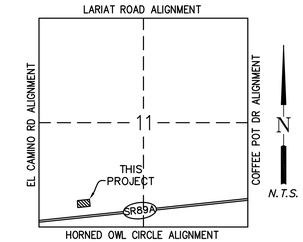
ALTA/NSPS LAND TITLE SURVEY

THE PROPERTY DESCRIBED IN DEED 2019-0036166, YCR
YAVAPAI COUNTY, ARIZONA.

A PORTION OF THE SOUTHWEST QUARTER OF
SECTION 11, TOWNSHIP 17 NORTH, RANGE 5 EAST OF
THE GILA & SALT RIVER BASE & MERIDIAN, YAVAPAI COUNTY, ARIZONA



VICINITY MAP
SECTION 11, T17N, R5E, G&SRB & M

SCHEDULE B - PART TWO - EXCEPTIONS

1. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES, FOR THE SECOND INSTALLMENT OF 2019 TAXES.

2. PROPERTY TAXES, WHICH ARE A LIEN NOT YET DUE AND PAYABLE, INCLUDING ANY ASSESSMENTS COLLECTED WITH TAXES TO BE LEVIED FOR THE YEAR 2020.

3. LIABILITIES AND OBLIGATIONS IMPOSED UPON SAID LAND BY ITS INCLUSION WITHIN ANY DISTRICT FORMED PURSUANT TO TITLE 48, ARIZONA REVISED STATUTES.

4. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: ELECTRIC LINES
RECORDING NO: BOOK 186 OF DEEDS, PAGE 293
NOT PLOTTED (AFFECTS ALL OF THE SUBJECT PROPERTY, BUT NOT THE SURVEY)

5. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: ELECTRIC LINES
RECORDING NO: BOOK 1351 OF OFFICIAL RECORDS, PAGE 109
NOT PLOTTED (AFFECTS ALL OF THE SUBJECT PROPERTY, BUT NOT THE SURVEY)

6. MATTERS SHOWN ON RECORD OF SURVEY:
RECORDING NO.: BOOK 175 OF LAND SURVEYS, PAGE 36
NOT PLOTTED (AFFECTS ALL OF THE SUBJECT PROPERTY, BUT NOT THE SURVEY)

7. MATTERS SHOWN ON RECORD OF SURVEY:
RECORDING NO.: BOOK 183 OF LAND SURVEYS, PAGE 94
NOT PLOTTED (AFFECTS ALL OF THE SUBJECT PROPERTY, BUT NOT THE SURVEY)

8. MATTERS SHOWN ON RECORD OF SURVEY:
RECORDING NO.: 2015-37171
NOT PLOTTED (AFFECTS ALL OF THE SUBJECT PROPERTY, BUT NOT THE SURVEY)

9. MATTERS SHOWN ON RECORD OF SURVEY:
RECORDING NO.: 2019-38903
NOT PLOTTED (BOUNDARY SHOWN MATCHES BOUNDARY FROM THIS RECORD OF SURVEY)

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF YAVAPAI, STATE OF ARIZONA, AND IS DESCRIBED AS FOLLOWS:

A PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 17 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, YAVAPAI COUNTY, ARIZONA, LYING NORTH OF U.S. HIGHWAY 89A PER ADOT PLAN PROJECT S-366-709 RECORD ADOT={RA} AND SOUTHEAST OF THE SOUTHWEST CENTER SUBDIVISION, BOOK 17 OF MAPS, PAGE PLATS, PAGE 16, YAVAPAI COUNTY RECORDER {YCR} RECORD = MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING FOR REFERENCE AT THE SOUTHWEST CORNER OF SAID SECTION 11, A FOUND BLM BRASS CAP;

THENCE NORTH 76°30'51" EAST 1351.90 FEET (NORTH 76°47'44" EAST 1351.83 FEET RA, TO STATION 977+47.98 RHT 63.22 BASIS OF BEARINGS RA) TO A FOUND ½ INCH REBAR NO IDENTIFICATION, TO WHICH A STAINLESS STEEL CAP LS 32230 WAS ADDED;

THENCE NORTH 01°10'20" WEST 2.80 FEET TO A SET ½" REBAR WITH ALUMINUM CAP LS 32230 ON THE NORTH RIGHT OF WAY OF SAID HWY 89A RA AND THE POINT OF BEGINNING;

THENCE NORTH 01°10'20" WEST 190.79 FEET TO A SET ½" REBAR WITH CAP LS 32230;

THENCE SOUTH 82°21'06" WEST 418.06 FEET TO A SET ½" REBAR WITH CAP LS 32230;

THENCE SOUTH 07°56'28" EAST 192.01 FEET TO THE NORTH LINE OF RA, A SET ½" REBAR WITH ALUMINUM CAP LS 32230 AND FROM WHICH A FOUND ½" REBAR WITH CAP LS 27253 LIES SOUTH 07°56'28" EAST 0.54 FEET;

THENCE NORTH 81°59'57" EAST 395.56 FEET (NORTH 82°00'15" EAST R) TO THE POINT OF BEGINNING.

APN: 408-24-536C

BASIS OF BEARING

FROM A BLM BC AT THE SW COR. OF SEC. 11, T.17N., R.5E., N. 76-30-51 E., TO A 3/4" PIPE W/CAP "LS32230", FROM LEGAL PROVIDED & ALTA SURVEY MAP 2019-0038903, YCR.

BENCHMARK

SPCS BM 62, 3" ADOT ALUMINUM CAP STAMPED "ELEV.4378.82" ON TOP OF CURB AT CL OF CATCH BASIN ON THE S. SIDE OF SR 89A, 220'+/- W. OF THUNDERBIRD DR. SPCS ELEV. 4382.50

APN#

408-24-536C

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
040130	1435 NOV 4, 2015	G	SEP 3, 2010	X	1 TO 3 FEET

ZONE "X" IS DEFINED AS "AREAS OF 0.2% ANNUAL CHANCE FLOOD. AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS OF LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD."

UTILITY TABLE

UTILITY	PROVIDER	DATE ORDERED	RESULTS
ELECTRIC	APS	3/16/20	PENDING RESEARCH
NATURAL GAS	UNISOURCE SERVICES	3/16/20	SHOWN ON SURVEY
IRRIGATION	--	--	NONE SHOWN
WATER	ARIZONA WATER COMPANY	3/16/20	SHOWN ON SURVEY
SEWER	CITY OF SEDONA	3/16/20	SHOWN ON SURVEY
STORM DRAIN	CITY OF SEDONA	--	NONE SHOWN
COMMUNICATIONS	CENTURYLINK	3/16/20	PENDING RESEARCH
COMMUNICATIONS	COX COMMUNICATIONS	3/16/20	PENDING RESEARCH

OWNER

KATHERENE HELEN LUDEWIG, AN UNMARRIED WOMAN

PARCEL AREA

NET: 77,602 S.F. / 1.781 AC. GROSS: 109,904 S.F. / 2.523 AC.

NOTES

1. THIS SURVEY WAS CONDUCTED ON THE GROUND OF THE PREMISES AS DEPICTED HEREON IN **MARCH, 2020**.

2. THERE WAS NO ZONING REPORT OR LETTER PROVIDED TO THE SURVEYOR BY THE CLIENT REGARDING THE CURRENT ZONING CLASSIFICATION, SETBACK REQUIREMENTS, THE HEIGHT AND FLOOR SPACE AREA RESTRICTIONS, AND PARKING REQUIREMENTS. THEY HAVE NOT BEEN SHOWN.

3. THERE ARE NO BUILDINGS ON THE SUBJECT PARCEL, NO EXTERIOR DIMENSIONS OR SQUARE FOOTAGE OF BUILDINGS AT GROUND LEVEL HAVE BEEN PROVIDED.ED

4. THERE WAS NO DESIGNATION BY THE CLIENT REGARDING A DETERMINATION OF THE RELATIONSHIP AND LOCATION OF CERTAIN DIVISION OR PARTY WALLS WITH RESPECT TO ADJOINING PROPERTIES. THERE WAS NO DESIGNATION BY THE CLIENT REGARDING A DETERMINATION OF WHETHER CERTAIN WALLS ARE PLUMB.

5. THIS SURVEY REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ADDITIONALLY, AS PER THE **2016** ALTA STANDARDS: WITH REGARD TO TABLE A, ITEM 11, SOURCE INFORMATION FROM PLANS AND MARKINGS WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES TO DEVELOP A VIEW OF THOSE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.

6. THERE WAS NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.

7. THERE ARE NO PROPOSED CHANGES IN STREET RIGHT OF WAY LINES, NO SUCH INFORMATION WAS MADE AVAILABLE TO THE SURVEYOR BY THE CONTROLLING JURISDICTION. THERE WAS NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.

8. THERE HAS NOT BEEN A FIELD DELINEATION OF WETLANDS CONDUCTED BY A QUALIFIED SPECIALIST HIRED BY THE CLIENT, THE SURVEYOR DID NOT OBSERVE ANY DELINEATION MARKERS IN THE PROCESS OF CONDUCTING THE FIELD WORK.

REFERENCE DOCUMENTS

R1 2019-0038903 ALTA/NSPS SURVEY
R2 2015-0037171 RECORD OF SURVEY
R3 2019-0010245 ALTA/NSPS LAND TITLE SURVEY

CERTIFICATE OF SURVEY

TO:
1. **COMMONWEALTH LAND TITLE INSURANCE COMPANY**
2. **CIRCLE K STORES INC., A TEXAS CORPORATION**
3. **KATHERENE HELEN LUDEWIG, AN UNMARRIED WOMAN**

COMMONWEALTH LAND TITLE INSURANCE COMPANY, COMMITMENT FOR TITLE INSURANCE, FILE NO.: **01927255-295-NA-DG2**
COMMITMENT DATE: FEBRUARY 7, 2020 AT 7:30 A.M.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE **2016** MINIMUM STANDARD DETAIL REQUIREMENTS FOR **ALTA/NSPS** LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, INCLUDES ITEMS **1, 2, 3, 4, 5, 6(A),7(A), 7(B), 8, 9, 10, 11, 13, 14, 16, 17, 18, 19, 20 ($1MM) AS DESCRIBED THEREIN.**

FIELD WORK COMPLETED IN **MARCH, 2020**
DATE OF PLAT: **MARCH 20, 2020**

MICHAEL J.THOMPSON, RLS25090
HELIX ENGINEERING, LLC
3240 E UNION HILLS DR #112
PHOENIX, AZ 85050
mt@hxeng.com

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25090
MICHAEL J.
THOMPSON
4/2/20
ARIZONA U.S.A.
Expires 09/30/2021

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25090
MICHAEL J.
THOMPSON
4/2/20
ARIZONA U.S.A.

Helix Engineering, LLC
Engineering / Surveying / Consulting
3240 E Union Hills
Suite 113
Phoenix AZ 85050
ph 602-788-2616
www.hxeng.com

TWO WORKING DAYS BEFORE YOU DIG. CALL FOR THE BLUE STAKES
1-800-782-5348
BLUE STAKE CENTER

RELEASE	
DATE	

REVISIONS		
NO.	DATE	
1		
2	.	.
3	.	.

PROJECT NAME
ALTA LAND TITLE SURVEY

PROJECT ADDRESS
2820 W STATE ROUTE 89A
SEDONA, ARIZONA
86336

PROJECT AREA
AZ-89A & SOUTHWEST DR

HELIX JOB NUMBER: 470
IN HOUSE
DRAWN BY: TDS
CHECKED BY: MJT

SHEET TITLE
ALTA/NSPS LAND TITLE SURVEY
A PORTION OF SW 1/4 SEC. 11, T.17N., R.5E., G. & S.R.B. & M.

SHEET: COVER
PAGE: 1 OF 2

PLOT SCALE: 1:1 @ 24"x36"; 1:2.2 @ 11"x17"

Apr 02, 2020 - 1:23pm
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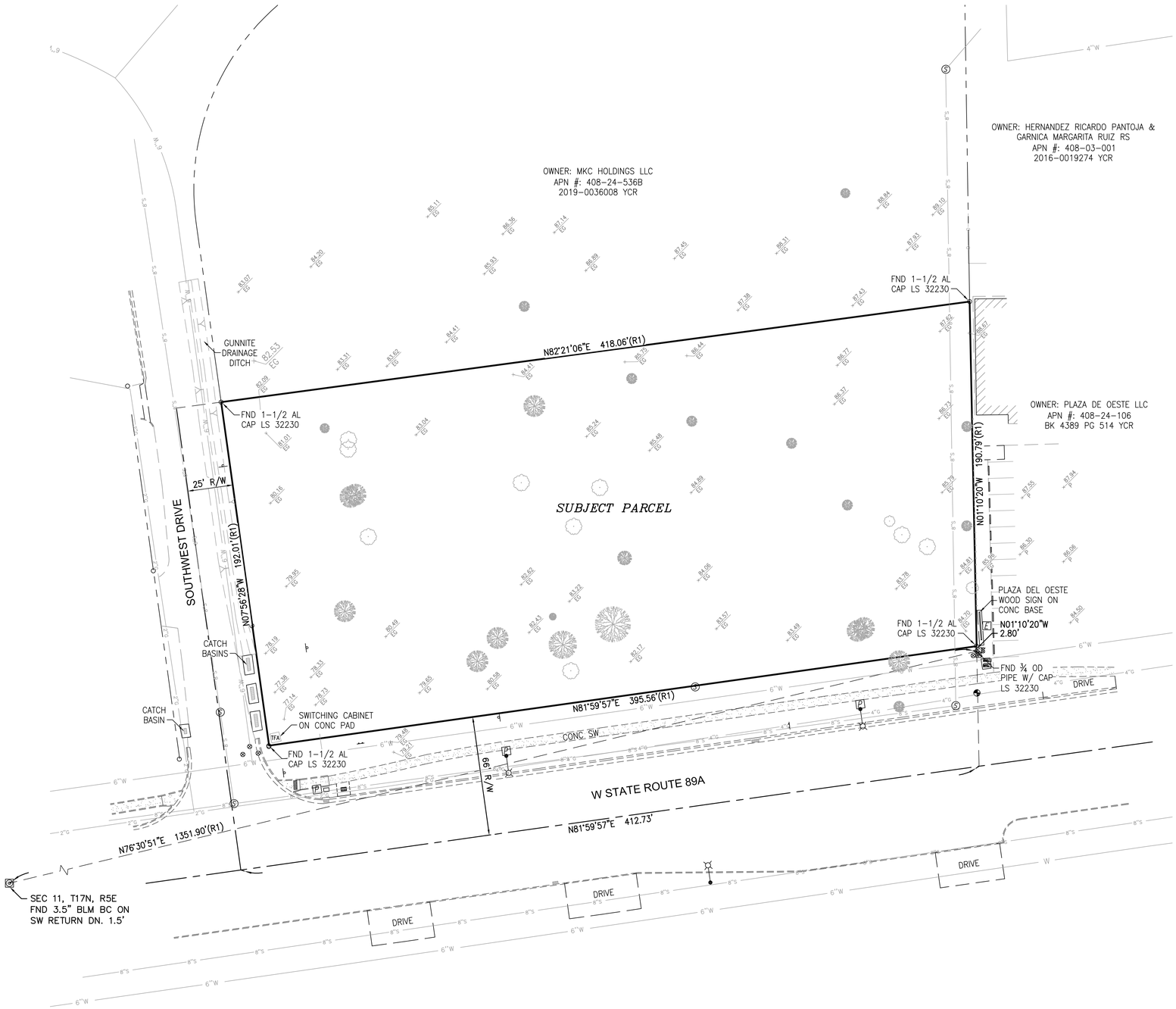

LEGEND

- BRASS CAP IN HAND HOLE
- BRASS CAP FLUSH
- FOUND MONUMENT
- SET 1/2" REBAR & TAG "LS25090"
- NOTHING FOUND NOTHING SET UNLESS OTHERWISE NOTED
- COMMUNICATIONS MANHOLE
- COMMUNICATIONS RISER
- CONDUIT
- ELECTRIC CABINET
- ELECTRIC JUNCTION BOX
- ELECTRIC PANEL
- ELECTRIC TRANSFORMER
- FIBER OPTIC MARKER
- GROUND LIGHT
- LIGHT POLE
- POWER POLE
- STEEL POWER POLE
- STREET LIGHT
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL JUNCTION BOX
- TRAFFIC SIGNAL W/ MAST ARM
- BLUESTAKE GAS
- EMERGENCY SHUTOFF
- GAS MANHOLE
- GAS MARKER
- GAS METER
- GAS PUMP
- GAS VALVE
- SEWER CLEANOUT
- SEWER MANHOLE
- DRAIN INLET
- DRY WELL
- INTERCEPTOR MANHOLE
- MONITORING WELL
- STORM DRAIN MANHOLE
- TELEPHONE JUNCTION BOX
- TELEPHONE RISER
- TELEVISION CABINET
- TELEVISION JUNCTION BOX
- FIRE DEPARTMENT CONNECTION
- HOSE BIB
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- WATER BACKFLOW PREVENTER
- WATER METER
- WATER VALVE

- ACCESSIBLE SPACE
- AIR PUMP
- BOLLARD
- COLUMN
- CURB STOP
- FLAGPOLE
- MAILBOX
- PULL BOX
- SIGN
- UNDERGROUND VAULT

APN	ASSESSOR'S PARCEL NUMBER
DOC	DOCUMENT
ESMT	EASEMENT
HWY	HIGHWAY
L/S	LANDSCAPE
MCR	MARICOPA COUNTY RECORDER
PUE	PUBLIC UTILITY EASEMENT
RDWY	ROADWAY
R/W	RIGHT OF WAY

- DECIDUOUS TREE
- PALM TREE
- PINE TREE
- SAGUARO

- BOUNDARY
- CENTERLINE
- EASEMENT LINE
- METAL RAIL FENCE
- OHE OVERHEAD ELECTRIC LINE
- RIGHT OF WAY LINE
- SECTION LINE
- STORM DRAIN LINE
- WALL
- CONCRETE
- ASPHALT

N

30 15 0 30 60 90

SCALE: 1"=30'

REGISTERED LAND SURVEYOR
25090
MICHAEL J. THOMPSON
4/2/20
ARIZONA U.S.A.
Expires 09/30/2022

Helix Engineering, LLC
Engineering / Surveying / Consulting
3240 E Union Hills
Suite 113
Phoenix AZ 85050
ph 602-788-2616
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BLUE STAKE CENTER

RELEASE	
DATE	

REVISIONS		
NO.	DATE	
1		
2	.	.
3	.	.

PROJECT NAME

ALTA LAND TITLE SURVEY

PROJECT ADDRESS

2820 W STATE ROUTE 89A
SEDONA, ARIZONA
86336

PROJECT AREA

AZ-89A & SOUTHWEST DR

HELIX JOB NUMBER	IN HOUSE
470	DRAWN BY: TDS CHECKED BY: MJT

SHEET TITLE

ALTA/NSPS LAND TITLE SURVEY
A PORTION OF SW 1/4 SEC. 11, T.17N., R.5E., G. & S.R.B. & M.

SHEET	PAGE
	2 OF 2

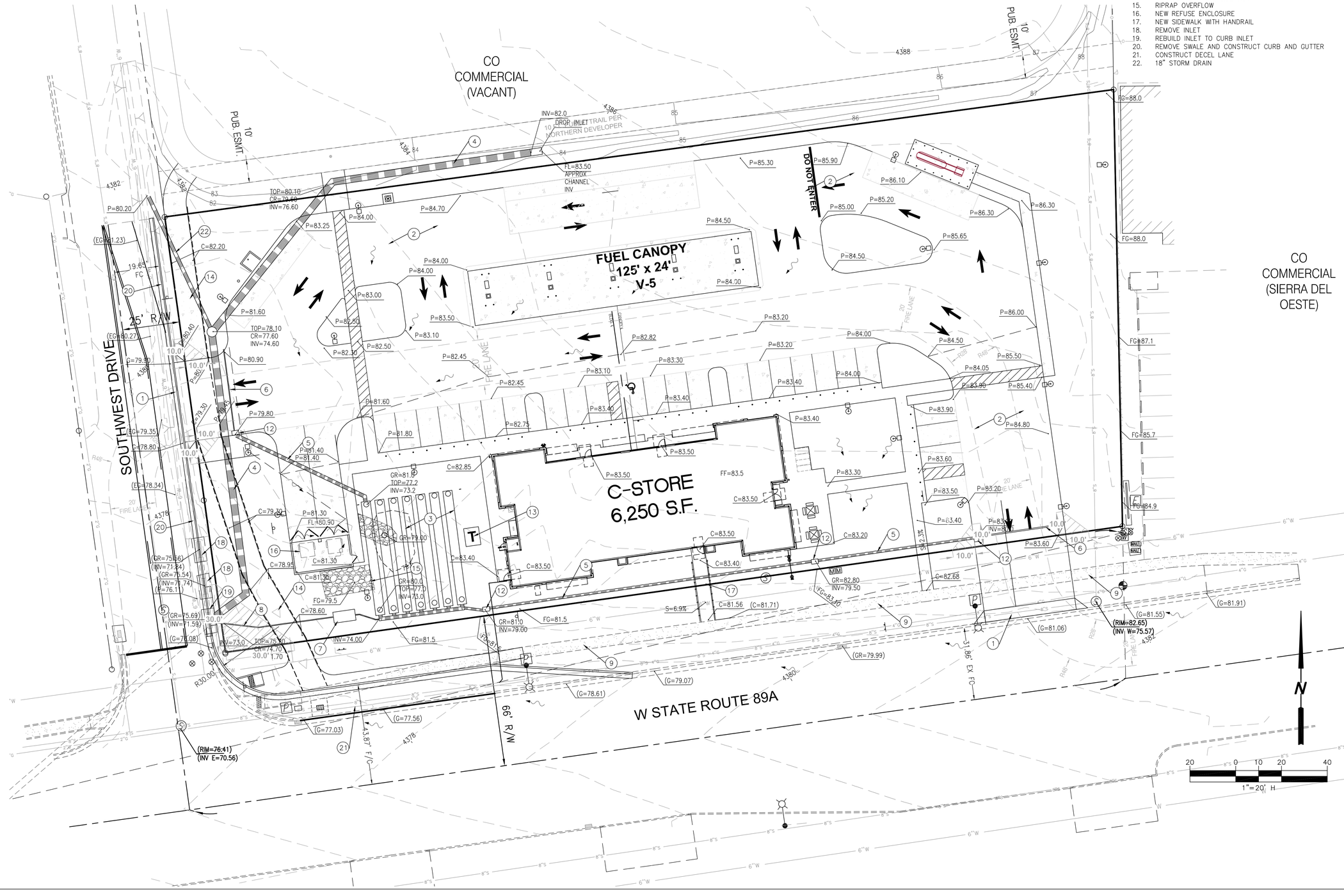
PLOT SCALE: 1:1 @ 24"x36"; 1:2.2 @ 11"x17"

Apr 02, 2020 - 1:23pm
Q:\JOBS\470 Circle K-Sedona\DWGS\SRVY\470 89A & Southwest ALTA v3.dwg

KEYED NOTES

(X)

1. NEW DRIVEWAY
2. NEW ONSITE PAVING
3. CONSTRUCT DETENTION BASIN – 7x50' 48" CMP UNDERGROUND RETENTION
4. NEW 36" STORM DRAIN AND DROP INLET
5. NEW ONSITE STORM DRAIN
6. NEW VANE DRAIN
7. NEW PRECAST SEPARATOR WITH COALESCING PACK
8. NEW 4" BLEED LINE
9. SIDEWALK TO REMAIN
10. NEW PIPE CULVERT – 15" RGRCP PIPE WITH TONGUE AND GROOVE JOINTS (NO BELL JOINTS)
11. EXISTING GRATE INLETS TO REMAIN
12. NEW ONSITE INLET
13. NEW APS TRANSFORMER
14. NEW 10' CONCRETE SIDEWALK
15. RIPRAP OVERFLOW
16. NEW REFUSE ENCLOSURE
17. NEW SIDEWALK WITH HANDRAIL
18. REMOVE INLET
19. REBUILD INLET TO CURB INLET
20. REMOVE SWALE AND CONSTRUCT CURB AND GUTTER
21. CONSTRUCT DECEL LANE
22. 18" STORM DRAIN



CLIENT:
Land Development Consultants, LLC
11811 N. Tatum Boulevard, Suite 1051
Phoenix, AZ 85028
ph: 602-684-5210
fax: 480-393-0946
contact: Michael Scarbrough

PRELIMINARY

Registered Professional Engineering — CERTIFICATE NO. 30489 — STEVEN R. BOWSER — 1-26-23 — ARIZONA U.S.A. — Expires 09/30/2026

Helix Engineering, LLC
Engineering / Surveying / Consulting
3240 E Union Hills
Suite 113
Phoenix AZ 85050
ph 602-788-2616
www.hxeng.com

RELEASE	
DATE	
2-15-21	DRAFT GD
3-1-21	UG RETENTION
6-4-21	REV SP
10-11-22	REVISED SP-CITY COMMENTS
7-14-23	REVISED SP-CITY COMMENTS
7-20-23	REVISED SP

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

PROJECT NAME
CIRCLE K

PROJECT ADDRESS
W. AZ-89A
Sedona, AZ
86336

PROJECT AREA
89A / Southwest Dr.

HELIX JOB NUMBER: 470
IN HOUSE
DRAWN BY: HXE
CHECKED BY: SB

SHEET TITLE
PRELIM G / D PLAN

SHEET: GD-1
PAGE: 1 OF 1

PLOT SCALE: 1:1 @ 24"x36"; 1:2.2 @ 11"x17"

PZ22-00004

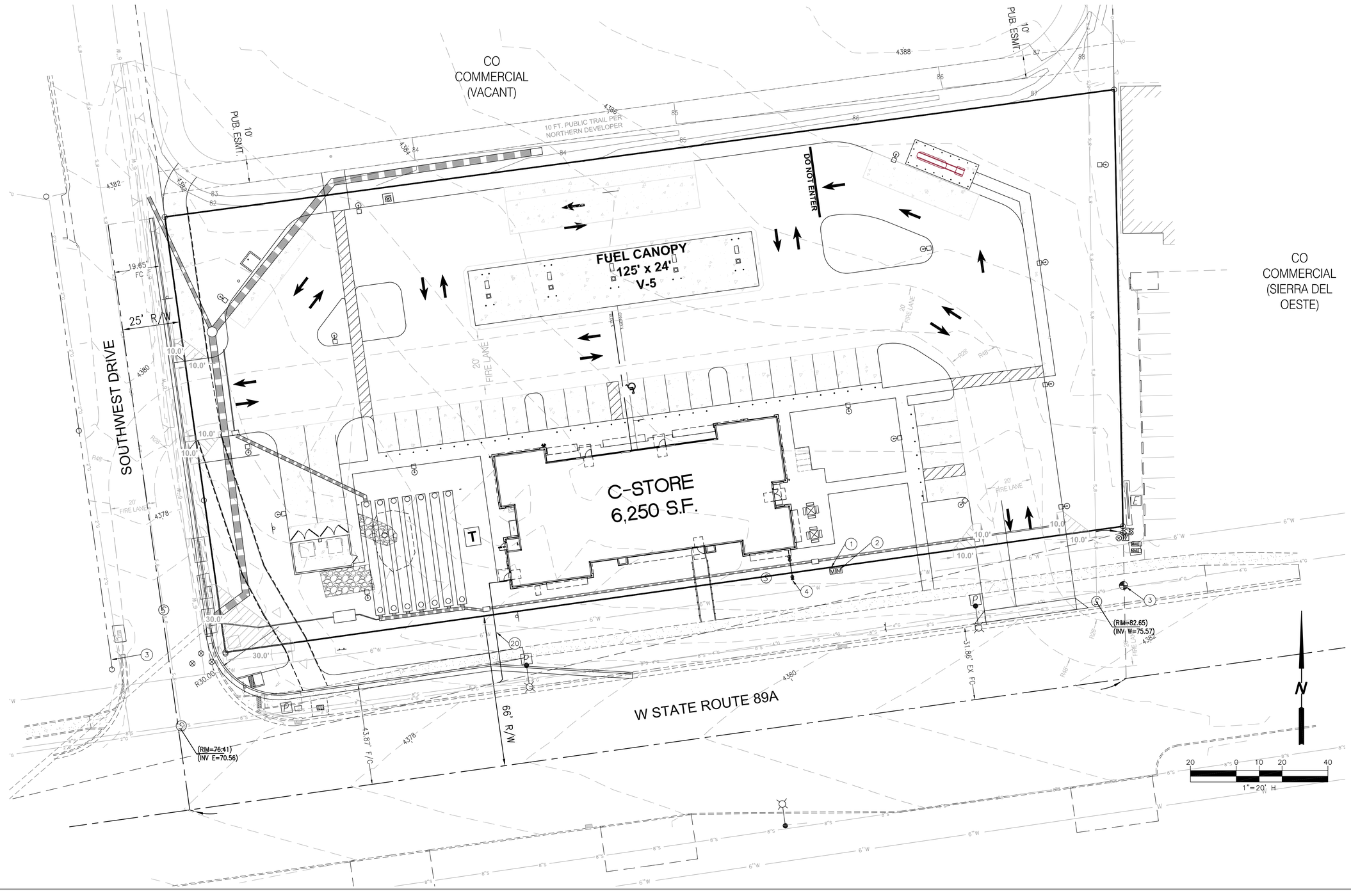
Jul 21, 2023 - 8:32am
O:_JOBS\470 Circle K-Sedona\DWGS\XREF\470 mgr plans.dwg

KEYED NOTES

(X)

1. ISNTALL NEW 2" METER PER AWC DETAILS
2. INSTALL NWE 1" METER PER AWC DETAILS (LDSC)
3. EXISTING FH TO REMAIN
4. CONSTRUCT 6" TS&V AND DOUBLE CHECK FOR FIRELINE

20. INSTALL NEW 6" SEWER TAP TO CITY MAIN



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PRELIMINARY

Registered Professional Engineer
CERTIFICATE NO.
30489
STEVEN R. BOWSER
7-20-23
ARIZONA U.S.A.
Expires 09/30/2024

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Phoenix AZ 85050
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RELEASE	
DATE	
2-15-21	DRAFT GD
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7-20-23	REVISED SP

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PROJECT NAME
CIRCLE K

PROJECT ADDRESS
W. AZ-89A
Sedona, AZ
86336

PROJECT AREA
89A / Southwest Dr.

HELIX JOB NUMBER: 470
IN HOUSE: DRAWN BY: HXE, CHECKED BY: SB

SHEET TITLE
PRELIM UTIL PLAN

SHEET: UT-1
PAGE: 1 OF 1

PLOT SCALE: 1:1 @ 24"x36"; 1:2.2 @ 11"x17"

PZ22-00004

Jul 21, 2023 - 8:32am
Q:\JOBS\470 Circle K-Sedona\DWGS\XREF\470 impr plans.dwg

1250 E. State Route 89A
Cottonwood, AZ 86326

Feb 16, 2020

Robin Nash
Helix Engineering, LLC
3240 E. Union Hills Dr.
Suite # 113
Phoenix, AZ 85050
Cell # 623-418-5344
Office # 602-788-2616

ADDRESS: 2820 W. State Route 89A Sedona, AZ parcel # 408-24-124E

The above referenced project is located in Arizona Public Service Company's electric service area. As a matter of fact, this property is already being served by APS. The Company extends its lines in accordance with the "Conditions Governing Extensions of Electric Distribution Lines and Services," Schedule 3, and the "Terms and Conditions for the Sale of Electric Service," Schedule 1, on file with the Arizona Corporation Commission at the time we begin installation of the electric facilities. These Schedules are available on-line at aps.com.

Application for the Company's electric service often involves construction of new facilities for various distances and costs depending upon customer's location, load size and load characteristics. With such variations, it is necessary to establish conditions under which Arizona Public Service will extend its facilities.

Sincerely,

Patty G

Verde Control Desk
928 646 8502
Verdecontroldesk@apsc.com

Our Purpose: As Arizona stewards, we do what is right for the people and prosperity of our state.
Our Vision: Create a sustainable energy future for Arizona.
Our Mission: Serve our customers with clean, reliable and affordable energy.

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, AZ 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

March 5, 2021

Robin Nash
Helix Engineering, LLC
3240 E. Union Hills Dr.
Suite 113
Phoenix, AZ 85050

Re: Domestic Water Service to APN 408-24-536C

Dear Ms. Nash:

Arizona Water Company (the "Company") certifies that the above-described property is located within its Certificate of Convenience and Necessity in Sedona, Arizona, and that it will provide water service to the property in accordance with the Company's tariffs and the Arizona Corporation Commission's rules and regulations. It will be the responsibility of the developer to provide the funds to install the necessary water facilities, and the Company assumes no liability to install those facilities if the funds are not advanced by the developer.

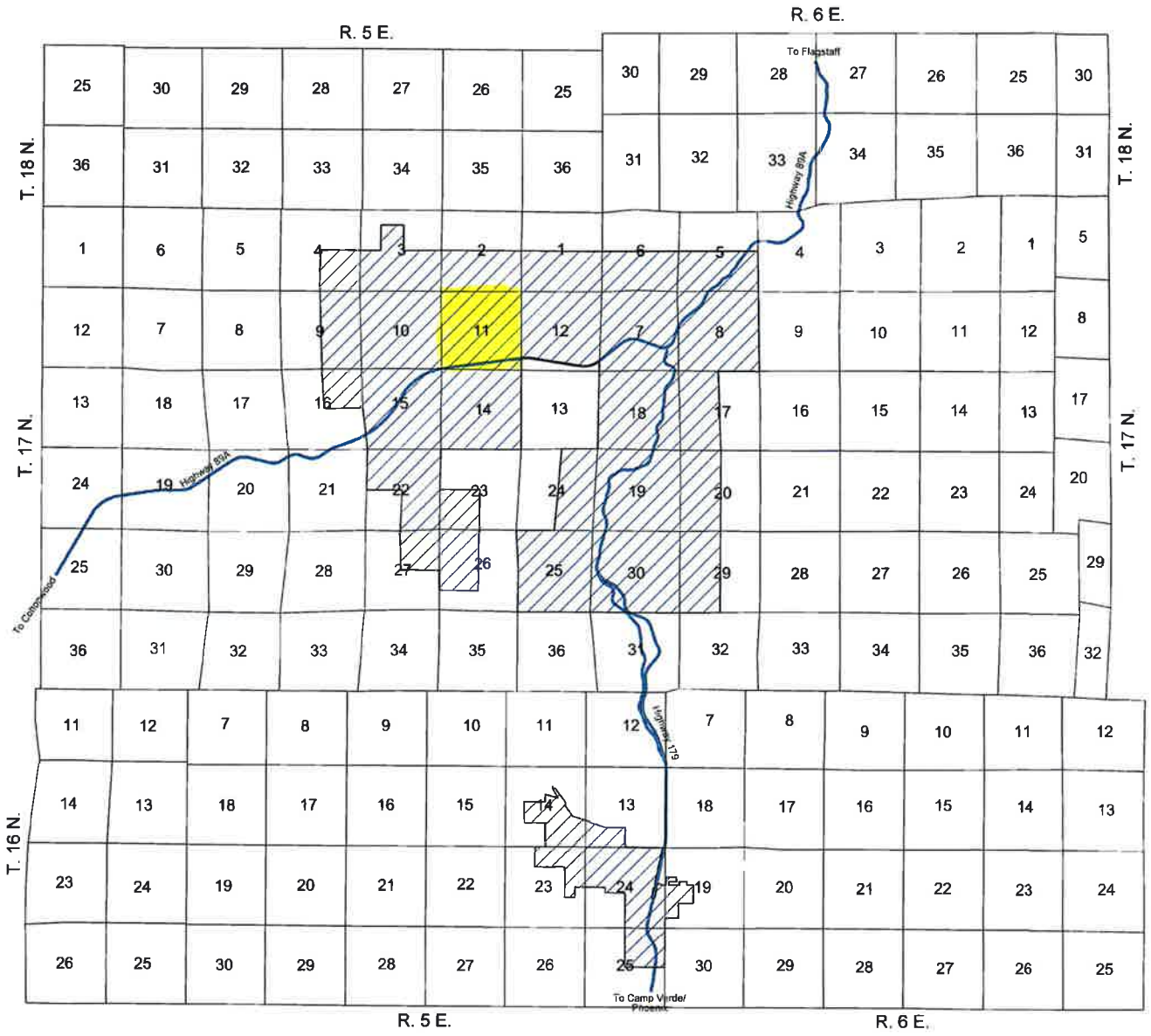
The design of the water distribution system must comply with the Company's standard specifications that are on file at the Arizona Department of Environmental Quality. Both preliminary and final water system designs must be approved by the Company.

It will also be the responsibility of the developer to meet all the requirements of regulatory agencies having jurisdiction over Arizona subdivisions and of Arizona statutes applicable to subdivided or unsubdivided land, including, but not limited to, requirements relating to a Certificate of Assured Water Supply, as set forth in the Arizona Groundwater Management Act, A.R.S. §45-576.

Very truly yours,

Andrew J. Haas, P.E.
Vice President - Engineering
engineering@azwater.com

sla



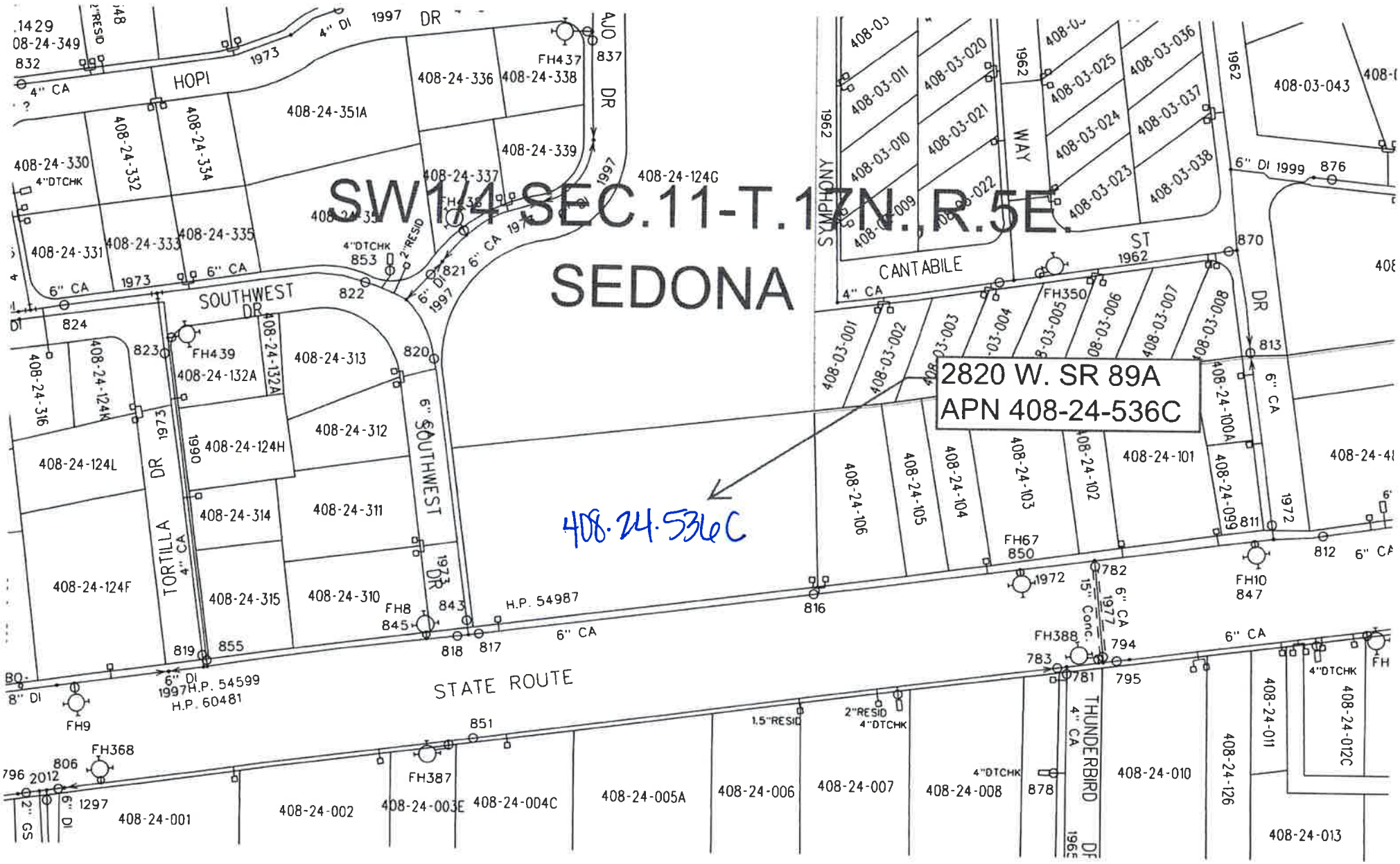
Area Covered By Present CCN

No	Decision Date	Revision	By	Date
23	11/05	Decision No. 68300 (VOC)	CB	1/06
22	4/04	Decision No. 66582	CB	4/04
21	7/00	Decision No. 61849 (VOC)	CB	4/00
20	3/99	Decision No. 60717 (VOC)	GRS	5/99
19	7/97	Decision No. 60269	GRS	5/99
18	1/95	Decision No. 59399 (VOC)	GRS	12/95
17	8/88	Decision No. 56108 (Tmsh-VOC)	GRS	1/89
16	9/86	Decision No. 55153 (DEL-VOC)	GRS	1/88
15	9/83	Decision No. 53757 (Tmsh VOC)	GRS	10/83
14	1/74	Decision No. 43313	RWH	1/74
13	8/73	Decision No. 43993 (+VOC)	MB	8/73
12	10/69	Decision No. 40253 (Tmsh)	CB	12/17
11	2/67	Decision No. 38825	RB	11/68
10	10/66	Decision No. 38677 (Tmsh)	RB	11/68
9	1/66	Decision No. 38309	RB	11/68
8	12/65	Decision No. 38226 (Tmsh)	RB	11/68
7	12/64	Decision No. 35607 (Tmsh)	RB	11/68
6	9/63	Decision No. 34756 (VOC)	RB	11/68
5	5/63	Decision No. 34610 (Tmsh)	RB	11/68
4	5/63	Decision No. 34532	RB	11/68
3	4/63	Decision No. 34462 (Tmsh)	RB	11/68
2	9/62	Decision No. 34082 (Tmsh)	RB	11/68
1	8/60	Decision No. 32356 (VOC)		11/68

ARIZONA WATER COMPANY

AREA COVERED BY PRESENT C C N
AT
SEDONA

DATE: August 1980
SCALE: 1" = 1 Mile


SW1/4 SEC.11-T.17N.,R.5E.
SEDONA
2820 W. SR 89A
APN 408-24-536C
408.24.536C
HOPI
SOUTHWEST DR
CANTABILE ST
SYMPHONY WAY
TORTILLA DR
THUNDERBIRD DR
STATE ROUTE
408-24-351A
408-24-336
408-24-338
408-24-339
408-24-337
408-24-124G
408-24-330
408-24-332
408-24-334
408-24-331
408-24-333
408-24-335
408-24-313
408-24-132A
408-24-312
408-24-124H
408-24-314
408-24-311
408-24-124L
408-24-124F
408-24-315
408-24-310
408-24-316
408-24-124K
408-24-106
408-24-105
408-24-104
408-24-103
408-24-102
408-24-101
408-24-100A
408-24-099
408-03-001
408-03-002
408-03-003
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408-03-009
408-03-010
408-03-011
408-03-020
408-03-021
408-03-022
408-03-023
408-03-024
408-03-025
408-03-036
408-03-037
408-03-038
408-03-043
408-24-001
408-24-002
408-24-003E
408-24-004C
408-24-005A
408-24-006
408-24-007
408-24-008
408-24-010
408-24-011
408-24-126
408-24-012C
408-24-013
FH437
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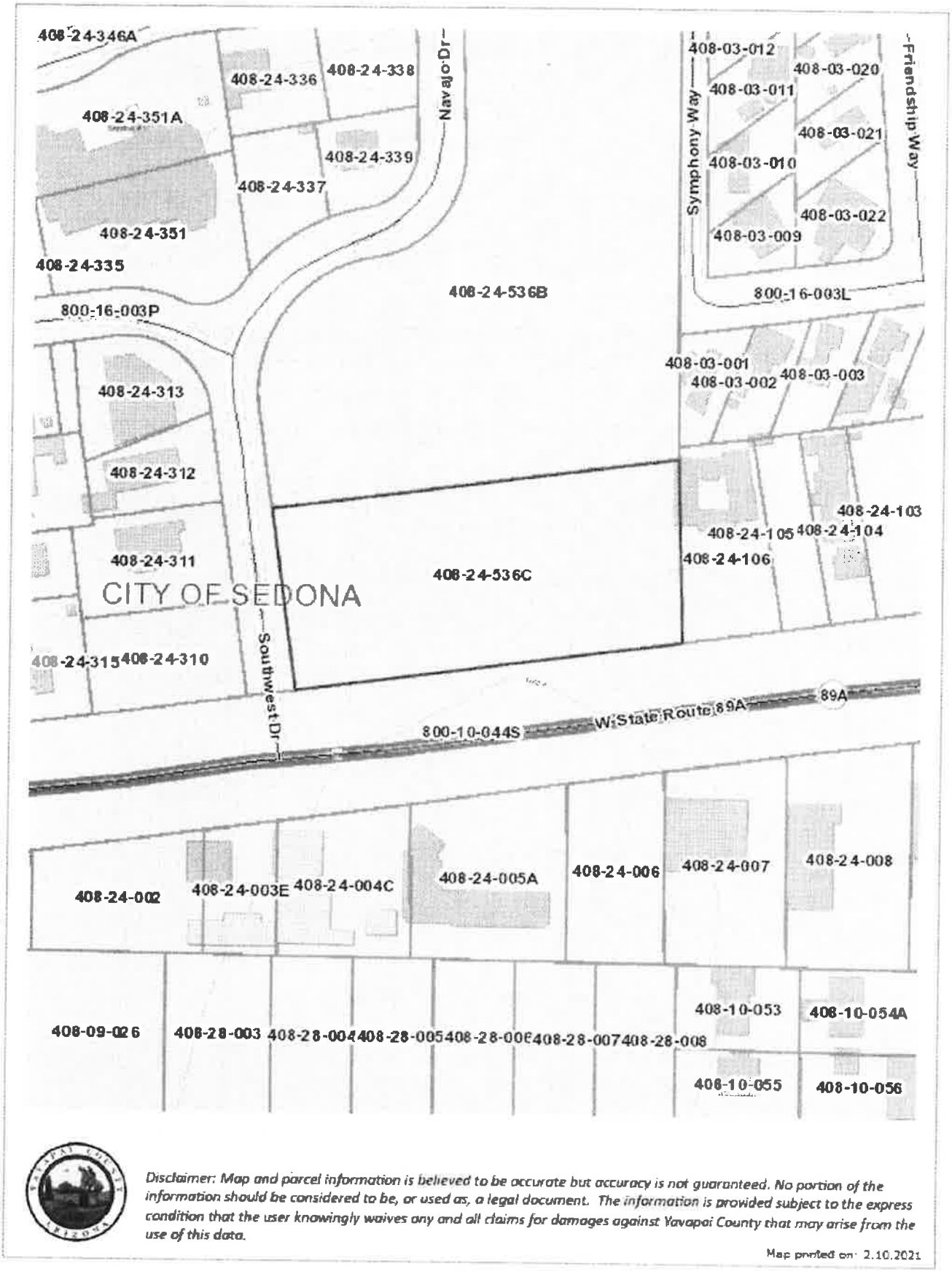
H.P. 54599
H.P. 60481



Disclaimer: Map and parcel information is believed to be accurate but accuracy is not guaranteed. No portion of the information should be considered to be, or used as, a legal document. The information is provided subject to the express condition that the user knowingly waives any and all claims for damages against Yavapai County that may arise from the use of this data.

