TIERRA WEST

Unser Blvd. and Sage Rd. Development

(Albuquerque, New Mexico)

Draft Traffic Impact Study

July 29, 2024

DRAFT

Presented to:
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Unser Blvd. and Sage Rd. Development

Southwest Corner of Unser Blvd. at Sage Rd., in Albuquerque, NM

Traffic Impact Study Update

Executive Summary

The purpose of this Traffic Impact Study (TIS) is to evaluate the transportation conditions before and after implementation of the proposed Unser Blvd. and Sage Rd. Development, to determine the impact of the site development on the adjacent transportation system, and then recommend mitigation measures where necessary. This TIS is prepared in accordance with the requirements set forth by the City of Albuquerque (COA). The City of Albuquerque scoping letter for the Unser Blvd. and Sage Rd. Development TIS is in Appendix A-01. The project was originally proposed for 2021, and a TIS was prepared and approved in 2022. The developer subsequently changed the land use on one parcel, increasing the number of trips generated by the proposed development. This TIS update addresses the most recent change.

Project Scope

Proposed Site Location

The proposed Unser Blvd. and Sage Rd. Development site is situated on the southwest corner on the intersection of Unser Blvd. at Sage Rd. in the City of Albuquerque, New Mexico. It is approximately 4,500-ft west of Coors Blvd and approximately 7,000-ft from US Route 66 shown on Figure 1: Unser Blvd. and Sage Rd. Development Vicinity Map.

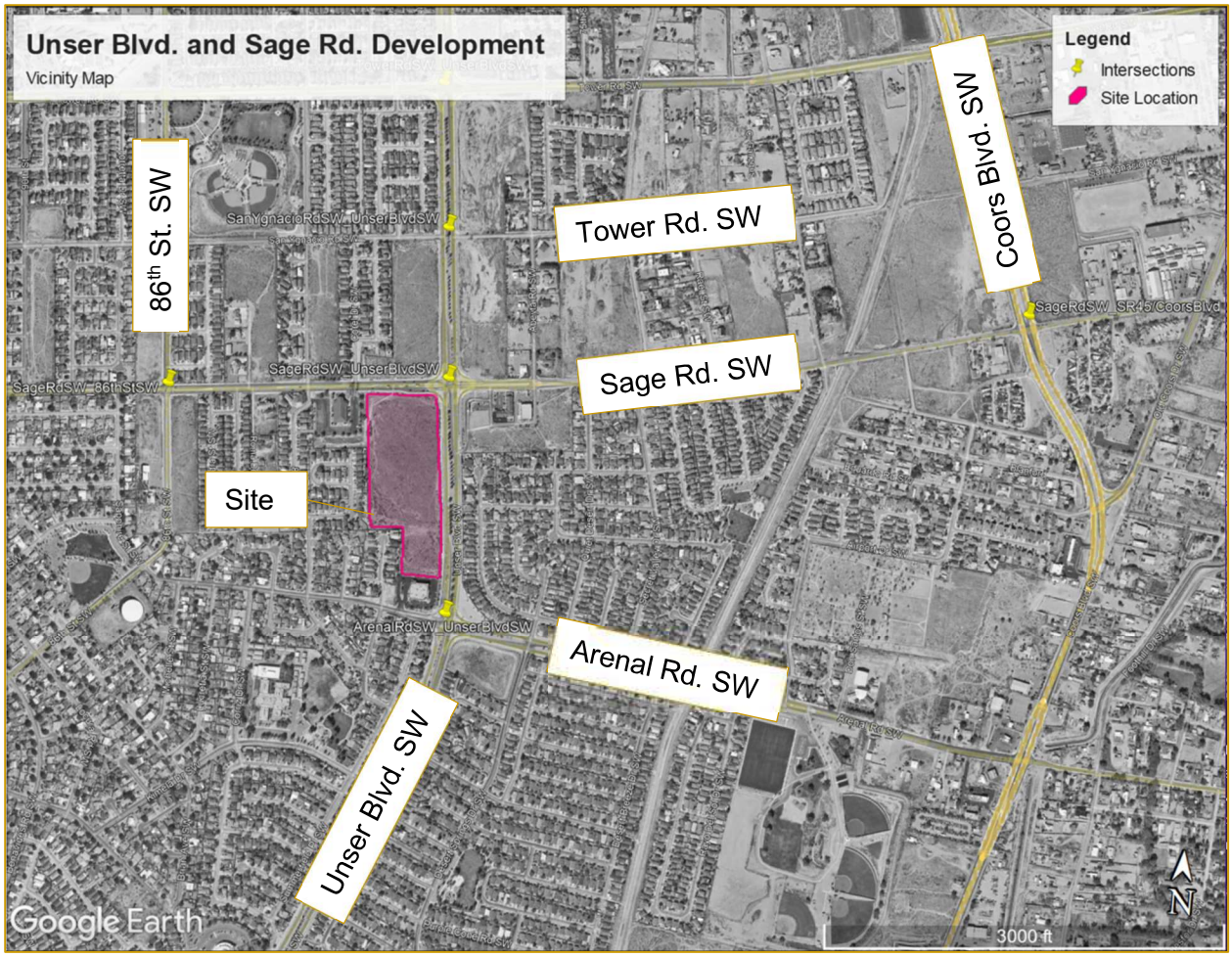


Figure 1: Unser Blvd. and Sage Rd. Development Vicinity Map

Proposed Study Area

The study area includes the six intersections and three access points for the Unser Blvd. and Sage Rd. Development shown on Figure 2: Unser Blvd. and Sage Rd. Development Intersection Reference Map and listed below:

1. Unser Blvd. & Arenal Rd. (Signalized)
2. Unser Blvd. & Sage Rd. (Signalized)
3. Unser Blvd. & Tower Rd. (Signalized)
4. Coors Blvd. & Sage Rd. (Signalized)
5. Sage Rd. & 86th St. (Signalized)
6. Unser Blvd. & San Ygnacio Rd. (Unsignalized)
7. Sage Rd. & Driveway "A" (Existing service tower driveway)
8. Unser Blvd. & Driveway "B" (Proposed – TCC Approval Requested)
9. Unser Blvd. & Driveway "C" (Existing right-in, right-out, and left in only)

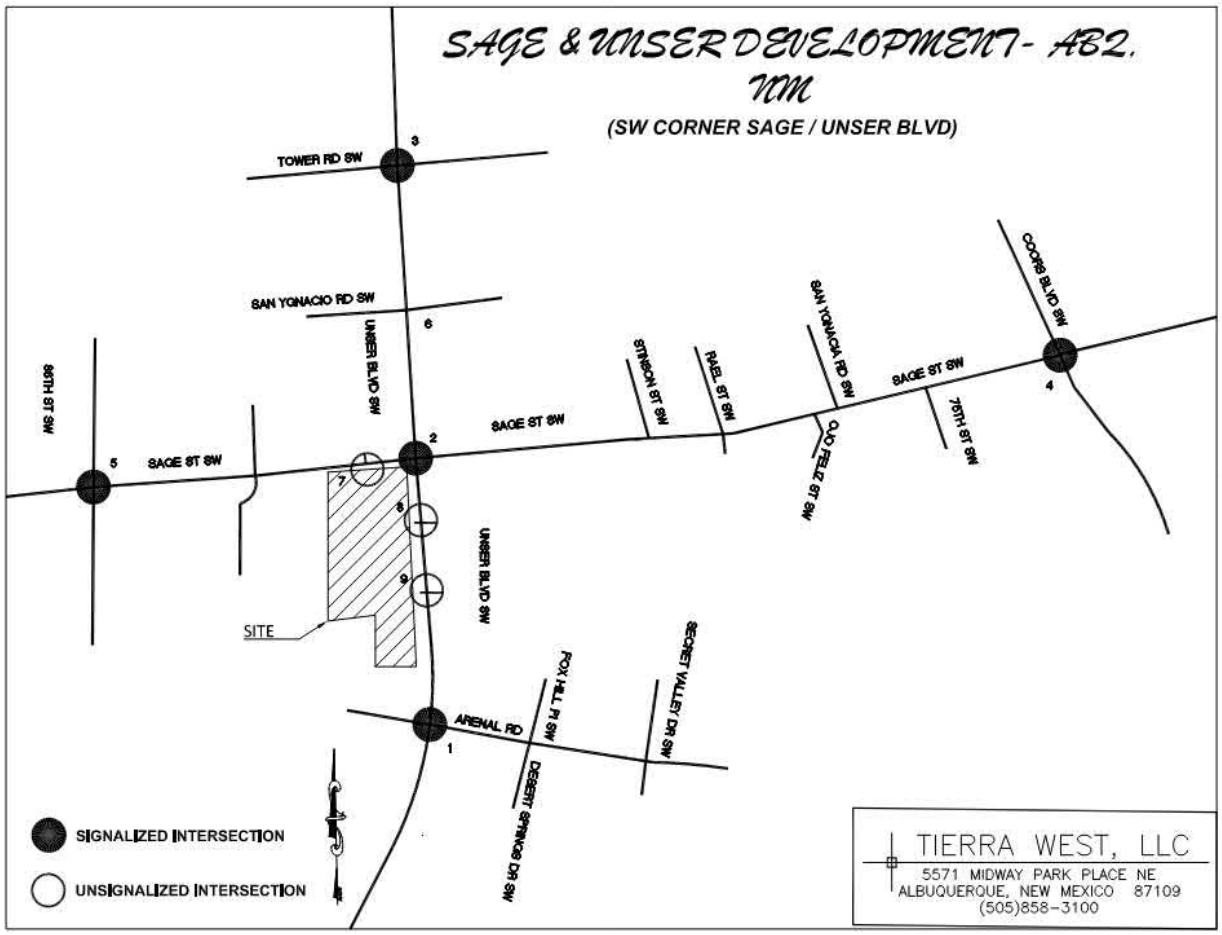


Figure 2: Unser Blvd. and Sage Rd. Development Intersection Reference Map

Proposed Site Description

The 15.38-acre Unser Blvd. and Sage Rd. Development is proposed to be fully developed for the Implementation Year of 2025 and evaluated for the Horizon Year of 2035. The site will generate residential and commercial trips for the westside of Albuquerque for use of the community. The site plan is attached in Appendix A-02.

The proposed site is to be developed with the following facilities:

- 1 Gas Station/Convenience Store >5.5k with 24 Fueling Positions
- 3,820 sq.ft. Fast Food Restaurant with a drive through window totaling
- 75-units Multifamily Housing (Low Rise)
- 1 Car Wash with One Automatic Tunnel

Proposed Improvements and Mitigations

A proposed change in the original TIS is the location of the Service Tower Driveway. The driveway will be changed to reflect the fact that it only functions as a service driveway to a cell

service tower. It is proposed to relocate the service driveway 60-ft to the west of the existing driveway. Proposed changes also refer to changing the access from a driveway to a drive pad. Changing the access location also provides Driveway “A” additional length for a deceleration lane. The Mitigated Site Plan of Driveway “A” west of Unser Blvd. on the south side of Sage Rd. is shown in Figure 3: Unser Blvd at Driveway "A" Access Mitigation (Tierra West LLC, 2024) and in Appendix A-03.

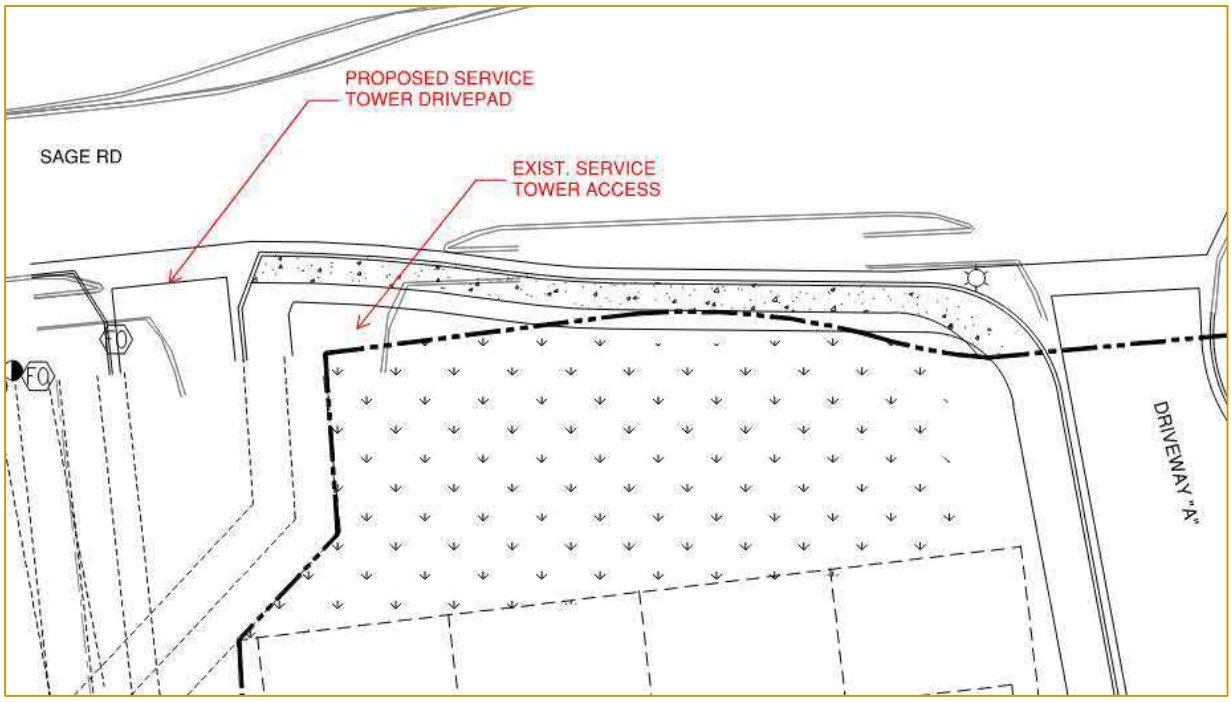


Figure 3: Unser Blvd at Driveway "A" Access Mitigation

It is proposed to add a second westbound through lane and second eastbound through lane on Sage Rd. at the intersection of Unser Blvd., and to eliminate the existing eastbound to southbound channelized free right-turn lane on the west leg of the intersection of Unser Blvd. at Sage Rd. The eastbound to southbound deceleration lane will remain. See Figure 4: Unser Blvd at Sage Rd. Geometry Mitigation Exhibit below and attached in Appendix A-03.

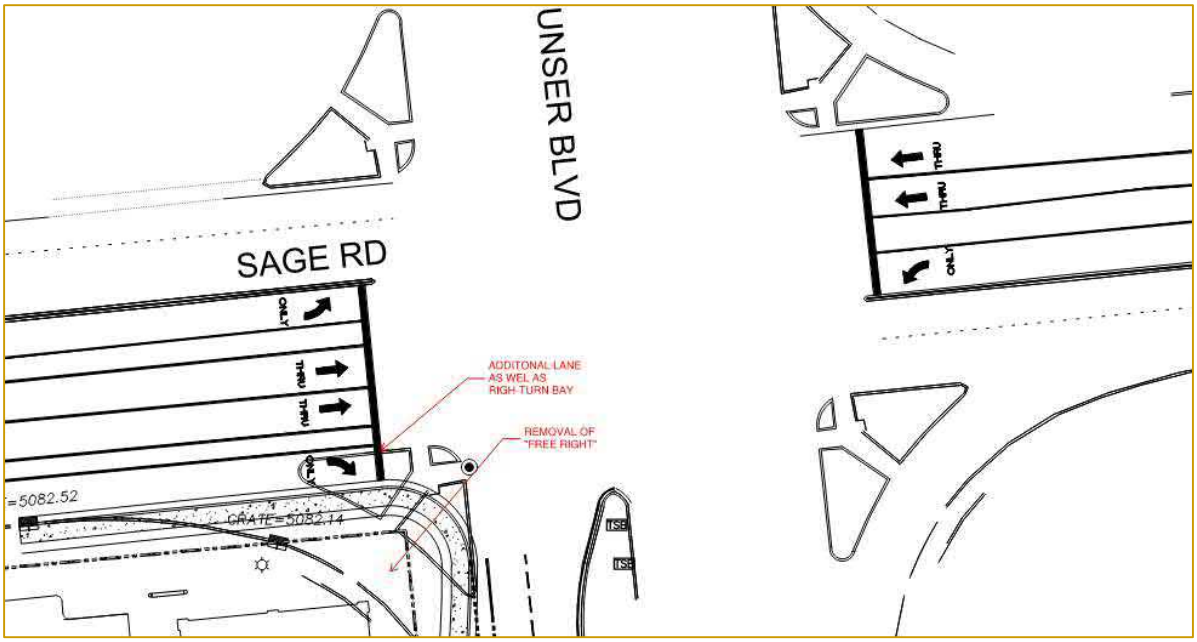
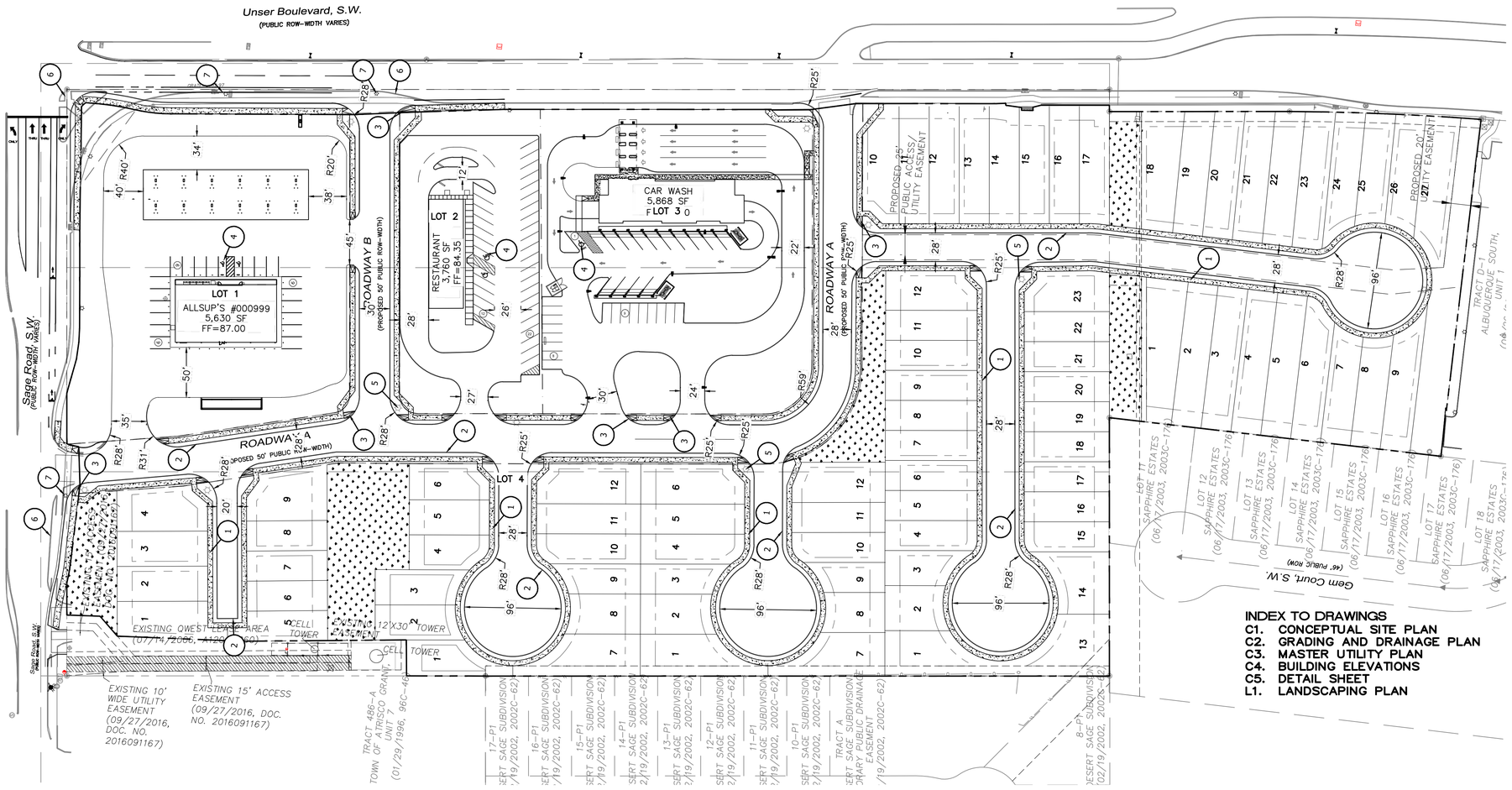


Figure 4: Unser Blvd at Sage Rd. Geometry Mitigation Exhibit



VICINITY MAP: M10

LEGAL DESCRIPTION:

TRS 483 484 & 485 UNIT NO 7 ATRISCO GRANT CONT 15.000 AC

TR D-2 PLAT FOR TRACTS D-1, D-2, D-3 & D-4
ALBUQUERQUESOUTH UNIT 1 BEING A REPLAT OF TRACT D
ALBUQUERQUESOUTH UNIT 1 CONT 2.6205 AC

LEGEND

- CURB & GUTTER
- PROPOSED BOUNDARY LINE
- EXISTING BOUNDARY LINE
- PROPOSED LOT LINE
- EASEMENT
- RIGHT-OF-WAY
- PROPOSED BUILDING/RESIDENTIAL LOT LINE
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- EXISTING CURB & GUTTER
- LANDSCAPE AREA
- LANE
- STRIPING

INDEX TO DRAWINGS

NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 260-1990 (OR DIAL 811 LOCALLY), FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACK FILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

GENERAL NOTES - SITE PLANS:

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING THIS WORK. IN CASE OF ANY DISCREPANCIES, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY AND WORK SHALL NOT COMMENCE WITHOUT APPROVAL FROM THE ARCHITECT.
2. WRITTEN DIMENSIONS OF DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE BUILDING SITE, AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
3. GC AND LIGHTING CONTRACTOR TO ENSURE SITE LIGHTING FIXTURE HEADS HAVE THE CORRECT ORIENTATION. REFER TO PHOTOMETRIC DRAWINGS FOR HEAD PLACEMENT.
4. GC TO COORDINATE SITE SECURITY LAYOUT AND CONDUIT SIZE & LOCATION WITH THE OWNER.
5. GC TO ENSURE PAVING AT ALL EXITS SHALL NOT EXCEED A 2% MAX SLOPE IN ALL DIRECTIONS.
6. PAVING SHALL BE LOWER THAN THE BUILDING SLAB BY THE FOLLOWING AMOUNTS UNO:
   - 1/2" @ ALL EXIT DOORS
   - 1/2" @ ALL SHOWROOM GLAZING LOCATIONS
   - 1 1/2" @ OVERHEAD DOORS
   - 1 1/2" @PRE-FAB METAL WALL PANELS
7. PARKING LOT SHALL BE ASPHALT PAVING

SITE DATA

LOT 1
PROPOSED USAGE: GAS STATION
LOT AREA 86,207.21 SF (1.98 AC)
ZONING PD
BUILDING AREA 3,760 SF
MAX BUILDING HEIGHT: 38'

PARKING REQUIRED 22 SPACES (4/1000 GFA PARKING PROVIDED)
STANDARD PARKING PROVIDED 21 SPACES
PUMP SPACES PROVIDED 24 SPACES
TOTAL PARKING PROVIDED 45
HC PARKING REQUIRED 1 SPACES
HC PARKING PROVIDED 2 SPACES

LOT 2
PROPOSED USAGE RESTAURANT
LOT AREA 42,809.19 SF (0.98 AC)
ZONING PD
BUILDING AREA 3,760 SF
MAX BUILDING HEIGHT: 38'

PARKING REQUIRED 22 SPACES (5.6/1000 GFA PARKING PROVIDED)
PARKING PROVIDED 34 SPACES
HC PARKING REQUIRED 1 SPACES
HC PARKING PROVIDED 2 SPACES

LOT 3
PROPOSED USAGE CAR WASH
LOT AREA 81,745.68 SF (1.88 AC)
ZONING PD
BUILDING AREA 5,868 SF
MAX BUILDING HEIGHT: 38'

PARKING REQUIRED 12 SPACES (2/1000 GFA PARKING PROVIDED)
PARKING PROVIDED 18 SPACES
HC PARKING REQUIRED 1 SPACES
HC PARKING PROVIDED 1 SPACES

LOT 4
PROPOSED USAGE: SINGLE FAMILY
LOT AREA: 406,625.73 SF (9.33 AC)
ZONING: PD (USED R-T FOR DESIGN)
TOTAL NO. RESIDENTIAL UNITS: 83 UNITS
BUILDING AREA:
MINIMUM LOT: 2,200 SF
LOT PADS: 1,350 SF (25*54)
BUILDING MAX HEIGHT: 26'
BUILDING SETBACK:
FRONT: 10' MIN
REAR: 15' MIN
SIDE: 5' INTERIOR
10' FROM STREET
PARKING REQUIRED: 2 SPACES (GARAGE)
2 SPACES (DRIVEWAY)

LOT 5
PROPOSED USAGE CELL TOWER
LOT AREA 13,267.66 SF (0.30 AC)
ZONING PD

KEYED NOTES

1. NEW 5' CONCRETE SIDEWALK PER COA STD DWG 2430 (TYP.)
2. STANDARD CURB AND GUTTER (TYP.) PER COA STD DWG 2415B
3. UNIDIRECTIONAL ACCESSIBLE (TYP.) RAMP PER COA STD DWG 2443
4. ACCESSIBLE PARKING SPACE W/SIGN (TYP.)
5. 16' LIGHT POLE (TYP.)
6. REMOVAL OF EXISTING CURB AND GUTTER
7. REMOVAL AND REPLACE LIGHT POLE

PROJECT NUMBER: _____

APPLICATION NUMBER: _____

This plan is consistent with the specific Site Development Plan approved by the Environmental Planning Commission (EPC), dated _____, and the Findings and Conditions in the Official Notification of Decision are satisfied.

Is an Infrastructure List required? ( ) Yes ( ) No If Yes, then a set of approved DRC plans with a work order is required for any construction within Public Right-of-Way or for construction of public improvements.

DRB SITE DEVELOPMENT PLAN SIGNOFF APPROVAL:

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

* Environmental Health, if necessary

60 30 0 30 60
SCALE: 1"=60'

ENGINEER'S SEAL
RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER
5/9/2024
RONALD R. BOHANNAN P.E. #7868

SAGE AND UNSER DEVELOPMENT
ALBUQUERQUE, NM

CONCEPTUAL SITE PLAN

TIERRA WEST, LLC
5571 MIDWAY PARK PL NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 858-3100
www.tierrawestllc.com

DRAWN BY TW
DATE 5/9/2024
DRAWING 2024029_SP
SHEET # SP-1
JOB # 2024029

Traffic Impact Analysis

Trip Generation

The ITE Codes used for the proposed Unser Blvd. and Sage Rd. Development include the following: ITE Code 945 (Gas Station/Convenience Store 5.5K-10K GFA), ITE Code 934 (Fast Food Restaurant with a Drive-Thru Window), ITE Code 948 (Automated Car Wash), and ITE Code 210 (Multifamily Housing (Low Rise)). A 33% pass-by trip rate reduction was applied to the trip generation rates for retail trips only. Table 1: Unser Blvd. and Sage Rd. Development Trip Generations Data summary is below and attached in the Appendices.

Table 1: Unser Blvd. and Sage Rd. Development Trip Generations Data

Unser Blvd SW and Sage Rd SW Development

Trip Generation Data (ITE Trip Generation Manual - 11th Edition)

USE (ITE CODE) / DESCRIPTION		24 HR VOL GROSS	A. M. PEAK HR. ENTER	A. M. PEAK HR. EXIT	P. M. PEAK HR. ENTER	P. M. PEAK HR. EXIT
Summary Sheet	Units					
Multifamily Housing (Low-Rise)	75	506	7	23	33	20
Convenience Store / Gas Station - GFA 5.5-10K (945)	24	8,298	379	379	323	323
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		**10,587**	**473**	**485**	**461**	**442**
Retail Commercial Trips		10,081	466	462	428	422
Pass-By Trips	33%		*-154*	*-152*	*-141*	*-139*
Total New Primary Trips			312	310	287	283
Total New Residential Trips			7	23	33	20

Intersection Level of Service Evaluation

Analysis of the study area for this project was performed using Synchro 12 software developed by Trafficware, Inc., a Cubic company. Synchro 12 software reporting reflects the Highway Capacity Manual, 7th Edition (HCM7). Synchro 12 reports are located in the Appendices of this report.

Background traffic volumes were calculated by applying historical annual background traffic growth rates to the existing traffic volumes for the implementation year. Existing traffic volumes were collected while school was in session during the month of April of the year 2022. The summarized traffic volumes are attached in Appendix A-05.

The results of the Implementation Year (2025) and Horizon Year (2035) APH and PPH NO BUILD and BUILD conditions are summarized in

Table 2: Intersection LOS Analysis *Summary Table*

Table 2: Intersection LOS Analysis Summary Table

	Intersection Description	Intersection Operation	Case Evaluation	Implementation Year (2025) Conditions		Horizon Year (2035) Conditions	
				AM Peak LOS -Delay (s)	PM Peak LOS -Delay (s)	AM Peak LOS -Delay (s)	PM Peak LOS -Delay (s)
1	Unser Blvd. / Arenal Rd	Signalized	No Build	C (21.2)	B (15.1)	C (28.2)	B (18.8)
			Build	C (21.5)	B (15.3)	D (38.3)	C (21.6)
2	Unser Blvd. / Sage Rd.	Signalized	No Build	C (23.4)	B (16.2)	C (31.4)	C (22.8)
			Build	E (43.2)	C (22.8)	D (52.7)	D (44.8)
			Mitigated	C (29.1)	C (25.7)	D (46.8)	D (49.3)
3	Unser Blvd. / Tower Rd.	Signalized	No Build	B (11.7)	B (14.5)	B (12.7)	C (22.4)
			Build	B (11.4)	B (14.6)	B (12.6)	C (25.3)
4	Coors Blvd. / Sage Rd.	Signalized	No Build	F (610.7)	F (314.7)	F (705.5)	F (410.4)
			Build	F (672.4)	F (338.5)	F (770.1)	F (427.6)
5	86th St. / Sage Rd.	Signalized	No Build	D (38.3)	D (37.1)	D (36.5)	D (35.3)
			Build	D (36.7)	D (37.0)	D (35.0)	D (35.4)
6	Unser Blvd. / San Ygnacio Rd.	Unsignalized	No Build	A (0.2)	A (0.2)	A (0.2)	A (0.3)
			Build	A (0.2)	A (0.2)	A (0.2)	A (0.3)
7	Sage Rd. / Driveway "A"	Unsignalized	Build	A (8.4)	A (4.1)	A (8.4)	A (4.5)
			Mitigated	B (15.0)	A (5.1)	B (15.0)	A (5.1)
8	Unser Blvd/. / Driveway "B"	Unsignalized	Build	A (0.7)	A (1.0)	A (1.0)	A (2.7)
			Mitigated	A (0.9)	A (1.4)	A (1.0)	A (2.7)
9	Unser Blvd/. / Driveway "C"	Unsignalized	Build	A (0.9)	A (1.0)	A (0.9)	A (1.5)
			Mitigated	A (0.9)	A (1.0)	A (0.9)	A (1.5)

Mitigations in red were applied to the intersection of Unser Blvd. at Sage Rd.

Mitigation Analysis

The results demonstrate that the signalized intersection of Unser Blvd. and Sage Rd. is characterized by a marginally long delay for the projected 2035 volumes for the “AM Build” scenario. The scenario indicates that the signalized intersection is slightly congested because of the projected traffic volumes generated by the Unser Blvd. and Sage Rd. Development (Full Development). With the additional growth in volumes from the proposed development, the projected delay for the horizon year (2035) increases the APH intersection delay by 5.7 seconds and the intersection delay remains LOS “C.” The existing lane geometry of the Unser Blvd. at Sage Rd. intersection demonstrate the eastbound and westbound through movements (that travel through the intersection of Unser Blvd. and Sage Rd.) are currently striped as one eastbound and one westbound lane. Although the existing geometry demonstrates one eastbound and westbound lane, there is sufficient pavement width for expansion of an additional eastbound and westbound lane. It is proposed to eliminate the existing striping and use this existing pavement section as additional through lanes as well as provide improvements to the southwest corner of the intersection. These improvements also include elimination of the channelized free flow right-turn movement at the southwest corner of Unser Blvd. and Sage Rd.

The mitigations provided for this intersection include implementing an additional eastbound and westbound through lane, removal of the channelized free flow right-turn movement and adjusting the signal operations. The analysis of this report concludes that the timing splits and improving the intersection geometry of Unser Blvd. at Sage Rd. intersection improves the Level of Service from a LOS "D" to a LOS "C."

Deceleration Lane Warrant Analysis

Determination of Warrants for Deceleration Lanes for Driveway "A," Driveway "B" and Driveway "C" were evaluated in accordance with the City of Albuquerque Development Process Manual (DPM) Criteria. Table 3: Deceleration Lane Warrant Analysis Summary[1] defines the COA's warrant criteria for right-turn and left-turn lanes at the existing and proposed driveways.

Table 3: Deceleration Lane Warrant Analysis Summary

City of Albuquerque Turn Lane Warrants for Driveway "A" Driveway "B" and Driveway "C"					
Design Process Manual Table 7.4.67					
Left Turn (Sage Rd Speed Limit 35 MPH)			Right Turn		
Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access	Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access
Sage Rd and Driveway "A" - 35 MPH					
30-40	40	55	30-40	50	102
Warranted (WBL Existing)			Warranted		
Unser Blvd and Driveway "B" - 40 MPH					
30-40	40	N/A	30-40	50	101
			Warranted		
Unser Blvd and Driveway "C" - 40 MPH					
30-40	40	105	30-40	50	20
Warranted (NBL Existing)			Not Warranted (SBR Existing)		

According to the COA Design Process Manual Table 7.7.67, the addition of an eastbound right-turn deceleration lane into Driveway "A" is warranted. The existing access is already constructed to the appropriate width according to DPM Table 7.4.47 (Three-lane Drive) for 30-ft wide. The warranted westbound left-turn deceleration lane exists with 100-ft of storage. The eastbound right-turn deceleration lane is also warranted but due to the spacing of the shifted Service Tower entrance, there is only room to construct approximately 125-ft of storage.

This report concludes a deceleration lane is warranted for both westbound left-turn and eastbound right-turn access into Driveway "A".

[1] (Development Process Manual, 2020)

Also warranted by the COA DPM Table 7.7.67 and 7.4.68, a southbound right-turn deceleration lane at Unser Blvd. at Driveway "B". The deceleration lane is proposed with 240-ft of deceleration length for the southbound right-in right-out access point.

This report concludes that a southbound right-turn deceleration lane is warranted for Driveway "B."

Driveway "C" warrants only a northbound left deceleration lane on Unser Blvd. at Driveway "C" according to COA DPM Table 7.4.68 at the driveway access into the project site. The deceleration lane currently exists and includes 400-ft of storage. The southbound right-tun deceleration lane at Driveway "C" currently exists and is approximately 400-ft in length.

No recommendations are made for Driveway "C."

Driveway Access Evaluation Summary

Driveway "A" and Driveway "C" are existing driveways. Driveway "C" was approved as a right-in and right-out, with a left-in only unsignalized driveway in 2008 (R-08-01-TCC) along the west side of Unser Blvd. approximately 800 feet south of Sage Rd. Driveway "B" is a right-in and right-out unsignalized driveway access, located approximately 360 feet south of Sage Rd., and was approved by the TCC early in 2023.

Crash Analysis

Crash data for the study area was collected for the years 2015, 2016, 2017, 2018, and 2019. The crash data was taken from the New Mexico Department of Transportation's (NMDOT) statewide database. The crash history data was collected for the intersection of Unser Blvd. and Sage Rd. Based on the low number of crashes reported over the recent five-year period, this report finds that there are no significant safety issues in the study area. Table 11: Unser Blvd. and Sage Rd. Development Crash Analysis Summary below summarizes the crashes by year and by type of crash:

Table 4: Unser Blvd. and Sage Rd. Development Crash Analysis Summary

Crash Analysis

Unser and Sage Development

Unser Blvd. / Sage Rd - Albuquerque, NM

Intersection: 1. Unser Blvd. / Sage Rd.
Date: 4/19/2023

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2015		1	2	6	4	1	0	0	2	7	23
2016		0	2	7	0	2	1	1	6	2	21
2017		0	0	6	2	2	7	0	3	5	25
2018		0	1	4	2	3	2	0	4	3	19
2019		0	1	3	2	3	4	0	1	4	18
Total		1	6	26	10	11	14	1	16	21	106
		1%	6%	25%	9%	10%	13%	1%	15%	20%	100%

Average Crashes per Million Entering Vechicles = 1.9

ɔased on existing (2022) PM Peak Hour Volume x 10 hours x 365 days per year = 11,139,800 veh/year

Recommendations

It is recommended that signal timing adjustments be considered for the southbound left-turn movement of the Unser Blvd. at Arenal Rd. intersection. It is recommended that signal timing adjustments be considered for the eastbound left-turn southbound movements of the Unser Blvd. at Sage Rd. intersection. An additional recommendation to the signal timing optimization should be complete at the discretion of the COA and not the expense of the Development since the background growth of the intersection impacts the intersection performance prior to the additional volumes generated by the proposed Unser Blvd. and Sage Rd. Development.

Unser Blvd. at Sage Rd. intersection recommendation is to optimize the signal timing splits for the implementation year (2025) and the horizon year (2035) to improve the operation of the traffic signal. The recommended mitigated measures include adding an additional eastbound and westbound through lane before and after the signalized intersection of Unser Blvd. at Sage Rd. Restriping and additional geometry currently has width for the additional eastbound and westbound through lane from Driveway “A” access point to Abeyta Rd. As well as the removal of channelized free flow right-turn at southwest corner of Unser Blvd. at Sage Rd. The removal of the channelized free flow right-turn movement at the southwest corner of Unser Blvd. at Sage Rd and provide an eastbound right at the intersection. The eastbound right turning movement will keep the existing turn-bay storage of 280-ft.

Sage Rd. at Driveway “A” is an existing full access, unsignalized driveway north of the proposed site. This should still operate as a full access driveway and match the existing width of

the access point. An additional right-turn deceleration lane is warranted for right-turn access into the proposed Unser Blvd. and Sage Rd. Development site with a storage of 240-ft.

Unser Blvd. at Driveway “B” is a proposed southbound right-turn deceleration lane is warranted for southbound right-in access into the proposed Unser Blvd. and Sage Rd. Development site. This storage length will consist of 240-ft in storage length.

Unser Blvd. at Driveway “C” has no recommendations and should remain as a full access driveway.

Table of Contents

List of Figures

List of Tables

Table of Authorities

Regulations

Unser Blvd. and Sage Rd. Development

Intersection of Unser Blvd. at Sage Rd. in Albuquerque, NM

Traffic Impact Study

Introduction

The purpose of this Traffic Impact Study (TIS) is to evaluate the transportation conditions before and after implementation of the proposed Unser Blvd. and Sage Rd. Development, to determine the impact of the development on the adjacent transportation system, and then recommend and evaluate mitigation measures where necessary. This study is prepared in accordance with the requirements of the City of Albuquerque (COA).

The proposed Unser Blvd. and Sage Rd. Development is to be located at the southwest corner of Unser Blvd. and Sage Rd. in the City of Albuquerque, New Mexico. See Figure 5: Unser Blvd. and Sage Rd. Development Vicinity Map below.

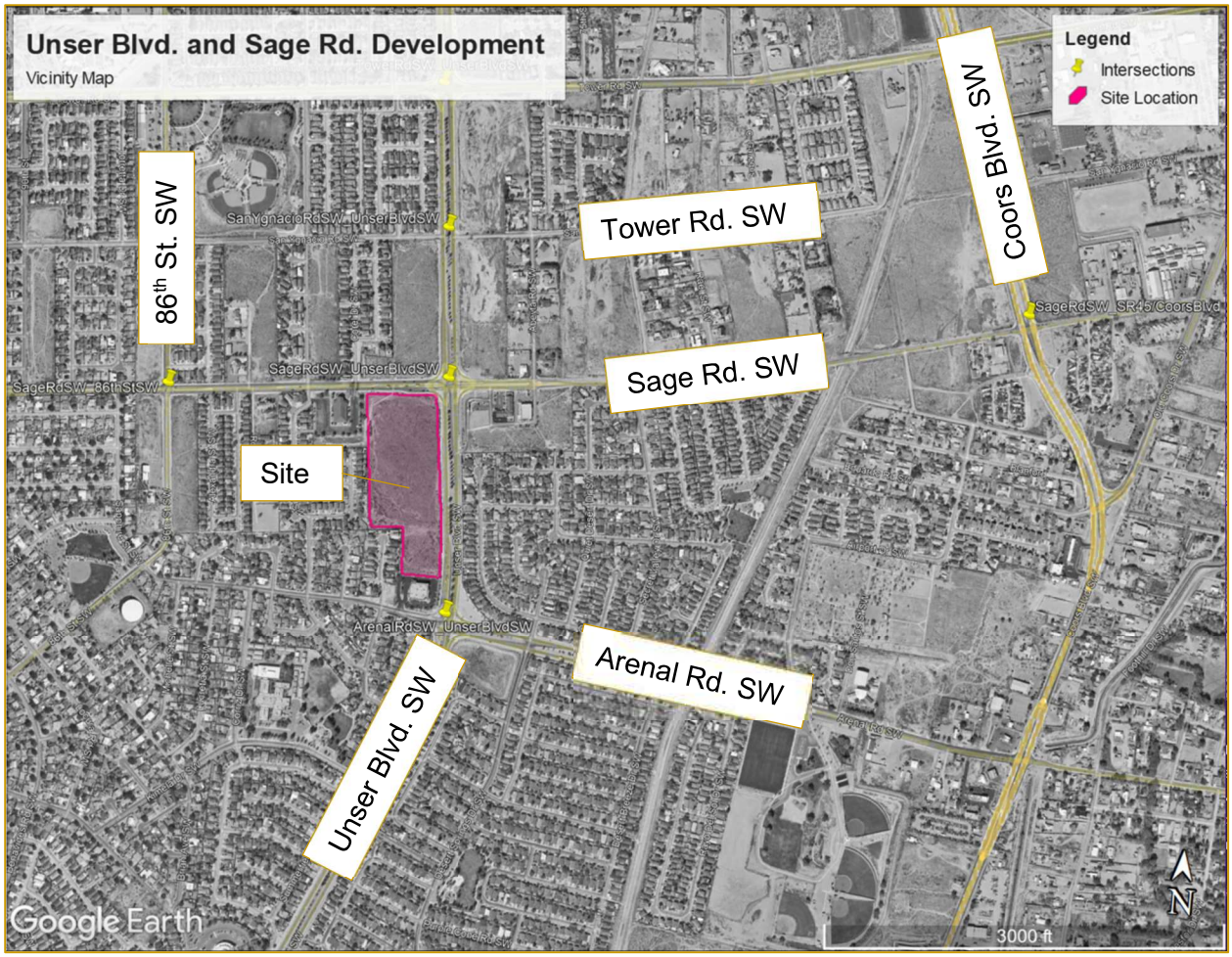


Figure 5: Unser Blvd. and Sage Rd. Development Vicinity Map

Project Scope

The initial traffic impact study (TIS) scoping meeting was held on April 12, 2022. The attendees included Jeanne Wolfenbarger, P.E. (City of Albuquerque), Matthew Grush, P.E. (City of Albuquerque), Julie Luna, P.E. (Bernalillo County), Ronald R. Bohannan, P.E. (Tierra West LLC.), Terry Brown P.E. (Tierra West LLC.), and Amanda Herrera, P.E. (Tierra West LLC.). At the scoping meeting, it was determined that the study area for the TIS would include the six intersections and three access points listed below and shown on Figure 2: Unser Blvd. and Sage Rd. Development Intersection Reference Map :

1. Unser Blvd & Arenal Rd. (Signalized)
2. Unser Blvd & Sage Rd. (Signalized)
3. Unser Blvd & Tower Rd. (Signalized)
4. Coors Blvd & Sage Rd. (Signalized)
5. 86th St. & Sage Rd. (Signalized)
6. Unser Blvd & San Ygnacio Rd (Unsignalized)
7. Sage Rd. & Driveway “A”
8. Unser Blvd & Driveway “B”
9. Unser Blvd & Driveway “C”

Due to adjustments to the land use and retail commercial site footprint within the project area, an amended TIS report and analysis was deemed necessary. The secondary scoping meeting was held on March 20, 2024. The attendees included Matthew Grush, P.E. (City of Albuquerque), Julie Luna, P.E. (Bernalillo County), Ronald R. Bohannan, P.E. (Tierra West LLC.), Terry Brown P.E. (Tierra West LLC.), Derek Bohannan (Tierra West LLC) and Jimeia Roberts (Tierra West LLC.). It was determined in this scoping meeting that the TIS scope would not change from the initial April 2022 scoping meeting. The development will be built in one phase. The implementation year for this project is 2025 and the horizon year is 2035. The City of Albuquerque scoping letter for this TIS is on Appendix page A-01.

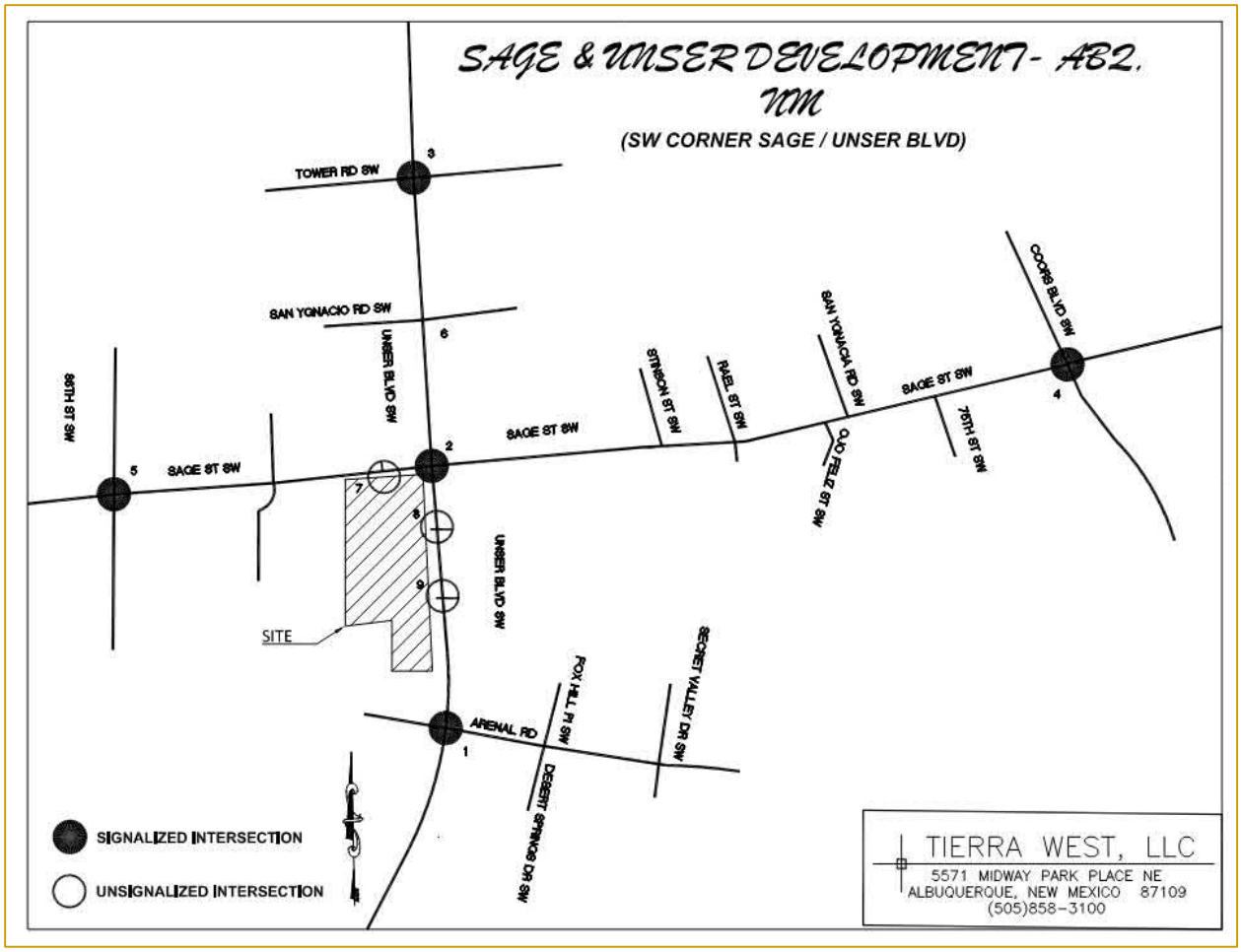
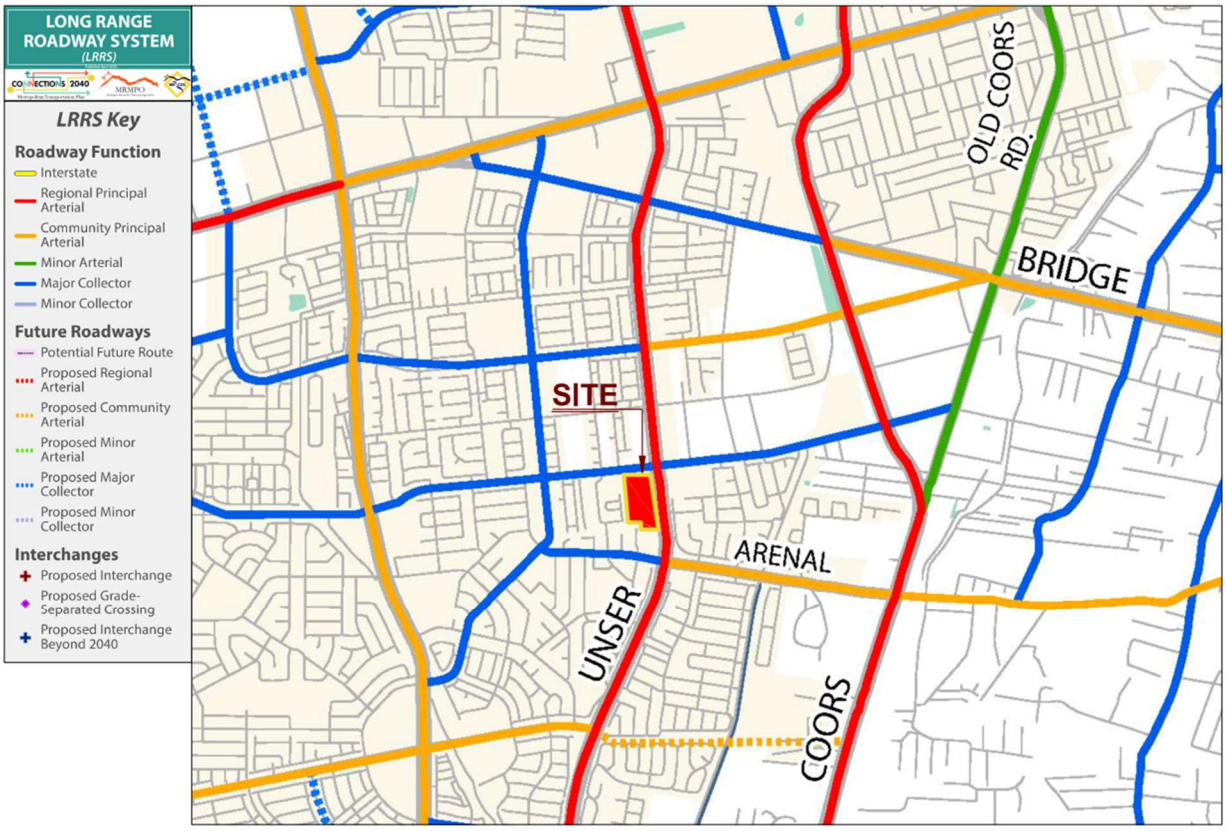


Figure 6: Unser Blvd. and Sage Rd. Development Intersection Reference Map

Existing Roadway System

The Long-Range Roadway System (LRRS) classifies the regional role of existing and planned future 2040 arterials within the overall network. By categorizing network links into two groups regional and community, considerations for existing and planned future 2040 transportation system improvements are ensured. The arterial categories within the study area are illustrated in Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map and attached in Appendix page A-06.



Portion of Futures 2040 Long Range Roadway System
(from Mid-Region Council of Governments)

Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map

#1 – Signalized Intersection of Unser Blvd. at Arenal Rd.

Arenal Rd. is classified as an 'Existing Community Principal Arterial' east of Unser Blvd, on the Figure 7: Futures 2040 Maps for Long Range Roadway Systems (MRMPO Long Range Roadway System (LRRS), 2024). The west leg of the intersection of Arenal Rd. is named Sapphire St. For consistency the west leg will be referred to as Arenal Rd. for the remainer of the TIS. The west leg of the Arenal Rd. intersection is a divided one-lane in each direction 'Existing Major Collector' roadway classified on Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map. The west leg has one left-turn lane, one through lane, and one shared through/right-turn lane (the right turn lane becomes channelized, separated by a raised median). The east leg of the Arenal Rd. intersection is a two-lane in both directions' roadway. The east leg of the intersection has one left-turn lane, one through lane, and one channelized right-turn lane. Unser Blvd. is a divided two-lane in each direction 'Existing Regional Principal Arterial' roadway classified on Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map. The north leg

has one left-turn lane, two through lanes, one channelized right-turn lane. The south leg has one left-turn lane, two through lanes, and one channelized right-turn lane.

All four legs of the intersections are constructed with mast arm signal supports, pedestrian cross walks, and ADA pedestrian ramps. The asphalt paved roadway has raised concrete curbs and medians, as well as gutters and sidewalks. The posted speed limit along Arenal Rd. within the study area is 40 MPH. The intersection configuration is shown in Figure 8: Signalized Intersection Areial of Unser Blvd. at Arenal Rd.

Figure 8: Signalized Intersection Areial of Unser Blvd. at Arenal Rd (Google, 2024).

The eastbound approach has two horizontal 3-sections signal heads along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal head for the southbound approach), and two pedestrian signal displays for the phase 4 across the south leg and phase 6 across the east leg also on the mast arm post. On the channelized right-turn raised median for the northbound approach there are two pedestrian push button pedestals. There is an additional 3-section signal on a pedestal posted on the raised center median. The

view of the eastbound approach is shown in Figure 9: Eastbound Approach Streetview of Unser Blvd. at Arenal Rd.

The westbound approach has one 3-section signal display along the mast arm, one 3-section signal display on the mast arm post, and two pedestrian signal displays for the phase 8 across the north leg and phase 2 across the west leg also on the mast arm post. On the channelized right-turn raised median for the southbound approach there are two pedestrian push button pedestals. There is an additional vertical 5-section signal on both a pedestal posted on the raised center median and on the mast arm post for the southbound approach. The view of the westbound approach is shown in Figure 10: Westbound Approach Streetview of Unser Blvd. at Arenal Rd.

The northbound approach has two horizontal 3-sections signal heads along the mast arm, one vertical 3-section signal head on the mast arm post, and two pedestrian signal displays for the phase 4 across the south leg and phase 2 across the west leg also on the mast arm post. On the channelized right-turn raised median for the westbound approach there are two pedestrian push button pedestals. There is an additional vertical 3-section signal on a pedestal posted on the raised center median. The view of the northbound approach is shown in Figure 11: Northbound Approach Streetview of Unser Blvd. at Arenal Rd.

The southbound approach has two horizontal 3-sections signal heads along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal head for the eastbound approach), and two pedestrian signal displays for the phase 8 across the north leg and phase 6 across the east leg also on the mast arm post. On the channelized right-turn raised median for the eastbound approach there is one pedestrian push button pedestals. There is an additional vertical 5-section signal on a pedestal posted on the raised center median. The view of the southbound approach is shown in Figure 12: Southbound Approach Streetview of Unser Blvd. at Arenal Rd.

Figure 9: Eastbound Approach Streetview of Unser Blvd. at Arenal Rd.

Figure 10: Westbound Approach Streetview of Unser Blvd. at Arenal Rd.

Figure 11: Northbound Approach Streetview of Unser Blvd. at Arenal Rd.

Figure 12: Southbound Approach Streetview of Unser Blvd. at Arenal Rd

#2 – Signalized Intersection of Unser Blvd. at Sage Rd.

Sage Rd. is classified as an 'Existing Major Collector' on the Figure 7: Futures 2040 Maps for Long Range Roadway Systems. The west leg of the Sage Rd intersection is a divided two-lane roadway in both directions. The west leg has one left-turn lane, one through lane, and one channelized right-turn lane. The east leg of the Sage Rd. intersection is a divided one-lane roadway in both directions. The east leg of the intersection has one left-turn lane, and one shared through and channelized right-turn lane. Unser Blvd. is a divided two-lane in each direction 'Existing Regional Principal Arterial' classified on Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map. The north leg has one left-turn lane, two through lanes, one channelized right-turn lane. The south leg has one left-turn lane, two through lanes, and one channelized right-turn lane.

All four legs of the signalized intersection are constructed with mast arm signal supports, pedestrian cross walks, and ADA pedestrian ramps. Each mast arm post has lighting and is equipped with video detection. Video detection cameras are also available on each of the mast arms. Sidewalks are available in all directions except for the north side of Sage Rd. on the east leg and abruptly ends just beyond the unsignalized intersection east of Unser Blvd. on the south side of Sage Rd. Bike lanes are available on the north, south, east legs. The asphalt paved roadway has raised concrete raised curbs and medians, as well as gutters and sidewalks. The posted speed limit on Sage Rd. within the study area is 30 MPH. The intersection configuration is shown in Figure 13: Signalized Intersection Areial of Unser Blvd.at Sage Rd.

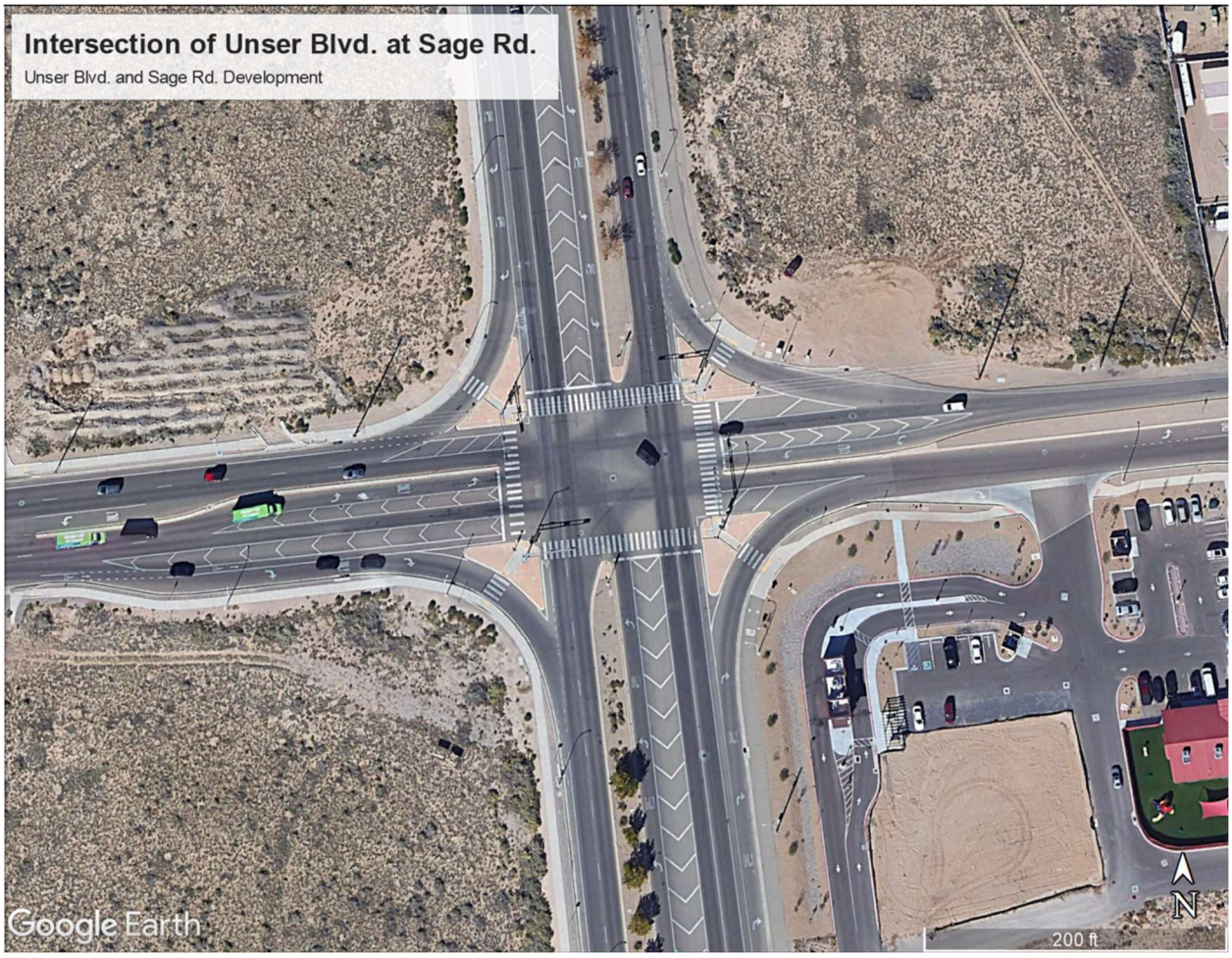


Figure 13: Signalized Intersection Areial of Unser Blvd.at Sage Rd. (Google, 2024)

The eastbound approach has one horizontal 5-sections signal display and one horizontal 3-section signal display along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal display for the southbound approach), and one pedestrian signal display and push button for the phase 6 across the east leg also on the mast arm post. On the channelized right-turn raised median for the northbound approach there is one pedestrian display with a push button on a pedestal for the phase 4 across the south leg. There is an additional 3-section signal display on the mast arm post for the northbound approach. The view of the eastbound approach is shown in Figure 14: Eastbound Approach Streetview of Unser Blvd. at Sage Rd.

The westbound approach has one horizontal 5-sections signal display and one horizontal 3-section signal display along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal head for the northbound approach), and one pedestrian signal display and push button for the phase across the east leg also on the mast arm post. On

the channelized right-turn raised median for the southbound approach there is one pedestrian display with a push button on a pedestal for phase 8 across the north leg. There is an additional 3-section signal display on the mast arm post for the southbound approach. The view of the westbound approach is shown in Figure 15: Westbound Approach Streetview of Unser Blvd. at Sage Rd.

The northbound approach has two horizontal 3-sections signal heads along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal display for the eastbound approach), and one pedestrian signal displays with push button for the phase 4 across the south leg on the mast arm post. On the channelized right-turn raised median for the westbound approach there is one pedestrian display with a push button on a pedestal for the phase 2 across the west leg. There are additional vertical 5-section signal displays on a pedestal posted on the raised center median and the mast arm post for the westbound approach. The view of the northbound approach is shown in Figure 16: Northbound Approach Streetview of Unser Blvd. at Sage Rd.

The southbound approach has two horizontal 3-sections signal heads along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal head for the westbound approach), and one pedestrian signal displays with push button for the phase 8 across the south leg on the mast arm post. On the channelized right-turn raised median for the eastbound approach there is one pedestrian display with a push button on a pedestal. There is an additional vertical 5-section signal on a pedestal posted on the raised center median. The view of the southbound approach is shown in Figure 17: Southbound Approach Streetview of Unser Blvd. at Sage Rd.

Figure 14: Eastbound Approach Streetview of Unser Blvd. at Sage Rd.

Figure 15: Westbound Approach Streetview of Unser Blvd. at Sage Rd.

Figure 16: Northbound Approach Streetview of Unser Blvd. at Sage Rd.

Figure 17: Southbound Approach Streetview of Unser Blvd. at Sage Rd.

#3 – Signalized Intersection of Unser Blvd. at Tower Rd.

Tower Rd. is classified as an 'Existing Community Principal Arterial' east of Unser Blvd, on the Figure 7: Futures 2040 Maps for Long Range Roadway Systems. The west leg of the Tower Rd. intersection is a divided two-lane in each direction 'Existing Major Collector' classified on Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map. The east and west legs have one left-turn lane, one through lane, and one shared through/right-turn lane (the right turn lane becomes channelized, separated by a raised median). Unser Blvd. is a divided two-lane in each direction 'Existing Regional Principal Arterial' classified on Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map. The north leg has one left-turn lane, two through lanes, one channelized right-turn lane. The south leg has one left-turn lane, one through lane, and one shared through/right-turn lane (the right turn lane becomes channelized, separated by a raised median).