Map printed on: 2.10.2021

SERVICEABILITY LETTER

Casey Goff

From: Robin Nash [rn@hxeng.com]
Sent: Wednesday, February 10, 2021 9:40 AM
To: Casey Goff
Subject: Will serve letter

Hello, I am looking for a will serve letter for 2820 W. State RouteA Sedona, AZ.
APN#~~408-24-124E~~ 408-24-536C You can mail it to Helix Engineering LLC 3240 E. Union Hills Dr. #113 Phoenix, AZ 85050.

Thank you

--

Robin Nash

Helix Engineering, LLC

3240 E. Union Hills Dr.

Suite # 113

Phoenix, AZ 85050

Cell # 623-418-5344

Office # 602-788-2616

SEND TO:

Preliminary Drainage Report

For

Circle K

NE corner State Route 89A / Southwest Dr

Sedona, AZ

City Case : PZ22-0004
Job: 470
July 2023

Prepared by:

Steve Bowser, PE
Helix Engineering, LLC
3240 E. Union Hills Dr #113
Phoenix, AZ 85050
602-788-2616
sb@hxeng.com

EXP 9-30-23

Preliminary DRAINAGE REPORT
For
Circle K
NE corner State Route 89A / Southwest Dr

Sedona, AZ

1.0 INTRODUCTION

The proposed site is located at the northeast corner of W. State Route 89A and Southwest Drive located withing the City of Sedona, Arizona. The site is situated within the Southwest Quarter of Section 11, Township 17 North, Range 5 East of the Gila and Salt River Base and Meridian, Yavapai County, Arizona. The site is currently vacant with developed streets on the west and south boundaries of the site. This project will develop a convenience store building, fuel canopy and car wash on the site.

2.0 OBJECTIVES – PROJECT DEVELOPMENT AND BACKGROUND

The purpose of this report is to verify the site compliance with the drainage requirements set forth in the *Drainage Design Manual for Yavapai County Dated 2015*.

3.0 EXISTING SITE CONDITIONS

Currently, the site is a vacant site. State Route 89A borders the south side the site and is developed with curb / gutter and detached sidewalk. The west boundary is Southwest Drive. Southwest Drive has no curb and gutter but has a shotcrete lined v ditch immediately east of the edge of pavement. Flows on the site generally flow from the northeast to the southwest.

The state highway has a developed drainage system. Three large inlets are located immediately north of the curb return at Southwest Dr and State Route 89A.

Site north of this site is vacant, and the site to the east is a commercial development.

Project titled Navajo Lofts has designated 103 CFS sheet flow entering the site along the north boundary of the site.

4.0 FLOOD PLAIN DESIGNATION

The west side of the site lies within zone X Shaded per (FEMA) Flood Insurance Rate Map (FIRM), Map Numbers 1456G, dated Sept 3 ,2010.

See Figure 3 for a copy of the FEMA map.

5.0 PROPOSED STORMWATER SITE DETETION

STORMWATER RETENTION AND ONSITE STORM DRAIN

The intent of design of this project is to provide detention so the 2, 10 and 100 post construction flows do not exceed the preconstruction flows. The site is small, and a Tc of 10 minutes use used for both pre and post analysis.

Preconstruction: The preconstruction conditions are an undeveloped site. Existing slope is approx. 2% from the northeast and preconstruction C factor of 0.50 was used.

Post Construction: A composite of 0.88 was used for the post construction site based on 0.95 for paved and roof areas and 0.50 for landscape areas.

Underground stormwater storage pipe will be located the southwest corner of the site to detail runoff to keep flows less than This basin contains a 6" orifice bleed pipe which bleeds to storm drain at the southwest corner of the site. A separator with coalescing pack will be installed in the bleed line to handle any hydrocarbon spills that may take place within the site.

A weir with an elevation of 80.50 at 6' wide will handle overflows at the southwest corner of the site.

Pre and post flows are calculated in Figure 3.

ONSITE STORM DRAIN

A storm drain will convey areas along the southeast corner of the site. The east driveway will have a vane drain installed to capture flows from existing the driveway. These flows will be conveyed to the detention basin.

A separate storm drain will convey offsite flows from the property to the north. The property to the north (Navajo Lofts) has designated 103 CFS entering the site at the north edge of the property. A 36" storm drain will convey these flows from the north property line to the existing inlets at the southwest corner of the site. This pipe will not intercept any onsite flows and will basic 'flow thru' conveyance pipe.

Two additional flows from the north will also be conveyed into a portion of this pipe. The Navajo Lofts project will have a 100 year post flow of 7.0 CFS. (per the Navajo Lofts prelim drainage report) The roadway swale from the north will also convey 4.8 cfs. The Circle K project will remove the roadway swale for the frontage and will intercept these flows int this storm drain.

For preliminary calculations, the roadway swale is calculated as follows:
Area: 1.2 acres (per drainage map from Navajo Lofts)
i=5.7 in / hr (NOAA 14, based on Tc=15 min)
C=0.70 (for half street of Southwest Dr and Navajo Dr and upstream residential lots
Q=0.70 x 5.7 in/hr x 1.20 ac = 4.8 cfs

The pipe conveying the roadside swale will be sized for 7.0 cfs (Navajo Lofts) + 4.8 cfs (roadside swale) = 11.8 cfs

C FACTORS

A C factor of 0.50 is used for new landscape areas and 0.95 for paved and roof areas. 0.50 is used for the native condition.

ULTIMATE OUTFALLS

This project ultimate outfall will remain at the southwest corner of the site at elevation 75.6. The finish floor is in excess of 2' above this elevation. This outfall is unchanged from historical. The site ultimate outfall is the storm drain inlet along Southwest Drive north of US 89A

DISPOSAL

Underground storage pipe will be bled off thru an interceptor and bleed into existing storm drain.

404 AND CONSTRUCTION STORMWATER

This project is not located in a 404 wash. Project exceeds 1 acre and will have a Stormwater Management Plan prepared and an NOI filed with ADEQ prior to improvement plan approval.

6.0 SUMMARY

- This project is the development of a Convenience store, fuel canopy and car wash.
- The site will provide detention for the 2,10 and 100 year. The site will detain 5059 cu ft which will allow each event post construction to not exceed preconstruction flow rates.
- A 36" storm drain will convey offsite flow from the outfall of the project Navajo Lofts and convey to the existing inlets at the corner of 89A and Southwest Drive.
- The Project Site is located within FEMA designated X.
- Site will outfall to the southwest corner of the site.

7.0 REFERENCES

1. Federal Emergency Management Agency, Flood Insurance Rate Map, Maricopa County, Arizona and Incorporated Areas, Map Number 0425C1435G, Sept 3, 2010.

2. Drainage Design Manual, Yavapai County 2015.

Figure 1-VICINITY MAP

Figure 2-FEMA MAP

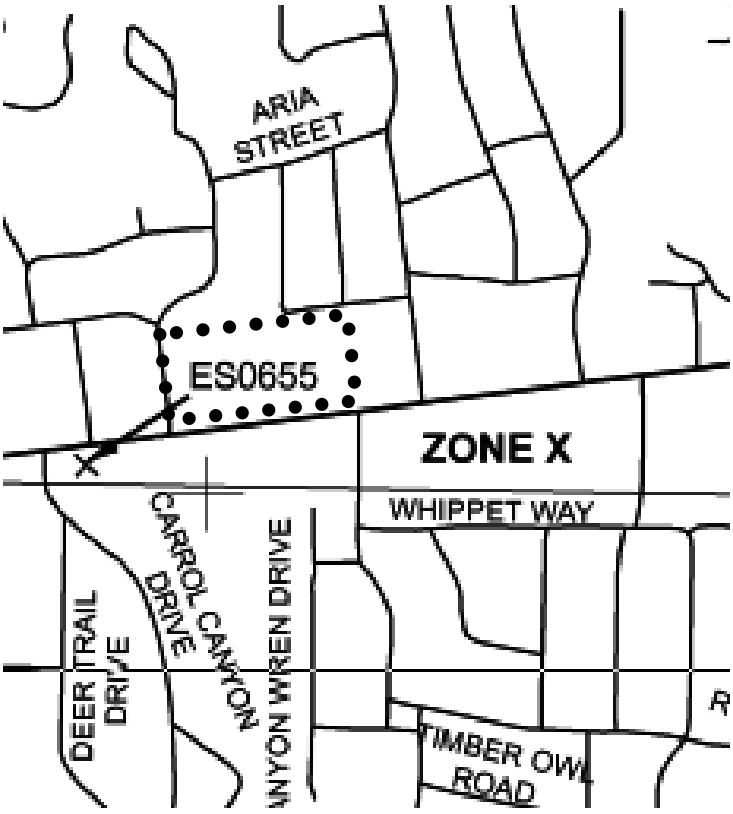


Figure 3-Detention Calculations and storm drain calculations

WEIGHTED C FACTORS

POST CONSTRUCTION		C FACTOR		
Overall	59916		52605.6	**0.88**
Landscape	9588	0.5	4794	
Concrete/paving	50328	0.95	47811.6	

PRECONSTRUCTION		c factor		
Overall	59916		29958	**0.50**
Landscape	59916	0.5	29958	
Non Landscape	0	0.95	0	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

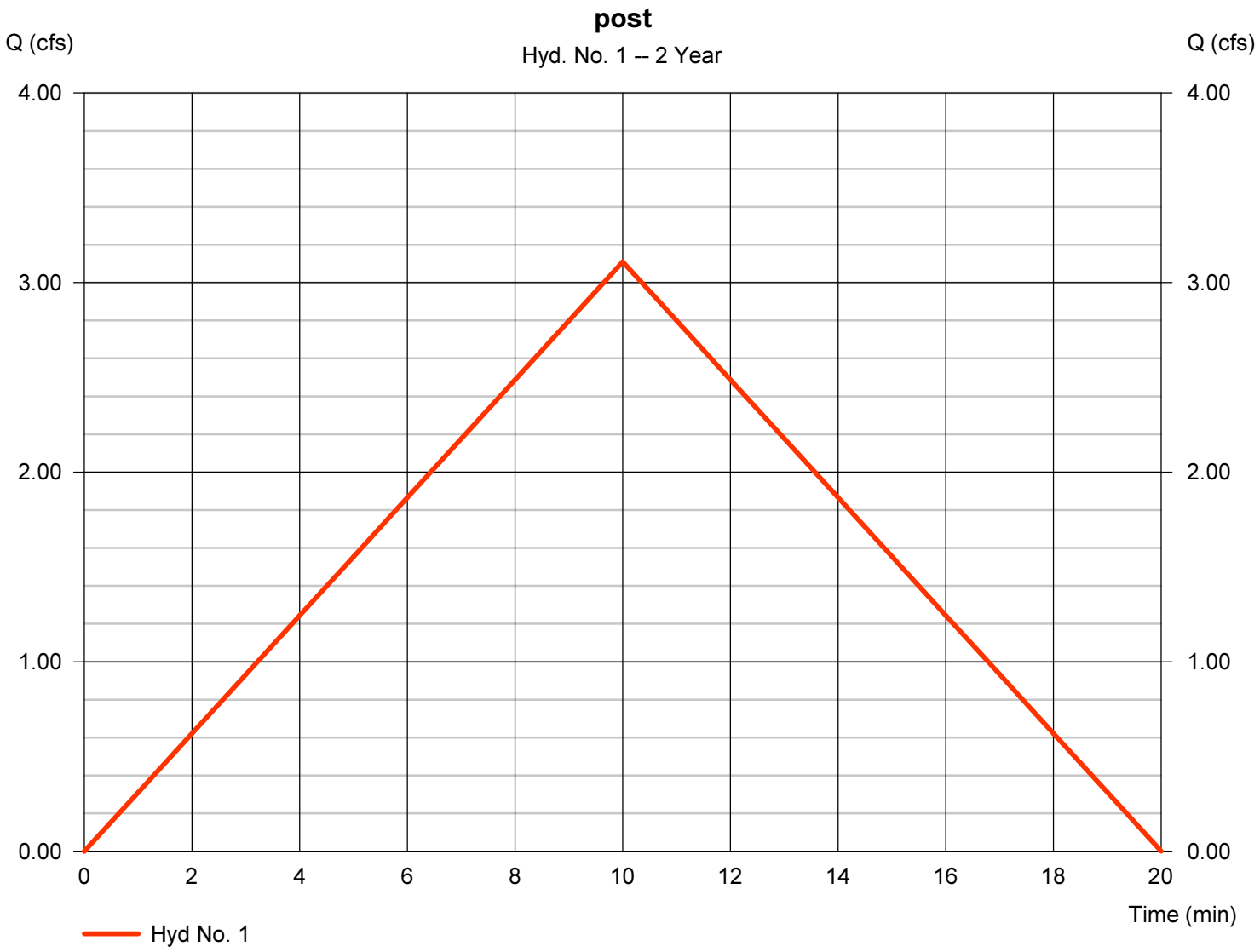
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	3.110	1	10	1,866	------	------	------	post
2	Reservoir	0.154	1	20	1,859	1	74.48	1,729	Post thru new basin
3	Rational	1.767	1	10	1,060	------	------	------	Pre rational

Hydrograph Report

Hyd. No. 1

post

Hydrograph type	= Rational	Peak discharge	= 3.110 cfs
Storm frequency	= 2 yrs	Time to peak	= 10 min
Time interval	= 1 min	Hyd. volume	= 1,866 cuft
Drainage area	= 1.400 ac	Runoff coeff.	= 0.88
Intensity	= 2.524 in/hr	Tc by User	= 10.00 min
IDF Curve	= 470.IDF	Asc/Rec limb fact	= 1/1



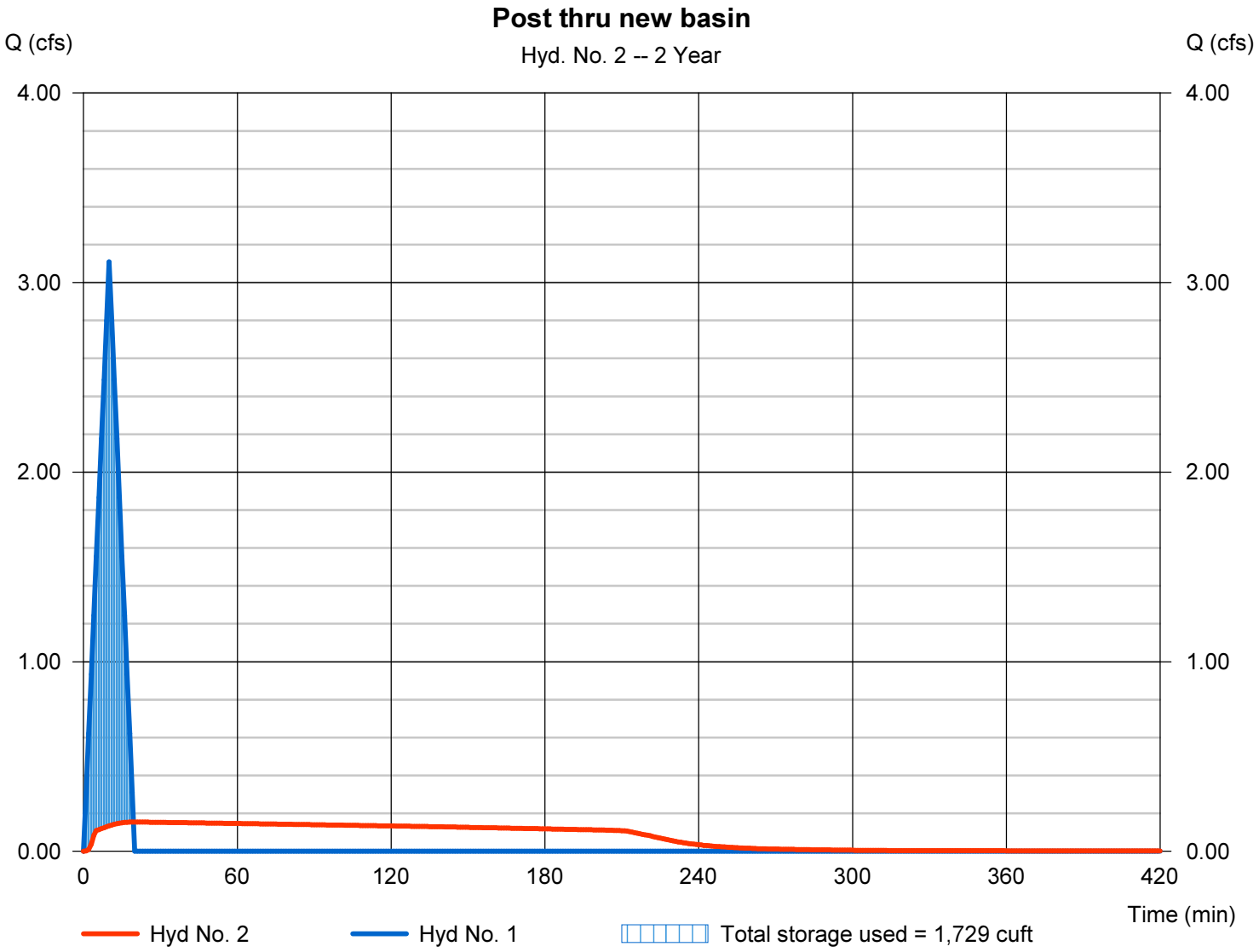
Hydrograph Report

Hyd. No. 2

Post thru new basin

Hydrograph type	= Reservoir	Peak discharge	= 0.154 cfs
Storm frequency	= 2 yrs	Time to peak	= 20 min
Time interval	= 1 min	Hyd. volume	= 1,859 cuft
Inflow hyd. No.	= 1 - post	Max. Elevation	= 74.48 ft
Reservoir name	= onsite basin	Max. Storage	= 1,729 cuft

Storage Indication method used.

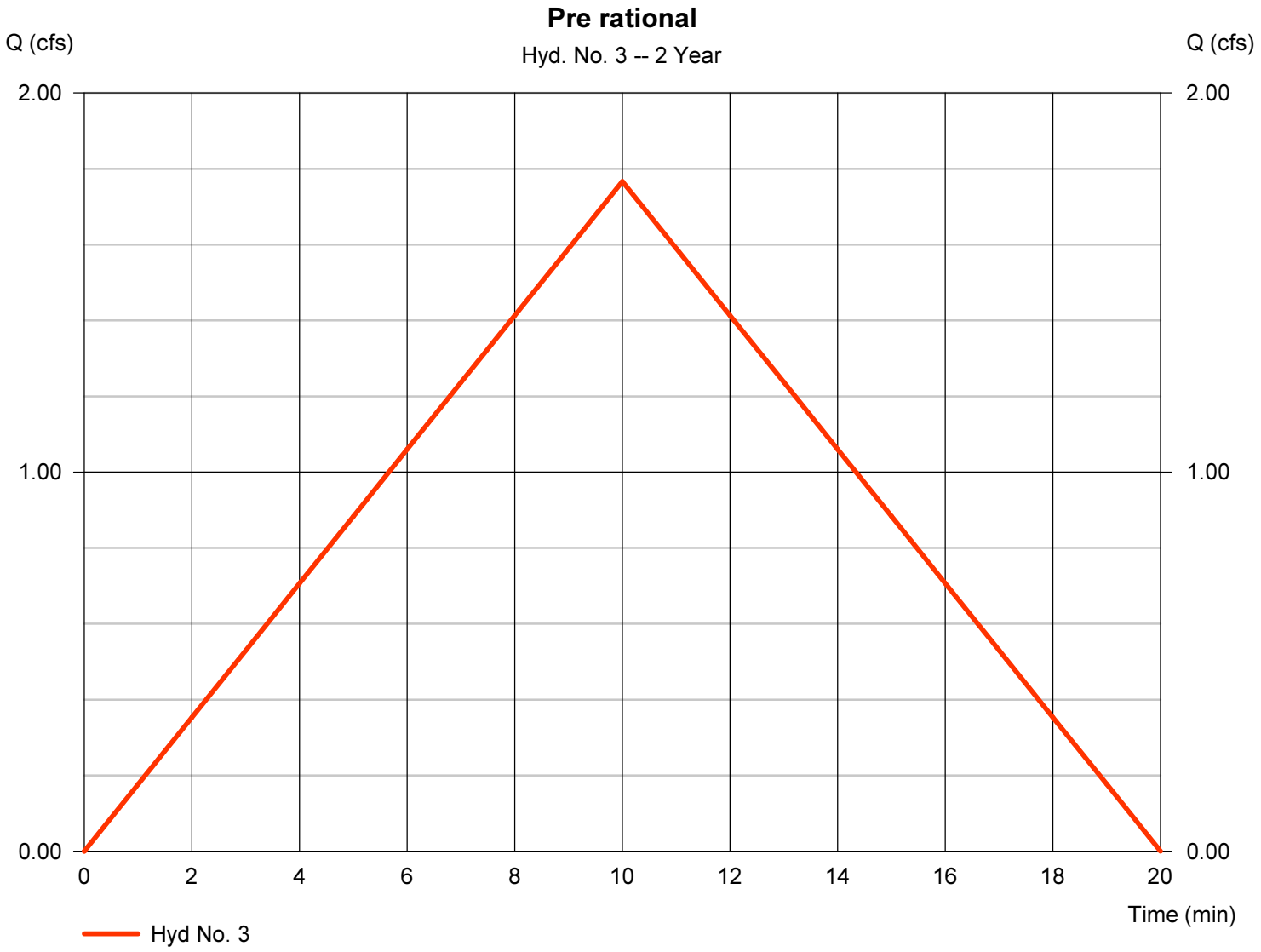


Hydrograph Report

Hyd. No. 3

Pre rational

Hydrograph type	= Rational	Peak discharge	= 1.767 cfs
Storm frequency	= 2 yrs	Time to peak	= 10 min
Time interval	= 1 min	Hyd. volume	= 1,060 cuft
Drainage area	= 1.400 ac	Runoff coeff.	= 0.5
Intensity	= 2.524 in/hr	Tc by User	= 10.00 min
IDF Curve	= 470.IDF	Asc/Rec limb fact	= 1/1



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

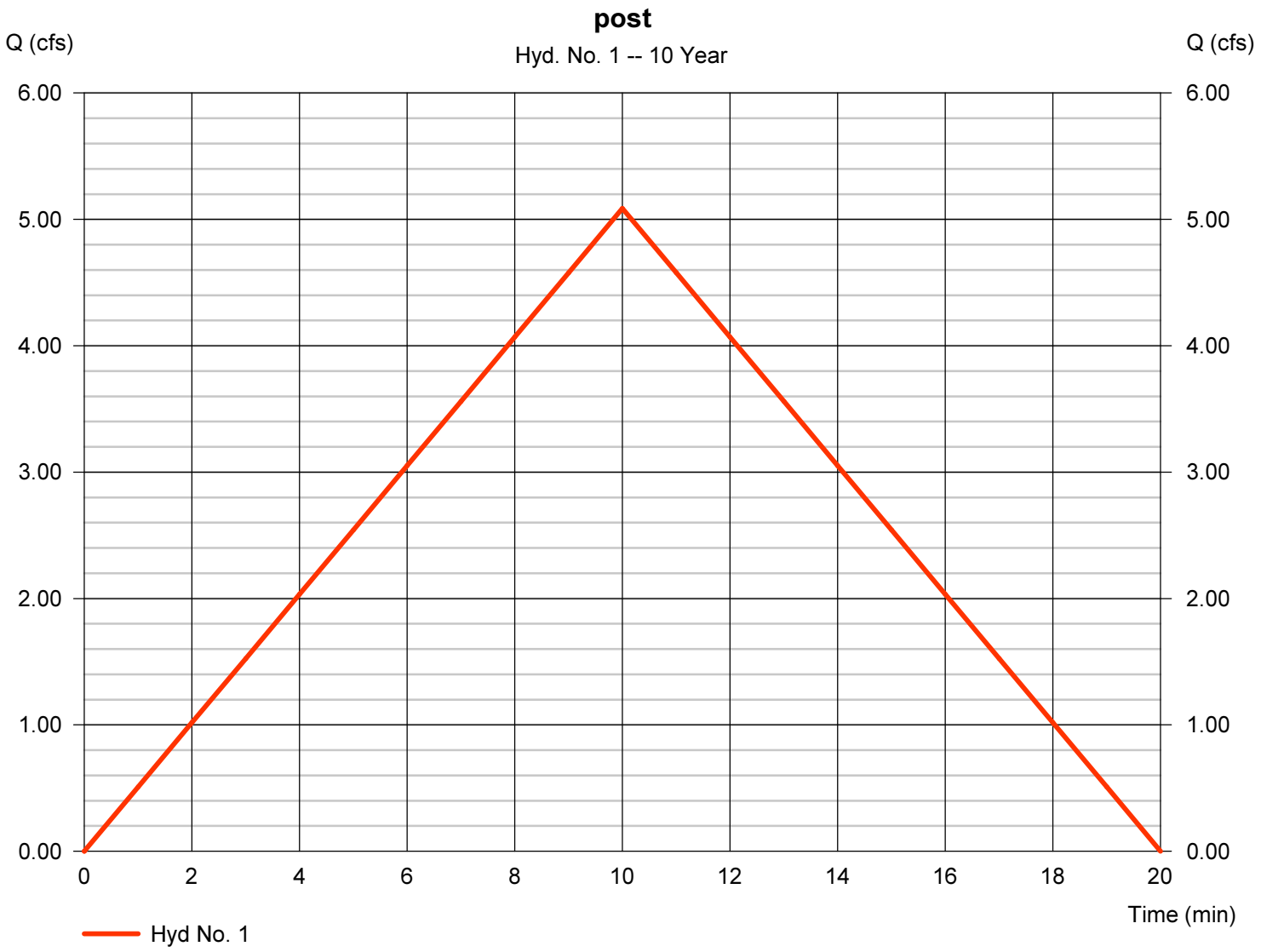
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	5.086	1	10	3,052	------	------	------	post
2	Reservoir	0.177	1	20	3,045	1	75.17	2,895	Post thru new basin
3	Rational	2.890	1	10	1,734	------	------	------	Pre rational

Hydrograph Report

Hyd. No. 1

post

Hydrograph type	= Rational	Peak discharge	= 5.086 cfs
Storm frequency	= 10 yrs	Time to peak	= 10 min
Time interval	= 1 min	Hyd. volume	= 3,052 cuft
Drainage area	= 1.400 ac	Runoff coeff.	= 0.88
Intensity	= 4.128 in/hr	Tc by User	= 10.00 min
IDF Curve	= 470.IDF	Asc/Rec limb fact	= 1/1



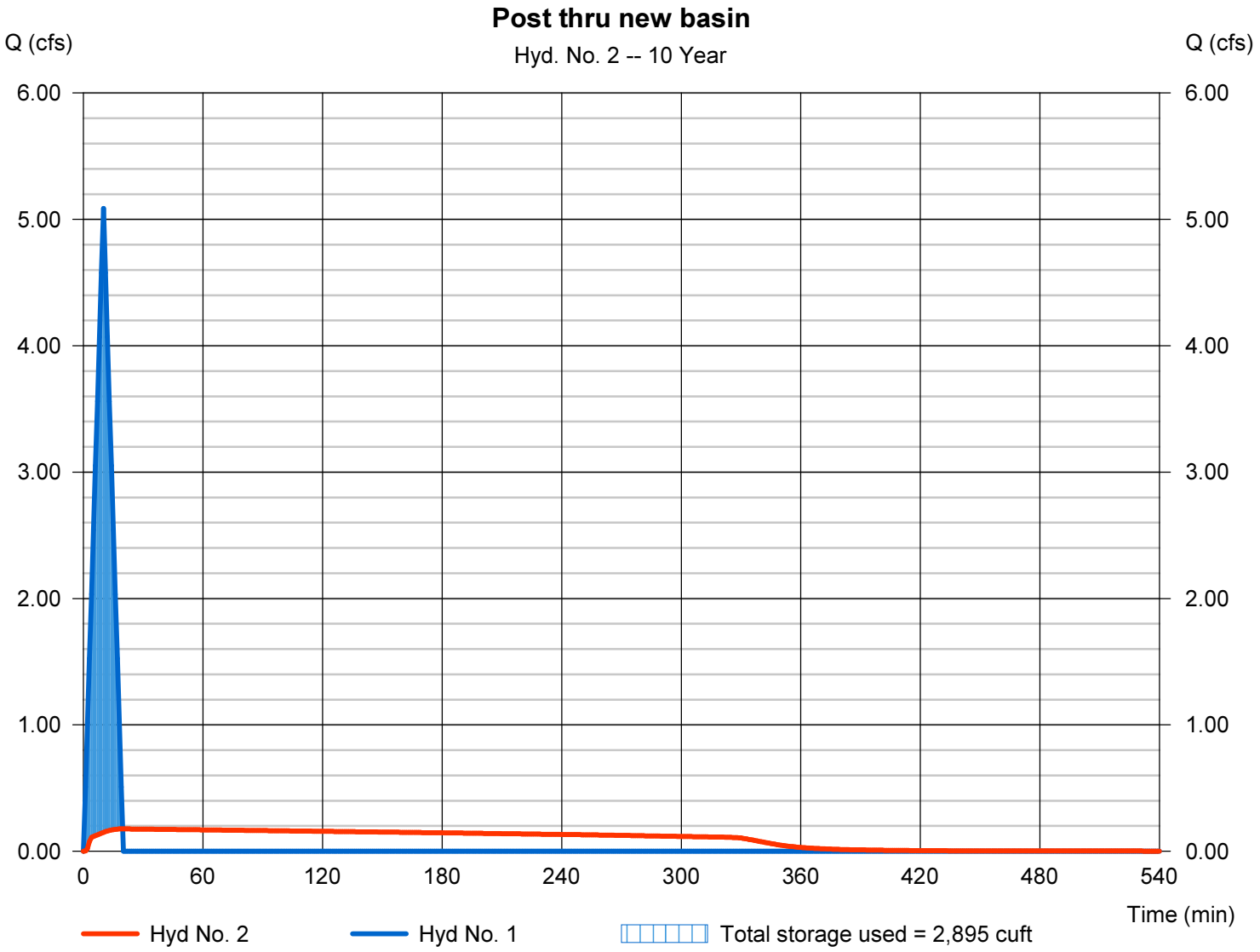
Hydrograph Report

Hyd. No. 2

Post thru new basin

Hydrograph type	= Reservoir	Peak discharge	= 0.177 cfs
Storm frequency	= 10 yrs	Time to peak	= 20 min
Time interval	= 1 min	Hyd. volume	= 3,045 cuft
Inflow hyd. No.	= 1 - post	Max. Elevation	= 75.17 ft
Reservoir name	= onsite basin	Max. Storage	= 2,895 cuft

Storage Indication method used.

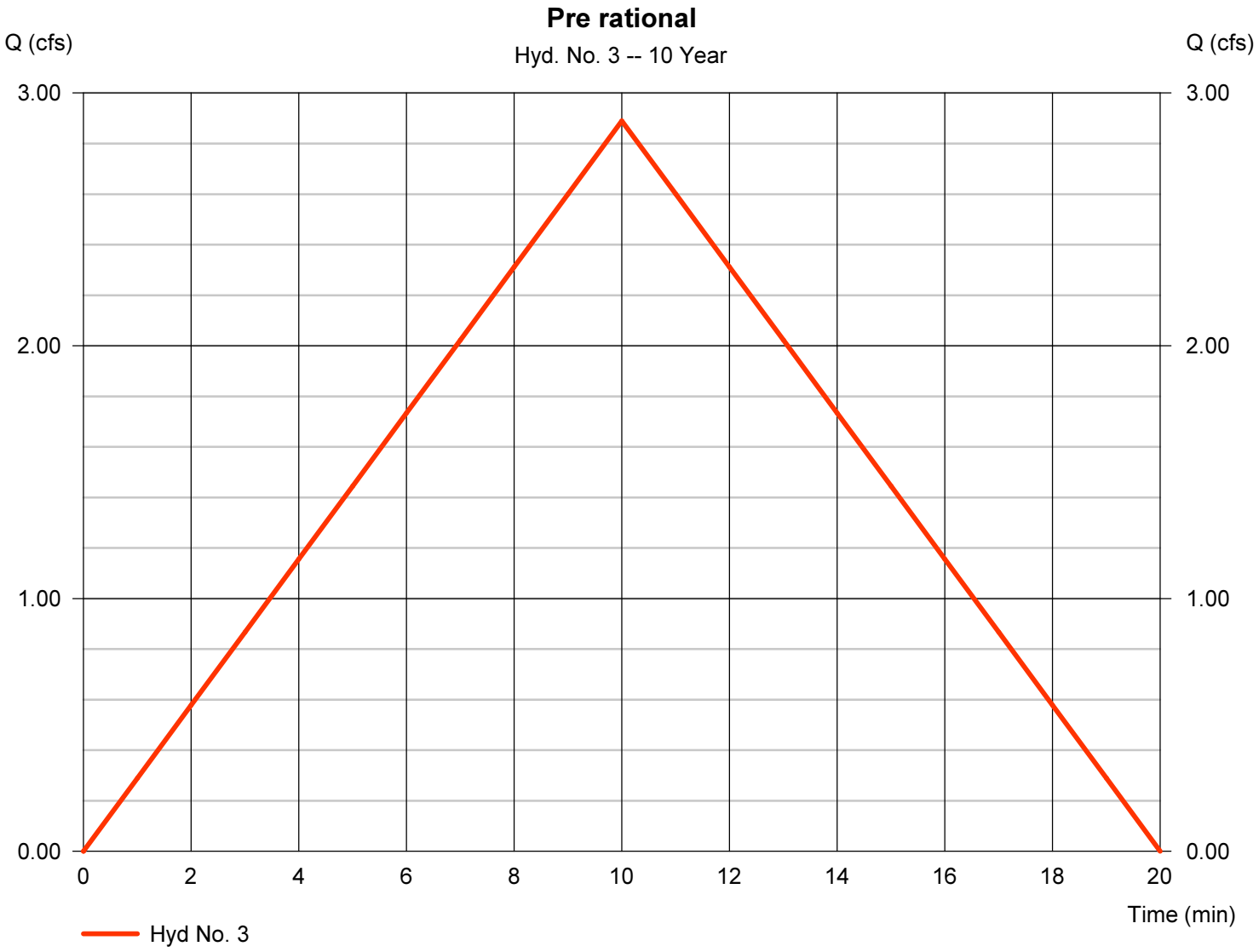


Hydrograph Report

Hyd. No. 3

Pre rational

Hydrograph type	= Rational	Peak discharge	= 2.890 cfs
Storm frequency	= 10 yrs	Time to peak	= 10 min
Time interval	= 1 min	Hyd. volume	= 1,734 cuft
Drainage area	= 1.400 ac	Runoff coeff.	= 0.5
Intensity	= 4.128 in/hr	Tc by User	= 10.00 min
IDF Curve	= 470.IDF	Asc/Rec limb fact	= 1/1



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

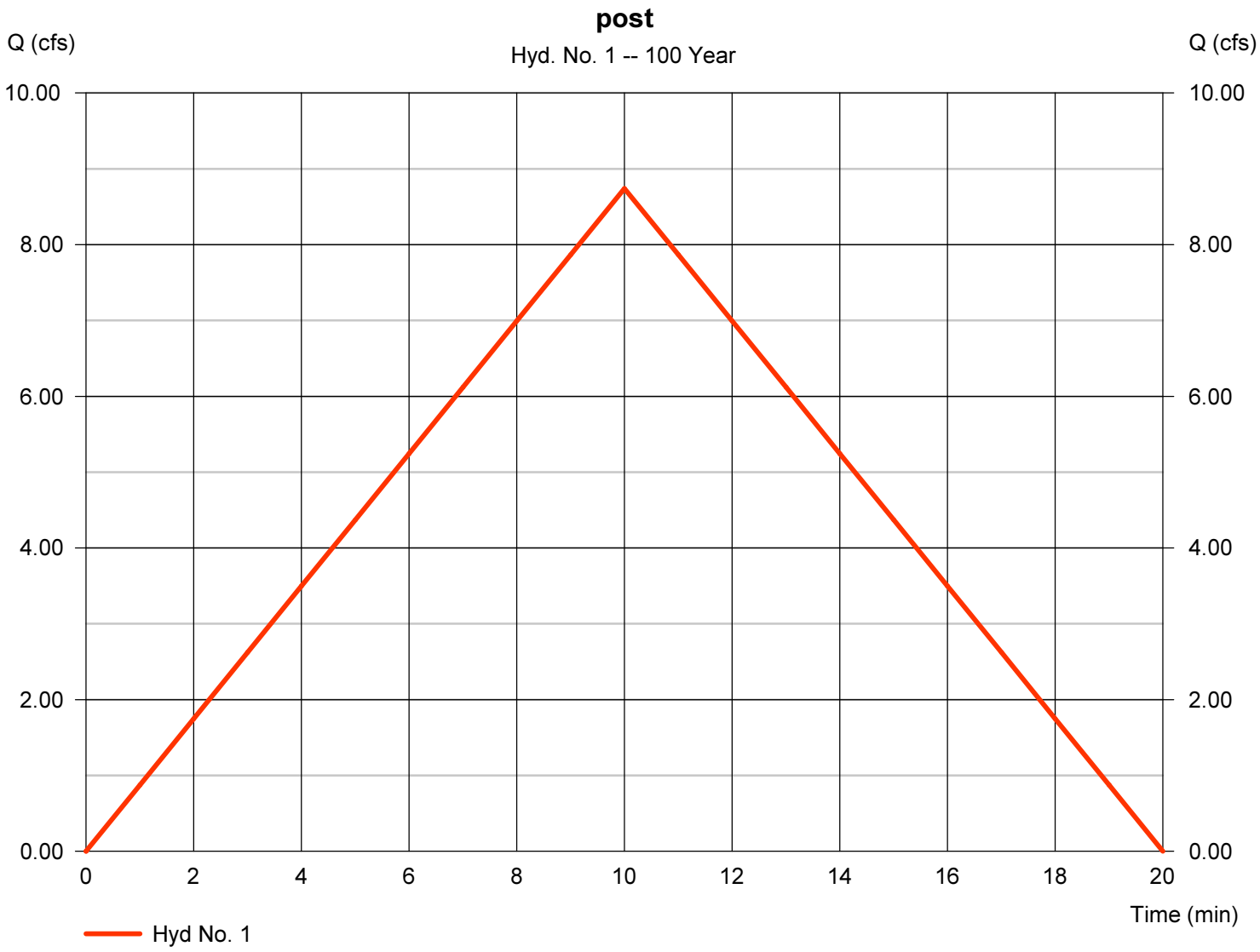
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	8.742	1	10	5,245	------	------	------	post
2	Reservoir	0.216	1	20	5,238	1	76.61	5,059	Post thru new basin
3	Rational	4.967	1	10	2,980	------	------	------	Pre rational

Hydrograph Report

Hyd. No. 1

post

Hydrograph type	= Rational	Peak discharge	= 8.742 cfs
Storm frequency	= 100 yrs	Time to peak	= 10 min
Time interval	= 1 min	Hyd. volume	= 5,245 cuft
Drainage area	= 1.400 ac	Runoff coeff.	= 0.88
Intensity	= 7.096 in/hr	Tc by User	= 10.00 min
IDF Curve	= 470.IDF	Asc/Rec limb fact	= 1/1



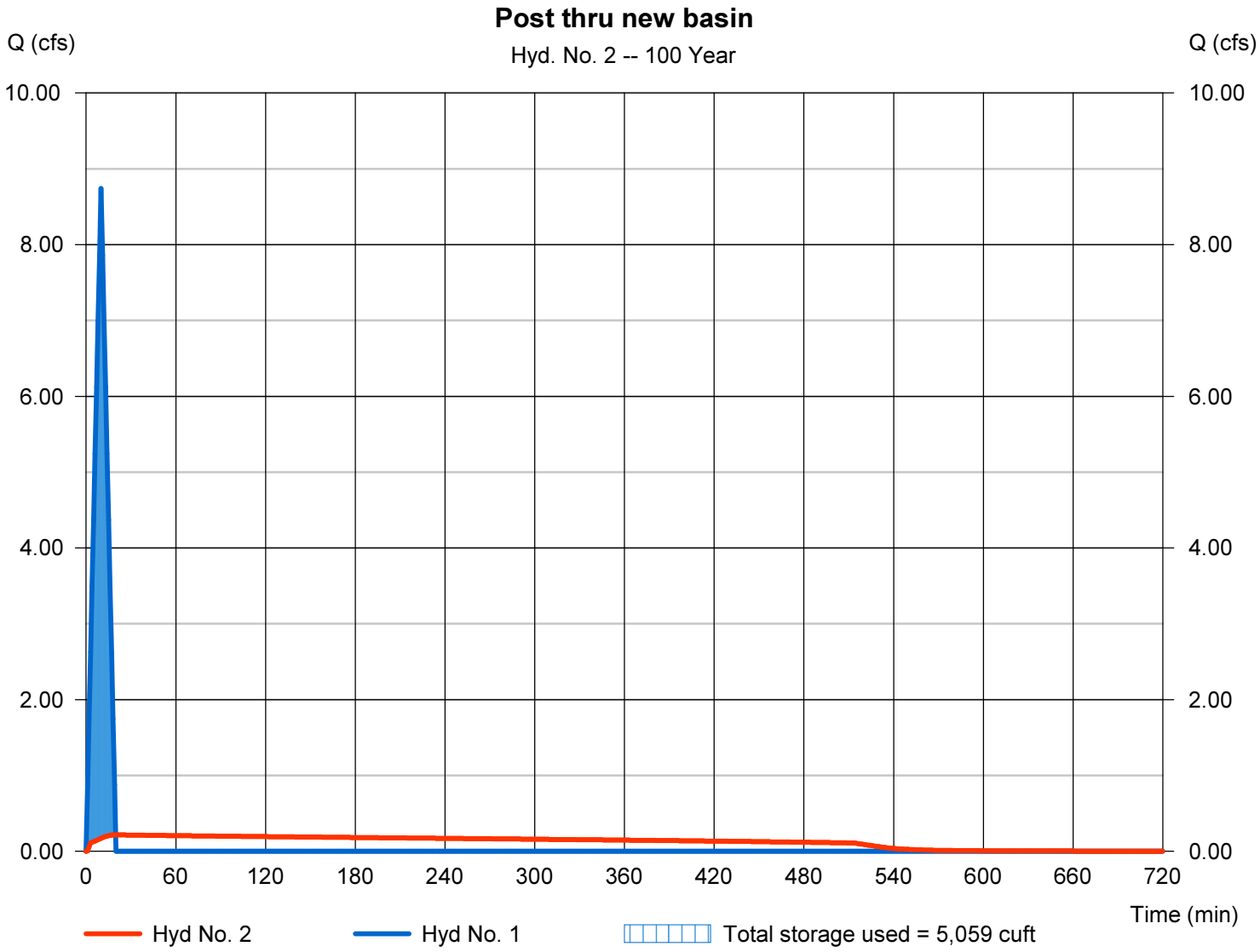
Hydrograph Report

Hyd. No. 2

Post thru new basin

Hydrograph type	= Reservoir	Peak discharge	= 0.216 cfs
Storm frequency	= 100 yrs	Time to peak	= 20 min
Time interval	= 1 min	Hyd. volume	= 5,238 cuft
Inflow hyd. No.	= 1 - post	Max. Elevation	= 76.61 ft
Reservoir name	= onsite basin	Max. Storage	= 5,059 cuft

Storage Indication method used.

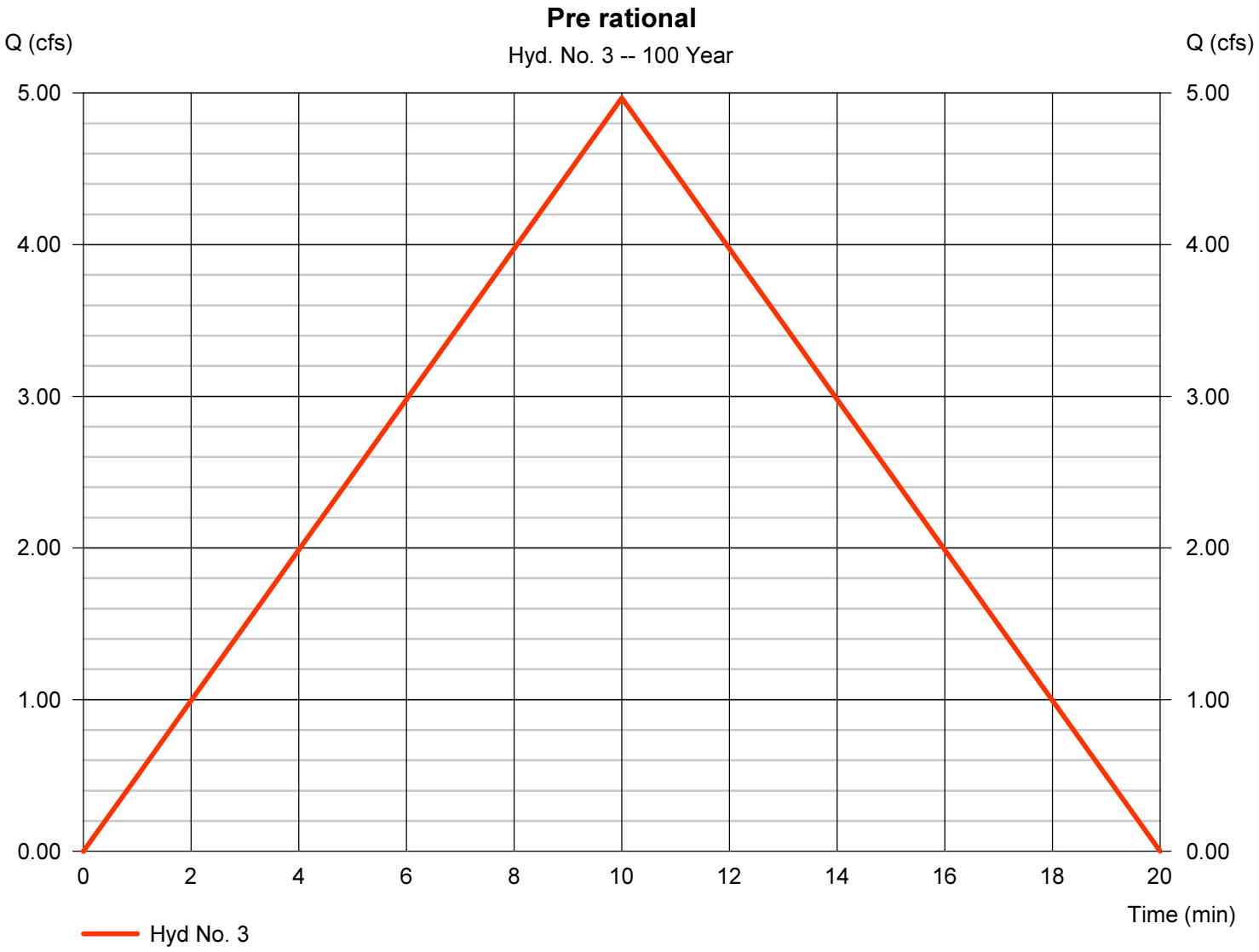


Hydrograph Report

Hyd. No. 3

Pre rational

Hydrograph type	= Rational	Peak discharge	= 4.967 cfs
Storm frequency	= 100 yrs	Time to peak	= 10 min
Time interval	= 1 min	Hyd. volume	= 2,980 cuft
Drainage area	= 1.400 ac	Runoff coeff.	= 0.5
Intensity	= 7.096 in/hr	Tc by User	= 10.00 min
IDF Curve	= 470.IDF	Asc/Rec limb fact	= 1/1



Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	18.5	-40.1	None	0.00	0.00	0.00	0.0	71.70	4.32	72.50	36	Cir	0.013	0.00	78.90	
2	1	114.5	-49.9	MH	0.00	0.00	0.00	0.0	72.50	1.83	74.60	36	Cir	0.013	0.00	81.60	
3	2	85.0	46.8	None	0.00	0.00	0.00	0.0	74.60	2.35	76.60	36	Cir	0.013	0.00	83.00	
4	3	88.1	42.1	DrGrt	103.00	0.00	0.00	0.0	76.60	6.13	82.00	36	Cir	0.013	0.00	85.50	
5	2	64.0	-17.7	None	11.80	0.00	0.00	0.0	76.10	6.41	80.20	18	Cir	0.013	0.00	82.00	

Project File: 470 Culvert from north.stm

Number of lines: 5

Date: 7/16/2023

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1		114.8	36	Cir	18.5	71.70	72.50	4.324	74.61	75.44	0.00	75.44	End	None
2		114.8	36	Cir	114.5	72.50	74.60	1.834	75.50*	78.89*	0.00	78.89	1	Manhole
3		103.0	36	Cir	85.0	74.60	76.60	2.353	78.89*	80.92*	0.00	80.92	2	None
4		103.0	36	Cir	88.1	76.60	82.00	6.129	80.92	84.91	0.00	84.91	3	DropGrate
5		11.80	18	Cir	64.0	76.10	80.20	6.406	78.89	81.51	n/a	81.51 j	2	None

Project File: 470 Culvert from north.stm

Number of lines: 5

Run Date: 7/16/2023

NOTES: Known Qs only ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Hydraulic Grade Line Computations

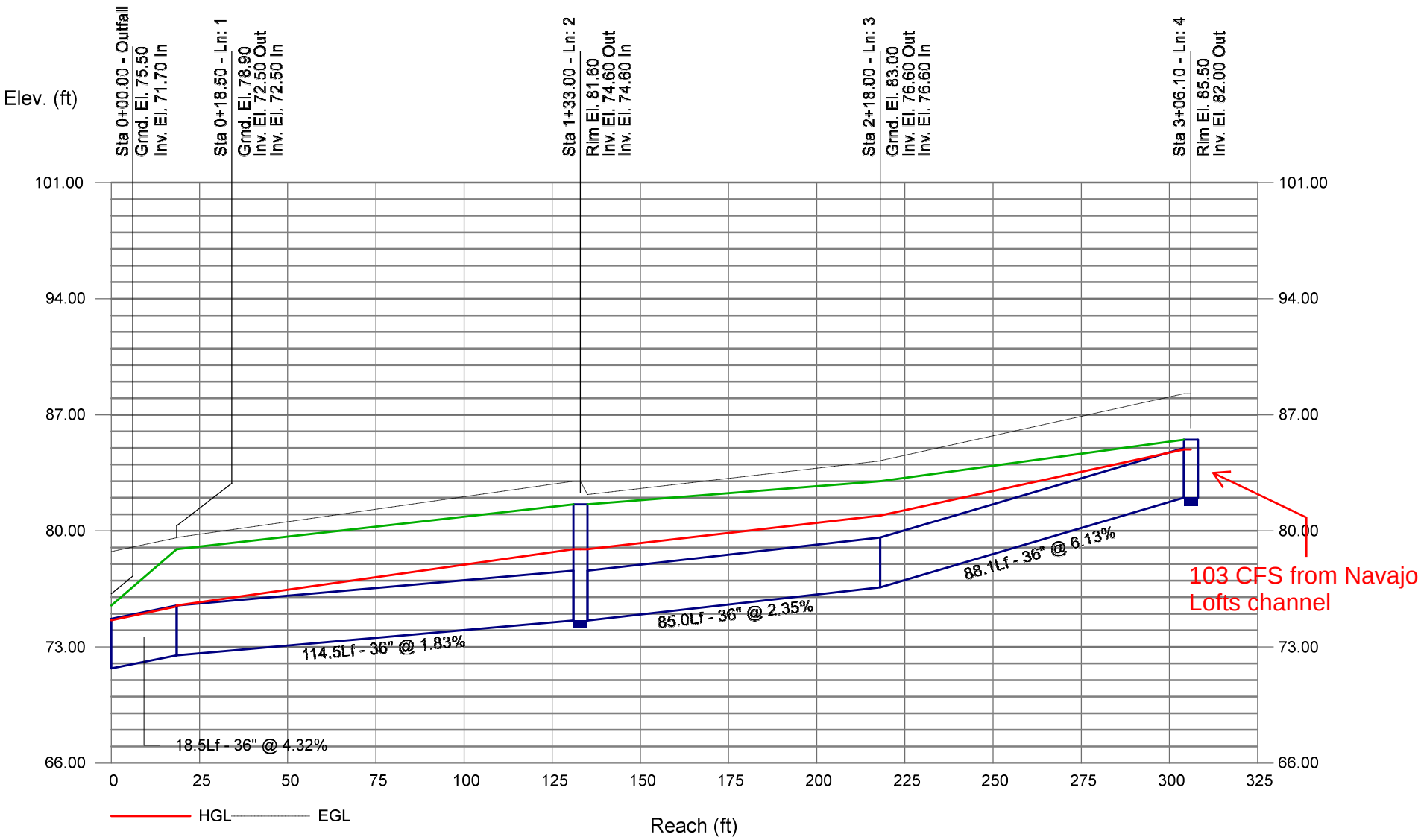
Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	36	114.8	71.70	74.61	2.91	7.01	16.38	4.14	78.75	0.000	18.5	72.50	75.44	2.94**	7.03	16.32	4.14	79.58	0.000	0.000	n/a	0.00	0.00
2	36	114.8	72.50	75.50	3.00*	7.07	16.24	4.10	79.60	2.964	114.5	74.60	78.89	3.00	7.07	16.24	4.10	83.00	2.963	2.964	3.393	0.00	0.00
3	36	103.0	74.60	78.89	3.00	7.07	14.57	3.30	82.20	2.386	85.0	76.60	80.92	3.00	7.07	14.57	3.30	84.23	2.385	2.386	2.028	0.00	0.00
4	36	103.0	76.60	80.92	3.00	7.00	14.57	3.30	84.23	2.386	88.1	82.00	84.91	2.91**	7.00	14.71	3.36	88.27	2.096	2.241	n/a	0.00	0.00
5	18	11.80	76.10	78.89	1.50	1.63	6.68	0.69	79.59	1.263	64.0	80.20	81.51 j	1.31**	1.63	7.23	0.81	82.32	1.152	1.207	n/a	0.00	n/a

Project File: 470 Culvert from north.stm | Number of lines: 5 | Run Date: 7/16/2023

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: 470 Culvert from north.stm



Storm Sewer Profile

Proj. file: 470 Culvert from north.stm

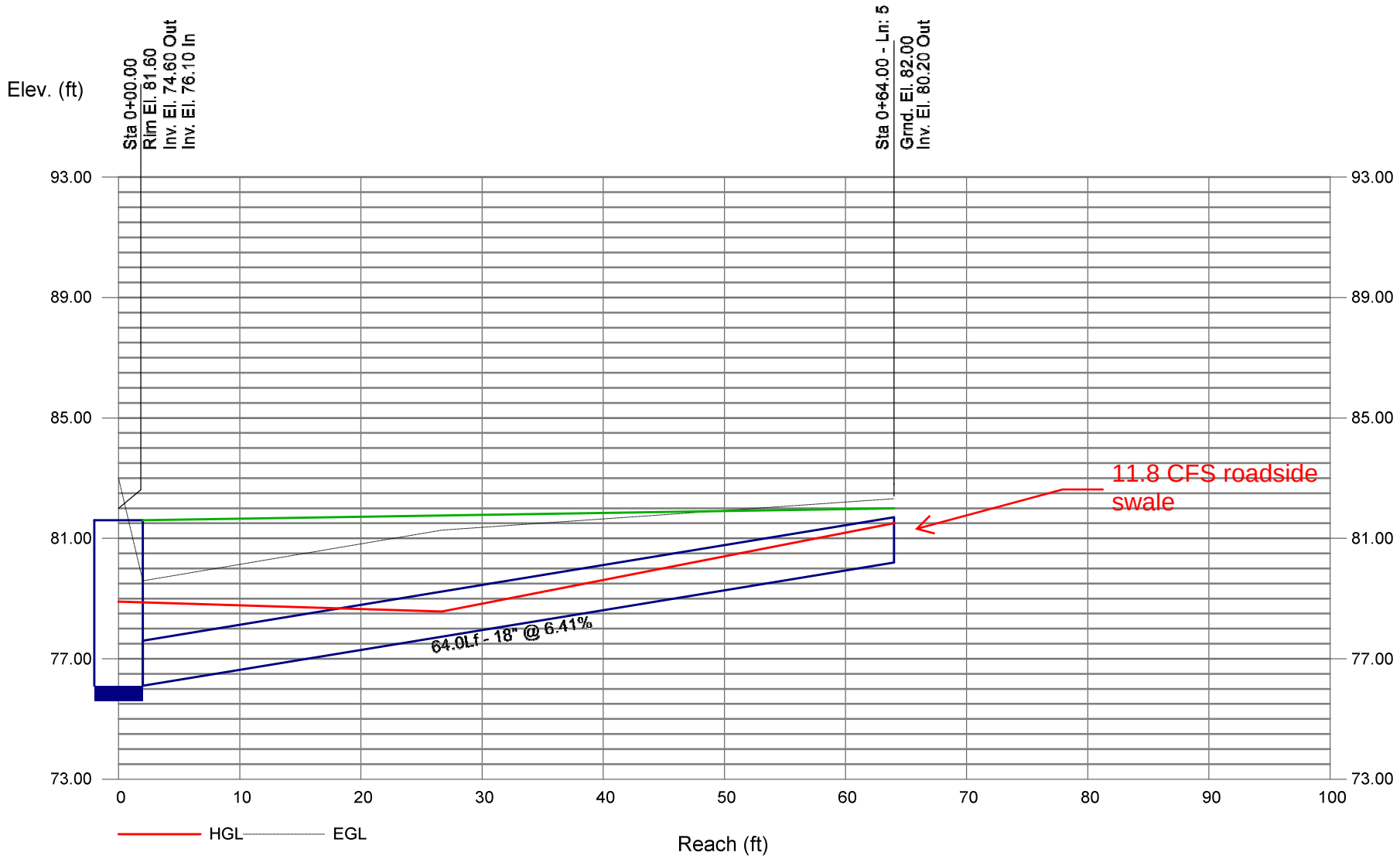
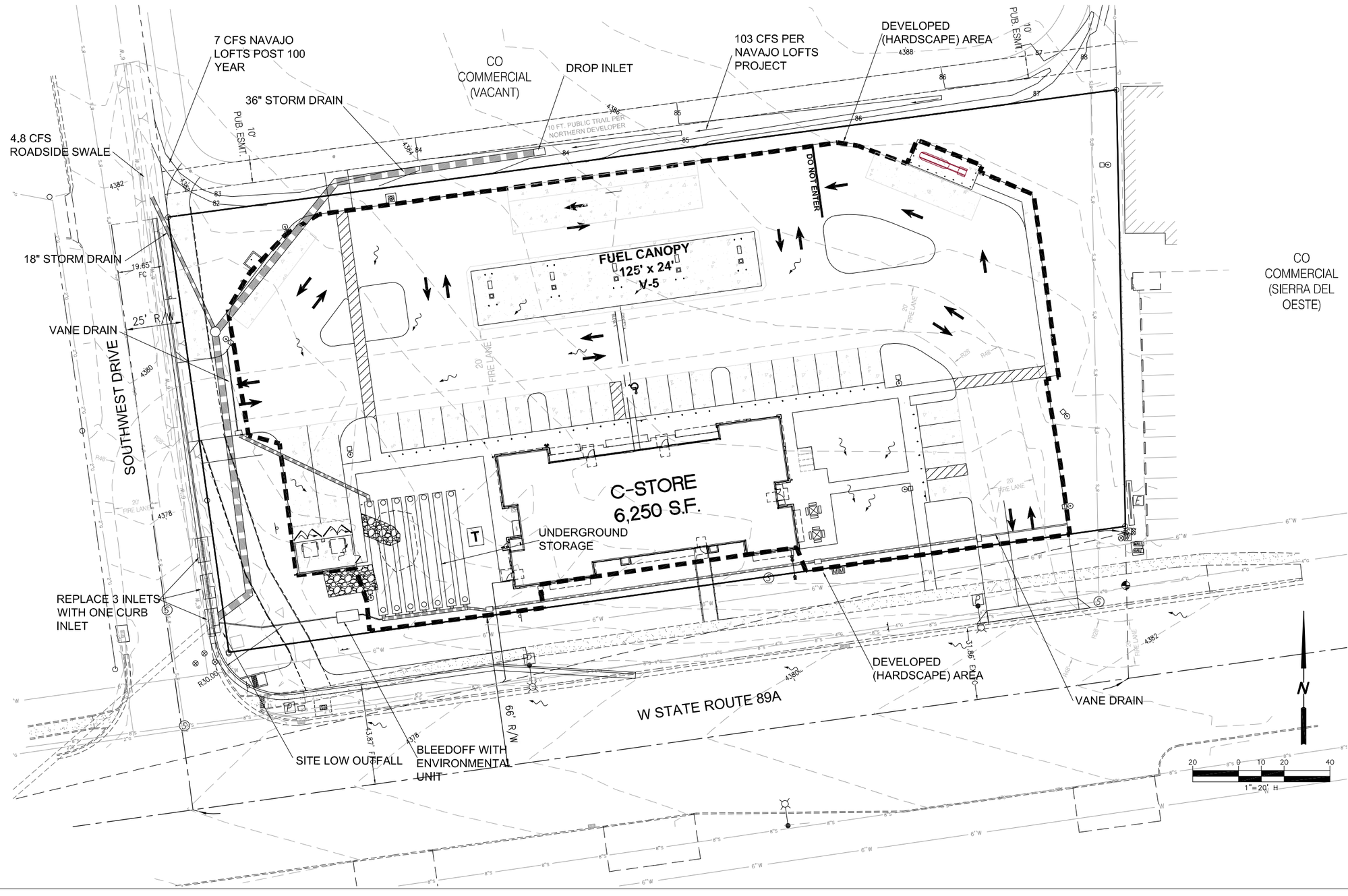


Figure 4-Drainage Exhibits



Jul 16, 2023 - 3:27pm
O:\JOBS\470 Circle K-Sedona\DWGS\VARET\470 impr plans.dwg

CLIENT:
Land Development Consultants, LLC
11811 N. Tatum Boulevard, Suite 1051
Phoenix, AZ 85028
ph: 602-684-5210
fax: 480-393-0946
contact: Michael Scarbrough

PRELIMINARY

Registered Professional Engineer (Civil)
CERTIFICATE
30489
STEVEN R. BOWSER
7-14-23
ARIZONA U.S.A.
Expires 09/30/2025

Helix Engineering, LLC
Engineering / Surveying / Consulting
3240 E Union Hills
Suite 113
Phoenix AZ 85050
ph 602-788-2616
www.hxeng.com

RELEASE	
DATE	
2-15-21	DRAFT GD
3-1-21	UG RETENTION
6-4-21	REV SP
10-11-22	REVISED SP-CITY COMMENTS
7-14-23	REVISED SP-CITY COMMENTS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PROJECT NAME
CIRCLE K

PROJECT ADDRESS
W. AZ-89A
Sedona, AZ
86336

PROJECT AREA
89A / Southwest Dr.

HELIX JOB NUMBER: 470
IN HOUSE: DRAWN BY: HXE; CHECKED BY: SB

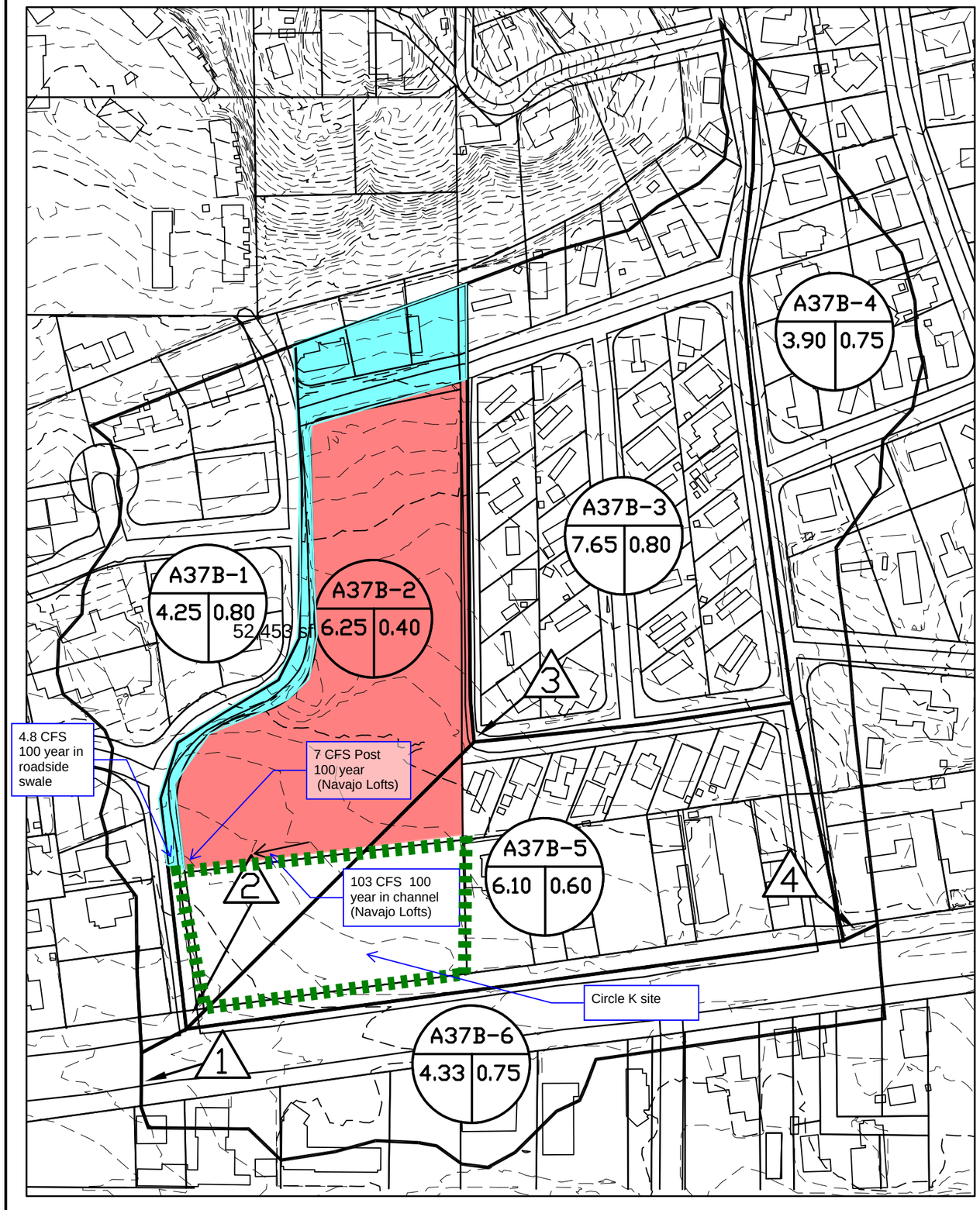
SHEET TITLE
DRAINAGE EXHIBIT

SHEET: FIGURE 4
PAGE: 1 OF 1

PLOT SCALE: 1:1 @ 24"x36"; 1:2.2 @ 11"x17"

P22-00004

DRAINAGE MAP



PEAK DISCHARGES

SUB-BASIN	*2-yr PEAK (cfs)*	*5-yr PEAK (cfs)*	*10-yr PEAK (cfs)*	*25-yr PEAK (cfs)*	*50-yr PEAK (cfs)*	*100-yr PEAK (cfs)*
A37B-1	-	-	-	*20.60*	-	*27.95*
A37B-2	-	-	-	*15.15*	-	*20.55*
A37B-3	-	-	-	*37.10*	-	*50.30*
A37B-4	-	-	-	*17.70*	-	*24.00*
A37B-5	-	-	-	*22.20*	-	*30.10*
A37B-6	-	-	-	*19.70*	-	*26.70*
DESIGN PT						
1	-	-	-	*132.45*	-	*179.60*
2	-	-	-	*74.45*	-	*100.95*
3	-	-	-	*37.10*	-	*50.30*
4	-	-	-	*17.70*	-	*24.00*

A = BASIN DESIGNATION
B = AREA IN ACRES
C = COMPOSITE RUNOFF COEFFICIENTS

D = DESIGN POINT DESIGNATION

N

S

NTS

From Navajo Lofts prelim drainage report

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNlY OF YAVAPAI, STATE OF ARIZONA, AND IS DESCRIBED AS FOLLOWS:

A PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 17 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, YAVAPAI COUNTY, ARIZONA, LYING NORTH OF U.S. HIGHWAY 89A PER ADOT PLAN PROJECT S-366-709 RECORD ADOT=jRAl AND SOUTHEAST OF THE SOUTHWEST CENTER SUBDIVISION, BOOK 17 OF MAPS, PAGE PLATS, PAGE 16, YAVAPAI COUNlY RECORDER jYCRl RECORD = MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING FOR REFERENCE AT THE SOUTHWEST CORNER OF SAID SECTION 11, A FOUND BLM BRASS CAP; THENCE NORTH 76'30'51"EAST 1351.90 FEET (NORTH 76'47'44"EAST 1351.83 FEET RA, TO STATION 977+47.98 RHT

63.22 BASIS OF BEARINGS RA) TO A FOUND ½ INCH REBAR NO IDENTIFICATION, TO WHICH A STAINLESS STEEL CAP LS 32230 WAS ADDED;

THENCE NORTH 01'10'20"WEST 2.80 FEET TO A SET ½"REBAR WITH ALUMINUM CAP LS 32230 ON THE NORTH RIGHT OF WAY OF SAID HWY 89A RA AND THE POINT OF BEGINNING;

THENCE NORTH 01'10'20"WEST 190.79 FEET TO A SET ½"REBAR WITH CAP LS 32230; THENCE SOUTH 82'21'06"WEST 418.06 FEET TO A SET ½" REBAR WITH CAP LS 32230;

THENCE SOUTH 07'56'28"EAST 192.01 FEET TO THE NORTH LINE OF RA, A SET ½"REBAR WITH ALUMINUM CAP LS 32230 AND FROM WHICH A FOUND ½"REBAR WITH CAP LS 27253 LIES SOUTH 07'56'28"EAST 0.54 FEET;

THENCE NORTH 81'59'57"EAST 395.56 FEET (NORTH 82"00'15"EAST R) TO THE POINT OF BEGINNING.

APN: 408-24-536C

TRAFFIC IMPACT ANALYSIS

SOUTHWEST CIRCLE K

SOUTHWEST DRIVE/SR 89A

REVISED 7 AUGUST 2023
1 NOVEMBER 2021

PREPARED FOR
LAND DEVELOPMENT CONSULTANTS
11811 NORTH TATUM BOULEVARD, SUITE 1051
PHOENIX, ARIZONA 85028

SOUTHWEST TRAFFIC ENGINEERING, LLC
3838 NORTH CENTRAL AVENUE, SUITE 1810
PHOENIX, AZ 85012
T 602.266.SWTE (7983) F 602.266.1115

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Trip Generation Calculations
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Capacity Calculations
Turn Lane Calculations
Traffic Signal Warrant Analysis
Crash Data
Comment Resolution

Prepared By:
Andrew Smigielski, PE, PTOE, PTP
Amy Forsythe, EIT

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

Executive Summary

The purpose of this traffic study is to evaluate the current and future transportation system within the project study area surrounding the site without and with the proposed project.

Existing Traffic Data

The northbound approach to the intersection of Tortilla Drive/SR 89A currently experiences an inadequate delay during the weekday AM peak hour.

The remaining study intersections currently operate at an adequate level of service (LOS) during the weekday peak hours.

Future Traffic Data Without Project

An adjacent development, Navajo Lofts, is planned to be constructed in the near future. This development is located directly north of the Southwest Circle K project site. The expected trip assignment from this development was added to this analysis based on the traffic assignment form the following report: *Navajo Lofts Traffic Impact Analysis* (Navajo Lofts TIA) written by Lee Engineering, LLC, dated August 2021.

The northbound approach to the intersection of Tortilla Drive/SR 89A is anticipated to experience an inadequate delay during the weekday AM peak hour in 2022 without traffic from the project. In 2025 without traffic from the project, the northbound and southbound approaches to the intersection of Tortilla Drive/SR 89A are expected to experience inadequate delays during the weekday peak hours.

The southbound approach to the intersection of Plaza de Oeste Driveway/SR 89A is expected to operate at a LOS E during the weekday PM peak hour in 2025 without traffic from the project.

The remaining study intersections are expected to operate at an adequate LOS during the weekday peak hours in 2022 and 2025 without traffic from the project.

Future Traffic Data With Project

The northbound and southbound approaches to the intersection of Tortilla Drive/SR 89A are anticipated to experience inadequate delays during the weekday peak hours in 2022 and 2025 without and with traffic from the project.

The southbound approaches to Southwest Drive/SR 89A and East Access/SR 89A are expected to experience inadequate delays during the weekday peak hours in 2022 and 2025 with traffic from the project.

The northbound and southbound approaches to the intersection of Plaza de Oeste Driveway/SR 89A are expected to operate at a LOS E during the weekday PM peak hour in 2022 with the project and in 2025 without and with traffic from the project.

The remaining study intersections are expected to operate at an adequate LOS during the weekday peak hours in 2022 and 2025 without traffic from the project.

Turn Lane Analysis
While a westbound right turn lane is warranted at East Access/SR 89A in 2025 with the project, this turn lane cannot be constructed due to geometric constraints, as East Access is located approximately 55 feet west of an adjacent driveway. The installation of a continuous right turn lane would also not be possible as the driveways along SR 89A are located too closely to one another and do not provide an acceptable location for a right turn lane to be constructed without placing adjacent driveways within the taper of the right turn lane. Moreover, continuous right turn lanes can lead to driver confusion as it can be unclear which driveway vehicles are turning into.

It should be noted that shifting the location of East Access is not possible as it would negatively impact the layout and internal circulation of the site.

The southbound left turn lane at Southwest Drive/SR 89A is expected to require a minimum storage length of 75 feet.

The westbound right turn lane at Southwest Drive/SR 89A is expected to require a minimum total turn lane length of 150 feet.

Traffic Signal Warrant Analysis
The intersection of Southwest Drive/ SR 89A does not currently meet and is not expected to meet traffic signal warrants #1 or #2 in 2022 or 2025 without traffic from the project. In 2022 and 2025, traffic signal warrants #1 and #2 are expected to be met with the project and with the adjacent Navajo Lofts development.

Crash Analysis
Six collisions were reported at the intersection of Tortilla Drive/SR 89A during the five-year study period. None of the crashes resulted in injury.

A total of nine crashes were reported at the intersection of Southwest Drive/SR 89A during the five-year study period, four of which resulted in injury.

One crash was reported at the intersection of Slingshot Rentals Driveway/SR 89A within the five-year study period. The collision was a rear-end.

No crashes were reported at the remaining study intersections. This limited crash data provides no observable crash pattern for the area.

Mitigation
The delays at the intersections of Tortilla Drive/SR 89A, Southwest Drive/SR 89A, East Access/SR 89A, and Plaza de Oeste Driveway/SR 89A are due to the relatively high through traffic volumes along SR 89A not providing adequate gaps for vehicles turning from the minor approaches. Unsignalized, minor approaches to four or more lane major streets such as SR 89A tend to operate at a LOS E or F during the weekday peak hours.

Mitigation measures at these closely spaced intersections are limited. While a traffic signal would be expected to alleviate these delays, the intersections are too closely spaced for traffic signals to be installed at each intersection. Moreover, traffic signals are not appropriate for delays experienced by a relatively low number of vehicles for only a few hours of the day.

Although the installation of a traffic signal at Southwest Drive/SR 89A is expected to alleviate the delays at this intersection, it is not recommended. The Arizona Department of Transportation's (ADOT's) priority is to maintain traffic flow on SR 89A. Traffic signals impede such flow. There has also been discussion with ADOT that the intersection of Tortilla Drive/SR 89a would be signalized in the future making signal spacing inadequate with Southwest Drive. Furthermore, two existing business access points on the south side of the intersection are offset, cannot be combined or relocated, and would make such a traffic installation difficult at best in integrating three intersections within the design window of the traffic signal. However, the proposed widening of the southbound approach to the intersection to provide an exclusive left turn lane and exclusive right turn lane is expected to have a positive impact on the delay at this intersection.

Recommendations
The westbound right turn lane at Southwest Drive/SR 89A should be constructed to provide a minimum turn lane length of 150 feet.

The southbound left turn lane at Southwest Drive/SR 89A should be constructed to provide a minimum storage length of 75 feet.

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

Project Description

Circle K is proposing a new ten (10) fueling station gas station and convenience store and a single tunnel car wash on the northeast corner of Southwest Drive/SR 89A in Sedona, Arizona. The vicinity of the project is shown in **Figure 1**. The site is located as shown in **Figure 2**. The project will be served by two proposed access points.

The purpose of this traffic impact analysis is to:

- Evaluate the current and future operational characteristics of the adjacent roadway network surrounding the project site.
- Estimate the traffic generation associated with the project and assign that traffic to the existing roadway system.
- Analyze future traffic operations at nine existing intersections and two proposed access points serving the project area.
- Determine the need for auxiliary (left and right turn) lanes at the proposed driveways that will serve the project site.
- Conduct traffic signal warrant analyses at the intersection of Southwest Drive/SR 89A.
- Perform a crash analysis to identify any specific crash trends within the study area.

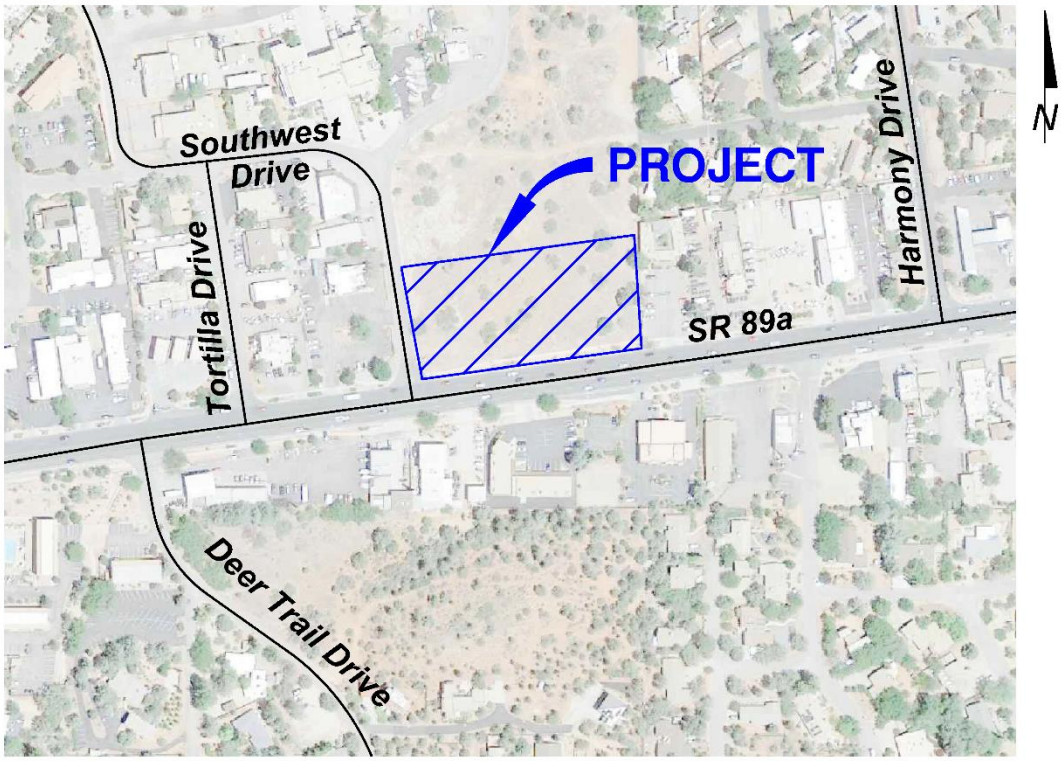
The author of this report is a registered professional engineer (civil) in the State of Arizona having specific expertise and experience in the preparation of traffic impact analyses.

Study Methodology

In order to analyze and evaluate the potential traffic impacts of the proposed development, the following tasks were undertaken:

- Field observation of the proposed site and surrounding area was conducted to evaluate the existing physical and operational characteristics of the adjacent roadway network.
- Site traffic volumes generated by the proposed site were calculated using the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition,* 2017.
- Calculated site traffic was distributed based on existing traffic patterns and assigned to the primary roadways within the project study limits.
- Capacity analyses were performed for the existing conditions and future conditions without and with the project based on an opening year of 2022 and a horizon year of 2025 using methodology presented in the *2016 Highway Capacity Manual (HCM 6).*
- The need for auxiliary turn lanes at the study driveways was evaluated based on ADOT guidelines.
- Traffic signal warrant analyses were completed for the existing conditions, 2022 and 2025 without and with traffic from the proposed site.
- Crash records were obtained from the Arizona Department of Transportation (ADOT) database to identify any specific crash trends within the study area.

Figure 1 – Vicinity Map



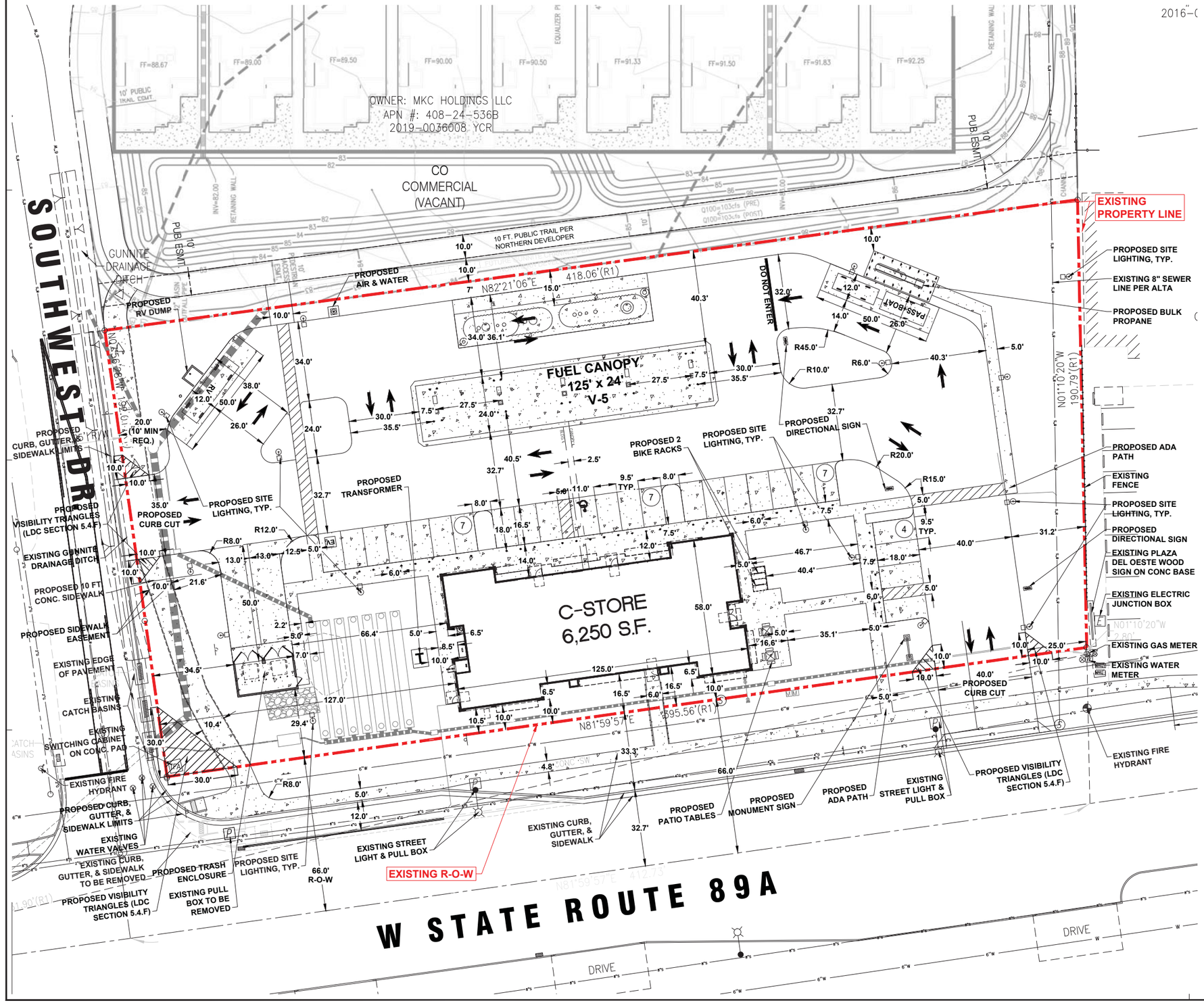
LEGEND:

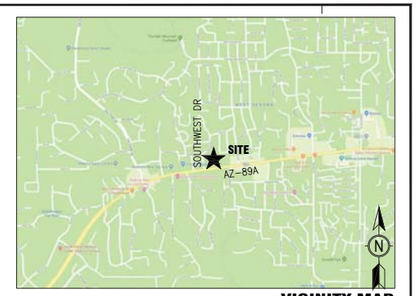
EXISTING ROAD

PROJECT SITE

CIRCLE K STORE
SITE PLAN

NEC ARIZONA STATE HIGHWAY 89A & SOUTHWEST DRIVE, SEDONA, AZ





VICINITY MAP

OWNER:

CIRCLE K STORES INC.
1120 WEST WARNER ROAD
TEMPE, ARIZONA 85284

OWNER REPRESENTATIVE:

LAND DEVELOPMENT CONSULTANTS, LLC
11811 N. TATUM BLVD. #1051
PHOENIX, ARIZONA 85028
PHONE: (602) 850-8101
FAX: (602) 997-9807
CONTACT: MIKE SCARBROUGH

ARCHITECT :

GREENBERG FARROW
30 EXECUTIVE PARK, SUITE 100
IRVINE, CA 92614
PHONE: (949) 296-0450
FAX: (949) 296-0479
CONTACT: DOUG COUPER

PROJECT INFORMATION

PROJECT NAME:	CIRCLE K CONVENIENCE STORE
PROJECT ADDRESS:	NEC AZ-89A & SOUTHWEST DRIVE, SEDONA, AZ
PROJECT DESCRIPTION:	PROPOSAL FOR A NEW CONVENIENCE STORE WITH ASSOCIATED FUEL SALES CONSISTING OF A 6,250 S.F. CONVENIENCE STORE, AND A FUEL CANOPY WITH 5 FUEL PUMPS.

ZONING INFORMATION

JURISDICTION:	CITY OF SEDONA, AZ		
EXISTING ZONING:	CO (COMMERCIAL)		
PROPOSED ZONING:	CO (COMMERCIAL)		
MAX. BLDG HEIGHT ALLOWED:	40' OVERALL	BLDG HEIGHT PROVIDED:	23'-0"

SETBACKS:

FRONT:	10'
SIDE:	0'
REAR:	0'
STREET:	10'
ABUTTING RESIDENTIAL:	20'

SITE DATA

PARCEL:	APN: 408-24-536C
CIRCLE K NET SITE AREA:	±1.781 AC (± 77,602 SF)

BUILDING AREA

CONVENIENCE STORE BLDG AREA	6,250 SF
FUEL CANOPY AREA	3,000 SF
CIRCLE K SITE COVERAGE (BASED ON 6,250 SF BLDG AREA PLUS 3,000 SF FUEL CANOPY AREA AND ±1.781 AC OF NET SITE AREA)	±11.9% (5,194 SF/AC)

PARKING REQUIREMENTS

CIRCLE K PARKING REQUIRED	
RETAIL: 1 SP/250 SF	25 SP
CIRCLE K PARKING PROVIDED	
STANDARD PARKING SPACES	24 SP
ACCESSIBLE PARKING SPACES	1 SP
TOTAL CIRCLE K PARKING PROVIDED	25 SP
BICYCLE PARKING PROVIDED	4 SP
VENDOR PARKING PROVIDED	2 SP

GENERAL NOTES

1. THIS IS A CONCEPTUAL SITE PLAN AND IS FOR PLANNING PURPOSES ONLY.
2. THIS SITE PLAN IS BASED ON A PDF OF THE ALTA SURVEY PREPARED BY HELIX ENGINEERING, LLC, DATED 04/02/2020, AND AN AERIAL.

SCALE 1"=20'

0 20' 40

30 Executive Park
Suite 100
Irvine, CA 92614
t: 949 296 0450

ISSUE/REVISION RECORD

DATE	DESCRIPTION
02/25/20	PREP SP-3
02/26/20	PREP SP-4
07/14/20	PREP SP-5
08/28/20	PREP SP-6
08/28/20	PREP SP-7
09/15/20	PREP SP-8
09/24/20	REV SP-8
01/26/21	PREP SP-9
03/02/21	PREP SP-10
03/11/21	PREP SP-11
05/25/21	PREP SP-12
08/26/21	REV SP-12
09/24/22	PREP SP-13
10/05/22	PREP SP-14
10/24/22	PREP SP-15
05/09/23	PREP SP-16
06/01/23	PREP SP-17
06/13/23	PREP SP-18
06/27/23	PREP SP-19
07/13/23	PREP SP-20
07/14/23	PREP SP-21
07/20/23	REV SP-21

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE
DOUG S. COUPER
PROJECT MANAGER
DC
QUALITY CONTROL
DRAWN BY
JN

PROJECT NAME

CIRCLE K STORES INC.
SEDONA, ARIZONA
NEC AZ-89A & SOUTHWEST DRIVE

LAND DEVELOPMENT CONSULTANTS, LLC
11811 N. TATUM BLVD., #1051
PHOENIX, AZ 85028

CIRCLE K STORES INC.

PROJECT NUMBER
20191225.0
SHEET TITLE

SITE PLAN

SHEET NUMBER

CSP 21.0W

NOT ISSUED FOR CONSTRUCTION

Existing Conditions

The proposed project will be located on the northeast corner of Southwest Drive/SR 89A.

SR 89A is aligned north/south aligned roadway serving as a scenic route between Prescott, Arizona and Flagstaff, Arizona. However, adjacent to the project site, the roadway is aligned east/west. Two through lanes are provided for each direction of travel, separated by a two-way center left turn lane. The posted speed limit on SR 89A is 35 miles per hour (mph) near the project site.

Southwest Drive is a two-lane roadway that extends north from SR 89A. Approximately 380 feet north of SR 89A, Southwest Drive curves west and then ends after approximately 650 feet at Sinagua Drive. The roadway serves a fire department and various land uses. There is a posted speed limit of 25 mph on Southwest Drive.

Navajo Drive extends to the north from Southwest Drive, approximately 380 feet north of SR 89A. The roadway continues north for approximately 820 feet, ending at an apartment complex. Functionally, Navajo Drive serves as a continuation of Southwest Drive. There is no posted speed limit on Navajo Drive.

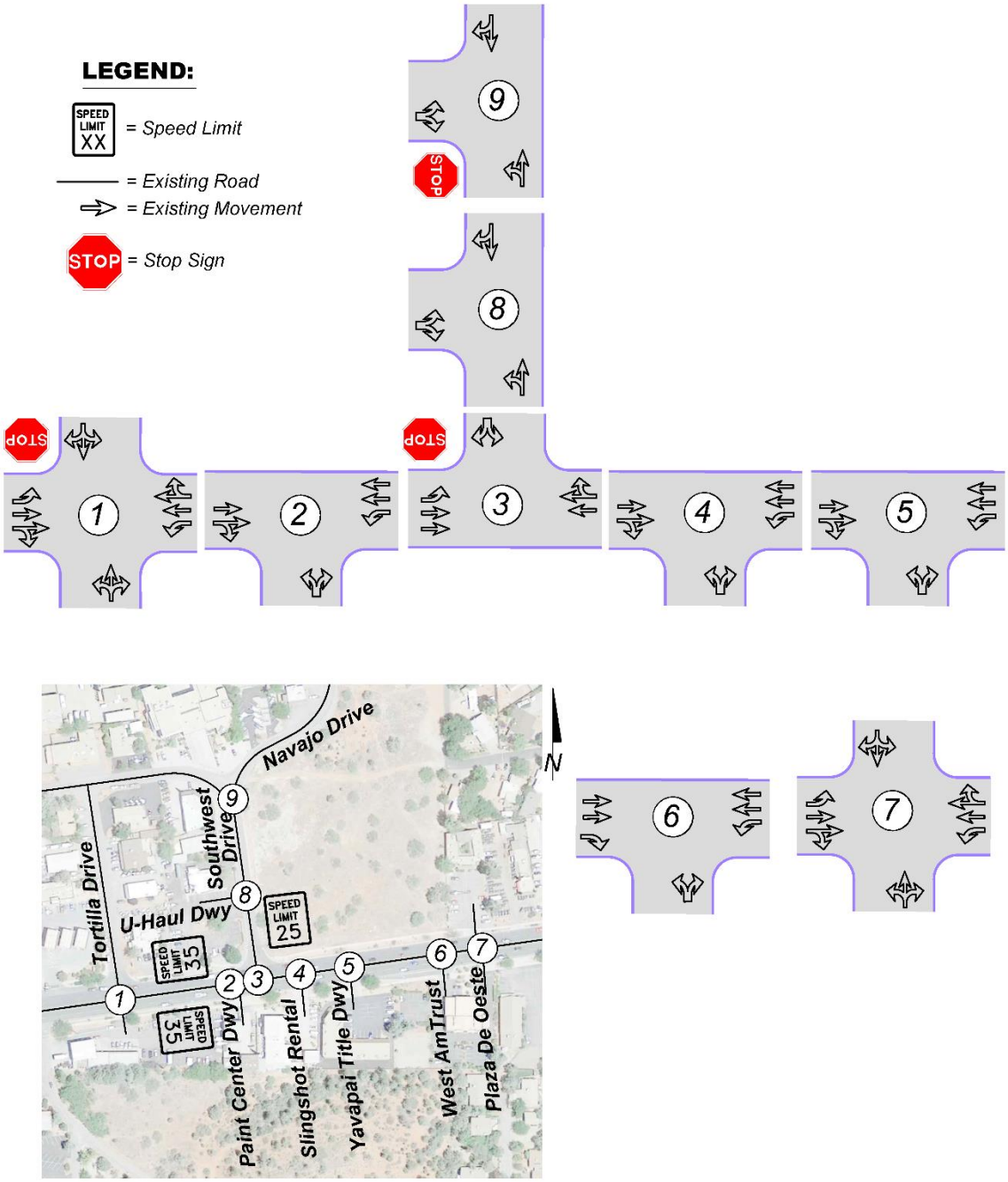
Tortilla Drive is a two-lane street that serves as a connection between SR 89A and Southwest Drive. There is no posted speed limit on Tortilla Drive. A driveway to Big O Tires, located on the south side of SR 89A, aligns with Tortilla Drive.