All four legs of the signalized intersections are constructed with mast arm signal supports, pedestrian cross walks, and ADA pedestrian ramps. Each mast arm post has lighting and is equipped with video detection. Video detection cameras are also available on each of the mast arms. Sidewalks are available in all directions except for the south side of Tower Rd. on the east leg. Bike lanes are available on all legs. The asphalt paved roadway has raised concrete raised curbs and medians, as well as gutters and sidewalks. The posted speed limit along Arenal Rd. within the study area is 35 MPH. The intersection configuration is shown in Figure 18: Signalized Intersection of Unser Blvd. at Tower Rd.

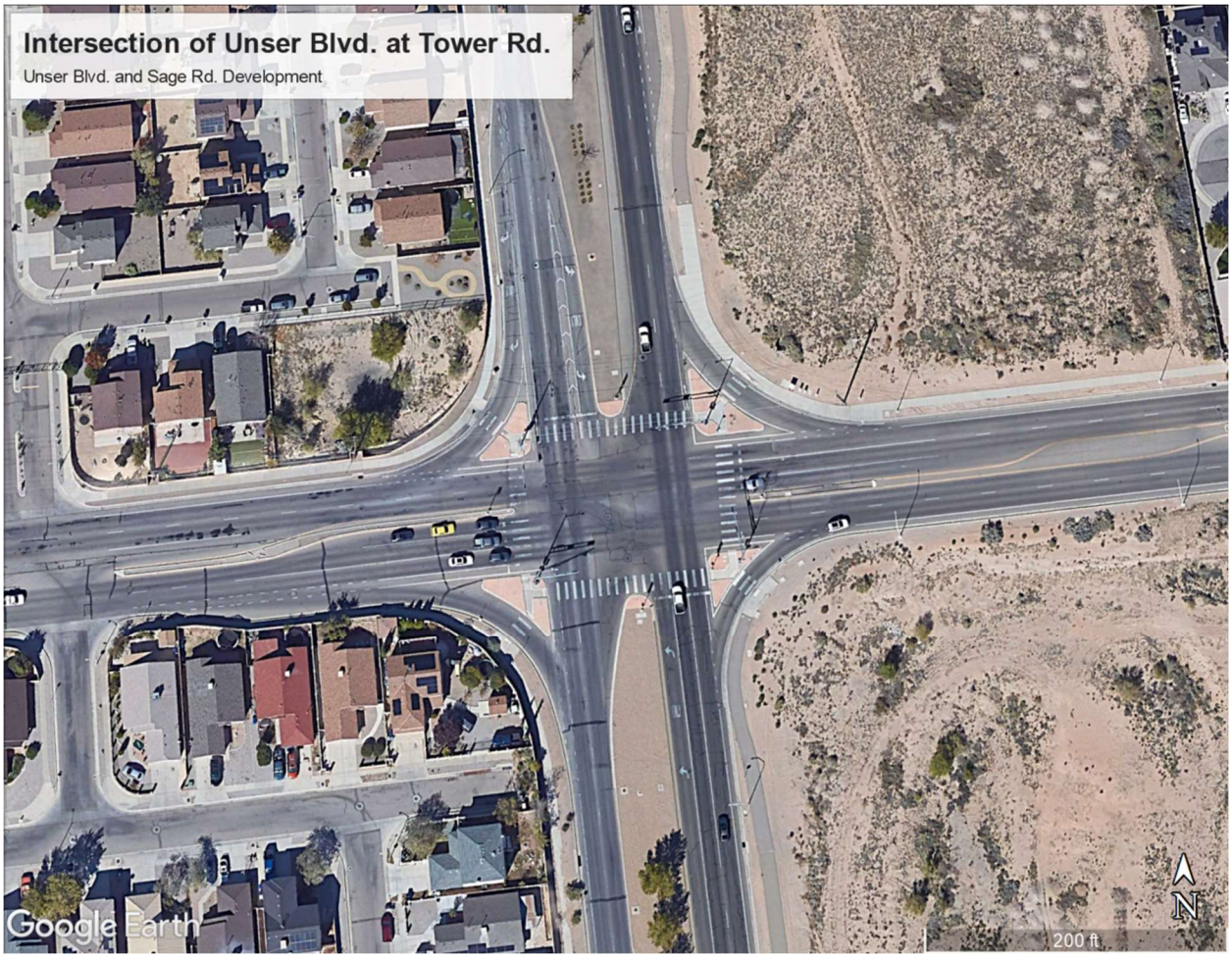


Figure 18: Signalized Intersection of Unser Blvd. at Tower Rd.

The eastbound approach has two horizontal 3-sections signal display along the mast arm, one vertical 3-section signal head on the mast arm post, and one pedestrian signal display and push button for the phase 6 across the west leg also on the mast arm post. On the channelized right-turn raised median for the northbound approach there is vertical 5-section signal display for the southbound approach and one pedestrian display with a push button on a pedestal for the phase 4 across the north leg. There are additional vertical 3-section signal displays on a pedestal posted on the raised center median and on the mast arm post for the northbound approach. The view of the eastbound approach is shown in Figure 18: Signalized Intersection of Unser Blvd. at Tower Rd.

The westbound approach has two horizontal 3-sections signal display along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal head for the northbound approach), and two pedestrian signal display with push buttons for the phase 8 across both the north and east legs also on the mast arm post. There are additional vertical 3-

section signal displays on a pedestal posted on the raised center median and on the mast arm post for the southbound approach. The view of the westbound approach is shown in Figure 20: Westbound Approach Streetview of Unser Blvd. at Tower Rd.

The northbound approach has two horizontal 3-sections signal heads along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 3-section signal display for the eastbound approach), and one pedestrian signal display with push button for the phase 4 across the south leg on the mast arm post. On the channelized right-turn raised median for the westbound approach there is one pedestrian display with a push button on a pedestal for the phase 2 across the west leg. There are additional vertical 5-section signal displays on a pedestal posted on the raised center median and the mast arm post for the westbound approach. The view of the northbound approach is shown in Figure 21: Northbound Approach Streetview of Unser Blvd. at Tower Rd.

The southbound approach has two horizontal 3-sections signal heads along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 3-section signal head for the westbound approach), and two pedestrian signal displays with push button for the phases 8 and 6 across both the north and east legs on the mast arm post. There are additional vertical 5-section signal displays on a pedestal posted on the raised center median and on a pedestal posted on the channelized right-turn raised median for the southbound approach. The view of the southbound approach is shown in Figure 22: Southbound Approach Streetview of Unser Blvd. at Tower Rd.

Figure 19: Eastbound Approach Streetview of Unser Blvd. at Tower Rd.

Figure 21: Northbound Approach Streetview of Unser Blvd. at Tower Rd.

Figure 20: Westbound Approach Streetview of Unser Blvd. at Tower Rd.

Figure 22: Southbound Approach Streetview of Unser Blvd. at Tower Rd.

#4 – Signalized Intersection of Coors Blvd. at Sage Rd.

SR 45/Coors Blvd. is classified as a 'Existing Regional Principal Arterial' on the Figure 7: Futures 2040 Maps for Long Range Roadway Systems. Coors Blvd. is designated as State Road 45. For consistency the intersection will be referred to as Coors Blvd. for the remainer of the TIS. The intersection of Coors Blvd. at Sage Rd is part of a coordinated signal system along Coors Blvd. Coors Blvd. is a divided two-lane in each direction. The north leg has one left-turn lane, two through lanes, one right-turn lane. The south leg has one left-turn lane, two through lanes, and one right-turn lane. Sage Rd. is classified as an 'Existing Major Collector' on the Figure 7: Futures 2040 Maps for Long Range Roadway Systems. Sage Rd intersection is an undivided one-lane roadway in both directions. Both the west legs have one through lane, and one channelized right-turn lane.

All four legs of the signalized intersection are constructed with mast arm signal supports, pedestrian cross walks, and ADA pedestrian ramps. Video detection cameras are available on each of the mast arms. Sidewalks are available on the south leg on both sides, as well as on the east side of the north leg on Coors Blvd. The asphalt paved roadway has raised concrete raised curbs and medians, as well as gutters. Designated bike lanes are available along both the east and west sides of Coors Blvd. The posted speed limit on Coors Blvd. in the study area is 40 MPH. The intersection configuration is shown in Figure 23: Signalized Intersection of Coors Blvd. at Sage Rd.

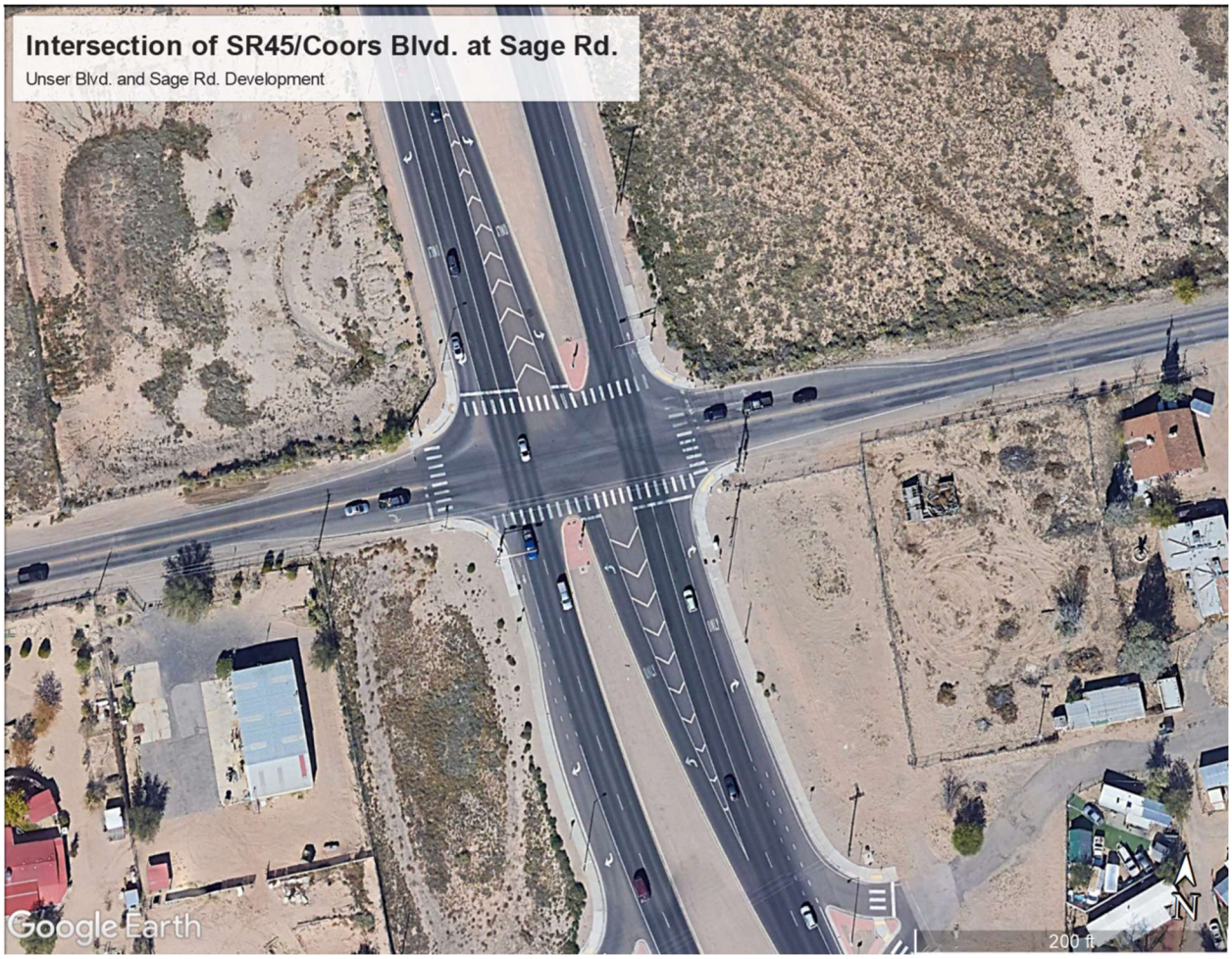


Figure 23: Signalized Intersection of Coors Blvd. at Sage Rd. (Google, 2024)

The eastbound approach has one horizontal 3-sections signal display along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal display for the southbound approach), and two pedestrian signal display for the phase 4 and 6 across the south and west legs also on the mast arm post. On the raised curb sidewalk for the northbound approach there are two push buttons on pedestals for phases 4 and 6 across the south and west legs. There is an additional vertical 3-section signal display on a pedestal posted on curb sidewalk for the eastbound approach. The view of the eastbound approach is shown in Figure 24: Eastbound Approach Streetview of SR45/Coors Blvd. at Sage Rd. (Google, 2024)

The westbound approach has one horizontal 3-sections signal display along the mast arm, one vertical 3-section signal head on the mast arm post (another vertical 5-section signal display for the northbound approach), and two pedestrian signal display with push buttons for the phases 8 and 2 across both the north and west legs also on the mast arm post. On the raised curb sidewalk for the southbound approach there are two push buttons on pedestals for phases 8 and

2 across the north and west legs. There is an additional vertical 3-section signal display on a pedestal posted on curb sidewalk for the westbound approach. The view of the westbound approach is shown in Figure 25: Westbound Approach Streetview of SR45/Coors Blvd. at Sage Rd.

The northbound approach has one horizontal 3-sections signal head along the mast arm, one vertical 3-section signal head on the mast arm post, and two pedestrian signals for phases 4 and 2 across both the north and west legs on the mast arm post. On the raised curb sidewalk for the westbound approach there are two push buttons on pedestals for phases 4 and 2 across both the south and east leg. There are additional vertical 5-section signal displays on a pedestal posted on the raised center median and the mast arm post for the westbound approach. The view of the northbound approach is shown in Figure 26: Northbound Approach Streetview of SR45/Coors Blvd. at Sage Rd.

The southbound approach has one horizontal 3-sections signal head along the mast arm, one vertical 3-section signal head on the mast arm post, and two pedestrian signals for phase 8 and 6 across both the north and east legs on the mast arm post. On the raised curb sidewalk for the westbound approach there are two push buttons on pedestals for phase 8 and 6 across both the south and west legs. There are additional vertical 5-section signal displays on a pedestal posted on the raised center median and the mast arm post for the southbound approach. The view of the southbound approach is shown in Figure 27: Southbound Approach Streetview of SR45/Coors Blvd. at Sage Rd.

Figure 24: Eastbound Approach Streetview of SR45/Coors Blvd. at Sage Rd.

Figure 25: Westbound Approach Streetview of SR45/Coors Blvd. at Sage Rd.

Figure 26: Northbound Approach Streetview of SR45/Coors Blvd. at Sage Rd.

Figure 27: Southbound Approach Streetview of SR45/Coors Blvd. at Sage Rd.

#5 – Signalized Intersection of 86th St. at Sage Rd.

86th St. is classified as a 'Existing Major Collector' on the Figure 7: Futures 2040 Maps for Long Range Roadway Systems. 86th St. is an undivided one-lane roadway in each direction. Both the north and south legs have one left-turn lane, one shared through/right-turn lane. Sage Rd. is classified as an 'Existing Major Collector' on the Figure 7: Futures 2040 Maps for Long Range Roadway Systems. Sage Rd intersection is an undivided one-lane roadway in both directions. Both the east and west legs have one left-turn lane, one through lane, and one shared through/right-turn lane.

All four legs of the signalized intersection are constructed with mast arm signal supports, pedestrian cross walks, and ADA pedestrian ramps. The southbound approach mast arm post has lighting. Video detection cameras are also available on each of the mast arms. Sidewalks are available on all four legs. The asphalt paved roadway has raised concrete raised curbs and medians, as well as gutters. Designated bike lanes are available along both the north and south legs of 86th St. and along the north side of Sage Rd. on both the east and west legs. The posted speed limit on Sage Rd. within the study area is 30 MPH. The intersection configuration is shown in Figure 28: Signalized Intersection of 86th St. at Sage Rd.

Figure 28: Signalized Intersection of 86th St. at Sage Rd.

The eastbound approach has one horizontal 5-section signal display and one horizontal 3-section signal display along the mast arm, one vertical 3-section signal display on the mast arm post, and one pedestrian signal display with push button for phase 2 across the west leg also on the mast arm post. On the raised curb sidewalk for the northbound approach there is another vertical 3-section signal display for the southbound approach and a push button on a pedestal for phase 4 across the south leg. There is an additional vertical 5-section signal display on a pedestal posted on curb sidewalk for the westbound approach. The view of the eastbound approach is shown in Figure 29: Eastbound Approach Streetview of 86th St. at Sage Rd.

The westbound approach has one horizontal 5-sections signal display and one horizontal 3-section signal display along the mast arm, one vertical 3-section signal display on the mast arm post, and one pedestrian signal display with push button for phase 8 across the north leg also on the mast arm post. On the raised curb sidewalk for the southbound approach there is another vertical 3-section signal display for the northbound approach phase 6 across the east leg. There

is an additional vertical 5-section signal display on a pedestal posted on the raised curb sidewalk for the eastbound approach. The view of the westbound approach is shown in Figure 30: Westbound Approach Streetview of 86th St. at Sage Rd.

The northbound approach has one horizontal 3-sections signal head along the mast arm, one vertical 3-section signal display on the mast arm post, and one pedestrian signal with push button for phase 2 across west leg on the mast arm post. On the raised curb sidewalk for the westbound approach there is a 5-section signal display for the eastbound approach and pedestrian signal display with push buttons on a pedestal for phase 2 across east leg. There is an additional vertical 3-section signal display on a pedestal posted on the raised curb sidewalk for the southbound approach. The view of the northbound approach is shown in Figure 31: Northbound Approach Streetview of 86th St. at Sage Rd.

The southbound approach has one horizontal 3-sections signal head along the mast arm, one vertical 3-section signal display on the mast arm post, and one pedestrian signal with push button for phase 6 across east leg on the mast arm post. On the raised curb sidewalk for the westbound approach there is a 5-section signal display for the eastbound approach and pedestrian signal display with push buttons on a pedestal for phase 6 across the west leg. There is an additional vertical 3-section signal display on a pedestal posted on the raised curb sidewalk for the northbound approach. The view of the southbound approach is shown in Figure 32: Southbound Approach Streetview of 86th St. at Sage Rd.

Figure 29: Eastbound Approach Streetview of 86th St. at Sage Rd.

Figure 31: Northbound Approach Streetview of 86th St. at Sage Rd.

Figure 30: Westbound Approach Streetview of 86th St. at Sage Rd.

Figure 32: Southbound Approach Streetview of 86th St. at Sage Rd.

#6 – Unsignalized Intersection of Unser Blvd. at San Ygnacio Rd.

San Ygnacio Rd. is not classified according to the Figure 7: Futures 2040 Maps for Long Range Roadway Systems, and should be considered a local urban minor collector. San Ygnacio Rd. is an undivided one lane roadway in each direction. Both east and west legs operate as stop sign-controlled T-intersection at Unser Blvd. Unser Blvd. is a divided two-lane in each direction 'Existing Regional Principal Arterial' roadway classified on Figure 7: Futures 2040 Maps for Long Range Roadway Systems Map.

San Ygnacio Rd has sidewalks only on the north side of the west leg. San Ygnacio only has raised curbs and gutters along the north side of the west leg. Unser Blvd. has sidewalks, and ADA pedestrian ramps. The asphalt paved roadway of Unser Blvd. has raised concrete raised curbs and medians, as well as gutters. Designated bike lanes are available along Unser Blvd. The posted speed limit on San Ygnacio Rd. is 35 MPH. The intersection configuration is shown in Figure 33: Unsignalized Intersection of Unser Blvd. at San Ygnacio Rd.

Figure 33: Unsignalized Intersection of Unser Blvd. at San Ygnacio Rd.

Figure 34:Eastbound Approach Streetview of Unser Blvd. at San Ygnacio Rd.

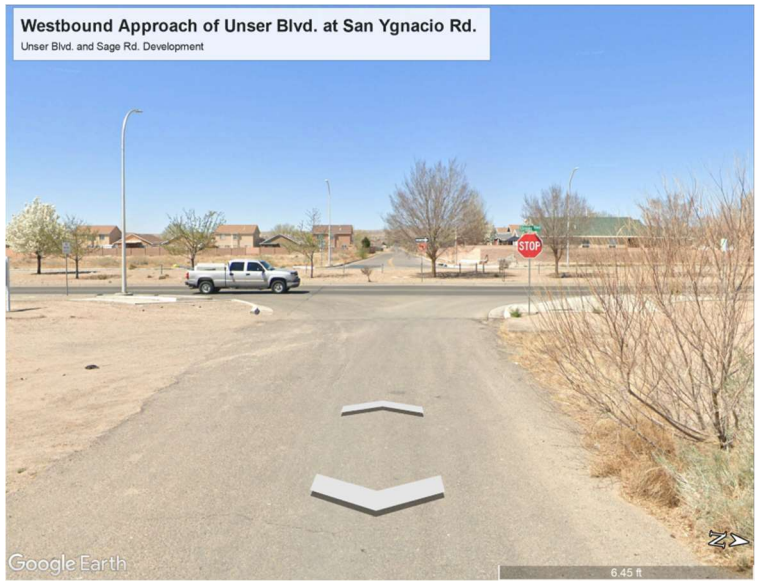


Figure 35: Westbound Approach Streetview of Unser Blvd. at San Ygnacio Rd.

Figure 36: Northbound Approach Streetview of Unser Blvd. at San Ygnacio Rd.

Figure 37: Southbound Approach Streetview of Unser Blvd. at San Ygnacio Rd.

Existing Land Use and Site Access

The land for the project is undeveloped and the study area is mostly developed with residential lots with minimal commercial land use in the area. There are three proposed access driveways (Driveway ‘A’, Driveway ‘B’, and Driveway ‘C’).

#7 – Unsignalized Intersection of Sage Rd. at Driveway “A”

Driveway ‘A’ is currently an existing full-access driveway located 430-feet to the west (centerline to centerline) of the intersection of Unser Blvd. at Sage Rd. This is the only “full-access” Driveway that will serve incoming traffic to both residential and commercial portions of the development. The intersection configuration is shown in Figure 38: Site Access Sage Rd. at Driveway "A"

Figure 38: Site Access Sage Rd. at Driveway "A"

#8 – Unsignalized Intersection of Unser Blvd at Driveway “B”

Driveway ‘B’ is a proposed right-in/right-out access located 360-feet south (centerline to centerline) from the intersection of Unser Blvd. at Sage Rd. This driveway will isolate most of the commercial traffic from the residential portion of the proposed development. The intersection configuration is shown in Figure 38: Site Access Sage Rd. at Driveway "A"

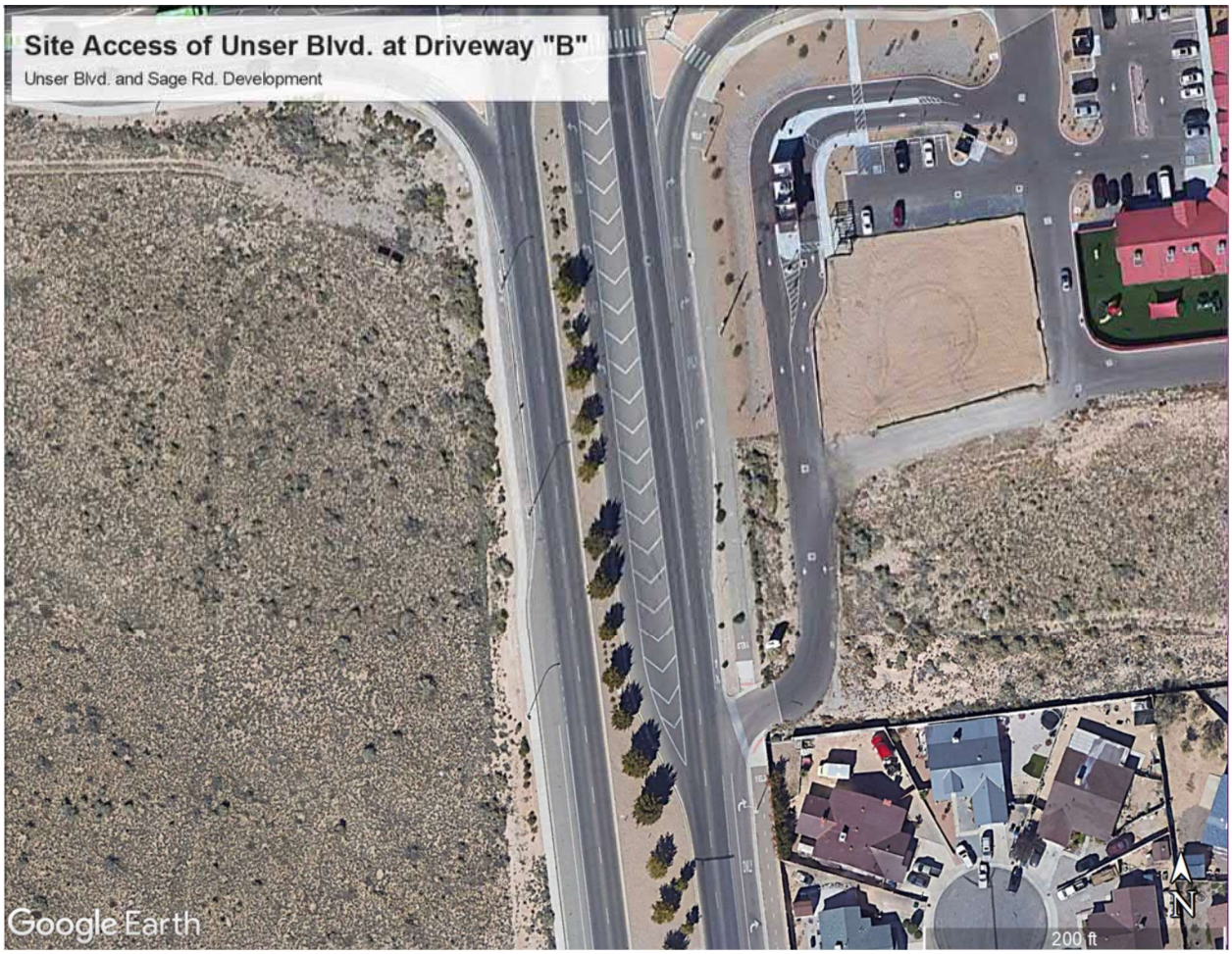


Figure 39: Site Access Unser Blvd. at Driveway “B”

#9 – Unsignalized Intersection of Unser Blvd. at Driveway “C”

Driveway ‘C’ is an existing right-in, right-out, left-in only access located 800-feet south (centerline to centerline) from the intersection of Unser Blvd. and Sage Rd. This will also provide access into the residential portion of the development but still have partial access for the left-in turn lane for northbound travelers into the commercial access.

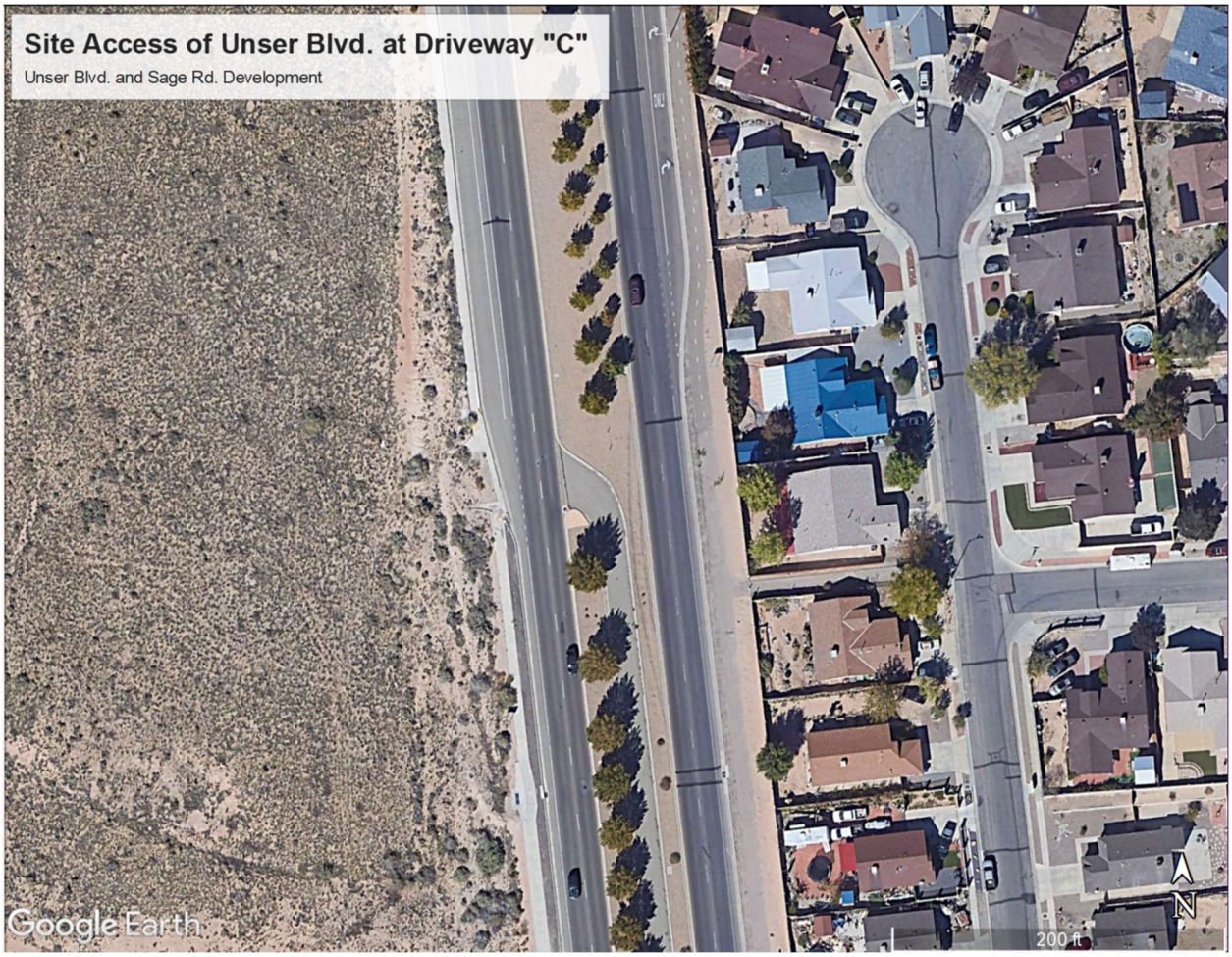


Figure 40: Site Access Unser Blvd. at Driveway "C"

Existing and Planned Zoning

The proposed development is located within the southwest quadrant of Albuquerque, NM. The north portion of the proposed Unser Blvd. and Sage Rd. Development, totaling 15-acres, is currently zoned as Planned Development (PD). PD is to accommodate small to medium scale projects that do not create significant adverse impacts on nearby existing neighborhoods, City Parks or trails, or Major Public Open Space. The 15-acres will include one fast-food restaurant, one Gas Station with 24 fueling stations and convenient store (>5.5K GFA), and 75 multifamily housing (low rise). The south portion (2.62-ac) of the Proposed Development is currently zoned as Commercial (MX-L) Low Intensity. This portion will contain one Automated Car Wash and the rest is Residential town-home lots. See Figure 41: Unser Blvd. and Sage Rd. Development Zone Atlas Map below and Appendix A-02.

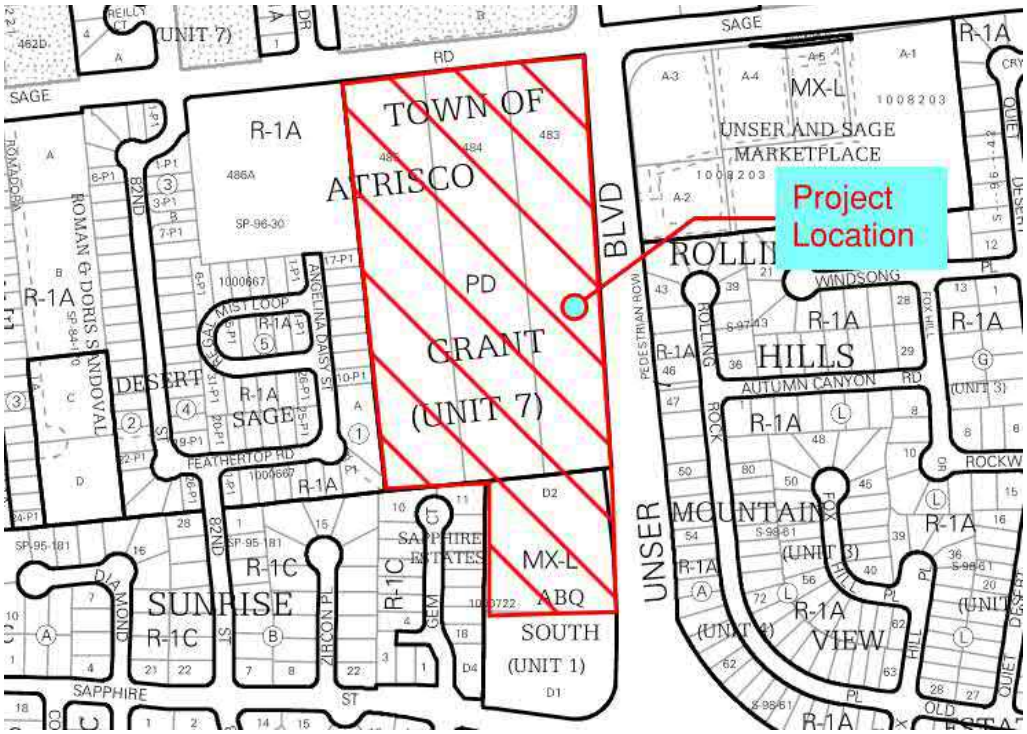


Figure 41: Unser Blvd. and Sage Rd. Development Zone Atlas Map

Alternative Travel Modes

There is one Primary Route (ABQ Ride) in the area of analysis along Coors Blvd. that stretches from Gun Club Rd. to Interstate 40. The Primary Route (155) is 21.6 miles in length.

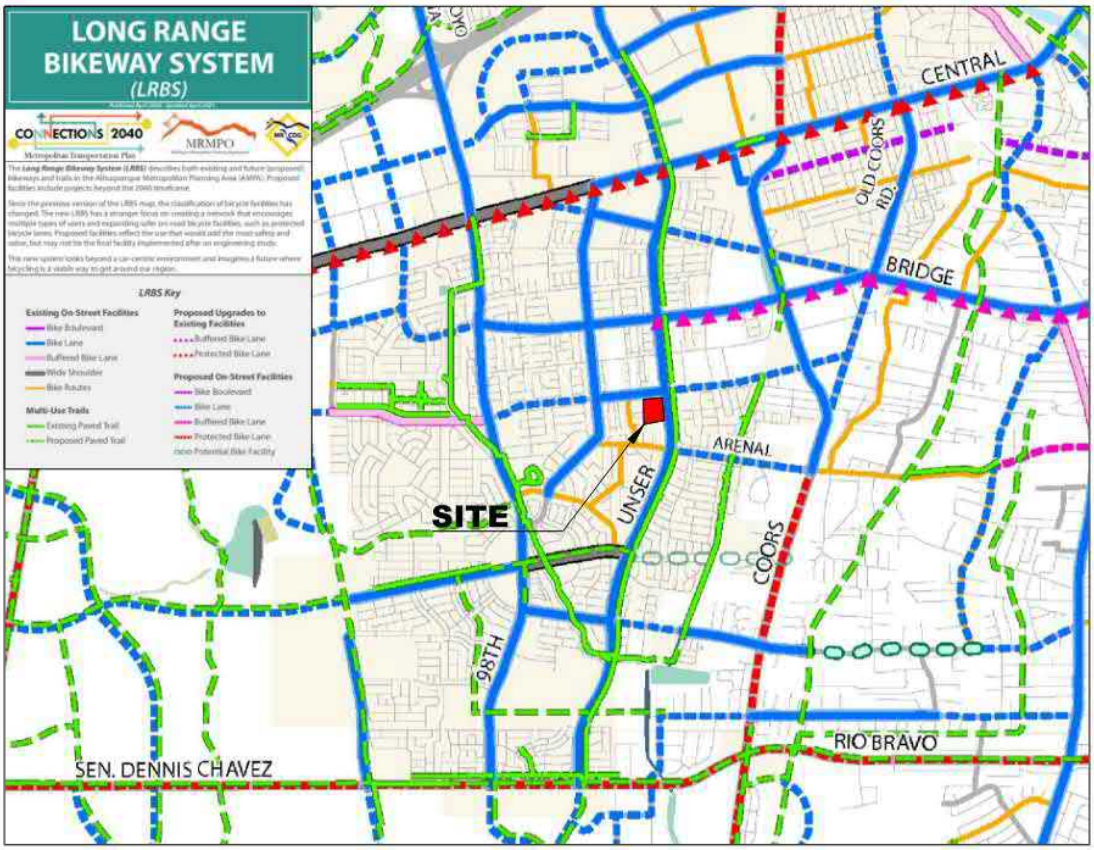
Unser Blvd. contains a multi-use train that runs north to south along the east side of the roadway called the Unser Trail.

San Ygnacio Rd is the only roadway evaluated that is not equipped with bicycle facilities and not planned for future bicycle facilities according to the Futures 2040 Long Range Bikeway System Map.

Unser Blvd., Sage Rd., Blvd., Coors Blvd., Arenal Rd, and Tower Rd. all have designated transit routes equipped with bicycle facilities and none of them are planned for future bicycle facilities according to the Futures 2040 Long Range Bikeway System Map

Arenal Rd. and Tower Rd are served by Regular Route 54. Coors Blvd. is served by Regular Route 155. No Rapid Routes or ABQ Transit routes are in the study area.

Following are the Futures 2040 maps for the Long-Range Roadway System, the Bike Route System, and the ABQ RIDE Master bus route map.



Portion of Futures 2040 Long Range Bikeway System (from Mid-Region Council of Governments)

Figure 42: Futures Long Range Bikeway System

Figure 43: ABQ Ride System Map

Traffic Impact Analysis

The Highway Capacity Manual establishes a criterion for the determinations of signalized and unsignalized levels-of-service. These levels determine if an intersection will be proficient enough to accommodate the projected volumes from the new development. The average control delay is calculated for each intersection and for each lane group of each leg of the intersection. The analysis of the calculated control delay determines the level of service for each lane group. However, if the v/c ratio is 1.0 or greater, then the v/c ratio overrides the calculated delay and qualifies the lane group to be LOS "F". The control delay generally determines the level-of-service based on the following tables:

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

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

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

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

For parameter of acceptance, generally a Level-of-Service D or better is an acceptable parameter for design purposes.

In summary, the proposed Unser Blvd. and Sage Rd. Development will have minimal adverse impact on the adjacent transportation system. Level of service (LOS) at the intersections in the study area meet or exceed the City of Albuquerque's minimum acceptable Level of Service Standards for the 2025 implementation year and 2035 horizon year for all intersections in the study area.

Level of Service (LOS)

According to the City of Albuquerque Design Process Manual (DPM), LOS standards are defined by Access Category. Table 5: Design Process Manual LOS Criteria identifies the minimum acceptable LOS standards according to Functional Classification & Roadway Type and City of Albuquerque's ABC Comp Plan Type.

Table 5: Design Process Manual LOS Criteria

TABLE 7.5.88 **Desired LOS by Location and Corridor Type**

Functional Classification & Roadway Type	ABC Comp Plan Center Type						
	Transit Station Area	Downtown	Urban Center	Activity Center	Village Center	Employment Center	Outside Center
Premium Transit	E-F	E-F	E-F	E-F	E-F	E-F	E-F
Major Transit	E	E-F	E	E	D-E	D-E	D-E
Multi-modal	E	E	E	E	D-E	D-E	D-E
Commuter	E	E	D-E	D-E	D-E	D-E	D
Other Arterial	E	E	E	D-E	D-E	D-E	D
Minor Arterial	E	E	D-E	D-E	D-E	D	D
Collector	E	D-E	D	D	C-D	C-D	C-D

Unser Blvd. is considered a Principle Arterial not within a Center, intersections along the Unser Blvd. corridor should have a LOS D or better. Mitigations have a LOS=D or better or mitigated to maintain the LOS at existing (No Build) condition levels.

Analysis of Existing Conditions

Existing Traffic Volumes

Since the Implementation Year is less than three years in the future and the annual background traffic growth rate is approximately 4.5%, no existing analysis was performed. The Implementation Year NO BUILD analyses should closely approximate existing conditions. Existing traffic volumes (turning movement counts) were collected at the intersections targeted for analysis in this study in April 2022 and attached in Appendix A-134 through A-138.

Existing traffic volumes were collected during April of 2022 while school was in session. The turning movement counts for the 2025 and 2035 AM and PM Peak Hour Demand, NO BUILD, and BUILD conditions for each movement in each intersection the study area are provided in Appendix A-05. NO BUILD volumes were generated by adjusting the existing volumes with the background traffic growth. BUILD volumes were calculated by increasing the NO BUILD volumes by the trips generated by the project. Summarized Volumes can be found in

Planned or Approved Development and Transportation Improvements

There are two other major developments planned or approved in the influence area. Development activity within the area defined during the scoping meeting of the Unser Blvd and Sage Rd Development TIS included both the MAS Charter school and Sage Park Subdivision. The MAS Charter school expansion began in 2018. The existing 16-acres of land, designated for grades K-5th education facilities implemented during the 2018-2019 school year. The current growth of the school includes grades K-7th during 2021-2022school year. The future expansion is projected for grades K-12th during the 2026-2027 year. The Final TIS Report for MAS Charter School Expansion (March 30th, 2021) was projected to include 1470 students in total with the reduction of 288 students to account for usage of the five buses of transport.

Table 6: MAS Charter School Trip Generation Summary

MAS Charter School Expansion (San Ygnacio Rd. / Old Coors Rd.)

Trip Generation Data (ITE Trip Generation Manual - 10th Edition)

COMMENT		USE (ITE CODE) DESCRIPTION		24 HR VOL GROSS	A. M. PEAK HR. ENTER	A. M. PEAK HR. EXIT	P. M. PEAK HR. ENTER	P. M. PEAK HR. EXIT
		Summary Sheet	Units					
Existing school w/1 bus		Private School [K-12] (536)	138.00	342	65	42	58	81
Future (2032)	w/ 5 buses	Private School [K-12] (536)	1,183.00	2,934	575	368	247	341
		Increase in trips		2,592	510	326	189	260

The volumes available from the MAS Charter School TIS report were included in the base traffic volumes at the intersection of Sage Rd. and Coors Blvd. The trips generated by the MAS Charter School for AM and PM Peak:

Table 7: MAS Charter School AM Peak Trips Generated

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
52	0	0	48	32	72	0	76	0	0	0	4

Table 8: MAS Charter School PM Peak Trips Generated

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
20	0	0	40	24	56	0	28	0	0	0	0

The Sage Park Subdivision base traffic volumes were also included for the Unser Blvd and Sage Rd Development TIS. The location of this subdivision is located on the northwest corner of Sage Rd. at Coors Blvd. Projected volumes were gathered from the Sage Park Subdivision TIS report completed by Lee Engineering in March 2021. The proposed subdivision includes 62 single family dwelling units with approximately 9.96-acres in total. Site access includes two access points; one access from San Ygnacio Rd., and one access from Sage Rd. Due to the traffic patterns identified in the report, the trip generated by the project have been considered and summarized below in Table 9: Sage Park Subdivision AM Peak Trips Generated and Table 10: Sage Park Subdivision PM Peak Trips Generated.

Table 9: Sage Park Subdivision AM Peak Trips Generated

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3	11	2	0	3	0	1	1	0	0	3	1

Table 10: Sage Park Subdivision PM Peak Trips Generated

Eastbound (Sage Rd.)			Westbound (Sage Rd.)			Northbound (Coors Blvd.)			Southbound (Coors Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2	7	1	0	12	0	2	4	0	0	2	3

Crash Analysis

Crash data for the study area was collected for the years 2015, 2016, 2017, 2018, and 2019. The crash data was taken from the New Mexico Department of Transportation's (NMDOT) statewide database. The crash history data was collected for the intersection of Unser Blvd. and Sage Rd. Based on the low number of crashes reported over the recent five-year period, this report finds that there are no significant safety issues in the study area. Table 11: Unser Blvd. and Sage Rd. Development Crash Analysis Summary below summarizes the crashes by year and by type of crash:

Table 11: Unser Blvd. and Sage Rd. Development Crash Analysis Summary

Crash Analysis

Unser and Sage Development

Unser Blvd. / Sage Rd - Albuquerque, NM

Intersection: 1. Unser Blvd. / Sage Rd.
Date: 4/19/2023

		Alcohol/Drug Involved	Disregarded Traffic Signal	Driver Inattention	Excessive Speed	Failure to Yield	Following Too Closely/ Overtaking	Improper Lane Change/Turn	Other	Missing Data	Total
2015		1	2	6	4	1	0	0	2	7	23
2016		0	2	7	0	2	1	1	6	2	21
2017		0	0	6	2	2	7	0	3	5	25
2018		0	1	4	2	3	2	0	4	3	19
2019		0	1	3	2	3	4	0	1	4	18
Total		1	6	26	10	11	14	1	16	21	106
		1%	6%	25%	9%	10%	13%	1%	15%	20%	100%

Average Crashes per Million Entering Vechicles = 1.9

Based on existing (2022) PM Peak Hour Volume x 10 hours x 365 days per year = 11,139,800 veh/year

Analysis of Proposed Conditions

Description of Proposed Development

The proposed development is located at the southwest corner of Unser Blvd. at Sage Rd. It is approximately 4,500-ft west of Coors Blvd and approximately 7,000-ft from US Route 66 in the City of Albuquerque, NM. The site is to be developed as the following:

- 1 Gas Station/Convenience Store with 24 Fueling Positions
- 3,820 sq.ft. Fast Food Restaurant with a drive through window totaling
- 75 units Multifamily Housing (Low Rise)
- 1 Car Wash with One Automatic Tunnel

The proposed site plan is shown on the next page and in Appendix A-03.

SITE PLAN HERE

Trip Generation

The ITE Codes used for the proposed Unser Blvd. and Sage Rd. Development include the following: ITE Code 945 (Gas Station/Convenience Store 5.5K-10K GFA), ITE Code 934 (Fast Food Restaurant with a Drive-Thru Window), ITE Code 948 (Automated Car Wash), and ITE Code 210 (Multifamily Housing (Low Rise)). A 33% pass-by trip rate reduction was applied to the trip generation rates for retail trips only. Table 12: Unser Blvd. and Sage Rd Development Trip Generation summary is below and attached in **Error! Reference source not found.** Land use descriptions are also attached in Appendix A-04

Table 12: Unser Blvd. and Sage Rd Development Trip Generation

Unser Blvd SW and Sage Rd SW Development

Trip Generation Data (ITE Trip Generation Manual - 11th Edition)

USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		*GROSS*	*ENTER*	*EXIT*	*ENTER*	*EXIT*
Summary Sheet	Units					
Multifamily Housing (Low-Rise)	75	506	7	23	33	20
Convenience Store / Gas Station - GFA 5.5-10K (945)	24	8,298	379	379	323	323
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		**10,587**	**473**	**485**	**461**	**442**
Retail Commercial Trips		10,081	466	462	428	422
Pass-By Trips	33%		*-154*	*-152*	*-141*	*-139*
Total New Primary Trips			312	310	287	283
Total New Residential Trips			7	23	33	20

Based on the trip generation summary table the Unser Blvd. at Sage Rd. development is predicted to increase the study areas by generating 11,000 daily weekday trips.

Traffic Volume Projections

The anticipated Implementation Year for this project is 2025 and the Horizon Year is 2035. MRCOG Traffic Flow Map data was used for traffic growth from 2015 to 2022 to determine the historical growth rates for the study area. The calculated growth rate at the intersections varies from 1.3% to 4.5% and is the same for both the Implementation Year and Horizon Year. The following growth rate percentages were used.

1. Unser Blvd & Arenal Rd. – 4.3%
2. Unser Blvd & Sage Rd. – 4.5%
3. Unser Blvd & Tower Rd. – 4.4%
4. Coors Blvd & Sage Rd. – 1.3%
5. Sage Rd. & 86th St. – 1.9%

6. Unser Blvd & San Ygnacio Rd – 4.3%

For a conservative approach, max growth rates experienced by the intersections above were used for evaluation of the Driveways:

7. Sage Rd. & Driveway “A” – 4.5%
8. Unser Blvd & Driveway “B” – 4.5%
9. Unser Blvd & Driveway “C” – 4.5%

Background traffic volumes were calculated by applying historical annual background traffic growth rates to the existing collected data, and then adding MAS Charter School and Sage Park Development traffic volumes for the Implementation Year (2025) No Build volumes. See Appendix A-06 for the Historic Growth Rate Graph.

Trip Distribution and Trip Assignments

The trip assignment percentages were used to distribute the trips generated to the individual traffic movements at each intersection. Trip assignments percentages for new trips entering and exiting are derived from data established in the trip distribution determination process and logical routing. Both residential and retail commercial trips were distributed based on Mid-Region Council of Governments’ Socio-economic data (2016-2040 data set).

The retail commercial trips were assigned based on population distribution within a two-mile radius of the project. A visual of the data analysis subzones for commercial trips that will be entering and exiting the site. The Data Table and Maps used to calculate the commercial trip distribution percentages can be found in Appendix A-06.

The residential trips were distributed based on the employment distribution regionally inversely proportional to the distance of the subarea from the project. The Residential Trip Distribution Maps and the Data Table used to calculate the Residential Trip Distributions percentages can be found in Appendix A-06.

Intersection Analysis

The following Lanes / Volumes Analysis Tables demonstrate the impacts to the adjacent roadway system. The Lanes / Volumes Analysis Tables quantify the APH and PPH No Build and Build volumes along with the associated v/c ratios, LOS, calculated delays, and 95th percentile queue lengths. Mitigation measures, if necessary, will be analyzed and the results will be provided in the table as well. The Lanes / Volume Analysis Tables report the performance of proposed geometric mitigation measures and applied signal timing optimizations. The tables are attached in Appendix A-06.

#1 – Signalized Intersection of Unser Blvd. at Arenal Rd.

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Arenal Rd. are summarized in Table 13: 2025 Implementation Year Unser Blvd. at Arenal Rd. AM Peak LVAM Summary, as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Arenal Rd. are summarized in Table 14: 2035 Horizon Year Unser Blvd. at Arenal Rd. LVAM Summary, as well as attached in Appendix A-07.

Table 13: 2025 Implementation Year Unser Blvd. at Arenal Rd. AM Peak LVAM Summary

Arenal Rd. / Unser Blvd. 2025_ Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	172	230	63	163	149	275	63	763	235	239	714	41
V/C Ratio	0.67	0.40		0.49	0.28		0.15	0.42		0.51	0.32	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.7	49.0	0.0	39.1	36.9	0.0	17.7	20.5	0.0	12.8	0.4	0.0
Intersection LOS	**C - 21.2**											
95th Percentile Queue (ft)	237.5	150.0	0.0	187.5	167.5	0.0	47.5	287.5	0.0	122.5	5.0	0.0
95th Percentile Queue (veh)	9.5	6.0	0.0	7.5	6.7	0.0	1.9	11.5	0.0	4.9	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	185	230	63	163	149	306	63	817	235	270	769	54
V/C Ratio	0.68	0.37		0.47	0.28		0.16	0.47		0.60	0.35	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.2	47.8	0.0	38.1	36.0	0.0	19.5	22.9	0.0	14.2	0.5	0.0
Intersection LOS	**C - 21.5**											
95th Percentile Queue (ft)	250.0	147.5	0.0	185.0	165.0	0.0	50.0	322.5	0.0	142.5	5.0	0.0
95th Percentile Queue (veh)	10.0	5.9	0.0	7.4	6.6	0.0	2.0	12.9	0.0	5.7	0.2	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	68	81	63	190	113	388	36	637	163	316	966	131
V/C Ratio	0.46	0.32		0.65	0.31		0.09	0.31		0.52	0.39	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.3	57.9	0.0	52.5	45.3	0.0	12.4	14.0	0.0	8.1	0.4	0.0
Intersection LOS	**B - 15.1**											
95th Percentile Queue (ft)	102.5	57.5	0.0	245.0	142.5	0.0	22.5	205.0	0.0	117.5	5.0	0.0
95th Percentile Queue (veh)	4.1	2.3	0.0	9.8	5.7	0.0	0.9	8.2	0.0	4.7	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	80	81	63	190	113	416	36	688	163	344	1,016	143
V/C Ratio	0.50	0.28		0.62	0.30		0.10	0.34		0.58	0.41	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	60.9	56.6	0.0	50.3	44.2	0.0	13.8	15.8	0.0	9.1	0.5	0.0
Intersection LOS	**B - 15.3**											
95th Percentile Queue (ft)	120.0	57.5	0.0	240.0	140.0	0.0	25.0	232.5	0.0	135.0	7.5	0.0
95th Percentile Queue (veh)	4.8	2.3	0.0	9.6	5.6	0.0	1.0	9.3	0.0	5.4	0.3	0.0

Table 14: 2035 Horizon Year Unser Blvd. at Arenal Rd. LVAM Summary

Arenal Rd. / Unser Blvd. 2035_ Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_NO BUILD Volumes	237	318	87	224	206	380	87	1,054	324	331	985	56
V/C Ratio	0.74	0.40		0.58	0.32		0.31	0.76		0.91	0.50	
Level-of-Service	D	D		C	C		C	D		D	A	
Control Delay (Seconds)	54.5	43.1	0.0	34.8	31.2	0.0	31.3	38.1	0.0	38.6	0.8	0.0
Intersection LOS	**C - 28.2**											
95th Percentile Queue (ft)	310.0	192.5	0.0	230.0	207.5	0.0	95.0	525.0	0.0	245.0	10.0	0.0
95th Percentile Queue (veh)	12.4	7.7	0.0	9.2	8.3	0.0	3.8	21.0	0.0	9.8	0.4	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_BUILD Volumes	250	318	87	224	206	411	87	1,108	324	362	1,040	69
V/C Ratio	0.75	0.38		0.56	0.31		0.36	0.91		0.95	0.54	
Level-of-Service	D	D		C	C		D	D		E	B	
Control Delay (Seconds)	54.9	42.0	0.0	33.5	30.3	0.0	37.4	51.9	0.0	65.5	11.9	0.0
Intersection LOS	**D - 38.3**											
95th Percentile Queue (ft)	327.5	192.5	0.0	227.5	205.0	0.0	107.5	632.5	0.0	502.5	230.0	0.0
95th Percentile Queue (veh)	13.1	7.7	0.0	9.1	8.2	0.0	4.3	25.3	0.0	20.1	9.2	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_NO BUILD Volumes	94	112	87	262	156	536	50	879	224	437	1,335	181
V/C Ratio	0.54	0.32		0.84	0.38		0.19	0.49		0.82	0.55	
Level-of-Service	E	E		E	D		B	C		B	A	
Control Delay (Seconds)	59.9	55.3	0.0	66.6	43.7	0.0	19.8	22.2	0.0	13.0	0.1	0.0
Intersection LOS	**B - 18.8**											
95th Percentile Queue (ft)	140.0	77.5	0.0	165.0	192.5	0.0	42.5	340.0	0.0	125.0	0.0	0.0
95th Percentile Queue (veh)	5.6	3.1	0.0	6.6	7.7	0.0	1.7	13.6	0.0	5.0	0.0	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2035_BUILD Volumes	106	112	87	262	156	564	50	930	224	465	1,385	193
V/C Ratio	0.57	0.30		0.80	0.36		0.21	0.55		0.88	0.58	
Level-of-Service	E	D		E	D		C	C		C	A	
Control Delay (Seconds)	59.4	54.0	0.0	61.2	42.6	0.0	22.3	25.3	0.0	29.2	1.0	0.0
Intersection LOS	**C - 21.6**											
95th Percentile Queue (ft)	157.5	77.5	0.0	145.0	190.0	0.0	45.0	382.5	0.0	265.0	15.0	0.0
95th Percentile Queue (veh)	6.3	3.1	0.0	5.8	7.6	0.0	1.8	15.3	0.0	10.6	0.6	0.0

Both the implementation year and the horizon year analysis in the above tables show that the signalized intersection of Unser Blvd. at Arenal Rd. is operating at an acceptable LOS for all conditions evaluated in this study The. The southbound left-turn LOS decreases from a LOS D to LOS E, although the queue length does not exceed 500 feet of storage length during the APH for the horizon year build conditions. The V/C for the southbound through movement is nearly 1.0, at 0.91 for the APH horizon year no build conditions, and marginally increased to 0.95 during APH horizon year build conditions. It is recommended that signal timing adjustments be considered for the southbound left-turn movement. Additional recommendations to the signal timing optimization should be done at the discretion of the COA and not the expense of the Development since the background growth of the intersection impacts the intersection performance prior to the additional

volumes generated by the proposed Unser Blvd. and Sage Rd. Development. The PPH has failing LOS for many movements experience no build volume conditions, although the V/C ratio does not exceed 1.0. This indicates that the new trips generated by the Unser Blvd. and Sage Rd. Development present no significant adverse impact to the operation of this signalized intersection. Overall, the impact by the Unser Blvd. and Sage Rd. Development does not significantly impact the Unser Blvd. at Arenal Rd. intersection.

#2 – Signalized Intersection of Unser Blvd. at Sage Rd.

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Sage Rd. are summarized in Table 15: 2025 Implementation Year Unser Blvd. at Sage Rd. LVAM Summary, as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Sage Rd. are summarized in Table 16: 2035 Horizon Year Unser Blvd. at Sage Rd. LVAM Summary, as well as attached in Appendix A-07.

Table 15: 2025 Implementation Year Unser Blvd. at Sage Rd. LVAM Summary

Sage Rd. / Unser Blvd. 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD Volumes	286	331	213	41	109	86	95	1,053	100	86	735	82
V/C Ratio	0.88	0.89		0.31	0.43		0.17	0.50		0.25	0.35	
Level-of-Service	E	E		D	D		A	B		B	A	
Control Delay (Seconds)	64.4	57.8	0.0	47.5	51.8	0.0	9.4	15.7	0.0	11.3	0.5	0.0
Intersection LOS	**C - 23.4**											
95th Percentile Queue (ft)	195.0	387.5	0.0	42.5	105.0	0.0	45.0	330.0	0.0	40.0	5.0	0.0
95th Percentile Queue (veh)	7.8	15.5	0.0	1.7	4.2	0.0	1.8	13.2	0.0	1.6	0.2	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	1.23	0.90		0.37	0.44		0.19	0.50		0.25	0.39	
Level-of-Service	F	E		D	D		B	B		B	A	
Control Delay (Seconds)	175.9	62.6	0.0	44.3	49.0	0.0	11.0	17.8	0.0	12.8	0.6	0.0
Intersection LOS	**E - 43.2**											
95th Percentile Queue (ft)	662.5	477.5	0.0	50.0	122.5	0.0	50.0	340.0	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	26.5	19.1	0.0	2.0	4.9	0.0	2.0	13.6	0.0	1.8	0.3	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	0.98	0.46	0.51	0.27	0.41		0.19	0.50		0.26	0.40	
Level-of-Service	F	D	D	D	E		B	B		B	A	
Control Delay (Seconds)	83.0	43.6	41.4	51.1	56.5	0.0	11.5	18.6	0.0	13.4	0.6	0.0
Intersection LOS	**C - 29.1**											
95th Percentile Queue (ft)	295.0	222.5	245.0	72.5	95.0	0.0	52.5	347.5	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	11.8	8.9	9.8	2.9	3.8	0.0	2.1	13.9	0.0	1.8	0.3	0.0
PM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD Volumes	127	136	250	136	209	59	200	858	64	95	1,167	163
V/C Ratio	0.58	0.57		0.50	0.84		0.45	0.39		0.22	0.56	
Level-of-Service	D	E		D	E		A	B		B	A	
Control Delay (Seconds)	46.1	55.1	0.0	44.8	60.2	0.0	8.7	13.3	0.0	10.1	1.1	0.0
Intersection LOS	**B - 16.2**											
95th Percentile Queue (ft)	160.0	185.0	0.0	160.0	262.5	0.0	92.5	252.5	0.0	45.0	15.0	0.0
95th Percentile Queue (veh)	6.4	7.4	0.0	6.4	10.5	0.0	3.7	10.1	0.0	1.8	0.6	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.98	0.60		0.52	0.85		0.48	0.40		0.22	0.62	
Level-of-Service	F	D		D	E		B	B		B	A	
Control Delay (Seconds)	99.9	53.2	0.0	42.5	59.2	0.0	10.3	15.5	0.0	11.8	1.5	0.0
Intersection LOS	**C - 22.8**											
95th Percentile Queue (ft)	240.0	230.0	0.0	170.0	292.5	0.0	102.5	265.0	0.0	50.0	17.5	0.0
95th Percentile Queue (veh)	9.6	9.2	0.0	6.8	11.7	0.0	4.1	10.6	0.0	2.0	0.7	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.20	0.28	0.68	0.57	0.37		0.62	0.38		0.21	0.60	
Level-of-Service	D	D	D	D	D		B	B		B	B	
Control Delay (Seconds)	41.8	47.1	47.8	47.5	47.4	0.0	16.0	13.8	0.0	10.9	18.9	0.0
Intersection LOS	**C - 25.7**											
95th Percentile Queue (ft)	57.5	110.0	300.0	72.5	152.5	0.0	95.0	250.0	0.0	47.5	425.0	0.0
95th Percentile Queue (veh)	2.3	4.4	12.0	2.9	6.1	0.0	3.8	10.0	0.0	1.9	17.0	0.0

Table 16: 2035 Horizon Year Unser Blvd. at Sage Rd. LVAM Summary

Sage Rd. / Unser Blvd. 2035_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_NO BUILD Volumes	399	463	298	57	152	120	133	1,471	139	120	1,027	114
V/C Ratio	1.01	0.93		0.40	0.39		0.31	0.82		0.61	0.57	
Level-of-Service	F	E		D	D		B	C		C	A	
Control Delay (Seconds)	85.2	60.1	0.0	40.6	44.2	0.0	14.0	29.7	0.0	25.2	1.3	0.0
Intersection LOS	**C - 31.4**											
95th Percentile Queue (ft)	47.2	50.2	0.0	40.5	57.0	0.0	20.6	22.5	0.0	17.3	9.7	0.0
95th Percentile Queue (veh)	15.7	21.4	0.0	2.0	5.2	0.0	3.3	24.5	0.0	2.9	0.6	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_BUILD Volumes	538	504	298	70	177	120	133	1,415	139	120	1,077	137
V/C Ratio	1.32	0.94		0.47	0.40		0.35	0.83		0.61	0.64	
Level-of-Service	F	E		D	D		B	C		C	A	
Control Delay (Seconds)	205.3	68.9	0.0	38.6	42.0	0.0	15.8	34.0	0.0	26.2	3.5	0.0
Intersection LOS	**D - 52.7**											
95th Percentile Queue (ft)	942.5	657.5	0.0	57.5	147.5	0.0	90.0	662.5	0.0	77.5	52.5	0.0
95th Percentile Queue (veh)	37.7	26.3	0.0	2.3	5.9	0.0	3.6	26.5	0.0	3.1	2.1	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2035_BUILD Volumes	538	504	298	70	177	120	133	1,415	139	120	1,077	137
V/C Ratio	1.33	0.65	0.70	0.35	0.43		0.31	0.73		0.52	0.56	
Level-of-Service	F	D	D	D	D		B	C		B	A	
Control Delay (Seconds)	83.0	43.6	41.4	51.1	56.5	0.0	11.5	18.6	0.0	13.4	0.6	0.0
Intersection LOS	**D - 46.8**											
95th Percentile Queue (ft)	842.5	297.5	342.5	90.0	122.5	0.0	75.0	562.5	0.0	65.0	15.0	0.0
95th Percentile Queue (veh)	33.7	11.9	13.7	3.6	4.9	0.0	3.0	22.5	0.0	2.6	0.6	0.0
PM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_NO BUILD Volumes	178	190	349	190	292	82	279	1,198	89	133	1,629	228
V/C Ratio	0.72	0.57		0.59	0.87		0.78	0.63		0.46	0.92	
Level-of-Service	D	D		D	E		C	C		B	A	
Control Delay (Seconds)	47.2	50.2	0.0	40.5	57.0	0.0	20.6	22.5	0.0	17.3	9.7	0.0
Intersection LOS	**C - 22.8**											
95th Percentile Queue (ft)	212.5	235.0	0.0	197.5	342.5	0.0	182.5	440.0	0.0	80.0	110.0	0.0
95th Percentile Queue (veh)	8.5	9.4	0.0	7.9	13.7	0.0	7.3	17.6	0.0	3.2	4.4	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2035_BUILD Volumes	295	227	349	204	319	82	279	1,156	89	133	1,688	254
V/C Ratio	1.18	0.63		0.65	0.88		1.14	0.63		0.46	0.99	
Level-of-Service	F	D		D	E		F	C		B	C	
Control Delay (Seconds)	160.5	50.0	0.0	40.6	57.2	0.0	141.2	24.0	0.0	18.0	22.5	0.0
Intersection LOS	**D - 44.8**											
95th Percentile Queue (ft)	415.0	280.0	0.0	210.0	370.0	0.0	555.0	455.0	0.0	82.5	245.0	0.0
95th Percentile Queue (veh)	16.6	11.2	0.0	8.4	14.8	0.0	22.2	18.2	0.0	3.3	9.8	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2035_BUILD Volumes	295	227	349	204	319	82	279	1,156	89	133	1,688	254
V/C Ratio	0.78	0.28	0.69	0.56	0.40		1.26	0.67		0.49	1.06	
Level-of-Service	D	D	D	D	D		F	C		C	F	
Control Delay (Seconds)	49.6	41.9	41.2	35.6	43.2	0.0	191.7	27.8	0.0	20.6	48.3	0.0
Intersection LOS	**D - 49.3**											
95th Percentile Queue (ft)	182.5	137.5	377.5	217.5	195.0	0.0	622.5	492.5	0.0	90.0	457.5	0.0
95th Percentile Queue (veh)	7.3	5.5	15.1	8.7	7.8	0.0	24.9	19.7	0.0	3.6	18.3	0.0

The implementation year during the APH experiences a decreased LOS from LOS C to LOS D for the intersection performance while remaining acceptable to COA requirements. It is indicated the there is an existing high demand for the eastbound left-turn movement which has a failing LOS E during no build volume conditions. Mitigated lane geometry and signal operations were analyzed that also reflect an increase in the LOS to a LOS F. The eastbound left-turn movement is permissive protective, although the V/C is exceeded during the implementation year build conditions once the intersection was mitigated the queue length did not exceed the turn lane capacity. However, the eastbound through direction has an existing LOS E experienced with no build volume conditions that remained the same for the applied build volumes, and then improved to LOS D when mitigated measures were applied. Adjustments to the signal timing alleviated the queueing issues experienced by traffic generated from the Unser Blvd. and Sage Rd. Development turning eastbound left. Mitigation measures reduced capacity issues eastbound by adding a second through lane. During the PPH the eastbound left-turn lane experiences similar capacity and queue issues as APH. The eastbound through lane experiences an improved LOS from LOS E to LOS D with the applied build volumes and mitigation measures. The westbound through lane experiences a decrease in LOS from LOS D to LOS E. This is most likely due to the mitigation measures applied to the signal timing to alleviate delays for the eastbound right-turn volumes during the APH, since the PPH is improved by the additional lane westbound.