Several closely spaced driveways are located along SR 89A. Paint Center Driveway is located on the south side of SR 89A, immediately west of Southwest Drive. Slingshot Rentals Driveway, Yavapai Title Driveway, and West AmTrust Driveway are located approximately 30 feet, 150 feet, and 350 feet east of Southwest Drive, on the south side of SR 89A.

Plaza de Oeste Driveway is located approximately 430 feet east of Southwest Drive on the north side of SR 89A. This driveway aligns with a driveway for the AmTrust Bank on the south side of SR 89A. The driveway on the south side of SR 89A is intended as an exit-only from the bank and is marked with STOP (R1-1) signs and northbound pavement marking arrows to discourage vehicles from entering.

The study intersection locations, lane configurations, and intersection control are shown in **Figure 3**.

Figure 3 – Existing Lane Configurations and Traffic Control



Existing Traffic Data

In order to form a basis for analysis of the project impacts, weekday AM and PM peak hour turning movement counts were conducted at the following intersections:

- Tortilla Drive/SR 89A
- Paint Center Driveway/SR 89A
- Southwest Drive/SR 89A
- Slingshot Rental Driveway/SR 89A
- Yavapai Title Driveway/SR 89A
- West Amtrust Driveway/SR 89A
- Plaza de Oeste Driveway/SR 89A
- Uhaul Driveway/Southwest Drive
- Navajo Drive/Southwest Drive

In addition, a weekday 24-hour intersection approach count was taken at Southwest Drive/SR 89A.

The weekday turning movement counts were conducted from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. All traffic data was collected in September 2021 while school was in session. The existing weekday traffic volumes are shown in **Figure 4**. Complete traffic count data can be found in the Appendix.

Access

Two full access points are proposed to serve the site, East Access is proposed on SR 89A and North Access is proposed on Southwest Drive.

As part of the project, Southwest Drive will be widened adjacent to the project site to provide a new southbound approach to Southwest Drive/SR 89A that provides an exclusive left turn lane and exclusive right turn lane. A westbound right turn lane will also be installed at the intersection.

East Access is proposed on the north side of SR 89A, approximately 335 feet east of Southwest Drive. This driveway will align with the existing West AmTrust Driveway.

North Access is proposed on the east side of Southwest Drive approximately 95 feet north of SR 89A. This Driveway will align with Uhaul Driveway.

The adjacent Navajo Lofts site to the north is expected to construct an east leg at the intersection of Navajo Drive/Southwest Drive.

Figure 5 shows the locations, geometry and spacing for the proposed driveways serving the project site that will serve as a baseline of analysis in the report.

Figure 4 – Existing Weekday Peak Hour Traffic Volumes

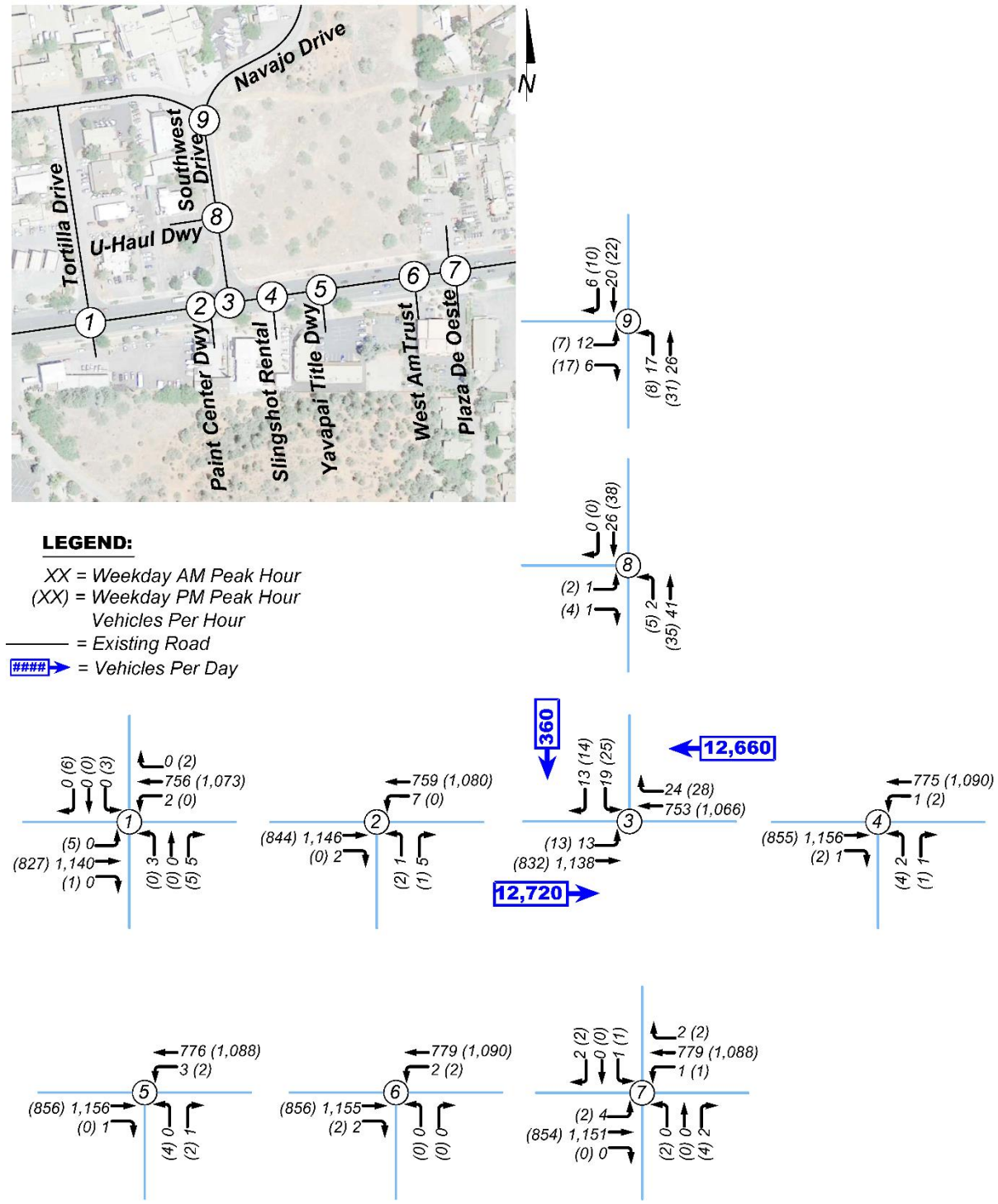
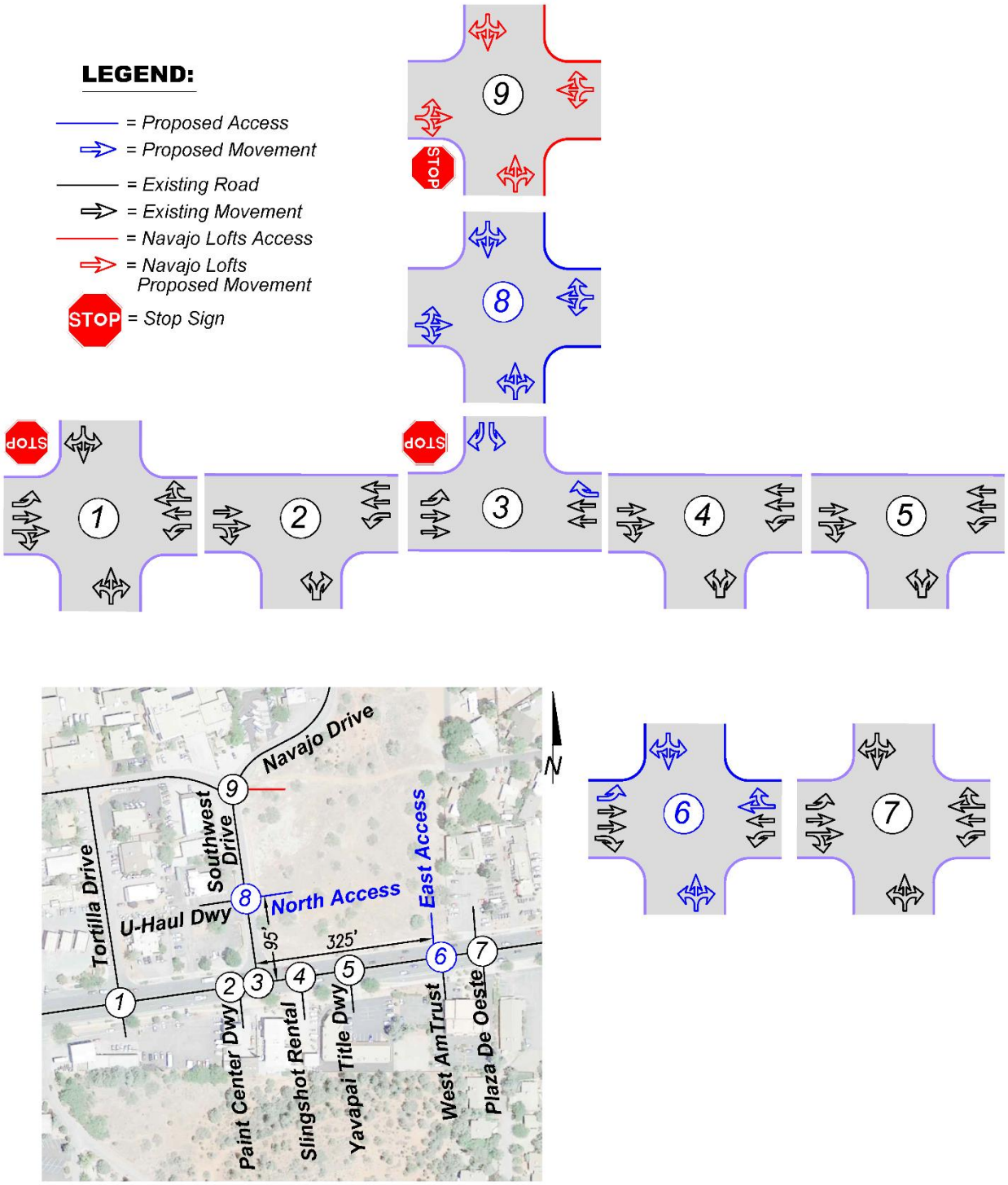


Figure 5 – Baseline Access Point and Intersection Configuration Assumptions



Trip Generation

Trip generation was developed utilizing nationally agreed upon data contained in the Institute of Transportation Engineers (ITE) publication *Trip Generation, 11th Edition*, 2021. The project trip generation was estimated for a ten (10) fueling station gas station based on ITE Land Use Code 945, Convenience Market/Gas Station (LUC 945) and a single tunnel car wash based on LUC 948, Automated Car Wash. The result is the expected weekday trip generation for the project as shown in **Table 1**. The complete trip generation calculations can be found in the Appendix.

Table 1 – Project Site Generated Trips

Time Period	10 Fueling Station Convenience Market/ Gas Station (LUC 945)	*Single Tunnel Automated Car Wash (LUC 948)	Total
Average Daily, Inbound (vtpd)	2,189	390	2,579
Average Daily, Outbound (vtpd)	2,189	390	2,579
Total Weekday Daily	**4,378**	**780**	**5,158**
AM Peak Hour, Inbound (vtph)	177	N/A	177
AM Peak Hour, Outbound (vtph)	177	N/A	177
Total AM Peak	**354**	**N/A**	**354**
PM Peak Hour, Inbound (vtph)	171	39	210
PM Peak Hour, Outbound (vtph)	171	39	210
Total PM Peak	**342**	**78**	**420**

vtpd - vehicle trips per day, vtph - vehicle trips per hour

*Weekday daily volume based on 10% peak hour assumption

Pass-By Reduction

Gas stations do not typically generate all new traffic on a roadway system, many are 'pass-by' trips. The Institute of Transportation Engineers' (ITE) publication *Trip Generation, 11th Edition, 2021* defines pass-by trips as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Primary trips are trips where the primary purpose of the trip is to visit a specific location (i.e. gas station). Pass-by trips are trips where the secondary purpose of the trip is to visit the gas station, in conjunction with some other primary trip purpose (such as driving home from work).

ITE estimates that 76% of the external weekday AM peak hour trips and 75% of the external weekday PM peak hour trips will be from pass-by. Pass-By trips lower the through traffic volumes at project access points as vehicles choose to turn into the site instead of continuing through the intersection. **Table 2** shows the pass-by reductions expected at the project site.

Table 2 – Pass-By Reduction

Time Period	10 Fueling Station Convenience Market/ Gas Station (LUC 945)	Pass-By Reduction	Total (Primary Trips)
AM Peak Hour, Inbound (vtph)	177	-135	42
AM Peak Hour, Outbound (vtph)	177	-135	42
Total AM Peak	**354**	**-270**	**84**
PM Peak Hour, Inbound (vtph)	160	-120	40
PM Peak Hour, Outbound (vtph)	160	-120	40
Total PM Peak	**320**	**-240**	**80**

vtph - vehicle trips per hour

Trip Distribution & Assignment

Trip distribution for the project was based on existing traffic volume patterns near the proposed site. **Figure 6** shows the weekday trip distribution for the project as a percentage of net new primary trips.

Figure 7 shows the assignment of the new site generated trips to the project intersections, including the pass-by trip reduction. The pass-by trip assignment for the gas station be found in the Appendix.

Existing Traffic Operations

Analysis of current intersection operations was conducted for the weekday AM and PM peak hours using the nationally accepted methodology set forth in the *Highway Capacity Manual*, Transportation Research Board, 2016 (HCM 6). The computer software Synchro 10 was utilized to calculate the levels of service for individual movements and approaches.

LOS is a qualitative measure of the traffic operations at an intersection or on a roadway segment. Level of service is ranked from LOS A, which signifies little or no congestion and is the highest rank, to LOS F, which signifies congestion and jam conditions. LOS D is typically considered adequate operation at signalized and un-signalized intersections in developed areas. Per discussions with ADOT and the City of Sedona, Sedona is considered an urban area and LOS D is acceptable.

At un-signalized intersections, level of service is predicted/calculated for those movements, which must either stop for or yield to oncoming traffic and is based on average control delay for the particular movement. Control delay is the portion of total delay attributed to traffic control measures such as stop signs and traffic signals. The criteria for level of service at un-signalized intersections are shown in **Table 3.**

Figure 6 – Weekday Peak Hour Trip Distribution

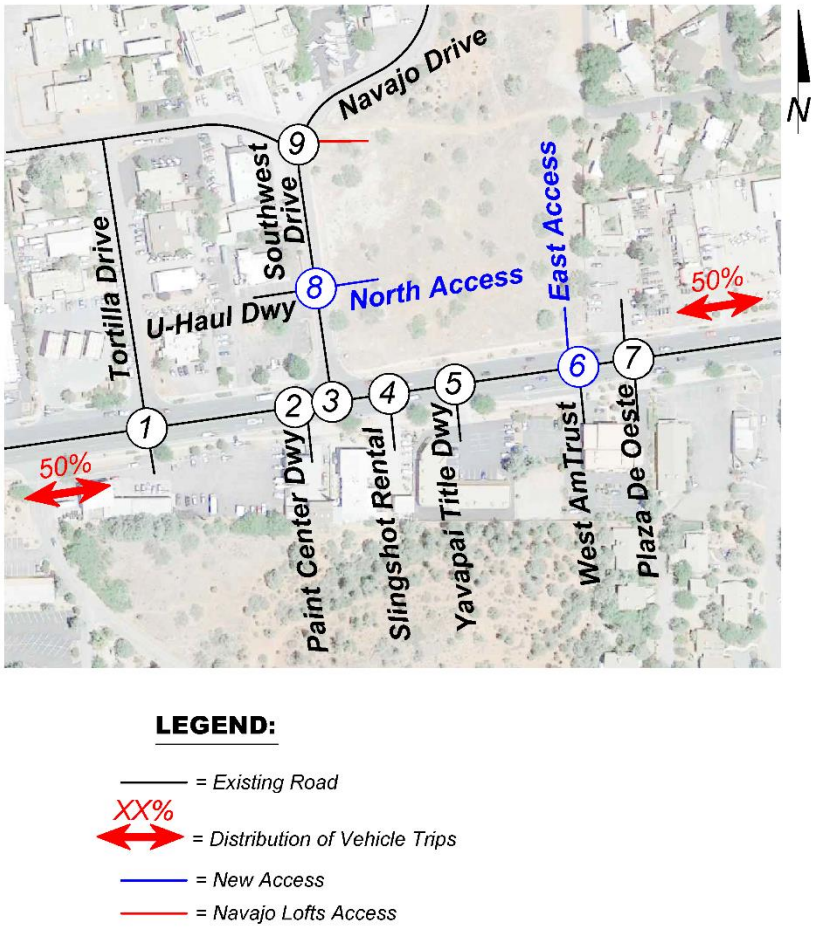


Figure 7 – Weekday Peak Hour Trip Assignment

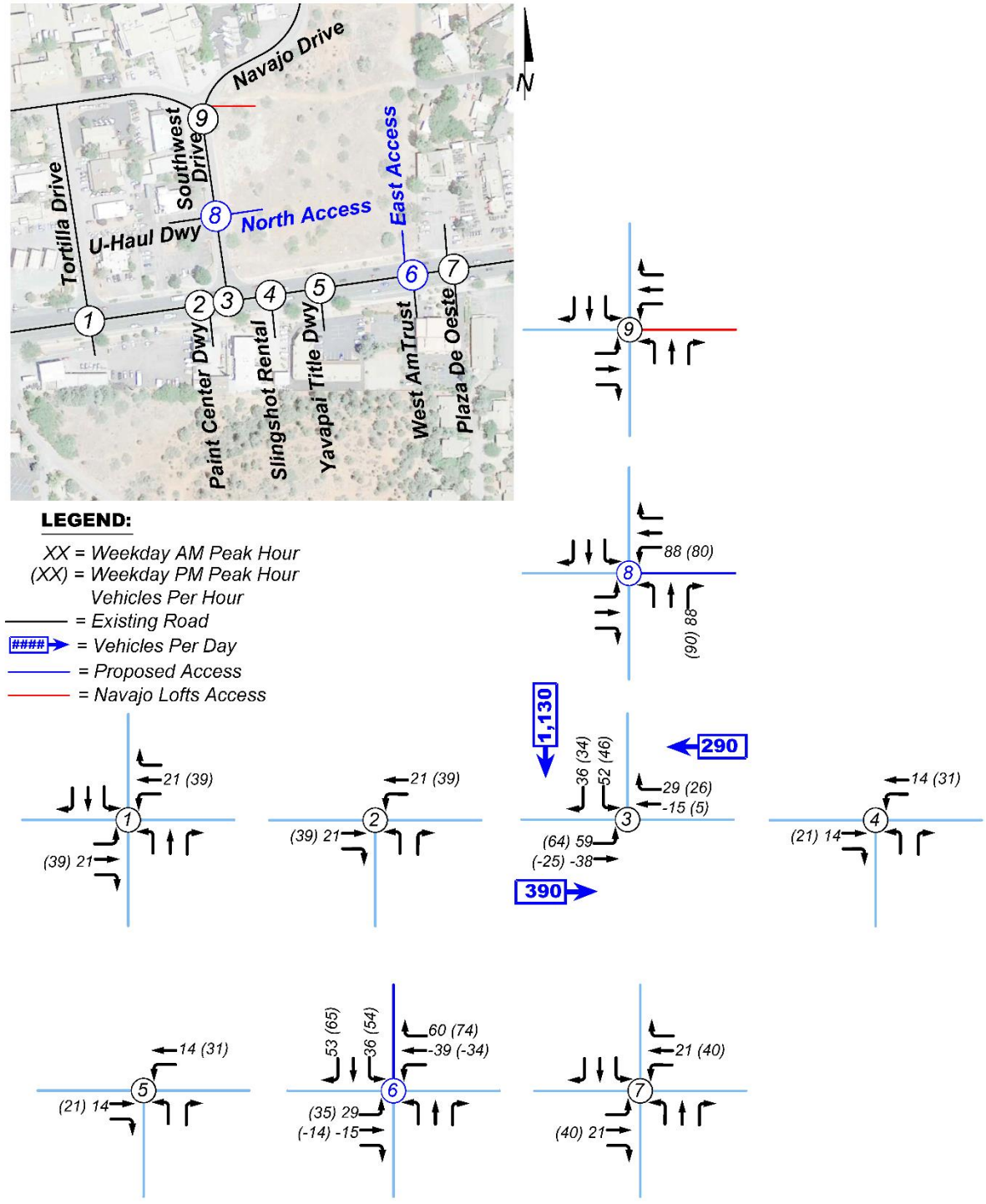


Table 3 – Level of Service Criteria – Un-signalized Intersections

Level-of-Service	Delay
A	< 10 seconds/vehicle
B	> 10 and < 15 seconds/vehicle
C	> 15 and < 25 seconds/vehicle
D	> 25 and < 35 seconds/vehicle
E	> 35 and < 50 seconds/vehicle
F	> 50 seconds/vehicle

Table 4 shows the existing levels of service that were calculated for the study intersections. Complete capacity calculations are included in the Appendix.

Table 4 – Existing Weekday Peak Hour Levels of Service

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Un-signalized Intersections				
Tortilla Drive/SR 89a				
Eastbound Left	A	0.0	B	11.3
Westbound Left	B	11.6	A	0.0
Northbound Left/Through/Right	E	35.2	B	11.6
Southbound Left/Through/Right	A	0.0	D	31.7
Paint Center Driveway/SR 89a				
Westbound Left	B	11.8	A	0.0
Northbound Left/Right	C	15.8	C	17.7
Southwest Drive/SR 89a				
Eastbound Left	A	9.8	B	11.5
Southbound Left/Right	C	18.2	C	24.5
Slingshot Rental Driveway/SR 89a				
Westbound Left	B	11.7	B	10.0
Northbound Left/Right	C	21.7	C	19.3
Yavapai Title Driveway/SR 89a				
Westbound Left	B	11.8	B	10.0
Northbound Left/Right	B	13.7	C	17.2
West AmTrust Driveway/SR 89a				
Westbound Left	B	11.8	B	10.0
Northbound Left/Right	A	0.0	A	0.0
Plaza de Oeste Driveway/SR 89a				
Eastbound Left	A	9.7	B	11.3
Westbound Left	B	11.7	B	10.0
Northbound Left/Through/Right	B	13.7	D	26.4
Southbound Left/Through/Right	C	24.4	D	31.4
Uhaul Driveway/Southwest Drive				
Eastbound Left/Right	A	8.7	A	8.7
Northbound Left/Through	A	7.3	A	7.3
Navajo Drive/Southwest Drive				
Eastbound Left/Right	A	9.0	A	8.7
Northbound Left/Through	A	7.3	A	7.3

Delay - seconds per vehicle

As shown in **Table 4**, the northbound approach to the intersection of Tortilla Drive/SR 89A currently experiences an inadequate delay during the weekday AM peak hour. This delay is due to the relatively high through traffic volumes along SR 89A not providing adequate gaps for vehicles turning from the minor approach.

The remaining study intersections currently operate at an adequate LOS during the weekday peak hours.

Future Traffic Operations Without Project

In order to assess the impacts of the project on future traffic operations, traffic projections were made for the opening year of 2022 and the horizon year of 2025.

A review of historical traffic data in the vicinity of the project showed increasing and decreasing traffic volumes along SR 89A. Due to this, a conservative 2% growth rate was used to account for future development near the project area. Weekday peak hour traffic volumes without the project in 2022 and 2025 were estimated using a 2% annual traffic growth rate, as shown in **Figures 8** and **9**.

An adjacent development, Navajo Lofts, is planned to be constructed in the near future. This development is located directly north of the Southwest Circle K project site. The expected trip assignment from this development was added to this analysis based on the traffic assignment form the following report: *Navajo Lofts TIA* written by Lee Engineering, LLC, dated August 2021. The trip assignment from the *Navajo Lofts TIA* can be found in the Appendix.

Traffic volumes from Navajo Lofts were then combined with the estimated 2022 and 2025 traffic volumes without the project (**Figures 8** and **9**) to yield 2022 and 2025 weekday AM and PM peak hour traffic volumes, without the project, with adjacent developments, as shown in **Figure 10** and **11.**

As with the current volumes, levels of service were calculated for the study intersection in 2022 and 2025 without the project, with the adjacent development. Intersection levels of service for 2022 and 2025 without the project are shown in **Tables 5** and **6**. Complete capacity calculations are included in the Appendix.

Figure 8 – 2022 Weekday Peak Hour Traffic Volumes Without Project

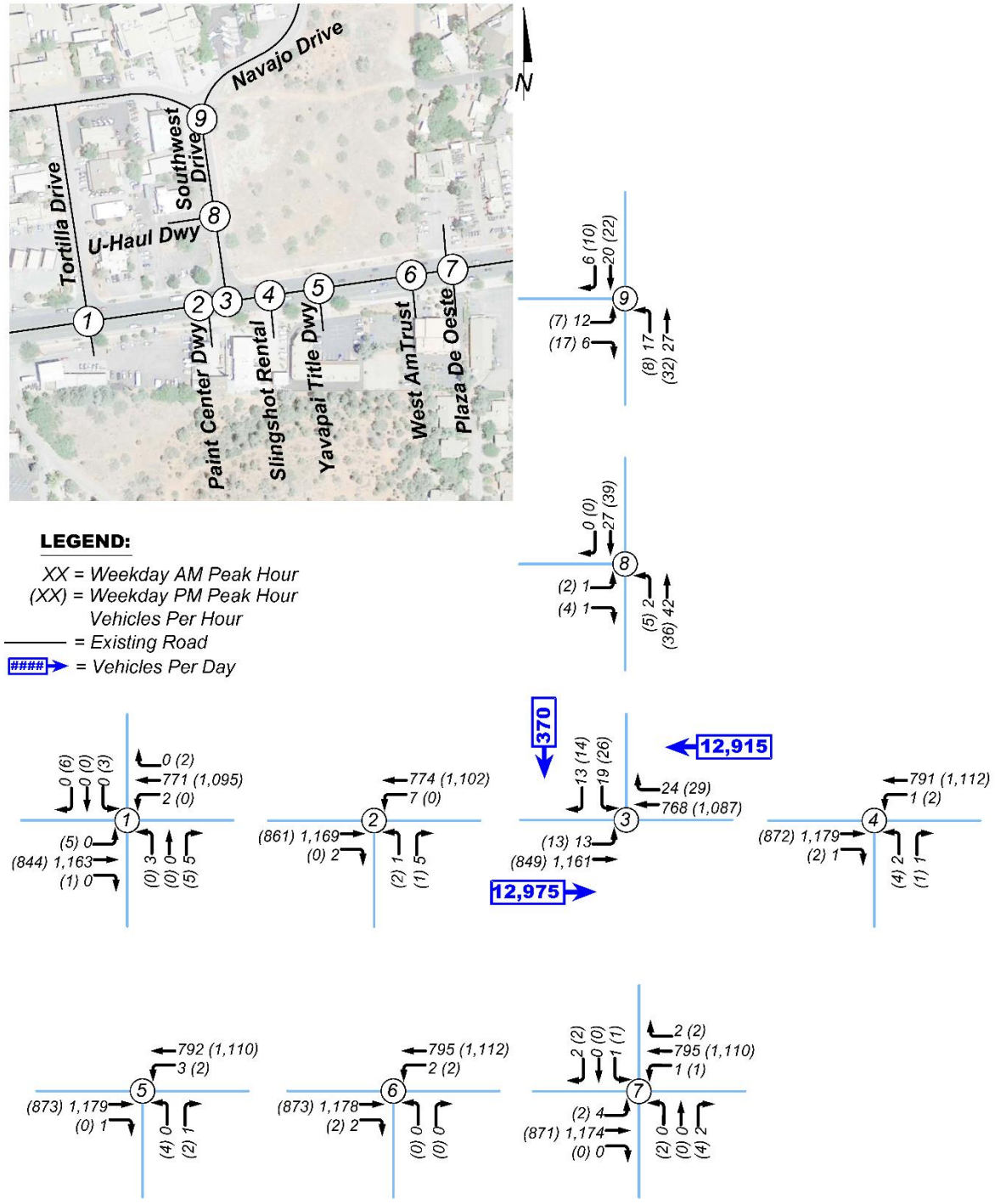


Figure 9 – 2025 Weekday Peak Hour Traffic Volumes Without Project

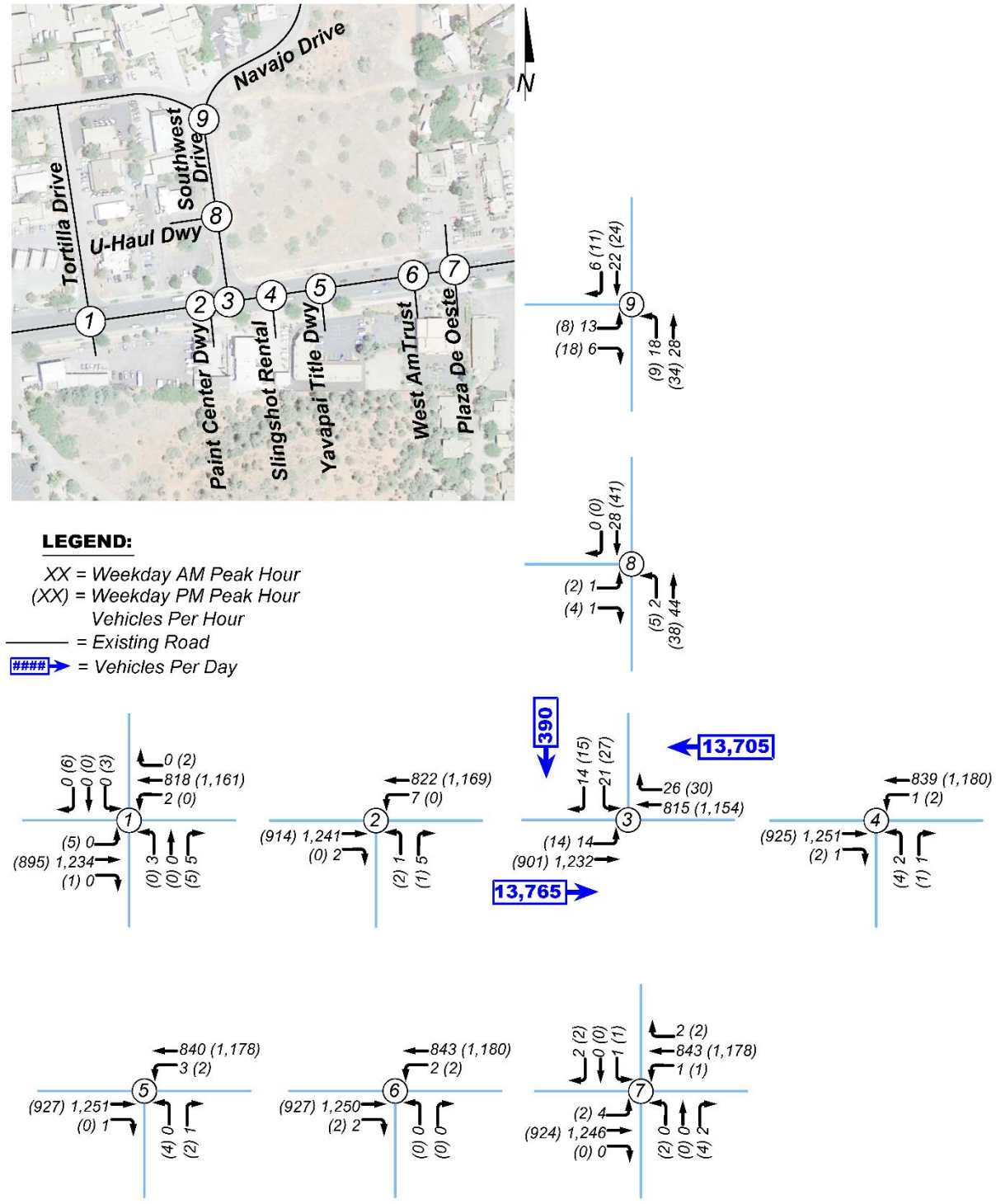


Figure 10 – 2022 Weekday Peak Hour Traffic Volumes Without Project With Navajo Lofts

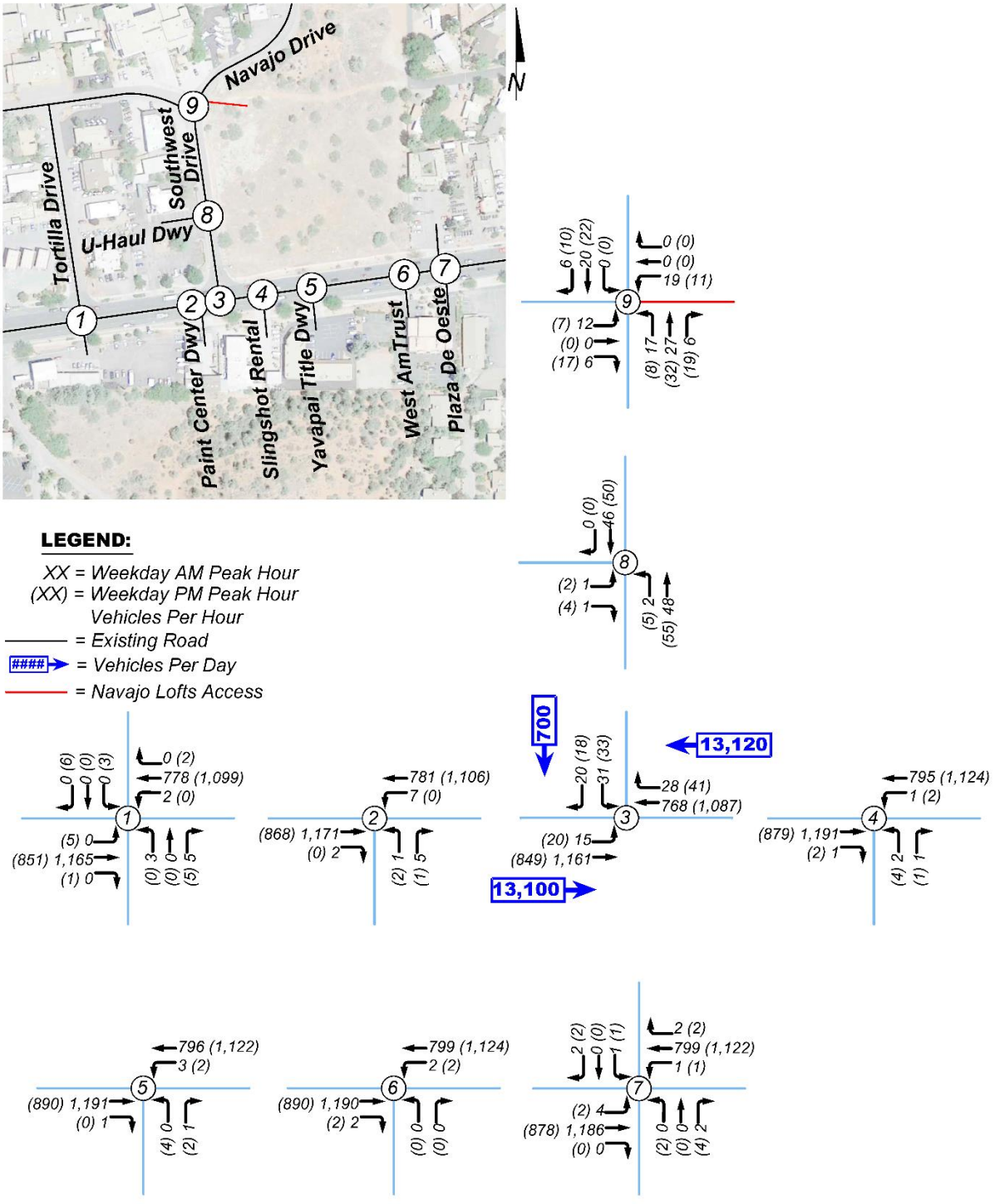


Figure 11 – 2025 Weekday Peak Hour Traffic Volumes Without Project With Navajo Lofts

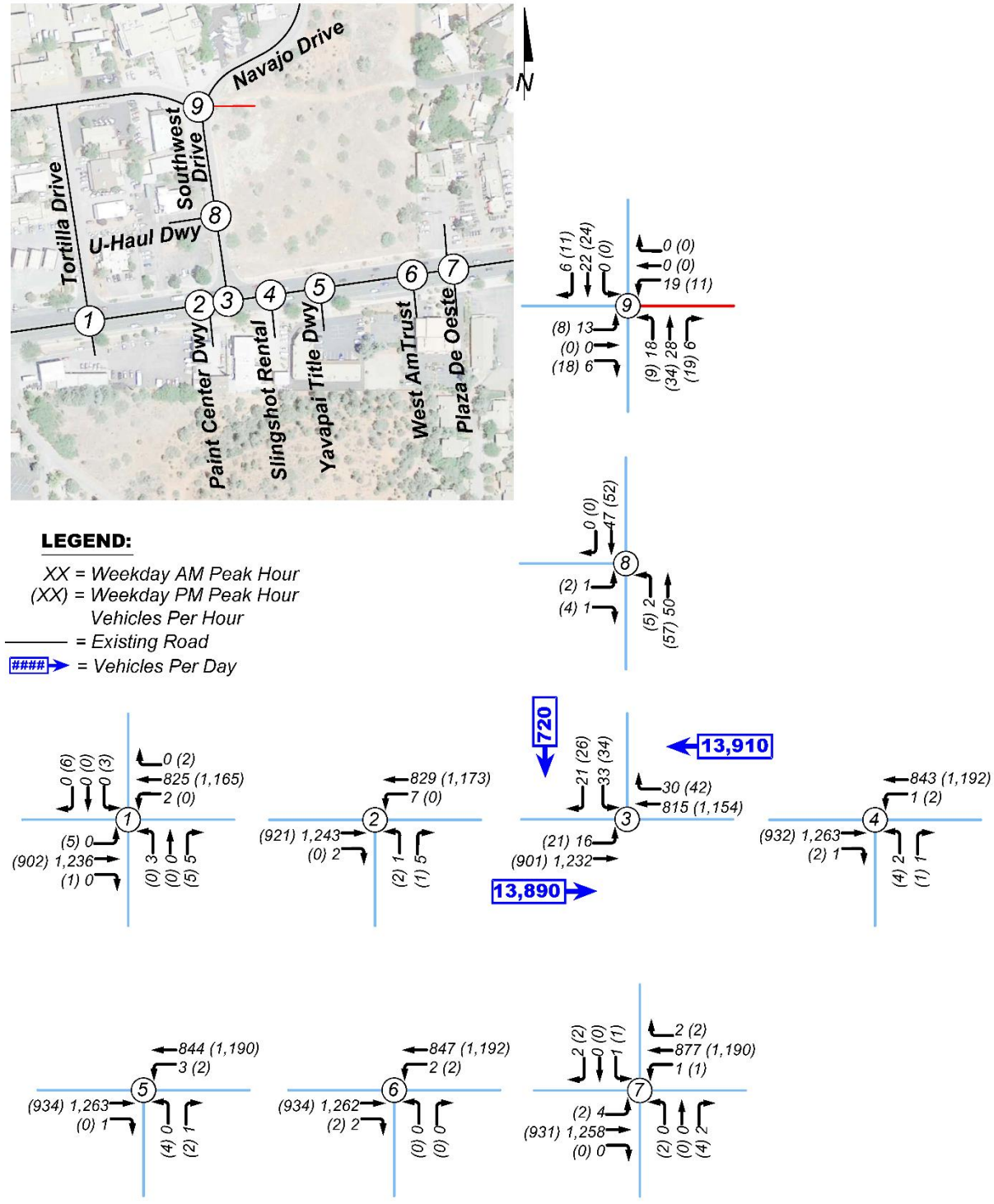


Table 5 – 2022 Weekday Peak Hour Levels of Service Without Project With Navajo Lofts

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Un-signalized Intersections				
Tortilla Drive/SR 89a				
Eastbound Left	A	0.0	B	11.4
Westbound Left	B	11.8	A	0.0
Northbound Left/Through/Right	E	37.1	B	11.8
Southbound Left/Through/Right	A	0.0	D	33.6
Paint Center Driveway/SR 89a				
Westbound Left	B	11.9	A	0.0
Northbound Left/Right	C	16.0	C	18.1
Southwest Drive/SR 89a				
Eastbound Left	A	9.8	B	11.8
Southbound Left/Right	C	20.2	D	27.9
Slingshot Rental Driveway/SR 89a				
Westbound Left	B	12.0	B	10.2
Northbound Left/Right	C	22.5	C	19.9
Yavapai Title Driveway/SR 89a				
Westbound Left	B	12.0	B	10.2
Northbound Left/Right	B	13.9	C	17.7
West AmTrust Driveway/SR 89a				
Westbound Left	B	12.0	B	10.2
Northbound Left/Right	A	0.0	A	0.0
Plaza de Oeste Driveway/SR 89a				
Eastbound Left	A	9.8	B	11.5
Westbound Left	B	11.9	B	10.1
Northbound Left/Through/Right	B	13.9	D	28.0
Southbound Left/Through/Right	D	25.7	D	33.7
Uhaul Driveway/Southwest Drive				
Eastbound Left/Right	A	8.7	A	8.8
Northbound Left/Through	A	7.3	A	7.3
Navajo Drive/Southwest Drive				
Eastbound Left/Through/Right	A	9.0	A	8.8
Westbound Left/Through/Right	A	9.4	A	9.4
Northbound Left/Through	A	7.3	A	7.3
Southbound Left/Through/Right	A	0.0	A	0.0

Delay - seconds per vehicle

Table 6 – 2025 Weekday Peak Hour Levels of Service Without Project With Navajo Lofts

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Un-signalized Intersections				
Tortilla Drive/SR 89a				
Eastbound Left	A	0.0	B	11.9
Westbound Left	B	12.3	A	0.0
Northbound Left/Through/Right	E	43.3	B	12.1
Southbound Left/Through/Right	A	0.0	E	39.0
Paint Center Driveway/SR 89a				
Westbound Left	B	12.5	A	0.0
Northbound Left/Right	C	16.9	C	19.1
Southwest Drive/SR 89a				
Eastbound Left	B	10.1	B	12.4
Southbound Left/Right	C	22.0	D	30.5
Slingshot Rental Driveway/SR 89a				
Westbound Left	B	12.5	B	10.4
Northbound Left/Right	C	24.2	C	21.1
Yavapai Title Driveway/SR 89a				
Westbound Left	B	12.5	B	10.4
Northbound Left/Right	B	14.5	C	18.6
West AmTrust Driveway/SR 89a				
Westbound Left	B	12.5	B	10.4
Northbound Left/Right	A	0.0	A	0.0
Plaza de Oeste Driveway/SR 89a				
Eastbound Left	B	10.2	B	12.0
Westbound Left	B	12.4	B	10.4
Northbound Left/Through/Right	B	14.5	D	32.0
Southbound Left/Through/Right	D	30.1	E	38.9
Uhaul Driveway/Southwest Drive				
Eastbound Left/Right	A	8.9	A	8.9
Northbound Left/Through	A	7.3	A	7.4
Navajo Drive/Southwest Drive				
Eastbound Left/Through/Right	A	9.1	A	8.8
Westbound Left/Through/Right	A	9.4	A	9.4
Northbound Left/Through	A	7.3	A	7.3
Southbound Left/Through/Right	A	0.0	A	0.0

Delay - seconds per vehicle

As shown in **Table 5** and **6**, the northbound approach to the intersection of Tortilla Drive/SR 89A is anticipated to experience an inadequate delay during the weekday AM peak hour in 2022 without traffic from the project. In 2025 without traffic from the project, the northbound and southbound approaches to the intersection of Tortilla Drive/SR 89A are expected to experience inadequate delays during the weekday peak hours.

The southbound approach to the intersection of Plaza de Oeste Driveway/SR 89A is expected to operate at a LOS E during the weekday PM peak hour in 2025 without traffic from the project.

The delays at the intersections of Tortilla Drive/SR 89A and Plaza de Oeste Driveway/SR 89A are due to the relatively high through traffic volumes along SR 89A not providing adequate gaps for vehicles turning from the minor approaches.

The remaining study intersections are expected to operate at an adequate LOS during the weekday peak hours in 2022 and 2025 without traffic from the project.

Future Traffic Operations With Project

In order to assess the impacts of the project on future traffic operations, levels of service were calculated for each project intersection in 2022 and 2025, with the project.

Weekday peak hour traffic volumes for 2022 and 2025 without the project were combined with the estimated trips generated by the project to yield weekday peak hour traffic volumes with the project as shown in **Figures 12** and **13**.

Weekday intersection levels of service for 2022 and 2025, with the project, were then calculated as shown in **Tables 7** and **8**. Complete capacity calculations are included in the Appendix.

As shown in **Tables 7** and **8**, the northbound and southbound approaches to the intersection of Tortilla Drive/SR 89A are anticipated to experience inadequate delays during the weekday peak hours in 2022 and 2025 without and with traffic from the project.

The southbound approach to Southwest Drive/SR 89A is expected to experience an inadequate delay during the weekday peak hours in 2022 and 2025 with traffic from the project.

The southbound approach to East Access/SR 89A is anticipated to operate at a LOS F in 2022 and 2025 with traffic from the project.

The southbound approach to the intersection of Plaza de Oeste Driveway/SR 89A is expected to operate at a LOS E during the weekday PM peak hour in 2022 with the project and in 2025 without and with traffic from the project. The northbound approach is also expected to experience an inadequate delay in 2025 with traffic from the project.

The delays at these intersections are due to the relatively high through traffic volumes along SR 89A not providing adequate gaps for vehicles turning from the minor approaches.

The remaining study intersections are expected to operate at an adequate LOS during the weekday peak hours in 2022 and 2025 without traffic from the project.

Figure 12 – 2022 Weekday Peak Hour Traffic Volumes With Project

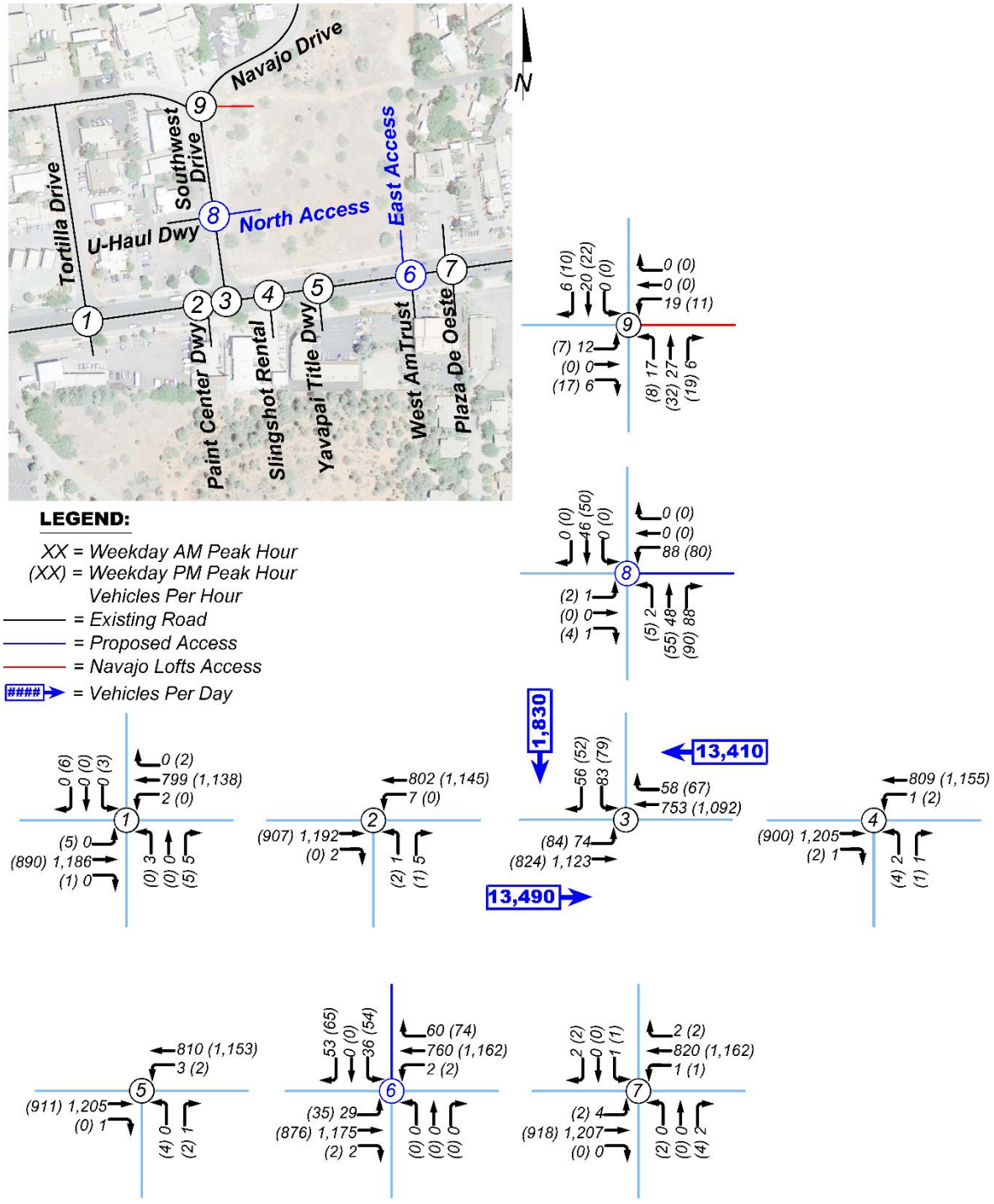


Figure 13 – 2025 Weekday Peak Hour Traffic Volumes With Project

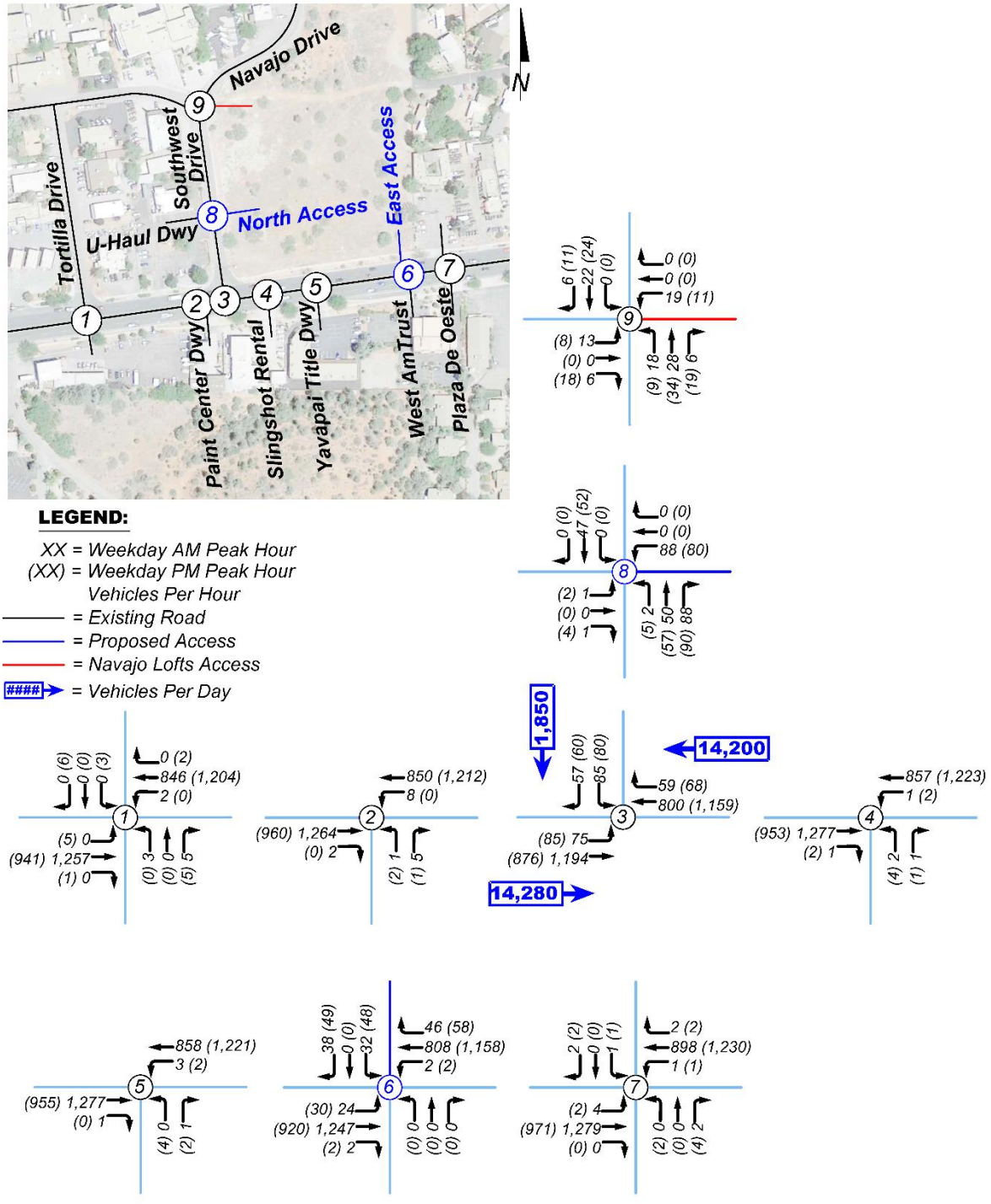


Table 7 – 2022 Weekday Peak Hour Levels of Service With Project

Intersection	2022 Without Project				2022 With Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Un-signalized Intersections								
Tortilla Drive/SR 89a								
Eastbound Left	A	0.0	B	11.4	A	0.0	B	11.7
Westbound Left	B	11.8	A	0.0	B	12.0	A	0.0
Northbound Left/Through/Right	E	37.1	B	11.8	E	38.9	B	12.0
Southbound Left/Through/Right	A	0.0	D	33.6	A	0.0	E	36.6
Paint Center Driveway/SR 89a								
Westbound Left	B	11.9	A	0.0	B	12.1	A	0.0
Northbound Left/Right	C	16.0	C	18.1	C	16.3	C	18.8
Southwest Drive/SR 89a								
Eastbound Left	A	9.8	B	11.8	B	10.5	B	13.5
Southbound Left/Right	C	20.2	D	27.9	N/A		N/A	
Southbound Left	N/A		N/A		E	38.4	F	66.0
Southbound Right					B	11.9	B	14.6
Slingshot Rental Driveway/SR 89a								
Westbound Left	B	12.0	B	10.2	B	12.1	B	10.3
Northbound Left/Right	C	22.5	C	19.9	C	22.9	C	20.3
Yavapai Title Driveway/SR 89a								
Westbound Left	B	12.0	B	10.2	B	12.1	B	10.3
Northbound Left/Right	B	13.9	C	17.7	B	14.1	C	18.1
East Access/SR 89a								
Eastbound Left	N/A		N/A		B	10.1	B	12.4
Westbound Left	B	12.0	B	10.2	B	11.9	B	10.1
Northbound Left/Right	A	0.0	A	0.0	N/A		N/A	
Northbound Left/Through/Right	N/A		N/A		A	0.0	A	0.0
Southbound Left/Through/Right					F	91.0	F	>120
Plaza de Oeste Driveway/SR 89a								
Eastbound Left	A	9.8	B	11.5	A	9.9	B	11.8
Westbound Left	B	11.9	B	10.1	B	12.1	B	10.3
Northbound Left/Through/Right	B	13.9	D	28.0	B	14.1	D	30.6
Southbound Left/Through/Right	D	25.7	D	33.7	D	26.8	E	36.8
Uhaul Driveway/Southwest Drive								
Eastbound Left/Right	A	8.7	A	8.8	N/A		N/A	
Eastbound Left/Through/Right	N/A		N/A		A	9.1	A	9.0
Westbound Left/Through/Right					B	10.3	A	10.4
Northbound Left/Through	A	7.3	A	7.3	N/A		N/A	
Northbound Left/Through/Right	N/A		N/A		A	7.3	A	7.3
Southbound Left/Through/Right					A	0.0	A	0.0
Navajo Drive/Southwest Drive								
Eastbound Left/Through/Right	A	9.0	A	8.8	A	9.0	A	8.8
Westbound Left/Through/Right	A	9.4	A	9.4	A	9.4	A	9.4
Northbound Left/Through	A	7.3	A	7.3	A	7.3	A	7.3
Southbound Left/Through/Right	A	0.0	A	0.0	A	0.0	A	0.0

Delay - seconds per vehicle

Table 8 – 2025 Weekday Peak Hour Levels of Service With Project

Intersection	2025 Without Project				2025 With Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Un-signalized Intersections								
Tortilla Drive/SR 89a								
Eastbound Left	A	0.0	B	11.9	A	0.0	B	12.1
Westbound Left	B	12.3	A	0.0	B	12.5	A	0.0
Northbound Left/Through/Right	E	43.3	B	12.1	E	45.9	B	12.3
Southbound Left/Through/Right	A	0.0	E	39.0	A	0.0	E	43.0
Paint Center Driveway/SR 89a								
Westbound Left	B	12.5	A	0.0	B	12.6	A	0.0
Northbound Left/Right	C	16.9	C	19.1	C	17.2	C	19.9
Southwest Drive/SR 89a								
Eastbound Left	B	10.1	B	12.4	B	10.8	B	14.1
Southbound Left/Right	C	22.0	D	30.5	N/A		N/A	
Southbound Left	N/A		N/A		E	44.0	F	82.7
Southbound Right					B	12.3	C	15.4
Slingshot Rental Driveway/SR 89a								
Westbound Left	B	12.5	B	10.4	B	12.6	B	10.5
Northbound Left/Right	C	24.2	C	21.1	C	24.5	C	21.5
Yavapai Title Driveway/SR 89a								
Westbound Left	B	12.5	B	10.4	B	12.6	B	10.5
Northbound Left/Right	B	14.5	C	18.6	B	14.6	C	18.9
East Access/SR 89a								
Eastbound Left	N/A		N/A		B	10.4	B	12.9
Westbound Left	B	12.5	B	10.4	B	12.4	B	10.4
Northbound Left/Right	A	0.0	A	0.0	N/A		N/A	
Northbound Left/Through/Right	N/A		N/A		A	0.0	A	0.0
Southbound Left/Through/Right					F	>120	F	>120
Plaza de Oeste Driveway/SR 89a								
Eastbound Left	B	10.2	B	12.0	B	10.3	B	12.3
Westbound Left	B	12.4	B	10.4	B	12.6	B	10.6
Northbound Left/Through/Right	B	14.5	D	32.0	B	14.7	D	34.6
Southbound Left/Through/Right	D	30.1	E	38.9	D	31.8	E	42.4
Uhaul Driveway/Southwest Drive								
Eastbound Left/Right	A	8.7	A	8.7	N/A		N/A	
Eastbound Left/Through/Right	N/A		N/A		A	9.1	A	9.0
Westbound Left/Through/Right					A	10.3	B	10.5
Northbound Left/Through	A	7.3	A	7.3	N/A		N/A	
Northbound Left/Through/Right	N/A		N/A		A	7.3	A	7.4
Southbound Left/Through/Right					A	0.0	A	0.0
Navajo Drive/Southwest Drive								
Eastbound Left/Through/Right	A	9.1	A	8.8	A	9.1	A	8.8
Westbound Left/Through/Right	A	9.4	A	9.4	A	9.4	A	9.4
Northbound Left/Through	A	7.3	A	7.3	A	7.3	A	7.3
Southbound Left/Through/Right	A	0.0	A	0.0	A	0.0	A	0.0

Delay - seconds per vehicle

Turn Lane Analysis

A key element of this traffic analysis is to determine if a right turn lane is required at East Access. The need for a northbound right turn lane at North Access/Southwest Drive was not evaluated due to the low-speed, low-volume nature of Southwest Drive. Additionally, the need for eastbound left turn lanes at Southwest Drive/SR 89A and East Access/SR 89A was not analyzed due to the existing two-way center left turn lane on SR 89A that will be available for eastbound left turning vehicles. Additionally, a southbound left turn lane and a westbound right turn lane are proposed at Southwest Drive/SR 89A.

The need for right turn lanes was based on the ADOT's *Traffic Guidelines and Processes 245 – Turn Lane Warrants* (TGP 245). The criteria for determining if right turn lanes are needed are based on speed, through traffic volume, and turning traffic volume during the peak hour. **Table 9** shows ADOT's right turn lane warrant requirements.

Table 9 – ADOT Right Turn Lane Requirements

Peak Hour Traffic Volume on the Highway in Advancing Direction	Minimum Peak Hour Right-turn Traffic Volume				
	# of thru lanes per direction				
	1		2		3
	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed	All Speeds
≤ 200					
201 – 300	-	30	-	-	-
301 – 400	-	19	-	55	-
401 – 500	85	14	-	30	-
501 – 600	58	12	140	25	-
601 – 700	27	9	80	18	-
701 – 800	20	8	53	15	-
801 – 900	12	7	40	12	-
901 – 1000	9	6	30	11	-
1001 – 1100	8	5	23	9	18
1101 – 1200	7	5	18	8	16
1201 – 1300	6	4	14	8	15
1301 – 1400	6	4	11	6	12
1400+	5	3	8	6	10

When needed, turn lanes remove the slowing turning traffic from the through traffic stream, improving capacity. **Table 10** shows the locations that were evaluated for a right turn lane based on traffic volumes in 2025 with the project.

Table 10 – Right Turn Lane Warrants, With Project

Intersection	Direction	Peak Hour	# of Thru Lanes per Direction	Posted Speed	Peak Hour Traffic Volume in Advancing Direction	Right Turn Volume (vph)	Minimum Right Turn Volume Criteria	Warranted
East Access/SR 89A	Westbound	AM	2	35 mph	854 vph	46	40	Yes
		PM			1216 vph	58	14	

vph - vehicles per hour, mph - miles per hour

Table 10 shows that a westbound right turn lane is warranted at East Access/SR 89A in 2025 with the project.

While a westbound right turn lane is warranted at East Access/SR 89A in 2025 with the project, this turn lane cannot be constructed due to geometric constraints, as East Access is located approximately 55 feet west of an adjacent driveway. The installation of a continuous right turn lane would also not be possible as the driveways along SR 89A are located too closely to one another and do not provide an acceptable location for a right turn lane to be constructed without placing adjacent driveways within the taper of the right turn lane. Moreover, continuous right turn lanes can lead to driver confusion as it can be unclear which driveway vehicles are turning into.

It should be noted that shifting the location of East Access is not possible as it would negatively impact the layout and internal circulation of the site.

Queue storage requirements for proposed westbound right turn lane and southbound left turn lane at Southwest Drive/SR 89A were calculated using the following method as recommended in ADOT *TGP 430 – Turn Lane Design* for an un-signalized intersection. Typically, an average vehicle length of 25 feet is assumed.

For un-signalized intersections, storage for vehicles likely to arrive in an average two-minute period within the peak hour should be provided.

Vehicles per 2 min. period = (vehicles/hour) ÷ (30 periods/hour)
Storage length = vehicles per 2 min. period x vehicle length

Table 11 shows the calculated queue lengths for the proposed turn lanes based on 2025 weekday peak hour traffic volumes with traffic from the project. The computed values are typically rounded to the nearest 25 feet. Complete queue length calculations are available in the Appendix.

It should be noted that the westbound right turning movement from SR 89A to Southwest Drive is not expected to generate a queue, as it will be a free flow movement. Based on an average vehicle length of 25 feet, ADOT requires a minimum queue length of 50 feet for turn lanes.

Table 11 – Calculated Queue Lengths

Intersection	Left Turn Storage				Right Turn Storage			
	NB	SB	EB	WB	NB	SB	EB	WB
North Access/SR 89								
Turning Volume (vph)		85						68
$S_{calculated}$ =		71						0
$S_{rounded}$ =		75						50

S - storage in feet, vph - vehicles per hour

Once the queue length is determined, gap and braking distance must be calculated for turn lanes on ADOT controlled roadways. *ADOT TGP 430 – Turn Lane Design* provides gap and braking distance criteria based on the posted roadway speed limit. The speed limit at the project site on SR 89A is 35 mph. The minimum total turn length is shown in **Table 12**.

Table 12 – Turn Lane Length

Intersection	Queue	Minimum Braking Distance	Gap	Minimum Total
Southwest Drive/SR 89A				
Westbound Right Turn Lane	50	40	60	150

All Lengths in Feet, Calculations Based on Posted Speed, Minimum Requirements

As shown in **Table 12**, the westbound right turn lane at Southwest Drive/SR 89A should be constructed to provide minimum turn lane lengths of 150 feet.

Traffic Signal Warrant Analysis

Traffic signal warrant analyses were performed at the intersection of Southwest Drive/SR 89A to determine if and/or when a traffic signal will be needed. The study intersection was analyzed for the existing conditions and in 2022 and 2025 without and with the project.

The *Manual on Uniform Traffic Control Devices (MUTCD),* Federal Highway Administration, 2009, lists nine warrants that are used to determine if a traffic signal should be considered for installation at an intersection. A traffic signal may be warranted if one or more of the warrants are satisfied. Warrants #1 (Eight Hour Volume) and #2 (Four Hour Vehicular Volume) were used to evaluate the need to signalize the intersection. Based on existing conditions, availability of information, and applicability, the remaining warrants (#3, #4, #5, #6, #7, #8, and #9) do not apply to the given conditions.

Warrant #1 (Eight Hour Volume) is satisfied when for at least eight (8) hours of an average day, specific traffic volume levels are met for both the major and minor streets (Condition A – Minimum Vehicular Volume). The MUTCD states these volumes depend on the vehicles per hour (vph) combined for both approaches of the major street, and for the highest volume approach on the minor street. The values vary depending on the number of approach lanes and the 85th percentile speed of the roadways.

Warrant #1 also applies to operating conditions where the major street traffic levels are sufficiently high that traffic entering or crossing from a minor street suffers excessive delay (Condition B – Interruption of Continuous Traffic). Once again, the warrant is satisfied when for each of any of the same eight (8) hours of an average day, specific traffic volume levels are met for both the major and minor streets.

Warrant #2 (Four Hour Volume) is met when, for any four hours of the average day on both the major and minor streets, the hourly approach volumes are above the plotted curve contained in the MUTCD (see Appendix F).

Daily traffic generated by the project was distributed throughout the 24 hours of a day based on existing daily traffic distributions and included in the future 2022 and 2025 calculations. **Table 13** shows the results of the warrant analyses at the study intersection. A complete set of the warrant analyses can be found in the Appendix.

Table 13 – Traffic Signal Warrant Analysis (Southwest Drive/SR 89A)

Southwest Drive/SR 89A	Warrant Number									
	1		2	3	4	5	6	7	8	9
	Condition A	Condition B								
Existing	No	No	No	*	*	*	*	*	*	*
Hours Met	0	0	0	*	*	*	*	*	*	*
2022 Without Project	No	No	No	*	*	*	*	*	*	*
Hours Met	0	0	0	*	*	*	*	*	*	*
2025 Without Project	No	No	No	*	*	*	*	*	*	*
Hours Met	0	0	0	*	*	*	*	*	*	*
2022 With Project	No	Yes	Yes	*	*	*	*	*	*	*
Hours Met	0	10	10	*	*	*	*	*	*	*
2025 With Project	No	Yes	Yes	*	*	*	*	*	*	*
Hours Met	0	10	10	*	*	*	*	*	*	*

* Warrant Does Not Apply

As shown in **Table 13**, the intersection of Southwest Drive/ SR 89A does not currently meet and is not expected to meet traffic signal warrants #1 or #2 in 2022 or 2025 without traffic from the project, with the adjacent Navajo Lofts development. In 2022 and 2025, traffic signal warrants #1 and #2 are expected to be met with the project and with the adjacent Navajo Lofts development.

It is important to mention that traffic signals should not be installed because one or more of the warrants are satisfied. The MUTCD warrants reflect only the lowest minimum levels on which traffic engineers agree. It also states that, "The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal."

Crash Analysis

Crash history for the existing study intersections was obtained from ADOT from 1 January 2016 to 31 December 2020. The results of the crash analysis at the nine existing study intersections are shown in **Table 14** through **16**. A summary of the crash data can be found in the Appendix.

Table 14 – Tortilla Drive/SR 89A

Year	Crash Type							Fatal	Injury	Crash Totals
	Angle	Left Turn	Rear-End	Sideswipe	Single Vehicle	Head On	Other			
2016		1								1
2017			1							1
2018	1									1
2019			1	1						2
2020		1								1
5-Year Total	**1**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**6**

As shown in **Table 14**, six collisions were reported at the intersection of Tortilla Drive/SR 89A during the five-year study period. None of the crashes resulted in injury.

Table 15 – Southwest Drive/SR 89A

Year	Crash Type							Fatal	Injury	Crash Totals
	Angle	Left Turn	Rear-End	Sideswipe	Single Vehicle	Head On	Other			
2016		1							1	1
2017			1		1				1	2
2018	2								2	2
2019				1						1
2020		1	1	1						3
5-Year Total	**2**	**2**	**2**	**2**	**1**	**0**	**0**	**0**	**4**	**9**

Table 15 shows that a total of nine crashes were reported at the intersection of Southwest Drive/SR 89A during the five-year study period, four of which resulted in injury.

Table 16 – Slingshot Rentals Driveway/SR 89A

Year	Crash Type							Fatal	Injury	Crash Totals
	Angle	Left Turn	Rear-End	Sideswipe	Single Vehicle	Head On	Other			
2016										0
2017										0
2018			1							1
2019										0
2020										0
5-Year Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

As shown in **Table 16**, one crash was reported at the intersection of Slingshot Rentals Driveway/SR 89A within the five-year study period. The collision was a rear-end.

No crashes were reported at the remaining study intersections. This limited crash data provides no observable crash pattern for the area.

It should be noted that this crash summary only includes crashes where a police officer was contacted and wrote a report, otherwise, there is no record of the incident. It is possible that other minor crashes occurred in the area where the Police Department was not contacted, and no official record of these crashes exists.

Mitigation

The delays at the intersections of Tortilla Drive/SR 89A, Southwest Drive/SR 89A, East Access/SR 89A, and Plaza de Oeste Driveway/SR 89A are due to the relatively high through traffic volumes along SR 89A not providing adequate gaps for vehicles turning from the minor approaches. Unsignalized, minor approaches to four or more lane major streets such as SR 89A tend to operate at a LOS E or F during the weekday peak hours. Mitigation measures at these closely spaced intersections are limited. While a traffic signal would be expected to alleviate these delays, the intersections are too closely spaced for traffic signals to be installed at each intersection. Moreover, traffic signals are not appropriate for delays experienced by a relatively low number of vehicles for only a few hours of the day.

The installation of a traffic signal at Southwest Drive/SR 89A is expected to alleviate the delays at this intersection.

Table 17 shows the corresponding levels of service with the proposed mitigation measure described above using 2025 peak hour traffic volumes with traffic from the project. Complete capacity calculations can be found in the Appendix.

Table 17 – Mitigation Measures, 2025 With Project

Intersection	Mitigation Measure	2025 Without Mitigation				2025 With Mitigation			
		AM Peak		PM Peak		AM Peak		PM Peak	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Southwest Drive/SR 89a	Install a Traffic Signal								
Overall Intersection		N/A		N/A		B	14.7	B	12.8
Eastbound Left		B	10.8	B	14.1	B	12.3	B	12.9
Eastbound Through		N/A		N/A		B	13.1	A	7.8
Westbound Through						B	17.3	B	15.7
Westbound Through/Right						B	13.2	B	10.1
Southbound Left		E	44.0	F	82.7	B	15.6	C	21.6
Southbound Right		B	12.3	C	15.4	B	15.3	C	21.3

Delay - seconds per vehicle

Although the installation of a traffic signal at Southwest Drive/SR 89A is expected to alleviate the delays at this intersection, it is not recommended. The Arizona Department of Transportation's (ADOT's) priority is to maintain traffic flow on SR 89A. Traffic signals impede such flow. There has also been discussion with ADOT that the intersection of Tortilla Drive/SR 89a would be signalized in the future making signal spacing inadequate with Southwest Drive. Furthermore, two existing business access points on the south side of the intersection are offset, cannot be combined or relocated, and would make such a traffic installation difficult at best in integrating three intersections within the design window of the traffic signal. However, the proposed widening of the southbound approach to the intersection to provide an exclusive left turn lane and exclusive right turn lane is expected to have a positive impact on the delay at this intersection.

Conclusion

When fully completed, the proposed project is predicted to generate an additional 5,158 vehicle trips per day (vtpd) on weekdays to the adjacent street system from the new project site. Fifty percent of these new trips (2,579 vehicle trips) will be into the project and fifty percent will be out of the project.

The northbound approach to the intersection of Tortilla Drive/SR 89A currently experiences an inadequate delay during the weekday AM peak hour.

The remaining study intersections currently operate at an adequate level of service (LOS) during the weekday peak hours.

An adjacent development, Navajo Lofts, is planned to be constructed in the near future. This development is located directly north of the Southwest Circle K project site. The expected trip assignment from this development was added to this analysis based on the traffic assignment form the following report: *Navajo Lofts Traffic Impact Analysis* (Navajo Lofts TIA) written by Lee Engineering, LLC, dated August 2021.

The northbound approach to the intersection of Tortilla Drive/SR 89A is anticipated to experience an inadequate delay during the weekday AM peak hour in 2022 without traffic from the project. In 2025 without traffic from the project, the northbound and southbound approaches to the intersection of Tortilla Drive/SR 89A are expected to experience inadequate delays during the weekday peak hours.

The southbound approach to the intersection of Plaza de Oeste Driveway/SR 89A is expected to operate at a LOS E during the weekday PM peak hour in 2025 without traffic from the project.

The remaining study intersections are expected to operate at an adequate LOS during the weekday peak hours in 2022 and 2025 without traffic from the project.

The northbound and southbound approaches to the intersection of Tortilla Drive/SR 89A are anticipated to experience inadequate delays during the weekday peak hours in 2022 and 2025 without and with traffic from the project.

The southbound approaches to Southwest Drive/SR 89A and East Access/SR 89A are expected to experience inadequate delays during the weekday peak hours in 2022 and 2025 with traffic from the project.

The northbound and southbound approaches to the intersection of Plaza de Oeste Driveway/SR 89A are expected to operate at a LOS E during the weekday PM peak hour in 2022 with the project and in 2025 without and with traffic from the project.

The remaining study intersections are expected to operate at an adequate LOS during the weekday peak hours in 2022 and 2025 without traffic from the project.

While a westbound right turn lane is warranted at East Access/SR 89A in 2025 with the project, this turn lane cannot be constructed due to geometric constraints, as East Access is located approximately 55 feet west of an adjacent driveway. The installation of a continuous right turn lane would also not be possible as the driveways along SR 89A are located too closely to one another and do not provide an acceptable location for a right turn lane to be constructed without placing adjacent driveways within the taper of the right turn lane. Moreover, continuous right turn lanes can lead to driver confusion as it can be unclear which driveway vehicles are turning into.

It should be noted that shifting the location of East Access is not possible as it would negatively impact the layout and internal circulation of the site.

The westbound right turn lane at Southwest Drive/SR 89A is expected to require a minimum total turn lane length of 150 feet.

The southbound left turn lane at Southwest Drive/SR 89A is expected to require a minimum storage length of 75 feet.

The intersection of Southwest Drive/ SR 89A does not currently meet and is not expected to meet traffic signal warrants #1 or #2 in 2022 or 2025 without traffic from the project. In 2022 and 2025, traffic signal warrants #1 and #2 are expected to be met with the project and with the adjacent Navajo Lofts development.

Six collisions were reported at the intersection of Tortilla Drive/SR 89A during the five-year study period. None of the crashes resulted in injury.

A total of nine crashes were reported at the intersection of Southwest Drive/SR 89A during the five-year study period, four of which resulted in injury.

One crash was reported at the intersection of Slingshot Rentals Driveway/SR 89A within the five-year study period. The collision was a rear-end.

No crashes were reported at the remaining study intersections. This limited crash data provides no observable crash pattern for the area.

The delays at the intersections of Tortilla Drive/SR 89A, Southwest Drive/SR 89A, East Access/SR 89A, and Plaza de Oeste Driveway/SR 89A are due to the relatively high through traffic volumes along SR 89A not providing adequate gaps for vehicles turning from the minor approaches. Unsignalized, minor approaches to four or more lane major streets such as SR 89A tend to operate at a LOS E or F during the weekday peak hours.

Mitigation measures at these closely spaced intersections are limited. While a traffic signal would be expected to alleviate these delays, the intersections are too closely spaced for traffic signals to be installed at each intersection. Moreover, traffic signals are not appropriate for delays experienced by a relatively low number of vehicles for only a few hours of the day.

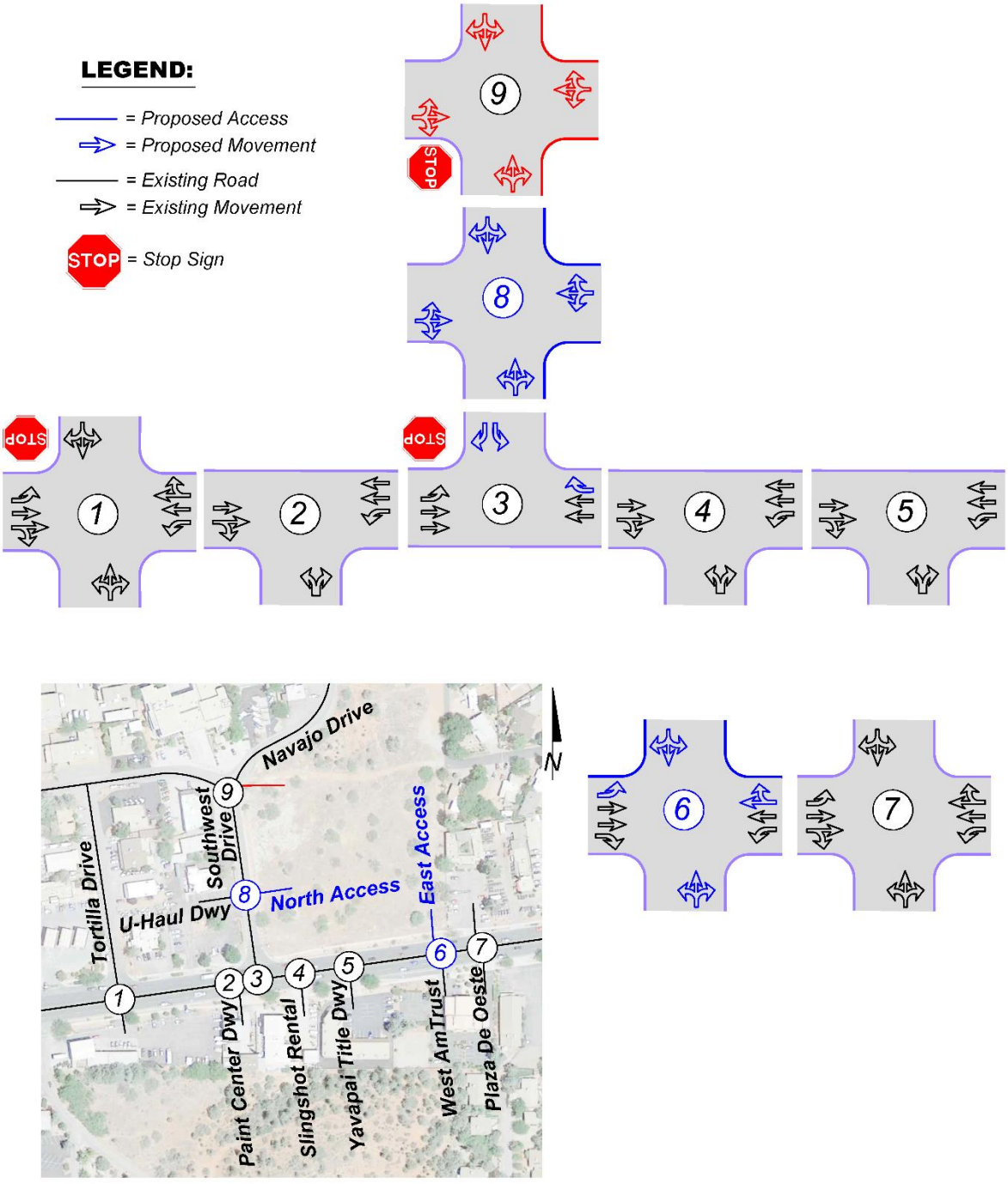
Although the installation of a traffic signal at Southwest Drive/SR 89A is expected to alleviate the delays at this intersection, it is not recommended. The Arizona Department of Transportation's (ADOT's) priority is to maintain traffic flow on SR 89A. Traffic signals impede such flow. There has also been discussion with ADOT that the intersection of Tortilla Drive/SR 89a would be signalized in the future making signal spacing inadequate with Southwest Drive. Furthermore, two existing business access points on the south side of the intersection are offset, cannot be combined or relocated, and would make such a traffic installation difficult at best in integrating three intersections within the design window of the traffic signal. However, the proposed widening of the southbound approach to the intersection to provide an exclusive left turn lane and exclusive right turn lane is expected to have a positive impact on the delay at this intersection.

The westbound right turn lane at Southwest Drive/SR 89A should be constructed to provide a minimum turn lane length of 150 feet.

The southbound left turn lane at Southwest Drive/SR 89A should be constructed to provide a minimum storage length of 75 feet.

Proposed lane configurations and traffic control are shown in **Figure 14**.

Figure 14 – Proposed Lane Configurations and Traffic Control



SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

Traffic Counts

Trip Generation Calculations

Pass-By Trip Assignment

Capacity Calculations

Turn Lane Calculations

Traffic Signal Warrant Analysis

Crash Data

Comment Resolution

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

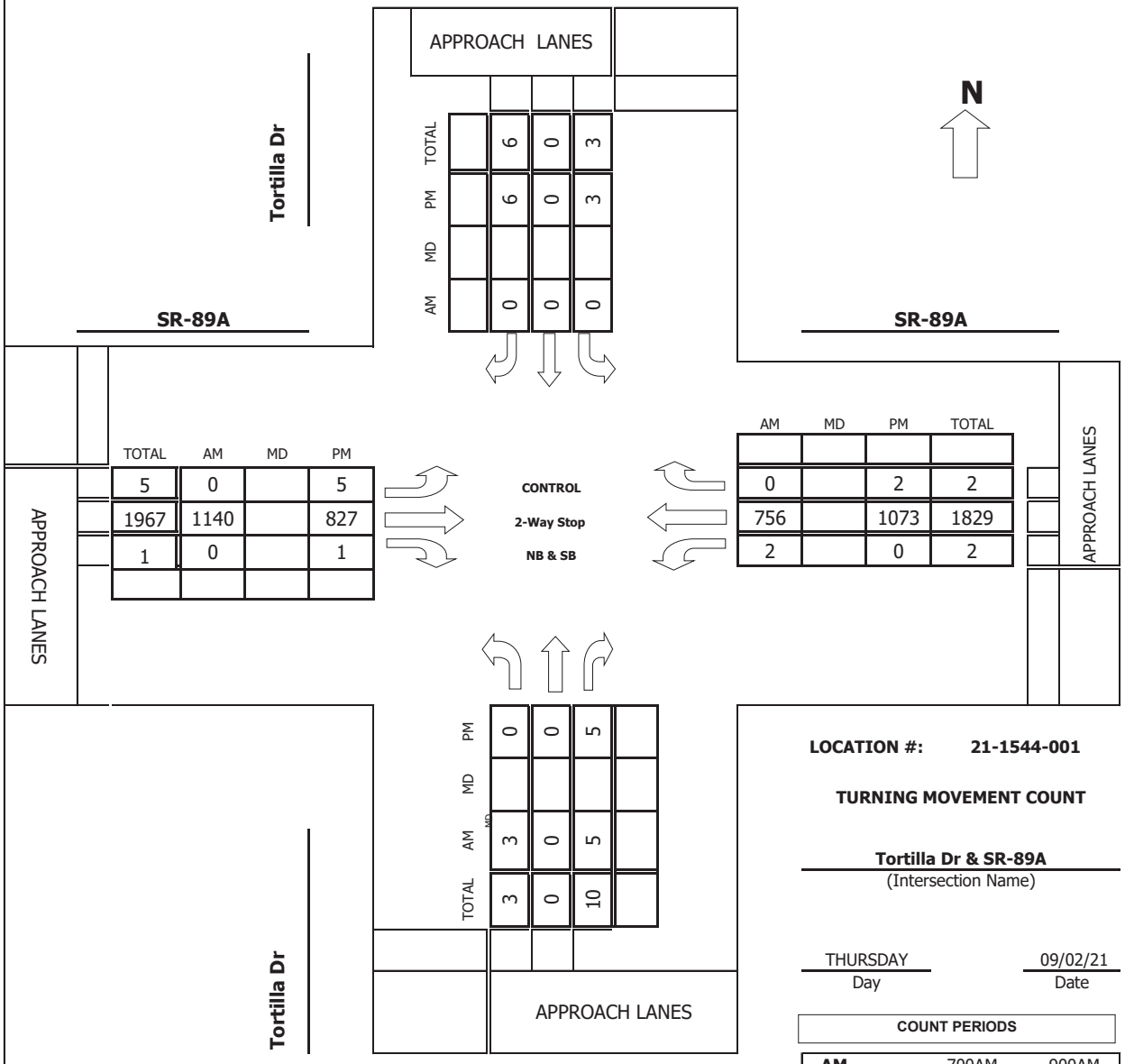
Traffic Counts

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-001

TMC SUMMARY OF Tortilla Dr & SR-89A



LOCATION #: 21-1544-001

TURNING MOVEMENT COUNT

Tortilla Dr & SR-89A
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Tortilla Dr	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	2	0	0	0	1	168	1	4	115	0	291
7:15 AM	2	0	1	0	0	0	0	181	1	2	116	0	303
7:30 AM	0	0	0	0	0	1	0	249	0	0	133	0	383
7:45 AM	0	0	1	0	0	2	1	261	2	2	138	0	407
8:00 AM	2	0	1	0	0	0	0	285	0	0	185	0	473
8:15 AM	1	0	1	0	0	0	0	292	0	1	211	0	506
8:30 AM	0	0	1	0	0	0	0	308	0	0	196	0	505
8:45 AM	0	0	2	0	0	0	0	255	0	1	164	0	422
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	5	0	9	0	0	3	2	1999	4	10	1258	0	3290
Approach %	35.71	0.00	64.29	0.00	0.00	100.00	0.10	99.70	0.20	0.79	99.21	0.00	
App/Depart	14	/	2	3	/	14	2005	/	2008	1268	/	1266	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	3	0	5	0	0	0	0	1140	0	2	756	0	1906
Approach %	37.50	0.00	62.50	####	####	####	0.00	100.00	0.00	0.26	99.74	0.00	
PEAK HR. FACTOR:		0.667			0.000			0.925			0.894		0.942

CONTROL:	2-Way Stop (NB & SB)
COMMENT 1:	
GPS:	34.862163, -111.811080

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Tortilla Dr 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	3	2	0	1	2	218	0	1	242	1	470
4:15 PM	0	0	1	1	0	2	4	208	1	0	232	0	449
4:30 PM	0	0	2	1	0	0	1	215	0	0	271	2	492
4:45 PM	0	0	0	1	0	4	0	191	0	0	262	0	458
5:00 PM	0	0	2	0	0	0	0	213	0	0	308	0	523
5:15 PM	0	0	1	0	0	0	0	179	1	0	238	0	419
5:30 PM	0	0	0	0	0	1	0	179	0	0	202	0	382
5:45 PM	0	0	0	1	0	2	0	170	0	0	201	0	374
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	9	6	0	10	7	1573	2	1	1956	3	3567
Approach %	0.00	0.00	100.00	37.50	0.00	62.50	0.44	99.43	0.13	0.05	99.80	0.15	
App/Depart	9	/	10	16	/	3	1582	/	1588	1960	/	1966	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	0	0	5	3	0	6	5	827	1	0	1073	2	1922
Approach %	0.00	0.00	100.00	33.33	0.00	66.67	0.60	99.28	0.12	0.00	99.81	0.19	

PEAK HR. FACTOR:	0.625	0.450	0.964	0.873	0.919

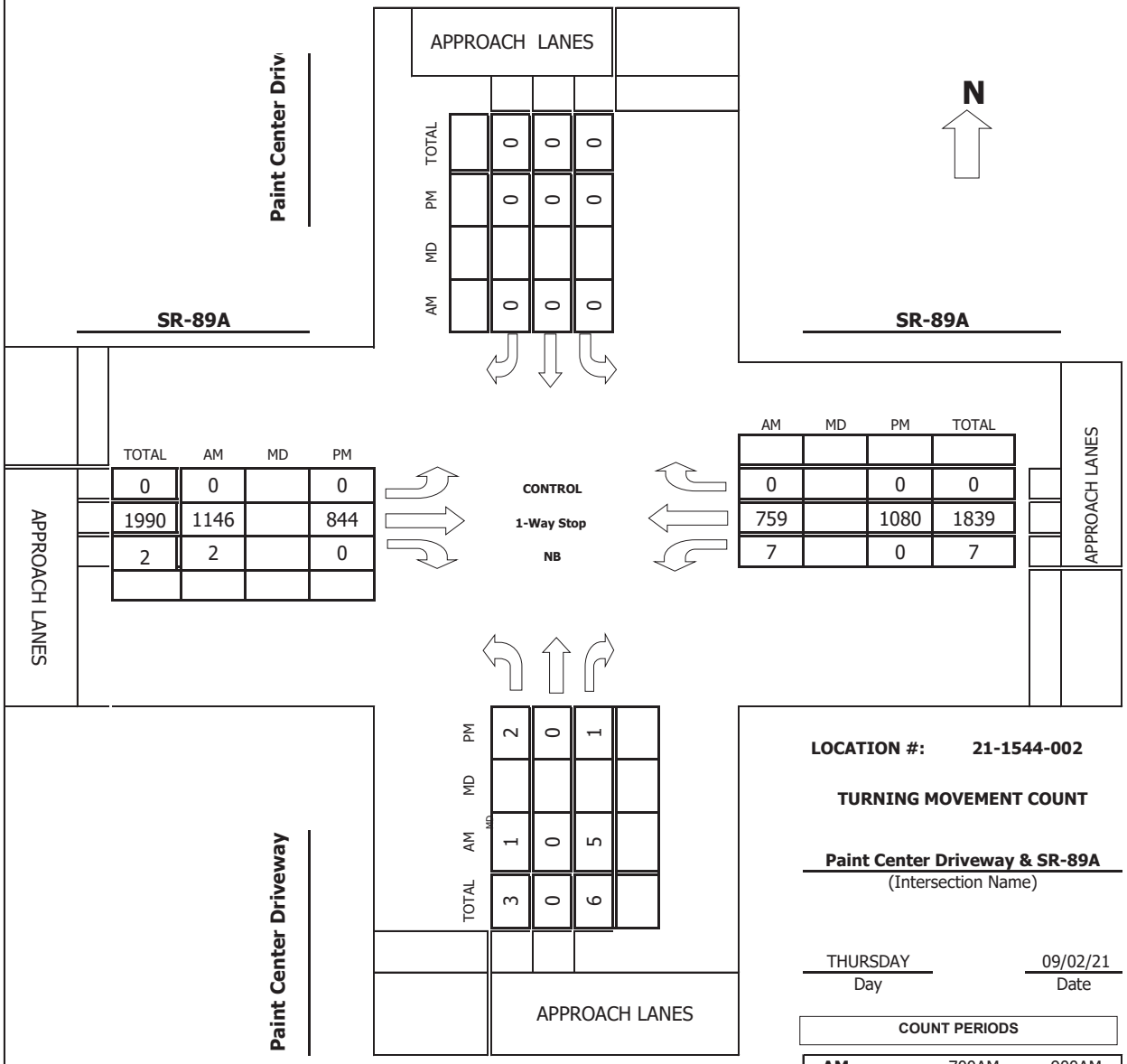
CONTROL: 2-Way Stop (NB & SB)
COMMENT 1: 0
GPS: 34.862163, -111.811080

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-002

TMC SUMMARY OF Paint Center Driveway & SR-89A



LOCATION #: 21-1544-002

TURNING MOVEMENT COUNT

Paint Center Driveway & SR-89A
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Paint Center Driveway	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	2	0	0	0	0	164	0	1	121	0	288
7:15 AM	1	0	1	0	0	0	0	186	0	2	119	0	309
7:30 AM	0	0	3	0	0	0	0	245	1	1	134	0	384
7:45 AM	0	0	0	0	0	0	0	263	0	0	139	0	402
8:00 AM	1	0	0	0	0	0	0	284	1	3	183	0	472
8:15 AM	0	0	3	0	0	0	0	299	0	0	214	0	516
8:30 AM	0	0	1	0	0	0	0	305	1	2	198	0	507
8:45 AM	0	0	1	0	0	0	0	258	0	2	164	0	425
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	2	0	11	0	0	0	0	2004	3	11	1272	0	3303
Approach %	15.38	0.00	84.62	####	####	####	0.00	99.85	0.15	0.86	99.14	0.00	
App/Depart	13	/	0	0	/	14	2007	/	2015	1283	/	1274	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	1	0	5	0	0	0	0	1146	2	7	759	0	1920
Approach %	16.67	0.00	83.33	####	####	####	0.00	99.83	0.17	0.91	99.09	0.00	