The horizon year during the PPH experiences a decrease in LOS from LOS C to LOS D for the intersection performance. It is indicated the high demand volume still exists for the eastbound left-turn movement which has a failing LOS F during APH no build conditions. The eastbound left-turn remains protective permissive during the PPH, however the mitigation measures improve the LOS from LOS F to LOS D. By adjusting the signal timing for the eastbound left-turn the V/C ratio is greatly reduced and no longer exceeds 1.5. Adding an additional eastbound through lane improves the LOS from LOS E to LOS D. The PPH westbound through movement is also improved by implementing the mitigation measures of adding an additional westbound through lane. Southbound through movements during the PPH is greatly impacted by the signal timing adjustment implemented to alleviate the eastbound turning traffic. The southbound movements volume to capacity ratio for the no build condition was nearly 1.0, at 0.92. Adjusting the ring barrier decreased the amount of green time for the southbound through movement, although the LOS remains at an acceptable LOS for the intersection performance.

Based on the additional traffic volumes from the proposed development mitigation measures are suggested. It is recommended that the proposed mitigation measures be applied to the intersection of Unser Blvd. at Sage Rd. The mitigation measures considered are an

additional eastbound and westbound through lane, adjusting the signal timing operation, and removal of the "free-right." The evaluation of this intersection with the proposed mitigation measures has improved delays by 14.1 seconds for the build volume during the APH. Additional recommendations to the signal timing optimization should be done at the discretion of the COA and not the expense of the Development since the background growth of the intersection impacts the intersection performance prior to the additional volumes generated by the proposed Unser Blvd. and Sage Rd. Development. The mitigation measure to the geometry of the intersection is expounded on in the Mitigation Analysis section of this TIS report.

The overall intersection delay associated with the AM and PM Peak analysis is LOS "C" which is acceptable by the COA. The new trips generated by the Unser Blvd. and Sage Rd. Development present a significant adverse impact to this signalized intersection. It is recommended that a second eastbound through lane and a second westbound thru lane be implemented on Sage Rd. though the intersection to increase capacity and mitigate the impact of this development on the intersection.

#3 – Signalized Intersection of Unser Blvd. at Tower Rd.

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Tower Rd. are summarized in Table 17: 2025 Implementation Year Unser Blvd. at Tower Rd. LVAM Summary, as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Tower Rd. are summarized in Table 18: 2035 Horizon Year Unser Blvd. at Tower Rd. LVAM Summary, as well as attached in Appendix A-07.

Table 17: 2025 Implementation Year Unser Blvd. at Tower Rd. LVAM Summary

Tower Rd. / Unser Blvd. 2025_ Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	95	118	68	36	86	63	32	969	36	27	462	59
V/C Ratio	0.54	0.29		0.22	0.21		0.04	0.37		0.05	0.17	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	56.6	52.5	0.0	3.8	0.4	0.0	3.9	5.0	0.0
Intersection LOS	**B - 11.7**											
95th Percentile Queue (ft)	140.0	80.0	0.0	50.0	57.5	0.0	7.5	7.5	0.0	7.5	72.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.0	2.3	0.0	0.3	0.3	0.0	0.3	2.9	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	95	118	87	43	86	63	51	1,025	43	27	508	59
V/C Ratio	0.54	0.29		0.27	0.21		0.07	0.39		0.06	0.19	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	57.0	52.5	0.0	3.9	0.4	0.0	4.0	5.3	0.0
Intersection LOS	**B - 11.4**											
95th Percentile Queue (ft)	140.0	80.0	0.0	60.0	57.5	0.0	12.5	7.5	0.0	7.5	82.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.4	2.3	0.0	0.5	0.3	0.0	0.3	3.3	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	63	118	100	54	267	77	136	906	32	50	1,295	131
V/C Ratio	0.45	0.23		0.27	0.52		0.40	0.36		0.10	0.53	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.4	51.7	0.0	8.1	0.4	0.0	5.7	10.7	0.0
Intersection LOS	**B - 14.5**											
95th Percentile Queue (ft)	92.5	77.5	0.0	75.0	182.5	0.0	42.5	7.5	0.0	17.5	325.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.0	7.3	0.0	1.7	0.3	0.0	0.7	13.0	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	63	118	117	60	267	77	153	956	38	50	1,354	131
V/C Ratio	0.45	0.23		0.30	0.52		0.46	0.38		0.10	0.56	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.7	51.7	0.0	9.1	0.4	0.0	5.8	11.3	0.0
Intersection LOS	**B - 14.6**											
95th Percentile Queue (ft)	92.5	77.5	0.0	82.5	182.5	0.0	47.5	7.5	0.0	17.5	350.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.3	7.3	0.0	1.9	0.3	0.0	0.7	14.0	0.0

Table 18: 2035 Horizon Year Unser Blvd. at Tower Rd. LVAM Summary

Tower Rd. / Unser Blvd. 2035_ Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_NO BUILD Volumes	132	163	94	50	119	88	44	1,346	50	38	641	82
V/C Ratio	0.62	0.30		0.26	0.22		0.07	0.54		0.11	0.26	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	56.9	49.1	0.0	53.7	48.4	0.0	5.5	2.3	0.0	5.4	7.3	0.0
Intersection LOS	**B - 12.7**											
95th Percentile Queue (ft)	192.5	105.0	0.0	67.5	77.5	0.0	15.0	65.0	0.0	12.5	135.0	0.0
95th Percentile Queue (veh)	7.7	4.2	0.0	2.7	3.1	0.0	0.6	2.6	0.0	0.5	5.4	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_BUILD Volumes	132	163	113	57	119	88	63	1,402	57	38	687	82
V/C Ratio	0.62	0.30		0.30	0.22		0.11	0.56		0.11	0.28	
Level-of-Service	E	D		D	D		A	A		A	A	
Control Delay (Seconds)	56.9	49.1	0.0	54.1	48.4	0.0	5.6	2.4	0.0	5.6	7.7	0.0
Intersection LOS	**B - 12.6**											
95th Percentile Queue (ft)	192.5	105.0	0.0	77.5	77.5	0.0	20.0	70.0	0.0	12.5	150.0	0.0
95th Percentile Queue (veh)	7.7	4.2	0.0	3.1	3.1	0.0	0.8	2.8	0.0	0.5	6.0	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_NO BUILD Volumes	88	163	138	75	371	107	189	1,258	44	69	1,798	182
V/C Ratio	0.54	0.23		0.30	0.52		0.89	0.55		0.20	0.82	
Level-of-Service	E	D		D	D		D	A		A	C	
Control Delay (Seconds)	57.9	43.7	0.0	49.0	46.7	0.0	46.1	5.0	0.0	8.9	22.7	0.0
Intersection LOS	**C - 22.4**											
95th Percentile Queue (ft)	127.5	100.0	0.0	97.5	230.0	0.0	205.0	137.5	0.0	30.0	687.5	0.0
95th Percentile Queue (veh)	5.1	4.0	0.0	3.9	9.2	0.0	8.2	5.5	0.0	1.2	27.5	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2035_BUILD Volumes	88	163	155	81	371	107	206	1,308	50	69	1,857	182
V/C Ratio	0.54	0.23		0.32	0.52		0.90	0.57		0.21	0.87	
Level-of-Service	E	D		D	D		E	A		A	C	
Control Delay (Seconds)	57.9	43.7	0.0	49.3	46.7	0.0	61.1	5.2	0.0	9.8	27.5	0.0
Intersection LOS	**C - 25.3**											
95th Percentile Queue (ft)	127.5	100.0	0.0	107.5	230.0	0.0	315.0	145.0	0.0	32.5	782.5	0.0
95th Percentile Queue (veh)	5.1	4.0	0.0	4.3	9.2	0.0	12.6	5.8	0.0	1.3	31.3	0.0

Both the implementation year and the horizon year analysis in the above tables show that the signalized intersection of Unser Blvd. at Tower Rd. is operating at an acceptable level of service for all conditions evaluated in this study. The increase in northbound left-turn volumes decreases the LOS D to LOS E, although the V/C ratio does not exceed 1.0. Although the northbound left-turn movement is protected permissive the delay is significantly increased by 16.0 seconds during the PPH horizon year build volumes. Overall, the total intersection delay experienced by the intersection of Unser Blvd. at Tower Rd. during horizon year build conditions increases by 3.0 seconds compared to horizon year no build conditions. The new trips generated for the Unser Blvd. and Sage Rd. Development present no significant adverse impact to the signalized intersection of Unser Blvd. at Tower Rd, therefore no recommendation is suggested.

#4 – Signalized Intersection of Coors Blvd. at Sage Rd.

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of Coors Blvd. at Sage Rd. are summarized in Table 19: 2025 Implementation Year Coors Blvd. at Sage Rd. LVAM Summary, as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of Coors Blvd. at Sage Rd. are summarized in Table 20: 2035 Horizon Year Coors Blvd. at Sage Rd. LVAM Summary, as well as attached in Appendix A-07.

Table 19: 2025 Implementation Year Coors Blvd. at Sage Rd. LVAM Summary

Sage Rd. / Coors Blvd. 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	304	210	68	94	164	234	22	1,137	17	54	585	71
V/C Ratio	7.79	0.00	0.13	1.96	0.00	0.46	0.05	0.95	0.03	0.17	0.42	0.11
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,129.6	0.0	21.2	487.2	0.0	24.2	15.7	45.4	19.5	17.6	20.3	17.3
Intersection LOS	**F - 610.7**											
95th Percentile Queue (ft)	2,432.5	0.0	42.5	862.5	0.0	167.5	10.0	480.0	10.0	22.5	182.5	40.0
95th Percentile Queue (veh)	97.3	0.0	1.7	34.5	0.0	6.7	0.4	19.2	0.4	0.9	7.3	1.6
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	319	225	74	94	179	234	27	1,137	17	54	585	83
V/C Ratio	8.27	0.00	0.15	2.03	0.00	0.46	0.06	0.95	0.03	0.17	0.44	0.14
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,345.8	0.0	21.3	517.6	0.0	24.2	15.2	45.4	19.5	17.8	21.1	18.2
Intersection LOS	**F - 672.4**											
95th Percentile Queue (ft)	2,580.0	0.0	47.5	927.5	0.0	167.5	12.5	480.0	10.0	25.0	187.5	47.5
95th Percentile Queue (veh)	103.2	0.0	1.9	37.1	0.0	6.7	0.5	19.2	0.4	1.0	7.5	1.9
PM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	80	73	5	131	302	255	85	892	179	91	792	115
V/C Ratio	1.54	0.00	0.01	5.11	0.00	0.52	0.20	0.77	0.35	0.23	0.68	0.22
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	319.6	0.0	21.4	1,910.2	0.0	26.2	15.0	32.1	24.7	15.8	29.1	22.7
Intersection LOS	**F - 314.7**											
95th Percentile Queue (ft)	452.5	0.0	2.5	1,955.0	0.0	195.0	37.5	337.5	132.5	40.0	290.0	80.0
95th Percentile Queue (veh)	18.1	0.0	0.1	78.2	0.0	7.8	1.5	13.5	5.3	1.6	11.6	3.2
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	93	87	10	131	316	255	90	892	179	91	792	131
V/C Ratio	1.79	0.00	0.02	5.30	0.00	0.52	0.21	0.77	0.35	0.23	0.68	0.25
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	428.6	0.0	21.5	1,995.2	0.0	26.2	15.0	32.1	24.7	15.8	29.4	23.3
Intersection LOS	**F - 338.5**											
95th Percentile Queue (ft)	592.5	0.0	7.5	2,025.0	0.0	195.0	40.0	337.5	132.5	40.0	290.0	92.5
95th Percentile Queue (veh)	23.7	0.0	0.3	81.0	0.0	7.8	1.6	13.5	5.3	1.6	11.6	3.7

Table 20: 2035 Horizon Year Coors Blvd. at Sage Rd. LVAM Summary

Sage Rd. / Coors Blvd. 2035_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	336	235	77	99	180	254	24	1,269	19	61	658	80
V/C Ratio	8.74	0.00	0.15	2.22	0.00	0.51	0.06	1.07	0.04	0.19	0.48	0.13
Level-of-Service	F		C	F		C	B	F	B	B	C	B
Control Delay (Seconds)	3,556.0	0.0	21.7	603.0	0.0	25.1	15.8	77.6	19.9	17.7	21.2	17.6
Intersection LOS	**F - 705.5**											
95th Percentile Queue (ft)	2,712.5	0.0	50.0	1,002.5	0.0	187.5	12.5	690.0	12.5	27.5	210.0	45.0
95th Percentile Queue (veh)	108.5	0.0	2.0	40.1	0.0	7.5	0.5	27.6	0.5	1.1	8.4	1.8
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	351	250	83	99	195	254	29	1,269	19	61	658	92
V/C Ratio	9.22	0.00	0.17	2.35	0.00	0.51	0.07	1.07	0.04	0.19	0.49	0.15
Level-of-Service	F		C	F		C	B	F	B	B	C	B
Control Delay (Seconds)	3,774.0	0.0	21.7	662.0	0.0	25.1	15.4	77.6	19.9	17.9	22.0	18.5
Intersection LOS	**F - 770.1**											
95th Percentile Queue (ft)	2,857.5	0.0	55.0	1,085.0	0.0	187.5	15.0	690.0	12.5	27.5	212.5	55.0
95th Percentile Queue (veh)	114.3	0.0	2.2	43.4	0.0	7.5	0.6	27.6	0.5	1.1	8.5	2.2
PM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	87	82	6	143	335	280	96	1,000	201	103	890	129
V/C Ratio	1.69	0.00	0.01	6.41	0.00	0.57	0.24	0.87	0.39	0.27	0.77	0.25
Level-of-Service	F		C	F		C	B	D	C	B	C	C
Control Delay (Seconds)	383.7	0.0	21.6	2,501.2	0.0	27.5	15.8	37.4	25.7	17.1	32.0	23.3
Intersection LOS	**F - 401.4**											
95th Percentile Queue (ft)	452.5	0.0	2.5	1,955.0	0.0	195.0	37.5	337.5	132.5	40.0	290.0	80.0
95th Percentile Queue (veh)	18.1	0.0	0.1	78.2	0.0	7.8	1.5	13.5	5.3	1.6	11.6	3.2
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	100	96	11	143	349	280	101	1,000	201	103	890	145
V/C Ratio	1.95	0.00	0.02	6.63	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Level-of-Service	F		C	F		C	B	D	C	B	C	C
Control Delay (Seconds)	495.2	0.0	21.7	2,599.4	0.0	27.5	15.9	37.4	25.7	17.1	32.3	23.9
Intersection LOS	**F - 427.6**											
95th Percentile Queue (ft)	677.5	0.0	7.5	2,285.0	0.0	217.5	45.0	400.0	152.5	47.5	337.5	105.0
95th Percentile Queue (veh)	27.1	0.0	0.3	91.4	0.0	8.7	1.8	16.0	6.1	1.9	13.5	4.2

Both the implementation year and the horizon year analysis in the above tables show that the signalized intersection of Coors Blvd. at Sage Rd. is stressed. The operation of the intersection is currently LOS “F” for no build conditions. The intersection carries traffic from many other networks and very minimal from the Unser Blvd. and Sage Rd. Development. The basic problem with the operation of the intersection lies with its design. The east-west street (Sage Rd.) operates on a single phase to serve left / thru / right turn traffic.

The operation of the signal should be changed to permitted / protected phasing to serve the eastbound and westbound left turn movements, but the design and construction of the intersection is not conducive to such a change. It would require significant modifications to the

geometric design and construction of the intersection to accommodate the forecast NO BUILD volumes for which the developer should not be responsible. Therefore, no recommendation is made for this intersection regarding this development.

#5 – Signalized Intersection of 86th St. at Sage Rd.

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of 86th St. at Sage Rd. are summarized in Table 21: 2025 Implementation Year 86th St. at Sage Rd. LVAM Summary , as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of 86th St. at Sage Rd. are summarized in Table 22: 2035 Horizon Year 86th St. at Sage Rd. LVAM Summary, as well as attached in Appendix A-07.

Table 21: 2025 Implementation Year 86th St. at Sage Rd. LVAM Summary

86th St. / Sage Rd. 2025_ Conditions	EB (86th St.)			WB (86th St.)			NB (Sage Rd.)			SB (Sage Rd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	59	541	13	38	211	59	4	114	80	42	30	51
V/C Ratio	0.24	0.81	0.81	0.28	0.43	0.45	0.00	0.00	0.16	0.05	0.00	0.07
Level-of-Service	D	E	E	D	D	D	A		A	A		A
Control Delay (Seconds)	42.3	55.3	55.1	43.7	38.2	38.4	7.4	0.0	7.8	8.9	0.0	7.1
Intersection LOS	**D - 38.3**											
95th Percentile Queue (ft)	70.0	342.5	355.0	45.0	137.5	140.0	2.5	0.0	90.0	20.0	0.0	35.0
95th Percentile Queue (veh)	2.8	13.7	14.2	1.8	5.5	5.6	0.1	0.0	3.6	0.8	0.0	1.4
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	59	607	13	61	277	77	4	114	103	60	30	51
V/C Ratio	0.23	0.82	0.82	0.38	0.47	0.49	0.00	0.00	0.19	0.08	0.00	0.07
Level-of-Service	D	D	D	D	C	C	A		A	B		A
Control Delay (Seconds)	39.1	53.6	53.5	40.1	33.5	33.7	9.0	0.0	9.7	11.4	0.0	8.7
Intersection LOS	**D - 36.7**											
95th Percentile Queue (ft)	67.5	372.5	385.0	67.5	165.0	165.0	2.5	0.0	115.0	35.0	0.0	40.0
95th Percentile Queue (veh)	2.7	14.9	15.4	2.7	6.6	6.6	0.1	0.0	4.6	1.4	0.0	1.6
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	55	300	42	51	410	55	17	85	25	30	110	93
V/C Ratio	0.36	0.59	0.60	0.27	0.82	0.83	0.02	0.00	0.09	0.03	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	46.0	52.5	52.6	43.3	47.3	47.6	7.8	0.0	6.5	7.0	0.0	7.0
Intersection LOS	**D - 37.1**											
95th Percentile Queue (ft)	70.0	225.0	230.0	60.0	242.5	247.5	7.5	0.0	45.0	12.5	0.0	87.5
95th Percentile Queue (veh)	2.8	9.0	9.2	2.4	9.7	9.9	0.3	0.0	1.8	0.5	0.0	3.5
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	55	361	42	72	470	71	17	85	46	46	110	93
V/C Ratio	0.36	0.58	0.59	0.33	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	44.7	52.6	52.7	41.4	45.2	45.6	9.0	0.0	7.6	8.4	0.0	8.1
Intersection LOS	**D - 37.0**											
95th Percentile Queue (ft)	67.5	257.5	262.5	82.5	282.5	287.5	7.5	0.0	60.0	22.5	0.0	95.0
95th Percentile Queue (veh)	2.7	10.3	10.5	3.3	11.3	11.5	0.3	0.0	2.4	0.9	0.0	3.8

Table 22: 2035 Horizon Year 86th St. at Sage Rd. LVAM Summary

86th St. / Sage Rd. 2035_ Conditions	EB (86th St.)			WB (86th St.)			NB (Sage Rd.)			SB (Sage Rd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	70	638	15	45	249	70	5	135	95	50	35	60
V/C Ratio	0.25	0.82	0.82	0.32	0.44	0.45	0.01	0.00	0.20	0.07	0.00	0.09
Level-of-Service	D	D	D	D	C	C	A		A	B		A
Control Delay (Seconds)	38.9	52.8	52.7	40.9	33.8	34.0	9.2	0.0	9.8	11.5	0.0	8.8
Intersection LOS	**D - 36.5**											
95th Percentile Queue (ft)	80.0	387.5	402.5	52.5	150.0	150.0	2.5	0.0	125.0	30.0	0.0	47.5
95th Percentile Queue (veh)	3.2	15.5	16.1	2.1	6.0	6.0	0.1	0.0	5.0	1.2	0.0	1.9
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	70	704	15	68	315	88	5	135	118	68	35	60
V/C Ratio	0.25	0.83	0.83	0.41	0.48	0.49	0.01	0.00	0.24	0.10	0.00	0.09
Level-of-Service	D	D	D	D	C	C	B		B	B		B
Control Delay (Seconds)	36.1	51.3	51.1	37.8	29.5	29.7	11.0	0.0	11.9	14.5	0.0	10.5
Intersection LOS	**D - 35.0**											
95th Percentile Queue (ft)	77.5	417.5	432.5	72.5	170.0	170.0	2.5	0.0	155.0	47.5	0.0	52.5
95th Percentile Queue (veh)	3.1	16.7	17.3	2.9	6.8	6.8	0.1	0.0	6.2	1.9	0.0	2.1
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	65	354	50	60	484	65	20	100	30	35	130	110
V/C Ratio	0.40	0.60	0.61	0.30	0.84	0.84	0.03	0.00	0.11	0.04	0.00	0.21
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	43.6	50.3	50.4	40.4	43.4	43.7	9.9	0.0	7.9	8.6	0.0	8.7
Intersection LOS	**D - 35.3**											
95th Percentile Queue (ft)	77.5	252.5	257.5	67.5	262.5	267.5	10.0	0.0	60.0	17.5	0.0	120.0
95th Percentile Queue (veh)	3.1	10.1	10.3	2.7	10.5	10.7	0.4	0.0	2.4	0.7	0.0	4.8
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	65	415	50	81	544	81	20	100	51	51	130	110
V/C Ratio	0.40	0.66	0.66	0.38	0.85	0.85	0.03	0.00	0.13	0.06	0.00	0.21
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	42.4	50.2	50.3	38.8	42.0	42.2	11.2	0.0	9.1	10.3	0.0	9.9
Intersection LOS	**D - 35.4**											
95th Percentile Queue (ft)	77.5	285.0	290.0	90.0	307.5	312.5	12.5	0.0	77.5	27.5	0.0	130.0
95th Percentile Queue (veh)	3.1	11.4	11.6	3.6	12.3	12.5	0.5	0.0	3.1	1.1	0.0	5.2

Both Implementation Year and the Horizon Year analysis in the above tables show that the signalized intersection of 86th St. at Sage Rd. is operating at an acceptable LOS for all conditions evaluated in this study. Eastbound through and eastbound right-turn movements are improved from a LOS E to LOS D under implementation year APH build conditions, this reflects the deceleration lane proposed in the Unser Blvd. and Sage Rd. Development site. The extension of the right-turn storage length to an additional 125 feet. Overall, improvements in delays are indicated by implementing the proposed roadway design. The new trips generated by the Unser Blvd. and Sage Rd. Development present no significant adverse impact to the signalized intersection of 86th St at Sage Rd, therefore no recommendations are made.

#6 – Unsignalized Intersection of Unser Blvd. at San Ygnacio Rd.

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at San Ygnacio Rd. are summarized in Table 23: 2025 Implementation Year Unser Blvd. at San Ygnacio Rd. LVAM Summary, as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at San Ygnacio Rd. are summarized in Table 24: 2035 Horizon Year Unser Blvd. at San Ygnacio Rd. LVAM Summary, as well as attached in Appendix A-07.

Table 23: 2025 Implementation Year Unser Blvd. at San Ygnacio Rd. LVAM Summary

San Ygnacio Rd. / Unser Blvd. 2025_ Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,609	11	0	1,019	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.7			10.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,692	11	0	1,092	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.9			11.1						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						
PM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,179	11	0	1,609	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.1			9.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,254	11	0	1,694	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.3			10.0						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						

Table 24: 2035 Horizon Year Unser Blvd. at San Ygnacio Rd. LVAM Summary

San Ygnacio Rd. / Unser Blvd. 2035_ Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	47	0	0	16	0	3,102	16	0	2,039	16
V/C Ratio			0.09			0.08						
Level-of-Service			B			D						
Control Delay (Seconds)			12.9			25.3						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			7.5			13.8						
95th Percentile Queue (veh)			0.3			0.3						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	47	0	0	16	0	3,185	16	0	2,039	16
V/C Ratio			0.09			0.10						
Level-of-Service			B			D						
Control Delay (Seconds)			12.9			29.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			7.5			7.5						
95th Percentile Queue (veh)			0.3			0.3						
PM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	47	0	0	16	0	2,273	16	0	3,102	47
V/C Ratio			0.24			0.04						
Level-of-Service			D			B						
Control Delay (Seconds)			29.5			13.8						
Intersection LOS	**TWSC / A - 0.3**											
95th Percentile Queue (ft)			22.5			2.5						
95th Percentile Queue (veh)			0.9			0.1						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	47	0	0	16	0	2,348	16	0	3,187	47
V/C Ratio			0.29			0.04						
Level-of-Service			E			B						
Control Delay (Seconds)			36.5			14.2						
Intersection LOS	**TWSC / A - 0.3**											
95th Percentile Queue (ft)			30.0			2.5						
95th Percentile Queue (veh)			1.2			0.1						

Both the implementation year and the horizon year analysis in the above tables the unsignalized intersection of Unser Blvd. at San Ygnacio Rd. is operating at an acceptable LOS for all 2025 conditions evaluated in this study. The new trips generated by the Unser Blvd. and Sage Rd. Development present no significant adverse impact to this signalized intersection. Table 24: 2035 Horizon Year Unser Blvd. at San Ygnacio Rd. LVAM Summary demonstrates a LOS E for the eastbound-right movement during the PPH horizon build condition analysis, although the V/C ration remains very low. Since the proposed development is not contributing to this failing movement for the eastbound-right movement, no recommendation are made for the Unser Blvd. at San Ygnacio Rd. intersection.

#7 – Unsignalized Intersection of Sage Rd. at Driveway "A"

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of Sage Rd. at Driveway "A" are summarized in Table 25: 2025 Implementation Year Sage Rd. at Driveway "A" LVAM Summary, as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Driveway "A" are summarized in Table 26: 2035 Horizon Year Sage Rd. at Driveway "A" LVAM Summary, as well as attached in Appendix A-07.

Table 25: 2025 Implementation Year Sage Rd. at Driveway "A" LVAM Summary

Sage Rd. / Driveway "A" 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry		2>	0	1	2		1>		0
2025_BUILD Volumes		830	149	62	286	123	218		218
V/C Ratio				0.09			0.80		
Level-of-Service				B			E		
Control Delay (Seconds)				10.6			39.3		
Intersection LOS	**TWSC / A - 8.4**								
95th Percentile Queue (ft)				7.5			177.5		
95th Percentile Queue (veh)				0.3			7.1		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		830	149	62	286		123		218
V/C Ratio				0.16			0.95		
Level-of-Service				C			F		
Control Delay (Seconds)				15.6			70.3		
Intersection LOS	**TWSC / B - 15.0**								
95th Percentile Queue (ft)				12.5			255.0		
95th Percentile Queue (veh)				0.5			10.2		
PM Peak Hour									
Proposed Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		513	122	74	572		121		174
V/C Ratio				0.08			0.55		
Level-of-Service				A			C		
Control Delay (Seconds)				9.1			19.5		
Intersection LOS	**TWSC / A - 4.1**								
95th Percentile Queue (ft)				7.5			82.5		
95th Percentile Queue (veh)				0.3			3.3		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		513	122	74	572		121		174
V/C Ratio				0.13			0.62		
Level-of-Service				B			C		
Control Delay (Seconds)				12.0			24.2		
Intersection LOS	**TWSC / A - 5.1**								
95th Percentile Queue (ft)				10.0			102.5		
95th Percentile Queue (veh)				0.4			4.1		

Table 26: 2035 Horizon Year Sage Rd. at Driveway "A" LVAM Summary

Sage Rd. / Driveway "A" 2035_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry		2>	0	1	2		1>		0
2025_BUILD Volumes		1,160	149	62	399		123		218
V/C Ratio				0.09			0.80		
Level-of-Service				B			E		
Control Delay (Seconds)				10.6			39.3		
Intersection LOS	**TWSC / A - 8.4**								
95th Percentile Queue (ft)				7.5			177.5		
95th Percentile Queue (veh)				0.3			7.1		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		1,160	149	62	399		123		218
V/C Ratio				0.16			0.95		
Level-of-Service				C			F		
Control Delay (Seconds)				15.6			70.3		
Intersection LOS	**TWSC / B - 15.0**								
95th Percentile Queue (ft)				12.5			255.0		
95th Percentile Queue (veh)				0.5			10.2		
PM Peak Hour									
Proposed Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		717	122	74	799		121		174
V/C Ratio				0.08			0.55		
Level-of-Service				A			C		
Control Delay (Seconds)				9.1			19.5		
Intersection LOS	**TWSC / A - 4.5**								
95th Percentile Queue (ft)				7.5			82.5		
95th Percentile Queue (veh)				0.3			3.3		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		717	122	74	799		121		174
V/C Ratio				0.16			0.77		
Level-of-Service				B			C		
Control Delay (Seconds)				14.1			4.1		
Intersection LOS	**TWSC / A - 5.1**								
95th Percentile Queue (ft)				15.0			160.0		
95th Percentile Queue (veh)				0.6			6.4		

Table 25: 2025 Implementation Year Sage Rd. at Driveway "A" LVAM Summary and Table 26: 2035 Horizon Year Sage Rd. at Driveway "A" LVAM Summary show that the unsignalized intersection of Unser Blvd. at Driveway "A" is operating at an acceptable level of service during all period analyzed for both the implementation and horizon years build condition and mitigated build condition. Both the implementation and horizon years northbound left-turn indicates a failing

LOS E for the APH implementation year build conditions, this is due to the high volume of traffic along Unser Blvd. creating inadequate gaps in traffic to complete a left-turn into adjacent traffic. Since volumes do not exist at this proposed intersection the analysis of the projected conditions warrants a signal to accommodate exiting traffic. The vicinity of the proposed unsignalized intersection is within the accessed spacing standard of 330 feet west of the signalized intersection of Unser Blvd. at Sage Rd., however it is too close to recommend a fully actuated signal.

The westbound left-turn movement along the major arterial of Sage Rd. does not experience adverse effects under build conditions or mitigated condition with the increase in trips generated into the site. Westbound left-turn performance is indicated by the very low V/C ratio and low delay time. Overall, the V/C ratio does not exceed 1.0, and the LOS intersection performance for all analyzed conditions are acceptable, therefore no recommendations are made for the intersection of Sage Blvd. at Driveway “A.”

Driveway "A" currently exists and should be designed and constructed as a full access unsignalized intersection with a minimum of one lane entering and one lane exiting. Driveway "A" can be widened within the constraints of the COA DPM, but the design of Driveway "A" should maintain proper alignment with the existing driveway on the north side of Sage Rd. An eastbound right-turn deceleration lane on Sage Rd. at Driveway "A" is warranted and should be constructed to the length required by the COA to the degree possible. Relocation of the existing service driveway to the west of Driveway "A" and converting that driveway to a “residential type” driveway is recommended. Also, the existing westbound left turn lane on Sage Rd. at Driveway "A" should be maintained. The mitigation measure to the geometry of the intersection is expounded on in the Mitigation Analysis section of this TIS report.

#8 – Unsignalized Intersection of Unser Blvd at Driveway “B”

The results of the 2025 Implementation Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Driveway “B” are summarized in Table 27: 2025 Implementation Year Unser Blvd. at Driveway “B” LVAM Summary , as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the signalized intersection of Unser Blvd. at Driveway “B” are summarized in Table 28: 2035 Horizon Year Unser Blvd. at Driveway “B” LVAM Summary, as well as attached in Appendix A-07.

Table 27: 2025 Implementation Year Unser Blvd. at Driveway "B" LVAM Summary

Driveway "B" / Unser Blvd. 2025_ Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2	1
2025_ BUILD Volumes	0		129	0	1,191			962	128
V/C Ratio			0.24						
Level-of-Service			B						
Control Delay (Seconds)			13.9						
Intersection LOS	**TWSC / A - 0.7**								
95th Percentile Queue (ft)			22.5						
95th Percentile Queue (veh)			0.9						
Mitigated Lane Geometry	0		1	0	2			2>	0
2025_ BUILD Volumes	0		129	0	1,191			962	128
V/C Ratio			0.31						
Level-of-Service			C						
Control Delay (Seconds)			17.6						
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			32.5						
95th Percentile Queue (veh)			1.3						
PM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.38						
Level-of-Service			C						
Control Delay (Seconds)			21.4						
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			42.5						
95th Percentile Queue (veh)			1.7						
Mitigage Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.50						
Level-of-Service			D						
Control Delay (Seconds)			31.2						
Intersection LOS	**TWSC / A - 1.4**								
95th Percentile Queue (ft)			65.0						
95th Percentile Queue (veh)			2.6						

Table 28: 2035 Horizon Year Unser Blvd. at Driveway "B" LVAM Summary

Driveway "B" / Unser Blvd. 2035_ Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2	1
2025_ BUILD Volumes	0		129	0	1,686			1,335	128
V/C Ratio			0.41						
Level-of-Service			C						
Control Delay (Seconds)			24.4						
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			47.5						
95th Percentile Queue (veh)			1.9						
Mitigated Lane Geometry	0		1	0	2			2>	0
2025_ BUILD Volumes	0		129	0	1,686			1,335	128
V/C Ratio			0.41						
Level-of-Service			C						
Control Delay (Seconds)			24.4						
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			47.5						
95th Percentile Queue (veh)			1.9						
PM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,524			2,132	158
V/C Ratio			0.80						
Level-of-Service			F						
Control Delay (Seconds)			80.2						
Intersection LOS	**TWSC / A - 2.7**								
95th Percentile Queue (ft)			130.0						
95th Percentile Queue (veh)			5.2						
Mitigage Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,524			2,132	158
V/C Ratio			0.80						
Level-of-Service			F						
Control Delay (Seconds)			80.2						
Intersection LOS	**TWSC / A - 2.7**								
95th Percentile Queue (ft)			130.0						
95th Percentile Queue (veh)			5.2						

Both the implementation year analysis indicates that the unsignalized intersection of Unser Blvd. at Driveway "B" is operating at acceptable LOS for both APH and PPH conditions. During the Horizon year the LOS is failing, Since the intersection is experiencing low volumes, the LOS can be attributed to the limited occurrence of a gap in the southbound traffic. The intersection is located approximately 730 ft south of Sage Rd., which is an acceptable distance for the proposed

right-in and right-out driveway access. The vicinity of the intersection to the signalized intersection of Unser Blvd. at Sage Rd. does not meet the DPM requirements. The V/C ratio does not exceed 1.0 for all analyzed conditions.

Proposed Driveway "B" should be designed and constructed as a right-in, right-out only unsignalized intersection with one lane entering and one lane exiting. Driveway "B" should be constructed to comply with the requirements of the COA DPM. A southbound right turn deceleration lane on Unser Blvd. at Driveway "B" is warranted and, therefore, should be designed and constructed. To be constructed to full required length, the signalized intersection of Unser Blvd. at Sage Rd. will need to be reconfigured to eliminate the eastbound to southbound free right turn so that it becomes a standard signalized right turn movement with a full right-turn lane.

#9 – Unsignalized Intersection of Unser Blvd. at Driveway "C"

The results of the 2025 Implementation Year for the APH and PPH analysis of the unsignalized intersection of Unser Blvd. at Driveway "C" are summarized in Table 29: 2025 Implementation Year Unser Blvd. at Driveway "C" LVAM Summary, as well as attached in Appendix A-07. The results of the 2035 Horizon Year for the APH and PPH analysis of the unsignalized intersection of Unser Blvd. at Driveway "C". are summarized in Table 30: 2035 Horizon Year Unser Blvd. at Driveway "C" LVAM Summary, as well as attached in Appendix A-07.

Table 29: 2025 Implementation Year Unser Blvd. at Driveway "C" LVAM Summary

Driveway "C" / Unser Blvd. 2025_ Conditions	EB (Driveway "C")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2	1
2025_BUILD Volumes	0		18	155	1,191			1,034	18
V/C Ratio			0.04	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			12.4	12.2					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			2.5	22.5					
95th Percentile Queue (veh)			0.1	0.9					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	155	1,191			1,034	18
V/C Ratio			0.04	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			12.4	12.2					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			2.5	22.5					
95th Percentile Queue (veh)			0.1	0.9					
PM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.05	0.33					
Level-of-Service			C	C					
Control Delay (Seconds)			16.4	18.2					
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.05	0.33					
Level-of-Service			C	C					
Control Delay (Seconds)			16.4	18.2					
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					

Table 30: 2035 Horizon Year Unser Blvd. at Driveway "C" LVAM Summary

Driveway "C" / Unser Blvd. 2035_ Conditions	EB (Driveway "C")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2	1
2025_BUILD Volumes	0		18	155	1,686			1,427	18
V/C Ratio			0.05	0.05					
Level-of-Service			C	C					
Control Delay (Seconds)			15.1	16.6					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	155	1,686			1,427	18
V/C Ratio			0.05	0.33					
Level-of-Service			C	C					
Control Delay (Seconds)			15.1	16.6					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					
PM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,524			2,192	21
V/C Ratio			0.09	0.57					
Level-of-Service			C	E					
Control Delay (Seconds)			23.9	39.4					
Intersection LOS	**TWSC / A - 1.5**								
95th Percentile Queue (ft)			7.5	80.0					
95th Percentile Queue (veh)			0.3	3.2					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,524			2,192	21
V/C Ratio			0.09	0.57					
Level-of-Service			C	E					
Control Delay (Seconds)			23.9	39.4					
Intersection LOS	**TWSC / A - 1.5**								
95th Percentile Queue (ft)			7.5	80.0					
95th Percentile Queue (veh)			0.3	3.2					

Both the implementation year and the horizon year analysis in the above tables show that the unsignalized intersection of Unser Blvd. at Driveway "C" is operating at an acceptable level of service for all conditions evaluated in this study. Driveway "C" is an existing approved right-in, right-out, left-in only intersection. It should be maintained as a right-in, right-out, left-in only unsignalized intersection with one lane entering (minimum) and one lane exiting. The existing

southbound right turn deceleration lane on Unser Blvd. at Driveway "C" is not warranted. However, the existing southbound right-turn deceleration lane should be maintained.

Determination of Warrants for Deceleration Lanes

Determination of Warrants for Deceleration Lanes for Driveway “A,” Driveway “B” and Driveway “C” were evaluated in accordance with the City of Albuquerque Development Process Manual (DPM) Criteria. Table 31: Deceleration Lane Warrant Analysis Summary defines the COA’s warrant criteria for right-turn and left-turn lanes at the existing and proposed driveways.

Table 31: Deceleration Lane Warrant Analysis Summary

City of Albuquerque Turn Lane Warrants for Driveway "A" Driveway "B" and Driveway "C"					
Design Process Manual Table 7.4.67					
Left Turn (Sage Rd Speed Limit 35 MPH)			Right Turn		
Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access	Design Speed (MPH)	Required Turning Volume per Hour for Decel Lane	Volumes at Driveway Access
Sage Rd and Driveway "A" - 35 MPH					
30-40	40	55	30-40	50	102
Warranted (WBL Existing)			Warranted		
Unser Blvd and Driveway "B" - 40 MPH					
30-40	40	N/A	30-40	50	101
			Warranted		
Unser Blvd and Driveway "C" - 40 MPH					
30-40	40	105	30-40	50	20
Warranted (NBL Existing)			Not Warranted (SBR Existing)		

Deceleration Lanes for Driveway “A”

Determination of Warrants for Deceleration Lanes for Driveway “A,” indicates the following for left-turn and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

A westbound left turn lane on Sage Rd. at Driveway “A” is warranted based on COA DPM criteria Table 7.4.67 with a design speed of 35 MPH. However, a westbound left-turn lane on Sage Rd. at Driveway “A” exists and it is approximately 125-feet long (including transition). There is no recommendation.

An eastbound right turn deceleration lane is warranted at Driveway “A” per the COA DPM with a design speed of 35 MPH. This has been shown on the Site Plan at approximately 125-feet.

Deceleration Lanes for Driveway "B"

Determination of Warrants for Deceleration Lanes for Driveway "B," indicates the following for left and right-turn deceleration lanes based on the COA DPM criteria Table 7.4.67 Turn Lane Warrants.

- A southbound right turn lane on Unser Blvd. at Driveway "B" is warranted based on COA DPM criteria Table 7.4.67 with a design speed of 40 MPH. This has been shown on the site plan at approximately 300-feet (including transition).
- Since Driveway 'B' is a right-in/right-out only access, a northbound left-turn lane is not required. There is no recommendation.

Deceleration Lanes for Driveway "C"

Determination of Warrants for Deceleration Lanes for Driveway "C," indicates the following for left and right-turn deceleration lanes based on the City of Albuquerque DPM criteria Table 7.4.67 Turn Lane Warrants.

- A 250-feet long (including taper) northbound left turn deceleration lane is warranted at Driveway "C". However, a northbound left-turn lane at Unser Blvd. at Driveway "C" exists and it is approximately 425-feet long (including transition). There are no recommendations.
- A southbound right-turn lane on Unser Blvd. at Driveway "C" is not warranted based on COA DPM criteria Table 7.4.67 with a design speed of 40 MPH. However, a southbound right-turn lane on Unser Blvd. at Driveway "C" exists and it is approximately 425-feet long (including transition). There is no recommendation.

Deceleration Lane Analysis

According to the COA Design Process Manual Table 7.7.67, the addition of an eastbound right-turn deceleration lane into Driveway "A" is warranted. The existing access is already constructed to the appropriate width according to DPM Table 7.4.47 (Three-lane Drive) for 30-ft wide. The warranted westbound left-turn deceleration lane exists with 100-ft of storage. The eastbound right-turn deceleration lane is also warranted but due to the spacing of the shifted Service Tower entrance, there is only room to construct approximately 125-ft of storage.

This report concludes a deceleration lane is warranted for both westbound left-turn and eastbound right-turn access into Driveway "A".

Also warranted by the COA DPM Table 7.7.67 and 7.4.68, a southbound right-turn deceleration lane at Unser Blvd. at Driveway "B". The deceleration lane is proposed with 240-ft of deceleration length for the southbound right-in right-out access point.

This report concludes that a southbound right-turn deceleration lane is warranted for Driveway "B."

Driveway "C" warrants only a northbound left deceleration lane on Unser Blvd. at Driveway "C" according to COA DPM Table 7.4.68 at the driveway access into the project site. The deceleration lane currently exists and includes 400-ft of storage. The southbound right-tun deceleration lane at Driveway "C" currently exists and is approximately 400-ft in length.

No recommendations are made for Driveway "C."

Driveway Access Evaluation Summary

Driveway "A" and Driveway "C" are existing driveways. Driveway "C" was approved as a right-in and right-out, with a left-in only unsignalized driveway in 2008 (R-08-01-TCC) along the west side of Unser Blvd. approximately 800 feet south of Sage Rd. Driveway "B" is a right-in and right-out unsignalized driveway access, located approximately 360 feet south of Sage Rd., and was approved by the TCC early in 2023.

Mitigation Analysis

The results demonstrate that the signalized intersection of Unser Blvd. and Sage Rd. is characterized by a marginally long delay for the projected 2035 volumes for the "AM Build" scenario. The scenario indicates that the signalized intersection is slightly congested because of the projected traffic volumes generated by the Unser Blvd. and Sage Rd. Development (Full Development). With the additional growth in volumes from the proposed development, the projected delay for the horizon year (2035) increases the APH intersection delay by 5.9 seconds and the intersection delay remains LOS "C." The existing lane geometry of the Unser Blvd. at Sage Rd. intersection demonstrate the eastbound and westbound through movements (that travel through the intersection of Unser Blvd. and Sage Rd.) are currently striped as one eastbound and one westbound lane. Although the existing geometry demonstrates one eastbound and westbound lane, there is sufficient pavement width for expansion of an additional eastbound and westbound lane. It is proposed to eliminate the existing striping and use this existing pavement section as additional through lanes as well as provide improvements to the southwest corner of the intersection. These improvements also include elimination of the channelized free flow right-turn movement at the southwest corner of Unser Blvd. and Sage Rd. This can be seen in Figure 44: Unser Blvd at Sage Rd. Geometry Mitigation Exhibit below and attached in Appendix A-02.

The mitigations provided for this intersection include implementing an additional eastbound and westbound through lane, removal of the channelized free flow right-turn

movement and adjusting the signal operations. The analysis of this report concludes that the timing splits and improving the intersection geometry of Unser Blvd. at Sage Rd. intersection improves the Level of Service from a LOS "E" to a LOS "D."

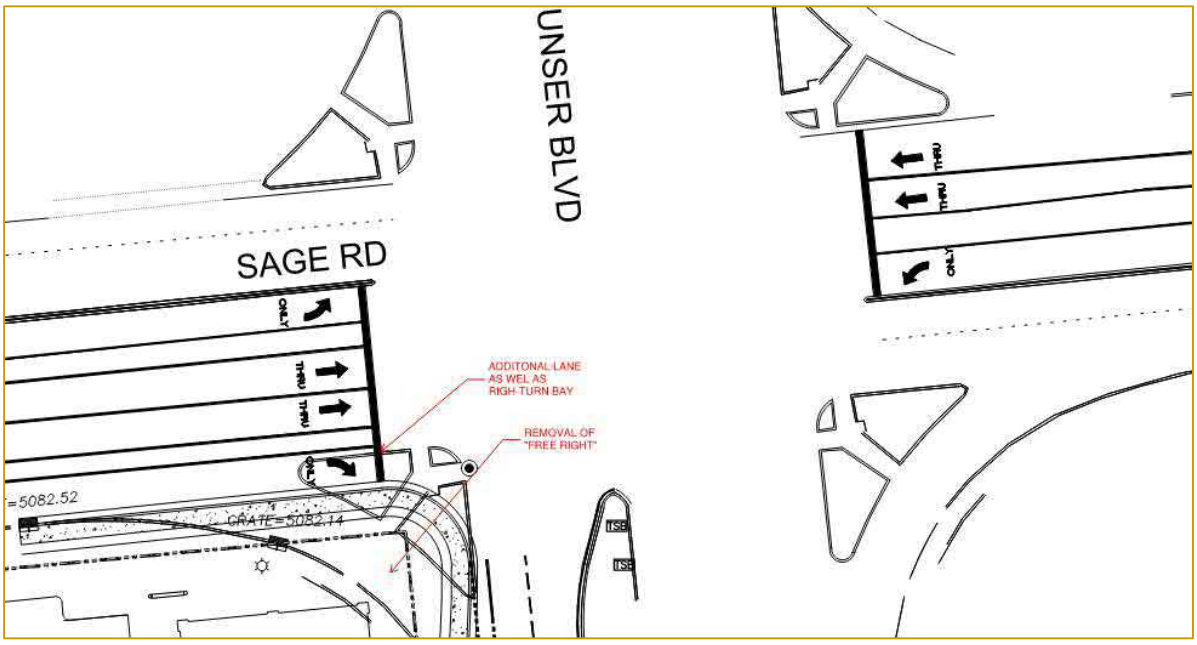


Figure 44: Unser Blvd at Sage Rd. Geometry Mitigation Exhibit

Another proposed change is the location of the Service Tower Driveway. Due to minimal trips taken for this access, the driveway could be changed to reflect the "once-a-month" maximum trips it experiences. The changes to this Service Tower access are shown below as 60-ft to the west of the existing driveway. Proposed changes also refer to changing the access from a driveway to a drive pad. Changing the access location also provides Driveway "A" additional length for a deceleration lane. The Mitigated Site Plan of Driveway "A" west of Unser Blvd. on the south side of Sage Rd. is shown below and in Appendix A-02.

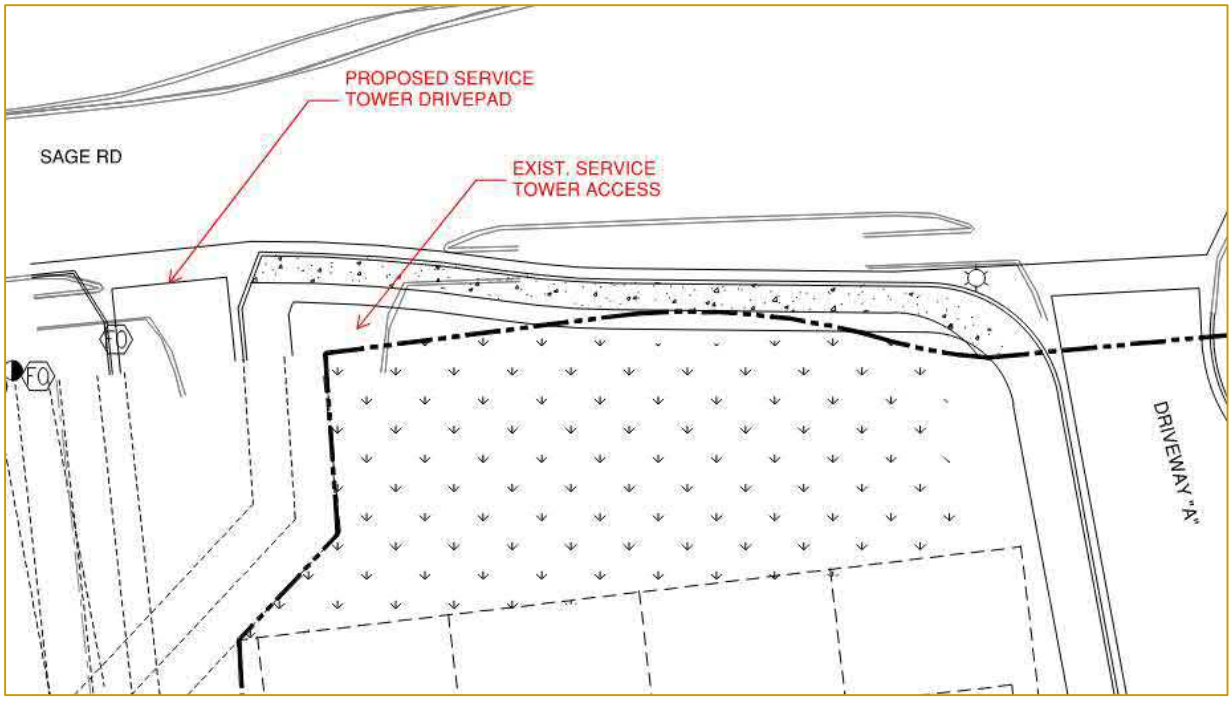


Figure 45: Unser Blvd at Driveway "A" Access Mitigation

According to the COA Design Process Manual Table 7.7.67, the addition of an eastbound right-turn deceleration lane into Driveway “A” is warranted. The existing access is already developed for the appropriate width according to DPM Table 7.4.47 Three-lane Drive for 30-ft wide. The warranted left-turn deceleration lane exists with 100-ft of storage. The right-turn deceleration lane is also warranted but due to the spacing of the shifted Service Tower entrance, there is approximately 125-ft of storage.

This report concludes a deceleration lane is warranted for eastbound right access into Driveway “A”.

Also warranted by the COA DPM Table 7.7.67 and 7.4.68, a southbound right-turn deceleration lane at Unser Blvd. at Driveway “B”. The deceleration lane is proposed with 240-ft of storage length for the southbound right-in right-out access point.

This report concludes that a southbound right-turn deceleration lane is warranted for Driveway “B.”

Driveway “C” warrants only a northbound left deceleration lane on Unser Blvd. at Driveway “C” according to COA DPM Table 7.4.68 at the driveway access into the project site. The deceleration lane currently existing and includes 400-ft of storage. The southbound right-tun deceleration lane at Driveway “C” currently is existing and is approximately 400-ft in length.

No recommendations are made for Driveway “C.”

Recommendations

It is recommended that signal timing adjustments be considered for the southbound left-turn movement of the Unser Blvd. at Arenal Rd. intersection. It is recommended that signal timing adjustments be considered for the eastbound left-turn southbound movements of the Unser Blvd. at Sage Rd. intersection. An additional recommendation to the signal timing optimization should be complete at the discretion of the COA and not the expense of the Development since the background growth of the intersection impacts the intersection performance prior to the additional volumes generated by the proposed Unser Blvd. and Sage Rd. Development.

Unser Blvd. at Sage Rd. intersection recommendation is to optimize the signal timing splits for the implementation year (2025) and the horizon year (2035) to improve the operation of the traffic signal. The recommended mitigated measures include adding an additional eastbound and westbound through lane before and after the signalized intersection of Unser Blvd. at Sage Rd. Restriping and additional geometry currently has width for the additional eastbound and westbound through lane from Driveway “A” access point to Abeyta Rd. As well as the removal of channelized free flow right-turn at southwest corner of Unser Blvd. at Sage Rd. The removal of the channelized free flow right-turn movement at the southwest corner of Unser Blvd. at Sage Rd and provide an eastbound right at the intersection. The eastbound right turning movement will keep the existing turn-bay storage of 280-ft.

Sage Rd. at Driveway “A” is an existing full access, unsignalized driveway north of the proposed site. This should still operate as a full access driveway and match the existing width of the access point. An additional right-turn deceleration lane is warranted for right-turn access into the proposed Unser Blvd. and Sage Rd. Development site with a storage of 240-ft.

Unser Blvd. at Driveway “B” is a proposed southbound right-turn deceleration lane is warranted for southbound right-in access into the proposed Unser Blvd. and Sage Rd. Development site. This storage length will consist of 240-ft in storage length.

Unser Blvd. at Driveway “C” has no recommendations and should remain as a full access driveway.

Bibliography

DEVELOPMENT PROCESS MANUAL DEVELOPMENT PROCESS MANUAL. (2020, June 08). Albuquerque, New Mexico, USA. Retrieved 2024

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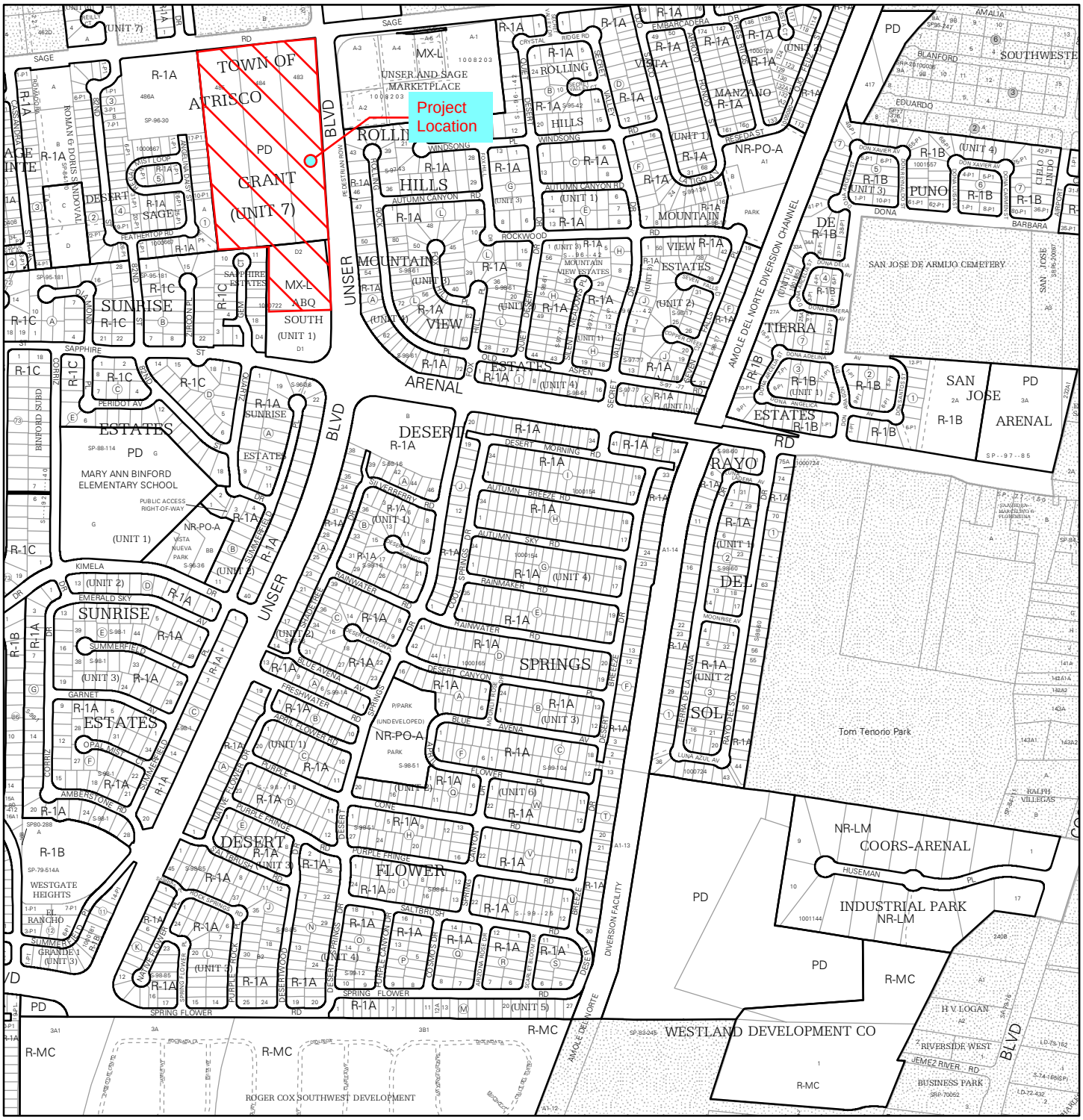
APPENDICES


Unser Blvd. and Sage Rd. Development
Vicinity Map
Legend
Intersections
Site Location
SanYgnacioRdSW_UnserBlvdSW
SageRdSW_UnserBlvdSW
SageRdSW_86thStSW
SageRdSW_SR45/CoorsBlvd
ArenalRdSW_UnserBlvdSW
Google Earth
3000 ft
N



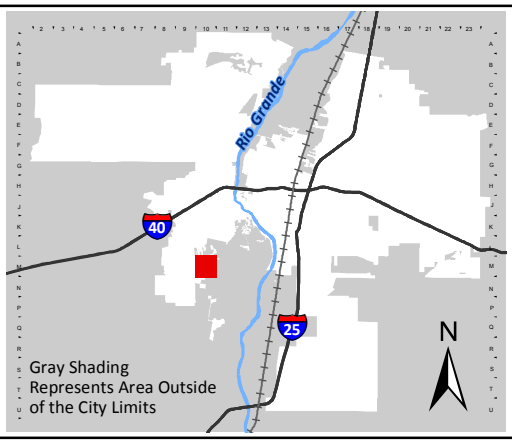
For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance

IDO Zone Atlas
May 2018

Albuquerque Geographic Information System

IDO Zoning information as of May 17, 2018

The Zone Districts and Overlay Zones are established by the Integrated Development Ordinance (IDO).



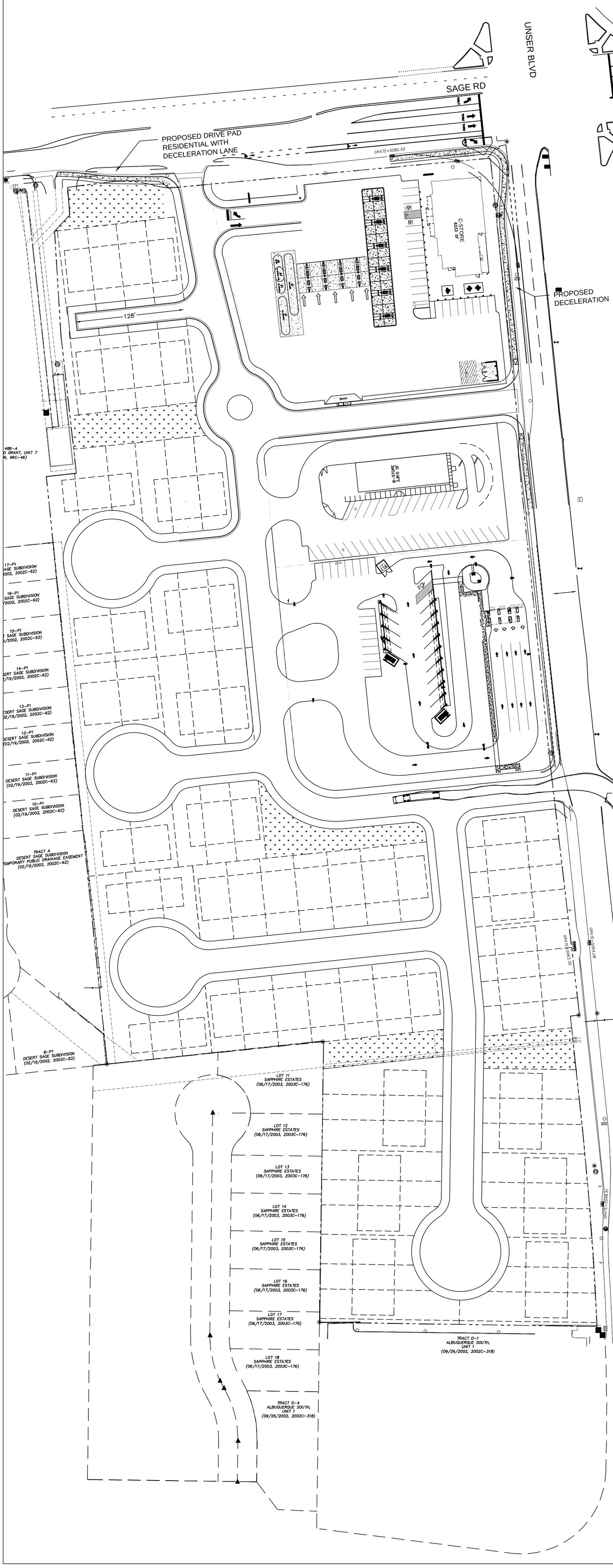
Zone Atlas Page:

M-10-Z

- Easement
- Escarpment
- Petroglyph National Monument
- Areas Outside of City Limits
- Airport Protection Overlay (APO) Zone
- Character Protection Overlay (CPO) Zone
- Historic Protection Overlay (HPO) Zone
- View Protection Overlay (VPO) Zone

Feet

0 250 500 1,000



UNSER & SAGE

ALBUQUERQUE, NM

SITE PLAN EXHIBIT
TOWNHOUSE LAYOUT

SITE SUMMARY DATA

75 TOWN HOME LOTS:	370,260.0 SQ.FT. 8.5 ACRES
LOSS OF 21 LOTS	
(TOTAL RESIDENTIAL AREA (REFERENCE) INCLUDING ROADWAY AND COMMON AREAS WITHIN):	479,160.0 SQ. FT. 11.0 ACRES
3 RETAIL PADS	
1 GAS STATION LOT:	84,058 SQ. FT. 1.93 ACRES
1 FAST FOOD LOTS:	42,535 SQ. FT. 0.98 ACRES
1 CAR WASH:	81,119 SQ. FT. 1.86 ACRES
ROADWAY AND COMMON AREAS:	152,460 SQ. FT. 3.5 ACRES
TOTAL:	676,554.7 SQ. FT. 15.53 ACRES

LEGEND

- CURB & GUTTER
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
- LANDSCAPE
- EXISTING BOUNDARY LINE
- LOT LINES

N

GRAPHIC SCALE

30 0 30 30

(IN FEET)
1 inch = 60 ft.

05/14/2021

TIERRA WEST, LLC
5571 MIDWAY PARK PL NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 858-3100
www.tierrawestllc.com

Unser and Sage Development

Trip Generation Data (ITE Trip Generation Manual - 11th Edition)

USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		*GROSS*	*ENTER*	*EXIT*	*ENTER*	*EXIT*
Summary Sheet	Units					
Multifamily Housing (Low-Rise)	75	506	7	23	33	20
Convenience Store / Gas Station - GFA 4-5.5K (945)	17	4,371	230	230	193	193
Fast Food Restaurant w/ Drive-Thru Window (934)	3.82	1,783	87	83	66	60
Automated Car Wash (948)	1	-	-	-	39	39
Subtotal		**6,660**	**324**	**336**	**331**	**312**
Retail Commercial Trips		**6,154**	**317**	**313**	**298**	**292**
Pass-By Trips	30%		*-95*	*-94*	*-89*	*-88*
Total New Primary Trips			**222**	**219**	**209**	**204**
Total New Residential Trips			**7**	**23**	**33**	**20**

Historic Growth Data Table

Unser and Sage Development

(Unser and Sage)

Traffic Flows (AWDT) from Mid-Region Council of Governments

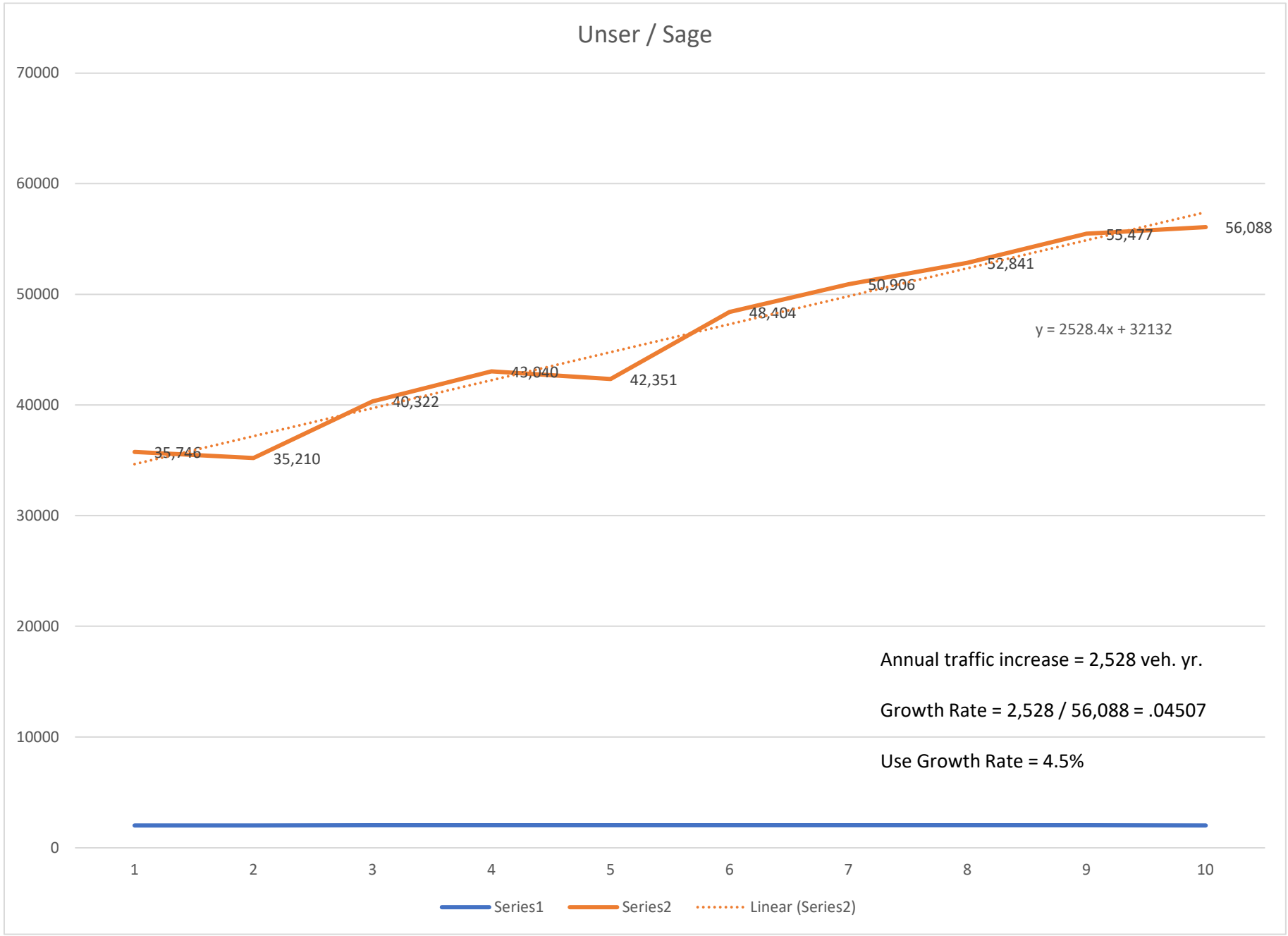
COG ID	Location											
Intersection #1:	**ARENAL / UNSER BLVD.**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26584	ARENAL	EAST OF UNSER	WEST OF COORS	10,270	10,116	9,565	9,402	9,252	10,331	10,589	10,991	12,163	12,689
26581	ARENAL	EAST OF 86TH	WEST OF UNSER	3,084	3,038	2,999	2,948	2,901	2,901	2,659	2,760	2,908	3,049
25054	UNSER BLVD.	NORTH OF ARENAL	SOUTH OF SAGE	10,205	10,052	13,609	13,378	13,164	17,015	17,440	18,103	18,790	19,602
25063	UNSER BLVD.	NORTH OF GIBSON WEST	SOUTH OF ARENAL	9,555	9,412	13,781	13,547	13,330	15,227	15,608	16,201	16,886	17,616
	Total Intersection Traffic Flows			**33,114**	**32,618**	**39,954**	**39,275**	**38,647**	**45,474**	**46,296**	**48,055**	**50,747**	**52,956**

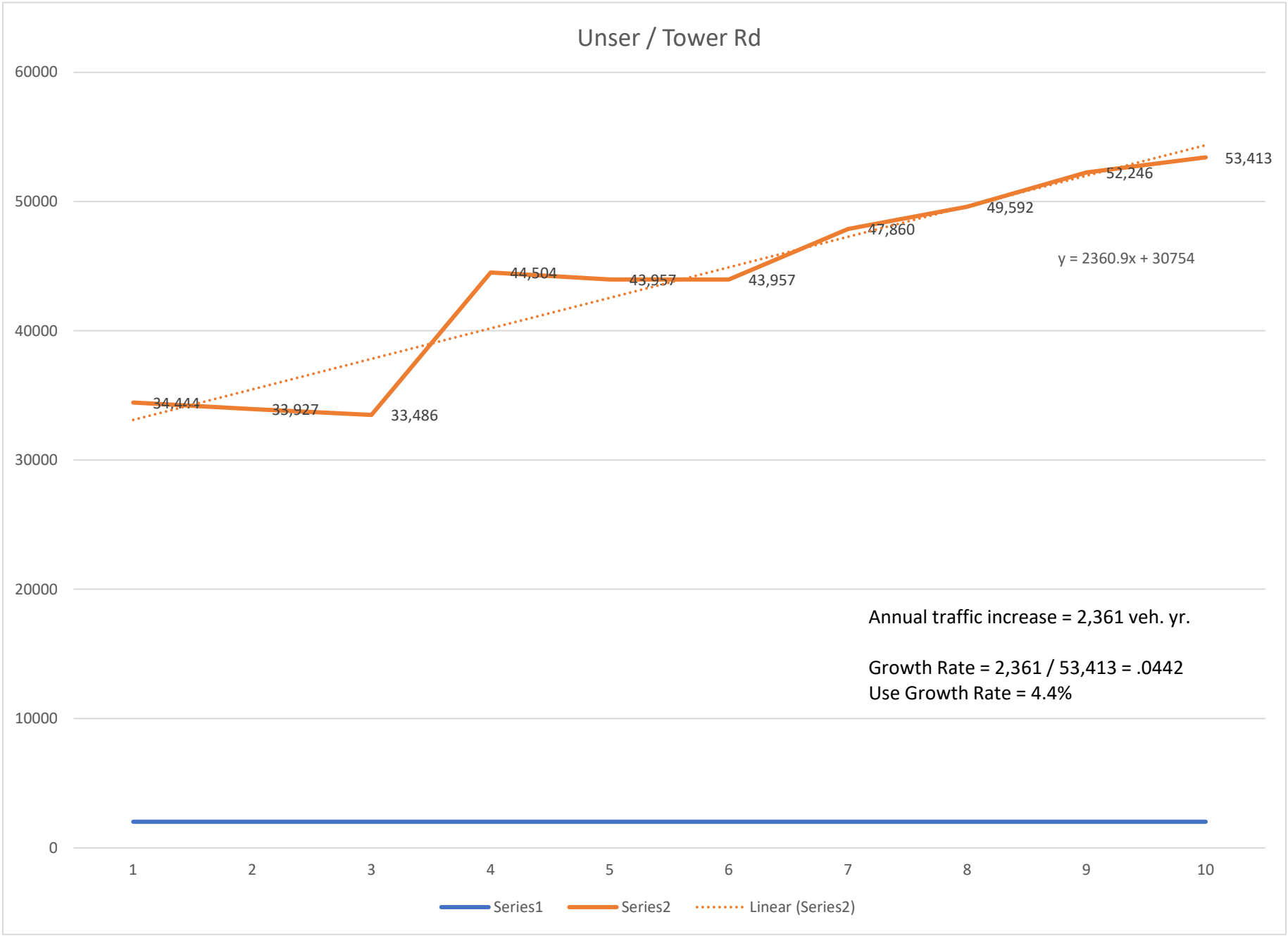
COG ID	Location											
Intersection #2:	**SAGE / UNSER BLVD.**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26440	SAGE	EAST OF UNSER	WEST OF COORS	5,015	4,940	6,733	6,619	6,513	8,010	8,210	8,522	8,846	6,669
26528	SAGE	EAST OF 86TH	WEST OF UNSER BLVD.	7,955	7,836	7,759	7,627	7,505	8,210	8,415	8,735	9,425	9,832
25053	UNSER BLVD.	NORTH OF SAGE	SOUTH OF TOWER	12,571	12,382	12,221	15,416	15,169	15,169	16,841	17,481	18,416	19,985
25054	UNSER BLVD.	NORTH OF ARENAL	SOUTH OF SAGE	10,205	10,052	13,609	13,378	13,164	17,015	17,440	18,103	18,790	19,602
	Total Intersection Traffic Flows			**35,746**	**35,210**	**40,322**	**43,040**	**42,351**	**48,404**	**50,906**	**52,841**	**55,477**	**56,088**

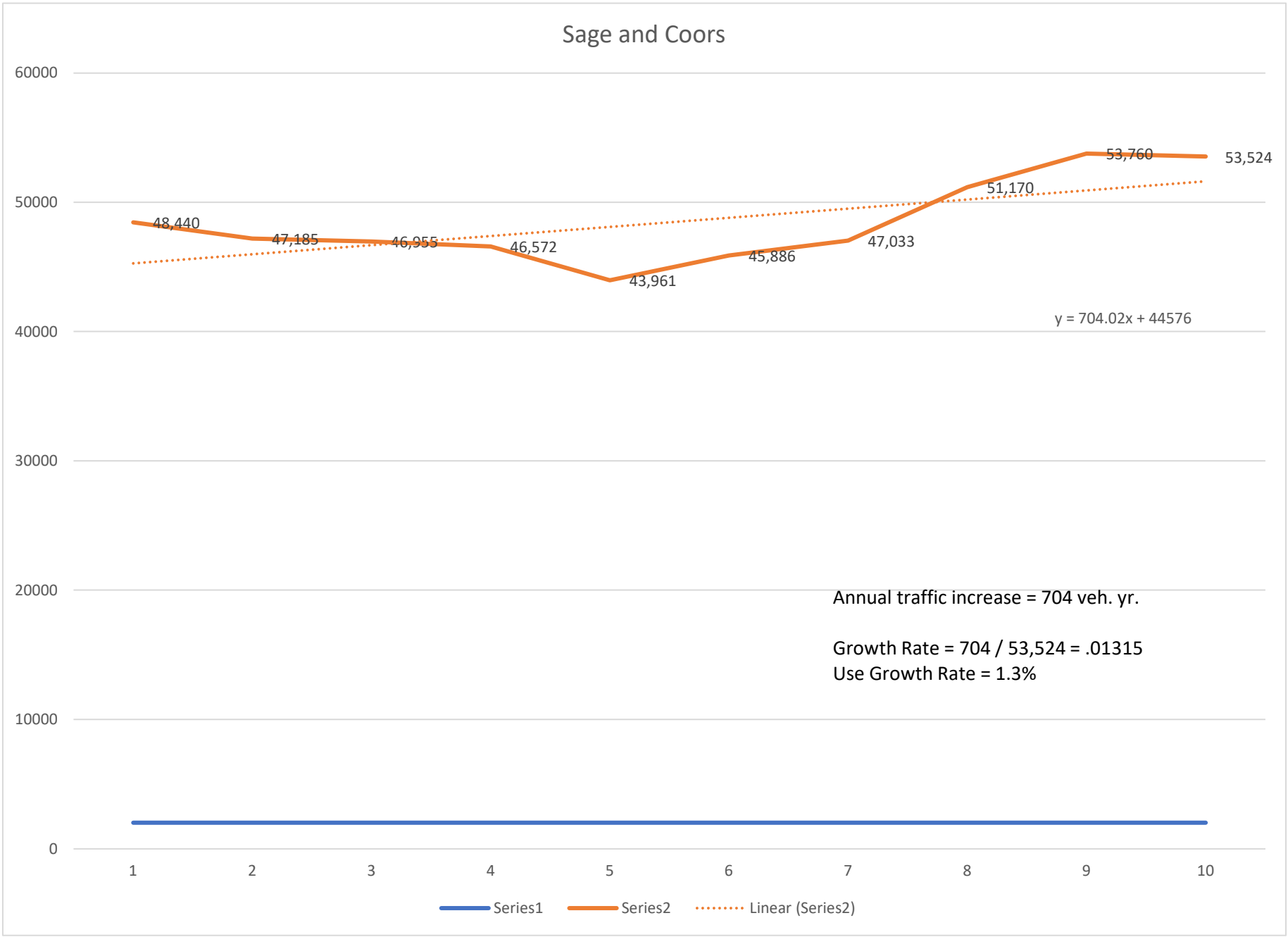
COG ID	Location											
Intersection #3:	**TOWER / UNSER BLVD.**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
24669	TOWER	EAST OF 86TH ST.	WEST OF UNSER BLVD.	5,887	5,799	5,724	7,128	7,014	7,014	7,416	7,698	8,110	7,843
24670	TOWER	EAST OF UNSER	WEST OF COORS BLVD.	4,976	4,901	4,837	5,162	5,079	5,079	6,491	6,738	7,099	6,159
25053	UNSER BLVD.	NORTH OF SAGE	SOUTH OF TOWER	12,571	12,382	12,221	15,416	15,169	15,169	16,841	17,481	18,416	19,985
25052	UNSER BLVD.	NORTH OF TOWER	SW OF BRIDGE BLVD.	11,010	10,845	10,704	16,798	16,695	16,695	17,112	17,675	18,621	19,426
	Total Intersection Traffic Flows			**34,444**	**33,927**	**33,486**	**44,504**	**43,957**	**43,957**	**47,860**	**49,592**	**52,246**	**53,413**

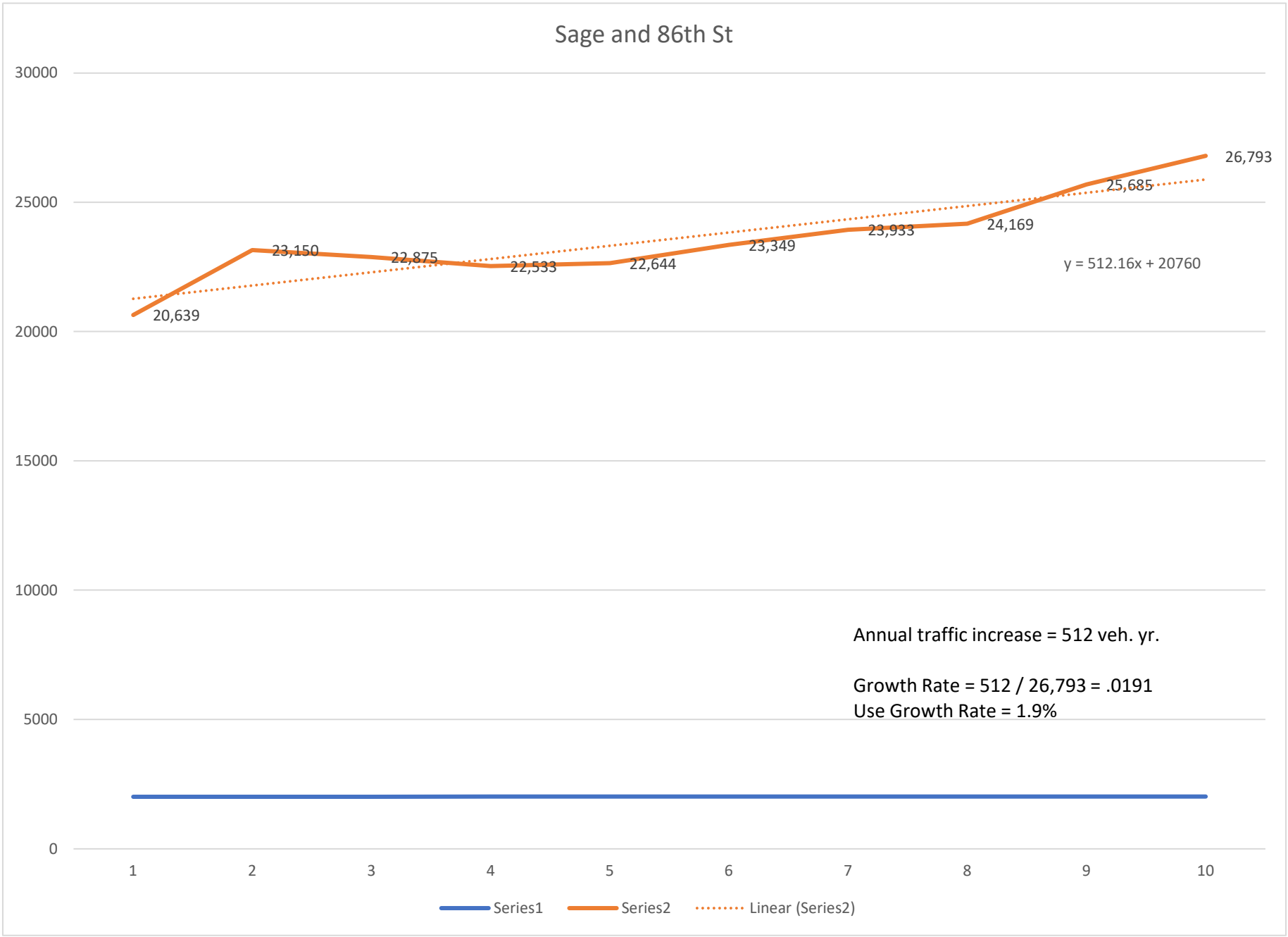
COG ID	Location											
Intersection #4:	**SAGE / COORS**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26440	SAGE	EAST OF UNSER	WEST OF COORS	5,015	4,940	6,733	6,619	6,513	8,010	8,210	8,522	8,846	6,669
26352	SAGE	EAST OF COORS	WEST OF OLD COORS RD.	6,104	6,012	4,460	4,384	4,314	4,742	4,861	5,046	5,300	5,529
26524	COORS	NORTHWEST OLD COORS RD.	SOUTH OF SAGE	17,546	16,755	16,537	15,689	13,572	13,572	13,911	16,579	17,466	18,221
26339	COORS	NORTH OF SAGE	SOUTH OF TOWER	19,775	19,478	19,225	19,880	19,562	19,562	20,051	21,023	22,148	23,105
	Total Intersection Traffic Flows			**48,440**	**47,185**	**46,955**	**46,572**	**43,961**	**45,886**	**47,033**	**51,170**	**53,760**	**53,524**

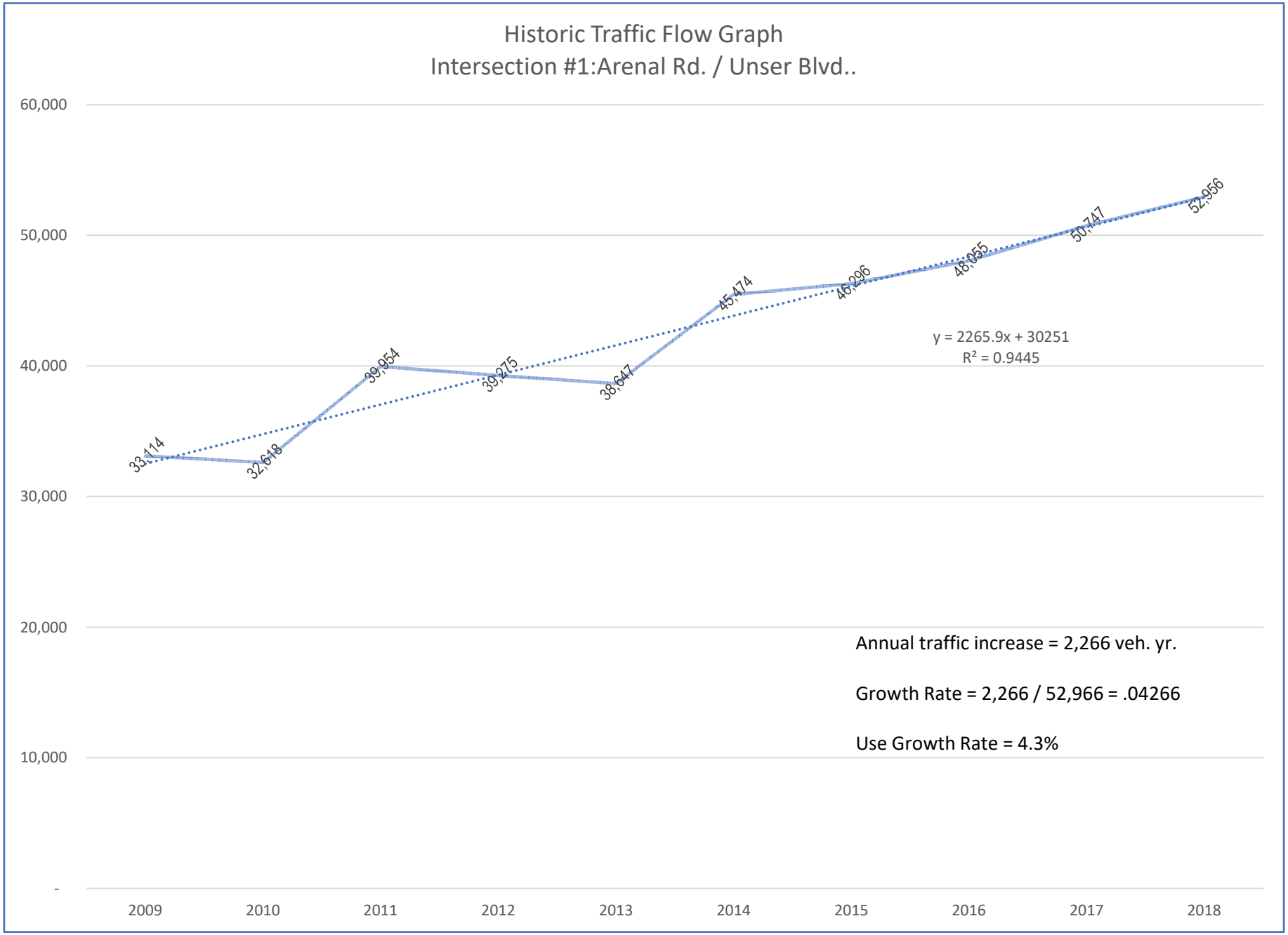
COG ID	Location	****No Data for Serracino**										
Intersection #5:	**SAGE / 86TH STREET**											
	Street:	**From:**	**To:**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
26523	SAGE	EAST OF 98TH ST.	WEST OF 86TH ST.	6,592	7,903	7,801	7,715	8,414	8,414	8,624	8,368	8,816	9,196
26528	SAGE	EAST OF 86TH	WEST OF UNSER BLVD.	7,955	7,836	7,759	7,627	7,505	8,210	8,415	8,735	9,425	9,832
22386	86TH STREET	NORTH OF ARENAL	SOUTH OF SAGE	2,425	2,758	2,722	2,676	2,422	2,422	2,483	2,422	2,552	2,662
22389	86TH STREET	NORTH OF SAGE	SOUTH OF TOWER	3,667	4,653	4,593	4,515	4,303	4,303	4,411	4,644	4,892	5,103
	Total Intersection Traffic Flows			**20,639**	**23,150**	**22,875**	**22,533**	**22,644**	**23,349**	**23,933**	**24,169**	**25,685**	**26,793**

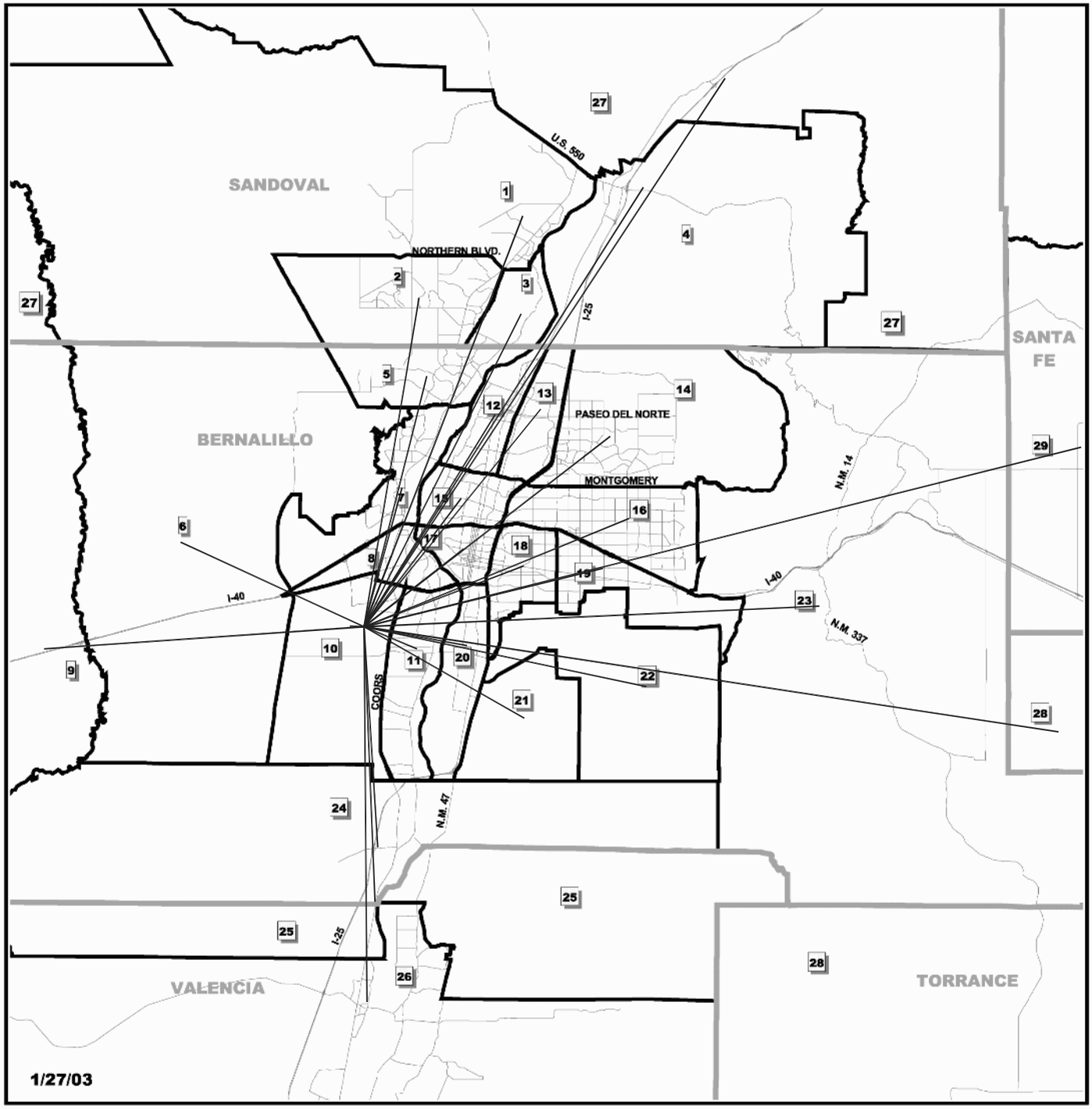

Unser / Sage
70000
60000
50000
40000
30000
20000
10000
0
1
2
3
4
5
6
7
8
9
10
35,746
35,210
40,322
43,040
42,351
48,404
50,906
52,841
55,477
56,088
y = 2528.4x + 32132
Annual traffic increase = 2,528 veh. yr.
Growth Rate = 2,528 / 56,088 = .04507
Use Growth Rate = 4.5%
Series1
Series2
Linear (Series2)


Unser / Tower Rd
60000
50000
40000
30000
20000
10000
0
1
2
3
4
5
6
7
8
9
10
34,444
33,927
33,486
44,504
43,957
43,957
47,860
49,592
52,246
53,413
y = 2360.9x + 30754
Annual traffic increase = 2,361 veh. yr.
Growth Rate = 2,361 / 53,413 = .0442
Use Growth Rate = 4.4%
Series1
Series2
Linear (Series2)


Sage and Coors
60000
50000
40000
30000
20000
10000
0
1
2
3
4
5
6
7
8
9
10
48,440
47,185
46,955
46,572
43,961
45,886
47,033
51,170
53,760
53,524
y = 704.02x + 44576
Annual traffic increase = 704 veh. yr.
Growth Rate = 704 / 53,524 = .01315
Use Growth Rate = 1.3%
Series1
Series2
Linear (Series2)


Sage and 86th St
30000
25000
20000
15000
10000
5000
0
1
2
3
4
5
6
7
8
9
10
20,639
23,150
22,875
22,533
22,644
23,349
23,933
24,169
25,685
26,793
y = 512.16x + 20760
Annual traffic increase = 512 veh. yr.
Growth Rate = 512 / 26,793 = .0191
Use Growth Rate = 1.9%
Series1
Series2
Linear (Series2)


Historic Traffic Flow Graph
Intersection #1:Arenal Rd. / Unser Blvd..
60,000
50,000
40,000
30,000
20,000
10,000
-
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
33,114
32,618
39,954
39,275
38,647
45,474
46,296
48,055
50,747
52,956
y = 2265.9x + 30251
R² = 0.9445
Annual traffic increase = 2,266 veh. yr.
Growth Rate = 2,266 / 52,966 = .04266
Use Growth Rate = 4.3%



22 Subarea Identification Number

Figure 6

Subareas of the MRCOG Region

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

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

Sage / Unser Development
(SW Corner)
Trip Distribution Subarea Map

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:
For determination of Trip Distribution for Proposed **Residential Development Trips**

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(TW) Tower Rd West			(UN) Unser North			(TE) Tower Rd East		
Sub Area I.D.#	**% Sub Area in Study**	**2016 Employment**	**2040 Employment**	**Interpolated Employment for the Year**	Employment in Study	Dist. (Mi.)	**Employment / Distance**	**% Employment / Distance**	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	**2040**	**2025**													
1	100%	8,354	11,675	9,599	9,599	19.5	**492**	**1.05%**	0%	0.00%	0	100%	1.05%	492	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	**1,204**	**2.57%**	0%	0.00%	0	100%	2.57%	1,204	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	**115**	**0.25%**	0%	0.00%	0	100%	0.25%	115	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	**168**	**0.36%**	0%	0.00%	0	100%	0.36%	168	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	**1,220**	**2.61%**	0%	0.00%	0	100%	2.61%	1,220	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	**276**	**0.59%**	20%	0.12%	55	80%	0.47%	221	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	**1,506**	**3.22%**	0%	0.00%	0	80%	2.57%	1,205	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	**2,693**	**5.75%**	0%	0.00%	0	80%	4.60%	2,154	0%	0.00%	0
9	100%	724	1,023	836	836	13	**64**	**0.14%**	20%	0.03%	13	80%	0.11%	51	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	**4,129**	**8.82%**	10%	0.88%	413	10%	0.88%	413	5%	0.44%	206
11	100%	5,699	6,882	6,143	6,143	2.9	**2,118**	**4.53%**	0%	0.00%	0	100%	4.53%	2,118	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	**591**	**1.26%**	0%	0.00%	0	100%	1.26%	591	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	**3,134**	**6.69%**	0%	0.00%	0	100%	6.69%	3,134	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	**2,734**	**5.84%**	0%	0.00%	0	100%	5.84%	2,734	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	**2,453**	**5.24%**	0%	0.00%	0	100%	5.24%	2,453	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	**4,345**	**9.28%**	0%	0.00%	0	50%	4.64%	2,173	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	**6,974**	**14.90%**	0%	0.00%	0	50%	7.45%	3,487	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	**4,288**	**9.16%**	0%	0.00%	0	80%	7.33%	3,430	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	**2,346**	**5.01%**	0%	0.00%	0	80%	4.01%	1,877	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	**1,382**	**2.95%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	**349**	**0.75%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	28,349	31,083	29,374	29,374	12.9	**2,277**	**4.86%**	0%	0.00%	0	50%	2.43%	1,139	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	**153**	**0.33%**	0%	0.00%	0	50%	0.16%	77	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	**141**	**0.30%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	112	112	112	112	11.3	**10**	**0.02%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	17,882	21,300	19,164	19,164	15.6	**1,228**	**2.62%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,846	6,024	5,913	5,913	28.8	**205**	**0.44%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,338	5,143	4,640	4,640	30.6	**152**	**0.32%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,784	2,111	1,907	1,907	32.3	**59**	**0.13%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,731	466,547	421,662	421,662		**46,809**	**100.00%**		1.03%	**481**		65.06%	**30,456**		0.44%	**206**
											1.03%			65.06%			0.44%

* - Subarea in which the site it located.

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:
For determination of Trip Distribution for Proposed **Residential Development Trips**

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(USN) Unser and Sage North			(USS) Unser and Sage South			(USW) Unser and Sage West		
Sub Area I.D.#	**% Sub Area in Study**	**2016 Employment**	**2040 Employment**	**Interpolated Employment for the Year**	Employment in Study	Dist. (Mi.)	**Employment / Distance**	**% Employment / Distance**	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	**2040**	**2025**													
1	100%	8,354	11,675	9,599	9,599	19.5	**492**	**1.05%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	**1,204**	**2.57%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	**115**	**0.25%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	**168**	**0.36%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	**1,220**	**2.61%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	**276**	**0.59%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	**1,506**	**3.22%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	**2,693**	**5.75%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	724	1,023	836	836	13	**64**	**0.14%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	**4,129**	**8.82%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
11	100%	5,699	6,882	6,143	6,143	2.9	**2,118**	**4.53%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	**591**	**1.26%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	**3,134**	**6.69%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	**2,734**	**5.84%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	**2,453**	**5.24%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	**4,345**	**9.28%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	**6,974**	**14.90%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	**4,288**	**9.16%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	**2,346**	**5.01%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	**1,382**	**2.95%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	**349**	**0.75%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	28,349	31,083	29,374	29,374	12.9	**2,277**	**4.86%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	**153**	**0.33%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	**141**	**0.30%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	112	112	112	112	11.3	**10**	**0.02%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	17,882	21,300	19,164	19,164	15.6	**1,228**	**2.62%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,846	6,024	5,913	5,913	28.8	**205**	**0.44%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,338	5,143	4,640	4,640	30.6	**152**	**0.32%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,784	2,111	1,907	1,907	32.3	**59**	**0.13%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,731	466,547	421,662	421,662		**46,809**	**100.00%**		0.00%	**0**		0.00%	**0**		0.00%	**0**
											0.00%			0.00%			0.00%

* - Subarea in which the site it located.

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:
For determination of Trip Distribution for Proposed **Residential Development Trips**

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

												(SW) Sage West			**(SE)** Sage East			**(86N)** 86th North		
Sub Area I.D.#	**% Sub Area in Study**	**2016 Employment**	**2040 Employment**	**Interpolated Employment for the Year**	Employment in Study	Dist. (Mi.)	**Employment / Distance**	**% Employment / Distance**	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	**2040**	**2025**																
1	100%	8,354	11,675	9,599	9,599	19.5	**492**	**1.05%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	**1,204**	**2.57%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	**115**	**0.25%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	**168**	**0.36%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	**1,220**	**2.61%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	**276**	**0.59%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	**1,506**	**3.22%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	**2,693**	**5.75%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	724	1,023	836	836	13	**64**	**0.14%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	**4,129**	**8.82%**	10%	0.88%	413	15%	1.32%	619	5%	0.44%	206
11	100%	5,699	6,882	6,143	6,143	2.9	**2,118**	**4.53%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	**591**	**1.26%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	**3,134**	**6.69%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	**2,734**	**5.84%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	**2,453**	**5.24%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	**4,345**	**9.28%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	**6,974**	**14.90%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	**4,288**	**9.16%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	**2,346**	**5.01%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	**1,382**	**2.95%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	**349**	**0.75%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	28,349	31,083	29,374	29,374	12.9	**2,277**	**4.86%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	**153**	**0.33%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	**141**	**0.30%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	112	112	112	112	11.3	**10**	**0.02%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	17,882	21,300	19,164	19,164	15.6	**1,228**	**2.62%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	5,846	6,024	5,913	5,913	28.8	**205**	**0.44%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,338	5,143	4,640	4,640	30.6	**152**	**0.32%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	1,784	2,111	1,907	1,907	32.3	**59**	**0.13%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		394,731	466,547	421,662	421,662		**46,809**	**100.00%**		0.88%	**413**		1.32%	**619**		0.44%	**206**
											0.88%			1.32%			0.44%

* - Subarea in which the site it located.

Trip Distribution Table

Sage and Unser Development

Sub Area Employment Data:
For determination of Trip Distribution for Proposed **Residential Development Trips**

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(86S) 86th South			(CN) Coors North			(CS) Coors South		
Sub Area I.D.#	**% Sub Area in Study**	**2016 Employment**	**2040 Employment**	**Interpolated Employment for the Year**	Employment in Study	Dist. (Mi.)	**Employment / Distance**	**% Employment / Distance**	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	**2040**	**2025**													
1	100%	8,354	11,675	9,599	9,599	19.5	**492**	**1.05%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	**1,204**	**2.57%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	**115**	**0.25%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	**168**	**0.36%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	**1,220**	**2.61%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	**276**	**0.59%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	**1,506**	**3.22%**	0%	0.00%	0	20%	0.64%	301	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	**2,693**	**5.75%**	0%	0.00%	0	20%	1.15%	539	0%	0.00%	0
9	100%	724	1,023	836	836	13	**64**	**0.14%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	**4,129**	**8.82%**	5%	0.44%	206	10%	0.88%	413	10%	0.88%	413
11	100%	5,699	6,882	6,143	6,143	2.9	**2,118**	**4.53%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	**591**	**1.26%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	**3,134**	**6.69%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	**2,734**	**5.84%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	**2,453**	**5.24%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	**4,345**	**9.28%**	0%	0.00%	0	50%	4.64%	2,173	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	**6,974**	**14.90%**	0%	0.00%	0	50%	7.45%	3,487	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	**4,288**	**9.16%**	0%	0.00%	0	20%	1.83%	858	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	**2,346**	**5.01%**	0%	0.00%	0	20%	1.00%	469	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	**1,382**	**2.95%**	0%	0.00%	0	50%	1.48%	691	50%	1.48%	691
21	100%	1,755	4,714	2,865	2,865	8.2	**349**	**0.75%**	0%	0.00%	0	0%	0.00%	0	50%	0.37%	175
22	100%	28,349	31,083	29,374	29,374	12.9	**2,277**	**4.86%**	0%	0.00%	0	50%	2.43%	1,139	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	**153**	**0.33%**	0%	0.00%	0	50%	0.16%	77	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	**141**	**0.30%**	0%	0.00%	0	0%	0.00%	0	20%	0.06%	28
25	100%	112	112	112	112	11.3	**10**	**0.02%**	0%	0.00%	0	0%	0.00%	0	20%	0.00%	2
26	100%	17,882	21,300	19,164	19,164	15.6	**1,228**	**2.62%**	0%	0.00%	0	0%	0.00%	0	20%	0.52%	246
27	100%	5,846	6,024	5,913	5,913	28.8	**205**	**0.44%**	0%	0.00%	0	0%	0.00%	0	20%	0.09%	41
28	100%	4,338	5,143	4,640	4,640	30.6	**152**	**0.32%**	0%	0.00%	0	0%	0.00%	0	20%	0.06%	30
29	100%	1,784	2,111	1,907	1,907	32.3	**59**	**0.13%**	0%	0.00%	0	0%	0.00%	0	20%	0.03%	12
		394,731	466,547	421,662	421,662		**46,809**	**100.00%**		0.44%	**206**		21.67%	**10,146**		3.50%	**1,638**
											0.44%			21.67%			3.50%

* - Subarea in which the site it located.

Trip Distribution Table

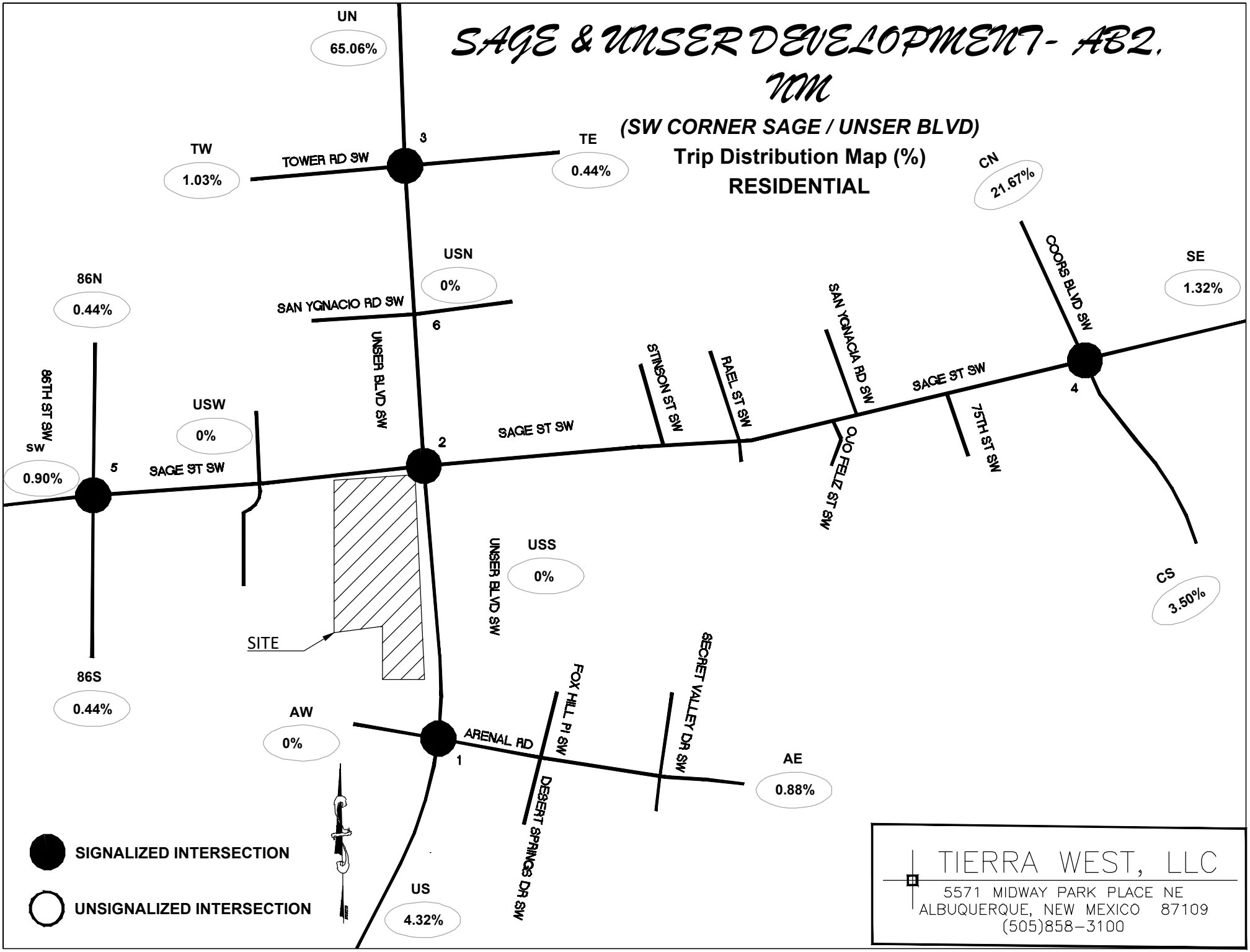
Sage and Unser Development

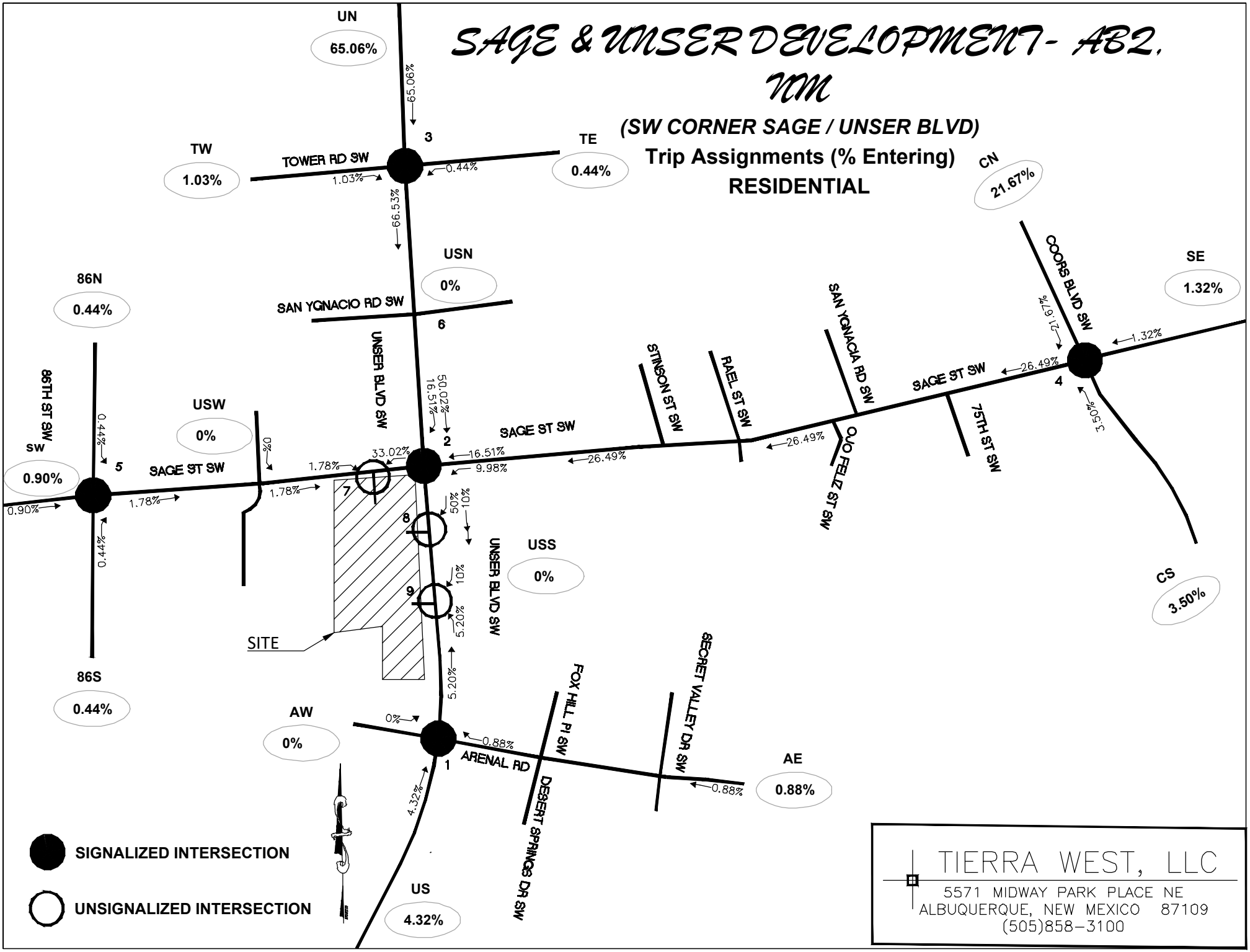
Sub Area Employment Data:
For determination of Trip Distribution for Proposed **Residential Development Trips**

2016 and 2040 Data Taken from Mid-Region Council of Governments' 2040 Data Set
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

									(US) Unser South		
Sub Area I.D.#	**% Sub Area in Study**	**2016 Employment**	**2040 Employment**	**Interpolated Employment for the Year**	Employment in Study	Dist. (Mi.)	**Employment / Distance**	**% Employment / Distance**	% Utilizing	% Employment / Dist. Utilizing	Employment
		2016	**2040**	**2025**							
1	100%	8,354	11,675	9,599	9,599	19.5	**492**	**1.05%**	0%	0.00%	0
2	100%	16,637	19,808	17,826	17,826	14.8	**1,204**	**2.57%**	0%	0.00%	0
3	100%	1,731	1,938	1,809	1,809	15.7	**115**	**0.25%**	0%	0.00%	0
4	100%	3,725	4,083	3,859	3,859	23	**168**	**0.36%**	0%	0.00%	0
5	100%	13,625	15,349	14,272	14,272	11.7	**1,220**	**2.61%**	0%	0.00%	0
6	100%	1,113	4,263	2,294	2,294	8.3	**276**	**0.59%**	0%	0.00%	0
7	100%	9,234	11,922	10,242	10,242	6.8	**1,506**	**3.22%**	0%	0.00%	0
8	100%	9,101	12,837	10,502	10,502	3.9	**2,693**	**5.75%**	0%	0.00%	0
9	100%	724	1,023	836	836	13	**64**	**0.14%**	0%	0.00%	0
10	100%	3,409	5,330	4,129	4,129	1	**4,129**	**8.82%**	10%	0.88%	413
11	100%	5,699	6,882	6,143	6,143	2.9	**2,118**	**4.53%**	0%	0.00%	0
12	100%	6,287	7,474	6,732	6,732	11.4	**591**	**1.26%**	0%	0.00%	0
13	100%	38,387	42,986	40,112	40,112	12.8	**3,134**	**6.69%**	0%	0.00%	0
14	100%	37,195	40,809	38,550	38,550	14.1	**2,734**	**5.84%**	0%	0.00%	0
15	100%	17,358	20,784	18,643	18,643	7.6	**2,453**	**5.24%**	0%	0.00%	0
16	100%	54,135	60,416	56,490	56,490	13	**4,345**	**9.28%**	0%	0.00%	0
17	100%	40,280	48,177	43,241	43,241	6.2	**6,974**	**14.90%**	0%	0.00%	0
18	100%	32,770	38,004	34,733	34,733	8.1	**4,288**	**9.16%**	0%	0.00%	0
19	100%	24,729	28,854	26,276	26,276	11.2	**2,346**	**5.01%**	0%	0.00%	0
20	100%	5,978	8,831	7,048	7,048	5.1	**1,382**	**2.95%**	0%	0.00%	0
21	100%	1,755	4,714	2,865	2,865	8.2	**349**	**0.75%**	50%	0.37%	175
22	100%	28,349	31,083	29,374	29,374	12.9	**2,277**	**4.86%**	0%	0.00%	0
23	100%	2,923	3,349	3,083	3,083	20.1	**153**	**0.33%**	0%	0.00%	0
24	100%	1,271	1,266	1,269	1,269	9	**141**	**0.30%**	80%	0.24%	113
25	100%	112	112	112	112	11.3	**10**	**0.02%**	80%	0.02%	8
26	100%	17,882	21,300	19,164	19,164	15.6	**1,228**	**2.62%**	80%	2.10%	983
27	100%	5,846	6,024	5,913	5,913	28.8	**205**	**0.44%**	80%	0.35%	164
28	100%	4,338	5,143	4,640	4,640	30.6	**152**	**0.32%**	80%	0.26%	121
29	100%	1,784	2,111	1,907	1,907	32.3	**59**	**0.13%**	80%	0.10%	47
		394,731	466,547	421,662	421,662		**46,809**	**100.00%**		4.32%	**2,024**
											4.32%

* - Subarea in which the site it located.


SAGE & UNSER DEVELOPMENT- ABQ, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Distribution Map (%)
RESIDENTIAL
UN
65.06%
TW
1.03%
TOWER RD SW
3
TE
0.44%
CN
21.67%
COORS BLVD SW
SE
1.32%
USN
0%
SAN YGNACIO RD SW
6
86N
0.44%
UNSER BLVD SW
SAN YGNACIA RD SW
STINSON ST SW
RAEL ST SW
SAGE ST SW
4
86TH ST SW
USW
0%
SW
0.90%
5
SAGE ST SW
2
QUO FELZ ST SW
75TH ST SW
SITE
USS
0%
UNSER BLVD SW
CS
3.50%
86S
0.44%
AW
0%
ARENAL RD
1
FOX HILL PI SW
SECRET VALLEY DR SW
AE
0.88%
DESERT SPRINGS DR SW
US
4.32%
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100


SAGE & UNSER DEVELOPMENT- AB2, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Assignments (% Entering)
RESIDENTIAL
UN
65.06%
TW
1.03%
TE
0.44%
CN
21.67%
SE
1.32%
USN
0%
86N
0.44%
USW
0%
SW
0.90%
86S
0.44%
USS
0%
AW
0%
AE
0.88%
US
4.32%
CS
3.50%
TOWER RD SW
SAN YGNACIO RD SW
UNSER BLVD SW
SAGE ST SW
86TH ST SW
STINSON ST SW
RAEL ST SW
SAN YGNACIA RD SW
COORS BLVD SW
75TH ST SW
QUO FELZ ST SW
ARENAL RD
FOX HILL PI SW
SECRET VALLEY DR SW
DESERT SPRINGS DR SW
SITE
1
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9
SIGNALIZED INTERSECTION
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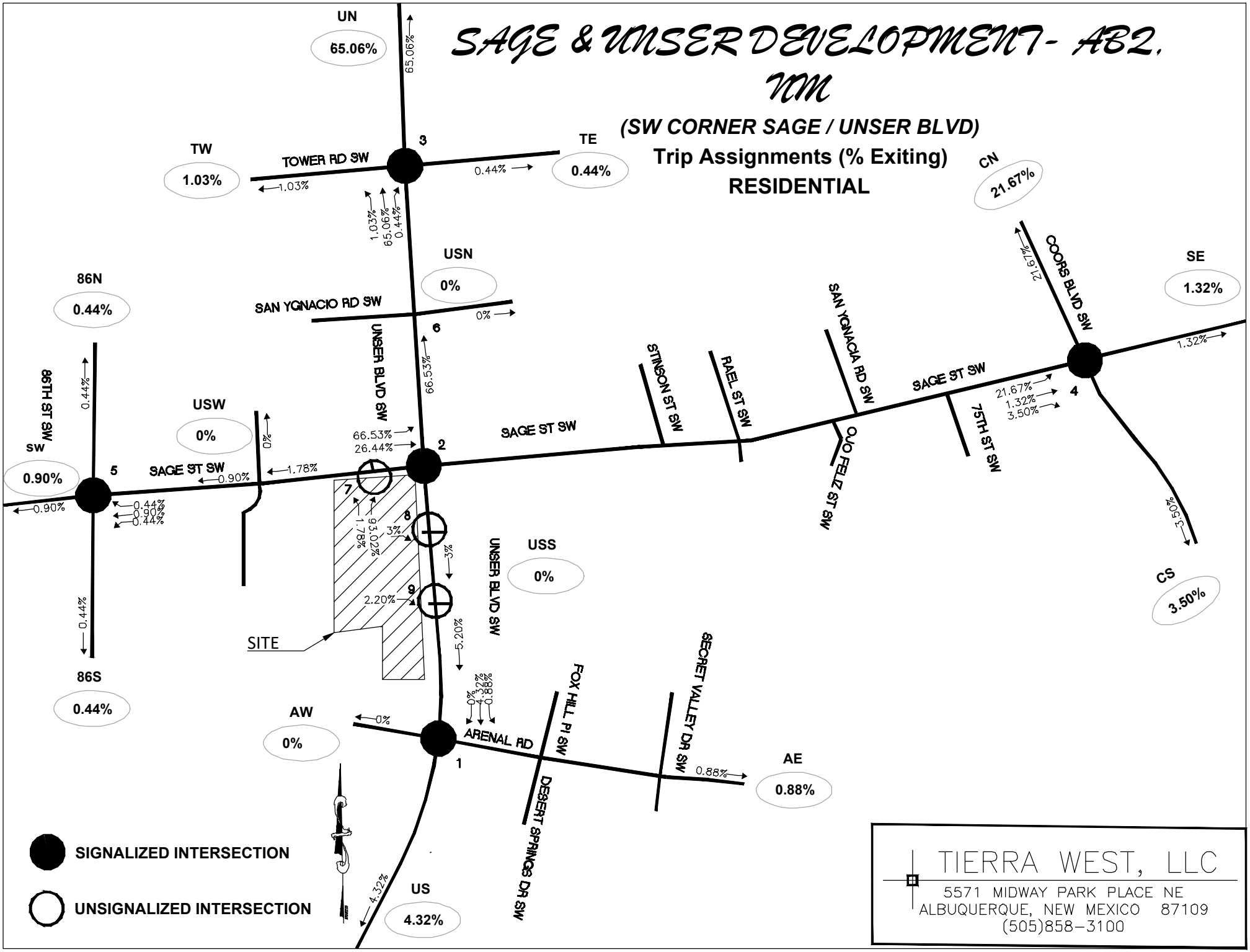
SAGE & UNSER DEVELOPMENT- AB2, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Assignments (% Exiting)
RESIDENTIAL
UN
65.06%
TW
1.03%
TOWER RD SW
TE
0.44%
CN
21.67%
USN
0%
SAN YGNACIO RD SW
SE
1.32%
COORS BLVD SW
86N
0.44%
86TH ST SW
SW
0.90%
USW
0%
UNSER BLVD SW
SAGE ST SW
STINSON ST SW
RAEL ST SW
SAN YGNACIA RD SW
QUO FELZ ST SW
75TH ST SW
CS
3.50%
SITE
USS
0%
AW
0%
ARENAL RD
FOX HILL PI SW
SECRET VALLEY DR SW
AE
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DESERT SPRINGS DR SW
US
4.32%
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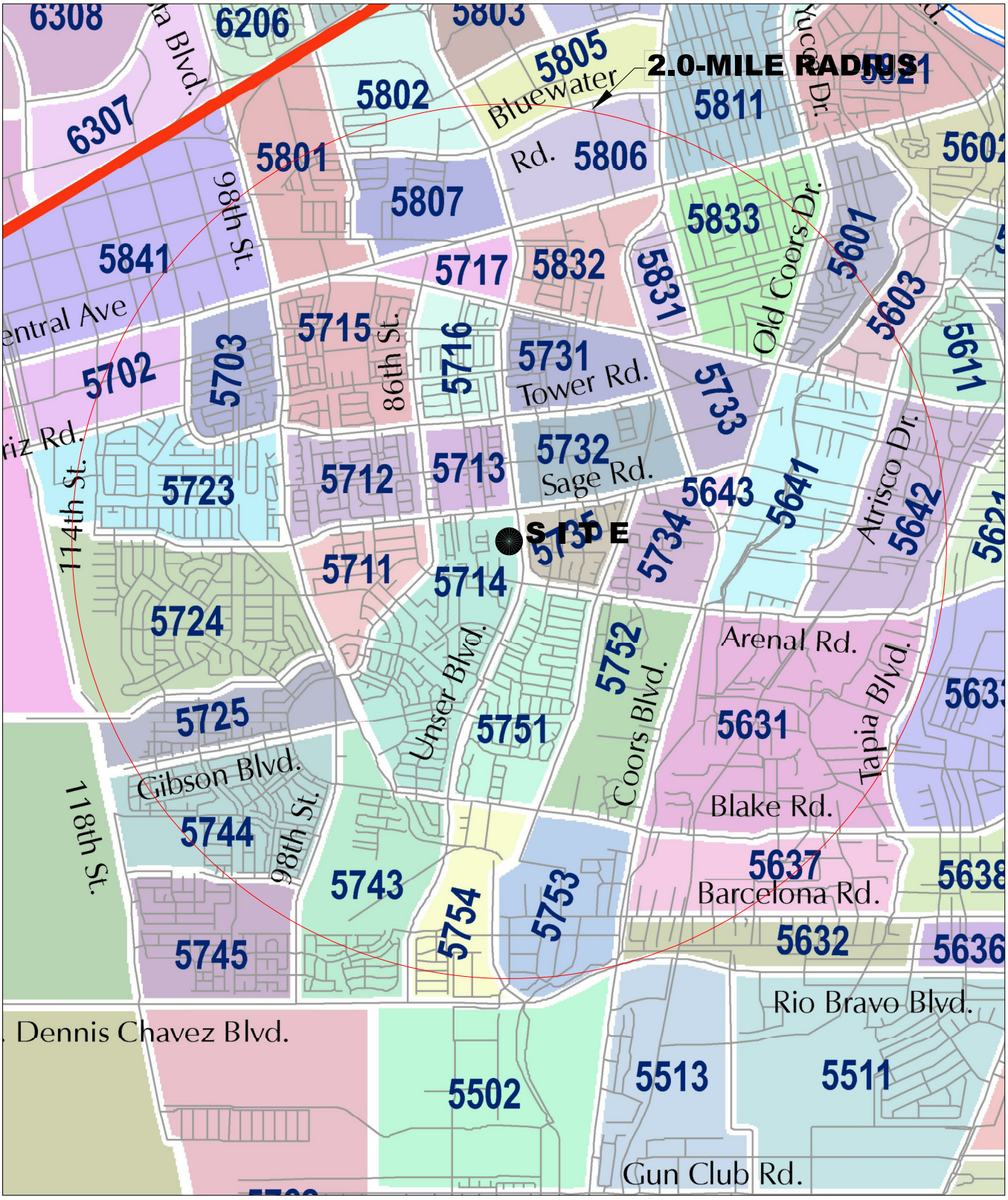


DATA ANALYSIS SUBZONE (DASZ) MAP

Sage Rd. / Unser Blvd. Development (NW Corner)

Trip Distribution Table

Sage and Unser Development [2021113]