PEAK HR. FACTOR:	0.500	0.000	0.938	0.895	0.930

CONTROL: 1-Way Stop (NB)
COMMENT 1:
GPS: 34.862252, -111.810185

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Paint Center Driveway 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	2	0	0	0	0	223	1	0	243	0	469
4:15 PM	0	0	0	0	0	0	0	214	0	0	236	0	450
4:30 PM	1	0	1	0	0	0	0	220	0	0	269	0	491
4:45 PM	1	0	0	0	0	0	0	193	0	0	264	0	458
5:00 PM	0	0	0	0	0	0	0	217	0	0	311	0	528
5:15 PM	0	0	0	0	0	0	0	183	0	0	236	0	419
5:30 PM	0	0	0	0	0	0	0	176	0	0	203	0	379
5:45 PM	1	0	0	0	0	0	0	164	2	0	202	0	369
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	3	0	3	0	0	0	0	1590	3	0	1964	0	3563
Approach %	50.00	0.00	50.00	####	####	####	0.00	99.81	0.19	0.00	100.00	0.00	
App/Depart	6	/	0	0	/	3	1593	/	1593	1964	/	1967	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	2	0	1	0	0	0	0	844	0	0	1080	0	1927
Approach %	66.67	0.00	33.33	####	####	####	0.00	100.00	0.00	0.00	100.00	0.00	

PEAK HR. FACTOR:	0.375	0.000	0.959	0.868	0.912

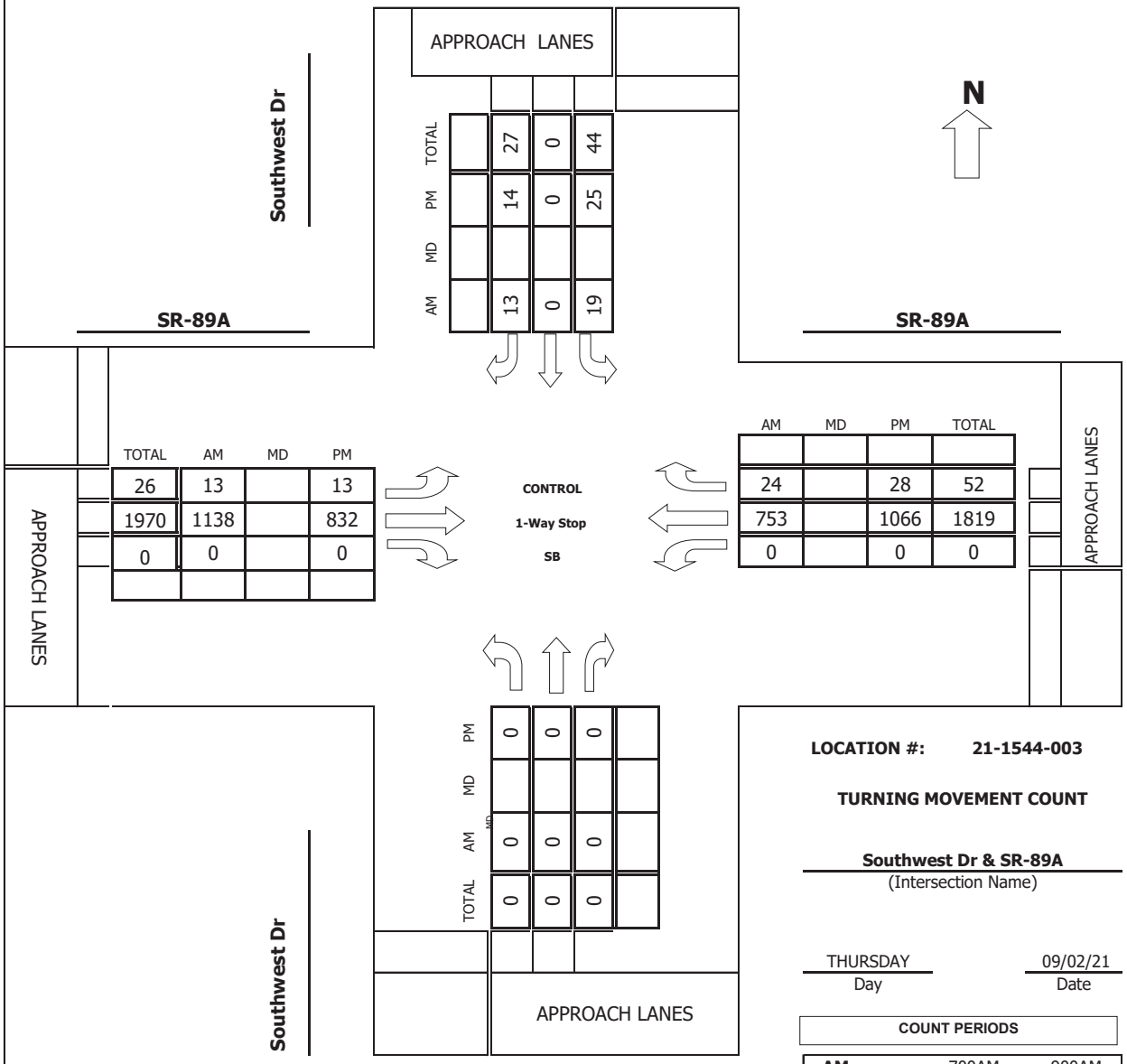
CONTROL: 1-Way Stop (NB)
COMMENT 1: 0
GPS: 34.862252, -111.810185

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-003

TMC SUMMARY OF Southwest Dr & SR-89A



LOCATION #: 21-1544-003

TURNING MOVEMENT COUNT

Southwest Dr & SR-89A
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Southwest Dr	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	3	0	1	1	165	0	0	121	5	296
7:15 AM	0	0	0	2	0	4	2	185	0	0	117	6	316
7:30 AM	0	0	0	2	0	1	6	242	0	0	134	9	394
7:45 AM	0	0	0	2	0	2	1	262	0	0	137	9	413
8:00 AM	0	0	0	3	0	3	1	283	0	0	183	8	481
8:15 AM	0	0	0	7	0	3	5	297	0	0	211	5	528
8:30 AM	0	0	0	4	0	3	5	301	0	0	197	9	519
8:45 AM	0	0	0	5	0	4	2	257	0	0	162	2	432
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	28	0	21	23	1992	0	0	1262	53	3379
Approach %	####	####	####	57.14	0.00	42.86	1.14	98.86	0.00	0.00	95.97	4.03	
App/Depart	0	/	76	49	/	0	2015	/	2020	1315	/	1283	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	0	0	19	0	13	13	1138	0	0	753	24	1960
Approach %	####	####	####	59.38	0.00	40.63	1.13	98.87	0.00	0.00	96.91	3.09	

PEAK HR. FACTOR:	0.000	0.800	0.940	0.899	0.928

CONTROL: 1-Way Stop (SB)
COMMENT 1:
GPS: 34.862276, -111.810032

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Southwest Dr 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	0	7	0	4	5	220	0	0	239	6	481
4:15 PM	0	0	0	5	0	4	4	210	0	0	232	4	459
4:30 PM	0	0	0	10	0	2	1	220	0	0	267	7	507
4:45 PM	0	0	0	6	0	4	4	189	0	0	260	9	472
5:00 PM	0	0	0	4	0	4	4	213	0	0	307	8	540
5:15 PM	0	0	0	6	0	2	2	181	0	0	234	6	431
5:30 PM	0	0	0	4	0	3	4	172	0	0	200	4	387
5:45 PM	0	0	0	8	0	7	1	163	0	0	195	6	380
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	50	0	30	25	1568	0	0	1934	50	3657
Approach %	####	####	####	62.50	0.00	37.50	1.57	98.43	0.00	0.00	97.48	2.52	
App/Depart	0	/	75	80	/	0	1593	/	1618	1984	/	1964	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	0	0	0	25	0	14	13	832	0	0	1066	28	1978
Approach %	####	####	####	64.10	0.00	35.90	1.54	98.46	0.00	0.00	97.44	2.56	

PEAK HR. FACTOR:	0.000	0.813	0.956	0.868	0.916

CONTROL: 1-Way Stop (SB)
COMMENT 1: 0
GPS: 34.862276, -111.810032

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, September 02, 2021 City: Sedona Project #: 21-1544-010

Location: Southwest Dr & SR-89A

AM Period	NB	SB		EB		WB			PM Period	NB	SB		EB		WB		
00:00		0		8		7			12:00		4		272		262		
00:15		0		2		7			12:15		8		244		191		
00:30		1		5		6			12:30		5		237		232		
00:45		0	1	6	21	4	24	46	12:45		9	26	243	996	238	923	1945
01:00		2		3		4			13:00		6		250		223		
01:15		0		2		3			13:15		8		215		255		
01:30		0		4		1			13:30		5		236		241		
01:45		0	2	4	13	0	8	23	13:45		7	26	243	944	213	932	1902
02:00		1		2		1			14:00		11		221		283		
02:15		0		4		5			14:15		10		214		266		
02:30		1		2		2			14:30		7		240		281		
02:45		1	3	3	11	5	13	27	14:45		4	32	252	927	300	1130	2089
03:00		0		3		3			15:00		8		259		330		
03:15		0		6		4			15:15		5		251		280		
03:30		0		7		3			15:30		9		303		292		
03:45		1	1	11	27	5	15	43	15:45		6	28	203	1016	278	1180	2224
04:00		2		6		5			16:00		11		225		245		
04:15		1		10		5			16:15		9		214		236		
04:30		0		15		14			16:30		12		221		274		
04:45		0	3	25	56	9	33	92	16:45		10	42	193	853	269	1024	1919
05:00		0		27		14			17:00		8		217		315		
05:15		1		29		32			17:15		8		183		240		
05:30		0		68		29			17:30		7		176		204		
05:45		0	1	96	220	39	114	335	17:45		15	38	164	740	201	960	1738
06:00		0		80		46			18:00		7		165		201		
06:15		1		96		71			18:15		4		169		174		
06:30		2		155		73			18:30		5		146		170		
06:45		3	6	158	489	83	273	768	18:45		2	18	130	610	143	688	1316
07:00		4		166		126			19:00		6		133		163		
07:15		6		187		123			19:15		3		136		165		
07:30		3		248		143			19:30		2		93		126		
07:45		4	17	263	864	146	538	1419	19:45		1	12	108	470	123	577	1059
08:00		6		284		191			20:00		0		54		133		
08:15		10		302		216			20:15		1		45		95		
08:30		7		306		206			20:30		2		49		107		
08:45		9	32	259	1151	164	777	1960	20:45		1	4	47	195	103	438	637
09:00		7		222		175			21:00		0		52		102		
09:15		4		234		185			21:15		0		38		74		
09:30		8		249		197			21:30		1		28		86		
09:45		5	24	254	959	222	779	1762	21:45		0	1	32	150	84	346	497
10:00		9		240		188			22:00		1		28		52		
10:15		6		224		195			22:15		0		28		37		
10:30		3		250		191			22:30		0		21		67		
10:45		2	20	239	953	182	756	1729	22:45		2	3	16	93	39	195	291
11:00		5		258		214			23:00		0		12		33		
11:15		2		212		213			23:15		1		11		19		
11:30		4		211		197			23:30		2		8		18		
11:45		7	18	237	918	231	855	1791	23:45		0	3	12	43	13	83	129
Total Vol.			128		5682		4185	**9995**				233		7037		8476	**15746**

GPS Coordinates: 34.862276, -111.810032

Daily Totals

NB	SB	EB	WB	Combined
	361	12719	12661	**25741**

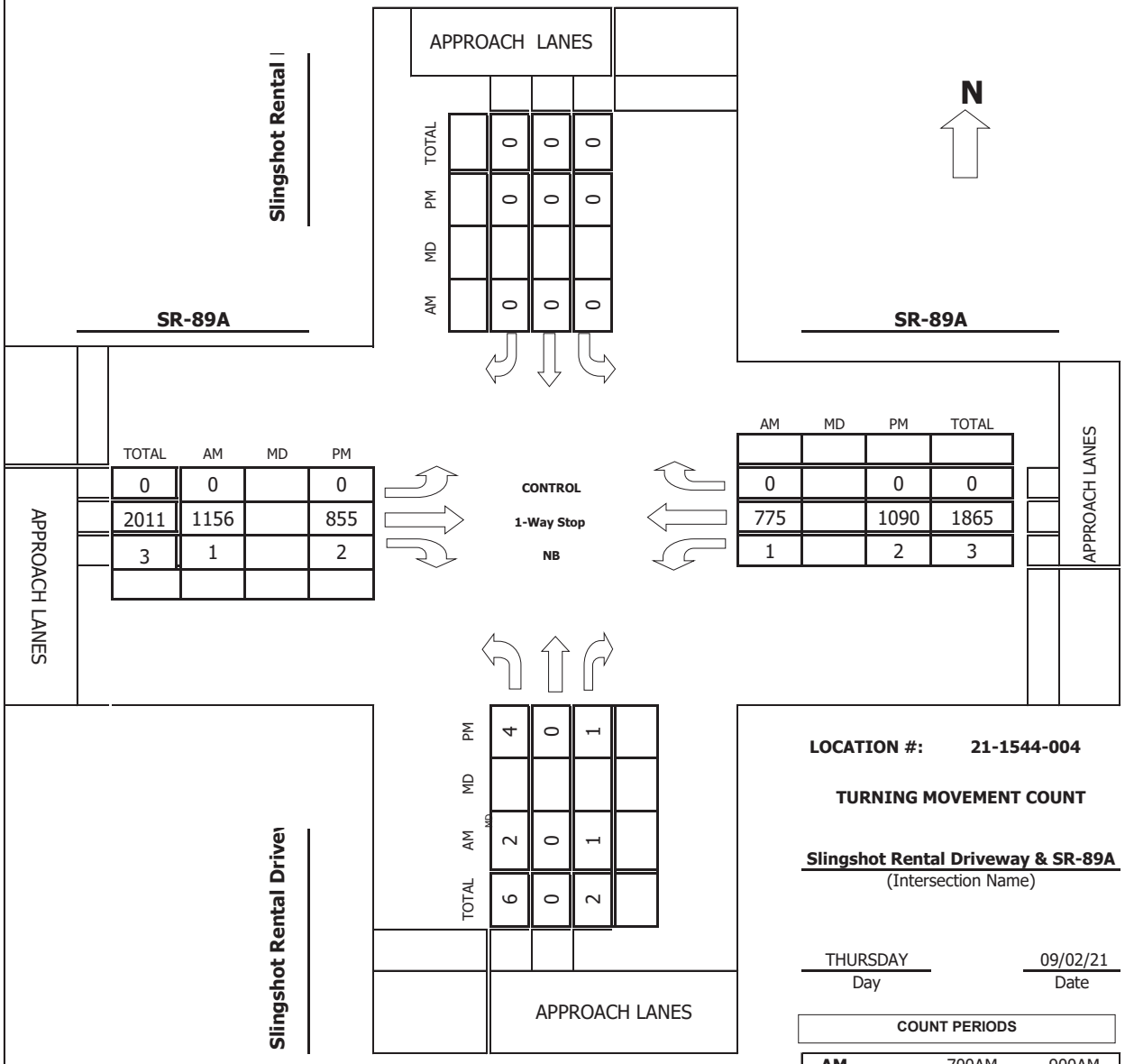
	AM				PM			
Split %	1.3%	56.8%	41.9%	**38.8%**	1.5%	44.7%	53.8%	**61.2%**
Peak Hour	08:15	07:45	11:45	**08:00**	16:00	14:45	14:45	**14:45**
Volume	33	1155	916	**1960**	42	1065	1202	**2293**
P.H.F.	0.83	0.94	0.87	**0.93**	0.88	0.88	0.91	**0.95**

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-004

TMC SUMMARY OF Slingshot Rental Driveway & SR-89A



LOCATION #: 21-1544-004

TURNING MOVEMENT COUNT

Slingshot Rental Driveway & SR-89A
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Slingshot Rental Driveway	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	0	0	0	0	167	1	0	126	0	294
7:15 AM	0	0	0	0	0	0	0	187	0	2	123	0	312
7:30 AM	0	0	0	0	0	0	0	243	1	0	143	0	387
7:45 AM	0	0	0	0	0	0	0	264	0	0	146	0	410
8:00 AM	1	0	1	0	0	0	0	285	1	1	190	0	479
8:15 AM	1	0	0	0	0	0	0	304	0	0	215	0	520
8:30 AM	0	0	0	0	0	0	0	305	0	0	206	0	511
8:45 AM	0	0	0	0	0	0	0	262	0	0	164	0	426
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	2	0	1	0	0	0	0	2017	3	3	1313	0	3339
Approach %	66.67	0.00	33.33	####	####	####	0.00	99.85	0.15	0.23	99.77	0.00	
App/Depart	3	/	0	0	/	6	2020	/	2018	1316	/	1315	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	2	0	1	0	0	0	0	1156	1	1	775	0	1936
Approach %	66.67	0.00	33.33	####	####	####	0.00	99.91	0.09	0.13	99.87	0.00	
PEAK HR. FACTOR:		0.375			0.000			0.948			0.902		0.931

CONTROL: 1-Way Stop (NB)
COMMENT 1:
GPS: 34.862298, -111.809787

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Slingshot Rental Driveway 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	0	0	0	0	0	227	0	0	245	0	472
4:15 PM	4	0	0	0	0	0	0	213	2	2	232	0	453
4:30 PM	0	0	0	0	0	0	0	230	0	0	274	0	504
4:45 PM	0	0	0	0	0	0	0	195	0	0	269	0	464
5:00 PM	0	0	1	0	0	0	0	217	0	0	315	0	533
5:15 PM	0	0	0	0	0	0	0	187	0	0	240	0	427
5:30 PM	0	0	1	0	0	0	0	176	0	1	204	0	382
5:45 PM	0	0	1	0	0	0	0	171	0	0	201	0	373
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	4	0	3	0	0	0	0	1616	2	3	1980	0	3608
Approach %	57.14	0.00	42.86	####	####	####	0.00	99.88	0.12	0.15	99.85	0.00	
App/Depart	7	/	0	0	/	5	1618	/	1619	1983	/	1984	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	4	0	1	0	0	0	0	855	2	2	1090	0	1954
Approach %	80.00	0.00	20.00	####	####	####	0.00	99.77	0.23	0.18	99.82	0.00	
PEAK HR. FACTOR:		0.313			0.000			0.932			0.867		0.917

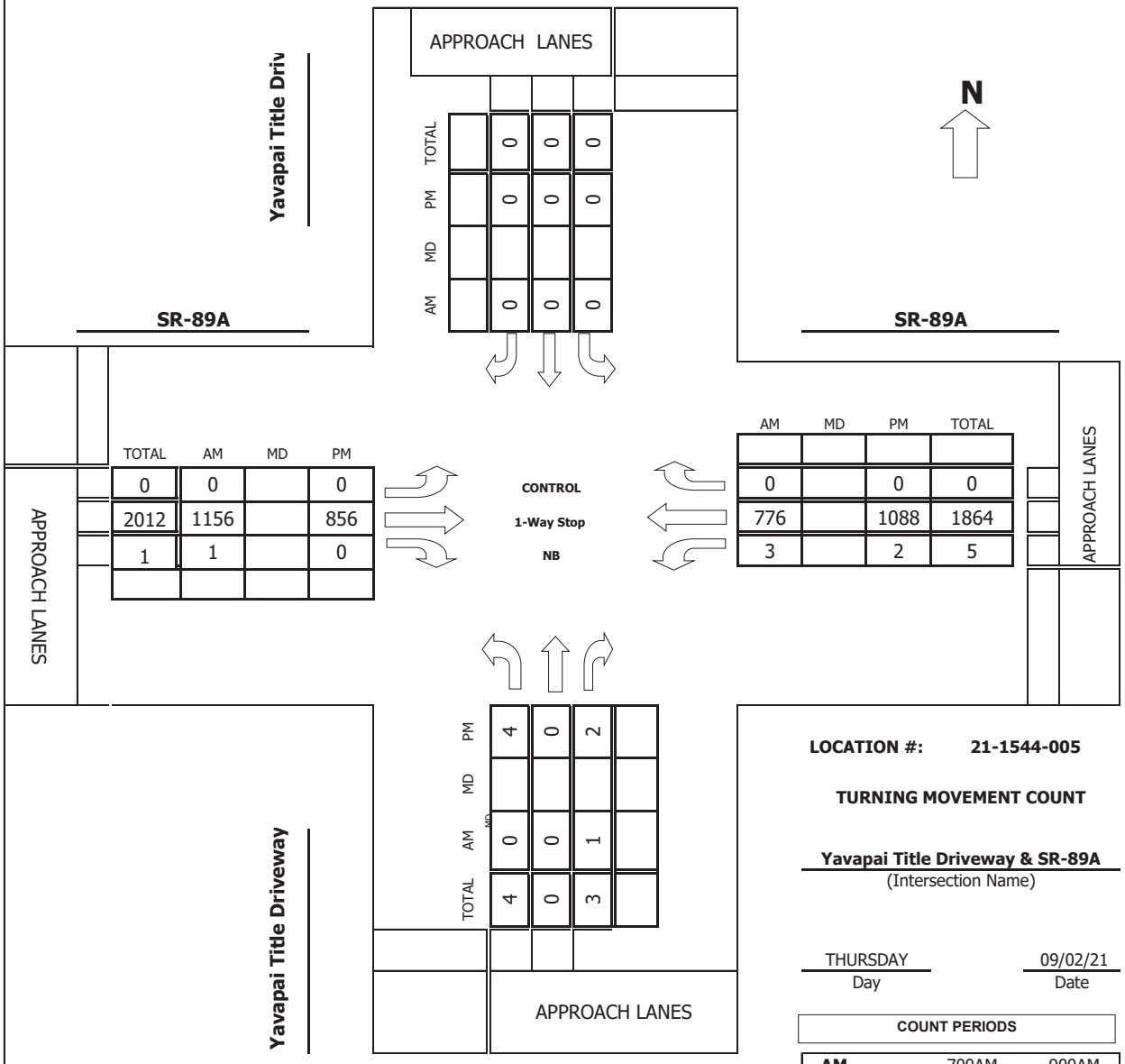
CONTROL:	1-Way Stop (NB)
COMMENT 1:	0
GPS:	34.862298, -111.809787

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-005

TMC SUMMARY OF Yavapai Title Driveway & SR-89A



LOCATION #: 21-1544-005

TURNING MOVEMENT COUNT

Yavapai Title Driveway & SR-89A
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Yavapai Title Driveway	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	0	0	0	0	167	0	1	126	0	294
7:15 AM	0	0	0	0	0	0	0	187	0	0	125	0	312
7:30 AM	0	0	0	0	0	0	0	241	2	0	143	0	386
7:45 AM	0	0	0	0	0	0	0	263	1	0	146	0	410
8:00 AM	0	0	0	0	0	0	0	285	1	0	191	0	477
8:15 AM	0	0	0	0	0	0	0	304	0	2	215	0	521
8:30 AM	0	0	0	0	0	0	0	305	0	1	206	0	512
8:45 AM	0	0	1	0	0	0	0	262	0	0	164	0	427
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	1	0	0	0	0	2014	4	4	1316	0	3339
Approach %	0.00	0.00	100.00	####	####	####	0.00	99.80	0.20	0.30	99.70	0.00	
App/Depart	1	/	0	0	/	8	2018	/	2015	1320	/	1316	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	0	1	0	0	0	0	1156	1	3	776	0	1937
Approach %	0.00	0.00	100.00	####	####	####	0.00	99.91	0.09	0.39	99.61	0.00	

PEAK HR. FACTOR:	0.250	0.000	0.948	0.897	0.929

CONTROL: 1-Way Stop (NB)
COMMENT 1:
GPS: 34.862342, -111.809399

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Yavapai Title Driveway 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	2	0	0	0	0	226	1	2	245	0	476
4:15 PM	0	0	1	0	0	0	0	213	0	1	234	0	449
4:30 PM	1	0	0	0	0	0	0	230	0	0	273	0	504
4:45 PM	3	0	0	0	0	0	0	195	0	0	266	0	464
5:00 PM	0	0	1	0	0	0	0	218	0	1	315	0	535
5:15 PM	0	0	0	0	0	0	0	187	0	0	240	0	427
5:30 PM	1	0	1	0	0	0	0	177	0	0	204	0	383
5:45 PM	1	0	0	0	0	0	0	172	0	0	200	0	373
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	6	0	5	0	0	0	0	1618	1	4	1977	0	3611
Approach %	54.55	0.00	45.45	####	####	####	0.00	99.94	0.06	0.20	99.80	0.00	
App/Depart	11	/	0	0	/	5	1619	/	1623	1981	/	1983	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	4	0	2	0	0	0	0	856	0	2	1088	0	1952
Approach %	66.67	0.00	33.33	####	####	####	0.00	100.00	0.00	0.18	99.82	0.00	

PEAK HR. FACTOR:	0.500	0.000	0.930	0.862	0.912

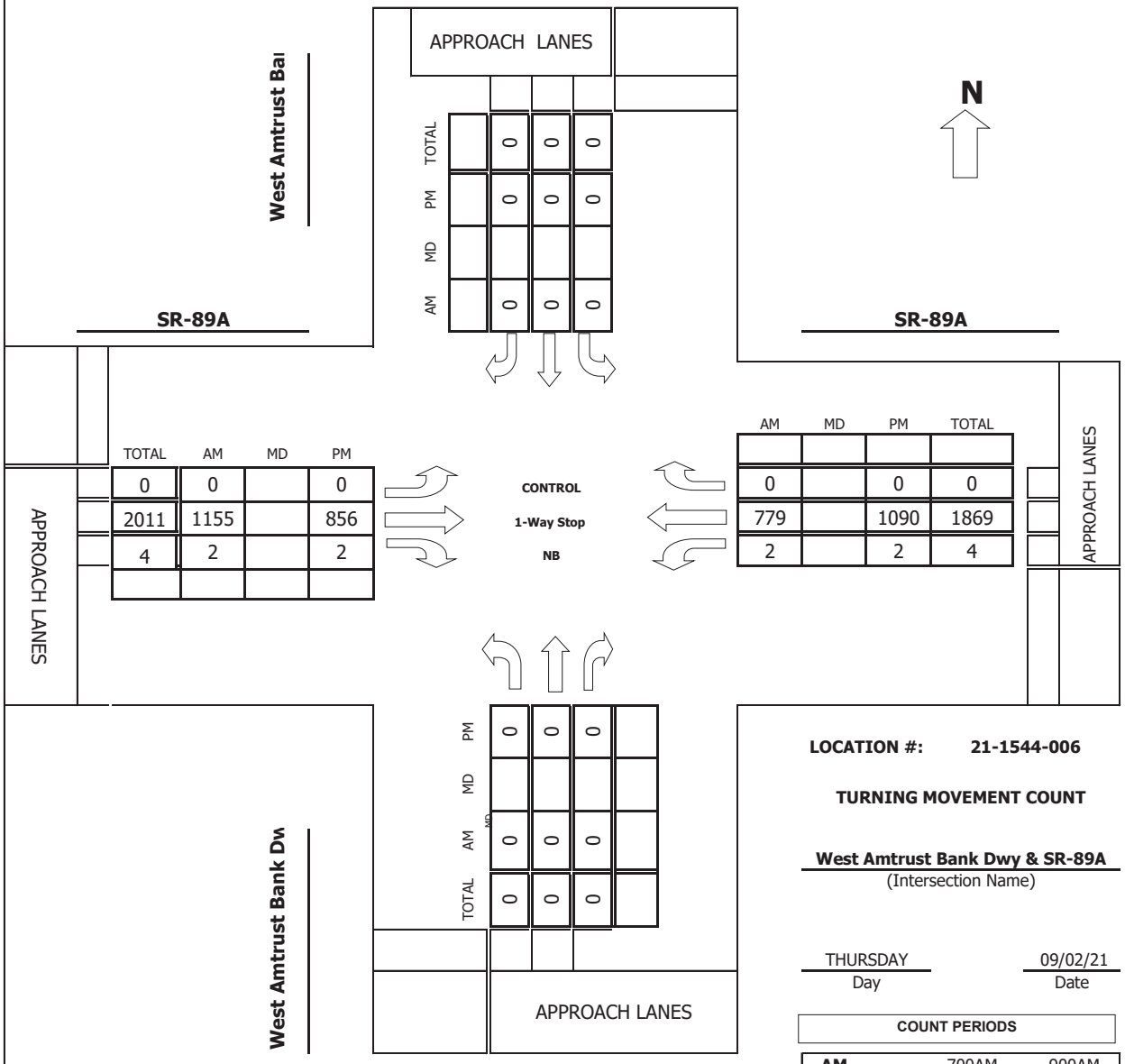
CONTROL: 1-Way Stop (NB)
COMMENT 1: 0
GPS: 34.862342, -111.809399

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-006

TMC SUMMARY OF West Amtrust Bank Dwy & SR-89A



LOCATION #: 21-1544-006

TURNING MOVEMENT COUNT

West Amtrust Bank Dwy & SR-89A
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	West Amtrust Bank Dwy	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	1	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	0	0	0	0	166	1	0	127	0	294
7:15 AM	0	0	0	0	0	0	0	187	0	0	125	0	312
7:30 AM	0	0	0	0	0	0	0	240	1	1	143	0	385
7:45 AM	0	0	0	0	0	0	0	262	1	0	146	0	409
8:00 AM	0	0	0	0	0	0	0	284	1	0	191	0	476
8:15 AM	0	0	0	0	0	0	0	303	1	0	217	0	521
8:30 AM	0	0	0	0	0	0	0	305	0	0	207	0	512
8:45 AM	0	0	0	0	0	0	0	263	0	2	164	0	429
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	0	0	0	0	2010	5	3	1320	0	3338
Approach %	####	####	####	####	####	####	0.00	99.75	0.25	0.23	99.77	0.00	
App/Depart	0	/	0	0	/	8	2015	/	2010	1323	/	1320	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	0	0	0	0	0	0	1155	2	2	779	0	1938
Approach %	####	####	####	####	####	####	0.00	99.83	0.17	0.26	99.74	0.00	

PEAK HR. FACTOR:	0.000	0.000	0.948	0.900	0.930

CONTROL: 1-Way Stop (NB)
COMMENT 1:
GPS: 34.862426, -111.808727

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	West Amtrust Bank Dwy 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	1	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	1	0	1	0	0	0	0	228	0	1	246	0	477
4:15 PM	0	0	0	0	0	0	0	214	0	0	235	0	449
4:30 PM	0	0	0	0	0	0	0	229	1	0	273	0	503
4:45 PM	0	0	0	0	0	0	0	194	1	2	266	0	463
5:00 PM	0	0	0	0	0	0	0	219	0	0	316	0	535
5:15 PM	0	0	0	0	0	0	0	187	0	0	240	0	427
5:30 PM	0	0	0	0	0	0	0	178	0	0	204	0	382
5:45 PM	1	0	0	0	0	0	0	172	0	1	199	0	373
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	2	0	1	0	0	0	0	1621	2	4	1979	0	3609
Approach %	66.67	0.00	33.33	####	####	####	0.00	99.88	0.12	0.20	99.80	0.00	
App/Depart	3	/	0	0	/	6	1623	/	1622	1983	/	1981	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	0	0	0	0	0	0	0	856	2	2	1090	0	1950
Approach %	####	####	####	####	####	####	0.00	99.77	0.23	0.18	99.82	0.00	

PEAK HR. FACTOR:	0.000	0.000	0.933	0.864	0.911

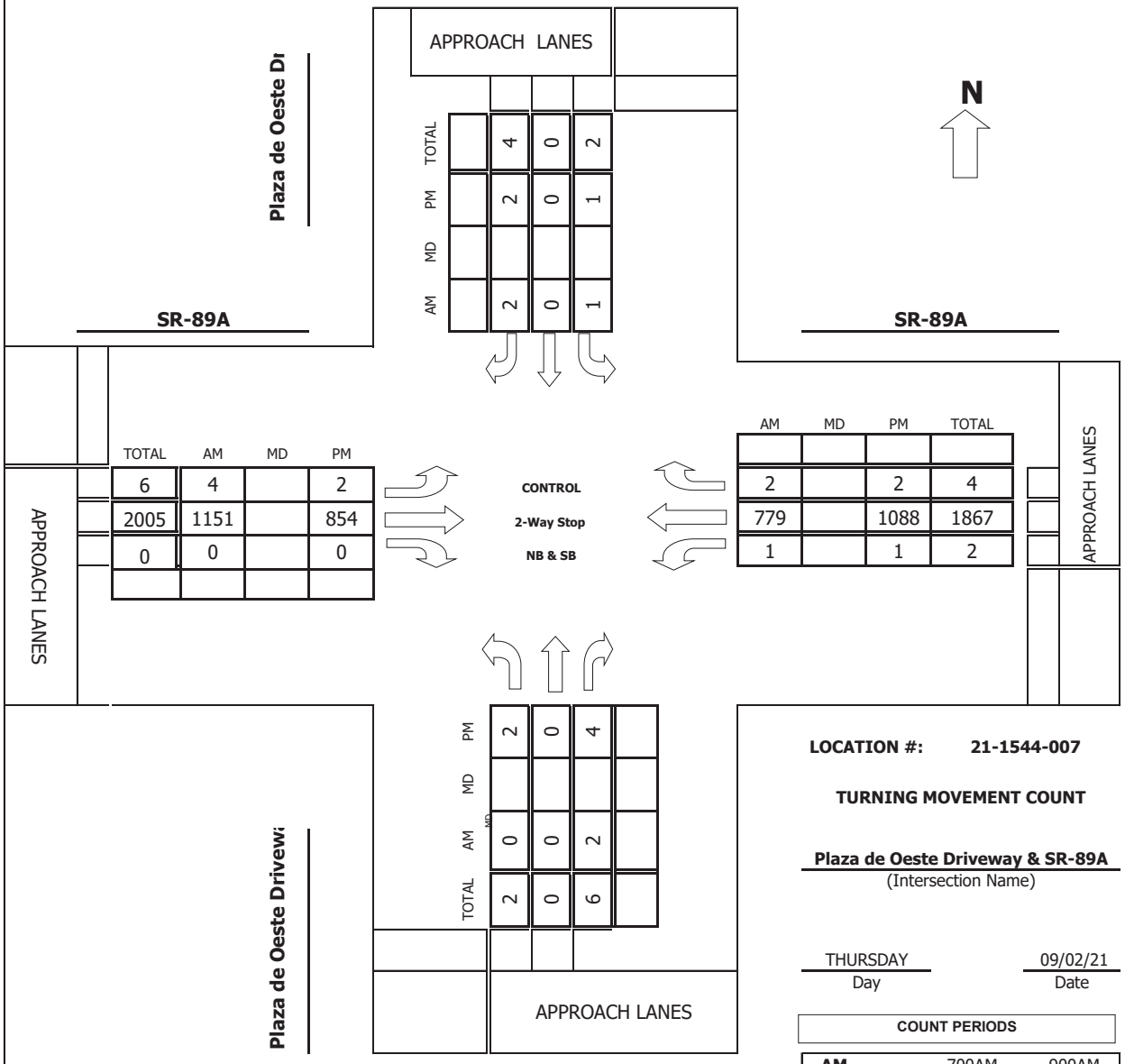
CONTROL:	1-Way Stop (NB)
COMMENT 1:	0
GPS:	34.862426, -111.808727

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-007

TMC SUMMARY OF Plaza de Oeste Driveway & SR-89A



LOCATION #: 21-1544-007

TURNING MOVEMENT COUNT

Plaza de Oeste Driveway & SR-89A
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Plaza de Oeste Driveway	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	0	0	0	0	166	0	0	127	0	293
7:15 AM	0	0	1	0	0	0	0	187	0	0	125	0	313
7:30 AM	0	0	1	0	0	0	0	240	0	0	144	0	385
7:45 AM	0	0	0	0	0	0	0	262	0	0	146	0	408
8:00 AM	0	0	0	0	0	0	0	284	0	0	191	0	475
8:15 AM	0	0	0	0	0	0	0	303	0	0	217	0	520
8:30 AM	0	0	1	1	0	1	3	302	0	1	206	1	516
8:45 AM	0	0	1	0	0	1	1	262	0	0	165	1	431
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	4	1	0	2	4	2006	0	1	1321	2	3341
Approach %	0.00	0.00	100.00	33.33	0.00	66.67	0.20	99.80	0.00	0.08	99.77	0.15	
App/Depart	4	/	6	3	/	1	2010	/	2011	1324	/	1323	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	0	2	1	0	2	4	1151	0	1	779	2	1942
Approach %	0.00	0.00	100.00	33.33	0.00	66.67	0.35	99.65	0.00	0.13	99.62	0.26	
PEAK HR. FACTOR:	0.500			0.375			0.947			0.901			0.934

CONTROL:	2-Way Stop (NB & SB)
COMMENT 1:	
GPS:	34.862466, -111.808478

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Plaza de Oeste Driveway 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	SR-89A	DAY:	THURSDAY	PROJECT#	21-1544-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	3	0	2	2	0	3	1	228	0	0	241	2	482
4:15 PM	0	0	1	0	0	0	0	214	0	1	235	0	451
4:30 PM	0	0	1	1	0	1	0	229	0	0	272	1	505
4:45 PM	2	0	1	0	0	1	1	193	0	0	265	0	463
5:00 PM	0	0	1	0	0	0	1	218	0	0	316	1	537
5:15 PM	0	0	0	0	0	0	0	187	0	1	240	0	428
5:30 PM	0	0	0	3	0	0	0	178	0	1	204	0	386
5:45 PM	0	0	0	0	0	0	0	172	0	0	200	0	372
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	5	0	6	6	0	5	3	1619	0	3	1973	4	3624
Approach %	45.45	0.00	54.55	54.55	0.00	45.45	0.18	99.82	0.00	0.15	99.65	0.20	
App/Depart	11	/	7	11	/	3	1622	/	1631	1980	/	1983	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	2	0	4	1	0	2	2	854	0	1	1088	2	1956
Approach %	33.33	0.00	66.67	33.33	0.00	66.67	0.23	99.77	0.00	0.09	99.73	0.18	

PEAK HR. FACTOR:	0.500	0.375	0.934	0.860	0.911

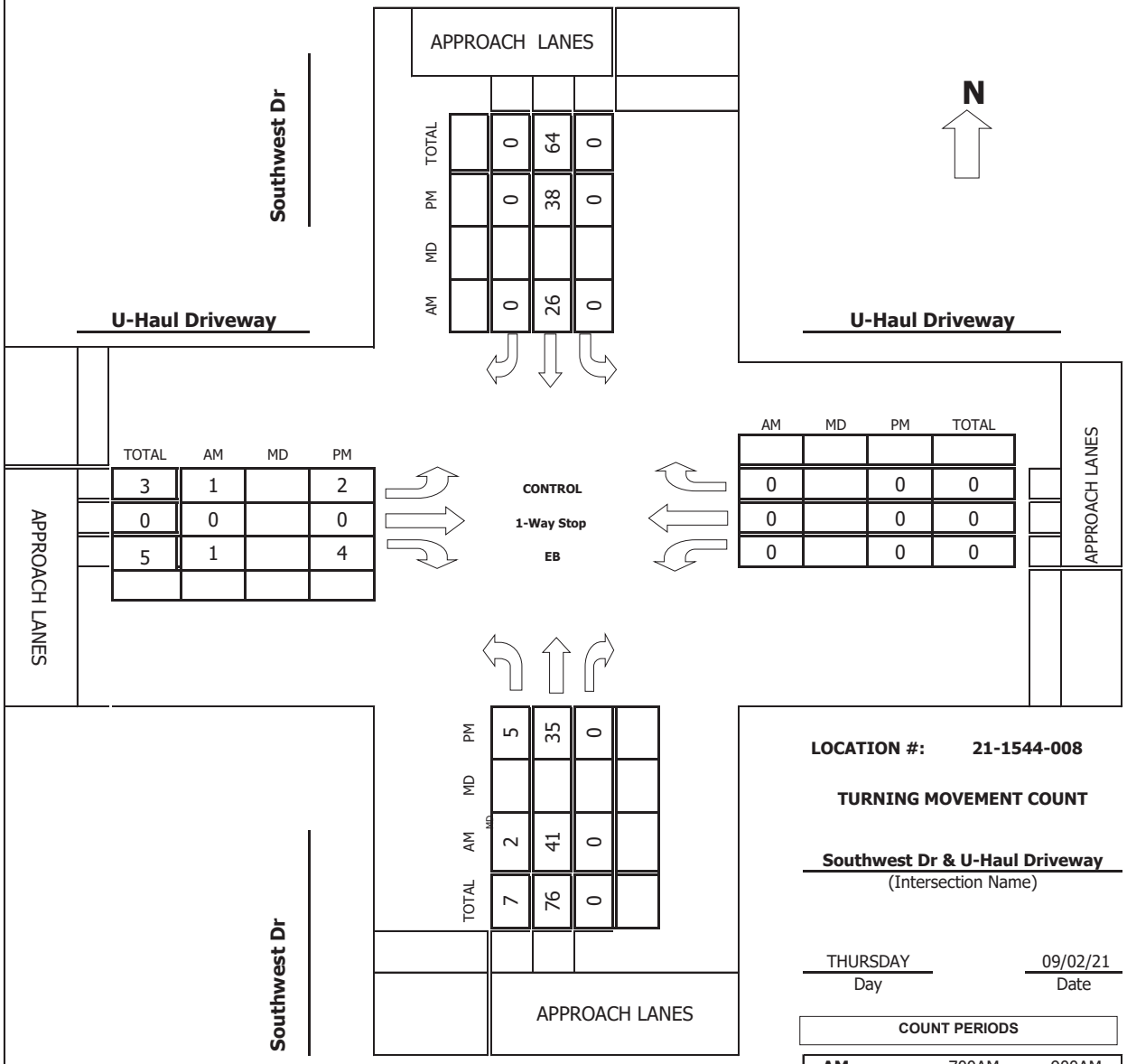
CONTROL: 2-Way Stop (NB & SB)
COMMENT 1: 0
GPS: 34.862466, -111.808478

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-008

TMC SUMMARY OF Southwest Dr & U-Haul Driveway



LOCATION #: 21-1544-008

TURNING MOVEMENT COUNT

Southwest Dr & U-Haul Driveway
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 745 AM

NOON PEAK HOUR

PM PEAK HOUR 400 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Southwest Dr	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	U-Haul Driveway	DAY:	THURSDAY	PROJECT#	21-1544-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	3	3	0	0	4	0	0	0	0	0	0	0	10
7:15 AM	3	5	0	0	6	0	0	0	0	0	0	0	14
7:30 AM	1	14	0	0	3	0	0	0	0	0	0	0	18
7:45 AM	1	9	0	0	4	0	0	0	0	0	0	0	14
8:00 AM	0	9	0	0	6	0	0	0	0	0	0	0	15
8:15 AM	0	10	0	0	10	0	1	0	0	0	0	0	21
8:30 AM	1	13	0	0	6	0	0	0	1	0	0	0	21
8:45 AM	0	4	0	0	9	0	0	0	0	0	0	0	13
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	9	67	0	0	48	0	1	0	1	0	0	0	126
Approach %	11.84	88.16	0.00	0.00	100.00	0.00	50.00	0.00	50.00	####	####	####	
App/Depart	76	/	68	48	/	49	2	/	0	0	/	9	

AM Peak Hr Begins at: 745 AM

PEAK													
Volumes	2	41	0	0	26	0	1	0	1	0	0	0	71
Approach %	4.65	95.35	0.00	0.00	100.00	0.00	50.00	0.00	50.00	####	####	####	
PEAK HR. FACTOR:		0.768			0.650			0.500			0.000		0.845

CONTROL: 1-Way Stop (EB)
COMMENT 1:
GPS: 34.862694, -111.810137

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Southwest Dr 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	U-Haul Driveway	DAY:	THURSDAY	PROJECT#	21-1544-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	3	8	0	0	9	0	0	0	2	0	0	0	22
4:15 PM	1	7	0	0	8	0	1	0	1	0	0	0	18
4:30 PM	1	7	0	0	11	0	1	0	1	0	0	0	21
4:45 PM	0	13	0	0	10	0	0	0	0	0	0	0	23
5:00 PM	0	12	0	0	8	0	0	0	0	0	0	0	20
5:15 PM	1	7	0	0	7	0	0	0	1	0	0	0	16
5:30 PM	1	7	0	0	7	0	0	0	0	0	0	0	15
5:45 PM	1	6	0	0	15	0	0	0	0	0	0	0	22
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	8	67	0	0	75	0	2	0	5	0	0	0	157
Approach %	10.67	89.33	0.00	0.00	100.00	0.00	28.57	0.00	71.43	####	####	####	
App/Depart	75	/	69	75	/	80	7	/	0	0	/	8	

PM Peak Hr Begins at: 400 PM

PEAK													
Volumes	5	35	0	0	38	0	2	0	4	0	0	0	84
Approach %	12.50	87.50	0.00	0.00	100.00	0.00	33.33	0.00	66.67	####	####	####	
PEAK HR. FACTOR:	0.769			0.864			0.750			0.000			0.913

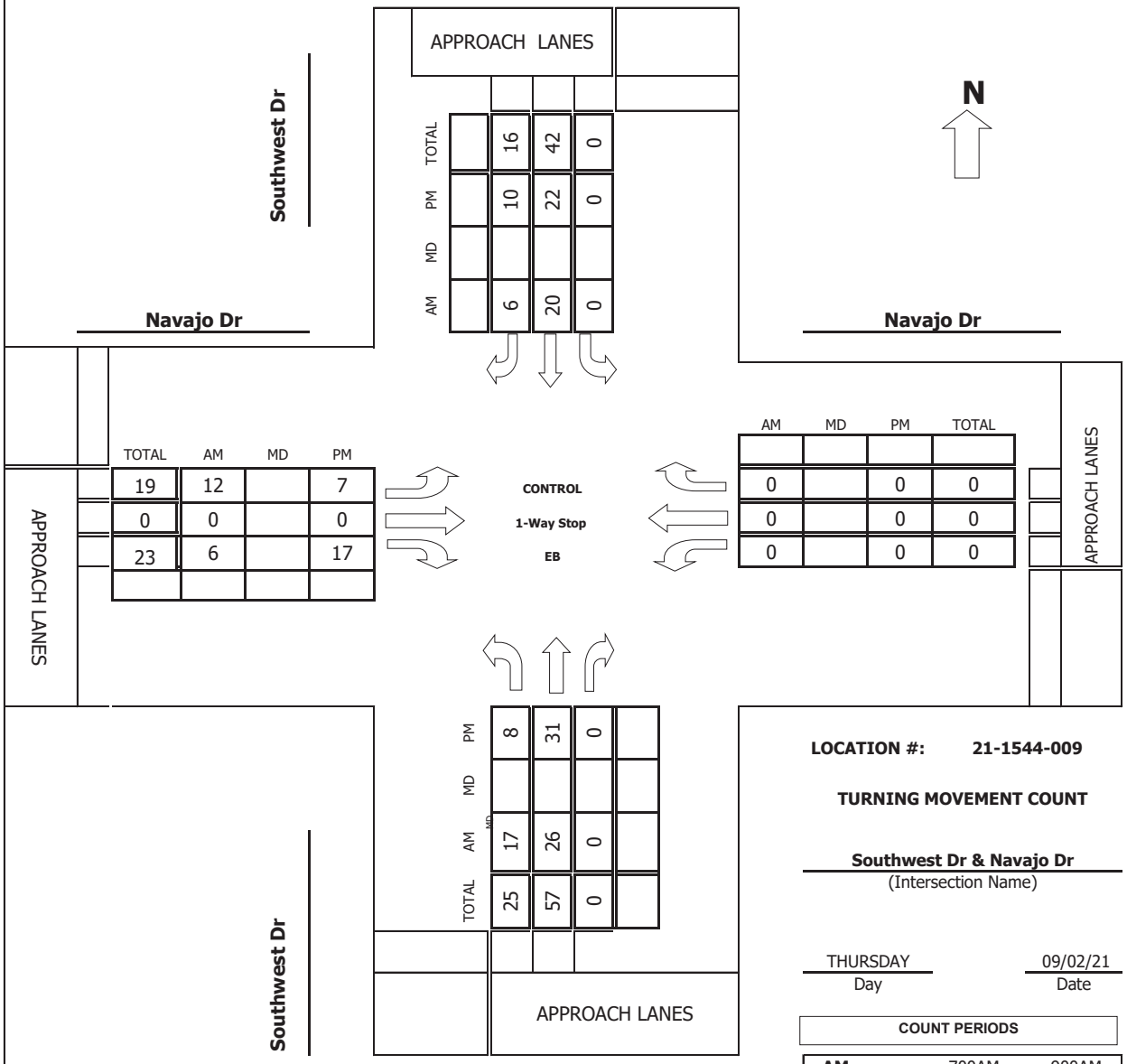
CONTROL:	1-Way Stop (EB)
COMMENT 1:	0
GPS:	34.862694, -111.810137

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1544-009

TMC SUMMARY OF Southwest Dr & Navajo Dr



LOCATION #: 21-1544-009

TURNING MOVEMENT COUNT

Southwest Dr & Navajo Dr
(Intersection Name)

THURSDAY (Day) 09/02/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 730 AM

NOON PEAK HOUR

PM PEAK HOUR 415 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Southwest Dr	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	Navajo Dr	DAY:	THURSDAY	PROJECT#	21-1544-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	3	0	0	4	1	1	0	0	0	0	0	10
7:15 AM	0	5	0	0	4	0	1	0	2	0	0	0	12
7:30 AM	4	9	0	0	4	0	3	0	0	0	0	0	20
7:45 AM	5	4	0	0	3	5	1	0	1	0	0	0	19
8:00 AM	4	5	0	0	6	1	1	0	1	0	0	0	18
8:15 AM	4	8	0	0	7	0	7	0	4	0	0	0	30
8:30 AM	2	10	0	0	3	2	0	0	2	0	0	0	19
8:45 AM	1	4	0	0	7	1	3	0	1	0	0	0	17
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	21	48	0	0	38	10	17	0	11	0	0	0	145
Approach %	30.43	69.57	0.00	0.00	79.17	20.83	60.71	0.00	39.29	####	####	####	
App/Depart	69	/	65	48	/	49	28	/	0	0	/	31	

AM Peak Hr Begins at: 730 AM

PEAK													
Volumes	17	26	0	0	20	6	12	0	6	0	0	0	87
Approach %	39.53	60.47	0.00	0.00	76.92	23.08	66.67	0.00	33.33	####	####	####	

PEAK HR. FACTOR:	0.827	0.813	0.409	0.000	0.725

CONTROL: 1-Way Stop (EB)
COMMENT 1:
GPS: 34.863466, -111.810273

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Southwest Dr 0	DATE:	09/02/21	LOCATION:	Sedona
E-W STREET:	Navajo Dr	DAY:	THURSDAY	PROJECT#	21-1544-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	2	7	0	0	7	1	5	0	1	0	0	0	23
4:15 PM	1	7	0	0	7	0	3	0	1	0	0	0	19
4:30 PM	4	4	0	0	5	1	3	0	7	0	0	0	24
4:45 PM	1	11	0	0	4	4	0	0	6	0	0	0	26
5:00 PM	2	9	0	0	6	5	1	0	3	0	0	0	26
5:15 PM	4	4	0	0	3	1	2	0	4	0	0	0	18
5:30 PM	1	5	0	0	4	1	1	0	2	0	0	0	14
5:45 PM	0	6	0	0	10	1	1	0	6	0	0	0	24
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	15	53	0	0	46	14	16	0	30	0	0	0	174
Approach %	22.06	77.94	0.00	0.00	76.67	23.33	34.78	0.00	65.22	####	####	####	
App/Depart	68	/	69	60	/	76	46	/	0	0	/	29	

PM Peak Hr Begins at: 415 PM

PEAK													
Volumes	8	31	0	0	22	10	7	0	17	0	0	0	95
Approach %	20.51	79.49	0.00	0.00	68.75	31.25	29.17	0.00	70.83	####	####	####	

PEAK HR. FACTOR:	0.813	0.727	0.600	0.000	0.913

CONTROL: 1-Way Stop (EB)
COMMENT 1: 0
GPS: 34.863466, -111.810273

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

Trip Generation Calculations

Convenience Market/Gas Station - GFA (5.5-10k) (LUC 945)

LAND USE: 6,250 Square Feet Convenience Market/Gas Station - VFP (9-15)

TRIP GENERATION CALCULATIONS ARE BASED ON THE INSTITUTE OF TRANSPORTATION ENGINEERS' TRIP GENERATION, 11TH EDITION. THE ITE LAND USE CODE IS Convenience Market/Gas Station - VFP (9-15) (945), General Urban/Suburban

Weekday

Average Rate = 700.43 Trips per 1000 Square Feet
T = 700.43 Trips x 6250 sqft / 1000
T = 4,378 VTPD
ENTER: (0.5)*(4378) = **2,189 VTPD**
EXIT: (0.5)*(4378) = **2,189 VTPD**

AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)

Average Rate = 56.52 Trips per 1000 Square Feet
T = 56.52 Trips x 6250 sqft / 1000
T = 354 VPH
ENTER: (0.5)*(354) = **177 VPH**
EXIT: (0.5)*(354) = **177 VPH**

PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)

Average Rate = 54.52 Trips per 1000 Square Feet
T = 54.52 Trips x 6250 sqft / 1000
T = 342 VPH
ENTER: (0.5)*(342) = **171 VPH**
EXIT: (0.5)*(342) = **171 VPH**

*where, T = trip ends

TRIP GENERATION SUMMARY

WEEKDAY	**4,378 VTPD**
AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)	**354 VPH**
PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)	**342 VPH**

Automated Car Wash

LAND USE: 1 Car Wash Tunnels Automated Car Wash

TRIP GENERATION CALCULATIONS ARE BASED ON THE INSTITUTE OF TRANSPORTATION ENGINEERS' TRIP GENERATION, 11TH EDITION. THE ITE LAND USE CODE IS Automated Car Wash (948), General Urban/Suburban

WEEKDAY

Average Rate = N/A Trips per Car Wash Tunnel (CWT)

T = N/A Trips x 1 CWT

T = N/A VTPD

ENTER: (0)*(N/A) = **N/A VTPD**

EXIT: (0)*(N/A) = **N/A VTPD**

AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)

Average Rate = N/A Trips per Car Wash Tunnel (CWT)

T = N/A Trips x 1 CWT

T = N/A VPH

ENTER: (0)*(N/A) = **N/A VPH**

EXIT: (0)*(N/A) = **N/A VPH**

PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)

Average Rate = 77.5 Trips per Car Wash Tunnel (CWT)

T = 77.5 Trips x 1 CWT

T = 78 VPH

ENTER: (0.5)*(78) = **39 VPH**

EXIT: (0.5)*(78) = **39 VPH**

*where, T = trip ends

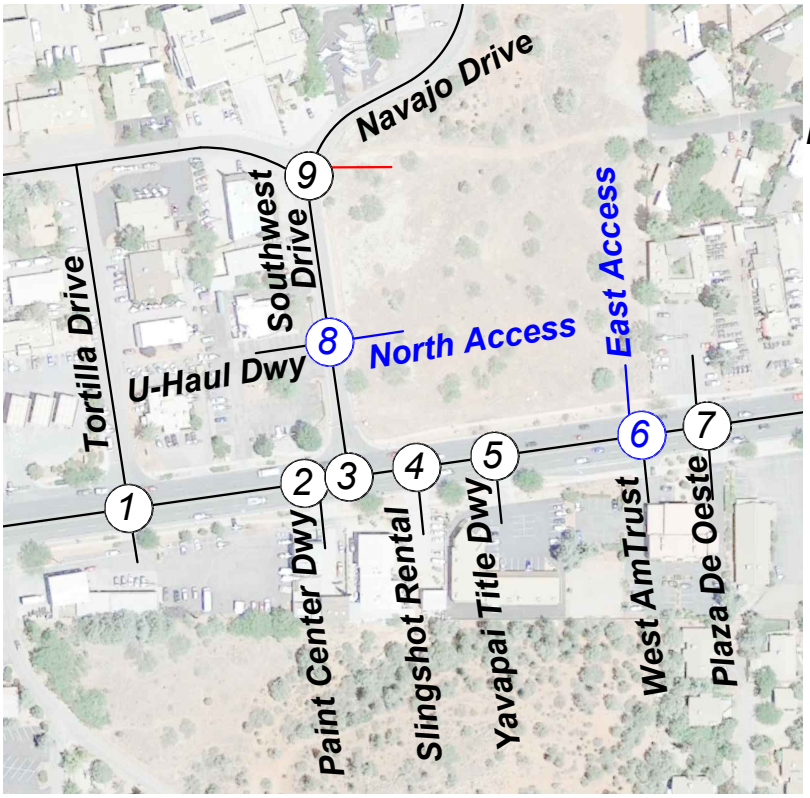
TRIP GENERATION SUMMARY

WEEKDAY	**N/A**	**VTPD**
AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)	**N/A**	**VPH**
PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)	**78**	**VPH**

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

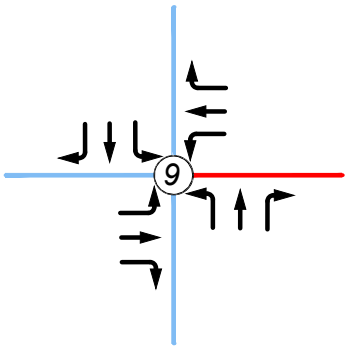
APPENDIX

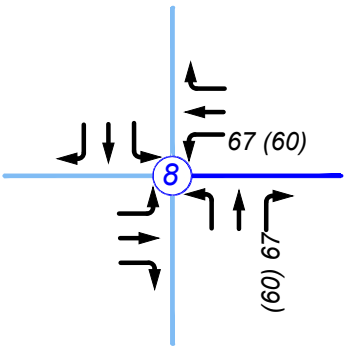
Pass-By Trip Assignment

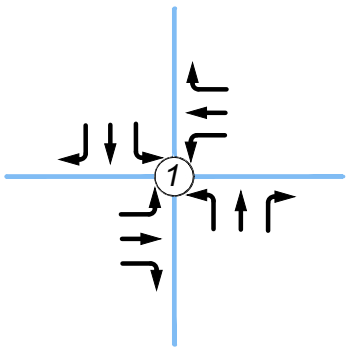


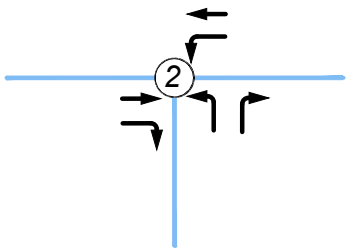
LEGEND:

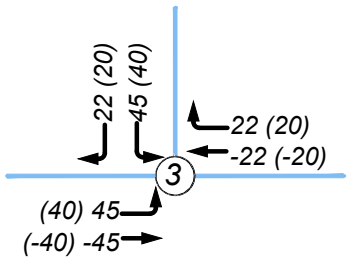
XX = Weekday AM Peak Hour
(XX) = Weekday PM Peak Hour
Vehicles Per Hour
= Existing Road
= Proposed Access
= Navajo Lofts Access

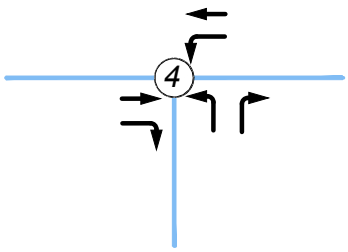


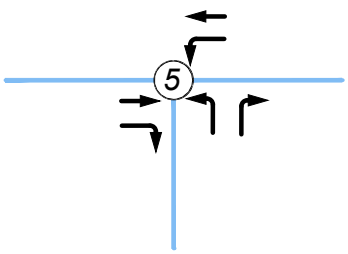


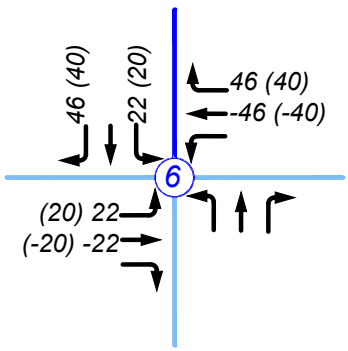


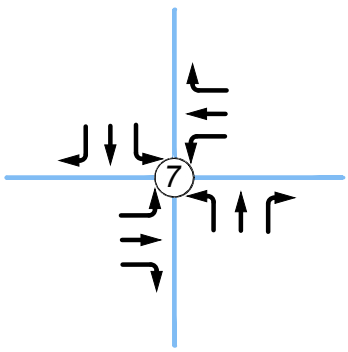












SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

Capacity Calculations

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	1140	0	2	756	0	3	0	5	0	0	0
Future Vol, veh/h	0	1140	0	2	756	0	3	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1267	0	3	840	0	4	0	6	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	840	0	0	1267	0	0	1693	2113	634	1480	2113	420
Stage 1	-	-	-	-	-	-	1267	1267	-	846	846	-
Stage 2	-	-	-	-	-	-	426	846	-	634	1267	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	791	-	-	544	-	-	60	50	422	87	50	582
Stage 1	-	-	-	-	-	-	179	238	-	323	377	-
Stage 2	-	-	-	-	-	-	577	377	-	434	238	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	791	-	-	544	-	-	60	50	422	85	50	582
Mov Cap-2 Maneuver	-	-	-	-	-	-	60	50	-	85	50	-
Stage 1	-	-	-	-	-	-	179	238	-	323	375	-
Stage 2	-	-	-	-	-	-	574	375	-	428	238	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	35.2	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	129	791	-	-	544	-	-	-
HCM Lane V/C Ratio	0.078	-	-	-	0.005	-	-	-
HCM Control Delay (s)	35.2	0	-	-	11.6	-	-	0
HCM Lane LOS	E	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1146	2	7	759	1	5
Future Vol, veh/h	1146	2	7	759	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1273	2	9	843	1	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1275	0	1714	638
Stage 1	-	-	-	-	1274	-
Stage 2	-	-	-	-	440	-
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	-	-	540	-	81	419
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	616	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	540	-	80	419
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	341	-	-	540	-
HCM Lane V/C Ratio	0.022	-	-	0.016	-
HCM Control Delay (s)	15.8	-	-	11.8	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	1138	753	24	19	13
Future Vol, veh/h	13	1138	753	24	19	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	1264	837	27	24	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	864	0	-	0	1515	432
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	664	-
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	774	-	-	-	110	572
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	474	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	774	-	-	-	108	572
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	474	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	18.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	774	-	-	-	312
HCM Lane V/C Ratio	0.021	-	-	-	0.128
HCM Control Delay (s)	9.8	-	-	-	18.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1156	1	1	775	2	1
Future Vol, veh/h	1156	1	1	775	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1284	1	1	861	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1285	0	1718	643
Stage 1	-	-	-	-	1285	-
Stage 2	-	-	-	-	433	-
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	-	-	536	-	81	416
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	621	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	536	-	81	416
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	620	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	219	-	-	536	-
HCM Lane V/C Ratio	0.017	-	-	0.002	-
HCM Control Delay (s)	21.7	-	-	11.7	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1156	1	3	776	0	1
Future Vol, veh/h	1156	1	3	776	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1284	1	4	862	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1285	0	1638	643
Stage 1	-	-	-	-	1285	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	536	-	115	416
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	536	-	114	416
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	641	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	536	-
HCM Lane V/C Ratio	0.003	-	-	0.007	-
HCM Control Delay (s)	13.7	-	-	11.8	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1155	2	2	779	0	0
Future Vol, veh/h	1155	2	2	779	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1283	3	3	866	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1286	0	1722	642
Stage 1	-	-	-	-	1283	-
Stage 2	-	-	-	-	439	-
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	-	-	535	-	80	417
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	617	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	535	-	80	417
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	535	-
HCM Lane V/C Ratio	-	-	-	0.005	-
HCM Control Delay (s)	0	-	-	11.8	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1151	0	1	779	2	0	0	2	1	0	2
Future Vol, veh/h	4	1151	0	1	779	2	0	0	2	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1279	0	1	866	2	0	0	3	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	868	0	0	1279	0	0	1724	2159	640	1519	2158	434
Stage 1	-	-	-	-	-	-	1289	1289	-	869	869	-
Stage 2	-	-	-	-	-	-	435	870	-	650	1289	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	772	-	-	539	-	-	57	47	418	82	47	570
Stage 1	-	-	-	-	-	-	173	232	-	313	367	-
Stage 2	-	-	-	-	-	-	570	367	-	424	232	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	772	-	-	539	-	-	56	47	418	81	47	570
Mov Cap-2 Maneuver	-	-	-	-	-	-	56	47	-	81	47	-
Stage 1	-	-	-	-	-	-	172	231	-	311	366	-
Stage 2	-	-	-	-	-	-	566	366	-	419	231	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.7	24.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	418	772	-	-	539	-	-	189
HCM Lane V/C Ratio	0.006	0.006	-	-	0.002	-	-	0.02
HCM Control Delay (s)	13.7	9.7	-	-	11.7	-	-	24.4
HCM Lane LOS	B	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	2	41	26	0
Future Vol, veh/h	1	1	2	41	26	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	3	51	33	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	90	33	33	0	-	0
Stage 1	33	-	-	-	-	-
Stage 2	57	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	910	1041	1579	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	966	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	908	1041	1579	-	-	-
Mov Cap-2 Maneuver	908	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	966	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1579	-	970	-	-
HCM Lane V/C Ratio	0.002	-	0.003	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	6	17	26	20	6
Future Vol, veh/h	12	6	17	26	20	6
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	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	8	21	33	25	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	104	29	33	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	75	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	894	1046	1579	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	881	1046	1579	-	-	-
Mov Cap-2 Maneuver	881	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	948	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	2.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1579	-	930	-	-
HCM Lane V/C Ratio	0.013	-	0.024	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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	5	827	1	0	1073	2	0	0	5	3	0	6
Future Vol, veh/h	5	827	1	0	1073	2	0	0	5	3	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	919	1	0	1192	2	0	0	6	4	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1194	0	0	920	0	0	1528	2126	460	1665	2125	597
Stage 1	-	-	-	-	-	-	932	932	-	1193	1193	-
Stage 2	-	-	-	-	-	-	596	1194	-	472	932	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	580	-	-	738	-	-	80	49	548	63	49	446
Stage 1	-	-	-	-	-	-	287	343	-	198	258	-
Stage 2	-	-	-	-	-	-	457	258	-	542	343	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	580	-	-	738	-	-	78	49	548	62	49	446
Mov Cap-2 Maneuver	-	-	-	-	-	-	78	49	-	62	49	-
Stage 1	-	-	-	-	-	-	284	340	-	196	258	-
Stage 2	-	-	-	-	-	-	449	258	-	530	340	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11.6	31.7
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	548	580	-	-	738	-	-	146
HCM Lane V/C Ratio	0.011	0.011	-	-	-	-	-	0.077
HCM Control Delay (s)	11.6	11.3	-	-	0	-	-	31.7
HCM Lane LOS	B	B	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	844	0	0	1080	2	1
Future Vol, veh/h	844	0	0	1080	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	938	0	0	1200	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	938	0	1538	469
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	600	-
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	-	-	726	-	106	541
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	726	-	106	541
Mov Cap-2 Maneuver	-	-	-	-	232	-
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	511	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	287	-	-	726	-
HCM Lane V/C Ratio	0.013	-	-	-	-
HCM Control Delay (s)	17.7	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	832	1066	28	25	14
Future Vol, veh/h	13	832	1066	28	25	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	924	1184	31	31	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1215	0	-	0	1694	608
Stage 1	-	-	-	-	1200	-
Stage 2	-	-	-	-	494	-
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	570	-	-	-	84	439
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	570	-	-	-	82	439
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	24.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	570	-	-	-	233
HCM Lane V/C Ratio	0.029	-	-	-	0.209
HCM Control Delay (s)	11.5	-	-	-	24.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	855	2	2	1090	4	1
Future Vol, veh/h	855	2	2	1090	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	950	2	3	1211	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	952	0	1563	476
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	612	-
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	-	-	717	-	102	535
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	504	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	717	-	102	535
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	258	-	-	717	-
HCM Lane V/C Ratio	0.024	-	-	0.003	-
HCM Control Delay (s)	19.3	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	856	0	2	1088	4	2
Future Vol, veh/h	856	0	2	1088	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	951	0	3	1209	5	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	951	0	1441	476
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	490	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	718	-	151	535
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	548	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	718	-	150	535
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	546	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	303	-	-	718	-
HCM Lane V/C Ratio	0.025	-	-	0.003	-
HCM Control Delay (s)	17.2	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	856	2	2	1090	0	0
Future Vol, veh/h	856	2	2	1090	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	951	3	3	1211	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	954	0	1563	476
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	612	-
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	-	-	716	-	102	535
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	504	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	716	-	102	535
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	716	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	10	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	854	0	1	1088	2	2	0	4	1	0	2
Future Vol, veh/h	2	854	0	1	1088	2	2	0	4	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	949	0	1	1209	2	3	0	5	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1211	0	0	949	0	0	1562	2168	475	1693	2167	606
Stage 1	-	-	-	-	-	-	955	955	-	1212	1212	-
Stage 2	-	-	-	-	-	-	607	1213	-	481	955	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	572	-	-	719	-	-	76	46	536	60	46	440
Stage 1	-	-	-	-	-	-	278	335	-	193	253	-
Stage 2	-	-	-	-	-	-	450	253	-	535	335	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	572	-	-	719	-	-	75	46	536	59	46	440
Mov Cap-2 Maneuver	-	-	-	-	-	-	75	46	-	59	46	-
Stage 1	-	-	-	-	-	-	277	333	-	192	253	-
Stage 2	-	-	-	-	-	-	447	253	-	527	333	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	26.4	31.4
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	176	572	-	-	719	-	-	140
HCM Lane V/C Ratio	0.043	0.004	-	-	0.002	-	-	0.027
HCM Control Delay (s)	26.4	11.3	-	-	10	-	-	31.4
HCM Lane LOS	D	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	5	35	38	0
Future Vol, veh/h	2	4	5	35	38	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	6	44	48	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	104	48	48	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	56	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	894	1021	1559	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	890	1021	1559	-	-	-
Mov Cap-2 Maneuver	890	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	967	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	973	-	-
HCM Lane V/C Ratio	0.004	-	0.008	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	17	8	31	22	10
Future Vol, veh/h	7	17	8	31	22	10
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	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	21	10	39	28	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	94	35	41	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	59	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	906	1038	1568	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	900	1038	1568	-	-	-
Mov Cap-2 Maneuver	900	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	964	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1568	-	994	-	-
HCM Lane V/C Ratio	0.006	-	0.03	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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	1165	0	2	778	0	3	0	5	0	0	0
Future Vol, veh/h	0	1165	0	2	778	0	3	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1294	0	3	864	0	4	0	6	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	864	0	0	1294	0	0	1732	2164	647	1517	2164	432
Stage 1	-	-	-	-	-	-	1294	1294	-	870	870	-
Stage 2	-	-	-	-	-	-	438	870	-	647	1294	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	774	-	-	531	-	-	56	47	414	82	47	572
Stage 1	-	-	-	-	-	-	172	231	-	313	367	-
Stage 2	-	-	-	-	-	-	567	367	-	426	231	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	774	-	-	531	-	-	56	47	414	80	47	572
Mov Cap-2 Maneuver	-	-	-	-	-	-	56	47	-	80	47	-
Stage 1	-	-	-	-	-	-	172	231	-	313	365	-
Stage 2	-	-	-	-	-	-	564	365	-	420	231	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	37.1	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	122	774	-	-	531	-	-	-
HCM Lane V/C Ratio	0.082	-	-	-	0.005	-	-	-
HCM Control Delay (s)	37.1	0	-	-	11.8	-	-	0
HCM Lane LOS	E	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1171	2	7	781	1	5
Future Vol, veh/h	1171	2	7	781	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1301	2	9	868	1	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1303	0	1754	652
Stage 1	-	-	-	-	1302	-
Stage 2	-	-	-	-	452	-
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	-	-	527	-	76	411
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	527	-	75	411
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	16
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	334	-	-	527	-
HCM Lane V/C Ratio	0.022	-	-	0.017	-
HCM Control Delay (s)	16	-	-	11.9	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	1161	768	28	31	20
Future Vol, veh/h	15	1161	768	28	31	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	1290	853	31	39	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	884	0	-	0	1552	442
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	683	-
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	761	-	-	-	104	563
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	463	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	761	-	-	-	101	563
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	362	-
Stage 2	-	-	-	-	463	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	20.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	761	-	-	-	300
HCM Lane V/C Ratio	0.025	-	-	-	0.213
HCM Control Delay (s)	9.8	-	-	-	20.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1191	1	1	795	2	1
Future Vol, veh/h	1191	1	1	795	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1323	1	1	883	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1324	0	1768	662
Stage 1	-	-	-	-	1324	-
Stage 2	-	-	-	-	444	-
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	-	-	518	-	75	404
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	518	-	75	404
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	210	-	-	518	-
HCM Lane V/C Ratio	0.018	-	-	0.002	-
HCM Control Delay (s)	22.5	-	-	12	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1191	1	3	796	0	1
Future Vol, veh/h	1191	1	3	796	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1323	1	4	884	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1324	0	1686	662
Stage 1	-	-	-	-	1324	-
Stage 2	-	-	-	-	362	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	518	-	108	404
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	639	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	518	-	107	404
Mov Cap-2 Maneuver	-	-	-	-	176	-
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	634	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	404	-	-	518	-
HCM Lane V/C Ratio	0.003	-	-	0.007	-
HCM Control Delay (s)	13.9	-	-	12	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1190	2	2	799	0	0
Future Vol, veh/h	1190	2	2	799	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1322	3	3	888	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1325	0	1772	661
Stage 1	-	-	-	-	1322	-
Stage 2	-	-	-	-	450	-
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	-	-	517	-	74	405
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	517	-	74	405
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	605	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	517	-
HCM Lane V/C Ratio	-	-	-	0.005	-
HCM Control Delay (s)	0	-	-	12	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1186	0	1	799	2	0	0	2	1	0	2
Future Vol, veh/h	4	1186	0	1	799	2	0	0	2	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1318	0	1	888	2	0	0	3	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	890	0	0	1318	0	0	1774	2220	659	1560	2219	445
Stage 1	-	-	-	-	-	-	1328	1328	-	891	891	-
Stage 2	-	-	-	-	-	-	446	892	-	669	1328	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	757	-	-	520	-	-	52	43	406	76	43	561
Stage 1	-	-	-	-	-	-	164	223	-	304	359	-
Stage 2	-	-	-	-	-	-	561	358	-	413	223	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	757	-	-	520	-	-	51	43	406	75	43	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	51	43	-	75	43	-
Stage 1	-	-	-	-	-	-	163	221	-	302	358	-
Stage 2	-	-	-	-	-	-	557	357	-	408	221	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.9	25.7
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	406	757	-	-	520	-	-	178
HCM Lane V/C Ratio	0.006	0.007	-	-	0.002	-	-	0.021
HCM Control Delay (s)	13.9	9.8	-	-	11.9	-	-	25.7
HCM Lane LOS	B	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	2	48	46	0
Future Vol, veh/h	1	1	2	48	46	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	3	60	58	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	124	58	58	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	871	1008	1546	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	869	1008	1546	-	-	-
Mov Cap-2 Maneuver	869	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1546	-	933	-	-
HCM Lane V/C Ratio	0.002	-	0.003	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	0	6	19	0	0	17	27	6	0	20	6
Future Vol, veh/h	12	0	6	19	0	0	17	27	6	0	20	6
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	8	24	0	0	21	34	8	0	25	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	109	113	29	113	113	38	33	0	0	42	0	0
Stage 1	29	29	-	80	80	-	-	-	-	-	-	-
Stage 2	80	84	-	33	33	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	870	777	1046	864	777	1034	1579	-	-	1567	-	-
Stage 1	988	871	-	929	828	-	-	-	-	-	-	-
Stage 2	929	825	-	983	868	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	860	766	1046	848	766	1034	1579	-	-	1567	-	-
Mov Cap-2 Maneuver	860	766	-	848	766	-	-	-	-	-	-	-
Stage 1	974	871	-	916	816	-	-	-	-	-	-	-
Stage 2	916	813	-	976	868	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.4	2.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1579	-	-	914	848	1567	-	-
HCM Lane V/C Ratio	0.013	-	-	0.025	0.028	-	-	-
HCM Control Delay (s)	7.3	0	-	9	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

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	5	851	1	0	1099	2	0	0	5	3	0	6
Future Vol, veh/h	5	851	1	0	1099	2	0	0	5	3	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	946	1	0	1221	2	0	0	6	4	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1223	0	0	947	0	0	1570	2182	474	1707	2181	612
Stage 1	-	-	-	-	-	-	959	959	-	1222	1222	-
Stage 2	-	-	-	-	-	-	611	1223	-	485	959	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	566	-	-	721	-	-	75	45	537	59	45	436
Stage 1	-	-	-	-	-	-	276	334	-	190	250	-
Stage 2	-	-	-	-	-	-	448	250	-	532	334	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	566	-	-	721	-	-	73	45	537	58	45	436
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	45	-	58	45	-
Stage 1	-	-	-	-	-	-	273	330	-	188	250	-
Stage 2	-	-	-	-	-	-	440	250	-	520	330	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11.8	33.6
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	537	566	-	-	721	-	-	137
HCM Lane V/C Ratio	0.012	0.011	-	-	-	-	-	0.082
HCM Control Delay (s)	11.8	11.4	-	-	0	-	-	33.6
HCM Lane LOS	B	B	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	868	0	0	1106	2	1
Future Vol, veh/h	868	0	0	1106	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	964	0	0	1229	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	964	0	1579	482
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	615	-
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	-	-	710	-	100	530
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	502	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	710	-	100	530
Mov Cap-2 Maneuver	-	-	-	-	225	-
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	278	-	-	710	-
HCM Lane V/C Ratio	0.013	-	-	-	-
HCM Control Delay (s)	18.1	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	849	1087	41	33	18
Future Vol, veh/h	20	849	1087	41	33	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	943	1208	46	41	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1254	0	-	0	1753	627
Stage 1	-	-	-	-	1231	-
Stage 2	-	-	-	-	522	-
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	551	-	-	-	76	426
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	560	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	551	-	-	-	73	426
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	228	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	551	-	-	-	220
HCM Lane V/C Ratio	0.045	-	-	-	0.29
HCM Control Delay (s)	11.8	-	-	-	27.9
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	879	2	2	1124	4	1
Future Vol, veh/h	879	2	2	1124	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	977	2	3	1249	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	979	0	1609	490
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	631	-
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	-	-	701	-	95	524
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	492	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	701	-	95	524
Mov Cap-2 Maneuver	-	-	-	-	219	-
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	490	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	248	-	-	701	-
HCM Lane V/C Ratio	0.025	-	-	0.004	-
HCM Control Delay (s)	19.9	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	890	0	2	1122	4	2
Future Vol, veh/h	890	0	2	1122	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	989	0	3	1247	5	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	989	0	1494	495
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	505	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	695	-	140	520
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	538	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	695	-	139	520
Mov Cap-2 Maneuver	-	-	-	-	237	-
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	290	-	-	695	-
HCM Lane V/C Ratio	0.026	-	-	0.004	-
HCM Control Delay (s)	17.7	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	890	2	2	1124	0	0
Future Vol, veh/h	890	2	2	1124	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	989	3	3	1249	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	992	0	1620	495
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	631	-
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	-	-	693	-	94	520
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	492	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	693	-	94	520
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	490	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	693	-
HCM Lane V/C Ratio	-	-	-	0.004	-
HCM Control Delay (s)	0	-	-	10.2	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

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	2	878	0	1	1122	2	2	0	4	1	0	2
Future Vol, veh/h	2	878	0	1	1122	2	2	0	4	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	976	0	1	1247	2	3	0	5	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1249	0	0	976	0	0	1608	2233	488	1744	2232	625
Stage 1	-	-	-	-	-	-	982	982	-	1250	1250	-
Stage 2	-	-	-	-	-	-	626	1251	-	494	982	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	553	-	-	703	-	-	70	42	526	55	42	428
Stage 1	-	-	-	-	-	-	267	325	-	183	243	-
Stage 2	-	-	-	-	-	-	439	242	-	526	325	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	553	-	-	703	-	-	69	42	526	54	42	428
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	42	-	54	42	-
Stage 1	-	-	-	-	-	-	266	323	-	182	243	-
Stage 2	-	-	-	-	-	-	436	242	-	518	323	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	28	33.7
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	164	553	-	-	703	-	-	129
HCM Lane V/C Ratio	0.046	0.005	-	-	0.002	-	-	0.029
HCM Control Delay (s)	28	11.5	-	-	10.1	-	-	33.7
HCM Lane LOS	D	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	5	55	50	0
Future Vol, veh/h	2	4	5	55	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	6	69	63	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	144	63	63	0	-	0
Stage 1	63	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	849	1002	1540	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	846	1002	1540	-	-	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1540	-	944	-	-
HCM Lane V/C Ratio	0.004	-	0.008	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	7	0	17	11	0	0	8	32	19	0	22	10
Future Vol, veh/h	7	0	17	11	0	0	8	32	19	0	22	10
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	21	14	0	0	10	40	24	0	28	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	107	119	35	117	113	52	41	0	0	64	0	0
Stage 1	35	35	-	72	72	-	-	-	-	-	-	-
Stage 2	72	84	-	45	41	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	872	771	1038	859	777	1016	1568	-	-	1538	-	-
Stage 1	981	866	-	938	835	-	-	-	-	-	-	-
Stage 2	938	825	-	969	861	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	868	766	1038	837	772	1016	1568	-	-	1538	-	-
Mov Cap-2 Maneuver	868	766	-	837	772	-	-	-	-	-	-	-
Stage 1	974	866	-	931	829	-	-	-	-	-	-	-
Stage 2	931	819	-	949	861	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	9.4	1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1568	-	-	982	837	1538	-	-
HCM Lane V/C Ratio	0.006	-	-	0.031	0.016	-	-	-
HCM Control Delay (s)	7.3	0	-	8.8	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

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	1236	0	2	825	0	3	0	5	0	0	0
Future Vol, veh/h	0	1236	0	2	825	0	3	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1373	0	3	917	0	4	0	6	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	917	0	0	1373	0	0	1838	2296	687	1610	2296	459
Stage 1	-	-	-	-	-	-	1373	1373	-	923	923	-
Stage 2	-	-	-	-	-	-	465	923	-	687	1373	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	740	-	-	496	-	-	47	38	389	70	38	549
Stage 1	-	-	-	-	-	-	153	212	-	290	347	-
Stage 2	-	-	-	-	-	-	547	347	-	403	212	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	740	-	-	496	-	-	47	38	389	69	38	549
Mov Cap-2 Maneuver	-	-	-	-	-	-	47	38	-	69	38	-
Stage 1	-	-	-	-	-	-	153	212	-	290	345	-
Stage 2	-	-	-	-	-	-	544	345	-	397	212	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	43.3	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	104	740	-	-	496	-	-	-
HCM Lane V/C Ratio	0.096	-	-	-	0.005	-	-	-
HCM Control Delay (s)	43.3	0	-	-	12.3	-	-	0
HCM Lane LOS	E	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1243	2	8	829	1	5
Future Vol, veh/h	1243	2	8	829	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1381	2	10	921	1	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1383	0	1863	692
Stage 1	-	-	-	-	1382	-
Stage 2	-	-	-	-	481	-
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	-	-	491	-	65	386
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	588	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	491	-	64	386
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	309	-	-	491	-
HCM Lane V/C Ratio	0.024	-	-	0.02	-
HCM Control Delay (s)	16.9	-	-	12.5	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	1232	815	30	33	21
Future Vol, veh/h	16	1232	815	30	33	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	1369	906	33	41	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	939	0	-	0	1648	470
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	725	-
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	726	-	-	-	90	540
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	726	-	-	-	87	540
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	22
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	726	-	-	-	279
HCM Lane V/C Ratio	0.028	-	-	-	0.242
HCM Control Delay (s)	10.1	-	-	-	22
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1263	1	1	843	2	1
Future Vol, veh/h	1263	1	1	843	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1403	1	1	937	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1404	0	1875	702
Stage 1	-	-	-	-	1404	-
Stage 2	-	-	-	-	471	-
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	-	-	482	-	63	381
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	594	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	482	-	63	381
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	593	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	191	-	-	482	-
HCM Lane V/C Ratio	0.02	-	-	0.003	-
HCM Control Delay (s)	24.2	-	-	12.5	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1263	1	3	844	0	1
Future Vol, veh/h	1263	1	3	844	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1403	1	4	938	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1404	0	1787	702
Stage 1	-	-	-	-	1404	-
Stage 2	-	-	-	-	383	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	482	-	94	381
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	482	-	93	381
Mov Cap-2 Maneuver	-	-	-	-	159	-
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	618	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	381	-	-	482	-
HCM Lane V/C Ratio	0.003	-	-	0.008	-
HCM Control Delay (s)	14.5	-	-	12.5	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1262	2	2	847	0	0
Future Vol, veh/h	1262	2	2	847	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1402	3	3	941	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1405	0	1879	701
Stage 1	-	-	-	-	1402	-
Stage 2	-	-	-	-	477	-
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	-	-	482	-	63	381
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	482	-	63	381
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	586	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	482	-
HCM Lane V/C Ratio	-	-	-	0.005	-
HCM Control Delay (s)	0	-	-	12.5	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1258	0	1	877	2	0	0	2	1	0	2
Future Vol, veh/h	4	1258	0	1	877	2	0	0	2	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1398	0	1	974	2	0	0	3	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	976	0	0	1398	0	0	1897	2386	699	1686	2385	488
Stage 1	-	-	-	-	-	-	1408	1408	-	977	977	-
Stage 2	-	-	-	-	-	-	489	978	-	709	1408	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	703	-	-	485	-	-	42	34	382	61	34	526
Stage 1	-	-	-	-	-	-	146	204	-	269	327	-
Stage 2	-	-	-	-	-	-	529	327	-	391	204	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	703	-	-	485	-	-	41	34	382	60	34	526
Mov Cap-2 Maneuver	-	-	-	-	-	-	41	34	-	60	34	-
Stage 1	-	-	-	-	-	-	145	203	-	267	326	-
Stage 2	-	-	-	-	-	-	525	326	-	386	203	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.5	30.1
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	703	-	-	485	-	-	147
HCM Lane V/C Ratio	0.007	0.007	-	-	0.003	-	-	0.026
HCM Control Delay (s)	14.5	10.2	-	-	12.4	-	-	30.1
HCM Lane LOS	B	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	2	50	47	0
Future Vol, veh/h	1	1	2	50	47	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	3	63	59	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	128	59	59	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	866	1007	1545	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	864	1007	1545	-	-	-
Mov Cap-2 Maneuver	864	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	954	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1545	-	930	-	-
HCM Lane V/C Ratio	0.002	-	0.003	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	0	6	19	0	0	18	28	6	0	22	6
Future Vol, veh/h	13	0	6	19	0	0	18	28	6	0	22	6
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	8	24	0	0	23	35	8	0	28	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	117	121	32	121	121	39	36	0	0	43	0	0
Stage 1	32	32	-	85	85	-	-	-	-	-	-	-
Stage 2	85	89	-	36	36	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	859	769	1042	854	769	1033	1575	-	-	1566	-	-
Stage 1	984	868	-	923	824	-	-	-	-	-	-	-
Stage 2	923	821	-	980	865	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	850	757	1042	838	757	1033	1575	-	-	1566	-	-
Mov Cap-2 Maneuver	850	757	-	838	757	-	-	-	-	-	-	-
Stage 1	969	868	-	909	812	-	-	-	-	-	-	-
Stage 2	909	809	-	973	865	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.4	2.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1575	-	-	903	838	1566	-	-
HCM Lane V/C Ratio	0.014	-	-	0.026	0.028	-	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

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	5	902	1	0	1165	2	0	0	5	3	0	6
Future Vol, veh/h	5	902	1	0	1165	2	0	0	5	3	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1002	1	0	1294	2	0	0	6	4	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1296	0	0	1003	0	0	1662	2311	502	1808	2310	648
Stage 1	-	-	-	-	-	-	1015	1015	-	1295	1295	-
Stage 2	-	-	-	-	-	-	647	1296	-	513	1015	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	531	-	-	686	-	-	64	38	515	49	38	413
Stage 1	-	-	-	-	-	-	255	314	-	172	231	-
Stage 2	-	-	-	-	-	-	426	231	-	512	314	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	531	-	-	686	-	-	62	38	515	48	38	413
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	38	-	48	38	-
Stage 1	-	-	-	-	-	-	252	311	-	170	231	-
Stage 2	-	-	-	-	-	-	418	231	-	500	311	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	12.1	39
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	515	531	-	-	686	-	-	117
HCM Lane V/C Ratio	0.012	0.012	-	-	-	-	-	0.096
HCM Control Delay (s)	12.1	11.9	-	-	0	-	-	39
HCM Lane LOS	B	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	921	0	0	1173	2	1
Future Vol, veh/h	921	0	0	1173	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1023	0	0	1303	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1023	0	1675	512
Stage 1	-	-	-	-	1023	-
Stage 2	-	-	-	-	652	-
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	-	-	674	-	86	507
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	480	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	674	-	86	507
Mov Cap-2 Maneuver	-	-	-	-	208	-
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	259	-	-	674	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	19.1	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	901	1154	42	34	26
Future Vol, veh/h	21	901	1154	42	34	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1001	1282	47	43	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1329	0	-	0	1859	665
Stage 1	-	-	-	-	1306	-
Stage 2	-	-	-	-	553	-
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	515	-	-	-	65	403
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	515	-	-	-	62	403
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	540	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	30.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	515	-	-	-	215
HCM Lane V/C Ratio	0.051	-	-	-	0.349
HCM Control Delay (s)	12.4	-	-	-	30.5
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.5

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	932	2	2	1192	4	1
Future Vol, veh/h	932	2	2	1192	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1036	2	3	1324	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1038	0	1705	519
Stage 1	-	-	-	-	1037	-
Stage 2	-	-	-	-	668	-
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	-	-	665	-	82	502
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	665	-	82	502
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	230	-	-	665	-
HCM Lane V/C Ratio	0.027	-	-	0.004	-
HCM Control Delay (s)	21.1	-	-	10.4	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	934	0	2	1190	4	2
Future Vol, veh/h	934	0	2	1190	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1038	0	3	1322	5	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1038	0	1573	519
Stage 1	-	-	-	-	1038	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	665	-	126	502
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	665	-	125	502
Mov Cap-2 Maneuver	-	-	-	-	222	-
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	273	-	-	665	-
HCM Lane V/C Ratio	0.027	-	-	0.004	-
HCM Control Delay (s)	18.6	-	-	10.4	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	934	2	2	1192	0	0
Future Vol, veh/h	934	2	2	1192	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	80	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1038	3	3	1324	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1041	0	1706	519
Stage 1	-	-	-	-	1038	-
Stage 2	-	-	-	-	668	-
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	-	-	664	-	82	502
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	664	-	82	502
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	664	-
HCM Lane V/C Ratio	-	-	-	0.004	-
HCM Control Delay (s)	0	-	-	10.4	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

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	2	931	0	1	1190	2	2	0	4	1	0	2
Future Vol, veh/h	2	931	0	1	1190	2	2	0	4	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1034	0	1	1322	2	3	0	5	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1324	0	0	1034	0	0	1703	2366	517	1848	2365	662
Stage 1	-	-	-	-	-	-	1040	1040	-	1325	1325	-
Stage 2	-	-	-	-	-	-	663	1326	-	523	1040	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	518	-	-	668	-	-	59	35	503	46	35	404
Stage 1	-	-	-	-	-	-	246	306	-	164	223	-
Stage 2	-	-	-	-	-	-	417	223	-	505	306	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	518	-	-	668	-	-	58	35	503	45	35	404
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	35	-	45	35	-
Stage 1	-	-	-	-	-	-	245	304	-	163	223	-
Stage 2	-	-	-	-	-	-	414	223	-	497	304	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	32	38.9
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	141	518	-	-	668	-	-	110
HCM Lane V/C Ratio	0.053	0.005	-	-	0.002	-	-	0.034
HCM Control Delay (s)	32	12	-	-	10.4	-	-	38.9
HCM Lane LOS	D	B	-	-	B	-	-	E
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	5	57	52	0
Future Vol, veh/h	2	4	5	57	52	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	6	71	65	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	148	65	65	0	-	0
Stage 1	65	-	-	-	-	-
Stage 2	83	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	844	999	1537	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	841	999	1537	-	-	-
Mov Cap-2 Maneuver	841	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	940	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1537	-	940	-	-
HCM Lane V/C Ratio	0.004	-	0.008	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	0	18	11	0	0	9	34	19	0	24	11
Future Vol, veh/h	8	0	18	11	0	0	9	34	19	0	24	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	23	14	0	0	11	43	24	0	30	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	114	126	37	126	121	55	44	0	0	67	0	0
Stage 1	37	37	-	77	77	-	-	-	-	-	-	-
Stage 2	77	89	-	49	44	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	863	764	1035	848	769	1012	1564	-	-	1535	-	-
Stage 1	978	864	-	932	831	-	-	-	-	-	-	-
Stage 2	932	821	-	964	858	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	859	759	1035	825	764	1012	1564	-	-	1535	-	-
Mov Cap-2 Maneuver	859	759	-	825	764	-	-	-	-	-	-	-
Stage 1	971	864	-	925	825	-	-	-	-	-	-	-
Stage 2	925	815	-	943	858	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	9.4	1.1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1564	-	-	974	825	1535	-	-
HCM Lane V/C Ratio	0.007	-	-	0.033	0.017	-	-	-
HCM Control Delay (s)	7.3	0	-	8.8	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