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

2012 and 2040 Data Taken from Mid-Region Council of Governments

2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(TW) Tower Rd West			(UN) Unser North			(TE) Tower Rd East			(USN) Unser and Sage North			(USS) Unser and Sage S	
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	**Population in Study**	**Percent Population**	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing
		2012	**2040**	**2023**																
Boundary Specified on DASZ Map																				
5601	45%	2074	2145	2,102	946	**1.33%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5603	33%	834	813	826	273	**0.38%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5611	5%	735	673	711	36	**0.05%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5631	95%	2428	2504	2,458	2,335	**3.27%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5632	5%	822	852	834	42	**0.06%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5637	50%	857	954	895	448	**0.63%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5641	100%	1610	1626	1,616	1,616	**2.27%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5642	80%	1601	1577	1,592	1,274	**1.79%**	0%	0.00%	0	**20%**	0.36%	255	**20%**	0.36%	255	0%	0.00%	0	0%	0.00%
5643	100%	140	132	137	137	**0.19%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5702	55%	28	105	58	32	**0.04%**	**50%**	0.02%	16	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5703	100%	2470	2412	2,447	2,447	**3.43%**	**50%**	1.72%	1,224	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5711	100%	1866	1827	1,851	1,851	**2.60%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5712	100%	2769	2324	2,594	2,594	**3.64%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5713	100%	995	859	942	942	**1.32%**	**7%**	0.09%	66	0%	0.00%	0	0%	0.00%	0	**33%**	0.44%	311	0%	0.00%
5714	100%	5423	5000	5,257	5,257	**7.37%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5715	100%	4039	4232	4,115	4,115	**5.77%**	**50%**	2.88%	2,058	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5716	100%	2780	2608	2,712	2,712	**3.80%**	**35%**	1.33%	949	**50%**	1.90%	1,356	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5717	100%	6	1529	604	604	**0.85%**	0%	0.00%	0	**100%**	0.85%	604	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5723	100%	4569	5779	5,044	5,044	**7.07%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5724	100%	4793	5913	5,233	5,233	**7.34%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5725	100%	2332	2916	2,561	2,561	**3.59%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5731	100%	1330	1632	1,449	1,449	**2.03%**	0%	0.00%	0	**50%**	1.02%	725	**50%**	1.02%	725	0%	0.00%	0	0%	0.00%
5732	100%	389	1086	663	663	**0.93%**	0%	0.00%	0	0%	0.00%	0	**25%**	0.23%	166	0%	0.00%	0	0%	0.00%
5733	100%	100	94	98	98	**0.14%**	0%	0.00%	0	0%	0.00%	0	**5%**	0.01%	5	0%	0.00%	0	0%	0.00%
5734	100%	961	1000	976	976	**1.37%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5735	100%	1721	1612	1,678	1,678	**2.35%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5743	60%	2583	3912	3,105	1,863	**2.61%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5744	80%	3396	5971	4,408	3,526	**4.94%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5745	5%	2777	3394	3,019	151	**0.21%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5751	100%	5698	4668	5,293	5,293	**7.42%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5752	100%	1088	1212	1,137	1,137	**1.59%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5753	85%	1953	1728	1,865	1,585	**2.22%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5754	75%	997	1373	1,145	859	**1.20%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5801	95%	1452	3303	2,179	2,070	**2.90%**	0%	0.00%	0	**50%**	1.45%	1,035	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5802	75%	592	758	657	493	**0.69%**	0%	0.00%	0	**100%**	0.69%	493	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5805	10%	138	343	219	22	**0.03%**	0%	0.00%	0	**100%**	0.03%	22	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5806	90%	847	2144	1,357	1,221	**1.71%**	0%	0.00%	0	**100%**	1.71%	1,221	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5807	100%	1730	2227	1,925	1,925	**2.70%**	0%	0.00%	0	**100%**	2.70%	1,925	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5811	10%	4435	4231	4,355	436	**0.61%**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5831	100%	668	671	669	669	**0.94%**	0%	0.00%	0	0%	0.00%	0	**40%**	0.38%	268	0%	0.00%	0	0%	0.00%
5832	100%	1221	1808	1,452	1,452	**2.04%**	0%	0.00%	0	**100%**	2.04%	1,452	0%	0.00%	0	0%	0.00%	0	0%	0.00%
5833	85%	3969	3511	3,789	3,221	**4.52%**	0%	0.00%	0	**10%**	0.45%	322	**5%**	0.23%	161	0%	0.00%	0	0%	0.00%
5841	20%	161	269	203	41	**0.06%**	**25%**	0.01%	10	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
				86,230	71,327	100.00%			**4,322**			**9,409**			**1,579**			**311**		
									6.06%			13.19%			2.21%			0.44%		

Trip Distribution Table

Sage and Unser Development [2021113]

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

2012 and 2040 Data Taken from Mid-Region Council of Governments

2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							outh	(USW) Unser and Sage West			(USE) Unser and Sage East			(SW) Sage West			(SE) Sage East			
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	**Population in Study**	**Percent Population**	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing
		2012	**2040**	**2023**																
Boundary Specified on DASZ Map																				
5601	45%	2074	2145	2,102	946	**1.33%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**100%**	1.33%	946	0%
5603	33%	834	813	826	273	**0.38%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**100%**	0.38%	273	0%
5611	5%	735	673	711	36	**0.05%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**100%**	0.05%	36	0%
5631	95%	2428	2504	2,458	2,335	**3.27%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5632	5%	822	852	834	42	**0.06%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5637	50%	857	954	895	448	**0.63%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5641	100%	1610	1626	1,616	1,616	**2.27%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**40%**	0.91%	646	0%
5642	80%	1601	1577	1,592	1,274	**1.79%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**5%**	0.09%	64	0%
5643	100%	140	132	137	137	**0.19%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**50%**	0.10%	69	0%
5702	55%	28	105	58	32	**0.04%**	0	0%	0.00%	0	0%	0.00%	0	**50%**	0.02%	16	0%	0.00%	0	0%
5703	100%	2470	2412	2,447	2,447	**3.43%**	0	0%	0.00%	0	0%	0.00%	0	**50%**	1.72%	1,224	0%	0.00%	0	0%
5711	100%	1866	1827	1,851	1,851	**2.60%**	0	0%	0.00%	0	0%	0.00%	0	**33%**	0.86%	611	0%	0.00%	0	0%
5712	100%	2769	2324	2,594	2,594	**3.64%**	0	0%	0.00%	0	0%	0.00%	0	**50%**	1.82%	1,297	0%	0.00%	0	**50%**
5713	100%	995	859	942	942	**1.32%**	0	**30%**	0.40%	283	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**30%**
5714	100%	5423	5000	5,257	5,257	**7.37%**	0	**10%**	0.74%	526	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5715	100%	4039	4232	4,115	4,115	**5.77%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**50%**
5716	100%	2780	2608	2,712	2,712	**3.80%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**15%**
5717	100%	6	1529	604	604	**0.85%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5723	100%	4569	5779	5,044	5,044	**7.07%**	0	0%	0.00%	0	0%	0.00%	0	**100%**	7.07%	5,044	0%	0.00%	0	0%
5724	100%	4793	5913	5,233	5,233	**7.34%**	0	0%	0.00%	0	0%	0.00%	0	**100%**	7.34%	5,233	0%	0.00%	0	0%
5725	100%	2332	2916	2,561	2,561	**3.59%**	0	0%	0.00%	0	0%	0.00%	0	**10%**	0.36%	256	0%	0.00%	0	0%
5731	100%	1330	1632	1,449	1,449	**2.03%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5732	100%	389	1086	663	663	**0.93%**	0	0%	0.00%	0	**75%**	0.70%	497	0%	0.00%	0	0%	0.00%	0	0%
5733	100%	100	94	98	98	**0.14%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**5%**	0.01%	5	0%
5734	100%	961	1000	976	976	**1.37%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5735	100%	1721	1612	1,678	1,678	**2.35%**	0	0%	0.00%	0	**50%**	1.18%	839	0%	0.00%	0	0%	0.00%	0	0%
5743	60%	2583	3912	3,105	1,863	**2.61%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5744	80%	3396	5971	4,408	3,526	**4.94%**	0	0%	0.00%	0	0%	0.00%	0	**10%**	0.49%	353	0%	0.00%	0	0%
5745	5%	2777	3394	3,019	151	**0.21%**	0	0%	0.00%	0	0%	0.00%	0	**5%**	0.01%	8	0%	0.00%	0	0%
5751	100%	5698	4668	5,293	5,293	**7.42%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5752	100%	1088	1212	1,137	1,137	**1.59%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5753	85%	1953	1728	1,865	1,585	**2.22%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5754	75%	997	1373	1,145	859	**1.20%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5801	95%	1452	3303	2,179	2,070	**2.90%**	0	0%	0.00%	0	0%	0.00%	0	**50%**	1.45%	1,035	0%	0.00%	0	0%
5802	75%	592	758	657	493	**0.69%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5805	10%	138	343	219	22	**0.03%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5806	90%	847	2144	1,357	1,221	**1.71%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5807	100%	1730	2227	1,925	1,925	**2.70%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5811	10%	4435	4231	4,355	436	**0.61%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5831	100%	668	671	669	669	**0.94%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5832	100%	1221	1808	1,452	1,452	**2.04%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%
5833	85%	3969	3511	3,789	3,221	**4.52%**	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**43%**	1.92%	1,369	0%
5841	20%	161	269	203	41	**0.06%**	0	0%	0.00%	0	0%	0.00%	0	**75%**	0.04%	31	0%	0.00%	0	0%
				86,230	71,327	100.00%	**-**			**808**			**1,336**			**15,106**			**3,407**	
							0.00%			1.13%			1.87%			21.18%			4.78%	

Trip Distribution Table

Sage and Unser Development [2021113]

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

2012 and 2040 Data Taken from Mid-Region Council of Governments

2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(86N) 86th North		(86S) 86th South			(CN) Coors North			(CS) Coors South			(US) Unser South		
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	**Population in Study**	**Percent Population**	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2012	**2040**	**2023**																
Boundary Specified on DASZ Map																				
5601	45%	2074	2145	2,102	946	**1.33%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5603	33%	834	813	826	273	**0.38%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5611	5%	735	673	711	36	**0.05%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,458	2,335	**3.27%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5632	5%	822	852	834	42	**0.06%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**50%**	0.03%	21
5637	50%	857	954	895	448	**0.63%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**75%**	0.47%	336
5641	100%	1610	1626	1,616	1,616	**2.27%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	**20%**	0.45%	323	0%	0.00%	0
5642	80%	1601	1577	1,592	1,274	**1.79%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5643	100%	140	132	137	137	**0.19%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	**50%**	0.10%	69	0%	0.00%	0
5702	55%	28	105	58	32	**0.04%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	100%	2470	2412	2,447	2,447	**3.43%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,851	1,851	**2.60%**	0.00%	0	**33%**	0.86%	611	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	100%	2769	2324	2,594	2,594	**3.64%**	1.82%	1,297	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	942	942	**1.32%**	0.40%	283	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,257	5,257	**7.37%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**45%**	3.32%	2,366
5715	100%	4039	4232	4,115	4,115	**5.77%**	2.88%	2,058	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	100%	2780	2608	2,712	2,712	**3.80%**	0.57%	407	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5717	100%	6	1529	604	604	**0.85%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	100%	4569	5779	5,044	5,044	**7.07%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,233	5,233	**7.34%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,561	2,561	**3.59%**	0.00%	0	**60%**	2.15%	1,537	0%	0.00%	0	0%	0.00%	0	**30%**	1.08%	768
5731	100%	1330	1632	1,449	1,449	**2.03%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	100%	389	1086	663	663	**0.93%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5733	100%	100	94	98	98	**0.14%**	0.00%	0	0%	0.00%	0	**90%**	0.12%	88	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	976	976	**1.37%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	**70%**	0.96%	683	0%	0.00%	0
5735	100%	1721	1612	1,678	1,678	**2.35%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5743	60%	2583	3912	3,105	1,863	**2.61%**	0.00%	0	**50%**	1.31%	932	0%	0.00%	0	0%	0.00%	0	**50%**	1.31%	932
5744	80%	3396	5971	4,408	3,526	**4.94%**	0.00%	0	**60%**	2.97%	2,116	0%	0.00%	0	0%	0.00%	0	**30%**	1.48%	1,058
5745	5%	2777	3394	3,019	151	**0.21%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**95%**	0.20%	143
5751	100%	5698	4668	5,293	5,293	**7.42%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**80%**	5.94%	4,234
5752	100%	1088	1212	1,137	1,137	**1.59%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**20%**	0.32%	227
5753	85%	1953	1728	1,865	1,585	**2.22%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**90%**	2.00%	1,427
5754	75%	997	1373	1,145	859	**1.20%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	**100%**	1.20%	859
5801	95%	1452	3303	2,179	2,070	**2.90%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5802	75%	592	758	657	493	**0.69%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5805	10%	138	343	219	22	**0.03%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5806	90%	847	2144	1,357	1,221	**1.71%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5807	100%	1730	2227	1,925	1,925	**2.70%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5811	10%	4435	4231	4,355	436	**0.61%**	0.00%	0	0%	0.00%	0	**100%**	0.61%	436	0%	0.00%	0	0%	0.00%	0
5831	100%	668	671	669	669	**0.94%**	0.00%	0	0%	0.00%	0	**60%**	0.56%	401	0%	0.00%	0	0%	0.00%	0
5832	100%	1221	1808	1,452	1,452	**2.04%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5833	85%	3969	3511	3,789	3,221	**4.52%**	0.00%	0	0%	0.00%	0	**43%**	1.92%	1,369	0%	0.00%	0	0%	0.00%	0
5841	20%	161	269	203	41	**0.06%**	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
				86,230	71,327	100.00%		**4,044**			**5,195**			**2,295**			**1,075**			**12,371**
								5.67%			7.28%			3.22%			1.51%			17.34%

Trip Distribution Table

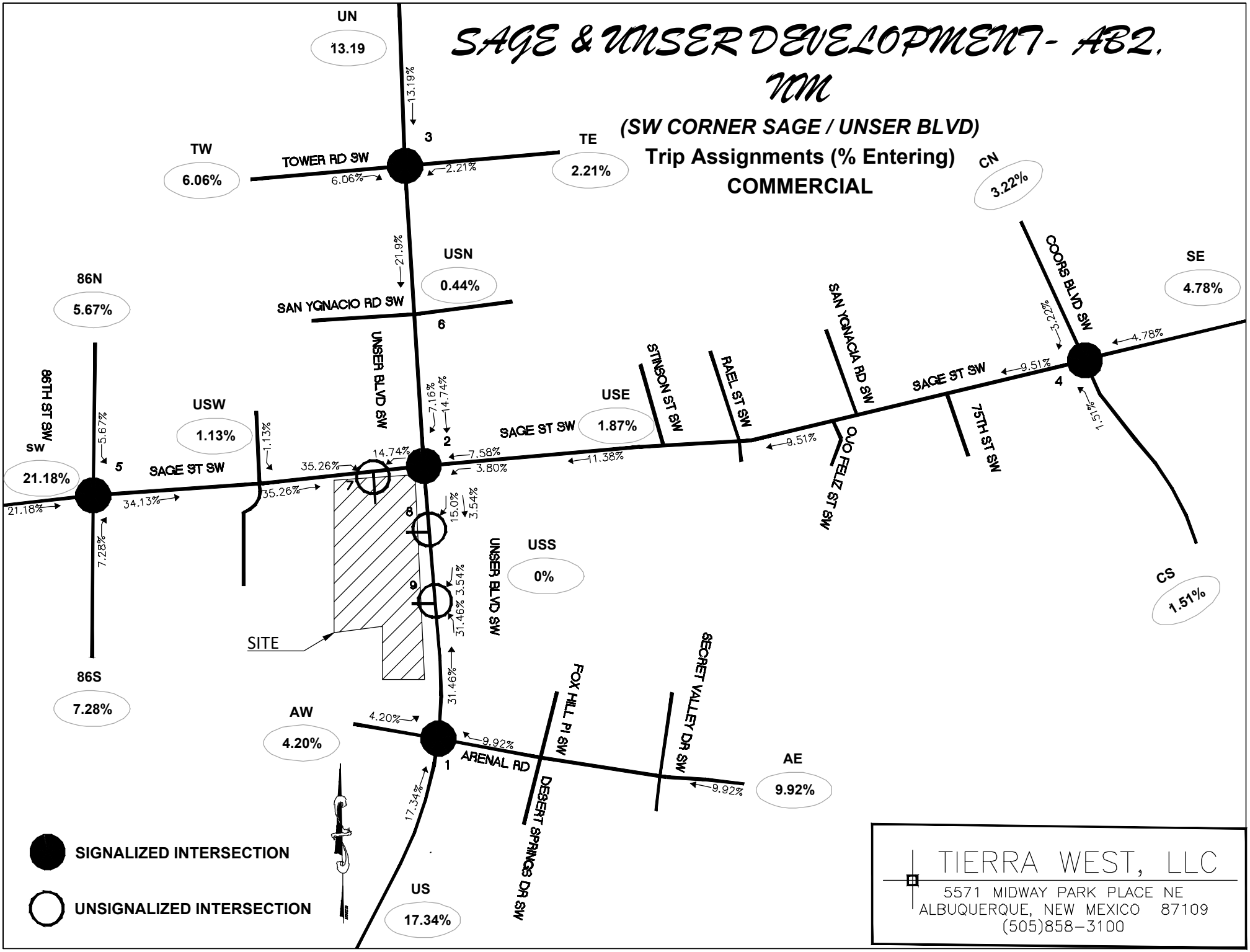
Sage and Unser Development [2021113]

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

2012 and 2040 Data Taken from Mid-Region Council of Governments

2040 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(AW) Areneal West			(AE) Arenal East		
DASZ #	% Sub Area in Study	2012 Population	2040 Population	Interpolated Population for the Year	**Population in Study**	**Percent Population**	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2012	**2040**	**2023**								
Boundary Specified on DASZ Map												
5601	45%	2074	2145	2,102	946	**1.33%**	0%	0.00%	0	0%	0.00%	0
5603	33%	834	813	826	273	**0.38%**	0%	0.00%	0	0%	0.00%	0
5611	5%	735	673	711	36	**0.05%**	0%	0.00%	0	0%	0.00%	0
5631	95%	2428	2504	2,458	2,335	**3.27%**	0%	0.00%	0	**100%**	3.27%	2,335
5632	5%	822	852	834	42	**0.06%**	0%	0.00%	0	**50%**	0.03%	21
5637	50%	857	954	895	448	**0.63%**	0%	0.00%	0	**25%**	0.16%	112
5641	100%	1610	1626	1,616	1,616	**2.27%**	0%	0.00%	0	**40%**	0.91%	646
5642	80%	1601	1577	1,592	1,274	**1.79%**	0%	0.00%	0	**55%**	0.98%	701
5643	100%	140	132	137	137	**0.19%**	0%	0.00%	0	0%	0.00%	0
5702	55%	28	105	58	32	**0.04%**	0%	0.00%	0	0%	0.00%	0
5703	100%	2470	2412	2,447	2,447	**3.43%**	0%	0.00%	0	0%	0.00%	0
5711	100%	1866	1827	1,851	1,851	**2.60%**	**34%**	0.88%	629	0%	0.00%	0
5712	100%	2769	2324	2,594	2,594	**3.64%**	0%	0.00%	0	0%	0.00%	0
5713	100%	995	859	942	942	**1.32%**	0%	0.00%	0	0%	0.00%	0
5714	100%	5423	5000	5,257	5,257	**7.37%**	**45%**	3.32%	2,366	0%	0.00%	0
5715	100%	4039	4232	4,115	4,115	**5.77%**	0%	0.00%	0	0%	0.00%	0
5716	100%	2780	2608	2,712	2,712	**3.80%**	0%	0.00%	0	0%	0.00%	0
5717	100%	6	1529	604	604	**0.85%**	0%	0.00%	0	0%	0.00%	0
5723	100%	4569	5779	5,044	5,044	**7.07%**	0%	0.00%	0	0%	0.00%	0
5724	100%	4793	5913	5,233	5,233	**7.34%**	0%	0.00%	0	0%	0.00%	0
5725	100%	2332	2916	2,561	2,561	**3.59%**	0%	0.00%	0	0%	0.00%	0
5731	100%	1330	1632	1,449	1,449	**2.03%**	0%	0.00%	0	0%	0.00%	0
5732	100%	389	1086	663	663	**0.93%**	0%	0.00%	0	0%	0.00%	0
5733	100%	100	94	98	98	**0.14%**	0%	0.00%	0	0%	0.00%	0
5734	100%	961	1000	976	976	**1.37%**	0%	0.00%	0	**30%**	0.41%	293
5735	100%	1721	1612	1,678	1,678	**2.35%**	0%	0.00%	0	**50%**	1.18%	839
5743	60%	2583	3912	3,105	1,863	**2.61%**	0%	0.00%	0	0%	0.00%	0
5744	80%	3396	5971	4,408	3,526	**4.94%**	0%	0.00%	0	0%	0.00%	0
5745	5%	2777	3394	3,019	151	**0.21%**	0%	0.00%	0	0%	0.00%	0
5751	100%	5698	4668	5,293	5,293	**7.42%**	0%	0.00%	0	**20%**	1.48%	1,059
5752	100%	1088	1212	1,137	1,137	**1.59%**	0%	0.00%	0	**80%**	1.28%	910
5753	85%	1953	1728	1,865	1,585	**2.22%**	0%	0.00%	0	**10%**	0.22%	159
5754	75%	997	1373	1,145	859	**1.20%**	0%	0.00%	0	0%	0.00%	0
5801	95%	1452	3303	2,179	2,070	**2.90%**	0%	0.00%	0	0%	0.00%	0
5802	75%	592	758	657	493	**0.69%**	0%	0.00%	0	0%	0.00%	0
5805	10%	138	343	219	22	**0.03%**	0%	0.00%	0	0%	0.00%	0
5806	90%	847	2144	1,357	1,221	**1.71%**	0%	0.00%	0	0%	0.00%	0
5807	100%	1730	2227	1,925	1,925	**2.70%**	0%	0.00%	0	0%	0.00%	0
5811	10%	4435	4231	4,355	436	**0.61%**	0%	0.00%	0	0%	0.00%	0
5831	100%	668	671	669	669	**0.94%**	0%	0.00%	0	0%	0.00%	0
5832	100%	1221	1808	1,452	1,452	**2.04%**	0%	0.00%	0	0%	0.00%	0
5833	85%	3969	3511	3,789	3,221	**4.52%**	0%	0.00%	0	0%	0.00%	0
5841	20%	161	269	203	41	**0.06%**	0%	0.00%	0	0%	0.00%	0
				86,230	71,327	100.00%			**2,995**			**7,074**
									4.20%			9.92%

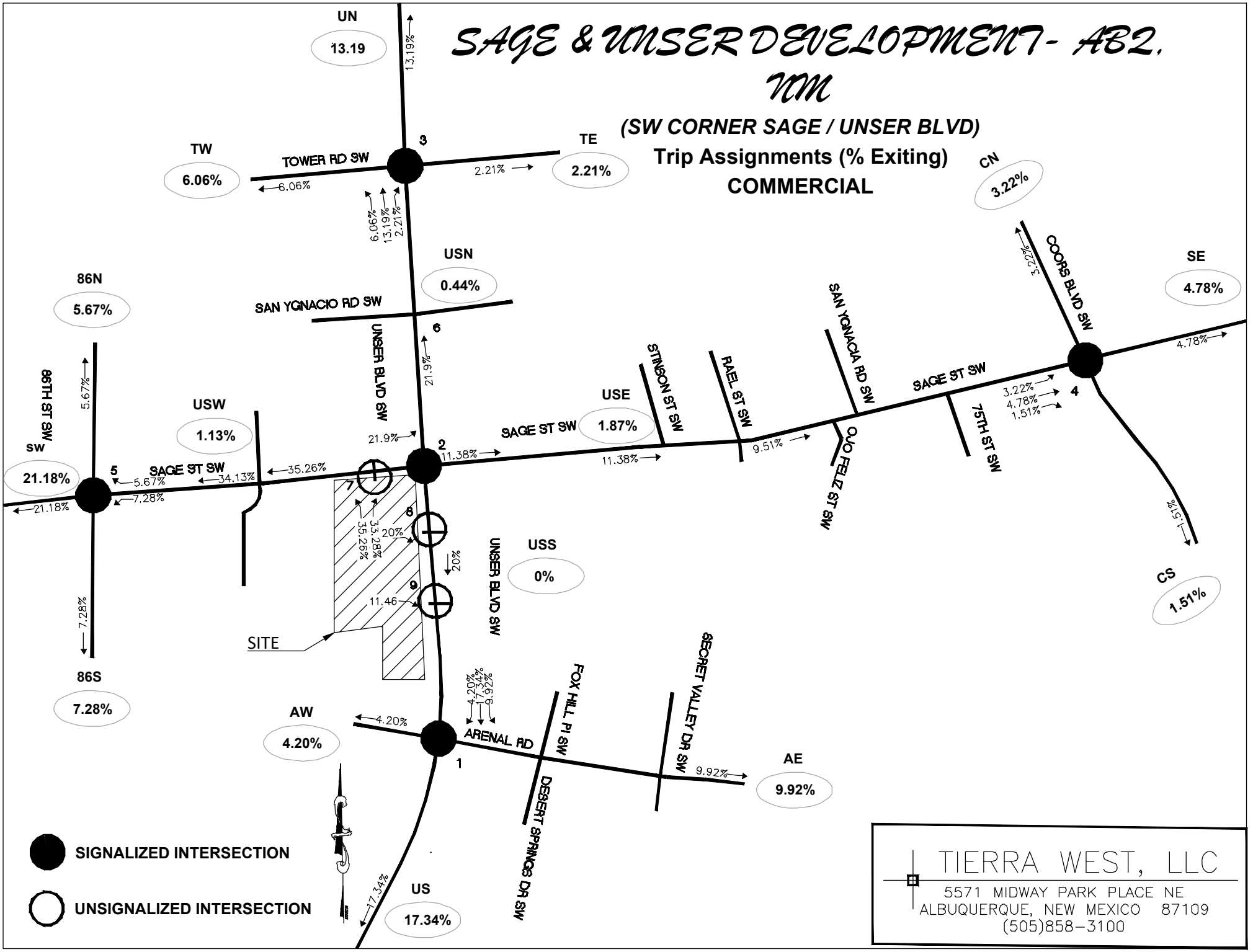

SAGE & UNSER DEVELOPMENT- AB2, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Assignments (% Entering)
COMMERCIAL
UN
13.19
TW
6.06%
TE
2.21%
CN
3.22%
USN
0.44%
SE
4.78%
86N
5.67%
USW
1.13%
USE
1.87%
SW
21.18%
USS
0%
CS
1.51%
86S
7.28%
AW
4.20%
AE
9.92%
US
17.34%
TOWER RD SW
SAN YGNACIO RD SW
UNSER BLVD SW
SAGE ST SW
STINSON ST SW
RAEL ST SW
SAN YGNACIA RD SW
COORS BLVD SW
75TH ST SW
QUO FELZ ST SW
86TH ST SW
ARENAL RD
FOX HILL PI SW
SECRET VALLEY DR SW
DESERT SPRINGS DR SW
SITE
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

SAGE & UNSER DEVELOPMENT- AB2, NM

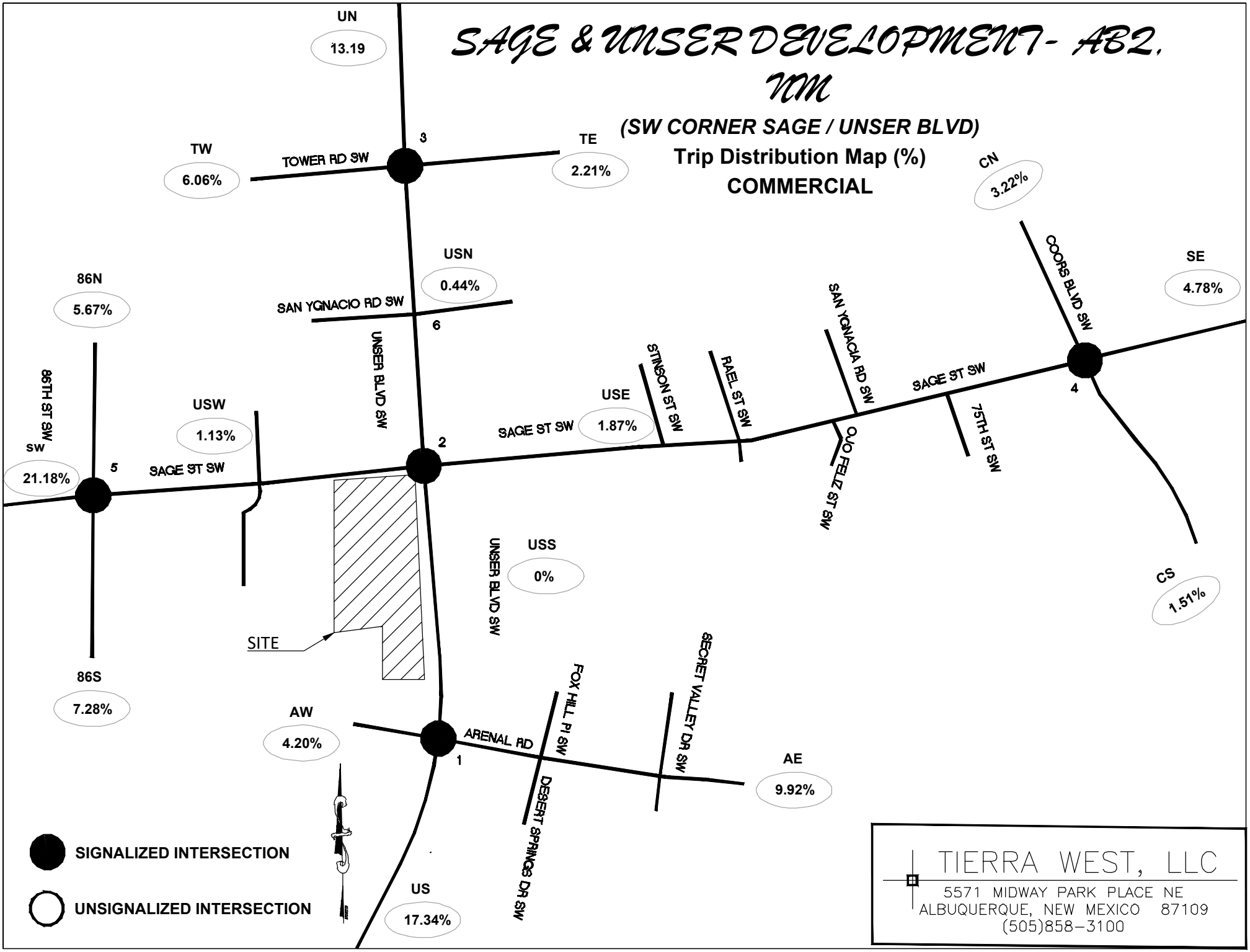
(SW CORNER SAGE / UNSER BLVD)

Trip Assignments (% Exiting)

COMMERCIAL



TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

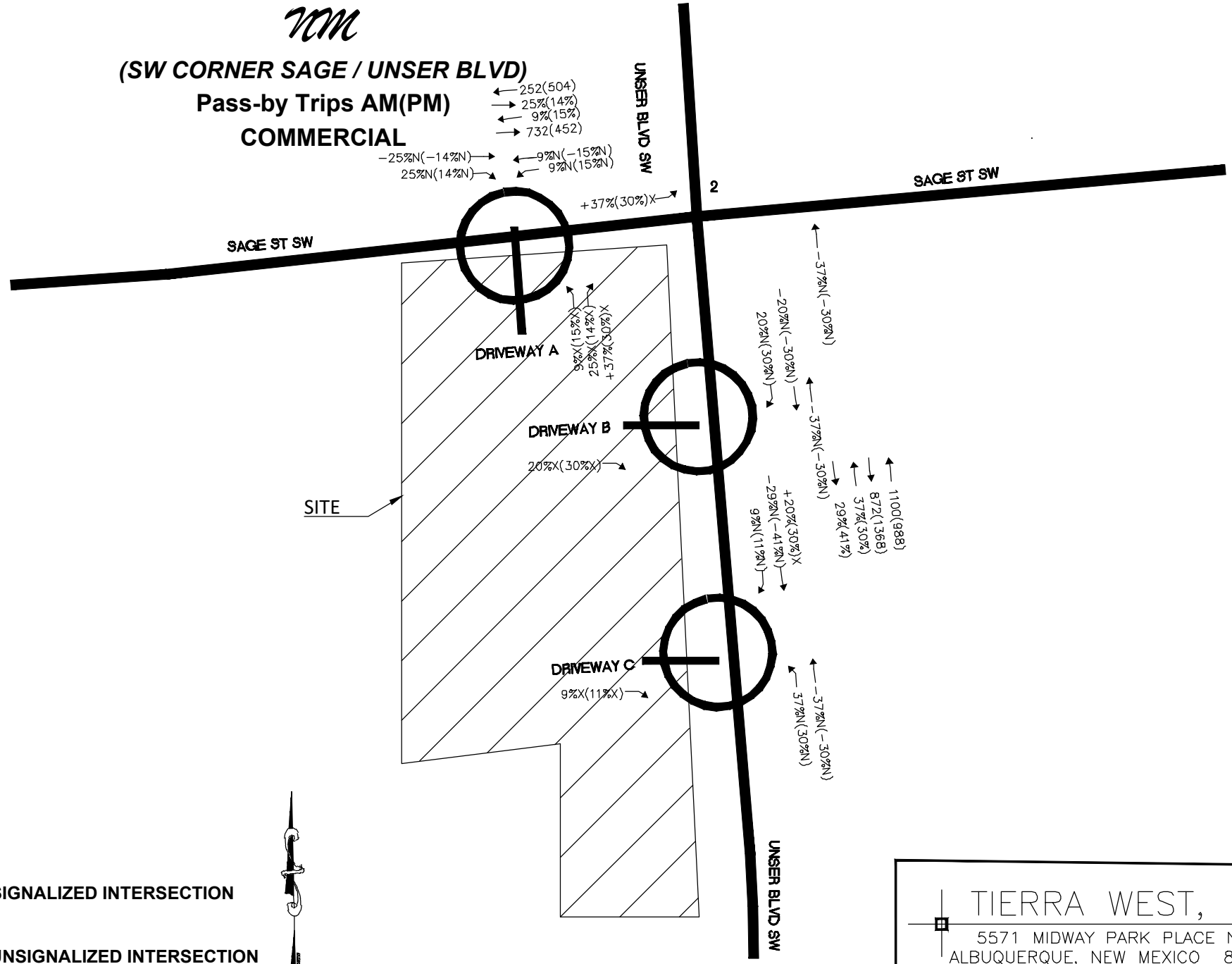

SAGE & UNSER DEVELOPMENT- AB2, NM
(SW CORNER SAGE / UNSER BLVD)
Trip Distribution Map (%)
COMMERCIAL
UN
13.19
TW
6.06%
TOWER RD SW
3
TE
2.21%
CN
3.22%
COORS BLVD SW
SE
4.78%
USN
0.44%
SAN YGNACIO RD SW
6
86N
5.67%
UNSER BLVD SW
SAN YGNACIA RD SW
STINSON ST SW
RAEL ST SW
SAGE ST SW
4
86TH ST SW
USW
1.13%
USE
1.87%
SAGE ST SW
2
75TH ST SW
SW
21.18%
5
SAGE ST SW
OJO FELIZ ST SW
USS
0%
UNSER BLVD SW
CS
1.51%
SITE
86S
7.28%
AW
4.20%
ARENAL RD
1
FOX HILL PI SW
SECRET VALLEY DR SW
AE
9.92%
DESERT SPRINGS DR SW
US
17.34%
SIGNALIZED INTERSECTION
UNSIGNALIZED INTERSECTION
TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO 87109
(505)858-3100

SAGE & UNSER DEVELOPMENT- AB2, NM

(SW CORNER SAGE / UNSER BLVD)

Pass-by Trips AM(PM)

COMMERCIAL



SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION

TIERRA WEST, LLC

5571 MIDWAY PARK PLACE NE

ALBUQUERQUE, NEW MEXICO 87109

(505)858-3100

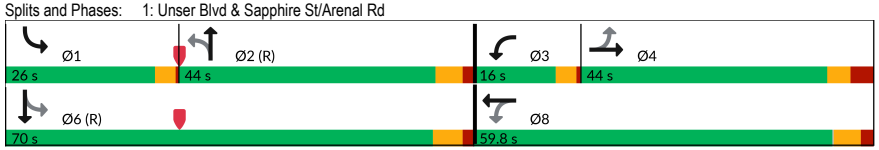
Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	172	230	163	149	275	63	763	235	239	714	41
Future Volume (vph)	172	230	163	149	275	63	763	235	239	714	41
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		1.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	23.8	23.8	42.3	39.8	130.0	62.5	62.5	130.0	80.7	78.2	130.0
Actuated g/C Ratio	0.18	0.18	0.33	0.31	1.00	0.48	0.48	1.00	0.62	0.60	1.00
v/c Ratio	0.76	0.45	0.46	0.26	0.17	0.19	0.45	0.15	0.55	0.34	0.03
Control Delay (s/veh)	71.0	43.8	35.4	33.4	0.2	26.4	25.9	0.2	30.7	17.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.0	43.8	35.4	33.4	0.2	26.4	25.9	0.2	30.7	17.0	0.0
LOS	E	D	D	C	A	C	C	A	C	B	A
Approach Delay (s/veh)		53.9		18.4			20.2			19.6	
Approach LOS		D		B			C			B	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 24.7		Intersection LOS: C	
Intersection Capacity Utilization 70.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	230	63	163	149	275	63	763	235	239	714	41
Future Volume (veh/h)	172	230	63	163	149	275	63	763	235	239	714	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	230	0	163	149	0	63	763	0	239	714	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	582		336	523		432	1818		467	2204	
Arrive On Green	0.16	0.16	0.00	0.09	0.28	0.00	0.51	0.51	0.00	0.16	1.00	0.00
Sat Flow, veh/h	1239	3647	0	1781	1870	1585	736	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	172	230	0	163	149	0	63	763	0	239	714	0
Grp Sat Flow(s),veh/h/ln	1239	1777	0	1781	1870	1585	736	1777	1585	1781	1777	1585
Q Serve(g_s), s	17.5	7.5	0.0	9.6	8.1	0.0	5.9	17.4	0.0	8.5	0.0	0.0
Cycle Q Clear(g_c), s	17.5	7.5	0.0	9.6	8.1	0.0	5.9	17.4	0.0	8.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	582		336	523		432	1818		467	2204	
V/C Ratio(X)	0.67	0.40		0.49	0.28		0.15	0.42		0.51	0.32	
Avail Cap(c_a), veh/h	408	1011		349	774		432	1818		630	2204	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	52.8	48.6	0.0	38.7	36.6	0.0	17.0	19.8	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.4	0.0	0.4	0.3	0.0	0.7	0.7	0.0	0.3	0.4	0.0
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 BackOfQ(95%),veh/ln	9.5	6.0	0.0	7.5	6.7	0.0	1.9	11.5	0.0	4.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.7	49.0	0.0	39.1	36.9	0.0	17.7	20.5	0.0	12.8	0.4	0.0
LnGrp LOS	E	D		D	D		B	C		B	A	
Approach Vol, veh/h		402			312			826			953	
Approach Delay, s/veh		51.9			38.1			20.3			3.5	
Approach LOS		D			D			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	14.1	72.5	15.1	28.3	86.6	43.4
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	10.5	19.4	11.6	19.5	2.0	10.1
Green Ext Time (p_c), s	0.2	5.3	0.0	1.8	5.4	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	21.2	
HCM 7th LOS	C	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

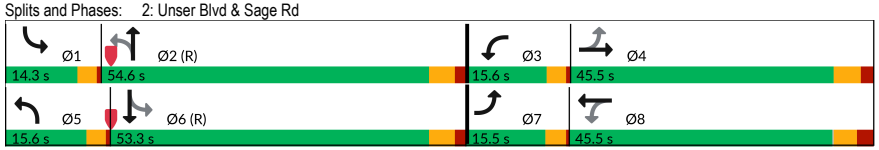
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	286	331	213	41	109	95	1053	100	86	735	82
Future Volume (vph)	286	331	213	41	109	95	1053	100	86	735	82
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	40.6	30.0	130.0	31.1	22.6	79.2	70.3	130.0	78.7	70.0	130.0
Actuated g/C Ratio	0.31	0.23	1.00	0.24	0.17	0.61	0.54	1.00	0.61	0.54	1.00
v/c Ratio	0.89	0.77	0.13	0.21	0.60	0.23	0.55	0.06	0.30	0.39	0.05
Control Delay (s/veh)	68.9	60.4	0.2	31.1	47.7	11.8	18.4	0.1	13.2	18.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.9	60.4	0.2	31.1	47.7	11.8	18.4	0.1	13.2	18.6	0.1
LOS	E	E	A	C	D	B	B	A	B	B	A
Approach Delay (s/veh)		47.8			44.8		16.4			16.4	
Approach LOS		D			D		B			B	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 26.6		Intersection LOS: C	
Intersection Capacity Utilization 77.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	331	213	41	109	86	95	1053	100	86	735	82
Future Volume (veh/h)	286	331	213	41	109	86	95	1053	100	86	735	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	286	331	0	41	109	0	95	1053	0	86	735	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	374		133	252		548	2123		344	2116	
Arrive On Green	0.09	0.20	0.00	0.03	0.13	0.00	0.04	0.60	0.00	0.07	1.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	286	331	0	41	109	0	95	1053	0	86	735	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	22.4	0.0	2.6	7.0	0.0	2.7	22.0	0.0	2.5	0.0	0.0
Cycle Q Clear(g_c), s	12.0	22.4	0.0	2.6	7.0	0.0	2.7	22.0	0.0	2.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	374		133	252		548	2123		344	2116	
V/C Ratio(X)	0.88	0.89		0.31	0.43		0.17	0.50		0.25	0.35	
Avail Cap(c_a), veh/h	324	568		250	568		651	2123		433	2116	
HCM Platoon Ratio	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.64	0.64	0.00	0.09	0.09	0.00	0.90	0.90	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.4	50.6	0.0	47.5	51.7	0.0	9.4	15.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	16.0	7.2	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.1	0.5	0.0
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 BackOfQ(95%),veh/ln	7.8	15.5	0.0	1.7	4.2	0.0	1.8	13.2	0.0	1.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.4	57.8	0.0	47.5	51.8	0.0	9.4	15.7	0.0	11.3	0.5	0.0
LnGrp LOS	E	E		D	D		A	B		B	A	
Approach Vol, veh/h		617			150			1148			821	
Approach Delay, s/veh		60.9			50.6			15.2			1.6	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	83.2	7.0	32.0	8.1	82.9	15.5	23.5
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	4.5	24.0	4.6	24.4	4.7	2.0	14.0	9.0
Green Ext Time (p_c), s	0.0	10.8	0.0	1.6	0.0	8.2	0.0	0.5

Intersection Summary		
HCM 7th Control Delay, s/veh	23.4	
HCM 7th LOS	C	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

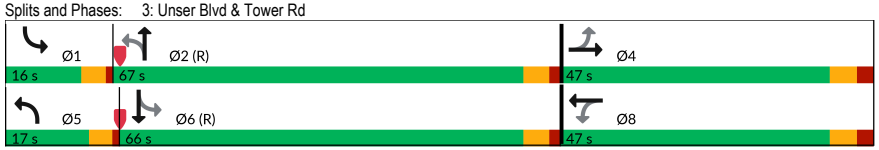
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	95	118	36	86	32	969	27	462	59
Future Volume (vph)	95	118	36	86	32	969	27	462	59
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	15.6	15.6	15.6	15.6	100.8	96.9	100.7	96.9	130.0
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.78	0.75	0.77	0.75	1.00
v/c Ratio	0.65	0.40	0.26	0.33	0.04	0.38	0.06	0.18	0.04
Control Delay (s/veh)	74.2	35.1	54.9	31.0	5.3	11.2	3.8	5.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.2	35.1	54.9	31.0	5.3	11.2	3.8	5.9	0.1
LOS	E	D	D	C	A	B	A	A	A
Approach Delay (s/veh)		48.3		35.6		11.1		5.1	
Approach LOS		D		D		B		A	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay (s/veh): 16.8	Intersection LOS: B	
Intersection Capacity Utilization 63.3%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	118	68	36	86	63	32	969	36	27	462	59
Future Volume (veh/h)	95	118	68	36	86	63	32	969	36	27	462	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	118	0	36	86	0	32	969	0	27	462	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	401		160	401		740	2651		513	2646	
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.03	1.00	0.00	0.01	0.74	0.00
Sat Flow, veh/h	1311	3647	0	1274	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	95	118	0	36	86	0	32	969	0	27	462	0
Grp Sat Flow(s),veh/h/ln	1311	1777	0	1274	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	9.2	4.0	0.0	3.5	2.9	0.0	0.6	0.0	0.0	0.5	5.0	0.0
Cycle Q Clear(g_c), s	12.1	4.0	0.0	7.4	2.9	0.0	0.6	0.0	0.0	0.5	5.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	401		160	401		740	2651		513	2646	
V/C Ratio(X)	0.54	0.29		0.22	0.21		0.04	0.37		0.05	0.17	
Avail Cap(c_a), veh/h	435	1107		413	1107		884	2651		645	2646	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.9	52.9	0.0	56.3	52.4	0.0	3.8	0.0	0.0	3.8	4.9	0.0
Incr Delay (d2), s/veh	1.0	0.2	0.0	0.3	0.1	0.0	0.0	0.4	0.0	0.0	0.1	0.0
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 BackOfQ(95%),veh/ln	5.6	3.2	0.0	2.0	2.3	0.0	0.3	0.3	0.0	0.3	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.9	53.1	0.0	56.6	52.5	0.0	3.8	0.4	0.0	3.9	5.0	0.0
LnGrp LOS	E	D		E	D		A	A		A	A	
Approach Vol, veh/h		213			122			1001			489	
Approach Delay, s/veh		55.7			53.7			0.5			5.0	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	6.4	102.5	21.2	6.6	102.3	21.2
Change Period (Y+Rc), s	4.5	5.5	6.5	4.5	5.5	6.5
Max Green Setting (Gmax), s	11.5	61.5	40.5	12.5	60.5	40.5
Max Q Clear Time (g_c+I1), s	2.5	2.0	14.1	2.6	7.0	9.4
Green Ext Time (p_c), s	0.0	12.5	0.6	0.0	4.7	0.4

Intersection Summary		
HCM 7th Control Delay, s/veh	11.7	
HCM 7th LOS	B	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

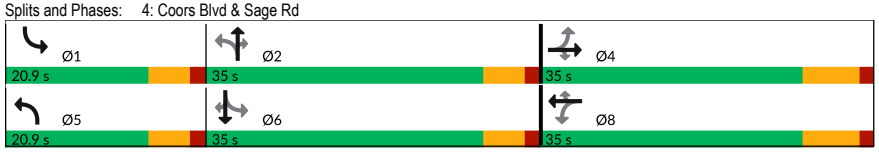
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	304	210	68	94	164	234	22	1137	17	54	585	71
Future Volume (vph)	304	210	68	94	164	234	22	1137	17	54	585	71
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.4	7.4		7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)		28.0	28.0		28.0	28.0	37.7	29.6	29.6	38.8	33.4	33.4
Actuated g/C Ratio		0.34	0.34		0.34	0.34	0.46	0.36	0.36	0.47	0.40	0.40
v/c Ratio		1.31	0.11		1.39	0.34	0.04	0.90	0.03	0.14	0.41	0.10
Control Delay (s/veh)		183.6	2.3		231.7	4.9	9.9	38.3	0.1	10.9	20.4	1.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		183.6	2.3		231.7	4.9	9.9	38.3	0.1	10.9	20.4	1.2
LOS		F	A		F	A	A	D	A	B	C	A
Approach Delay (s/veh)		162.5			123.9			37.2			17.7	
Approach LOS		F			F			D			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 82.5			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay (s/veh): 71.6		Intersection LOS: E	
Intersection Capacity Utilization 103.8%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	210	68	94	164	234	22	1137	17	54	585	71
Future Volume (veh/h)	304	210	68	94	164	234	22	1137	17	54	585	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	304	210	68	94	164	234	22	1137	17	54	585	71
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	0	504	57	75	504	419	1191	531	318	1385	618
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.34	0.34	0.13	0.39	0.39
Sat Flow, veh/h	0	0	1585	0	236	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	514	0	68	258	0	234	22	1137	17	54	585	71
Grp Sat Flow(s),veh/h/ln	0	0	1585	236	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	2.7	0.0	0.0	10.3	0.6	27.2	0.6	1.4	10.4	2.5
Cycle Q Clear(g_c), s	27.6	0.0	2.7	27.6	0.0	10.3	0.6	27.2	0.6	1.4	10.4	2.5
Prop In Lane	0.59		1.00	0.36		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	0	504	132	0	504	419	1191	531	318	1385	618
V/C Ratio(X)	7.79	0.00	0.13	1.96	0.00	0.46	0.05	0.95	0.03	0.17	0.42	0.11
Avail Cap(c_a), veh/h	66	0	504	132	0	504	600	1191	531	402	1385	618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	0.0	21.1	28.7	0.0	23.7	15.7	28.2	19.4	17.5	19.3	16.9
Incr Delay (d2), s/veh	3086.2	0.0	0.1	458.6	0.0	0.5	0.0	17.2	0.1	0.1	0.9	0.4
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(95%),veh/ln	97.3	0.0	1.7	34.5	0.0	6.7	0.4	19.2	0.4	0.9	7.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3129.6	0.0	21.2	487.2	0.0	24.2	15.7	45.4	19.5	17.6	20.3	17.3
LnGrp LOS	F		C	F		C	B	D	B	B	C	B
Approach Vol, veh/h		582			492			1176			710	
Approach Delay, s/veh		2766.4			267.0			44.5			19.8	
Approach LOS		F			F			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.8	35.0		35.0	12.1	39.7		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	3.4	29.2		29.6	2.6	12.4		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.1		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	610.7	
HCM 7th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.

Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	59	541	38	211	4	114	42	30
Future Volume (vph)	59	541	38	211	4	114	42	30
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	3.5	5.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	35.7	26.9	34.1	26.1	83.3	83.3	83.3	83.3
Actuated g/C Ratio	0.27	0.21	0.26	0.20	0.64	0.64	0.64	0.64
v/c Ratio	0.19	0.76	0.21	0.38	0.00	0.17	0.06	0.07
Control Delay (s/veh)	32.0	55.0	28.9	35.6	11.8	9.7	11.6	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.0	55.0	28.9	35.6	11.8	9.7	11.6	5.4
LOS	C	E	C	D	B	A	B	A
Approach Delay (s/veh)		52.8		34.8		9.8		7.5
Approach LOS		D		C		A		A

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 37.0		Intersection LOS: D	
Intersection Capacity Utilization 52.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: 86th Street & Sage Rd

HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	541	13	38	211	59	4	114	80	42	30	51
Future Volume (veh/h)	59	541	13	38	211	59	4	114	80	42	30	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	541	13	38	211	59	4	114	80	42	30	51
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	667	16	135	483	132	929	695	488	816	423	719
Arrive On Green	0.04	0.19	0.19	0.05	0.35	0.35	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1781	3547	85	1781	2759	753	1317	1023	718	1189	622	1058
Grp Volume(v), veh/h	59	271	283	38	134	136	4	0	194	42	0	81
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1735	1317	0	1741	1189	0	1680
Q Serve(g_s), s	3.5	19.0	19.0	2.3	7.5	7.9	0.1	0.0	5.2	1.7	0.0	2.1
Cycle Q Clear(g_c), s	3.5	19.0	19.0	2.3	7.5	7.9	2.2	0.0	5.2	6.9	0.0	2.1
Prop In Lane	1.00		0.05	1.00		0.43	1.00		0.41	1.00		0.63
Lane Grp Cap(c), veh/h	250	334	349	135	311	304	929	0	1183	816	0	1142
V/C Ratio(X)	0.24	0.81	0.81	0.28	0.43	0.45	0.00	0.00	0.16	0.05	0.00	0.07
Avail Cap(c_a), veh/h	348	713	745	257	713	697	929	0	1183	816	0	1142
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	50.6	50.6	42.6	37.3	37.4	7.4	0.0	7.5	8.8	0.0	7.0
Incr Delay (d2), s/veh	0.5	4.7	4.6	1.0	0.9	1.0	0.0	0.0	0.3	0.1	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	13.7	14.2	1.8	5.5	5.6	0.1	0.0	3.6	0.8	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.3	55.3	55.1	43.7	38.2	38.4	7.4	0.0	7.8	8.9	0.0	7.1
LnGrp LOS	D	E	E	D	D	D	A		A	A		A
Approach Vol, veh/h		613			308			198			123	
Approach Delay, s/veh		54.0			38.9			7.8			7.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		93.9	6.7	29.4		93.9	8.4	27.8				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		7.2	4.3	21.0		8.9	5.5	9.9				
Green Ext Time (p_c), s		1.3	0.0	3.4		0.6	0.0	1.6				

Intersection Summary		
HCM 7th Control Delay, s/veh	38.3	
HCM 7th LOS	D	

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	34	0	0	11	0	1609	11	0	1019	11
Future Vol, veh/h	0	0	34	0	0	11	0	1609	11	0	1019	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	34	0	0	11	0	1609	11	0	1019	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	515	-	-	810	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*801	0	0	*620	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			0			0		-	-		-	-
Mov Cap-1 Maneuver	-	-	*801	-	-	*620	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.7	10.91	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	801	620	-	-
HCM Lane V/C Ratio	-	-	0.042	0.018	-	-
HCM Control Delay (s/veh)	-	-	9.7	10.9	-	-
HCM Lane LOS	-	-	A	B	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

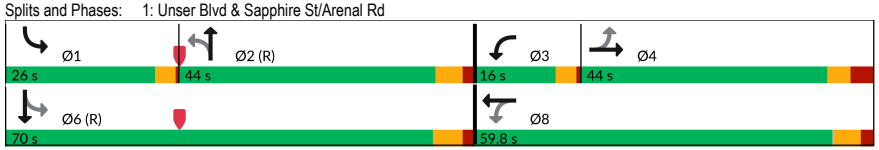
Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	237	318	224	206	380	87	1054	324	331	985	56
Future Volume (vph)	237	318	224	206	380	87	1054	324	331	985	56
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		1.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	31.0	31.0	50.2	47.7	130.0	46.0	46.0	130.0	72.8	70.3	130.0
Actuated g/C Ratio	0.24	0.24	0.39	0.37	1.00	0.35	0.35	1.00	0.56	0.54	1.00
v/c Ratio	0.85	0.48	0.61	0.30	0.24	0.46	0.84	0.20	0.94	0.51	0.04
Control Delay (s/veh)	73.1	40.8	34.6	29.4	0.4	46.0	47.6	0.3	88.9	31.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.1	40.8	34.6	29.4	0.4	46.0	47.6	0.3	88.9	31.0	0.0
LOS	E	D	C	C	A	D	D	A	F	C	A
Approach Delay (s/veh)		52.7		17.2			37.0			43.7	
Approach LOS		D		B			D			D	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.94		
Intersection Signal Delay (s/veh): 37.8	Intersection LOS: D	
Intersection Capacity Utilization 90.2%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	318	87	224	206	380	87	1054	324	331	985	56
Future Volume (veh/h)	237	318	87	224	206	380	87	1054	324	331	985	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	318	0	224	206	0	87	1054	0	331	985	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	803		386	653		279	1392		363	1958	
Arrive On Green	0.23	0.23	0.00	0.10	0.35	0.00	0.39	0.39	0.00	0.26	1.00	0.00
Sat Flow, veh/h	1176	3647	0	1781	1870	1585	571	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	237	318	0	224	206	0	87	1054	0	331	985	0
Grp Sat Flow(s),veh/h/ln	1176	1777	0	1781	1870	1585	571	1777	1585	1781	1777	1585
Q Serve(g_s), s	25.4	9.9	0.0	12.4	10.5	0.0	14.2	33.3	0.0	15.0	0.0	0.0
Cycle Q Clear(g_c), s	25.4	9.9	0.0	12.4	10.5	0.0	14.2	33.3	0.0	15.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	803		386	653		279	1392		363	1958	
V/C Ratio(X)	0.74	0.40		0.58	0.32		0.31	0.76		0.91	0.50	
Avail Cap(c_a), veh/h	390	1011		386	774		279	1392		436	1958	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.84	0.84	0.00
Uniform Delay (d), s/veh	48.8	42.8	0.0	33.3	30.9	0.0	28.4	34.2	0.0	21.8	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.3	0.0	1.5	0.3	0.0	2.9	3.9	0.0	16.8	0.8	0.0
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 BackOfQ(95%),veh/ln	12.4	7.7	0.0	9.2	8.3	0.0	3.8	21.0	0.0	9.8	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.5	43.1	0.0	34.8	31.2	0.0	31.3	38.1	0.0	38.6	0.8	0.0
LnGrp LOS	D	D		C	C		C	D		D	A	
Approach Vol, veh/h		555			430			1141			1316	
Approach Delay, s/veh		48.0			33.1			37.6			10.3	
Approach LOS		D			C			D			B	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	20.7	56.9	16.0	36.4	77.6	52.4
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	17.0	35.3	14.4	27.4	2.0	12.5
Green Ext Time (p_c), s	0.2	2.1	0.0	2.0	8.4	1.1

Intersection Summary		
HCM 7th Control Delay, s/veh	28.2	
HCM 7th LOS	C	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

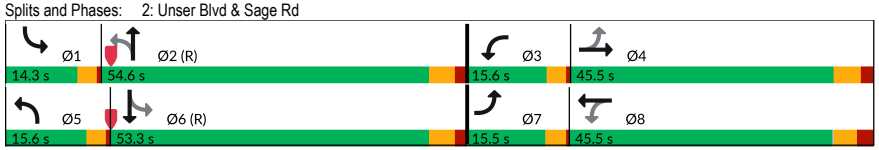
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	399	463	298	57	152	133	1471	139	120	1027	114
Future Volume (vph)	399	463	298	57	152	133	1471	139	120	1027	114
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	48.5	37.6	130.0	39.5	30.5	71.4	60.7	130.0	70.6	60.3	130.0
Actuated g/C Ratio	0.37	0.29	1.00	0.30	0.23	0.55	0.47	1.00	0.54	0.46	1.00
v/c Ratio	1.18	0.86	0.19	0.33	0.63	0.50	0.89	0.09	0.70	0.63	0.07
Control Delay (s/veh)	143.1	63.9	0.3	28.8	44.7	30.6	44.2	0.1	51.0	29.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	143.1	63.9	0.3	28.8	44.7	30.6	44.2	0.1	51.0	29.4	0.1
LOS	F	E	A	C	D	C	D	A	D	C	A
Approach Delay (s/veh)		74.8			41.9		39.7			28.8	
Approach LOS		E			D		D			C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 125		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.18		
Intersection Signal Delay (s/veh): 45.9	Intersection LOS: D	
Intersection Capacity Utilization 101.0%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	399	463	298	57	152	120	133	1471	139	120	1027	114
Future Volume (veh/h)	399	463	298	57	152	120	133	1471	139	120	1027	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	399	463	0	57	152	0	133	1471	0	120	1027	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	393	500		143	394		423	1801		198	1790	
Arrive On Green	0.09	0.27	0.00	0.04	0.21	0.00	0.05	0.51	0.00	0.10	1.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	399	463	0	57	152	0	133	1471	0	120	1027	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	31.3	0.0	3.2	9.1	0.0	4.7	45.3	0.0	4.3	0.0	0.0
Cycle Q Clear(g_c), s	12.0	31.3	0.0	3.2	9.1	0.0	4.7	45.3	0.0	4.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	393	500		143	394		423	1801		198	1790	
V/C Ratio(X)	1.01	0.93		0.40	0.39		0.31	0.82		0.61	0.57	
Avail Cap(c_a), veh/h	393	568		246	568		498	1801		260	1790	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.61	0.61	0.00	0.09	0.09	0.00	0.64	0.64	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.2	46.4	0.0	40.5	44.1	0.0	13.9	27.0	0.0	24.1	0.0	0.0
Incr Delay (d2), s/veh	39.0	13.7	0.0	0.1	0.1	0.0	0.1	2.8	0.0	1.1	1.3	0.0
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 BackOfQ(95%),veh/ln	15.7	21.4	0.0	2.0	5.2	0.0	3.3	24.5	0.0	2.9	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	85.2	60.1	0.0	40.6	44.2	0.0	14.0	29.7	0.0	25.2	1.3	0.0
LnGrp LOS	F	E		D	D		B	C		C	A	
Approach Vol, veh/h		862			209			1604			1147	
Approach Delay, s/veh		71.7			43.2			28.4			3.8	
Approach LOS		E			D			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	71.4	8.1	40.8	10.2	71.0	15.5	33.4
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	6.3	47.3	5.2	33.3	6.7	2.0	14.0	11.1
Green Ext Time (p_c), s	0.0	1.6	0.0	1.4	0.0	13.0	0.0	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	31.6	
HCM 7th LOS	C	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

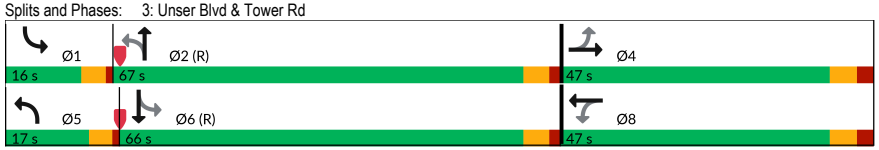
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	132	163	50	119	44	1346	38	641	82
Future Volume (vph)	132	163	50	119	44	1346	38	641	82
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	19.7	19.7	19.7	19.7	95.8	90.8	95.6	90.7	130.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.74	0.70	0.74	0.70	1.00
v/c Ratio	0.78	0.44	0.34	0.36	0.08	0.57	0.15	0.26	0.05
Control Delay (s/veh)	80.8	32.9	53.5	28.4	5.2	16.3	6.2	8.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.8	32.9	53.5	28.4	5.2	16.3	6.2	8.7	0.1
LOS	F	C	D	C	A	B	A	A	A
Approach Delay (s/veh)		49.2		33.3		15.9		7.6	
Approach LOS		D		C		B		A	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 19.8		Intersection LOS: B	
Intersection Capacity Utilization 74.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	163	94	50	119	88	44	1346	50	38	641	82
Future Volume (veh/h)	132	163	94	50	119	88	44	1346	50	38	641	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	163	0	50	119	0	44	1346	0	38	641	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	542		192	542		590	2500		351	2496	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.02	0.94	0.00	0.02	0.70	0.00
Sat Flow, veh/h	1273	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	132	163	0	50	119	0	44	1346	0	38	641	0
Grp Sat Flow(s),veh/h/ln	1273	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	13.2	5.3	0.0	4.9	3.8	0.0	0.9	6.4	0.0	0.8	8.5	0.0
Cycle Q Clear(g_c), s	17.0	5.3	0.0	10.2	3.8	0.0	0.9	6.4	0.0	0.8	8.5	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	542		192	542		590	2500		351	2496	
V/C Ratio(X)	0.62	0.30		0.26	0.22		0.07	0.54		0.11	0.26	
Avail Cap(c_a), veh/h	415	1107		387	1107		729	2500		478	2496	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.8	48.9	0.0	53.5	48.3	0.0	5.5	1.4	0.0	5.4	7.0	0.0
Incr Delay (d2), s/veh	1.1	0.1	0.0	0.3	0.1	0.0	0.0	0.8	0.0	0.0	0.2	0.0
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 BackOfQ(95%),veh/ln	7.7	4.2	0.0	2.7	3.1	0.0	0.6	2.6	0.0	0.5	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.9	49.1	0.0	53.7	48.4	0.0	5.5	2.3	0.0	5.4	7.3	0.0
LnGrp LOS	E	D		D	D		A	A		A	A	
Approach Vol, veh/h		295			169			1390			679	
Approach Delay, s/veh		52.6			50.0			2.4			7.2	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	96.9		26.3	6.9	96.8		26.3				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	2.8	8.4		19.0	2.9	10.5		12.2				
Green Ext Time (p_c), s	0.0	20.7		0.8	0.0	6.9		0.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.7	
HCM 7th LOS	B	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

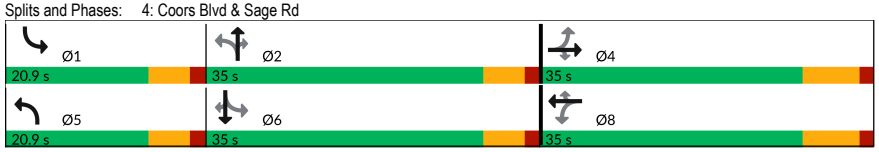
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	235	77	99	180	254	24	1269	19	61	658	80
Future Volume (vph)	336	235	77	99	180	254	24	1269	19	61	658	80
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.4	7.4		7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)		27.9	27.9		27.9	27.9	40.9	29.4	29.4	43.1	37.4	37.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.50	0.43	0.43
v/c Ratio		1.67	0.13		3.13	0.37	0.05	1.06	0.03	0.16	0.43	0.11
Control Delay (s/veh)		338.6	3.0		Error	5.0	9.8	73.5	0.1	10.9	20.3	1.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		338.6	3.0		Error	5.0	9.8	73.5	0.1	10.9	20.3	1.8
LOS		F	A		F	A	A	E	A	B	C	A
Approach Delay (s/veh)		298.7			527.0			71.2			17.7	
Approach LOS		F			F			E			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 3.13			
Intersection Signal Delay (s/veh): 176.8		Intersection LOS: F	
Intersection Capacity Utilization 113.9%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	235	77	99	180	254	24	1269	19	61	658	80
Future Volume (veh/h)	336	235	77	99	180	254	24	1269	19	61	658	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	336	235	77	99	180	254	24	1269	19	61	658	80
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	0	500	56	70	500	398	1182	527	318	1384	617
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.08	0.33	0.33	0.13	0.39	0.39
Sat Flow, veh/h	0	0	1585	0	222	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	571	0	77	279	0	254	24	1269	19	61	658	80
Grp Sat Flow(s),veh/h/ln	0	0	1585	222	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	3.1	0.0	0.0	11.4	0.7	29.1	0.7	1.6	12.1	2.8
Cycle Q Clear(g_c), s	27.6	0.0	3.1	27.6	0.0	11.4	0.7	29.1	0.7	1.6	12.1	2.8
Prop In Lane	0.59		1.00	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	0	500	126	0	500	398	1182	527	318	1384	617
V/C Ratio(X)	8.74	0.00	0.15	2.22	0.00	0.51	0.06	1.07	0.04	0.19	0.48	0.13
Avail Cap(c_a), veh/h	65	0	500	126	0	500	568	1182	527	388	1384	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	0.0	21.5	29.3	0.0	24.4	15.8	29.2	19.7	17.6	20.0	17.2
Incr Delay (d2), s/veh	3512.3	0.0	0.1	573.7	0.0	0.6	0.0	48.4	0.1	0.1	1.2	0.4
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(95%),veh/ln	108.5	0.0	2.0	40.1	0.0	7.5	0.5	27.6	0.5	1.1	8.4	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3556.0	0.0	21.7	603.0	0.0	25.1	15.8	77.6	19.9	17.7	21.2	17.6
LnGrp LOS	F		C	F		C	B	F	B	B	C	B
Approach Vol, veh/h		648			533			1312			799	
Approach Delay, s/veh		3136.0			327.6			75.6			20.6	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	35.0		35.0	12.5	40.0		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	3.6	31.1		29.6	2.7	14.1		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	705.5	
HCM 7th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.

Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	638	45	249	5	135	50	35
Future Volume (vph)	70	638	45	249	5	135	50	35
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	3.5	5.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	40.1	31.0	38.3	30.0	79.0	79.0	79.0	79.0
Actuated g/C Ratio	0.31	0.24	0.29	0.23	0.61	0.61	0.61	0.61
v/c Ratio	0.22	0.78	0.25	0.39	0.01	0.21	0.07	0.09
Control Delay (s/veh)	29.6	52.5	30.4	36.2	13.8	12.0	13.7	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.6	52.5	30.4	36.2	13.8	12.0	13.7	6.2
LOS	C	D	C	D	B	B	B	A
Approach Delay (s/veh)		50.3		35.5		12.1		8.8
Approach LOS		D		D		B		A

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 36.4		Intersection LOS: D	
Intersection Capacity Utilization 57.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: 86th Street & Sage Rd

HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	638	15	45	249	70	5	135	95	50	35	60
Future Volume (veh/h)	70	638	15	45	249	70	5	135	95	50	35	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	638	15	45	249	70	5	135	95	50	35	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	775	18	143	562	155	867	660	464	736	399	685
Arrive On Green	0.04	0.22	0.22	0.06	0.41	0.41	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1781	3549	83	1781	2753	758	1301	1022	719	1151	619	1061
Grp Volume(v), veh/h	70	319	334	45	159	160	5	0	230	50	0	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1734	1301	0	1741	1151	0	1679
Q Serve(g_s), s	4.0	22.3	22.3	2.6	8.4	8.7	0.2	0.0	7.0	2.4	0.0	2.8
Cycle Q Clear(g_c), s	4.0	22.3	22.3	2.6	8.4	8.7	3.0	0.0	7.0	9.4	0.0	2.8
Prop In Lane	1.00		0.04	1.00		0.44	1.00		0.41	1.00		0.63
Lane Grp Cap(c), veh/h	277	388	405	143	363	354	867	0	1124	736	0	1084
V/C Ratio(X)	0.25	0.82	0.82	0.32	0.44	0.45	0.01	0.00	0.20	0.07	0.00	0.09
Avail Cap(c_a), veh/h	366	713	745	258	713	696	867	0	1124	736	0	1084
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	48.4	48.4	39.8	33.1	33.2	9.2	0.0	9.4	11.3	0.0	8.7
Incr Delay (d2), s/veh	0.5	4.4	4.3	1.1	0.7	0.8	0.0	0.0	0.4	0.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	15.5	16.1	2.1	6.0	6.0	0.1	0.0	5.0	1.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.9	52.8	52.7	40.9	33.8	34.0	9.2	0.0	9.8	11.5	0.0	8.8
LnGrp LOS	D	D	D	D	C	C	A		A	B		A
Approach Vol, veh/h		723			364			235			145	
Approach Delay, s/veh		51.4			34.8			9.8			9.8	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		89.4	7.2	33.4		89.4	9.1	31.5				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		9.0	4.6	24.3		11.4	6.0	10.7				
Green Ext Time (p_c), s		1.5	0.0	4.1		0.8	0.1	1.9				

Intersection Summary		
HCM 7th Control Delay, s/veh	36.5	
HCM 7th LOS	D	

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	3102	16	0	2039	16
Future Vol, veh/h	0	0	47	0	0	16	0	3102	16	0	2039	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	3102	16	0	2039	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1028	-	-	1559	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*505	0	0	*193	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*505	-	-	*193	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.86	25.32	0	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	505	193	-	-
HCM Lane V/C Ratio	-	-	0.093	0.083	-	-
HCM Control Delay (s/veh)	-	-	12.9	25.3	-	-
HCM Lane LOS	-	-	B	D	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

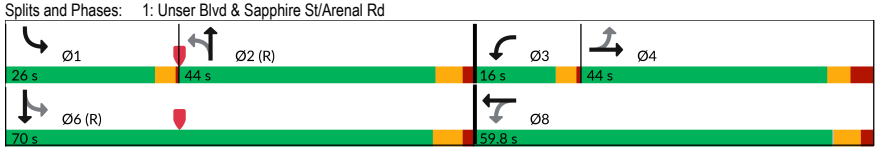
Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	250	318	224	206	411	87	1108	324	362	1040	69
Future Volume (vph)	250	318	224	206	411	87	1108	324	362	1040	69
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		1.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	31.9	31.9	51.1	48.6	130.0	42.2	42.2	130.0	71.9	69.4	130.0
Actuated g/C Ratio	0.25	0.25	0.39	0.37	1.00	0.32	0.32	1.00	0.55	0.53	1.00
v/c Ratio	0.87	0.47	0.60	0.30	0.26	0.52	0.96	0.20	0.93	0.55	0.04
Control Delay (s/veh)	74.8	39.9	33.6	28.8	0.4	51.7	63.1	0.3	81.0	32.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.8	39.9	33.6	28.8	0.4	51.7	63.1	0.3	81.0	32.4	0.0
LOS	E	D	C	C	A	D	E	A	F	C	A
Approach Delay (s/veh)		53.2		16.2			49.0			42.9	
Approach LOS		D		B			D			D	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 41.5		Intersection LOS: D	
Intersection Capacity Utilization 94.1%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	318	87	224	206	411	87	1108	324	362	1040	69
Future Volume (veh/h)	250	318	87	224	206	411	87	1108	324	362	1040	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	250	318	0	224	206	0	87	1108	0	362	1040	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	838		397	671		242	1222		382	1922	
Arrive On Green	0.24	0.24	0.00	0.10	0.36	0.00	0.34	0.34	0.00	0.23	0.72	0.00
Sat Flow, veh/h	1176	3647	0	1781	1870	1585	542	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	250	318	0	224	206	0	87	1108	0	362	1040	0
Grp Sat Flow(s),veh/h/ln	1176	1777	0	1781	1870	1585	542	1777	1585	1781	1777	1585
Q Serve(g_s), s	26.8	9.8	0.0	12.2	10.3	0.0	16.3	38.6	0.0	20.1	17.5	0.0
Cycle Q Clear(g_c), s	26.8	9.8	0.0	12.2	10.3	0.0	16.3	38.6	0.0	20.1	17.5	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	838		397	671		242	1222		382	1922	
V/C Ratio(X)	0.75	0.38		0.56	0.31		0.36	0.91		0.95	0.54	
Avail Cap(c_a), veh/h	390	1011		397	774		242	1222		387	1922	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.2	41.7	0.0	32.3	30.0	0.0	33.3	40.7	0.0	33.7	10.8	0.0
Incr Delay (d2), s/veh	6.7	0.3	0.0	1.1	0.3	0.0	4.1	11.3	0.0	31.8	1.1	0.0
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 BackOfQ(95%),veh/ln	13.1	7.7	0.0	9.1	8.2	0.0	4.3	25.3	0.0	20.1	9.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.9	42.0	0.0	33.5	30.3	0.0	37.4	51.9	0.0	65.5	11.9	0.0
LnGrp LOS	D	D		C	C		D	D		E	B	
Approach Vol, veh/h		568			430			1195			1402	
Approach Delay, s/veh		47.7			31.9			50.9			25.8	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	25.6	50.7	16.0	37.7	76.3	53.7
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	22.1	40.6	14.2	28.8	19.5	12.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	8.8	1.2

Intersection Summary		
HCM 7th Control Delay, s/veh	38.3	
HCM 7th LOS	D	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

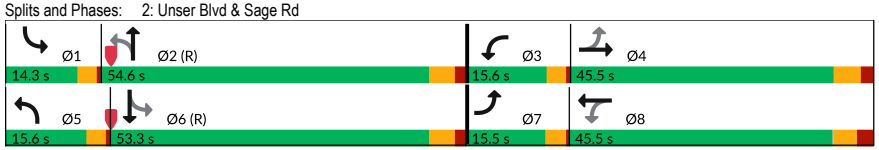
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
Future Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	50.8	39.5	130.0	42.5	33.0	69.2	58.2	130.0	67.9	57.5	130.0
Actuated g/C Ratio	0.39	0.30	1.00	0.33	0.25	0.53	0.45	1.00	0.52	0.44	1.00
v/c Ratio	1.58	0.89	0.19	0.41	0.64	0.56	0.89	0.09	0.69	0.69	0.09
Control Delay (s/veh)	301.5	64.6	0.3	30.3	44.6	36.0	47.6	0.1	49.9	32.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	301.5	64.6	0.3	30.3	44.6	36.0	47.6	0.1	49.9	32.7	0.1
LOS	F	E	A	C	D	D	D	A	D	C	A
Approach Delay (s/veh)		145.4			41.9		42.8			30.9	
Approach LOS		F			D		D			C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.58		
Intersection Signal Delay (s/veh): 68.5	Intersection LOS: E	
Intersection Capacity Utilization 108.5%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Future Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	538	504	0	70	177	0	133	1415	0	120	1077	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	535		150	440		381	1706		196	1695	
Arrive On Green	0.09	0.29	0.00	0.04	0.24	0.00	0.05	0.48	0.00	0.10	0.95	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	538	504	0	70	177	0	133	1415	0	120	1077	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	34.2	0.0	3.8	10.4	0.0	4.9	44.7	0.0	4.5	4.6	0.0
Cycle Q Clear(g_c), s	12.0	34.2	0.0	3.8	10.4	0.0	4.9	44.7	0.0	4.5	4.6	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	535		150	440		381	1706		196	1695	
V/C Ratio(X)	1.32	0.94		0.47	0.40		0.35	0.83		0.61	0.64	
Avail Cap(c_a), veh/h	407	568		242	568		452	1706		255	1695	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.8	45.3	0.0	38.6	42.0	0.0	15.6	29.2	0.0	25.0	1.7	0.0
Incr Delay (d2), s/veh	160.5	23.6	0.0	0.1	0.1	0.0	0.2	4.8	0.0	1.2	1.8	0.0
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 BackOfQ(95%),veh/ln	37.7	26.3	0.0	2.3	5.9	0.0	3.6	26.5	0.0	3.1	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	205.3	68.9	0.0	38.6	42.0	0.0	15.8	34.0	0.0	26.2	3.5	0.0
LnGrp LOS	F	E		D	D		B	C		C	A	
Approach Vol, veh/h		1042			247			1548			1197	
Approach Delay, s/veh		139.3			41.1			32.4			5.8	
Approach LOS		F			D			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	67.9	8.9	43.2	10.4	67.5	15.5	36.6
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	6.5	46.7	5.8	36.2	6.9	6.6	14.0	12.4
Green Ext Time (p_c), s	0.0	2.0	0.0	1.0	0.0	13.6	0.0	0.9

Intersection Summary		
HCM 7th Control Delay, s/veh	52.7	
HCM 7th LOS	D	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

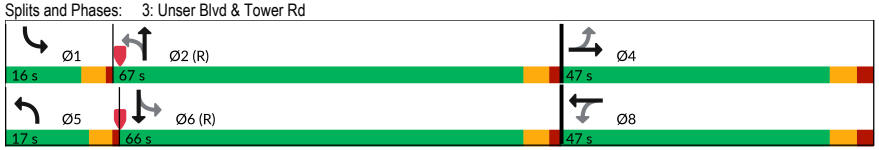
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	132	163	57	119	63	1402	38	687	82
Future Volume (vph)	132	163	57	119	63	1402	38	687	82
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	19.7	19.7	19.7	19.7	96.2	90.8	95.2	90.3	130.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.74	0.70	0.73	0.69	1.00
v/c Ratio	0.78	0.46	0.42	0.36	0.11	0.59	0.16	0.28	0.05
Control Delay (s/veh)	80.8	30.6	57.1	28.4	4.6	15.3	6.4	9.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.8	30.6	57.1	28.4	4.6	15.3	6.4	9.0	0.1
LOS	F	C	E	C	A	B	A	A	A
Approach Delay (s/veh)		46.9		34.6		14.8		8.0	
Approach LOS		D		C		B		A	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.78		
Intersection Signal Delay (s/veh): 19.1	Intersection LOS: B	
Intersection Capacity Utilization 83.1%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	163	113	57	119	88	63	1402	57	38	687	82
Future Volume (veh/h)	132	163	113	57	119	88	63	1402	57	38	687	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	163	0	57	119	0	63	1402	0	38	687	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	542		192	542		569	2500		336	2479	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.03	0.94	0.00	0.02	0.70	0.00
Sat Flow, veh/h	1273	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	132	163	0	57	119	0	63	1402	0	38	687	0
Grp Sat Flow(s),veh/h/ln	1273	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	13.2	5.3	0.0	5.6	3.8	0.0	1.3	7.0	0.0	0.8	9.4	0.0
Cycle Q Clear(g_c), s	17.0	5.3	0.0	10.9	3.8	0.0	1.3	7.0	0.0	0.8	9.4	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	542		192	542		569	2500		336	2479	
V/C Ratio(X)	0.62	0.30		0.30	0.22		0.11	0.56		0.11	0.28	
Avail Cap(c_a), veh/h	415	1107		387	1107		699	2500		463	2479	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.8	48.9	0.0	53.8	48.3	0.0	5.6	1.5	0.0	5.6	7.4	0.0
Incr Delay (d2), s/veh	1.1	0.1	0.0	0.3	0.1	0.0	0.0	0.9	0.0	0.1	0.3	0.0
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 BackOfQ(95%),veh/ln	7.7	4.2	0.0	3.1	3.1	0.0	0.8	2.8	0.0	0.5	6.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.9	49.1	0.0	54.1	48.4	0.0	5.6	2.4	0.0	5.6	7.7	0.0
LnGrp LOS	E	D		D	D		A	A		A	A	
Approach Vol, veh/h		295			176			1465			725	
Approach Delay, s/veh		52.6			50.2			2.5			7.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	96.9		26.3	7.5	96.2		26.3				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	2.8	9.0		19.0	3.3	11.4		12.9				
Green Ext Time (p_c), s	0.0	22.0		0.8	0.0	7.6		0.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.6	
HCM 7th LOS	B	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

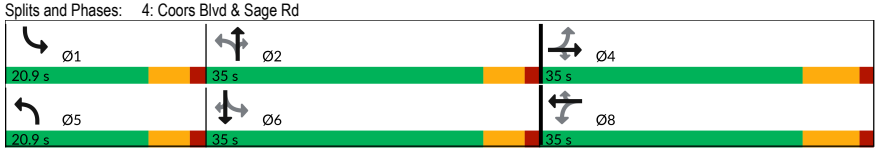
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	250	83	99	195	254	29	1269	19	61	658	92
Future Volume (vph)	351	250	83	99	195	254	29	1269	19	61	658	92
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.4	7.4		7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)		27.9	27.9		27.9	27.9	40.9	29.4	29.4	43.1	37.4	37.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.50	0.43	0.43
v/c Ratio		1.82	0.14		5.16	0.38	0.06	1.06	0.03	0.16	0.43	0.12
Control Delay (s/veh)		405.9	3.8		Error	5.6	9.9	73.5	0.1	10.9	20.3	2.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		405.9	3.8		Error	5.6	9.9	73.5	0.1	10.9	20.3	2.5
LOS		F	A		F	A	A	E	A	B	C	A
Approach Delay (s/veh)		357.1			1028.2			71.0			17.6	
Approach LOS		F			F			E			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 5.16			
Intersection Signal Delay (s/veh): 272.5		Intersection LOS: F	
Intersection Capacity Utilization 116.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	250	83	99	195	254	29	1269	19	61	658	92
Future Volume (veh/h)	351	250	83	99	195	254	29	1269	19	61	658	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	351	250	83	99	195	254	29	1269	19	61	658	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	0	500	55	70	500	406	1182	527	318	1345	600
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.09	0.33	0.33	0.13	0.38	0.38
Sat Flow, veh/h	0	0	1585	0	222	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	601	0	83	294	0	254	29	1269	19	61	658	92
Grp Sat Flow(s),veh/h/ln	0	0	1585	222	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	3.3	0.0	0.0	11.4	0.8	29.1	0.7	1.7	12.4	3.4
Cycle Q Clear(g_c), s	27.6	0.0	3.3	27.6	0.0	11.4	0.8	29.1	0.7	1.7	12.4	3.4
Prop In Lane	0.58		1.00	0.34		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	0	500	125	0	500	406	1182	527	318	1345	600
V/C Ratio(X)	9.22	0.00	0.17	2.35	0.00	0.51	0.07	1.07	0.04	0.19	0.49	0.15
Avail Cap(c_a), veh/h	65	0	500	125	0	500	557	1182	527	388	1345	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	0.0	21.6	29.2	0.0	24.4	15.4	29.2	19.7	17.8	20.7	17.9
Incr Delay (d2), s/veh	3730.3	0.0	0.1	632.8	0.0	0.6	0.0	48.4	0.1	0.1	1.3	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	114.3	0.0	2.2	43.4	0.0	7.5	0.6	27.6	0.5	1.1	8.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3774.0	0.0	21.7	662.0	0.0	25.1	15.4	77.6	19.9	17.9	22.0	18.5
LnGrp LOS	F		C	F		C	B	F	B	B	C	B
Approach Vol, veh/h		684			548			1317			811	
Approach Delay, s/veh		3318.7			366.8			75.4			21.3	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	35.0		35.0	13.5	39.0		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	3.7	31.1		29.6	2.8	14.4		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	770.1	
HCM 7th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.

Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	704	68	315	5	135	68	35
Future Volume (vph)	70	704	68	315	5	135	68	35
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	3.5	5.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	42.9	33.9	43.3	34.1	75.1	75.1	75.1	75.1
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.58	0.58	0.58	0.58
v/c Ratio	0.22	0.78	0.35	0.44	0.01	0.25	0.11	0.10
Control Delay (s/veh)	27.0	50.5	30.5	35.2	15.8	13.8	15.9	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.0	50.5	30.5	35.2	15.8	13.8	15.9	7.1
LOS	C	D	C	D	B	B	B	A
Approach Delay (s/veh)		48.4		34.5		13.9		10.8
Approach LOS		D		C		B		B

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 35.6		Intersection LOS: D	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: 86th Street & Sage Rd

HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	704	15	68	315	88	5	135	118	68	35	60
Future Volume (veh/h)	70	704	15	68	315	88	5	135	118	68	35	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	704	15	68	315	88	5	135	118	68	35	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	848	18	165	653	180	823	565	494	672	380	651
Arrive On Green	0.04	0.24	0.24	0.08	0.47	0.47	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1781	3558	76	1781	2754	757	1301	921	805	1127	619	1061
Grp Volume(v), veh/h	70	352	367	68	201	202	5	0	253	68	0	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1734	1301	0	1725	1127	0	1679
Q Serve(g_s), s	3.8	24.4	24.4	3.7	10.0	10.4	0.2	0.0	8.6	3.8	0.0	3.0
Cycle Q Clear(g_c), s	3.8	24.4	24.4	3.7	10.0	10.4	3.2	0.0	8.6	12.4	0.0	3.0
Prop In Lane	1.00		0.04	1.00		0.44	1.00		0.47	1.00		0.63
Lane Grp Cap(c), veh/h	284	423	442	165	421	411	823	0	1058	672	0	1030
V/C Ratio(X)	0.25	0.83	0.83	0.41	0.48	0.49	0.01	0.00	0.24	0.10	0.00	0.09
Avail Cap(c_a), veh/h	376	713	746	258	713	696	823	0	1058	672	0	1030
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.6	47.0	47.0	36.1	28.7	28.8	11.0	0.0	11.4	14.2	0.0	10.3
Incr Delay (d2), s/veh	0.4	4.3	4.1	1.7	0.8	0.9	0.0	0.0	0.5	0.3	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	16.7	17.3	2.9	6.8	6.8	0.1	0.0	6.2	1.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.1	51.3	51.1	37.8	29.5	29.7	11.0	0.0	11.9	14.5	0.0	10.5
LnGrp LOS	D	D	D	D	C	C	B		B	B		B
Approach Vol, veh/h		789			471			258			163	
Approach Delay, s/veh		49.8			30.8			11.9			12.2	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		85.2	8.8	36.0		85.2	8.9	35.8				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		10.6	5.7	26.4		14.4	5.8	12.4				
Green Ext Time (p_c), s		1.7	0.1	4.5		0.9	0.1	2.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	35.0	
HCM 7th LOS	D	

HCM 7th TWSC
6: Unser Blvd & San Ygnacio Rd 07/29/2024

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	3185	16	0	2039	16
Future Vol, veh/h	0	0	47	0	0	16	0	3185	16	0	2039	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	3185	16	0	2039	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1028	-	-	1601	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*505	0	0	*160	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*505	-	-	*160	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.86	29.94	0	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	505	160	-	-
HCM Lane V/C Ratio	-	-	0.093	0.1	-	-
HCM Control Delay (s/veh)	-	-	12.9	29.9	-	-
HCM Lane LOS	-	-	B	D	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 7th TWSC
7: Driveway "A" & Sage Rd 07/29/2024

Intersection						
Int Delay, s/veh	19.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1160	149	62	399	123	218
Future Vol, veh/h	1160	149	62	399	123	218
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1160	149	62	399	123	218

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1309	0	1558	655
Stage 1	-	-	-	-	1235	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	524	-	~ 103	409
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	706	-
Platoon blocked, %	-	-			-	
Mov Cap-1 Maneuver	-	-	524	-	~ 91	409
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.72	117.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	311	-	-	524	-
HCM Lane V/C Ratio	1.098	-	-	0.118	-
HCM Control Delay (s/veh)	117.4	-	-	12.8	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	13.4	-	-	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	129	0	1686	1335	128
Future Vol, veh/h	0	129	0	1686	1335	128
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	129	0	1686	1335	128

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	732	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	312	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	312	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	24.4	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	312	-	-
HCM Lane V/C Ratio	-	0.413	-	-
HCM Control Delay (s/veh)	-	24.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	1.9	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	155	1686	1427	18
Future Vol, veh/h	0	18	155	1686	1427	18
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	300	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	155	1686	1427	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	714	1445	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	374	465	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	374	465	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.1	1.39	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	465	-	374	-	-
HCM Lane V/C Ratio	0.333	-	0.048	-	-
HCM Control Delay (s/veh)	16.6	-	15.1	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	1.4	-	0.2	-	-

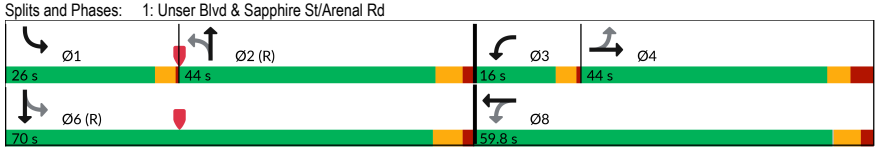
Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	250	318	224	206	411	87	1108	324	362	1040	69
Future Volume (vph)	250	318	224	206	411	87	1108	324	362	1040	69
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		1.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	31.9	31.9	51.1	48.6	130.0	42.2	42.2	130.0	71.9	69.4	130.0
Actuated g/C Ratio	0.25	0.25	0.39	0.37	1.00	0.32	0.32	1.00	0.55	0.53	1.00
v/c Ratio	0.87	0.47	0.60	0.30	0.26	0.52	0.96	0.20	0.93	0.55	0.04
Control Delay (s/veh)	74.8	39.9	33.6	28.8	0.4	51.7	63.1	0.3	81.6	18.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.8	39.9	33.6	28.8	0.4	51.7	63.1	0.3	81.6	18.0	0.0
LOS	E	D	C	C	A	D	E	A	F	B	A
Approach Delay (s/veh)		53.2		16.2			49.0			32.8	
Approach LOS		D		B			D			C	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 38.2		Intersection LOS: D	
Intersection Capacity Utilization 94.1%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	318	87	224	206	411	87	1108	324	362	1040	69
Future Volume (veh/h)	250	318	87	224	206	411	87	1108	324	362	1040	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	250	318	0	224	206	0	87	1108	0	362	1040	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	838		397	671		244	1234		379	1922	
Arrive On Green	0.24	0.24	0.00	0.10	0.36	0.00	0.35	0.35	0.00	0.33	1.00	0.00
Sat Flow, veh/h	1176	3647	0	1781	1870	1585	542	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	250	318	0	224	206	0	87	1108	0	362	1040	0
Grp Sat Flow(s),veh/h/ln	1176	1777	0	1781	1870	1585	542	1777	1585	1781	1777	1585
Q Serve(g_s), s	26.8	9.8	0.0	12.2	10.3	0.0	16.2	38.4	0.0	19.6	0.0	0.0
Cycle Q Clear(g_c), s	26.8	9.8	0.0	12.2	10.3	0.0	16.2	38.4	0.0	19.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	838		397	671		244	1234		379	1922	
V/C Ratio(X)	0.75	0.38		0.56	0.31		0.36	0.90		0.96	0.54	
Avail Cap(c_a), veh/h	390	1011		397	774		244	1234		390	1922	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.2	41.7	0.0	32.3	30.0	0.0	33.0	40.2	0.0	26.4	0.0	0.0
Incr Delay (d2), s/veh	6.7	0.3	0.0	1.1	0.3	0.0	4.0	10.4	0.0	33.4	1.1	0.0
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 BackOfQ(95%),veh/ln	13.1	7.7	0.0	9.1	8.2	0.0	4.3	25.0	0.0	14.2	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.9	42.0	0.0	33.5	30.3	0.0	37.0	50.7	0.0	59.8	1.1	0.0
LnGrp LOS	D	D		C	C		D	D		E	A	
Approach Vol, veh/h		568			430			1195			1402	
Approach Delay, s/veh		47.7			31.9			49.7			16.3	
Approach LOS		D			C			D			B	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	25.2	51.2	16.0	37.7	76.3	53.7
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	21.6	40.4	14.2	28.8	2.0	12.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	9.1	1.2

Intersection Summary		
HCM 7th Control Delay, s/veh	34.2	
HCM 7th LOS	C	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

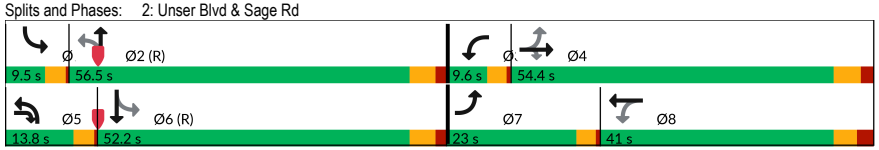
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
Future Volume (vph)	538	504	298	70	177	133	1415	139	120	1077	137
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases	4		4	8		2		Free	6		Free
Detector Phase	7	4	5	3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0	3.0	3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0	9.5	9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	23.0	54.4	13.8	9.6	41.0	13.8	56.5		9.5	52.2	
Total Split (%)	17.7%	41.8%	10.6%	7.4%	31.5%	10.6%	43.5%		7.3%	40.2%	
Yellow Time (s)	3.0	4.0	3.0	3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0	0.5	0.5	2.5	0.5	1.5		0.5	1.5	
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)	3.5	6.0	3.5	3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	39.2	29.0	43.9	22.0	13.7	79.4	68.5	130.0	81.3	69.5	130.0
Actuated g/C Ratio	0.30	0.22	0.34	0.17	0.11	0.61	0.53	1.00	0.63	0.53	1.00
v/c Ratio	1.54	0.64	0.50	0.37	0.66	0.44	0.76	0.09	0.56	0.57	0.09
Control Delay (s/veh)	286.5	46.8	28.0	40.0	41.5	21.6	37.4	0.1	27.8	20.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	286.5	46.8	28.0	40.0	41.5	21.6	37.4	0.1	27.8	20.9	0.1
LOS	F	D	C	D	D	C	D	A	C	C	A
Approach Delay (s/veh)		138.9			41.2		33.1			19.4	
Approach LOS		F			D		C			B	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 135		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.54		
Intersection Signal Delay (s/veh): 59.8	Intersection LOS: E	
Intersection Capacity Utilization 101.8%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Future Volume (veh/h)	538	504	298	70	177	120	133	1415	139	120	1077	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	538	504	298	70	177	0	133	1415	0	120	1077	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	406	780	424	198	409		426	1945		230	1935	
Arrive On Green	0.15	0.22	0.22	0.05	0.12	0.00	0.05	0.55	0.00	0.09	1.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	538	504	298	70	177	0	133	1415	0	120	1077	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	19.5	16.8	22.0	4.5	6.0	0.0	4.3	38.9	0.0	4.0	0.0	0.0
Cycle Q Clear(g_c), s	19.5	16.8	22.0	4.5	6.0	0.0	4.3	38.9	0.0	4.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	406	780	424	198	409		426	1945		230	1935	
V/C Ratio(X)	1.33	0.65	0.70	0.35	0.43		0.31	0.73		0.52	0.56	
Avail Cap(c_a), veh/h	406	1323	666	200	957		482	1945		232	1935	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.5	46.1	42.9	47.7	53.6	0.0	11.7	22.1	0.0	19.0	0.0	0.0
Incr Delay (d2), s/veh	163.1	0.9	2.1	0.4	0.7	0.0	0.2	2.4	0.0	1.0	1.2	0.0
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 BackOfQ(95%),veh/ln	33.7	11.9	13.7	3.6	4.9	0.0	3.0	22.5	0.0	2.6	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	209.6	47.1	45.1	48.1	54.3	0.0	11.8	24.6	0.0	20.0	1.2	0.0
LnGrp LOS	F	D	D	D	D		B	C		B	A	
Approach Vol, veh/h		1340			247			1548			1197	
Approach Delay, s/veh		111.9			52.5			23.5			3.0	
Approach LOS		F			D			C			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	76.6	9.4	34.5	9.8	76.3	23.0	21.0
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0
Max Green Setting (Gmax), s	6.0	51.0	6.1	48.4	10.3	46.7	19.5	35.0
Max Q Clear Time (g_c+I1), s	6.0	40.9	6.5	24.0	6.3	2.0	21.5	8.0
Green Ext Time (p_c), s	0.0	7.6	0.0	4.5	0.0	13.9	0.0	1.0

Intersection Summary		
HCM 7th Control Delay, s/veh		46.8
HCM 7th LOS		D

Notes

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

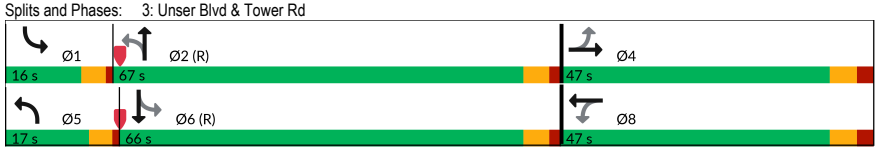
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	132	163	57	119	63	1402	38	687	82
Future Volume (vph)	132	163	57	119	63	1402	38	687	82
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	19.7	19.7	19.7	19.7	96.2	90.8	95.2	90.3	130.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.74	0.70	0.73	0.69	1.00
v/c Ratio	0.78	0.46	0.42	0.36	0.11	0.59	0.16	0.28	0.05
Control Delay (s/veh)	80.8	30.6	57.1	28.4	7.0	17.6	6.4	9.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.8	30.6	57.1	28.4	7.0	17.6	6.4	9.0	0.1
LOS	F	C	E	C	A	B	A	A	A
Approach Delay (s/veh)		46.9		34.6		17.2		8.0	
Approach LOS		D		C		B		A	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.78		
Intersection Signal Delay (s/veh): 20.3	Intersection LOS: C	
Intersection Capacity Utilization 83.1%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	163	113	57	119	88	63	1402	57	38	687	82
Future Volume (veh/h)	132	163	113	57	119	88	63	1402	57	38	687	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	163	0	57	119	0	63	1402	0	38	687	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	542		192	542		569	2500		336	2479	
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.03	0.94	0.00	0.02	0.70	0.00
Sat Flow, veh/h	1273	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	132	163	0	57	119	0	63	1402	0	38	687	0
Grp Sat Flow(s),veh/h/ln	1273	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	13.2	5.3	0.0	5.6	3.8	0.0	1.3	7.0	0.0	0.8	9.4	0.0
Cycle Q Clear(g_c), s	17.0	5.3	0.0	10.9	3.8	0.0	1.3	7.0	0.0	0.8	9.4	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	542		192	542		569	2500		336	2479	
V/C Ratio(X)	0.62	0.30		0.30	0.22		0.11	0.56		0.11	0.28	
Avail Cap(c_a), veh/h	415	1107		387	1107		699	2500		463	2479	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.8	48.9	0.0	53.8	48.3	0.0	5.6	1.5	0.0	5.6	7.4	0.0
Incr Delay (d2), s/veh	1.1	0.1	0.0	0.3	0.1	0.0	0.0	0.9	0.0	0.1	0.3	0.0
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 BackOfQ(95%),veh/ln	7.7	4.2	0.0	3.1	3.1	0.0	0.8	2.8	0.0	0.5	6.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.9	49.1	0.0	54.1	48.4	0.0	5.6	2.4	0.0	5.6	7.7	0.0
LnGrp LOS	E	D		D	D		A	A		A	A	
Approach Vol, veh/h		295			176			1465			725	
Approach Delay, s/veh		52.6			50.2			2.5			7.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	96.9		26.3	7.5	96.2		26.3				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	2.8	9.0		19.0	3.3	11.4		12.9				
Green Ext Time (p_c), s	0.0	22.0		0.8	0.0	7.6		0.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.6	
HCM 7th LOS	B	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

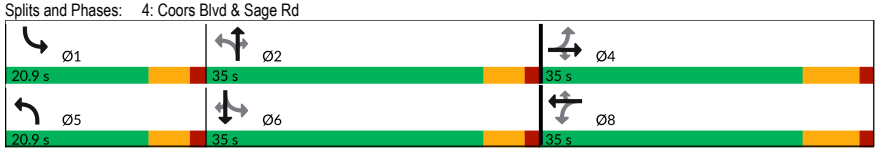
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	250	83	99	195	254	29	1269	19	61	658	92
Future Volume (vph)	351	250	83	99	195	254	29	1269	19	61	658	92
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.4	7.4		7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)		27.9	27.9		27.9	27.9	40.9	29.4	29.4	43.1	37.4	37.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.50	0.43	0.43
v/c Ratio		1.82	0.14		5.16	0.38	0.06	1.06	0.03	0.16	0.43	0.12
Control Delay (s/veh)		405.9	3.8		Error	5.6	9.9	73.5	0.1	10.9	20.3	2.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		405.9	3.8		Error	5.6	9.9	73.5	0.1	10.9	20.3	2.5
LOS		F	A		F	A	A	E	A	B	C	A
Approach Delay (s/veh)		357.1			1028.2			71.0			17.6	
Approach LOS		F			F			E			B	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 5.16			
Intersection Signal Delay (s/veh): 272.5		Intersection LOS: F	
Intersection Capacity Utilization 116.3%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	250	83	99	195	254	29	1269	19	61	658	92
Future Volume (veh/h)	351	250	83	99	195	254	29	1269	19	61	658	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	351	250	83	99	195	254	29	1269	19	61	658	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	0	500	55	70	500	406	1182	527	318	1345	600
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.09	0.33	0.33	0.13	0.38	0.38
Sat Flow, veh/h	0	0	1585	0	222	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	601	0	83	294	0	254	29	1269	19	61	658	92
Grp Sat Flow(s),veh/h/ln	0	0	1585	222	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	3.3	0.0	0.0	11.4	0.8	29.1	0.7	1.7	12.4	3.4
Cycle Q Clear(g_c), s	27.6	0.0	3.3	27.6	0.0	11.4	0.8	29.1	0.7	1.7	12.4	3.4
Prop In Lane	0.58		1.00	0.34		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	0	500	125	0	500	406	1182	527	318	1345	600
V/C Ratio(X)	9.22	0.00	0.17	2.35	0.00	0.51	0.07	1.07	0.04	0.19	0.49	0.15
Avail Cap(c_a), veh/h	65	0	500	125	0	500	557	1182	527	388	1345	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	0.0	21.6	29.2	0.0	24.4	15.4	29.2	19.7	17.8	20.7	17.9
Incr Delay (d2), s/veh	3730.3	0.0	0.1	632.8	0.0	0.6	0.0	48.4	0.1	0.1	1.3	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	114.3	0.0	2.2	43.4	0.0	7.5	0.6	27.6	0.5	1.1	8.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3774.0	0.0	21.7	662.0	0.0	25.1	15.4	77.6	19.9	17.9	22.0	18.5
LnGrp LOS	F		C	F		C	B	F	B	B	C	B
Approach Vol, veh/h		684			548			1317			811	
Approach Delay, s/veh		3318.7			366.8			75.4			21.3	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	35.0		35.0	13.5	39.0		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	3.7	31.1		29.6	2.8	14.4		29.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	770.1	
HCM 7th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.

Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	704	68	315	5	135	68	35
Future Volume (vph)	70	704	68	315	5	135	68	35
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	3.5	5.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	42.9	33.9	43.3	34.1	75.1	75.1	75.1	75.1
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.58	0.58	0.58	0.58
v/c Ratio	0.22	0.78	0.35	0.44	0.01	0.25	0.11	0.10
Control Delay (s/veh)	27.0	50.5	26.6	33.2	15.8	13.8	15.9	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.0	50.5	26.6	33.2	15.8	13.8	15.9	7.1
LOS	C	D	C	C	B	B	B	A
Approach Delay (s/veh)		48.4		32.3		13.9		10.8
Approach LOS		D		C		B		B

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 34.9		Intersection LOS: C	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: 86th Street & Sage Rd

HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	704	15	68	315	88	5	135	118	68	35	60
Future Volume (veh/h)	70	704	15	68	315	88	5	135	118	68	35	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	704	15	68	315	88	5	135	118	68	35	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	848	18	165	653	180	823	565	494	672	380	651
Arrive On Green	0.04	0.24	0.24	0.04	0.24	0.24	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1781	3558	76	1781	2754	757	1301	921	805	1127	619	1061
Grp Volume(v), veh/h	70	352	367	68	201	202	5	0	253	68	0	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1734	1301	0	1725	1127	0	1679
Q Serve(g_s), s	3.8	24.4	24.4	3.7	12.7	13.0	0.2	0.0	8.6	3.8	0.0	3.0
Cycle Q Clear(g_c), s	3.8	24.4	24.4	3.7	12.7	13.0	3.2	0.0	8.6	12.4	0.0	3.0
Prop In Lane	1.00		0.04	1.00		0.44	1.00		0.47	1.00		0.63
Lane Grp Cap(c), veh/h	264	423	442	165	422	411	823	0	1058	672	0	1030
V/C Ratio(X)	0.27	0.83	0.83	0.41	0.48	0.49	0.01	0.00	0.24	0.10	0.00	0.09
Avail Cap(c_a), veh/h	356	713	746	258	713	696	823	0	1058	672	0	1030
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	47.0	47.0	37.7	42.7	42.8	11.0	0.0	11.4	14.2	0.0	10.3
Incr Delay (d2), s/veh	0.5	4.3	4.1	1.7	0.8	0.9	0.0	0.0	0.5	0.3	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	16.7	17.3	3.1	9.5	9.6	0.1	0.0	6.2	1.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.4	51.3	51.1	39.4	43.5	43.7	11.0	0.0	11.9	14.5	0.0	10.5
LnGrp LOS	D	D	D	D	D	D	B		B	B		B
Approach Vol, veh/h		789			471			258			163	
Approach Delay, s/veh		49.9			43.0			11.9			12.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		85.2	8.8	36.0		85.2	8.9	35.8				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		10.6	5.7	26.4		14.4	5.8	15.0				
Green Ext Time (p_c), s		1.7	0.1	4.5		0.9	0.1	2.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	38.5	
HCM 7th LOS	D	

HCM 7th TWSC
6: Unser Blvd & San Ygnacio Rd 07/29/2024

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	3185	16	0	2039	16
Future Vol, veh/h	0	0	47	0	0	16	0	3185	16	0	2039	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	3185	16	0	2039	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1028	-	-	1601	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*505	0	0	*160	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*505	-	-	*160	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.86	29.94	0	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	505	160	-	-
HCM Lane V/C Ratio	-	-	0.093	0.1	-	-
HCM Control Delay (s/veh)	-	-	12.9	29.9	-	-
HCM Lane LOS	-	-	B	D	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 7th TWSC
7: Driveway "A" & Sage Rd 07/29/2024

Intersection						
Int Delay, s/veh	37.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1160	149	62	399	123	218
Future Vol, veh/h	1160	149	62	399	123	218
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1160	149	62	399	123	218

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1309	0	1558	655
Stage 1	-	-	-	-	1235	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	277	-	129	351
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %	-	-			-	
Mov Cap-1 Maneuver	-	-	277	-	~ 100	351
Mov Cap-2 Maneuver	-	-	-	-	166	-
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	529	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.92	225.49
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	250	-	-	277	-
HCM Lane V/C Ratio	1.363	-	-	0.224	-
HCM Control Delay (s/veh)	225.5	-	-	21.7	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	18.3	-	-	0.8	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	129	0	1686	1335	128
Future Vol, veh/h	0	129	0	1686	1335	128
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	129	0	1686	1335	128

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	732	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	312	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	312	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	24.4	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	312	-	-
HCM Lane V/C Ratio	-	0.413	-	-
HCM Control Delay (s/veh)	-	24.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	1.9	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	155	1686	1427	18
Future Vol, veh/h	0	18	155	1686	1427	18
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	300	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	155	1686	1427	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	714	1445	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	374	465	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	374	465	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.1	1.39	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	465	-	374	-	-
HCM Lane V/C Ratio	0.333	-	0.048	-	-
HCM Control Delay (s/veh)	16.6	-	15.1	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	1.4	-	0.2	-	-

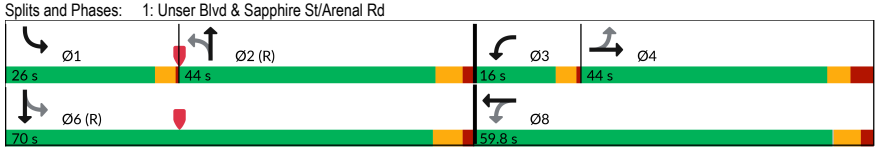
Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	94	112	262	156	536	50	879	224	437	1335	181
Future Volume (vph)	94	112	262	156	536	50	879	224	437	1335	181
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		1.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	15.4	15.4	34.9	32.4	130.0	41.6	41.6	130.0	88.1	85.6	130.0
Actuated g/C Ratio	0.12	0.12	0.27	0.25	1.00	0.32	0.32	1.00	0.68	0.66	1.00
v/c Ratio	0.65	0.43	0.78	0.34	0.34	0.41	0.78	0.14	0.69	0.57	0.11
Control Delay (s/veh)	74.2	33.8	58.0	41.0	0.6	47.4	45.7	0.2	40.4	31.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.2	33.8	58.0	41.0	0.6	47.4	45.7	0.2	40.4	31.6	0.0
LOS	E	C	E	D	A	D	D	A	D	C	A
Approach Delay (s/veh)		46.8		23.0			36.9			30.6	
Approach LOS		D		C			D			C	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 31.7		Intersection LOS: C	
Intersection Capacity Utilization 90.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	112	87	262	156	536	50	879	224	437	1335	181
Future Volume (veh/h)	94	112	87	262	156	536	50	879	224	437	1335	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	94	112	0	262	156	0	50	879	0	437	1335	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	345		313	412		262	1792		536	2416	
Arrive On Green	0.10	0.10	0.00	0.10	0.22	0.00	0.50	0.50	0.00	0.30	1.00	0.00
Sat Flow, veh/h	1231	3647	0	1781	1870	1585	410	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	94	112	0	262	156	0	50	879	0	437	1335	0
Grp Sat Flow(s),veh/h/ln	1231	1777	0	1781	1870	1585	410	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.7	3.8	0.0	12.5	9.2	0.0	9.0	21.2	0.0	17.1	0.0	0.0
Cycle Q Clear(g_c), s	9.7	3.8	0.0	12.5	9.2	0.0	9.0	21.2	0.0	17.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	345		313	412		262	1792		536	2416	
V/C Ratio(X)	0.54	0.32		0.84	0.38		0.19	0.49		0.82	0.55	
Avail Cap(c_a), veh/h	406	1011		313	774		262	1792		579	2416	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	57.4	54.7	0.0	49.9	43.1	0.0	18.2	21.2	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.5	0.0	16.7	0.6	0.0	1.6	1.0	0.0	0.7	0.1	0.0
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 BackOfQ(95%),veh/ln	5.6	3.1	0.0	6.6	7.7	0.0	1.7	13.6	0.0	5.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.9	55.3	0.0	66.6	43.7	0.0	19.8	22.2	0.0	13.0	0.1	0.0
LnGrp LOS	E	E		E	D		B	C		B	A	
Approach Vol, veh/h		206			418			929			1772	
Approach Delay, s/veh		57.4			58.1			22.0			3.3	
Approach LOS		E			E			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	22.8	71.6	16.0	19.6	94.4	35.6
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	19.1	23.2	14.5	11.7	2.0	11.2
Green Ext Time (p_c), s	0.2	5.8	0.0	0.9	13.7	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	18.8	
HCM 7th LOS	B	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

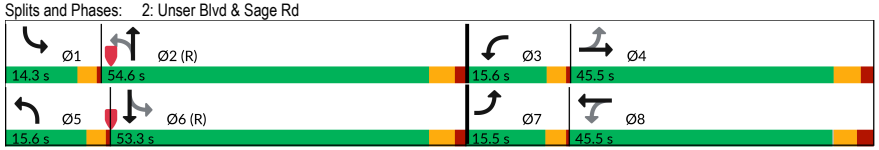
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	178	190	349	190	292	279	1198	89	133	1629	228
Future Volume (vph)	178	190	349	190	292	279	1198	89	133	1629	228
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	45.3	31.3	130.0	45.5	31.4	73.7	59.7	130.0	58.7	47.8	130.0
Actuated g/C Ratio	0.35	0.24	1.00	0.35	0.24	0.57	0.46	1.00	0.45	0.37	1.00
v/c Ratio	0.71	0.42	0.22	0.46	0.84	0.82	0.74	0.06	0.62	1.25	0.14
Control Delay (s/veh)	47.6	48.5	0.5	31.1	62.3	60.3	38.5	0.1	30.5	151.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.6	48.5	0.5	31.1	62.3	60.3	38.5	0.1	30.5	151.8	0.2
LOS	D	D	A	C	E	E	D	A	C	F	A
Approach Delay (s/veh)		24.9			51.8		40.2			126.3	
Approach LOS		C			D		D			F	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay (s/veh): 74.7		Intersection LOS: E	
Intersection Capacity Utilization 107.0%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	190	349	190	292	82	279	1198	89	133	1629	228
Future Volume (veh/h)	178	190	349	190	292	82	279	1198	89	133	1629	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	178	190	0	190	292	0	279	1198	0	133	1629	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	333		323	334		359	1898		288	1767	
Arrive On Green	0.09	0.18	0.00	0.09	0.18	0.00	0.09	0.53	0.00	0.11	0.99	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	178	190	0	190	292	0	279	1198	0	133	1629	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.5	12.1	0.0	11.3	19.8	0.0	9.6	30.8	0.0	4.9	3.9	0.0
Cycle Q Clear(g_c), s	10.5	12.1	0.0	11.3	19.8	0.0	9.6	30.8	0.0	4.9	3.9	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	333		323	334		359	1898		288	1767	
V/C Ratio(X)	0.72	0.57		0.59	0.87		0.78	0.63		0.46	0.92	
Avail Cap(c_a), veh/h	249	568		323	568		365	1898		342	1767	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.85	0.85	0.00	0.62	0.62	0.00	0.76	0.76	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.2	48.9	0.0	39.3	52.0	0.0	13.6	21.3	0.0	16.8	0.2	0.0
Incr Delay (d2), s/veh	7.0	1.3	0.0	1.2	5.0	0.0	7.0	1.2	0.0	0.4	9.5	0.0
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 BackOfQ(95%),veh/ln	8.5	9.4	0.0	7.9	13.7	0.0	7.3	17.6	0.0	3.2	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	50.2	0.0	40.5	57.0	0.0	20.6	22.5	0.0	17.3	9.7	0.0
LnGrp LOS	D	D		D	E		C	C		B	A	
Approach Vol, veh/h		368			482			1477			1762	
Approach Delay, s/veh		48.7			50.5			22.1			10.2	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	74.9	15.6	29.1	15.1	70.1	15.5	29.2
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	6.9	32.8	13.3	14.1	11.6	5.9	12.5	21.8
Green Ext Time (p_c), s	0.0	9.6	0.0	1.0	0.0	24.7	0.0	1.5

Intersection Summary		
HCM 7th Control Delay, s/veh	22.8	
HCM 7th LOS	C	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

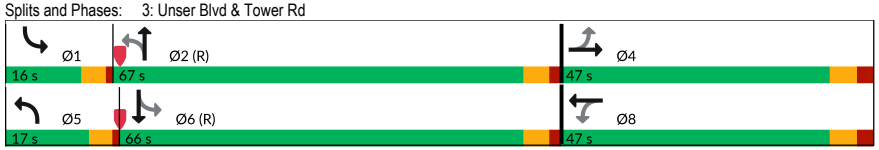
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	88	163	75	371	189	1258	69	1798	182
Future Volume (vph)	88	163	75	371	189	1258	69	1798	182
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	23.0	23.0	23.0	23.0	96.0	86.7	84.0	77.5	130.0
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.74	0.67	0.65	0.60	1.00
v/c Ratio	1.07	0.43	0.48	0.76	0.80	0.55	0.25	0.85	0.11
Control Delay (s/veh)	168.7	26.2	57.1	55.3	48.9	21.2	9.0	28.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	168.7	26.2	57.1	55.3	48.9	21.2	9.0	28.3	0.1
LOS	F	C	E	E	D	C	A	C	A
Approach Delay (s/veh)		58.4		55.5		24.7		25.2	
Approach LOS		E		E		C		C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.07		
Intersection Signal Delay (s/veh): 31.7	Intersection LOS: C	
Intersection Capacity Utilization 103.0%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	163	138	75	371	107	189	1258	44	69	1798	182
Future Volume (veh/h)	88	163	138	75	371	107	189	1258	44	69	1798	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	163	0	75	371	0	189	1258	0	69	1798	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	709		252	709		213	2296		348	2197	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.07	0.86	0.00	0.03	0.62	0.00
Sat Flow, veh/h	1011	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	88	163	0	75	371	0	189	1258	0	69	1798	0
Grp Sat Flow(s),veh/h/ln	1011	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	11.1	5.0	0.0	7.1	12.1	0.0	5.1	12.2	0.0	1.9	50.8	0.0
Cycle Q Clear(g_c), s	23.2	5.0	0.0	12.1	12.1	0.0	5.1	12.2	0.0	1.9	50.8	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	709		252	709		213	2296		348	2197	
V/C Ratio(X)	0.54	0.23		0.30	0.52		0.89	0.55		0.20	0.82	
Avail Cap(c_a), veh/h	276	1107		389	1107		286	2296		456	2197	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.9	43.6	0.0	48.7	46.5	0.0	27.9	4.1	0.0	8.8	19.2	0.0
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.2	0.2	0.0	18.2	0.9	0.0	0.1	3.5	0.0
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 BackOfQ(95%),veh/ln	5.1	4.0	0.0	3.9	9.2	0.0	8.2	5.5	0.0	1.2	27.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	43.7	0.0	49.0	46.7	0.0	46.1	5.0	0.0	8.9	22.7	0.0
LnGrp LOS	E	D		D	D		D	A		A	C	
Approach Vol, veh/h		251			446			1447			1867	
Approach Delay, s/veh		48.7			47.1			10.4			22.2	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	8.1	89.5	32.4	11.7	85.9	32.4
Change Period (Y+Rc), s	4.5	5.5	6.5	4.5	5.5	6.5
Max Green Setting (Gmax), s	11.5	61.5	40.5	12.5	60.5	40.5
Max Q Clear Time (g_c+I1), s	3.9	14.2	25.2	7.1	52.8	14.1
Green Ext Time (p_c), s	0.0	17.8	0.7	0.1	6.8	1.7

Intersection Summary		
HCM 7th Control Delay, s/veh	22.4	
HCM 7th LOS	C	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

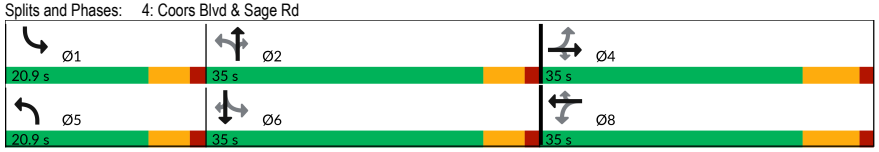
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	82	6	143	335	280	96	1000	201	103	890	129
Future Volume (vph)	87	82	6	143	335	280	96	1000	201	103	890	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.4	7.4		7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)		27.9	27.9		27.9	27.9	40.9	29.4	29.4	40.9	29.4	29.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.47	0.34	0.34
v/c Ratio		0.95	0.01		0.95	0.45	0.24	0.83	0.30	0.27	0.74	0.21
Control Delay (s/veh)		91.8	0.0		62.7	13.1	11.7	35.3	4.9	12.2	31.1	5.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		91.8	0.0		62.7	13.1	11.7	35.3	4.9	12.2	31.1	5.3
LOS		F	A		E	B	B	D	A	B	C	A
Approach Delay (s/veh)		88.6			44.4			28.8			26.4	
Approach LOS		F			D			C			C	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay (s/veh): 34.7		Intersection LOS: C	
Intersection Capacity Utilization 97.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	82	6	143	335	280	96	1000	201	103	890	129
Future Volume (veh/h)	87	82	6	143	335	280	96	1000	201	103	890	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	82	6	143	335	280	96	1000	201	103	890	129
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	39	487	52	22	487	407	1152	514	383	1161	518
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.32	0.32	0.15	0.33	0.33
Sat Flow, veh/h	0	128	1585	0	73	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	169	0	6	478	0	280	96	1000	201	103	890	129
Grp Sat Flow(s),veh/h/ln	128	0	1585	73	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.2	0.0	0.0	13.3	2.7	23.7	8.8	2.9	20.2	5.4
Cycle Q Clear(g_c), s	27.6	0.0	0.2	27.6	0.0	13.3	2.7	23.7	8.8	2.9	20.2	5.4
Prop In Lane	0.51		1.00	0.30		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	0	487	75	0	487	407	1152	514	383	1161	518
V/C Ratio(X)	1.69	0.00	0.01	6.41	0.00	0.57	0.24	0.87	0.39	0.27	0.77	0.25
Avail Cap(c_a), veh/h	100	0	487	75	0	487	434	1152	514	406	1161	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	21.6	36.7	0.0	26.1	15.7	28.5	23.5	16.9	27.1	22.1
Incr Delay (d2), s/veh	349.3	0.0	0.0	2464.5	0.0	1.4	0.1	8.9	2.2	0.1	4.9	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.4	0.0	0.2	88.6	0.0	8.7	1.8	16.0	6.1	1.9	13.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	383.7	0.0	21.6	2501.2	0.0	27.5	15.8	37.4	25.7	17.1	32.0	23.3
LnGrp LOS	F		C	F		C	B	D	C	B	C	C
Approach Vol, veh/h		175			758			1297			1122	
Approach Delay, s/veh		371.3			1587.5			34.0			29.6	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.7	35.0		35.0	19.5	35.2		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	4.9	25.7		29.6	4.7	22.2		29.6				
Green Ext Time (p_c), s	0.0	2.3		0.0	0.0	3.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	401.4	
HCM 7th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.

Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	65	354	60	484	20	100	35	130
Future Volume (vph)	65	354	60	484	20	100	35	130
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	3.5	5.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	36.2	26.9	35.7	26.6	82.3	82.3	82.3	82.3
Actuated g/C Ratio	0.28	0.21	0.27	0.20	0.63	0.63	0.63	0.63
v/c Ratio	0.33	0.55	0.24	0.76	0.03	0.11	0.04	0.22
Control Delay (s/veh)	34.2	46.8	33.9	55.8	12.3	10.6	12.2	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.2	46.8	33.9	55.8	12.3	10.6	12.2	10.6
LOS	C	D	C	E	B	B	B	B
Approach Delay (s/veh)		45.1		53.7		10.8		10.8
Approach LOS		D		D		B		B

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 38.9	Intersection LOS: D
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: 86th Street & Sage Rd

HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	354	50	60	484	65	20	100	30	35	130	110
Future Volume (veh/h)	65	354	50	60	484	65	20	100	30	35	130	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	354	50	60	484	65	20	100	30	35	130	110
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	583	82	203	578	77	756	923	277	865	625	529
Arrive On Green	0.04	0.19	0.19	0.08	0.37	0.37	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1781	3130	438	1781	3150	421	1140	1381	414	1260	936	792
Grp Volume(v), veh/h	65	200	204	60	272	277	20	0	130	35	0	240
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1781	1777	1795	1140	0	1796	1260	0	1728
Q Serve(g_s), s	3.8	13.4	13.6	3.5	18.2	18.4	0.9	0.0	3.4	1.3	0.0	7.0
Cycle Q Clear(g_c), s	3.8	13.4	13.6	3.5	18.2	18.4	7.9	0.0	3.4	4.7	0.0	7.0
Prop In Lane	1.00		0.24	1.00		0.23	1.00		0.23	1.00		0.46
Lane Grp Cap(c), veh/h	164	331	334	203	326	329	756	0	1200	865	0	1154
V/C Ratio(X)	0.40	0.60	0.61	0.30	0.84	0.84	0.03	0.00	0.11	0.04	0.00	0.21
Avail Cap(c_a), veh/h	257	713	719	301	713	721	756	0	1200	865	0	1154
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.71	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.0	48.5	48.6	39.9	39.4	39.4	9.8	0.0	7.7	8.6	0.0	8.3
Incr Delay (d2), s/veh	1.5	1.8	1.8	0.6	4.1	4.2	0.1	0.0	0.2	0.1	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	10.1	10.3	2.7	10.5	10.7	0.4	0.0	2.4	0.7	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.6	50.3	50.4	40.4	43.4	43.7	9.9	0.0	7.9	8.6	0.0	8.7
LnGrp LOS	D	D	D	D	D	D	A		A	A		A
Approach Vol, veh/h		469			609			150			275	
Approach Delay, s/veh		49.4			43.2			8.2			8.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		92.4	8.4	29.2		92.4	8.8	28.8				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		9.9	5.5	15.6		9.0	5.8	20.4				
Green Ext Time (p_c), s		0.9	0.0	2.5		1.7	0.1	3.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	35.3
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	2273	16	0	3102	47
Future Vol, veh/h	0	0	47	0	0	16	0	2273	16	0	3102	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	2273	16	0	3102	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1575	-	-	1145	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*193	0	0	*423	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*193	-	-	*423	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	29.54	13.85	0	0
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	193	423	-	-
HCM Lane V/C Ratio	-	-	0.243	0.038	-	-
HCM Control Delay (s/veh)	-	-	29.5	13.8	-	-
HCM Lane LOS	-	-	D	B	-	-
HCM 95th %tile Q(veh)	-	-	0.9	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

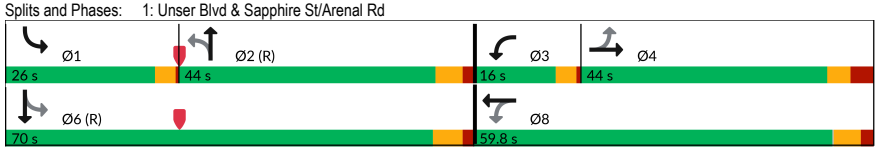
Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	106	112	262	156	564	50	930	224	465	1385	193
Future Volume (vph)	106	112	262	156	564	50	930	224	465	1385	193
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		1.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	16.6	16.6	36.1	33.6	130.0	38.6	38.6	130.0	86.9	84.4	130.0
Actuated g/C Ratio	0.13	0.13	0.28	0.26	1.00	0.30	0.30	1.00	0.67	0.65	1.00
v/c Ratio	0.68	0.41	0.76	0.32	0.36	0.47	0.88	0.14	0.72	0.60	0.12
Control Delay (s/veh)	74.3	33.2	54.3	39.8	0.6	54.2	54.8	0.2	41.5	31.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.3	33.2	54.3	39.8	0.6	54.2	54.8	0.2	41.5	31.4	0.0
LOS	E	C	D	D	A	D	D	A	D	C	A
Approach Delay (s/veh)		47.5		21.2			44.6			30.8	
Approach LOS		D		C			D			C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 130		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.88		
Intersection Signal Delay (s/veh): 33.5	Intersection LOS: C	
Intersection Capacity Utilization 91.6%	ICU Level of Service F	
Analysis Period (min) 15		

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	112	87	262	156	564	50	930	224	465	1385	193
Future Volume (veh/h)	106	112	87	262	156	564	50	930	224	465	1385	193
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	112	0	262	156	0	50	930	0	465	1385	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	379		326	430		242	1698		526	2381	
Arrive On Green	0.11	0.11	0.00	0.10	0.23	0.00	0.48	0.48	0.00	0.33	1.00	0.00
Sat Flow, veh/h	1231	3647	0	1781	1870	1585	391	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	106	112	0	262	156	0	50	930	0	465	1385	0
Grp Sat Flow(s),veh/h/ln	1231	1777	0	1781	1870	1585	391	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.9	3.8	0.0	12.5	9.1	0.0	10.0	24.1	0.0	19.4	0.0	0.0
Cycle Q Clear(g_c), s	10.9	3.8	0.0	12.5	9.1	0.0	10.0	24.1	0.0	19.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	379		326	430		242	1698		526	2381	
V/C Ratio(X)	0.57	0.30		0.80	0.36		0.21	0.55		0.88	0.58	
Avail Cap(c_a), veh/h	406	1011		326	774		242	1698		540	2381	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.7	53.5	0.0	48.6	42.1	0.0	20.3	24.0	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.4	0.0	12.6	0.5	0.0	1.9	1.3	0.0	15.0	1.0	0.0
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 BackOfQ(95%),veh/ln	6.3	3.1	0.0	5.8	7.6	0.0	1.8	15.3	0.0	10.6	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.4	54.0	0.0	61.2	42.6	0.0	22.3	25.3	0.0	29.2	1.0	0.0
LnGrp LOS	E	D		E	D		C	C		C	A	
Approach Vol, veh/h		218			418			980			1850	
Approach Delay, s/veh		56.6			54.3			25.1			8.1	
Approach LOS		E			D			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	25.0	68.1	16.0	20.9	93.1	36.9
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	21.4	26.1	14.5	12.9	2.0	11.1
Green Ext Time (p_c), s	0.1	5.5	0.0	0.9	14.7	0.8

Intersection Summary		
HCM 7th Control Delay, s/veh	21.6	
HCM 7th LOS	C	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

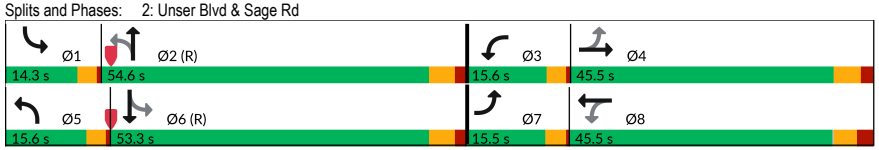
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
Future Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
Turn Type	pm+pt	NA	Free	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		Free	8		2		Free	6		Free
Detector Phase	7	4		3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0		3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0		9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5		15.6	45.5	15.6	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%		12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0		3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.5	0.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	47.7	33.2	130.0	47.0	32.9	71.6	57.7	130.0	58.7	47.8	130.0
Actuated g/C Ratio	0.37	0.26	1.00	0.36	0.25	0.55	0.44	1.00	0.45	0.37	1.00
v/c Ratio	1.17	0.48	0.22	0.51	0.87	0.89	0.74	0.06	0.61	1.30	0.16
Control Delay (s/veh)	142.6	46.9	0.3	31.3	63.8	67.6	44.2	0.1	30.9	171.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	142.6	46.9	0.3	31.3	63.8	67.6	44.2	0.1	30.9	171.1	0.2
LOS	F	D	A	C	E	E	D	A	C	F	A
Approach Delay (s/veh)		60.6			52.8		45.9			141.2	
Approach LOS		E			D		D			F	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 145		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.30		
Intersection Signal Delay (s/veh): 88.2	Intersection LOS: F	
Intersection Capacity Utilization 116.5%	ICU Level of Service H	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Future Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	295	227	0	204	319	0	279	1156	0	133	1688	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	360		315	362		244	1841		290	1702	
Arrive On Green	0.09	0.19	0.00	0.09	0.19	0.00	0.09	0.52	0.00	0.11	0.96	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	295	227	0	204	319	0	279	1156	0	133	1688	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	14.5	0.0	12.0	21.6	0.0	12.1	30.2	0.0	5.0	52.1	0.0
Cycle Q Clear(g_c), s	12.0	14.5	0.0	12.0	21.6	0.0	12.1	30.2	0.0	5.0	52.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	360		315	362		244	1841		290	1702	
V/C Ratio(X)	1.18	0.63		0.65	0.88		1.14	0.63		0.46	0.99	
Avail Cap(c_a), veh/h	249	568		315	568		244	1841		342	1702	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	0.60	0.60	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.3	48.2	0.0	38.4	51.0	0.0	39.3	22.4	0.0	17.6	2.5	0.0
Incr Delay (d2), s/veh	116.2	1.8	0.0	2.2	6.2	0.0	101.8	1.6	0.0	0.4	20.0	0.0
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 BackOfQ(95%),veh/ln	16.6	11.2	0.0	8.4	14.8	0.0	22.2	18.2	0.0	3.3	9.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	160.5	50.0	0.0	40.6	57.2	0.0	141.2	24.0	0.0	18.0	22.5	0.0
LnGrp LOS	F	D		D	E		F	C		B	C	
Approach Vol, veh/h		522			523			1435			1821	
Approach Delay, s/veh		112.5			50.7			46.8			22.2	
Approach LOS		F			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	72.9	15.6	31.0	15.6	67.8	15.5	31.1
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	7.0	32.2	14.0	16.5	14.1	54.1	14.0	23.6
Green Ext Time (p_c), s	0.0	9.5	0.0	1.2	0.0	0.0	0.0	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	44.8
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

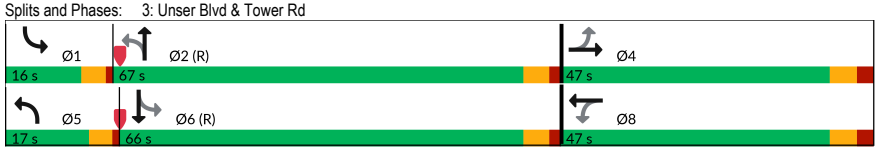
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	88	163	81	371	206	1308	69	1857	182
Future Volume (vph)	88	163	81	371	206	1308	69	1857	182
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	23.0	23.0	23.0	23.0	96.0	86.5	82.3	75.6	130.0
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.74	0.67	0.63	0.58	1.00
v/c Ratio	1.07	0.45	0.55	0.76	0.79	0.58	0.27	0.90	0.11
Control Delay (s/veh)	168.7	25.0	61.5	55.3	44.6	21.0	9.6	32.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	168.7	25.0	61.5	55.3	44.6	21.0	9.6	32.9	0.1
LOS	F	C	E	E	D	C	A	C	A
Approach Delay (s/veh)		56.2		56.2		24.1		29.3	
Approach LOS		E		E		C		C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.07		
Intersection Signal Delay (s/veh): 33.1	Intersection LOS: C	
Intersection Capacity Utilization 105.6%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	163	155	81	371	107	206	1308	50	69	1857	182
Future Volume (veh/h)	88	163	155	81	371	107	206	1308	50	69	1857	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	163	0	81	371	0	206	1308	0	69	1857	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	709		252	709		230	2294		334	2123	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.10	0.86	0.00	0.03	0.60	0.00
Sat Flow, veh/h	1011	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	88	163	0	81	371	0	206	1308	0	69	1857	0
Grp Sat Flow(s),veh/h/ln	1011	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	11.1	5.0	0.0	7.7	12.1	0.0	7.8	13.3	0.0	2.0	57.3	0.0
Cycle Q Clear(g_c), s	23.2	5.0	0.0	12.7	12.1	0.0	7.8	13.3	0.0	2.0	57.3	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	709		252	709		230	2294		334	2123	
V/C Ratio(X)	0.54	0.23		0.32	0.52		0.90	0.57		0.21	0.87	
Avail Cap(c_a), veh/h	276	1107		389	1107		266	2294		441	2123	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.9	43.6	0.0	49.0	46.5	0.0	35.3	4.2	0.0	9.7	22.1	0.0
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.3	0.2	0.0	25.8	1.0	0.0	0.1	5.4	0.0
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 BackOfQ(95%),veh/ln	5.1	4.0	0.0	4.3	9.2	0.0	12.6	5.8	0.0	1.3	31.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	43.7	0.0	49.3	46.7	0.0	61.1	5.2	0.0	9.8	27.5	0.0
LnGrp LOS	E	D		D	D		E	A		A	C	
Approach Vol, veh/h		251			452			1514			1926	
Approach Delay, s/veh		48.7			47.2			12.8			26.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	89.4		32.4	14.4	83.2		32.4				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	4.0	15.3		25.2	9.8	59.3		14.7				
Green Ext Time (p_c), s	0.0	18.8		0.7	0.0	1.2		1.7				

Intersection Summary		
HCM 7th Control Delay, s/veh	25.3	
HCM 7th LOS	C	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

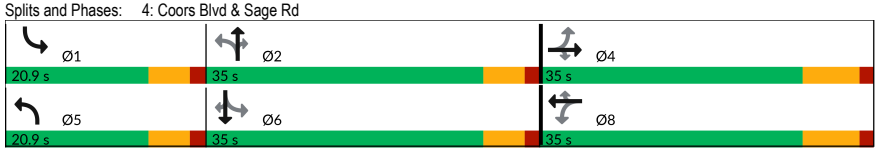
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	96	11	143	349	280	101	1000	201	103	890	145
Future Volume (vph)	100	96	11	143	349	280	101	1000	201	103	890	145
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.4	7.4		7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)		27.9	27.9		27.9	27.9	40.9	29.4	29.4	40.9	29.4	29.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.47	0.34	0.34
v/c Ratio		1.19	0.02		0.99	0.45	0.25	0.83	0.30	0.27	0.74	0.23
Control Delay (s/veh)		161.5	0.1		70.1	13.5	11.9	35.3	4.9	12.2	31.1	5.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		161.5	0.1		70.1	13.5	11.9	35.3	4.9	12.2	31.1	5.1
LOS		F	A		E	B	B	D	A	B	C	A
Approach Delay (s/veh)		152.9			49.6			28.8			26.1	
Approach LOS		F			D			C			C	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay (s/veh): 40.1		Intersection LOS: D	
Intersection Capacity Utilization 99.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	96	11	143	349	280	101	1000	201	103	890	145
Future Volume (veh/h)	100	96	11	143	349	280	101	1000	201	103	890	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	96	11	143	349	280	101	1000	201	103	890	145
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	40	487	52	22	487	408	1152	514	383	1155	515
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.32	0.32	0.15	0.32	0.32
Sat Flow, veh/h	0	130	1585	0	73	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	196	0	11	492	0	280	101	1000	201	103	890	145
Grp Sat Flow(s),veh/h/ln	130	0	1585	73	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.4	0.0	0.0	13.3	2.8	23.7	8.8	2.9	20.2	6.1
Cycle Q Clear(g_c), s	27.6	0.0	0.4	27.6	0.0	13.3	2.8	23.7	8.8	2.9	20.2	6.1
Prop In Lane	0.51		1.00	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	0	487	74	0	487	408	1152	514	383	1155	515
V/C Ratio(X)	1.95	0.00	0.02	6.63	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Avail Cap(c_a), veh/h	101	0	487	74	0	487	432	1152	514	406	1155	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	21.7	36.7	0.0	26.1	15.8	28.5	23.5	16.9	27.3	22.5
Incr Delay (d2), s/veh	460.9	0.0	0.0	2562.7	0.0	1.4	0.1	8.9	2.2	0.1	5.0	1.4
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(95%),veh/ln	27.1	0.0	0.3	91.4	0.0	8.7	1.8	16.0	6.1	1.9	13.5	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	495.2	0.0	21.7	2599.4	0.0	27.5	15.9	37.4	25.7	17.1	32.3	23.9
LnGrp LOS	F		C	F		C	B	D	C	B	C	C
Approach Vol, veh/h		207			772			1302			1138	
Approach Delay, s/veh		470.0			1666.6			34.0			29.8	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.7	35.0		35.0	19.7	35.1		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	4.9	25.7		29.6	4.8	22.2		29.6				
Green Ext Time (p_c), s	0.0	2.3		0.0	0.0	3.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	427.6	
HCM 7th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.

Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	65	415	81	544	20	100	51	130
Future Volume (vph)	65	415	81	544	20	100	51	130
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	3.5	5.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	38.6	28.1	40.6	30.8	78.2	78.2	78.2	78.2
Actuated g/C Ratio	0.30	0.22	0.31	0.24	0.60	0.60	0.60	0.60
v/c Ratio	0.32	0.61	0.32	0.75	0.03	0.14	0.07	0.23
Control Delay (s/veh)	31.7	47.4	31.9	49.9	13.7	11.5	13.7	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.7	47.4	31.9	49.9	13.7	11.5	13.7	12.0
LOS	C	D	C	D	B	B	B	B
Approach Delay (s/veh)		45.5		47.8		11.8		12.3
Approach LOS		D		D		B		B

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 37.4		Intersection LOS: D	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: 86th Street & Sage Rd

HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	415	50	81	544	81	20	100	51	51	130	110
Future Volume (veh/h)	65	415	50	81	544	81	20	100	51	51	130	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	415	50	81	544	81	20	100	51	51	130	110
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	630	76	214	639	95	727	755	385	813	605	512
Arrive On Green	0.04	0.20	0.20	0.10	0.41	0.41	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1781	3195	383	1781	3104	461	1140	1168	596	1236	936	792
Grp Volume(v), veh/h	65	230	235	81	311	314	20	0	151	51	0	240
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1787	1140	0	1763	1236	0	1728
Q Serve(g_s), s	3.8	15.5	15.7	4.7	20.6	20.8	1.0	0.0	4.3	2.2	0.0	7.4
Cycle Q Clear(g_c), s	3.8	15.5	15.7	4.7	20.6	20.8	8.4	0.0	4.3	6.5	0.0	7.4
Prop In Lane	1.00		0.21	1.00		0.26	1.00		0.34	1.00		0.46
Lane Grp Cap(c), veh/h	164	350	355	214	366	368	727	0	1139	813	0	1116
V/C Ratio(X)	0.40	0.66	0.66	0.38	0.85	0.85	0.03	0.00	0.13	0.06	0.00	0.21
Avail Cap(c_a), veh/h	258	713	723	292	713	718	727	0	1139	813	0	1116
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.8	48.1	48.2	37.7	36.4	36.5	11.2	0.0	8.9	10.2	0.0	9.4
Incr Delay (d2), s/veh	1.5	2.1	2.1	1.1	5.6	5.7	0.1	0.0	0.2	0.1	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	11.4	11.6	3.6	12.3	12.5	0.5	0.0	3.1	1.1	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.4	50.2	50.3	38.8	42.0	42.2	11.2	0.0	9.1	10.3	0.0	9.9
LnGrp LOS	D	D	D	D	D	D	B		A	B		A
Approach Vol, veh/h		530			706			171			291	
Approach Delay, s/veh		49.3			41.7			9.4			10.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		89.5	9.9	30.6		89.5	8.8	31.7				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		10.4	6.7	17.7		9.4	5.8	22.8				
Green Ext Time (p_c), s		1.0	0.1	2.9		1.8	0.1	4.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	35.4
HCM 7th LOS	D

HCM 7th TWSC
6: Unser Blvd & San Ygnacio Rd 07/29/2024

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	2348	16	0	3187	47
Future Vol, veh/h	0	0	47	0	0	16	0	2348	16	0	3187	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	2348	16	0	3187	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1617	-	-	1182	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*160	0	0	*407	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*160	-	-	*407	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	36.53	14.22	0	0
HCM LOS	E	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	160	407	-	-
HCM Lane V/C Ratio	-	-	0.293	0.039	-	-
HCM Control Delay (s/veh)	-	-	36.5	14.2	-	-
HCM Lane LOS	-	-	E	B	-	-
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 7th TWSC
7: Driveway "A" & Sage Rd 07/29/2024

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	717	122	74	799	121	174
Future Vol, veh/h	717	122	74	799	121	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	717	122	74	799	121	174

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	839	0	1326	420
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	548	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	791	-	147	582
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %	-	-			-	
Mov Cap-1 Maneuver	-	-	791	-	133	582
Mov Cap-2 Maneuver	-	-	-	-	325	-
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	493	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.85	28.38
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	-	-	791	-
HCM Lane V/C Ratio	0.671	-	-	0.093	-
HCM Control Delay (s/veh)	28.4	-	-	10	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	4.8	-	-	0.3	-

HCM 7th TWSC
8: Unser Blvd & Driveway "B" 07/29/2024

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	132	0	1524	2132	158
Future Vol, veh/h	0	132	0	1524	2132	158
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	132	0	1524	2132	158

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1145	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	166	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	166	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	80.19	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	166	-	-
HCM Lane V/C Ratio	-	0.796	-	-
HCM Control Delay (s/veh)	-	80.2	-	-
HCM Lane LOS	-	F	-	-
HCM 95th %tile Q(veh)	-	5.2	-	-

HCM 7th TWSC
9: Unser Blvd & Driveway "C" 07/29/2024

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	134	1524	2192	21
Future Vol, veh/h	0	18	134	1524	2192	21
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	300	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	134	1524	2192	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1096	2213	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	208	233	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	208	233	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	23.91	3.18	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	233	-	208	-	-
HCM Lane V/C Ratio	0.574	-	0.086	-	-
HCM Control Delay (s/veh)	39.4	-	23.9	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	3.2	-	0.3	-	-

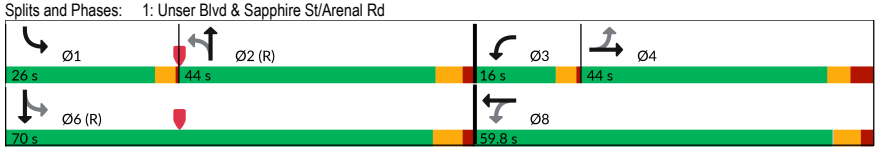
Timings
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	106	112	262	159	564	50	930	224	465	1385	193
Future Volume (vph)	106	112	262	159	564	50	930	224	465	1385	193
Turn Type	Perm	NA	pm+pt	NA	Free	Perm	NA	Free	pm+pt	NA	Free
Protected Phases		4	3	8			2		1	6	
Permitted Phases	4		8		Free	2		Free	6		Free
Detector Phase	4	4	3	8		2	2		1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	3.0	8.0		16.0	16.0		3.0	16.0	
Minimum Split (s)	44.2	44.2	15.6	59.8		44.2	44.2		26.0	70.2	
Total Split (s)	44.0	44.0	16.0	59.8		44.0	44.0		26.0	70.0	
Total Split (%)	33.8%	33.8%	12.3%	46.0%		33.8%	33.8%		20.0%	53.8%	
Yellow Time (s)	3.5	3.5	3.0	4.0		4.0	4.0		3.0	4.5	
All-Red Time (s)	3.5	3.5	0.5	2.0		1.5	1.5		0.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	3.5	6.0		5.5	5.5		3.5	6.0	
Lead/Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes		Yes		
Recall Mode	None	None	None	None		C-Max	C-Max		None	C-Max	
Act Effct Green (s)	16.7	16.7	36.2	33.7	130.0	38.6	38.6	130.0	86.8	84.3	130.0
Actuated g/C Ratio	0.13	0.13	0.28	0.26	1.00	0.30	0.30	1.00	0.67	0.65	1.00
v/c Ratio	0.68	0.41	0.76	0.33	0.36	0.47	0.89	0.14	0.72	0.60	0.12
Control Delay (s/veh)	74.2	33.1	54.1	39.8	0.6	54.2	54.9	0.2	38.8	25.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.2	33.1	54.1	39.8	0.6	54.2	54.9	0.2	38.8	25.8	0.1
LOS	E	C	D	D	A	D	D	A	D	C	A
Approach Delay (s/veh)		47.4		21.2			44.7			26.3	
Approach LOS		D		C			D			C	

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 63.7 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 31.5		Intersection LOS: C	
Intersection Capacity Utilization 91.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Unser Blvd & Sapphire St/Arenal Rd



HCM 7th Signalized Intersection Summary
1: Unser Blvd & Sapphire St/Arenal Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	112	87	262	159	564	50	930	224	465	1385	193
Future Volume (veh/h)	106	112	87	262	159	564	50	930	224	465	1385	193
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	112	0	262	159	0	50	930	0	465	1385	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	380		327	430		242	1697		526	2381	
Arrive On Green	0.11	0.11	0.00	0.10	0.23	0.00	0.48	0.48	0.00	0.33	1.00	0.00
Sat Flow, veh/h	1227	3647	0	1781	1870	1585	391	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	106	112	0	262	159	0	50	930	0	465	1385	0
Grp Sat Flow(s),veh/h/ln	1227	1777	0	1781	1870	1585	391	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.0	3.8	0.0	12.5	9.3	0.0	10.0	24.1	0.0	19.4	0.0	0.0
Cycle Q Clear(g_c), s	11.0	3.8	0.0	12.5	9.3	0.0	10.0	24.1	0.0	19.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	380		327	430		242	1697		526	2381	
V/C Ratio(X)	0.57	0.29		0.80	0.37		0.21	0.55		0.88	0.58	
Avail Cap(c_a), veh/h	405	1011		327	774		242	1697		539	2381	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.7	53.5	0.0	48.6	42.1	0.0	20.4	24.0	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.4	0.0	12.5	0.5	0.0	1.9	1.3	0.0	15.1	1.0	0.0
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 BackOfQ(95%),veh/ln	6.3	3.0	0.0	5.8	7.7	0.0	1.8	15.3	0.0	10.6	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.4	53.9	0.0	61.1	42.6	0.0	22.3	25.3	0.0	29.3	1.0	0.0
LnGrp LOS	E	D		E	D		C	C		C	A	
Approach Vol, veh/h		218			421			980			1850	
Approach Delay, s/veh		56.6			54.1			25.2			8.1	
Approach LOS		E			D			C			A	

Timer - Assigned Phs	1	2	3	4	6	8
Phs Duration (G+Y+Rc), s	25.0	68.1	16.0	20.9	93.1	36.9
Change Period (Y+Rc), s	3.5	* 6	3.5	7.0	6.0	* 7
Max Green Setting (Gmax), s	22.5	* 39	12.5	37.0	64.0	* 54
Max Q Clear Time (g_c+I1), s	21.4	26.1	14.5	13.0	2.0	11.3
Green Ext Time (p_c), s	0.1	5.5	0.0	0.9	14.7	0.9

Intersection Summary		
HCM 7th Control Delay, s/veh	21.6	
HCM 7th LOS	C	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

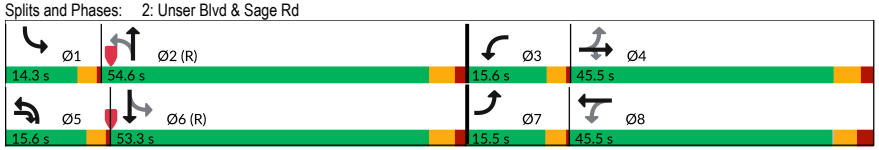
Timings
2: Unser Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
Future Volume (vph)	295	227	349	204	319	279	1156	89	133	1688	254
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases	4		4	8		2		Free	6		Free
Detector Phase	7	4	5	3	8	5	2		1	6	
Switch Phase											
Minimum Initial (s)	3.0	12.0	3.0	3.0	12.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	9.5	41.0	9.5	9.5	41.0	9.5	31.5		9.5	31.5	
Total Split (s)	15.5	45.5	15.6	15.6	45.5	15.6	54.6		14.3	53.3	
Total Split (%)	11.9%	35.0%	12.0%	12.0%	35.0%	12.0%	42.0%		11.0%	41.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	3.5	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	2.0	0.5	0.5	2.5	0.5	1.5		0.5	1.5	
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)	3.5	6.0	3.5	3.5	6.0	3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	34.7	20.2	54.0	34.2	20.0	85.0	69.9	130.0	63.4	51.8	130.0
Actuated g/C Ratio	0.27	0.16	0.42	0.26	0.15	0.65	0.54	1.00	0.49	0.40	1.00
v/c Ratio	1.15	0.41	0.49	0.60	0.73	0.64	0.61	0.06	0.45	1.20	0.16
Control Delay (s/veh)	138.6	49.6	32.6	44.6	57.0	38.5	34.2	0.1	16.0	127.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	138.6	49.6	32.6	44.6	57.0	38.5	34.2	0.1	16.0	127.6	0.2
LOS	F	D	C	D	E	D	C	A	B	F	A
Approach Delay (s/veh)		72.9			52.8		33.0			104.9	
Approach LOS		E			D		C			F	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 58.5 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 135		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.20		
Intersection Signal Delay (s/veh): 71.6	Intersection LOS: E	
Intersection Capacity Utilization 106.1%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 2: Unser Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
2: Unser Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Future Volume (veh/h)	295	227	349	204	319	82	279	1156	89	133	1688	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	295	227	349	204	319	0	279	1156	0	133	1688	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	378	798	504	365	801		221	1719		270	1588	
Arrive On Green	0.09	0.22	0.22	0.09	0.23	0.00	0.09	0.48	0.00	0.11	0.89	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	295	227	349	204	319	0	279	1156	0	133	1688	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	0	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	6.9	25.0	11.5	9.9	0.0	12.1	32.4	0.0	5.3	58.1	0.0
Cycle Q Clear(g_c), s	12.0	6.9	25.0	11.5	9.9	0.0	12.1	32.4	0.0	5.3	58.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	798	504	365	801		221	1719		270	1588	
V/C Ratio(X)	0.78	0.28	0.69	0.56	0.40		1.26	0.67		0.49	1.06	
Avail Cap(c_a), veh/h	378	1080	629	365	1080		221	1719		318	1588	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.4	41.7	38.8	34.4	42.8	0.0	43.0	25.7	0.0	20.0	6.9	0.0
Incr Delay (d2), s/veh	9.2	0.2	2.4	1.2	0.3	0.0	148.7	2.1	0.0	0.5	41.4	0.0
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 BackOfQ(95%),veh/ln	7.3	5.5	15.1	8.7	7.8	0.0	24.9	19.7	0.0	3.6	18.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.6	41.9	41.2	35.6	43.2	0.0	191.7	27.8	0.0	20.6	48.3	0.0
LnGrp LOS	D	D	D	D	D		F	C		C	F	
Approach Vol, veh/h		871			523			1435			1821	
Approach Delay, s/veh		44.3			40.2			59.7			46.3	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	68.4	15.6	35.2	15.6	63.6	15.5	35.3
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	3.5	6.0
Max Green Setting (Gmax), s	10.8	49.1	12.1	39.5	12.1	47.8	12.0	39.5
Max Q Clear Time (g_c+I1), s	7.3	34.4	13.5	27.0	14.1	60.1	14.0	11.9
Green Ext Time (p_c), s	0.0	8.7	0.0	2.2	0.0	0.0	0.0	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	49.3
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

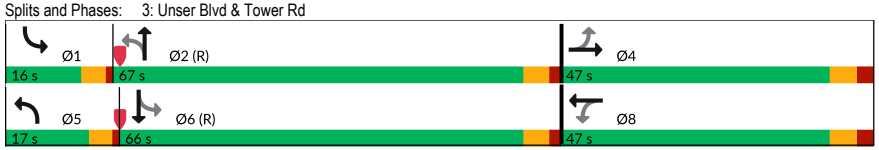
Timings
3: Unser Blvd & Tower Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	88	163	81	371	206	1308	69	1857	182
Future Volume (vph)	88	163	81	371	206	1308	69	1857	182
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Free
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		Free
Detector Phase	4	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	3.0	12.0	3.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	16.0	36.0	16.0	36.0	
Total Split (s)	47.0	47.0	47.0	47.0	17.0	67.0	16.0	66.0	
Total Split (%)	36.2%	36.2%	36.2%	36.2%	13.1%	51.5%	12.3%	50.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	1.0	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	4.5	5.5	4.5	5.5	
Lead/Lag					Lead	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	23.0	23.0	23.0	23.0	96.0	86.5	82.3	75.6	130.0
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.74	0.67	0.63	0.58	1.00
v/c Ratio	1.07	0.45	0.55	0.76	0.79	0.58	0.27	0.90	0.11
Control Delay (s/veh)	168.7	25.0	61.5	55.3	50.2	21.0	9.6	32.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	168.7	25.0	61.5	55.3	50.2	21.0	9.6	32.9	0.1
LOS	F	C	E	E	D	C	A	C	A
Approach Delay (s/veh)		56.2		56.2		24.9		29.3	
Approach LOS		E		E		C		C	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 27.3 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.07		
Intersection Signal Delay (s/veh): 33.4	Intersection LOS: C	
Intersection Capacity Utilization 105.6%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 3: Unser Blvd & Tower Rd



HCM 7th Signalized Intersection Summary
3: Unser Blvd & Tower Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	163	155	81	371	107	206	1308	50	69	1857	182
Future Volume (veh/h)	88	163	155	81	371	107	206	1308	50	69	1857	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	163	0	81	371	0	206	1308	0	69	1857	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	709		252	709		230	2294		334	2123	
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.10	0.86	0.00	0.03	0.60	0.00
Sat Flow, veh/h	1011	3647	0	1223	3647	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	88	163	0	81	371	0	206	1308	0	69	1857	0
Grp Sat Flow(s),veh/h/ln	1011	1777	0	1223	1777	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	11.1	5.0	0.0	7.7	12.1	0.0	7.8	13.3	0.0	2.0	57.3	0.0
Cycle Q Clear(g_c), s	23.2	5.0	0.0	12.7	12.1	0.0	7.8	13.3	0.0	2.0	57.3	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	709		252	709		230	2294		334	2123	
V/C Ratio(X)	0.54	0.23		0.32	0.52		0.90	0.57		0.21	0.87	
Avail Cap(c_a), veh/h	276	1107		389	1107		266	2294		441	2123	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.9	43.6	0.0	49.0	46.5	0.0	35.3	4.2	0.0	9.7	22.1	0.0
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.3	0.2	0.0	25.8	1.0	0.0	0.1	5.4	0.0
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 BackOfQ(95%),veh/ln	5.1	4.0	0.0	4.3	9.2	0.0	12.6	5.8	0.0	1.3	31.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	43.7	0.0	49.3	46.7	0.0	61.1	5.2	0.0	9.8	27.5	0.0
LnGrp LOS	E	D		D	D		E	A		A	C	
Approach Vol, veh/h		251			452			1514			1926	
Approach Delay, s/veh		48.7			47.2			12.8			26.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	89.4		32.4	14.4	83.2		32.4				
Change Period (Y+Rc), s	4.5	5.5		6.5	4.5	5.5		6.5				
Max Green Setting (Gmax), s	11.5	61.5		40.5	12.5	60.5		40.5				
Max Q Clear Time (g_c+I1), s	4.0	15.3		25.2	9.8	59.3		14.7				
Green Ext Time (p_c), s	0.0	18.8		0.7	0.0	1.2		1.7				

Intersection Summary		
HCM 7th Control Delay, s/veh	25.3	
HCM 7th LOS	C	

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

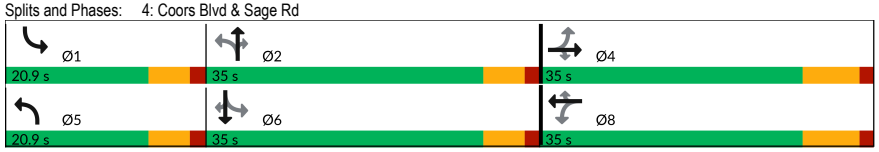
Timings
4: Coors Blvd & Sage Rd

07/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	96	11	143	349	280	101	1000	201	103	890	145
Future Volume (vph)	100	96	11	143	349	280	101	1000	201	103	890	145
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	15.0	20.0	20.0	15.0	20.0	20.0
Minimum Split (s)	54.4	54.4	54.4	54.4	54.4	54.4	20.9	28.9	28.9	20.9	28.9	28.9
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	20.9	35.0	35.0	20.9	35.0	35.0
Total Split (%)	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	23.0%	38.5%	38.5%	23.0%	38.5%	38.5%
Yellow Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.4	7.4		7.4	7.4	5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)		27.9	27.9		27.9	27.9	40.9	29.4	29.4	40.9	29.4	29.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.47	0.34	0.34	0.47	0.34	0.34
v/c Ratio		1.19	0.02		0.99	0.45	0.25	0.83	0.30	0.27	0.74	0.23
Control Delay (s/veh)		161.5	0.1		70.1	13.5	11.9	35.3	4.9	12.2	31.1	5.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		161.5	0.1		70.1	13.5	11.9	35.3	4.9	12.2	31.1	5.1
LOS		F	A		E	B	B	D	A	B	C	A
Approach Delay (s/veh)		152.9			49.6			28.8			26.1	
Approach LOS		F			D			C			C	

Intersection Summary			
Cycle Length: 90.9			
Actuated Cycle Length: 86.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay (s/veh): 40.1		Intersection LOS: D	
Intersection Capacity Utilization 99.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Coors Blvd & Sage Rd



HCM 7th Signalized Intersection Summary
4: Coors Blvd & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	96	11	143	349	280	101	1000	201	103	890	145
Future Volume (veh/h)	100	96	11	143	349	280	101	1000	201	103	890	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	96	11	143	349	280	101	1000	201	103	890	145
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	40	487	52	22	487	408	1152	514	383	1155	515
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.32	0.32	0.15	0.32	0.32
Sat Flow, veh/h	0	130	1585	0	73	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	196	0	11	492	0	280	101	1000	201	103	890	145
Grp Sat Flow(s),veh/h/ln	130	0	1585	73	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	0.4	0.0	0.0	13.3	2.8	23.7	8.8	2.9	20.2	6.1
Cycle Q Clear(g_c), s	27.6	0.0	0.4	27.6	0.0	13.3	2.8	23.7	8.8	2.9	20.2	6.1
Prop In Lane	0.51		1.00	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	0	487	74	0	487	408	1152	514	383	1155	515
V/C Ratio(X)	1.95	0.00	0.02	6.63	0.00	0.57	0.25	0.87	0.39	0.27	0.77	0.28
Avail Cap(c_a), veh/h	101	0	487	74	0	487	432	1152	514	406	1155	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	21.7	36.7	0.0	26.1	15.8	28.5	23.5	16.9	27.3	22.5
Incr Delay (d2), s/veh	460.9	0.0	0.0	2562.7	0.0	1.4	0.1	8.9	2.2	0.1	5.0	1.4
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(95%),veh/ln	27.1	0.0	0.3	91.4	0.0	8.7	1.8	16.0	6.1	1.9	13.5	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	495.2	0.0	21.7	2599.4	0.0	27.5	15.9	37.4	25.7	17.1	32.3	23.9
LnGrp LOS	F		C	F		C	B	D	C	B	C	C
Approach Vol, veh/h		207			772			1302			1138	
Approach Delay, s/veh		470.0			1666.6			34.0			29.8	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.7	35.0		35.0	19.7	35.1		35.0				
Change Period (Y+Rc), s	5.9	5.9		7.4	5.9	5.9		7.4				
Max Green Setting (Gmax), s	15.0	29.1		27.6	15.0	29.1		27.6				
Max Q Clear Time (g_c+I1), s	4.9	25.7		29.6	4.8	22.2		29.6				
Green Ext Time (p_c), s	0.0	2.3		0.0	0.0	3.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	427.6	
HCM 7th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.

Timings
5: 86th Street & Sage Rd

07/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	65	415	81	544	20	100	51	130
Future Volume (vph)	65	415	81	544	20	100	51	130
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	3.0	16.0	3.0	16.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.6	57.2	12.0	57.2	57.2	57.2	57.2	57.2
Total Split (s)	15.6	57.2	15.6	57.2	57.2	57.2	57.2	57.2
Total Split (%)	12.0%	44.0%	12.0%	44.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	1.5	0.5	1.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	3.5	5.0	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	37.4	27.0	39.6	29.7	79.3	79.3	79.3	79.3
Actuated g/C Ratio	0.29	0.21	0.30	0.23	0.61	0.61	0.61	0.61
v/c Ratio	0.32	0.64	0.33	0.74	0.03	0.14	0.07	0.22
Control Delay (s/veh)	32.5	49.1	32.2	47.8	13.1	11.0	13.1	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.5	49.1	32.2	47.8	13.1	11.0	13.1	11.5
LOS	C	D	C	D	B	B	B	B
Approach Delay (s/veh)		47.0		45.9		11.3		11.7
Approach LOS		D		D		B		B

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 92.3 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 36.8		Intersection LOS: D	
Intersection Capacity Utilization 57.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: 86th Street & Sage Rd

HCM 7th Signalized Intersection Summary
5: 86th Street & Sage Rd

07/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	415	50	81	544	51	20	100	51	51	130	110
Future Volume (veh/h)	65	415	50	81	544	51	20	100	51	51	130	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	415	50	81	544	51	20	100	51	51	130	110
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	598	72	203	643	60	740	766	391	827	614	519
Arrive On Green	0.04	0.19	0.19	0.10	0.39	0.39	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1781	3195	383	1781	3285	307	1140	1168	596	1236	936	792
Grp Volume(v), veh/h	65	230	235	81	294	301	20	0	151	51	0	240
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1815	1140	0	1763	1236	0	1728
Q Serve(g_s), s	3.8	15.7	15.9	4.7	19.5	19.7	0.9	0.0	4.2	2.1	0.0	7.2
Cycle Q Clear(g_c), s	3.8	15.7	15.9	4.7	19.5	19.7	8.1	0.0	4.2	6.3	0.0	7.2
Prop In Lane	1.00		0.21	1.00		0.17	1.00		0.34	1.00		0.46
Lane Grp Cap(c), veh/h	164	332	337	203	348	355	740	0	1157	827	0	1133
V/C Ratio(X)	0.40	0.69	0.70	0.40	0.84	0.85	0.03	0.00	0.13	0.06	0.00	0.21
Avail Cap(c_a), veh/h	258	713	723	281	713	729	740	0	1157	827	0	1133
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	49.3	49.4	38.6	37.8	37.8	10.6	0.0	8.4	9.6	0.0	8.9
Incr Delay (d2), s/veh	1.5	2.6	2.6	1.3	5.6	5.7	0.1	0.0	0.2	0.1	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	11.5	11.8	3.7	11.9	12.2	0.4	0.0	3.0	1.1	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.2	51.9	52.0	39.9	43.4	43.5	10.6	0.0	8.6	9.7	0.0	9.4
LnGrp LOS	D	D	D	D	D	D	B		A	A		A
Approach Vol, veh/h		530			676			171			291	
Approach Delay, s/veh		50.9			43.0			8.9			9.4	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		90.8	9.9	29.3		90.8	8.8	30.4				
Change Period (Y+Rc), s		5.5	3.5	5.0		5.5	3.5	5.0				
Max Green Setting (Gmax), s		51.7	12.1	52.2		51.7	12.1	52.2				
Max Q Clear Time (g_c+I1), s		10.1	6.7	17.9		9.2	5.8	21.7				
Green Ext Time (p_c), s		1.0	0.1	2.9		1.8	0.1	3.8				

Intersection Summary		
HCM 7th Control Delay, s/veh	36.2	
HCM 7th LOS	D	

HCM 7th TWSC
6: Unser Blvd & San Ygnacio Rd 07/29/2024

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	47	0	0	16	0	2348	16	0	3187	47
Future Vol, veh/h	0	0	47	0	0	16	0	2348	16	0	3187	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	16	0	2348	16	0	3187	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1617	-	-	1182	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	*160	0	0	*407	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %			1			1		-	-		-	-
Mov Cap-1 Maneuver	-	-	*160	-	-	*407	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	36.53	14.22	0	0
HCM LOS	E	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	160	407	-	-
HCM Lane V/C Ratio	-	-	0.293	0.039	-	-
HCM Control Delay (s/veh)	-	-	36.5	14.2	-	-
HCM Lane LOS	-	-	E	B	-	-
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 7th TWSC
7: Driveway "A" & Sage Rd 07/29/2024

Intersection						
Int Delay, s/veh	6.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	717	122	74	799	121	174
Future Vol, veh/h	717	122	74	799	121	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	717	122	74	799	121	174

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	839	0	1326	420
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	548	-
Critical Hdwy	-	-	5.34	-	6.29	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	3.12	-	3.67	3.92
Pot Cap-1 Maneuver	-	-	468	-	176	498
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %	-	-			-	
Mov Cap-1 Maneuver	-	-	468	-	149	498
Mov Cap-2 Maneuver	-	-	-	-	285	-
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	443	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.2	40.29
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	381	-	-	468	-
HCM Lane V/C Ratio	0.774	-	-	0.158	-
HCM Control Delay (s/veh)	40.3	-	-	14.1	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	6.4	-	-	0.6	-

HCM 7th TWSC
8: Unser Blvd & Driveway "B" 07/29/2024

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	132	0	1524	2132	158
Future Vol, veh/h	0	132	0	1524	2132	158
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	132	0	1524	2132	158

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1145	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	166	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	166	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	80.19	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	166	-	-
HCM Lane V/C Ratio	-	0.796	-	-
HCM Control Delay (s/veh)	-	80.2	-	-
HCM Lane LOS	-	F	-	-
HCM 95th %tile Q(veh)	-	5.2	-	-

HCM 7th TWSC
9: Unser Blvd & Driveway "C" 07/29/2024

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	18	134	1524	2192	21
Future Vol, veh/h	0	18	134	1524	2192	21
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	300	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	134	1524	2192	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1096	2213	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	208	233	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	208	233	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	23.91	3.18	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	233	-	208	-	-
HCM Lane V/C Ratio	0.574	-	0.086	-	-
HCM Control Delay (s/veh)	39.4	-	23.9	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	3.2	-	0.3	-	-

City of Albuquerque Turn Lane Warrants for Driveway "A" Driveway "B" and Driveway "C"

Design Process Manual Table 7.4.67					
Left Turn (Sage Rd Speed Limit 35 MPH)			**Right Turn**		
Design Speed (MPH)	**Required Turning Volume per Hour for Decel Lane**	**Volumes at Driveway Access**	**Design Speed (MPH)**	**Required Turning Volume per Hour for Decel Lane**	**Volumes at Driveway Access**
Sage Rd and Driveway "A" - 35 MPH					
30-40	40	**55**	30-40	50	**102**
		Warranted (WBL Existing)			**Warranted**
Unser Blvd and Driveway "B" - 40 MPH					
30-40	40	**N/A**	30-40	50	**101**
					Warranted
Unser Blvd and Driveway "C" - 40 MPH					
30-40	40	**105**	30-40	50	**20**
		Warranted (NBL Existing)			**Not Warranted (SBR Existing)**

Traffic Count Data Sheet

Year Counts Taken: **#VALUE!**

E-W Street: **Sage Rd**

N-S Street: **Unser Bd.**

Speed Limit (Sage Rd)= **30** MPH

Speed Limit (Unser Bd.)= **40** MPH

Signalized

4/27/2022.

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:45 AM	7:00 AM	26	36	42	0	4	14	13	0	12	262	11	1	10	118	6	0
7:00 AM	7:15 AM	41	49	38	0	13	18	18	0	17	254	28	1	18	153	8	0
7:15 AM	7:30 AM	35	49	34	0	9	25	12	0	25	268	22	0	15	156	7	0
7:30 AM	7:45 AM	**63**	**73**	**47**	**0**	**9**	**24**	**19**	**0**	**21**	**232**	**22**	**0**	**19**	**162**	**18**	**0**
7:45 AM	8:00 AM	37	61	37	0	11	48	18	0	23	194	18	0	15	141	12	0
8:00 AM	8:15 AM	60	55	22	0	16	29	17	0	19	185	29	0	9	132	15	0
8:15 AM	8:30 AM	24	49	31	0	15	32	7	0	26	213	11	0	12	142	10	0
8:30 AM	8:45 AM	29	24	27	0	11	18	16	0	22	167	5	0	10	115	11	0
4X Peak 15-Min. Vol. (AM)		**252**	**292**	**188**	**0**	**36**	**96**	**76**	**0**	**84**	**928**	**88**	**0**	**76**	**648**	**72**	**0**
% of Total Traffic		8.9%	10.3%	6.6%		1.3%	3.4%	2.7%		3.0%	32.7%	3.1%		2.7%	22.8%	2.5%	
% Directional			25.8%				7.3%	**Intersection**			38.8%				28.1%		

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:15 PM	4:30 PM	32	28	22	0	30	62	19	0	42	176	4	0	26	224	27	0
4:30 PM	4:45 PM	26	27	30	0	24	55	18	0	43	176	13	1	15	224	25	0
4:45 PM	5:00 PM	21	27	35	0	29	67	20	0	44	154	10	0	19	216	26	0
5:00 PM	5:15 PM	**28**	**30**	**55**	**0**	**30**	**46**	**13**	**2**	**44**	**189**	**14**	**0**	**21**	**257**	**36**	**0**
5:15 PM	5:30 PM	27	30	31	0	20	46	14	2	54	159	7	0	20	241	31	0
5:30 PM	5:45 PM	25	30	44	0	21	60	20	0	37	165	12	0	16	251	31	0
5:45 PM	6:00 PM	27	31	40	0	15	53	15	0	39	144	9	0	20	216	34	0
6:00 PM	6:15 PM	28	23	36	0	18	26	15	0	36	152	15	0	15	247	33	0
4X Peak 15-Min. Vol. (PM)		**112**	**120**	**220**	**0**	**120**	**184**	**52**	**4**	**176**	**756**	**56**	**0**	**84**	**1028**	**144**	**0**
% of Total Traffic		3.7%	3.9%	7.2%		3.9%	6.0%	1.7%		5.8%	24.7%	1.8%		2.7%	33.6%	4.7%	
% Directional			14.8%				11.6%	**Intersection**			32.3%				41.0%		

Traffic Count Data Sheet

Year Counts Taken: **2018**

E-W Street: **Tower**

N-S Street: **Unser Bd.**

Signalized

Speed Limit (Tower)= **25** MPH

Speed Limit (Unser Bd.)= **35** MPH

7/12/18

Begin Time	End Time	Eastbound (Tower)				Westbound (Tower)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:30 AM	6:45 AM	36	38	13	0	2	10	7	0	7	245	5	0	4	90	3	0
6:45 AM	7:00 AM	33	31	13	0	8	12	5	0	12	265	8	0	13	126	4	0
7:00 AM	7:15 AM	34	44	12	0	12	17	13	0	25	298	10	0	13	137	4	0
7:15 AM	7:30 AM	40	45	11	0	4	19	12	0	19	275	9	0	14	172	25	0
7:30 AM	7:45 AM	**42**	**43**	**19**	**0**	**8**	**25**	**7**	**0**	**28**	**275**	**26**	**0**	**14**	**162**	**14**	**0**
7:45 AM	8:00 AM	32	36	8	0	5	21	10	0	19	224	6	0	20	171	14	0
8:00 AM	8:15 AM	27	40	8	0	8	31	5	0	15	241	10	0	14	115	16	0
8:15 AM	8:30 AM	25	19	14	0	9	16	18	0	8	222	7	0	4	140	10	0
4X Peak 15-Min. Vol. (AM)		**84**	**104**	**60**	**0**	**32**	**76**	**56**	**0**	**28**	**856**	**32**	**0**	**24**	**408**	**52**	**0**
% of Total Traffic		3.2%	3.9%	2.3%		1.2%	2.9%	2.1%		1.1%	32.3%	1.2%		0.9%	15.4%	2.0%	
% Directional			9.4%				6.2%	**Intersection**			34.5%				18.3%		

Begin Time	End Time	Eastbound (Tower)				Westbound (Tower)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:30 PM	4:45 PM	15	19	13	0	9	40	18	0	18	211	9	0	13	277	25	0
4:45 PM	5:00 PM	26	22	24	1	10	37	17	0	22	190	5	0	12	266	21	0
5:00 PM	5:15 PM	17	26	23	0	19	31	16	0	16	172	5	0	11	280	30	0
5:15 PM	5:30 PM	**14**	**26**	**22**	**0**	**12**	**59**	**17**	**0**	**30**	**200**	**7**	**0**	**11**	**286**	**29**	**0**
5:30 PM	5:45 PM	14	24	25	0	9	56	14	2	27	192	9	2	16	274	31	0
5:45 PM	6:00 PM	23	22	30	0	7	46	17	0	23	209	7	0	17	263	26	0
6:00 PM	6:15 PM	18	27	20	0	7	44	13	0	23	200	6	1	17	257	36	0
6:15 PM	6:30 PM	23	18	22	1	6	41	9	0	18	194	4	0	12	263	26	0
4X Peak 15-Min. Vol. (PM)		**56**	**104**	**88**	**0**	**48**	**236**	**68**	**2**	**120**	**800**	**28**	**3**	**44**	**1144**	**116**	**0**
% of Total Traffic		2.0%	3.6%	3.1%		1.7%	8.3%	2.4%		4.2%	28.1%	1.0%		1.5%	40.1%	4.1%	
% Directional			8.7%				12.3%	**Intersection**			33.2%				45.7%		

Traffic Count Data Sheet

Year Counts Taken: **2022**

E-W Street: **Sage Rd**

N-S Street: **Coors Blvd**

Signalized

Speed Limit (Sage Rd)= **35** MPH

Speed Limit (Coors Blvd)= **45** MPH

4/26/22

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Coors Blvd)				Southbound (Coors Blvd)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:45 AM	7:00 AM	44	29	9	0	2	9	9	0	7	153	3	0	6	92	11	0
7:00 AM	7:15 AM	58	39	7	0	3	15	27	0	7	179	0	0	17	129	8	0
7:15 AM	7:30 AM	57	67	9	0	2	15	41	0	8	205	3	0	16	111	8	0
7:30 AM	7:45 AM	**60**	**48**	**16**	**0**	**11**	**31**	**39**	**0**	**5**	**255**	**4**	**0**	**13**	**140**	**16**	**0**
7:45 AM	8:00 AM	46	55	13	0	7	42	53	0	4	185	3	0	12	123	25	0
8:00 AM	8:15 AM	51	31	14	0	10	36	57	0	8	181	8	0	14	112	15	0
8:15 AM	8:30 AM	28	43	9	0	6	25	33	0	10	186	4	0	19	128	12	0
8:30 AM	8:45 AM	25	28	3	0	3	9	27	0	8	170	1	0	6	126	15	0
4X Peak 15-Min. Vol. (AM)		**240**	**192**	**64**	**0**	**44**	**124**	**156**	**0**	**20**	**1020**	**16**	**0**	**52**	**560**	**64**	**0**
% of Total Traffic		9.4%	7.5%	2.5%		1.7%	4.9%	6.1%		0.8%	40.0%	0.6%		2.0%	21.9%	2.5%	
% Directional			19.4%				12.7%	**Intersection**			41.4%				26.5%		

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (Coors Blvd)				Southbound (Coors Blvd)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	29	17	9	0	8	57	27	0	12	175	36	0	16	173	37	0
4:15 PM	4:30 PM	**14**	**16**	**1**	**0**	**22**	**64**	**48**	**0**	**20**	**207**	**43**	**0**	**22**	**190**	**27**	**0**
4:30 PM	4:45 PM	18	25	11	0	9	51	41	0	11	194	2	0	13	207	40	0
4:45 PM	5:00 PM	24	23	13	0	3	66	24	0	14	189	2	0	11	208	42	0
5:00 PM	5:15 PM	19	19	6	0	11	61	36	0	15	184	1	0	7	237	42	0
5:15 PM	5:30 PM	26	17	11	0	6	76	45	0	13	201	0	0	10	177	43	0
5:30 PM	5:45 PM	22	22	7	0	6	46	23	0	20	176	0	0	12	166	45	0
5:45 PM	6:00 PM	23	23	9	0	5	40	18	0	13	172	1	0	15	162	43	0
4X Peak 15-Min. Vol. (PM)		**56**	**64**	**4**	**0**	**88**	**256**	**192**	**0**	**80**	**828**	**172**	**0**	**88**	**760**	**108**	**0**
% of Total Traffic		2.1%	2.4%	0.1%		3.3%	9.5%	7.1%		3.0%	30.7%	6.4%		3.3%	28.2%	4.0%	
% Directional			4.6%				19.9%	**Intersection**			40.1%				35.5%		

Traffic Count Data Sheet

Year Counts Taken: **2022**

E-W Street: **Sage Rd**

N-S Street: **86th St**

Signalized

Speed Limit (Sage Rd)= **35** MPH

Speed Limit (86th St)= **30** MPH

4/27/22

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (86th St)				Southbound (86th St)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
6:45 AM	7:00 AM	13	70	2	0	5	30	1	0	0	16	6	0	5	2	9	0
7:00 AM	7:15 AM	16	90	2	0	1	35	6	0	0	16	11	0	6	7	12	0
7:15 AM	7:30 AM	13	98	5	0	5	42	10	1	5	25	11	0	4	9	3	0
7:30 AM	7:45 AM	**14**	**128**	**3**	**0**	**9**	**50**	**14**	**0**	**1**	**27**	**19**	**0**	**10**	**7**	**12**	**0**
7:45 AM	8:00 AM	16	106	5	2	9	59	10	0	4	18	12	1	14	7	27	0
8:00 AM	8:15 AM	14	112	3	0	9	65	8	0	3	17	11	0	4	6	13	0
8:15 AM	8:30 AM	9	77	2	0	2	55	6	0	1	14	5	0	5	6	12	0
8:30 AM	8:45 AM	6	50	1	0	0	34	8	0	2	14	4	0	7	6	7	0
4X Peak 15-Min. Vol. (AM)		**56**	**512**	**12**	**2**	**36**	**200**	**56**	**0**	**4**	**108**	**76**	**1**	**40**	**28**	**48**	**0**
% of Total Traffic		4.8%	43.5%	1.0%		3.1%	17.0%	4.8%		0.3%	9.2%	6.5%		3.4%	2.4%	4.1%	
% Directional			49.3%				24.8%	**Intersection**			16.0%				9.9%		

Begin Time	End Time	Eastbound (Sage Rd)				Westbound (Sage Rd)				Northbound (86th St)				Southbound (86th St)			
		L	T	R	Peds	L	T	R	Peds	L	T	R	Peds	L	T	R	Peds
4:00 PM	4:15 PM	11	77	0	0	7	76	14	0	3	15	10	0	13	18	31	0
4:15 PM	4:30 PM	16	64	9	0	8	108	8	0	3	10	5	0	10	20	18	0
4:30 PM	4:45 PM	11	63	4	0	3	93	9	0	5	13	5	1	8	33	28	0
4:45 PM	5:00 PM	9	77	2	0	2	101	15	0	2	12	4	0	8	20	22	0
5:00 PM	5:15 PM	16	88	5	2	4	96	14	0	1	13	4	0	8	25	23	0
5:15 PM	5:30 PM	14	67	6	0	5	99	12	0	2	9	5	0	12	27	24	0
5:30 PM	5:45 PM	17	80	3	0	9	92	4	0	3	18	6	0	5	26	18	0
5:45 PM	6:00 PM	**13**	**71**	**10**	**0**	**12**	**97**	**13**	**0**	**4**	**20**	**6**	**0**	**7**	**26**	**22**	**0**
4X Peak 15-Min. Vol. (PM)		**52**	**284**	**40**	**2**	**48**	**388**	**52**	**0**	**16**	**80**	**24**	**0**	**28**	**104**	**88**	**0**
% of Total Traffic		4.3%	23.6%	3.3%		4.0%	32.2%	4.3%		1.3%	6.6%	2.0%		2.3%	8.6%	7.3%	
% Directional			31.2%				40.5%	**Intersection**			10.0%				18.3%		

Streetlight Data (San Ygnacio / Unser Blvd.)

	Eastbound (San Ygancio)			Westbound (San Ygnacio)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
	San Ygnacio - West Leg (Eastboun			San Ygnacio - East Leg (Westboun			Unser Blvd. - South Leg (Northbou			Unser Blvd. - North Leg (Southbound)		
2022	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00am	0	0	0	0	0	0	0	104	0	0	37	0
6:15am	0	0	0	0	0	0	0	152	0	0	65	0
6:30am	0	0	2	0	0	0	0	196	1	0	96	1
6:45am	0	0	2	0	0	0	0	247	1	0	112	1
Hourly Total	0	0	4	0	0	0	0	699	2	0	310	2
7:00am	0	0	3	0	0	0	0	298	1	0	120	0
7:15am	0	0	4	0	0	0	0	301	1	0	144	0
7:30am	0	0	8	0	0	0	0	320	2	0	177	1
7:45am	0	0	14	0	0	0	0	269	2	0	186	2
Hourly Total	0	0	**29**	0	0	0	0	1188	**6**	0	627	3
8:00am	0	0	4	0	0	0	0	260	1	0	114	2
8:15am	0	0	1	0	0	0	0	279	0	0	127	3
8:30am	0	0	2	0	0	1	0	225	0	0	157	2
8:45am	0	0	2	0	0	1	0	235	0	0	149	2
Hourly Total	0	0	9	0	0	2	0	999	1	0	547	**9**
9:00am	0	0	1	0	0	1	0	181	0	0	117	1
9:15am	0	0	0	0	0	1	0	182	0	0	113	1
9:30am	0	0	0	0	0	1	0	200	0	0	123	1
9:45am	0	0	2	0	0	1	0	173	0	0	126	2
Hourly Total	0	0	3	0	0	**4**	0	736	0	0	479	5
3:00pm	0	0	7	0	0	2	0	390	0	0	301	7
3:15pm	0	0	7	0	0	2	0	351	0	0	370	8
3:30pm	0	0	6	0	0	2	0	315	0	0	353	9
3:45pm	0	0	5	0	0	3	0	292	1	0	319	8
Hourly Total	0	0	**25**	0	0	**9**	0	1348	1	0	1343	32
4:00pm	0	0	4	0	0	2	0	321	0	0	335	7
4:15pm	0	0	4	0	0	2	0	324	1	0	405	7
4:30pm	0	0	5	0	0	2	0	315	2	0	400	7
4:45pm	0	0	4	0	0	1	0	302	1	0	397	6
Hourly Total	0	0	17	0	0	7	0	1262	**4**	0	1537	27
5:00pm	0	0	4	0	0	2	0	310	2	0	370	6
5:15pm	0	0	6	0	0	1	0	306	2	0	362	6
5:30pm	0	0	6	0	0	1	0	315	1	0	371	7
5:45pm	0	0	7	0	0	2	0	301	0	0	367	8
Hourly Total	0	0	23	0	0	6	0	1232	5	0	1470	27
6:00pm	0	0	7	0	0	2	0	315	1	0	339	8
6:15pm	0	0	6	0	0	1	0	318	0	0	340	8
6:30pm	0	0	6	0	0	1	0	288	1	0	348	10
6:45pm	0	0	5	0	0	1	0	257	0	0	309	8
Hourly Total	0	0	24	0	0	5	0	1178	2	0	1336	**34**
AM Peak			**29**			**4**			**6**			**9**
PM Peak			**25**			**9**			**4**			**34**

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Ronald R. Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Pl. NE
Albuquerque, NM, 87109

MEETING DATE: April 12, 2022

ATTENDEES: Ronald R. Bohannan P.E. and Amanda Herrera, P.E. (Tierra West, LLC), Terry Brown, P.E., Matthew Grush, P.E., Jeanne Wolfenbarger, P.E. (City of Albuquerque Transportation Development Section, Planning Dept.), and Julie Luna (Bernalillo County)

PROJECT: Sage / Unser Development (SW Corner), Zone Atlas Page L-10-Z

REQUESTED CITY ACTION: ___ Zone Change __X__ Site Development Plan

__X__ Subdivision ___ Building Permit ___ Sector Plan ___ Sector Plan Amendment

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

ASSOCIATED APPLICATION: Mixed-use development consisting of approximately 97 townhome lots and retail commercial uses including 1 gasoline station / convenience market and 2 fast food restaurants with drive-thru windows. The project is being submitted to EPC for approval of a Planned Development Community and will review the establishment of a right in right out just south of the intersection of Sage & Unser.

SCOPE OF REPORT:
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.

1. Trip Generation - Use Trip Generation Manual, 11th Edition.
   Local data may be used for certain land use types as determined by staff.
   Consultant to provide.

2. Appropriate study area:
   Signalized Intersections;
   a. Sage Rd. / Unser Blvd. (signalized)
   b. Tower Rd. / Unser Blvd. (signalized)
   c. Sage Rd. / Coors Blvd. (signalized – County)
   d. Sage Rd. / 86th St. (signalized)

   Unsignalized Intersections;
   a. San Ygnacio Rd. / Unser Blvd.

   Driveway Intersections: all site drives (3).

3. Intersection turning movement counts
   Study Time – 6:00 am 8:45 a.m. peak hour, 4-7 p.m. peak hour
   Consultant to provide for all intersections listed above.

4. Type of intersection progression and factors to be used.

Type III arrival type (see “Highway Capacity Manual, current edition” 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;
   Interstate or to be determined by consultant - motel/hotel
   APS district boundary mapping for each school and bus routes

6. Basis for trip distribution.

Residential – Use inverse relationship based upon distance and employment. Use employment data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Office/Industrial - Use inverse relationship based upon distance and population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Commercial - Use relationship based upon population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Residential - $Ts = (Tt) (Se / D) / (Se / D)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Se = Subarea Employment
D = Distance from Development to Subarea

Office/Industrial - $Ts = (Tt) (Sp / D) / (Sp / D)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population
D = Distance from Development to Subarea

Commercial -
$Ts = (Tt) (Sp) / (Sp)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population

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. Projects in the area include:
   a. MAS Charter School
   b. Sage Park Subdivision (NW Corner of Sage Rd. / Coors Blvd.)

9. Method of intersection capacity analysis - planning or operational (see “2016 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.

10. Traffic conditions for analysis:
    a. Existing analysis __ yes _X_ no - year (N/A);
    b. Phase implementation year(s) without proposed development – 2025
    c. Phase implementation year(s) with proposed development – 2025
    d. Project completion year without proposed development – 2035
    e. Project completion year with proposed development – 2035
    f. Other –

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:
    a. None

13. Items to be included in the study:
    a. Intersection analysis. Yes
    b. Signal progression - An analysis is required if the driveway analysis indicates a traffic signal is possibly warranted. Analysis Method: Not Required
    c. Arterial LOS analysis; Not Required
    d. Recommended street, intersection and signal improvements. Yes
    e. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility. Yes
    f. Transportation system impacts. Yes
    g. Other mitigating measures. None.
    h. Accident analyses _X_ yes __ no; Location(s): Sage Rd. / Unser Blvd. – 5 year crash history
    i. Weaving analyses __ yes _X_ no; Location(s):

14. Other:

SUBMITTAL REQUIREMENTS:

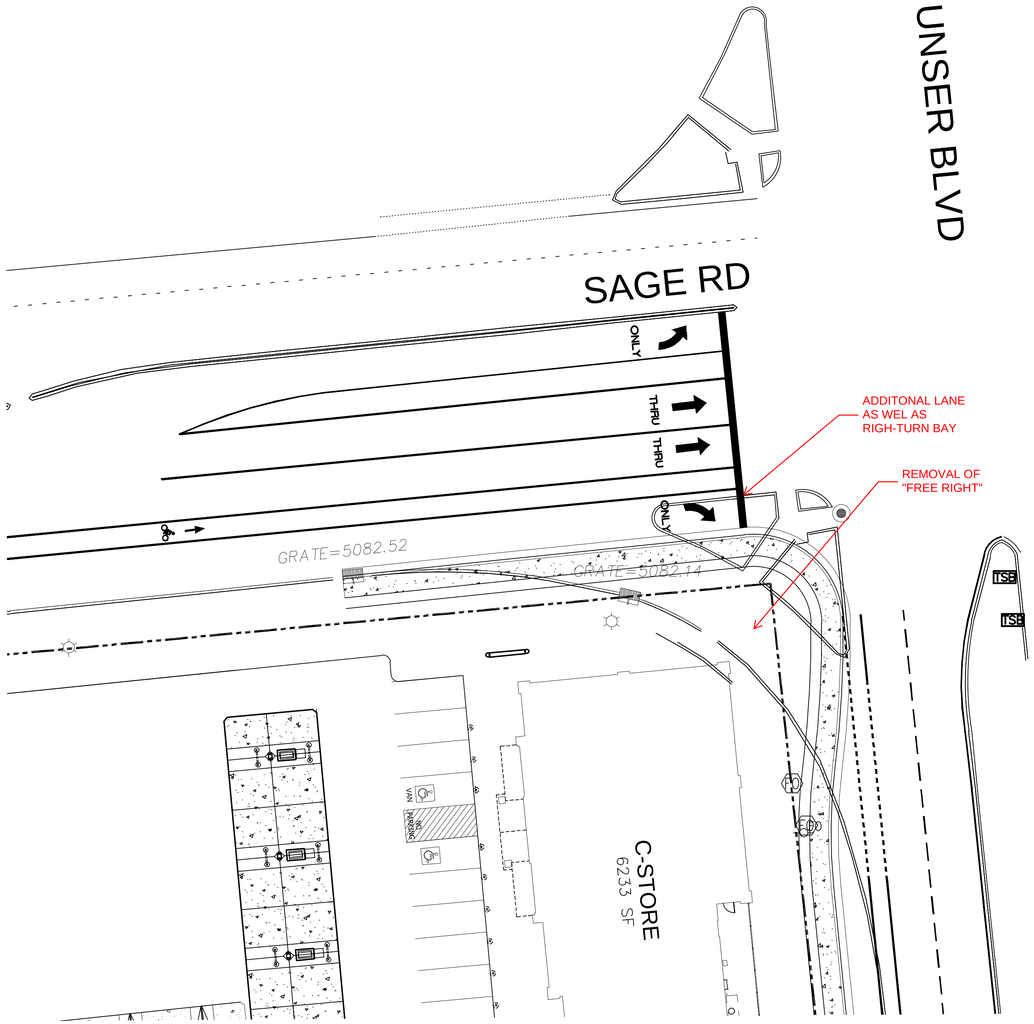
1. Number of copies of report required
    a. CoA - 1 digital copy – Yes (no paper copy)
    b. Bernalillo County – Yes (one hard copy in 3-ring binder & a digital copy)
2. CoA Submittal Fee – $1300 for up to 3 reviews

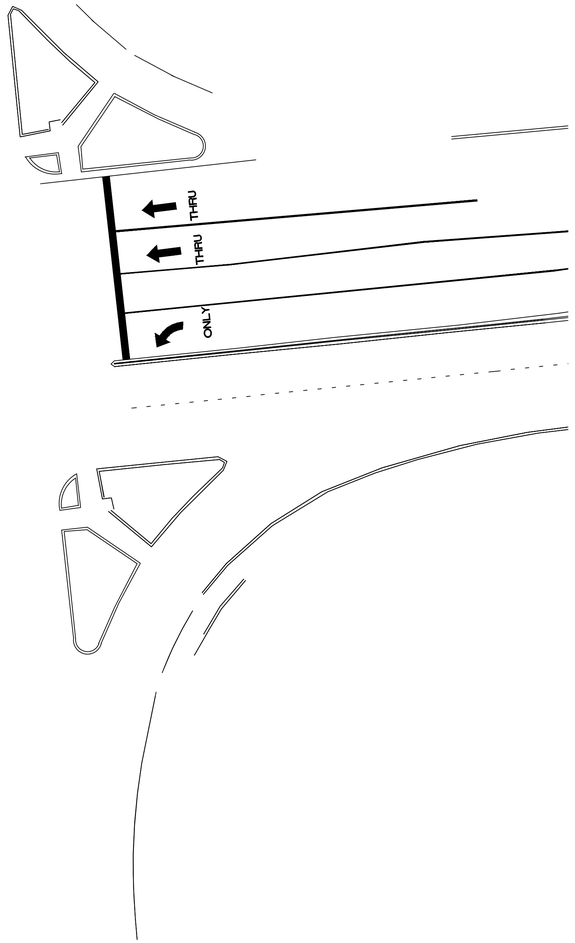
The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 924-3362.

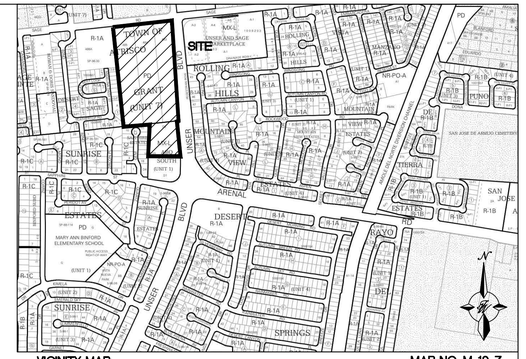
MP P.E. 4/14/2022

Matt Grush, P.E., PTOE — Date
Senior Engineer
City of Albuquerque, Planning
Transportation Development Section

via: email
C: TIS Task Force Attendees, file







VICINITY MAP: MAP NO. M-10-Z

LEGEND

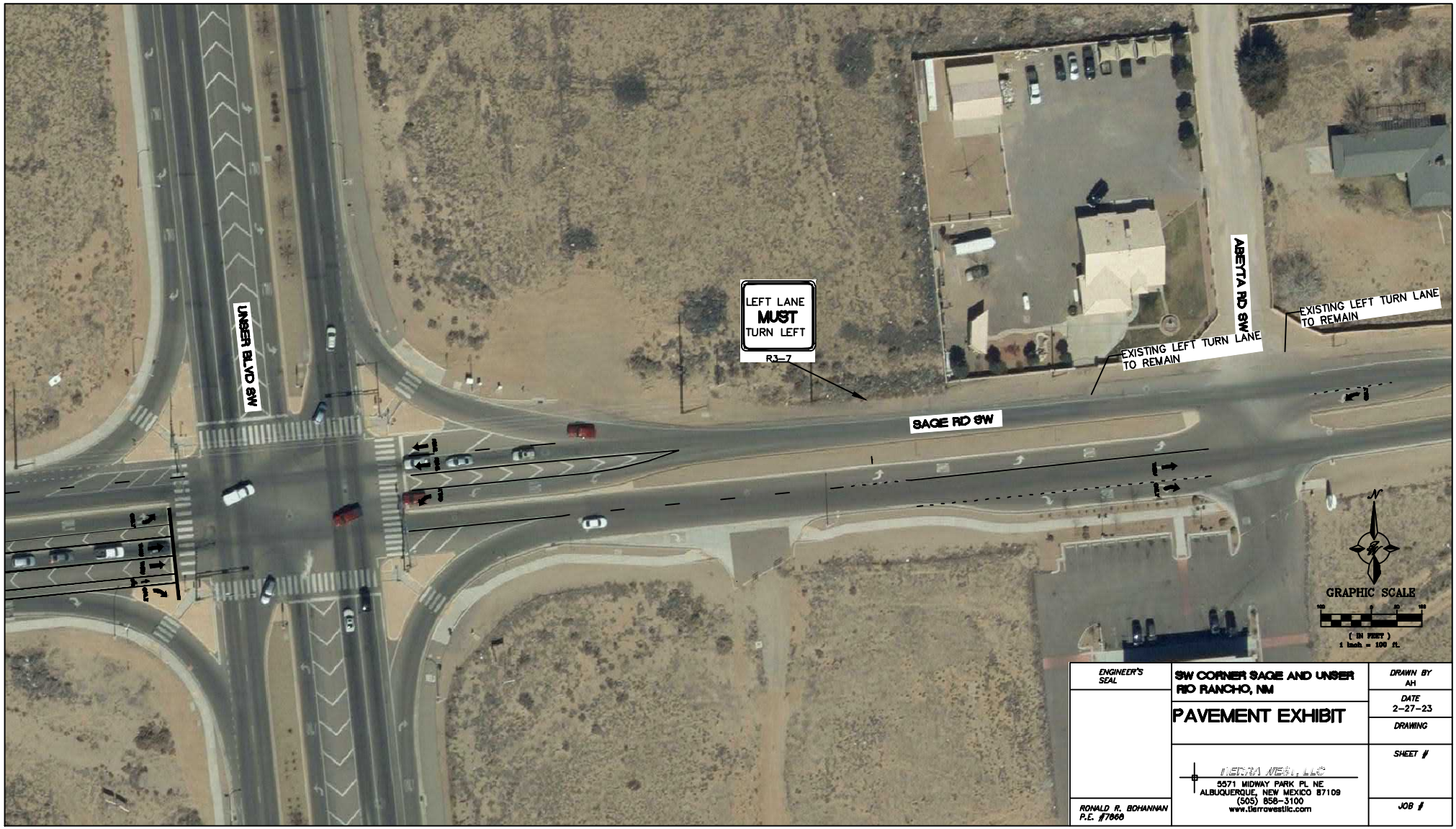
- CURB & GUTTER
- EASEMENT
- CENTERLINE
- RIGHT–OF–WAY
- BUILDING
- SIDEWALK
- EXISTING BOUNDARY LINE
- LOT LINES

GRAPHIC SCALE

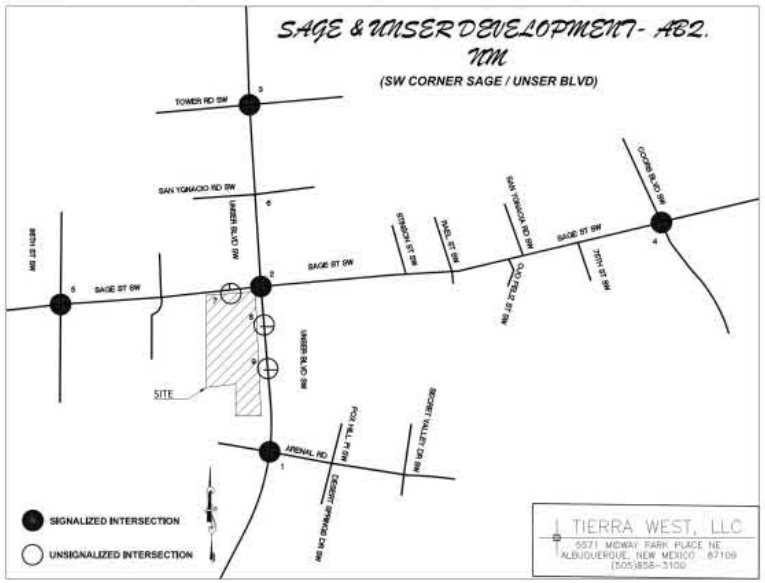
20 0 20 20

(IN FEET)
1 inch = 20 ft.

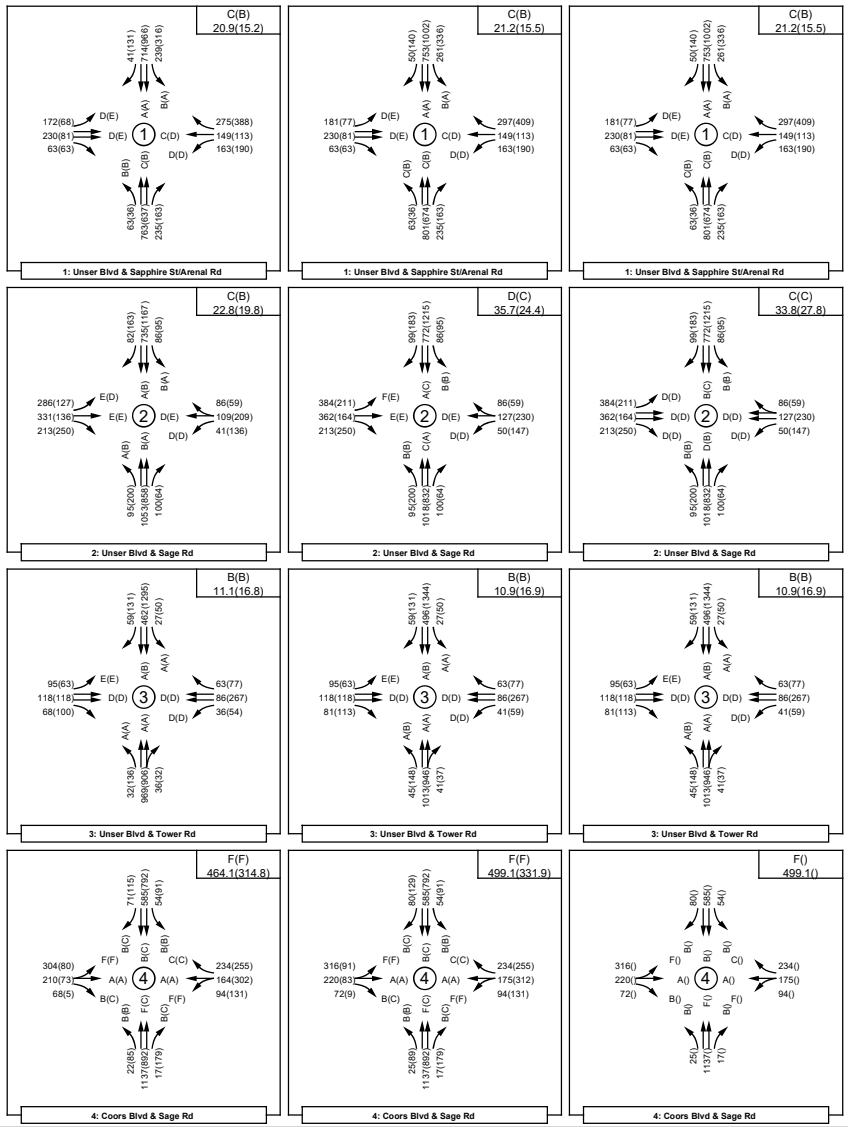
ENGINEER'S SEAL	UNSER AND SAGE UNSER BLVD ABQ, NM	DRAWN BY LN
		DATE 7–31–2020
	EXHIBIT A	DRAWING
		SHEET #
RONALD R. BOHANNAN P.E. #7868	TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858–3100 www.tierrawestllc.com	JOB # 2021113



ENGINEER'S SEAL	SW CORNER SAGE AND UNSER RIO RANCHO, NM	DRAWN BY AH
	PAVEMENT EXHIBIT	DATE 2-27-23
		DRAWING
	TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com	SHEET #
RONALD R. BOHANNAN P.E. #7868		JOB #

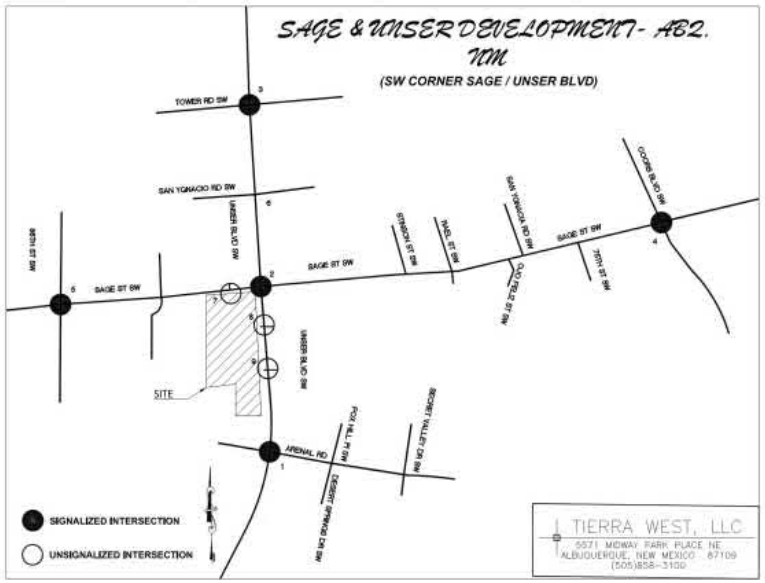


2025_NOBUILD | **2025_BUILD** | **2025_MITIGATIONS**

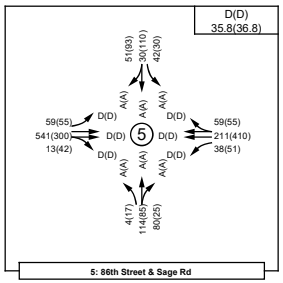


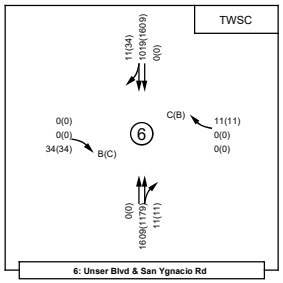
Unser and Sage Development
SW Corner (INTERSECTIONS 1-4)
LOS / Volume Analysis Map

AM(PM)

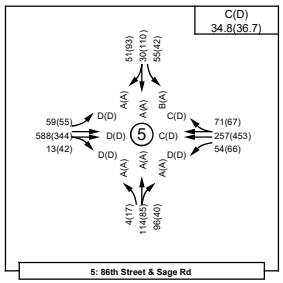


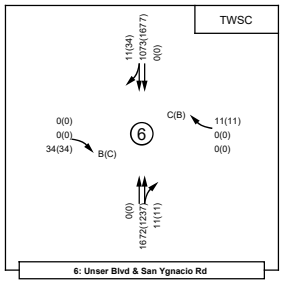
2025_NOBUILD



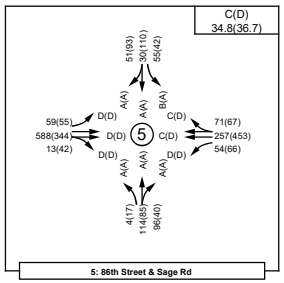


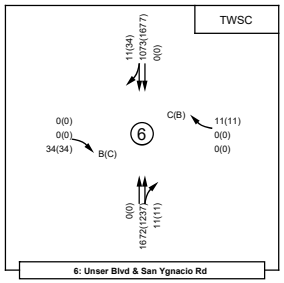
2025_BUILD





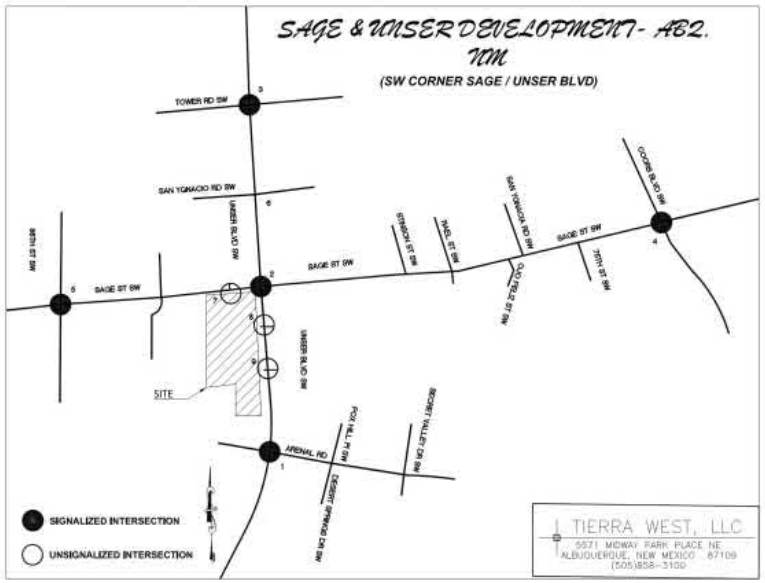
2025_MITIGATIONS





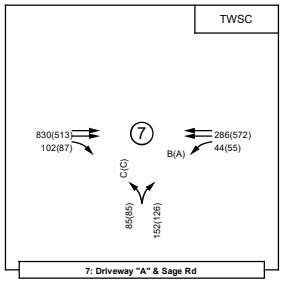
Unser and Sage Development
2025 (INTERSECTIONS 1-6)
LOS / Volume Analysis Map

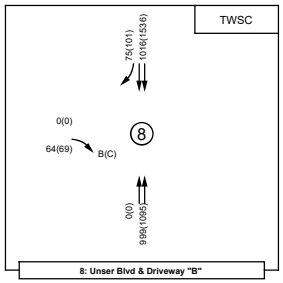
AM(PM)

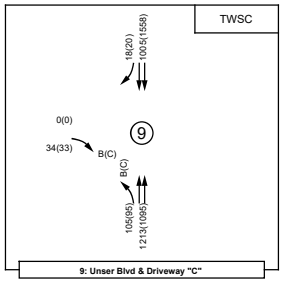


2025_NOBUILD

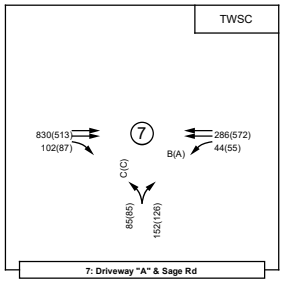
2025_BUILD

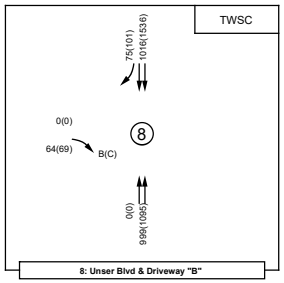


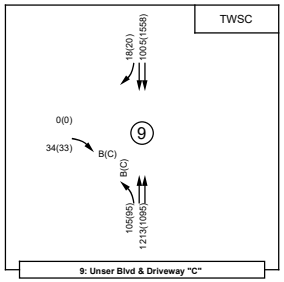




2025_MITIGATIONS

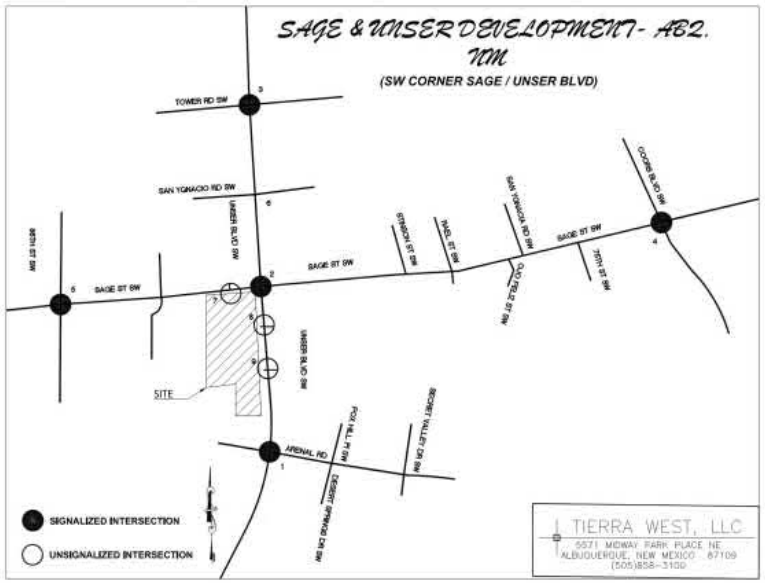




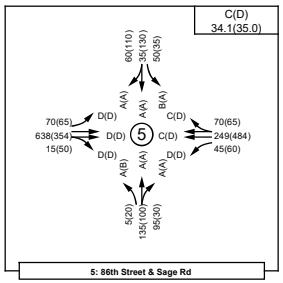


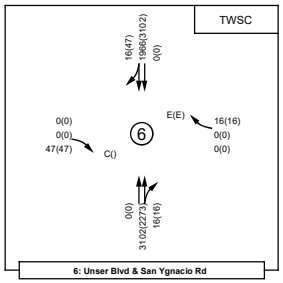
Unser and Sage Development
2025 (Driveways A - C)
LOS / Volume Analysis Map

AM(PM)

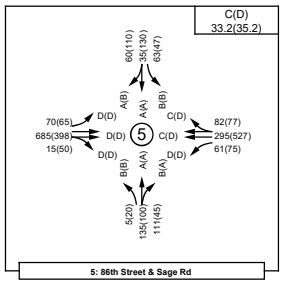


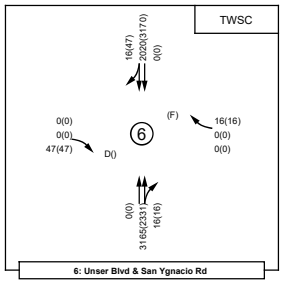
2035_NOBUILD



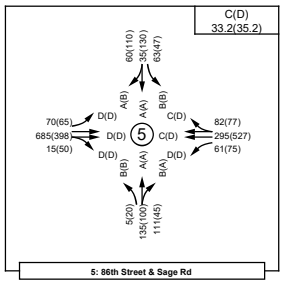


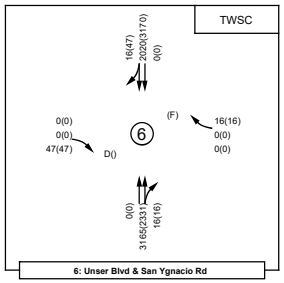
2035_BUILD





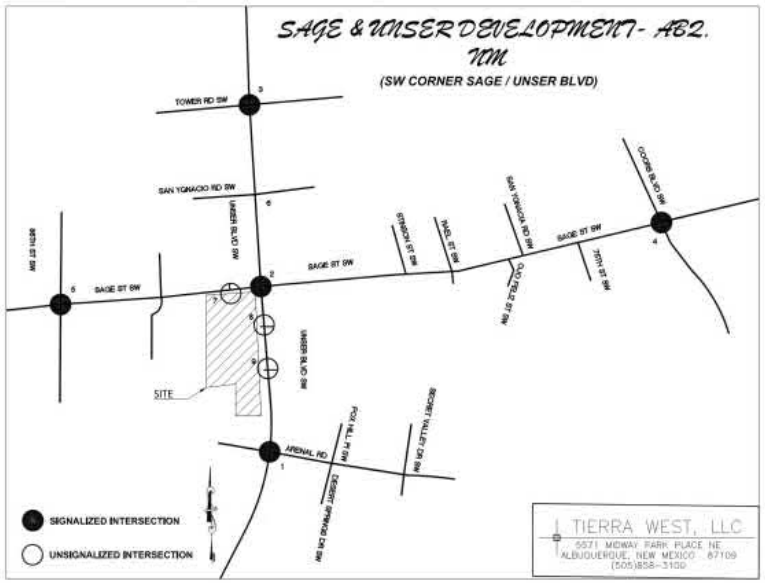
2035_MITIGATIONS





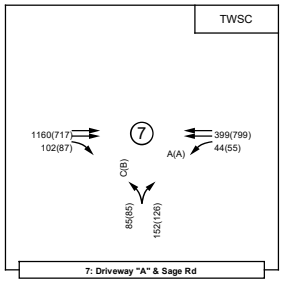
Unser and Sage Development
2035 (INTERSECTIONS 5-6)
LOS / Volume Analysis Map

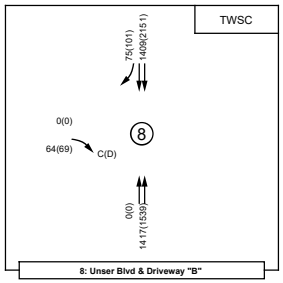
AM(PM)

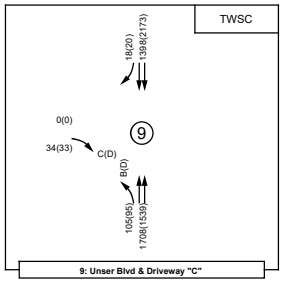


2035_NOBUILD

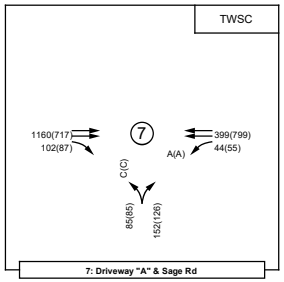
2035_BUILD

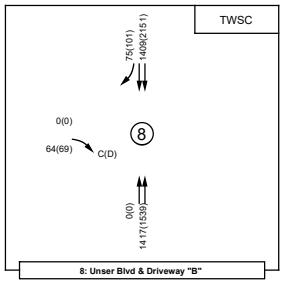


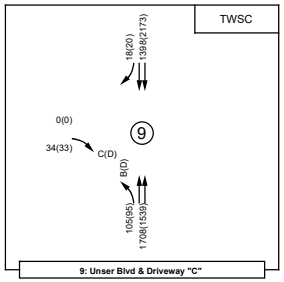




2035_MITIGATIONS







Unser and Sage Development
2035 (Driveways A-C)
LOS / Volume Analysis Map

AM(PM)

Synchro Results Summary Sheet

1: Unser Blvd & Sapphire St/Arenal Rd
2025_ Conditions
Arenal Rd.
Unser Blvd.
Signalized

Arenal Rd. / Unser Blvd. 2025_ Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	172	230	63	163	149	275	63	763	235	239	714	41
V/C Ratio	0.67	0.40		0.49	0.28		0.15	0.42		0.51	0.32	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.7	49.0	0.0	39.1	36.9	0.0	17.7	20.5	0.0	12.8	0.4	0.0
Intersection LOS	**C - 21.2**											
95th Percentile Queue (ft)	237.5	150.0	0.0	187.5	167.5	0.0	47.5	287.5	0.0	122.5	5.0	0.0
95th Percentile Queue (veh)	9.5	6.0	0.0	7.5	6.7	0.0	1.9	11.5	0.0	4.9	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	185	230	63	163	149	306	63	817	235	270	769	54
V/C Ratio	0.68	0.37		0.47	0.28		0.16	0.47		0.60	0.35	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.2	47.8	0.0	38.1	36.0	0.0	19.5	22.9	0.0	14.2	0.5	0.0
Intersection LOS	**C - 21.5**											
95th Percentile Queue (ft)	250.0	147.5	0.0	185.0	165.0	0.0	50.0	322.5	0.0	142.5	5.0	0.0
95th Percentile Queue (veh)	10.0	5.9	0.0	7.4	6.6	0.0	2.0	12.9	0.0	5.7	0.2	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	68	81	63	190	113	388	36	637	163	316	966	131
V/C Ratio	0.46	0.32		0.65	0.31		0.09	0.31		0.52	0.39	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.3	57.9	0.0	52.5	45.3	0.0	12.4	14.0	0.0	8.1	0.4	0.0
Intersection LOS	**B - 15.1**											
95th Percentile Queue (ft)	102.5	57.5	0.0	245.0	142.5	0.0	22.5	205.0	0.0	117.5	5.0	0.0
95th Percentile Queue (veh)	4.1	2.3	0.0	9.8	5.7	0.0	0.9	8.2	0.0	4.7	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	80	81	63	190	113	416	36	688	163	344	1,016	143
V/C Ratio	0.50	0.28		0.62	0.30		0.10	0.34		0.58	0.41	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	60.9	56.6	0.0	50.3	44.2	0.0	13.8	15.8	0.0	9.1	0.5	0.0
Intersection LOS	**B - 15.3**											
95th Percentile Queue (ft)	120.0	57.5	0.0	240.0	140.0	0.0	25.0	232.5	0.0	135.0	7.5	0.0
95th Percentile Queue (veh)	4.8	2.3	0.0	9.6	5.6	0.0	1.0	9.3	0.0	5.4	0.3	0.0

Synchro Results Summary Sheet

2: Unser Blvd & Sage Rd
2025_ Conditions
Sage Rd.
Unser Blvd.
Signalized

Sage Rd. / Unser Blvd. 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD Volumes	286	331	213	41	109	86	95	1,053	100	86	735	82
V/C Ratio	0.88	0.89		0.31	0.43		0.17	0.50		0.25	0.35	
Level-of-Service	E	E		D	D		A	B		B	A	
Control Delay (Seconds)	64.4	57.8	0.0	47.5	51.8	0.0	9.4	15.7	0.0	11.3	0.5	0.0
Intersection LOS	**C - 23.4**											
95th Percentile Queue (ft)	195.0	387.5	0.0	42.5	105.0	0.0	45.0	330.0	0.0	40.0	5.0	0.0
95th Percentile Queue (veh)	7.8	15.5	0.0	1.7	4.2	0.0	1.8	13.2	0.0	1.6	0.2	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	1.23	0.90		0.37	0.44		0.19	0.50		0.25	0.39	
Level-of-Service	F	E		D	D		B	B		B	A	
Control Delay (Seconds)	175.9	62.6	0.0	44.3	49.0	0.0	11.0	17.8	0.0	12.8	0.6	0.0
Intersection LOS	**E - 43.2**											
95th Percentile Queue (ft)	662.5	477.5	0.0	50.0	122.5	0.0	50.0	340.0	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	26.5	19.1	0.0	2.0	4.9	0.0	2.0	13.6	0.0	1.8	0.3	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	0.98	0.46	0.51	0.27	0.41		0.19	0.50		0.26	0.40	
Level-of-Service	F	D	D	D	E		B	B		B	A	
Control Delay (Seconds)	83.0	43.6	41.4	51.1	56.5	0.0	11.5	18.6	0.0	13.4	0.6	0.0
Intersection LOS	**C - 29.1**											
95th Percentile Queue (ft)	295.0	222.5	245.0	72.5	95.0	0.0	52.5	347.5	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	11.8	8.9	9.8	2.9	3.8	0.0	2.1	13.9	0.0	1.8	0.3	0.0

PM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD Volumes	127	136	250	136	209	59	200	858	64	95	1,167	163
V/C Ratio	0.58	0.57		0.50	0.84		0.45	0.39		0.22	0.56	
Level-of-Service	D	E		D	E		A	B		B	A	
Control Delay (Seconds)	46.1	55.1	0.0	44.8	60.2	0.0	8.7	13.3	0.0	10.1	1.1	0.0
Intersection LOS	**B - 16.2**											
95th Percentile Queue (ft)	160.0	185.0	0.0	160.0	262.5	0.0	92.5	252.5	0.0	45.0	15.0	0.0
95th Percentile Queue (veh)	6.4	7.4	0.0	6.4	10.5	0.0	3.7	10.1	0.0	1.8	0.6	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.98	0.60		0.52	0.85		0.48	0.40		0.22	0.62	
Level-of-Service	F	D		D	E		B	B		B	A	
Control Delay (Seconds)	99.9	53.2	0.0	42.5	59.2	0.0	10.3	15.5	0.0	11.8	1.5	0.0
Intersection LOS	**C - 22.8**											
95th Percentile Queue (ft)	240.0	230.0	0.0	170.0	292.5	0.0	102.5	265.0	0.0	50.0	17.5	0.0
95th Percentile Queue (veh)	9.6	9.2	0.0	6.8	11.7	0.0	4.1	10.6	0.0	2.0	0.7	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.20	0.28	0.68	0.57	0.37		0.62	0.38		0.21	0.60	
Level-of-Service	D	D	D	D	D		B	B		B	B	
Control Delay (Seconds)	41.8	47.1	47.8	47.5	47.4	0.0	16.0	13.8	0.0	10.9	18.9	0.0
Intersection LOS	**C - 25.7**											
95th Percentile Queue (ft)	57.5	110.0	300.0	72.5	152.5	0.0	95.0	250.0	0.0	47.5	425.0	0.0
95th Percentile Queue (veh)	2.3	4.4	12.0	2.9	6.1	0.0	3.8	10.0	0.0	1.9	17.0	0.0

Synchro Results Summary Sheet

3: Unser Blvd & Tower Rd
2025_ Conditions
Tower Rd.
Unser Blvd.
Signalized

Tower Rd. / Unser Blvd. 2025_ Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	95	118	68	36	86	63	32	969	36	27	462	59
V/C Ratio	0.54	0.29		0.22	0.21		0.04	0.37		0.05	0.17	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	56.6	52.5	0.0	3.8	0.4	0.0	3.9	5.0	0.0
Intersection LOS	**B - 11.7**											
95th Percentile Queue (ft)	140.0	80.0	0.0	50.0	57.5	0.0	7.5	7.5	0.0	7.5	72.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.0	2.3	0.0	0.3	0.3	0.0	0.3	2.9	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	95	118	87	43	86	63	51	1,025	43	27	508	59
V/C Ratio	0.54	0.29		0.27	0.21		0.07	0.39		0.06	0.19	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	57.0	52.5	0.0	3.9	0.4	0.0	4.0	5.3	0.0
Intersection LOS	**B - 11.4**											
95th Percentile Queue (ft)	140.0	80.0	0.0	60.0	57.5	0.0	12.5	7.5	0.0	7.5	82.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.4	2.3	0.0	0.5	0.3	0.0	0.3	3.3	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	63	118	100	54	267	77	136	906	32	50	1,295	131
V/C Ratio	0.45	0.23		0.27	0.52		0.40	0.36		0.10	0.53	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.4	51.7	0.0	8.1	0.4	0.0	5.7	10.7	0.0
Intersection LOS	**B - 14.5**											
95th Percentile Queue (ft)	92.5	77.5	0.0	75.0	182.5	0.0	42.5	7.5	0.0	17.5	325.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.0	7.3	0.0	1.7	0.3	0.0	0.7	13.0	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	63	118	117	60	267	77	153	956	38	50	1,354	131
V/C Ratio	0.45	0.23		0.30	0.52		0.46	0.38		0.10	0.56	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.7	51.7	0.0	9.1	0.4	0.0	5.8	11.3	0.0
Intersection LOS	**B - 14.6**											
95th Percentile Queue (ft)	92.5	77.5	0.0	82.5	182.5	0.0	47.5	7.5	0.0	17.5	350.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.3	7.3	0.0	1.9	0.3	0.0	0.7	14.0	0.0

Synchro Results Summary Sheet

4: Coors Blvd & Sage Rd
2025_ Conditions
Sage Rd.
Coors Blvd.
Signalized

Sage Rd. / Coors Blvd. 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	304	210	68	94	164	234	22	1,137	17	54	585	71
V/C Ratio	7.79	0.00	0.13	1.96	0.00	0.46	0.05	0.95	0.03	0.17	0.42	0.11
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,129.6	0.0	21.2	487.2	0.0	24.2	15.7	45.4	19.5	17.6	20.3	17.3
Intersection LOS	**F - 610.7**											
95th Percentile Queue (ft)	2,432.5	0.0	42.5	862.5	0.0	167.5	10.0	480.0	10.0	22.5	182.5	40.0
95th Percentile Queue (veh)	97.3	0.0	1.7	34.5	0.0	6.7	0.4	19.2	0.4	0.9	7.3	1.6
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	319	225	74	94	179	234	27	1,137	17	54	585	83
V/C Ratio	8.27	0.00	0.15	2.03	0.00	0.46	0.06	0.95	0.03	0.17	0.44	0.14
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,345.8	0.0	21.3	517.6	0.0	24.2	15.2	45.4	19.5	17.8	21.1	18.2
Intersection LOS	**F - 672.4**											
95th Percentile Queue (ft)	2,580.0	0.0	47.5	927.5	0.0	167.5	12.5	480.0	10.0	25.0	187.5	47.5
95th Percentile Queue (veh)	103.2	0.0	1.9	37.1	0.0	6.7	0.5	19.2	0.4	1.0	7.5	1.9
PM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	80	73	5	131	302	255	85	892	179	91	792	115
V/C Ratio	1.54	0.00	0.01	5.11	0.00	0.52	0.20	0.77	0.35	0.23	0.68	0.22
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	319.6	0.0	21.4	1,910.2	0.0	26.2	15.0	32.1	24.7	15.8	29.1	22.7
Intersection LOS	**F - 314.7**											
95th Percentile Queue (ft)	452.5	0.0	2.5	1,955.0	0.0	195.0	37.5	337.5	132.5	40.0	290.0	80.0
95th Percentile Queue (veh)	18.1	0.0	0.1	78.2	0.0	7.8	1.5	13.5	5.3	1.6	11.6	3.2
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	93	87	10	131	316	255	90	892	179	91	792	131
V/C Ratio	1.79	0.00	0.02	5.30	0.00	0.52	0.21	0.77	0.35	0.23	0.68	0.25
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	428.6	0.0	21.5	1,995.2	0.0	26.2	15.0	32.1	24.7	15.8	29.4	23.3
Intersection LOS	**F - 338.5**											
95th Percentile Queue (ft)	592.5	0.0	7.5	2,025.0	0.0	195.0	40.0	337.5	132.5	40.0	290.0	92.5
95th Percentile Queue (veh)	23.7	0.0	0.3	81.0	0.0	7.8	1.6	13.5	5.3	1.6	11.6	3.7

Synchro Results Summary Sheet

5: 86th Street & Sage Rd
2025_ Conditions
86th St.
Sage Rd.
Signalized

86th St. / Sage Rd. 2025_ Conditions	EB (86th St.)			WB (86th St.)			NB (Sage Rd.)			SB (Sage Rd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	59	541	13	38	211	59	4	114	80	42	30	51
V/C Ratio	0.24	0.81	0.81	0.28	0.43	0.45	0.00	0.00	0.16	0.05	0.00	0.07
Level-of-Service	D	E	E	D	D	D	A		A	A		A
Control Delay (Seconds)	42.3	55.3	55.1	43.7	38.2	38.4	7.4	0.0	7.8	8.9	0.0	7.1
Intersection LOS	**D - 38.3**											
95th Percentile Queue (ft)	70.0	342.5	355.0	45.0	137.5	140.0	2.5	0.0	90.0	20.0	0.0	35.0
95th Percentile Queue (veh)	2.8	13.7	14.2	1.8	5.5	5.6	0.1	0.0	3.6	0.8	0.0	1.4
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	59	607	13	61	277	77	4	114	103	60	30	51
V/C Ratio	0.23	0.82	0.82	0.38	0.47	0.49	0.00	0.00	0.19	0.08	0.00	0.07
Level-of-Service	D	D	D	D	C	C	A		A	B		A
Control Delay (Seconds)	39.1	53.6	53.5	40.1	33.5	33.7	9.0	0.0	9.7	11.4	0.0	8.7
Intersection LOS	**D - 36.7**											
95th Percentile Queue (ft)	67.5	372.5	385.0	67.5	165.0	165.0	2.5	0.0	115.0	35.0	0.0	40.0
95th Percentile Queue (veh)	2.7	14.9	15.4	2.7	6.6	6.6	0.1	0.0	4.6	1.4	0.0	1.6
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	55	300	42	51	410	55	17	85	25	30	110	93
V/C Ratio	0.36	0.59	0.60	0.27	0.82	0.83	0.02	0.00	0.09	0.03	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	46.0	52.5	52.6	43.3	47.3	47.6	7.8	0.0	6.5	7.0	0.0	7.0
Intersection LOS	**D - 37.1**											
95th Percentile Queue (ft)	70.0	225.0	230.0	60.0	242.5	247.5	7.5	0.0	45.0	12.5	0.0	87.5
95th Percentile Queue (veh)	2.8	9.0	9.2	2.4	9.7	9.9	0.3	0.0	1.8	0.5	0.0	3.5
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	55	361	42	72	470	71	17	85	46	46	110	93
V/C Ratio	0.36	0.58	0.59	0.33	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	44.7	52.6	52.7	41.4	45.2	45.6	9.0	0.0	7.6	8.4	0.0	8.1
Intersection LOS	**D - 37.0**											
95th Percentile Queue (ft)	67.5	257.5	262.5	82.5	282.5	287.5	7.5	0.0	60.0	22.5	0.0	95.0
95th Percentile Queue (veh)	2.7	10.3	10.5	3.3	11.3	11.5	0.3	0.0	2.4	0.9	0.0	3.8

Synchro Results Summary Sheet

6: Unser Blvd & San Ygnacio Rd

2025_ Conditions

San Ygnacio Rd.

Unser Blvd.

Unsignalized

San Ygnacio Rd. / Unser Blvd. 2025_ Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,609	11	0	1,019	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.7			10.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,692	11	0	1,092	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.9			11.1						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						

PM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,179	11	0	1,609	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.1			9.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,254	11	0	1,694	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.3			10.0						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						

Synchro Results Summary Sheet

7: Driveway "A" & Sage Rd

2025_ Conditions

Sage Rd.

Driveway "A"

Unsignalized

Sage Rd. / Driveway "A" 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry		2>	0	1	2		1>		0
2025_BUILD Volumes		830	149	62	286	123	218		218
V/C Ratio				0.09			0.80		
Level-of-Service				B			E		
Control Delay (Seconds)				10.6			39.3		
Intersection LOS	**TWSC / A - 8.4**								
95th Percentile Queue (ft)				7.5			177.5		
95th Percentile Queue (veh)				0.3			7.1		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		830	149	62	286		123		218
V/C Ratio				0.16			0.95		
Level-of-Service				C			F		
Control Delay (Seconds)				15.6			70.3		
Intersection LOS	**TWSC / B - 15.0**								
95th Percentile Queue (ft)				12.5			255.0		
95th Percentile Queue (veh)				0.5			10.2		
PM Peak Hour									
Proposed Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		513	122	74	572		121		174
V/C Ratio				0.08			0.55		
Level-of-Service				A			C		
Control Delay (Seconds)				9.1			19.5		
Intersection LOS	**TWSC / A - 4.1**								
95th Percentile Queue (ft)				7.5			82.5		
95th Percentile Queue (veh)				0.3			3.3		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		513	122	74	572		121		174
V/C Ratio				0.13			0.62		
Level-of-Service				B			C		
Control Delay (Seconds)				12.0			24.2		
Intersection LOS	**TWSC / A - 5.1**								
95th Percentile Queue (ft)				10.0			102.5		
95th Percentile Queue (veh)				0.4			4.1		

Synchro Results Summary Sheet

8: Unser Blvd & Driveway "B"

2025_ Conditions

Driveway "B"

Unser Blvd.

Unsignalized

Driveway "B" / Unser Blvd. 2025_ Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2	1
2025_ BUILD Volumes	0		129	0	1,191			962	128
V/C Ratio			0.24						
Level-of-Service			B						
Control Delay (Seconds)			13.9						
Intersection LOS	**TWSC / A - 0.7**								
95th Percentile Queue (ft)			22.5						
95th Percentile Queue (veh)			0.9						
Mitigated Lane Geometry	0		1	0	2			2>	0
2025_ BUILD Volumes	0		129	0	1,191			962	128
V/C Ratio			0.31						
Level-of-Service			C						
Control Delay (Seconds)			17.6						
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			32.5						
95th Percentile Queue (veh)			1.3						

PM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.38						
Level-of-Service			C						
Control Delay (Seconds)			21.4						
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			42.5						
95th Percentile Queue (veh)			1.7						
Mitigage Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.50						
Level-of-Service			D						
Control Delay (Seconds)			31.2						
Intersection LOS	**TWSC / A - 1.4**								
95th Percentile Queue (ft)			65.0						
95th Percentile Queue (veh)			2.6						

Synchro Results Summary Sheet

9: Unser Blvd & Driveway "C"

2025_ Conditions

Driveway "C"

Unser Blvd.

Unsignalized

Driveway "C" / Unser Blvd. 2025_ Conditions	EB (Driveway "C")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2	1
2025_BUILD Volumes	0		18	155	1,191			1,034	18
V/C Ratio			0.04	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			12.4	12.2					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			2.5	22.5					
95th Percentile Queue (veh)			0.1	0.9					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	155	1,191			1,034	18
V/C Ratio			0.04	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			12.4	12.2					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			2.5	22.5					
95th Percentile Queue (veh)			0.1	0.9					
PM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.05	0.33					
Level-of-Service			C	C					
Control Delay (Seconds)			16.4	18.2					
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.05	0.33					
Level-of-Service			C	C					
Control Delay (Seconds)			16.4	18.2					
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					

Synchro Results Summary Sheet

1: Unser Blvd & Sapphire St/Arenal Rd
2025_ Conditions
Arenal Rd.
Unser Blvd.
Signalized

Arenal Rd. / Unser Blvd. 2025_ Conditions	EB (Arenal Rd.)			WB (Arenal Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	172	230	63	163	149	275	63	763	235	239	714	41
V/C Ratio	0.67	0.40		0.49	0.28		0.15	0.42		0.51	0.32	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.7	49.0	0.0	39.1	36.9	0.0	17.7	20.5	0.0	12.8	0.4	0.0
Intersection LOS	**C - 21.2**											
95th Percentile Queue (ft)	237.5	150.0	0.0	187.5	167.5	0.0	47.5	287.5	0.0	122.5	5.0	0.0
95th Percentile Queue (veh)	9.5	6.0	0.0	7.5	6.7	0.0	1.9	11.5	0.0	4.9	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	185	230	63	163	149	306	63	817	235	270	769	54
V/C Ratio	0.68	0.37		0.47	0.28		0.16	0.47		0.60	0.35	
Level-of-Service	E	D		D	D		B	C		B	A	
Control Delay (Seconds)	55.2	47.8	0.0	38.1	36.0	0.0	19.5	22.9	0.0	14.2	0.5	0.0
Intersection LOS	**C - 21.5**											
95th Percentile Queue (ft)	250.0	147.5	0.0	185.0	165.0	0.0	50.0	322.5	0.0	142.5	5.0	0.0
95th Percentile Queue (veh)	10.0	5.9	0.0	7.4	6.6	0.0	2.0	12.9	0.0	5.7	0.2	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	68	81	63	190	113	388	36	637	163	316	966	131
V/C Ratio	0.46	0.32		0.65	0.31		0.09	0.31		0.52	0.39	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	61.3	57.9	0.0	52.5	45.3	0.0	12.4	14.0	0.0	8.1	0.4	0.0
Intersection LOS	**B - 15.1**											
95th Percentile Queue (ft)	102.5	57.5	0.0	245.0	142.5	0.0	22.5	205.0	0.0	117.5	5.0	0.0
95th Percentile Queue (veh)	4.1	2.3	0.0	9.8	5.7	0.0	0.9	8.2	0.0	4.7	0.2	0.0
Existing Lane Geometry	1	2>	0	1	1	1	1	2	1	1	2	1
2025_BUILD Volumes	80	81	63	190	113	416	36	688	163	344	1,016	143
V/C Ratio	0.50	0.28		0.62	0.30		0.10	0.34		0.58	0.41	
Level-of-Service	E	E		D	D		B	B		A	A	
Control Delay (Seconds)	60.9	56.6	0.0	50.3	44.2	0.0	13.8	15.8	0.0	9.1	0.5	0.0
Intersection LOS	**B - 15.3**											
95th Percentile Queue (ft)	120.0	57.5	0.0	240.0	140.0	0.0	25.0	232.5	0.0	135.0	7.5	0.0
95th Percentile Queue (veh)	4.8	2.3	0.0	9.6	5.6	0.0	1.0	9.3	0.0	5.4	0.3	0.0

Synchro Results Summary Sheet

2: Unser Blvd & Sage Rd
2025_ Conditions
Sage Rd.
Unser Blvd.
Signalized

Sage Rd. / Unser Blvd. 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD Volumes	286	331	213	41	109	86	95	1,053	100	86	735	82
V/C Ratio	0.88	0.89		0.31	0.43		0.17	0.50		0.25	0.35	
Level-of-Service	E	E		D	D		A	B		B	A	
Control Delay (Seconds)	64.4	57.8	0.0	47.5	51.8	0.0	9.4	15.7	0.0	11.3	0.5	0.0
Intersection LOS	**C - 23.4**											
95th Percentile Queue (ft)	195.0	387.5	0.0	42.5	105.0	0.0	45.0	330.0	0.0	40.0	5.0	0.0
95th Percentile Queue (veh)	7.8	15.5	0.0	1.7	4.2	0.0	1.8	13.2	0.0	1.6	0.2	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	1.23	0.90		0.37	0.44		0.19	0.50		0.25	0.39	
Level-of-Service	F	E		D	D		B	B		B	A	
Control Delay (Seconds)	175.9	62.6	0.0	44.3	49.0	0.0	11.0	17.8	0.0	12.8	0.6	0.0
Intersection LOS	**E - 43.2**											
95th Percentile Queue (ft)	662.5	477.5	0.0	50.0	122.5	0.0	50.0	340.0	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	26.5	19.1	0.0	2.0	4.9	0.0	2.0	13.6	0.0	1.8	0.3	0.0
Mitigate Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	425	372	213	54	134	86	95	997	100	86	785	105
V/C Ratio	0.98	0.46	0.51	0.27	0.41		0.19	0.50		0.26	0.40	
Level-of-Service	F	D	D	D	E		B	B		B	A	
Control Delay (Seconds)	83.0	43.6	41.4	51.1	56.5	0.0	11.5	18.6	0.0	13.4	0.6	0.0
Intersection LOS	**C - 29.1**											
95th Percentile Queue (ft)	295.0	222.5	245.0	72.5	95.0	0.0	52.5	347.5	0.0	45.0	7.5	0.0
95th Percentile Queue (veh)	11.8	8.9	9.8	2.9	3.8	0.0	2.1	13.9	0.0	1.8	0.3	0.0

PM Peak Hour												
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_NO BUILD Volumes	127	136	250	136	209	59	200	858	64	95	1,167	163
V/C Ratio	0.58	0.57		0.50	0.84		0.45	0.39		0.22	0.56	
Level-of-Service	D	E		D	E		A	B		B	A	
Control Delay (Seconds)	46.1	55.1	0.0	44.8	60.2	0.0	8.7	13.3	0.0	10.1	1.1	0.0
Intersection LOS	**B - 16.2**											
95th Percentile Queue (ft)	160.0	185.0	0.0	160.0	262.5	0.0	92.5	252.5	0.0	45.0	15.0	0.0
95th Percentile Queue (veh)	6.4	7.4	0.0	6.4	10.5	0.0	3.7	10.1	0.0	1.8	0.6	0.0
Existing Lane Geometry	1	1	1	1	1>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.98	0.60		0.52	0.85		0.48	0.40		0.22	0.62	
Level-of-Service	F	D		D	E		B	B		B	A	
Control Delay (Seconds)	99.9	53.2	0.0	42.5	59.2	0.0	10.3	15.5	0.0	11.8	1.5	0.0
Intersection LOS	**C - 22.8**											
95th Percentile Queue (ft)	240.0	230.0	0.0	170.0	292.5	0.0	102.5	265.0	0.0	50.0	17.5	0.0
95th Percentile Queue (veh)	9.6	9.2	0.0	6.8	11.7	0.0	4.1	10.6	0.0	2.0	0.7	0.0
Mitigated Lane Geometry	1	2	1	1	2>	0	1	2	1	1	2	1
2025_BUILD Volumes	244	173	250	150	236	59	200	816	64	95	1,226	189
V/C Ratio	0.20	0.28	0.68	0.57	0.37		0.62	0.38		0.21	0.60	
Level-of-Service	D	D	D	D	D		B	B		B	B	
Control Delay (Seconds)	41.8	47.1	47.8	47.5	47.4	0.0	16.0	13.8	0.0	10.9	18.9	0.0
Intersection LOS	**C - 25.7**											
95th Percentile Queue (ft)	57.5	110.0	300.0	72.5	152.5	0.0	95.0	250.0	0.0	47.5	425.0	0.0
95th Percentile Queue (veh)	2.3	4.4	12.0	2.9	6.1	0.0	3.8	10.0	0.0	1.9	17.0	0.0

Synchro Results Summary Sheet

3: Unser Blvd & Tower Rd
2025_ Conditions
Tower Rd.
Unser Blvd.
Signalized

Tower Rd. / Unser Blvd. 2025_ Conditions	EB (Tower Rd.)			WB (Tower Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	95	118	68	36	86	63	32	969	36	27	462	59
V/C Ratio	0.54	0.29		0.22	0.21		0.04	0.37		0.05	0.17	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	56.6	52.5	0.0	3.8	0.4	0.0	3.9	5.0	0.0
Intersection LOS	**B - 11.7**											
95th Percentile Queue (ft)	140.0	80.0	0.0	50.0	57.5	0.0	7.5	7.5	0.0	7.5	72.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.0	2.3	0.0	0.3	0.3	0.0	0.3	2.9	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	95	118	87	43	86	63	51	1,025	43	27	508	59
V/C Ratio	0.54	0.29		0.27	0.21		0.07	0.39		0.06	0.19	
Level-of-Service	E	D		E	D		A	A		A	A	
Control Delay (Seconds)	58.9	53.1	0.0	57.0	52.5	0.0	3.9	0.4	0.0	4.0	5.3	0.0
Intersection LOS	**B - 11.4**											
95th Percentile Queue (ft)	140.0	80.0	0.0	60.0	57.5	0.0	12.5	7.5	0.0	7.5	82.5	0.0
95th Percentile Queue (veh)	5.6	3.2	0.0	2.4	2.3	0.0	0.5	0.3	0.0	0.3	3.3	0.0
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_NO BUILD Volumes	63	118	100	54	267	77	136	906	32	50	1,295	131
V/C Ratio	0.45	0.23		0.27	0.52		0.40	0.36		0.10	0.53	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.4	51.7	0.0	8.1	0.4	0.0	5.7	10.7	0.0
Intersection LOS	**B - 14.5**											
95th Percentile Queue (ft)	92.5	77.5	0.0	75.0	182.5	0.0	42.5	7.5	0.0	17.5	325.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.0	7.3	0.0	1.7	0.3	0.0	0.7	13.0	0.0
Existing Lane Geometry	1	2>	0	1	2>	0	1	2>	0	1	2	1
2025_BUILD Volumes	63	118	117	60	267	77	153	956	38	50	1,354	131
V/C Ratio	0.45	0.23		0.30	0.52		0.46	0.38		0.10	0.56	
Level-of-Service	E	D		D	D		A	A		A	B	
Control Delay (Seconds)	59.8	49.3	0.0	53.7	51.7	0.0	9.1	0.4	0.0	5.8	11.3	0.0
Intersection LOS	**B - 14.6**											
95th Percentile Queue (ft)	92.5	77.5	0.0	82.5	182.5	0.0	47.5	7.5	0.0	17.5	350.0	0.0
95th Percentile Queue (veh)	3.7	3.1	0.0	3.3	7.3	0.0	1.9	0.3	0.0	0.7	14.0	0.0

Synchro Results Summary Sheet

4: Coors Blvd & Sage Rd
2025_ Conditions
Sage Rd.
Coors Blvd.
Signalized

Sage Rd. / Coors Blvd. 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Coors Blvd.)			SB (Coors Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	304	210	68	94	164	234	22	1,137	17	54	585	71
V/C Ratio	7.79	0.00	0.13	1.96	0.00	0.46	0.05	0.95	0.03	0.17	0.42	0.11
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,129.6	0.0	21.2	487.2	0.0	24.2	15.7	45.4	19.5	17.6	20.3	17.3
Intersection LOS	**F - 610.7**											
95th Percentile Queue (ft)	2,432.5	0.0	42.5	862.5	0.0	167.5	10.0	480.0	10.0	22.5	182.5	40.0
95th Percentile Queue (veh)	97.3	0.0	1.7	34.5	0.0	6.7	0.4	19.2	0.4	0.9	7.3	1.6
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	319	225	74	94	179	234	27	1,137	17	54	585	83
V/C Ratio	8.27	0.00	0.15	2.03	0.00	0.46	0.06	0.95	0.03	0.17	0.44	0.14
Level-of-Service	F		C	F		C	B	D	B	B	C	B
Control Delay (Seconds)	3,345.8	0.0	21.3	517.6	0.0	24.2	15.2	45.4	19.5	17.8	21.1	18.2
Intersection LOS	**F - 672.4**											
95th Percentile Queue (ft)	2,580.0	0.0	47.5	927.5	0.0	167.5	12.5	480.0	10.0	25.0	187.5	47.5
95th Percentile Queue (veh)	103.2	0.0	1.9	37.1	0.0	6.7	0.5	19.2	0.4	1.0	7.5	1.9
PM Peak Hour												
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_NO BUILD Volumes	80	73	5	131	302	255	85	892	179	91	792	115
V/C Ratio	1.54	0.00	0.01	5.11	0.00	0.52	0.20	0.77	0.35	0.23	0.68	0.22
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	319.6	0.0	21.4	1,910.2	0.0	26.2	15.0	32.1	24.7	15.8	29.1	22.7
Intersection LOS	**F - 314.7**											
95th Percentile Queue (ft)	452.5	0.0	2.5	1,955.0	0.0	195.0	37.5	337.5	132.5	40.0	290.0	80.0
95th Percentile Queue (veh)	18.1	0.0	0.1	78.2	0.0	7.8	1.5	13.5	5.3	1.6	11.6	3.2
Existing Lane Geometry	0	<1	1	0	<1	1	1	2	1	1	2	1
2025_BUILD Volumes	93	87	10	131	316	255	90	892	179	91	792	131
V/C Ratio	1.79	0.00	0.02	5.30	0.00	0.52	0.21	0.77	0.35	0.23	0.68	0.25
Level-of-Service	F		C	F		C	B	C	C	B	C	C
Control Delay (Seconds)	428.6	0.0	21.5	1,995.2	0.0	26.2	15.0	32.1	24.7	15.8	29.4	23.3
Intersection LOS	**F - 338.5**											
95th Percentile Queue (ft)	592.5	0.0	7.5	2,025.0	0.0	195.0	40.0	337.5	132.5	40.0	290.0	92.5
95th Percentile Queue (veh)	23.7	0.0	0.3	81.0	0.0	7.8	1.6	13.5	5.3	1.6	11.6	3.7

Synchro Results Summary Sheet

5: 86th Street & Sage Rd
2025_ Conditions
86th St.
Sage Rd.
Signalized

86th St. / Sage Rd. 2025_ Conditions	EB (86th St.)			WB (86th St.)			NB (Sage Rd.)			SB (Sage Rd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	59	541	13	38	211	59	4	114	80	42	30	51
V/C Ratio	0.24	0.81	0.81	0.28	0.43	0.45	0.00	0.00	0.16	0.05	0.00	0.07
Level-of-Service	D	E	E	D	D	D	A		A	A		A
Control Delay (Seconds)	42.3	55.3	55.1	43.7	38.2	38.4	7.4	0.0	7.8	8.9	0.0	7.1
Intersection LOS	**D - 38.3**											
95th Percentile Queue (ft)	70.0	342.5	355.0	45.0	137.5	140.0	2.5	0.0	90.0	20.0	0.0	35.0
95th Percentile Queue (veh)	2.8	13.7	14.2	1.8	5.5	5.6	0.1	0.0	3.6	0.8	0.0	1.4
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	59	607	13	61	277	77	4	114	103	60	30	51
V/C Ratio	0.23	0.82	0.82	0.38	0.47	0.49	0.00	0.00	0.19	0.08	0.00	0.07
Level-of-Service	D	D	D	D	C	C	A		A	B		A
Control Delay (Seconds)	39.1	53.6	53.5	40.1	33.5	33.7	9.0	0.0	9.7	11.4	0.0	8.7
Intersection LOS	**D - 36.7**											
95th Percentile Queue (ft)	67.5	372.5	385.0	67.5	165.0	165.0	2.5	0.0	115.0	35.0	0.0	40.0
95th Percentile Queue (veh)	2.7	14.9	15.4	2.7	6.6	6.6	0.1	0.0	4.6	1.4	0.0	1.6
PM Peak Hour												
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_NO BUILD Volumes	55	300	42	51	410	55	17	85	25	30	110	93
V/C Ratio	0.36	0.59	0.60	0.27	0.82	0.83	0.02	0.00	0.09	0.03	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	46.0	52.5	52.6	43.3	47.3	47.6	7.8	0.0	6.5	7.0	0.0	7.0
Intersection LOS	**D - 37.1**											
95th Percentile Queue (ft)	70.0	225.0	230.0	60.0	242.5	247.5	7.5	0.0	45.0	12.5	0.0	87.5
95th Percentile Queue (veh)	2.8	9.0	9.2	2.4	9.7	9.9	0.3	0.0	1.8	0.5	0.0	3.5
Existing Lane Geometry	1	2>	0	1	2>	0	1	1>	0	1	1>	0
2025_BUILD Volumes	55	361	42	72	470	71	17	85	46	46	110	93
V/C Ratio	0.36	0.58	0.59	0.33	0.83	0.84	0.02	0.00	0.11	0.05	0.00	0.17
Level-of-Service	D	D	D	D	D	D	A		A	A		A
Control Delay (Seconds)	44.7	52.6	52.7	41.4	45.2	45.6	9.0	0.0	7.6	8.4	0.0	8.1
Intersection LOS	**D - 37.0**											
95th Percentile Queue (ft)	67.5	257.5	262.5	82.5	282.5	287.5	7.5	0.0	60.0	22.5	0.0	95.0
95th Percentile Queue (veh)	2.7	10.3	10.5	3.3	11.3	11.5	0.3	0.0	2.4	0.9	0.0	3.8

Synchro Results Summary Sheet

6: Unser Blvd & San Ygnacio Rd

2025_ Conditions

San Ygnacio Rd.

Unser Blvd.

Unsignalized

San Ygnacio Rd. / Unser Blvd. 2025_ Conditions	EB (San Ygnacio Rd.)			WB (San Ygnacio Rd.)			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,609	11	0	1,019	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.7			10.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,692	11	0	1,092	11
V/C Ratio			0.04			0.02						
Level-of-Service			A			B						
Control Delay (Seconds)			9.9			11.1						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			2.5			2.5						
95th Percentile Queue (veh)			0.1			0.1						

PM Peak Hour												
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_NO BUILD Volumes	0	0	34	0	0	11	0	1,179	11	0	1,609	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.1			9.9						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						
Existing Lane Geometry	0	0	1	0	0	1	0	2>	0	0	2>	0
2025_BUILD Volumes	0	0	34	0	0	11	0	1,254	11	0	1,694	34
V/C Ratio			0.06			0.02						
Level-of-Service			B			A						
Control Delay (Seconds)			11.3			10.0						
Intersection LOS	**TWSC / A - 0.2**											
95th Percentile Queue (ft)			5.0			0.0						
95th Percentile Queue (veh)			0.2			0.0						

Synchro Results Summary Sheet

7: Driveway "A" & Sage Rd

2025_ Conditions

Sage Rd.

Driveway "A"

Unsignalized

Sage Rd. / Driveway "A" 2025_ Conditions	EB (Sage Rd.)			WB (Sage Rd.)			NB (Driveway "A")		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry		2>	0	1	2		1>		0
2025_BUILD Volumes		830	149	62	286	123	218		218
V/C Ratio				0.09			0.80		
Level-of-Service				B			E		
Control Delay (Seconds)				10.6			39.3		
Intersection LOS	**TWSC / A - 8.4**								
95th Percentile Queue (ft)				7.5			177.5		
95th Percentile Queue (veh)				0.3			7.1		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		830	149	62	286		123		218
V/C Ratio				0.16			0.95		
Level-of-Service				C			F		
Control Delay (Seconds)				15.6			70.3		
Intersection LOS	**TWSC / B - 15.0**								
95th Percentile Queue (ft)				12.5			255.0		
95th Percentile Queue (veh)				0.5			10.2		
PM Peak Hour									
Proposed Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		513	122	74	572		121		174
V/C Ratio				0.08			0.55		
Level-of-Service				A			C		
Control Delay (Seconds)				9.1			19.5		
Intersection LOS	**TWSC / A - 4.1**								
95th Percentile Queue (ft)				7.5			82.5		
95th Percentile Queue (veh)				0.3			3.3		
Mitigated Lane Geometry		2>	0	0	<2		1>		0
2025_BUILD Volumes		513	122	74	572		121		174
V/C Ratio				0.13			0.62		
Level-of-Service				B			C		
Control Delay (Seconds)				12.0			24.2		
Intersection LOS	**TWSC / A - 5.1**								
95th Percentile Queue (ft)				10.0			102.5		
95th Percentile Queue (veh)				0.4			4.1		

Synchro Results Summary Sheet

8: Unser Blvd & Driveway "B"

2025_ Conditions

Driveway "B"

Unser Blvd.

Unsignalized

Driveway "B" / Unser Blvd. 2025_ Conditions	EB (Driveway "B")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2	1
2025_ BUILD Volumes	0		129	0	1,191			962	128
V/C Ratio			0.24						
Level-of-Service			B						
Control Delay (Seconds)			13.9						
Intersection LOS	**TWSC / A - 0.7**								
95th Percentile Queue (ft)			22.5						
95th Percentile Queue (veh)			0.9						
Mitigated Lane Geometry	0		1	0	2			2>	0
2025_ BUILD Volumes	0		129	0	1,191			962	128
V/C Ratio			0.31						
Level-of-Service			C						
Control Delay (Seconds)			17.6						
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			32.5						
95th Percentile Queue (veh)			1.3						

PM Peak Hour									
Proposed Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.38						
Level-of-Service			C						
Control Delay (Seconds)			21.4						
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			42.5						
95th Percentile Queue (veh)			1.7						
Mitigage Lane Geometry	0		1	0	2			2>	0
2025_BUILD Volumes	0		132	0	1,080			1,517	158
V/C Ratio			0.50						
Level-of-Service			D						
Control Delay (Seconds)			31.2						
Intersection LOS	**TWSC / A - 1.4**								
95th Percentile Queue (ft)			65.0						
95th Percentile Queue (veh)			2.6						

Synchro Results Summary Sheet

9: Unser Blvd & Driveway "C"

2025_ Conditions

Driveway "C"

Unser Blvd.

Unsignalized

Driveway "C" / Unser Blvd. 2025_ Conditions	EB (Driveway "C")			NB (Unser Blvd.)			SB (Unser Blvd.)		
	L	T	R	L	T	R	L	T	R
AM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2	1
2025_BUILD Volumes	0		18	155	1,191			1,034	18
V/C Ratio			0.04	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			12.4	12.2					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			2.5	22.5					
95th Percentile Queue (veh)			0.1	0.9					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	155	1,191			1,034	18
V/C Ratio			0.04	0.24					
Level-of-Service			B	B					
Control Delay (Seconds)			12.4	12.2					
Intersection LOS	**TWSC / A - 0.9**								
95th Percentile Queue (ft)			2.5	22.5					
95th Percentile Queue (veh)			0.1	0.9					
PM Peak Hour									
Proposed Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.05	0.33					
Level-of-Service			C	C					
Control Delay (Seconds)			16.4	18.2					
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					
Mitigated Lane Geometry	0		1	1	2			2>	0
2025_BUILD Volumes	0		18	134	1,080			1,577	21
V/C Ratio			0.05	0.33					
Level-of-Service			C	C					
Control Delay (Seconds)			16.4	18.2					
Intersection LOS	**TWSC / A - 1.0**								
95th Percentile Queue (ft)			5.0	35.0					
95th Percentile Queue (veh)			0.2	1.4					