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	1186	0	2	799	0	3	0	5	0	0	0
Future Vol, veh/h	0	1186	0	2	799	0	3	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1318	0	3	888	0	4	0	6	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	888	0	0	1318	0	0	1768	2212	659	1553	2212	444
Stage 1	-	-	-	-	-	-	1318	1318	-	894	894	-
Stage 2	-	-	-	-	-	-	450	894	-	659	1318	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	758	-	-	520	-	-	53	43	406	77	43	561
Stage 1	-	-	-	-	-	-	166	225	-	302	358	-
Stage 2	-	-	-	-	-	-	558	358	-	419	225	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	758	-	-	520	-	-	53	43	406	75	43	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	53	43	-	75	43	-
Stage 1	-	-	-	-	-	-	166	225	-	302	356	-
Stage 2	-	-	-	-	-	-	555	356	-	413	225	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	38.9	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	116	758	-	-	520	-	-	-
HCM Lane V/C Ratio	0.086	-	-	-	0.005	-	-	-
HCM Control Delay (s)	38.9	0	-	-	12	-	-	0
HCM Lane LOS	E	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1192	2	7	802	1	5
Future Vol, veh/h	1192	2	7	802	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1324	2	9	891	1	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1326	0	1789	663
Stage 1	-	-	-	-	1325	-
Stage 2	-	-	-	-	464	-
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	-	-	517	-	72	404
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	599	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	517	-	71	404
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	589	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	327	-	-	517	-
HCM Lane V/C Ratio	0.023	-	-	0.017	-
HCM Control Delay (s)	16.3	-	-	12.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	74	1123	753	58	83	53
Future Vol, veh/h	74	1123	753	58	83	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	1248	837	64	98	62

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	901	0	-	0	1647	419
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	810	-
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	750	-	-	-	~ 90	583
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	398	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	750	-	-	-	~ 79	583
Mov Cap-2 Maneuver	-	-	-	-	202	-
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	398	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	28.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	750	-	-	-	202	583
HCM Lane V/C Ratio	0.123	-	-	-	0.483	0.107
HCM Control Delay (s)	10.5	-	-	-	38.4	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	2.4	0.4

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

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1205	1	1	809	2	1
Future Vol, veh/h	1205	1	1	809	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1339	1	1	899	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1340	0	1792	670
Stage 1	-	-	-	-	1340	-
Stage 2	-	-	-	-	452	-
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	-	-	510	-	72	399
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	510	-	72	399
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	607	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	205	-	-	510	-
HCM Lane V/C Ratio	0.018	-	-	0.002	-
HCM Control Delay (s)	22.9	-	-	12.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1205	1	3	810	0	1
Future Vol, veh/h	1205	1	3	810	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1339	1	4	900	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1340	0	1708	670
Stage 1	-	-	-	-	1340	-
Stage 2	-	-	-	-	368	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	510	-	105	399
Stage 1	-	-	-	-	205	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	510	-	104	399
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	205	-
Stage 2	-	-	-	-	629	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	399	-	-	510	-
HCM Lane V/C Ratio	0.003	-	-	0.007	-
HCM Control Delay (s)	14.1	-	-	12.1	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	1175	2	2	760	60	0	0	0	36	0	53
Future Vol, veh/h	29	1175	2	2	760	60	0	0	0	36	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	80	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	1306	3	3	844	67	0	0	0	45	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	911	0	0	1309	0	0	1806	2295	653	1609	2265	456
Stage 1	-	-	-	-	-	-	1378	1378	-	884	884	-
Stage 2	-	-	-	-	-	-	428	917	-	725	1381	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	743	-	-	524	-	-	50	38	410	70	40	551
Stage 1	-	-	-	-	-	-	152	210	-	307	362	-
Stage 2	-	-	-	-	-	-	575	349	-	383	210	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	743	-	-	524	-	-	42	36	410	67	38	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	36	-	67	38	-
Stage 1	-	-	-	-	-	-	145	200	-	292	360	-
Stage 2	-	-	-	-	-	-	503	347	-	364	200	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	91
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	743	-	-	524	-	-	140
HCM Lane V/C Ratio	-	0.049	-	-	0.005	-	-	0.795
HCM Control Delay (s)	0	10.1	-	-	11.9	-	-	91
HCM Lane LOS	A	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	4.9

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1207	0	1	820	2	0	0	2	1	0	2
Future Vol, veh/h	4	1207	0	1	820	2	0	0	2	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1341	0	1	911	2	0	0	3	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	913	0	0	1341	0	0	1809	2266	671	1595	2265	457
Stage 1	-	-	-	-	-	-	1351	1351	-	914	914	-
Stage 2	-	-	-	-	-	-	458	915	-	681	1351	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	742	-	-	510	-	-	49	40	399	72	40	551
Stage 1	-	-	-	-	-	-	158	217	-	294	350	-
Stage 2	-	-	-	-	-	-	552	350	-	407	217	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	742	-	-	510	-	-	48	40	399	71	40	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	40	-	71	40	-
Stage 1	-	-	-	-	-	-	157	215	-	292	349	-
Stage 2	-	-	-	-	-	-	548	349	-	402	215	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.1	26.8
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	399	742	-	-	510	-	-	169
HCM Lane V/C Ratio	0.006	0.007	-	-	0.002	-	-	0.022
HCM Control Delay (s)	14.1	9.9	-	-	12.1	-	-	26.8
HCM Lane LOS	B	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	1	88	0	0	2	48	88	0	46	0
Future Vol, veh/h	1	0	1	88	0	0	2	48	88	0	46	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	1	110	0	0	2	56	104	0	58	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	170	222	58	171	170	108	58	0	0	160	0	0
Stage 1	58	58	-	112	112	-	-	-	-	-	-	-
Stage 2	112	164	-	59	58	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	794	677	1008	792	723	946	1546	-	-	1419	-	-
Stage 1	954	847	-	893	803	-	-	-	-	-	-	-
Stage 2	893	762	-	953	847	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	793	676	1008	790	722	946	1546	-	-	1419	-	-
Mov Cap-2 Maneuver	793	676	-	790	722	-	-	-	-	-	-	-
Stage 1	953	847	-	892	802	-	-	-	-	-	-	-
Stage 2	892	761	-	952	847	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	10.3	0.1	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1546	-	-	888	790	1419	-	-
HCM Lane V/C Ratio	0.002	-	-	0.003	0.139	-	-	-
HCM Control Delay (s)	7.3	0	-	9.1	10.3	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	0	6	19	0	0	17	27	6	0	20	6
Future Vol, veh/h	12	0	6	19	0	0	17	27	6	0	20	6
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	8	24	0	0	21	34	8	0	25	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	109	113	29	113	113	38	33	0	0	42	0	0
Stage 1	29	29	-	80	80	-	-	-	-	-	-	-
Stage 2	80	84	-	33	33	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	870	777	1046	864	777	1034	1579	-	-	1567	-	-
Stage 1	988	871	-	929	828	-	-	-	-	-	-	-
Stage 2	929	825	-	983	868	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	860	766	1046	848	766	1034	1579	-	-	1567	-	-
Mov Cap-2 Maneuver	860	766	-	848	766	-	-	-	-	-	-	-
Stage 1	974	871	-	916	816	-	-	-	-	-	-	-
Stage 2	916	813	-	976	868	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.4	2.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1579	-	-	914	848	1567	-	-
HCM Lane V/C Ratio	0.013	-	-	0.025	0.028	-	-	-
HCM Control Delay (s)	7.3	0	-	9	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

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	5	890	1	0	1138	2	0	0	5	3	0	6
Future Vol, veh/h	5	890	1	0	1138	2	0	0	5	3	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	989	1	0	1264	2	0	0	6	4	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1266	0	0	990	0	0	1634	2268	495	1772	2267	633
Stage 1	-	-	-	-	-	-	1002	1002	-	1265	1265	-
Stage 2	-	-	-	-	-	-	632	1266	-	507	1002	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	545	-	-	694	-	-	67	40	520	53	40	422
Stage 1	-	-	-	-	-	-	260	318	-	179	239	-
Stage 2	-	-	-	-	-	-	435	238	-	516	318	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	545	-	-	694	-	-	65	40	520	52	40	422
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	40	-	52	40	-
Stage 1	-	-	-	-	-	-	257	315	-	177	239	-
Stage 2	-	-	-	-	-	-	427	238	-	504	315	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	12	36.6
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	520	545	-	-	694	-	-	125
HCM Lane V/C Ratio	0.012	0.011	-	-	-	-	-	0.09
HCM Control Delay (s)	12	11.7	-	-	0	-	-	36.6
HCM Lane LOS	B	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	907	0	0	1145	2	1
Future Vol, veh/h	907	0	0	1145	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1008	0	0	1272	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1008	0	1644	504
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	636	-
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	-	-	683	-	90	513
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	683	-	90	513
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	489	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	265	-	-	683	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	18.8	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	84	824	1092	67	79	52
Future Vol, veh/h	84	824	1092	67	79	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	80	85	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	916	1213	84	93	65

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1297	0	-	0	1881	607
Stage 1	-	-	-	-	1213	-
Stage 2	-	-	-	-	668	-
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	530	-	-	-	~ 63	439
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	530	-	-	-	~ 51	439
Mov Cap-2 Maneuver	-	-	-	-	145	-
Stage 1	-	-	-	-	196	-
Stage 2	-	-	-	-	471	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	44.8
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	530	-	-	-	145	439
HCM Lane V/C Ratio	0.198	-	-	-	0.641	0.148
HCM Control Delay (s)	13.5	-	-	-	66	14.6
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.7	-	-	-	3.5	0.5

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

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	900	2	2	1155	4	1
Future Vol, veh/h	900	2	2	1155	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1000	2	3	1283	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1002	0	1649	501
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	648	-
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	-	-	687	-	90	515
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	483	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	687	-	90	515
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	481	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	241	-	-	687	-
HCM Lane V/C Ratio	0.026	-	-	0.004	-
HCM Control Delay (s)	20.3	-	-	10.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	911	0	2	1153	4	2
Future Vol, veh/h	911	0	2	1153	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1012	0	3	1281	5	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1012	0	1530	506
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	681	-	134	512
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	681	-	133	512
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	283	-	-	681	-
HCM Lane V/C Ratio	0.027	-	-	0.004	-
HCM Control Delay (s)	18.1	-	-	10.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	27.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	876	2	2	1090	74	0	0	0	54	0	65
Future Vol, veh/h	35	876	2	2	1090	74	0	0	0	54	0	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	80	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	973	3	3	1211	82	0	0	0	68	0	81

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1293	0	0	976	0	0	1673	2360	487	1833	2322	647
Stage 1	-	-	-	-	-	-	1061	1061	-	1258	1258	-
Stage 2	-	-	-	-	-	-	612	1299	-	575	1064	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	532	-	-	703	-	-	62	35	526	~ 47	37	414
Stage 1	-	-	-	-	-	-	239	299	-	181	241	-
Stage 2	-	-	-	-	-	-	447	230	-	470	298	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	532	-	-	703	-	-	47	32	526	~ 44	34	414
Mov Cap-2 Maneuver	-	-	-	-	-	-	47	32	-	~ 44	34	-
Stage 1	-	-	-	-	-	-	219	274	-	166	240	-
Stage 2	-	-	-	-	-	-	358	229	-	431	273	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	0	$ 455
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	532	-	-	703	-	-	86
HCM Lane V/C Ratio	-	0.082	-	-	0.004	-	-	1.73
HCM Control Delay (s)	0	12.4	-	-	10.1	-	-	$ 455
HCM Lane LOS	A	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.3	-	-	0	-	-	12.4

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

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	2	918	0	1	1162	2	2	0	4	1	0	2
Future Vol, veh/h	2	918	0	1	1162	2	2	0	4	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1020	0	1	1291	2	3	0	5	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1293	0	0	1020	0	0	1674	2321	510	1810	2320	647
Stage 1	-	-	-	-	-	-	1026	1026	-	1294	1294	-
Stage 2	-	-	-	-	-	-	648	1295	-	516	1026	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	532	-	-	676	-	-	62	37	509	49	37	414
Stage 1	-	-	-	-	-	-	251	310	-	172	231	-
Stage 2	-	-	-	-	-	-	425	231	-	510	310	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	532	-	-	676	-	-	61	37	509	48	37	414
Mov Cap-2 Maneuver	-	-	-	-	-	-	61	37	-	48	37	-
Stage 1	-	-	-	-	-	-	249	308	-	171	231	-
Stage 2	-	-	-	-	-	-	422	231	-	502	308	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	30.6	36.8
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	148	532	-	-	676	-	-	117
HCM Lane V/C Ratio	0.051	0.005	-	-	0.002	-	-	0.032
HCM Control Delay (s)	30.6	11.8	-	-	10.3	-	-	36.8
HCM Lane LOS	D	B	-	-	B	-	-	E
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	4	80	0	0	5	55	90	0	50	0
Future Vol, veh/h	2	0	4	80	0	0	5	55	90	0	50	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	85	85	85	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	5	94	0	0	6	65	106	0	63	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	193	246	63	196	193	118	63	0	0	171	0	0
Stage 1	63	63	-	130	130	-	-	-	-	-	-	-
Stage 2	130	183	-	66	63	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	767	656	1002	763	702	934	1540	-	-	1406	-	-
Stage 1	948	842	-	874	789	-	-	-	-	-	-	-
Stage 2	874	748	-	945	842	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	765	653	1002	757	699	934	1540	-	-	1406	-	-
Mov Cap-2 Maneuver	765	653	-	757	699	-	-	-	-	-	-	-
Stage 1	944	842	-	871	786	-	-	-	-	-	-	-
Stage 2	871	745	-	940	842	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	10.4	0.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1540	-	-	908	757	1406	-	-
HCM Lane V/C Ratio	0.004	-	-	0.008	0.124	-	-	-
HCM Control Delay (s)	7.3	0	-	9	10.4	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	7	0	17	11	0	0	8	32	19	0	22	10
Future Vol, veh/h	7	0	17	11	0	0	8	32	19	0	22	10
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	21	14	0	0	10	40	24	0	28	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	107	119	35	117	113	52	41	0	0	64	0	0
Stage 1	35	35	-	72	72	-	-	-	-	-	-	-
Stage 2	72	84	-	45	41	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	872	771	1038	859	777	1016	1568	-	-	1538	-	-
Stage 1	981	866	-	938	835	-	-	-	-	-	-	-
Stage 2	938	825	-	969	861	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	868	766	1038	837	772	1016	1568	-	-	1538	-	-
Mov Cap-2 Maneuver	868	766	-	837	772	-	-	-	-	-	-	-
Stage 1	974	866	-	931	829	-	-	-	-	-	-	-
Stage 2	931	819	-	949	861	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	9.4	1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1568	-	-	982	837	1538	-	-
HCM Lane V/C Ratio	0.006	-	-	0.031	0.016	-	-	-
HCM Control Delay (s)	7.3	0	-	8.8	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

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	1257	0	2	846	0	3	0	5	0	0	0
Future Vol, veh/h	0	1257	0	2	846	0	3	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1397	0	3	940	0	4	0	6	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	940	0	0	1397	0	0	1873	2343	699	1645	2343	470
Stage 1	-	-	-	-	-	-	1397	1397	-	946	946	-
Stage 2	-	-	-	-	-	-	476	946	-	699	1397	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	725	-	-	485	-	-	44	36	382	66	36	540
Stage 1	-	-	-	-	-	-	148	206	-	281	338	-
Stage 2	-	-	-	-	-	-	539	338	-	397	206	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	725	-	-	485	-	-	44	36	382	65	36	540
Mov Cap-2 Maneuver	-	-	-	-	-	-	44	36	-	65	36	-
Stage 1	-	-	-	-	-	-	148	206	-	281	336	-
Stage 2	-	-	-	-	-	-	536	336	-	391	206	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	45.9	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	98	725	-	-	485	-	-	-
HCM Lane V/C Ratio	0.102	-	-	-	0.005	-	-	-
HCM Control Delay (s)	45.9	0	-	-	12.5	-	-	0
HCM Lane LOS	E	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1264	2	8	850	1	5
Future Vol, veh/h	1264	2	8	850	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1404	2	10	944	1	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1406	0	1897	703
Stage 1	-	-	-	-	1405	-
Stage 2	-	-	-	-	492	-
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	-	-	481	-	61	380
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	481	-	60	380
Mov Cap-2 Maneuver	-	-	-	-	151	-
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	568	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	303	-	-	481	-
HCM Lane V/C Ratio	0.025	-	-	0.021	-
HCM Control Delay (s)	17.2	-	-	12.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	1194	800	59	85	57
Future Vol, veh/h	75	1194	800	59	85	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	94	1327	889	66	100	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	955	0	-	0	1741	445
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	852	-
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	715	-	-	-	~ 78	561
Stage 1	-	-	-	-	362	-
Stage 2	-	-	-	-	378	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	715	-	-	-	~ 68	561
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	378	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	31.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	715	-	-	-	188	561
HCM Lane V/C Ratio	0.131	-	-	-	0.532	0.12
HCM Control Delay (s)	10.8	-	-	-	44	12.3
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.5	-	-	-	2.7	0.4

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

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1277	1	1	857	2	1
Future Vol, veh/h	1277	1	1	857	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1419	1	1	952	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1420	0	1898	710
Stage 1	-	-	-	-	1420	-
Stage 2	-	-	-	-	478	-
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	-	-	475	-	61	376
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	475	-	61	376
Mov Cap-2 Maneuver	-	-	-	-	150	-
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	589	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	188	-	-	475	-
HCM Lane V/C Ratio	0.02	-	-	0.003	-
HCM Control Delay (s)	24.5	-	-	12.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1277	1	3	858	0	1
Future Vol, veh/h	1277	1	3	858	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1419	1	4	953	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1420	0	1809	710
Stage 1	-	-	-	-	1420	-
Stage 2	-	-	-	-	389	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	475	-	91	376
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	619	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	475	-	90	376
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	614	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	376	-	-	475	-
HCM Lane V/C Ratio	0.003	-	-	0.008	-
HCM Control Delay (s)	14.6	-	-	12.6	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	1247	2	2	808	60	0	0	0	36	0	53
Future Vol, veh/h	29	1247	2	2	808	60	0	0	0	36	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	80	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	1386	3	3	898	67	0	0	0	45	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	965	0	0	1389	0	0	1913	2429	693	1703	2399	483
Stage 1	-	-	-	-	-	-	1458	1458	-	938	938	-
Stage 2	-	-	-	-	-	-	455	971	-	765	1461	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	709	-	-	489	-	-	41	32	386	59	33	530
Stage 1	-	-	-	-	-	-	136	192	-	284	341	-
Stage 2	-	-	-	-	-	-	554	329	-	362	192	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	709	-	-	489	-	-	34	30	386	56	31	530
Mov Cap-2 Maneuver	-	-	-	-	-	-	34	30	-	56	31	-
Stage 1	-	-	-	-	-	-	129	182	-	270	339	-
Stage 2	-	-	-	-	-	-	482	327	-	344	182	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	131.7
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	709	-	-	489	-	-	120
HCM Lane V/C Ratio	-	0.051	-	-	0.005	-	-	0.927
HCM Control Delay (s)	0	10.4	-	-	12.4	-	-	131.7
HCM Lane LOS	A	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	5.9

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1279	0	1	898	2	0	0	2	1	0	2
Future Vol, veh/h	4	1279	0	1	898	2	0	0	2	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1421	0	1	998	2	0	0	3	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1000	0	0	1421	0	0	1932	2433	711	1722	2432	500
Stage 1	-	-	-	-	-	-	1431	1431	-	1001	1001	-
Stage 2	-	-	-	-	-	-	501	1002	-	721	1431	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	688	-	-	475	-	-	40	31	375	57	31	516
Stage 1	-	-	-	-	-	-	141	198	-	260	319	-
Stage 2	-	-	-	-	-	-	521	318	-	385	198	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	688	-	-	475	-	-	40	31	375	56	31	516
Mov Cap-2 Maneuver	-	-	-	-	-	-	40	31	-	56	31	-
Stage 1	-	-	-	-	-	-	140	197	-	258	318	-
Stage 2	-	-	-	-	-	-	517	317	-	380	197	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.7	31.8
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	375	688	-	-	475	-	-	138
HCM Lane V/C Ratio	0.007	0.007	-	-	0.003	-	-	0.027
HCM Control Delay (s)	14.7	10.3	-	-	12.6	-	-	31.8
HCM Lane LOS	B	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	1	88	0	0	2	50	88	0	47	0
Future Vol, veh/h	1	0	1	88	0	0	2	50	88	0	47	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	1	110	0	0	2	59	104	0	59	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	174	226	59	175	174	111	59	0	0	163	0	0
Stage 1	59	59	-	115	115	-	-	-	-	-	-	-
Stage 2	115	167	-	60	59	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	789	673	1007	788	719	942	1545	-	-	1416	-	-
Stage 1	953	846	-	890	800	-	-	-	-	-	-	-
Stage 2	890	760	-	951	846	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	788	672	1007	786	718	942	1545	-	-	1416	-	-
Mov Cap-2 Maneuver	788	672	-	786	718	-	-	-	-	-	-	-
Stage 1	952	846	-	889	799	-	-	-	-	-	-	-
Stage 2	889	759	-	950	846	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	10.3	0.1	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1545	-	-	884	786	1416	-	-
HCM Lane V/C Ratio	0.002	-	-	0.003	0.14	-	-	-
HCM Control Delay (s)	7.3	0	-	9.1	10.3	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	0	6	19	0	0	18	28	6	0	22	6
Future Vol, veh/h	13	0	6	19	0	0	18	28	6	0	22	6
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	8	24	0	0	23	35	8	0	28	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	117	121	32	121	121	39	36	0	0	43	0	0
Stage 1	32	32	-	85	85	-	-	-	-	-	-	-
Stage 2	85	89	-	36	36	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	859	769	1042	854	769	1033	1575	-	-	1566	-	-
Stage 1	984	868	-	923	824	-	-	-	-	-	-	-
Stage 2	923	821	-	980	865	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	850	757	1042	838	757	1033	1575	-	-	1566	-	-
Mov Cap-2 Maneuver	850	757	-	838	757	-	-	-	-	-	-	-
Stage 1	969	868	-	909	812	-	-	-	-	-	-	-
Stage 2	909	809	-	973	865	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.4	2.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1575	-	-	903	838	1566	-	-
HCM Lane V/C Ratio	0.014	-	-	0.026	0.028	-	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

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	5	941	1	0	1204	2	0	0	5	3	0	6
Future Vol, veh/h	5	941	1	0	1204	2	0	0	5	3	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1046	1	0	1338	2	0	0	6	4	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1340	0	0	1047	0	0	1728	2399	524	1874	2398	670
Stage 1	-	-	-	-	-	-	1059	1059	-	1339	1339	-
Stage 2	-	-	-	-	-	-	669	1340	-	535	1059	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	510	-	-	660	-	-	57	33	498	44	33	399
Stage 1	-	-	-	-	-	-	240	299	-	161	220	-
Stage 2	-	-	-	-	-	-	413	220	-	497	299	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	510	-	-	660	-	-	55	33	498	43	33	399
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	33	-	43	33	-
Stage 1	-	-	-	-	-	-	237	295	-	159	220	-
Stage 2	-	-	-	-	-	-	405	220	-	485	295	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	12.3	43
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	498	510	-	-	660	-	-	106
HCM Lane V/C Ratio	0.013	0.012	-	-	-	-	-	0.106
HCM Control Delay (s)	12.3	12.1	-	-	0	-	-	43
HCM Lane LOS	B	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	960	0	0	1212	2	1
Future Vol, veh/h	960	0	0	1212	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1067	0	0	1347	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1067	0	1741	534
Stage 1	-	-	-	-	1067	-
Stage 2	-	-	-	-	674	-
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	-	-	649	-	78	491
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	468	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	649	-	78	491
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	468	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	246	-	-	649	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	19.9	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	85	876	1159	68	80	60
Future Vol, veh/h	85	876	1159	68	80	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	90	90	90	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	106	973	1288	76	94	71

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1364	0	-	0	1987	644
Stage 1	-	-	-	-	1288	-
Stage 2	-	-	-	-	699	-
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	500	-	-	-	~ 53	416
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	500	-	-	-	~ 42	416
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	53.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	500	-	-	-	131	416
HCM Lane V/C Ratio	0.213	-	-	-	0.718	0.17
HCM Control Delay (s)	14.1	-	-	-	82.7	15.4
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.8	-	-	-	4.1	0.6

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

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	953	2	2	1223	4	1
Future Vol, veh/h	953	2	2	1223	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1059	2	3	1359	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1061	0	1746	531
Stage 1	-	-	-	-	1060	-
Stage 2	-	-	-	-	686	-
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	-	-	652	-	77	493
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	652	-	77	493
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	459	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	224	-	-	652	-
HCM Lane V/C Ratio	0.028	-	-	0.004	-
HCM Control Delay (s)	21.5	-	-	10.5	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	955	0	2	1221	4	2
Future Vol, veh/h	955	0	2	1221	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1061	0	3	1357	5	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1061	0	1610	531
Stage 1	-	-	-	-	1061	-
Stage 2	-	-	-	-	549	-
Critical Hdwy	-	-	4.14	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	2.22	-	3.67	3.32
Pot Cap-1 Maneuver	-	-	652	-	120	493
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	510	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	652	-	119	493
Mov Cap-2 Maneuver	-	-	-	-	216	-
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	507	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	266	-	-	652	-
HCM Lane V/C Ratio	0.028	-	-	0.004	-
HCM Control Delay (s)	18.9	-	-	10.5	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	34.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	920	2	2	1158	74	0	0	0	54	0	65
Future Vol, veh/h	35	920	2	2	1158	74	0	0	0	54	0	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	80	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	1022	3	3	1287	82	0	0	0	68	0	81

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1369	0	0	1025	0	0	1760	2485	511	1933	2447	685
Stage 1	-	-	-	-	-	-	1110	1110	-	1334	1334	-
Stage 2	-	-	-	-	-	-	650	1375	-	599	1113	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	497	-	-	673	-	-	54	29	508	~ 40	31	391
Stage 1	-	-	-	-	-	-	223	283	-	162	221	-
Stage 2	-	-	-	-	-	-	424	211	-	455	282	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	497	-	-	673	-	-	40	26	508	~ 37	28	391
Mov Cap-2 Maneuver	-	-	-	-	-	-	40	26	-	~ 37	28	-
Stage 1	-	-	-	-	-	-	203	258	-	148	220	-
Stage 2	-	-	-	-	-	-	334	210	-	415	257	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	0	$ 603.6
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	497	-	-	673	-	-	73
HCM Lane V/C Ratio	-	0.088	-	-	0.004	-	-	2.038
HCM Control Delay (s)	0	12.9	-	-	10.4	-	-	$ 603.6
HCM Lane LOS	A	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.3	-	-	0	-	-	13.6

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

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	2	971	0	1	1230	2	2	0	4	1	0	2
Future Vol, veh/h	2	971	0	1	1230	2	2	0	4	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	90	90	80	90	90	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1079	0	1	1367	2	3	0	5	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1369	0	0	1079	0	0	1771	2456	540	1916	2455	685
Stage 1	-	-	-	-	-	-	1085	1085	-	1370	1370	-
Stage 2	-	-	-	-	-	-	686	1371	-	546	1085	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	497	-	-	642	-	-	53	30	486	41	30	391
Stage 1	-	-	-	-	-	-	231	291	-	154	212	-
Stage 2	-	-	-	-	-	-	404	212	-	490	291	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	497	-	-	642	-	-	52	30	486	40	30	391
Mov Cap-2 Maneuver	-	-	-	-	-	-	52	30	-	40	30	-
Stage 1	-	-	-	-	-	-	230	289	-	153	212	-
Stage 2	-	-	-	-	-	-	401	212	-	482	289	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	34.6	42.4
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	129	497	-	-	642	-	-	100
HCM Lane V/C Ratio	0.058	0.005	-	-	0.002	-	-	0.038
HCM Control Delay (s)	34.6	12.3	-	-	10.6	-	-	42.4
HCM Lane LOS	D	B	-	-	B	-	-	E
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	0	4	80	0	0	5	57	90	0	52	0
Future Vol, veh/h	2	0	4	80	0	0	5	57	90	0	52	0
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	85	85	85	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	5	94	0	0	6	67	106	0	65	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	197	250	65	200	197	120	65	0	0	173	0	0
Stage 1	65	65	-	132	132	-	-	-	-	-	-	-
Stage 2	132	185	-	68	65	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	762	653	999	759	699	931	1537	-	-	1404	-	-
Stage 1	946	841	-	871	787	-	-	-	-	-	-	-
Stage 2	871	747	-	942	841	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	760	650	999	753	696	931	1537	-	-	1404	-	-
Mov Cap-2 Maneuver	760	650	-	753	696	-	-	-	-	-	-	-
Stage 1	942	841	-	868	784	-	-	-	-	-	-	-
Stage 2	868	744	-	937	841	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	10.5	0.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1537	-	-	904	753	1404	-	-
HCM Lane V/C Ratio	0.004	-	-	0.008	0.125	-	-	-
HCM Control Delay (s)	7.4	0	-	9	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0	-	-

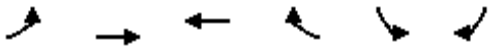
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	7	0	17	11	0	0	8	32	19	0	22	10
Future Vol, veh/h	7	0	17	11	0	0	8	32	19	0	22	10
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	21	14	0	0	10	40	24	0	28	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	107	119	35	117	113	52	41	0	0	64	0	0
Stage 1	35	35	-	72	72	-	-	-	-	-	-	-
Stage 2	72	84	-	45	41	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	872	771	1038	859	777	1016	1568	-	-	1538	-	-
Stage 1	981	866	-	938	835	-	-	-	-	-	-	-
Stage 2	938	825	-	969	861	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	868	766	1038	837	772	1016	1568	-	-	1538	-	-
Mov Cap-2 Maneuver	868	766	-	837	772	-	-	-	-	-	-	-
Stage 1	974	866	-	931	829	-	-	-	-	-	-	-
Stage 2	931	819	-	949	861	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	9.4	1	0
HCM LOS	A	A		

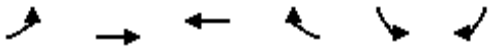
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1568	-	-	982	837	1538	-	-
HCM Lane V/C Ratio	0.006	-	-	0.031	0.016	-	-	-
HCM Control Delay (s)	7.3	0	-	8.8	9.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	1194	800	59	85	57
Future Volume (veh/h)	75	1194	800	59	85	57
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	94	1327	889	66	100	67
Peak Hour Factor	0.80	0.90	0.90	0.90	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	325	1837	1380	616	622	554
Arrive On Green	0.06	0.52	0.39	0.39	0.35	0.35
Sat Flow, veh/h	1781	3647	3647	1585	1781	1585
Grp Volume(v), veh/h	94	1327	889	66	100	67
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1781	1585
Q Serve(g_s), s	1.9	19.4	13.7	1.8	2.6	1.9
Cycle Q Clear(g_c), s	1.9	19.4	13.7	1.8	2.6	1.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	325	1837	1380	616	622	554
V/C Ratio(X)	0.29	0.72	0.64	0.11	0.16	0.12
Avail Cap(c_a), veh/h	348	3038	3038	1355	622	554
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	11.8	12.5	16.8	13.1	15.1	14.9
Incr Delay (d2), s/veh	0.5	0.5	0.5	0.1	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.6	4.9	0.6	1.1	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.3	13.1	17.3	13.2	15.6	15.3
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h		1421	955		167	
Approach Delay, s/veh		13.0	17.0		15.5	
Approach LOS		B	B		B	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			39.3		28.0	8.6	30.6
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			57.5		23.5	5.0	57.5
Max Q Clear Time (g_c+I1), s			21.4		4.6	3.9	15.7
Green Ext Time (p_c), s			13.4		0.4	0.0	7.3

Intersection Summary		
HCM 6th Ctrl Delay		14.7
HCM 6th LOS		B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	876	1159	68	80	60
Future Volume (veh/h)	85	876	1159	68	80	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	973	1288	76	94	71
Peak Hour Factor	0.80	0.90	0.90	0.90	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	284	2165	1730	772	476	424
Arrive On Green	0.06	0.61	0.49	0.49	0.27	0.27
Sat Flow, veh/h	1781	3647	3647	1585	1781	1585
Grp Volume(v), veh/h	106	973	1288	76	94	71
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1585	1781	1585
Q Serve(g_s), s	2.0	10.7	21.3	1.9	3.0	2.5
Cycle Q Clear(g_c), s	2.0	10.7	21.3	1.9	3.0	2.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	284	2165	1730	772	476	424
V/C Ratio(X)	0.37	0.45	0.74	0.10	0.20	0.17
Avail Cap(c_a), veh/h	299	2997	2997	1337	476	424
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	12.1	7.7	15.1	10.1	20.7	20.5
Incr Delay (d2), s/veh	0.8	0.1	0.7	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.4	7.3	0.6	1.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.9	7.8	15.7	10.1	21.6	21.3
LnGrp LOS	B	A	B	B	C	C
Approach Vol, veh/h		1079	1364		165	
Approach Delay, s/veh		8.3	15.4		21.5	
Approach LOS		A	B		C	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			48.9		24.0	8.9	40.0
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			61.5		19.5	5.0	61.5
Max Q Clear Time (g_c+I1), s			12.7		5.0	4.0	23.3
Green Ext Time (p_c), s			9.0		0.4	0.0	12.2

Intersection Summary		
HCM 6th Ctrl Delay		12.8
HCM 6th LOS		B

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

Turn Lane Calculations

Un-Signalized Intersection (Left Turn Lane)
Location: Southwest Drive/SR 89A
Approach/Leg: Southbound **2025 With Project**

V = vehicles per hour

AM Peak Hour
V = 85 vph

S = Storage = (V *2 min* 25 ft/veh)/60 min/hr

$$S\ (ft) = \frac{85\ vph * (2\ min) * (25\ ft/veh)}{(60\ min/hr)} = 71\ feet$$

Minimum Recommended Storage: 75 feet

Un-Signalized Intersection (Right Turn Lane)
Location: Southwest Drive/SR 89A
Approach/Leg: Westbound **2025 With Project**

V = vehicles per hour

PM Peak Hour
V = 68 vph

S = Storage = (V *2 min* 25 ft/veh)/60 min/hr

$$S\ (ft) = \frac{68\ vph * (2\ min) * (25\ ft/veh)}{(60\ min/hr)} = 57\ feet$$

Minimum Recommended Storage: 75 feet

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

Traffic Signal Warrant Analysis

General Description of Intersection

Project Number: 21130

Existing

Name of Major Roadway: SR 89A

Direction: E/W

# of EB Lanes: 2

# of WB Lanes: 2

85th percentile speed: 40 *mph*

Control #:

Section #:

Route #:

Name of Minor Roadway: Southwest Drive

Direction: N/S

# of NB Lanes: 0

# of SB Lanes: 1

85th percentile speed: 25 *mph*

Control #:

Section #:

Route #:

City: Sedona

Population: 10,300

County:

District:

Data Source: 24-hour approach

Date of Survey: 9/2/2021 *(press Ctrl + ;)*

Day of Week: Thursday

Weather: Sunny

Surface Conditions: Dry

Smooth

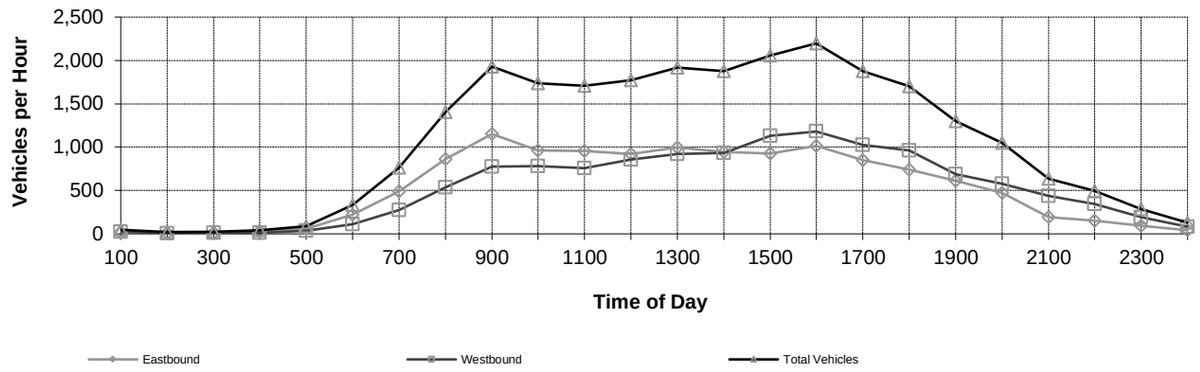
Enter Traffic Volumes:

Automated Traffic Counts

Street: **SR 89A**
Location: **Southwest Drive**

City/State: **Sedona, AZ**
Project #: **21130**
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **25,380**



Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	21		24	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	13		8	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	11		13	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	27		15	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	56		33	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	220		114	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	489		273	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	864		538	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	1151		777	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	959		779	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	953		756	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	918		855	

Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:15 PM				
12:30 PM				
12:45 PM				
1:00 PM	996		923	
1:15 PM				
1:30 PM				
1:45 PM				
2:00 PM	944		932	
2:15 PM				
2:30 PM				
2:45 PM				
3:00 PM	927		1130	
3:15 PM				
3:30 PM				
3:45 PM				
4:00 PM	1016		1180	
4:15 PM				
4:30 PM				
4:45 PM				
5:00 PM	853		1024	
5:15 PM				
5:30 PM				
5:45 PM				
6:00 PM	740		960	
6:15 PM				
6:30 PM				
6:45 PM				
7:00 PM	610		688	
7:15 PM				
7:30 PM				
7:45 PM				
8:00 PM	470		577	
8:15 PM				
8:30 PM				
8:45 PM				
9:00 PM	195		438	
9:15 PM				
9:30 PM				
9:45 PM				
10:00 PM	150		346	
10:15 PM				
10:30 PM				
10:45 PM				
11:00 PM	93		195	
11:15 PM				
11:30 PM				
11:45 PM				
12:00 AM	43		83	
	12,719		12,661	
	24-Hour Volume		25,380	

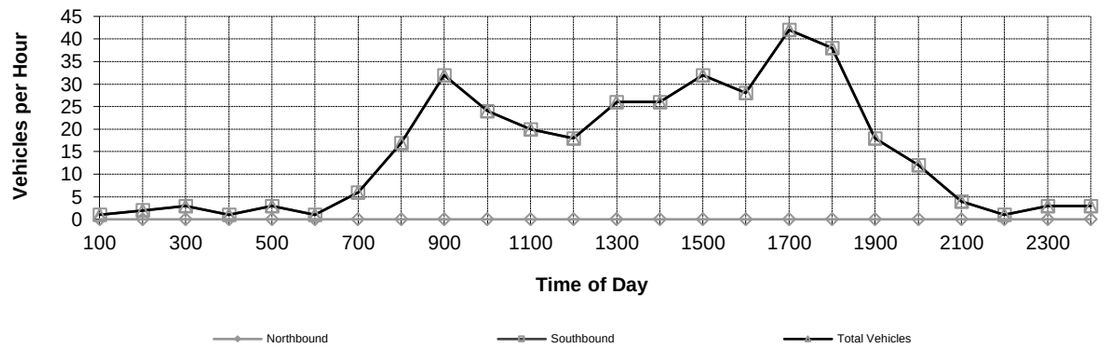
Equipment ID#:

Automated Traffic Counts

Street: **Southwest Drive**
Location: **SR 89A**

City/State: **Sedona, AZ**
Project #:
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **361**



Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	0		1	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	0		2	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	0		3	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	0		1	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	0		3	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	0		1	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	0		6	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	0		17	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	0		32	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	0		24	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	0		20	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	0		18	

Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:59 PM				
12:30 PM				
12:45 PM				
1:00 PM	0		26	
1:59 PM				
1:30 PM				
1:45 PM				
2:00 PM	0		26	
2:59 PM				
2:30 PM				
2:45 PM				
3:00 PM	0		32	
3:59 PM				
3:30 PM				
3:45 PM				
4:00 PM	0		28	
4:59 PM				
4:30 PM				
12:00 AM				
5:00 PM	0		42	
5:59 PM				
5:30 PM				
5:45 PM				
6:00 PM	0		38	
6:59 PM				
6:30 PM				
6:45 PM				
7:00 PM	0		18	
7:59 PM				
7:30 PM				
7:45 PM				
8:00 PM	0		12	
8:59 PM				
8:30 PM				
8:45 PM				
9:00 PM	0		4	
9:59 PM				
9:30 PM				
9:45 PM				
10:00 PM	0		1	
10:59 PM				
10:30 PM				
10:45 PM				
11:00 PM	0		3	
11:59 PM				
11:30 PM				
11:45 PM				
12:00 AM	0		3	
	0		361	
24-Hour Volume			361	

Equipment ID#:

TRAFFIC SURVEY - COUNT ANALYSIS

2009 MUTCD WARRANTS

Existing

County: _____ **District No.:** _____

City: Sedona **Population:** 10,300 **Survey Date:** 9/2/2021

	Route #	Name	Control	Section	85% Speed
Major		SR 89A		-	40
Minor		Southwest Drive		-	25

Warrant 1: Eight- Hour Volumes

Condition A

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural
1		1	500	350	150	105
2 or more		1	**600**	420	**150**	105
2 or more		2 or more	600	420	200	140
1		2 or more	500	350	200	140

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 1

Time		Volume		Criteria		
Begin	End	Major	Minor	Major >= 600	Minor >= 150	Both Meet
12:00 AM	1:00 AM	45	1	N	N	N
1:00 AM	2:00 AM	21	2	N	N	N
2:00 AM	3:00 AM	24	3	N	N	N
3:00 AM	4:00 AM	42	1	N	N	N
4:00 AM	5:00 AM	89	3	N	N	N
5:00 AM	6:00 AM	334	1	N	N	N
6:00 AM	7:00 AM	762	6	Y	N	N
7:00 AM	8:00 AM	1402	17	Y	N	N
8:00 AM	9:00 AM	1928	32	Y	N	N
9:00 AM	10:00 AM	1738	24	Y	N	N
10:00 AM	11:00 AM	1709	20	Y	N	N
11:00 AM	12:00 PM	1773	18	Y	N	N
12:00 PM	1:00 PM	1919	26	Y	N	N
1:00 PM	2:00 PM	1876	26	Y	N	N
2:00 PM	3:00 PM	2057	32	Y	N	N
3:00 PM	4:00 PM	2196	28	Y	N	N
4:00 PM	5:00 PM	1877	42	Y	N	N
5:00 PM	6:00 PM	1700	38	Y	N	N
6:00 PM	7:00 PM	1298	18	Y	N	N
7:00 PM	8:00 PM	1047	12	Y	N	N
8:00 PM	9:00 PM	633	4	Y	N	N
9:00 PM	10:00 PM	496	1	N	N	N
10:00 PM	11:00 PM	288	3	N	N	N
11:00 PM	12:00 AM	126	3	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition A is not satisfied

Warrant 1 not satisfied.

Warrant 1: Eight- Hour Volumes

Condition B

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural*
1		1	750	525	75	53
2 or more		1	**900**	630	**75**	53
2 or more		2 or more	900	630	100	70
1		2 or more	750	525	100	70

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 2

Time		Volume		Criteria		
				Major	Minor	
Begin	End	Major	Minor	>= 900	>=75	Both Meet
12:00 AM	1:00 AM	45	1	N	N	N
1:00 AM	2:00 AM	21	2	N	N	N
2:00 AM	3:00 AM	24	3	N	N	N
3:00 AM	4:00 AM	42	1	N	N	N
4:00 AM	5:00 AM	89	3	N	N	N
5:00 AM	6:00 AM	334	1	N	N	N
6:00 AM	7:00 AM	762	6	N	N	N
7:00 AM	8:00 AM	1402	17	Y	N	N
8:00 AM	9:00 AM	1928	32	Y	N	N
9:00 AM	10:00 AM	1738	24	Y	N	N
10:00 AM	11:00 AM	1709	20	Y	N	N
11:00 AM	12:00 PM	1773	18	Y	N	N
12:00 PM	1:00 PM	1919	26	Y	N	N
1:00 PM	2:00 PM	1876	26	Y	N	N
2:00 PM	3:00 PM	2057	32	Y	N	N
3:00 PM	4:00 PM	2196	28	Y	N	N
4:00 PM	5:00 PM	1877	42	Y	N	N
5:00 PM	6:00 PM	1700	38	Y	N	N
6:00 PM	7:00 PM	1298	18	Y	N	N
7:00 PM	8:00 PM	1047	12	Y	N	N
8:00 PM	9:00 PM	633	4	N	N	N
9:00 PM	10:00 PM	496	1	N	N	N
10:00 PM	11:00 PM	288	3	N	N	N
11:00 PM	12:00 AM	126	3	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition B is not satisfied

Warrant 1 not satisfied.

Warrant 2: Four Hour Vehicular Volumes

This warrant is similar to Warrant 1A, except that the required traffic volumes must be present for at least four hours of an average day. The traffic volumes required are based on curves (Figure 4C-2) shown in the MUTCD.

*** The required traffic volumes for Warrant 2 do not meet for any one hour.**

Warrant 2 is not satisfied

Warrant 3, Condition A- Peak Hour Delay

This warrant is intended for application where traffic conditions will cause undue delay to traffic entering or crossing the major street. The peak hour delay warrant is satisfied when the following conditions exist for one hour (any four consecutive 15-minute periods) of an average weekday:

(1) The total delay by the traffic on a side street controlled by a stop sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach, **and**

(2) the volume on the side street (one direction) equals or exceeds 100 vph for one moving lane of traffic and 150 vph for two moving lanes, **and**

(3) the total traffic volume serviced during 1 hour equals or exceeds 800 vph for an intersection with four (or more) approaches or 650 vph for three approaches.

***Part 1 - N/A**
***Part 2 - N/A**
***Part 3 - N/A**

Warrant 3, Condition B - Peak Hour Volume

This warrant applies to traffic entering from the minor street which encounters undue delay crossing the main street. This wa is satisfied when the main street and side street traffic volumes satisfy the curves shown in Figure 4C-4 of the TMUTCD.

Warrant 3 is N/A.

Warrant 4: Pedestrian Volume

Required*	Existing
100 or more for each of any four hours	_____
OR	
190 or more during any one hour	_____

* For predominant pedestrian crossing speeds less than 3.5 ft/sec, the pedestrian volume may be reduced as much as 50 percent.

Gap Requirements

YES	NO	Is the nearest signal located more than 300 feet away?
YES	NO	For traffic flow which is not platooned, are there less than 60 gaps per hour of adequate length for the pedestrians to cross the street?

Warrant 4 is N/A.

Warrant 5: School Crossing

YES NO Is the number of adequate gaps in traffic stream during the period when the children are using the crossing less than the number of minutes in the same period?

Warrant 5 is N/A.

Warrant 6: Coordinate Systems

YES NO Are the adjacent signals in a signal system?
YES NO Would the resultant spacing be 1000 feet or more?

Warrant 6 is N/A.

Warrant 7: Crash Experience

YES NO Is 80% or more of one of Warrants #1, #2, or #3 met?
YES NO Have there been more than five accidents susceptible to correction by a traffic signal in 12 months?

Warrant 7 is N/A.

Warrant 8: Roadway Network

YES NO Does the major street having an existing or immediately projected entering volume of > 1000 vehicles per hour of a typical weekday?

YES NO Do 5-year projected traffic volumes meet Warrants 1, 2, or 3?

YES NO Is there an entering traffic volume of at least 1000 vehicles per hour for each of any 5 hours on a Saturday or Sunday?

Warrant 8 is N/A.

Summary:

Warrants satisfied: none

Warrants not satisfied: 1, 2

Warrants not applicable: 3, 4, 5, 6, 7, 8

Warrants not included in study: none

Warrant 2 - Four Hour Vehicular Volumes

85th % speed: <= 40 mph
Population: >= 10,000

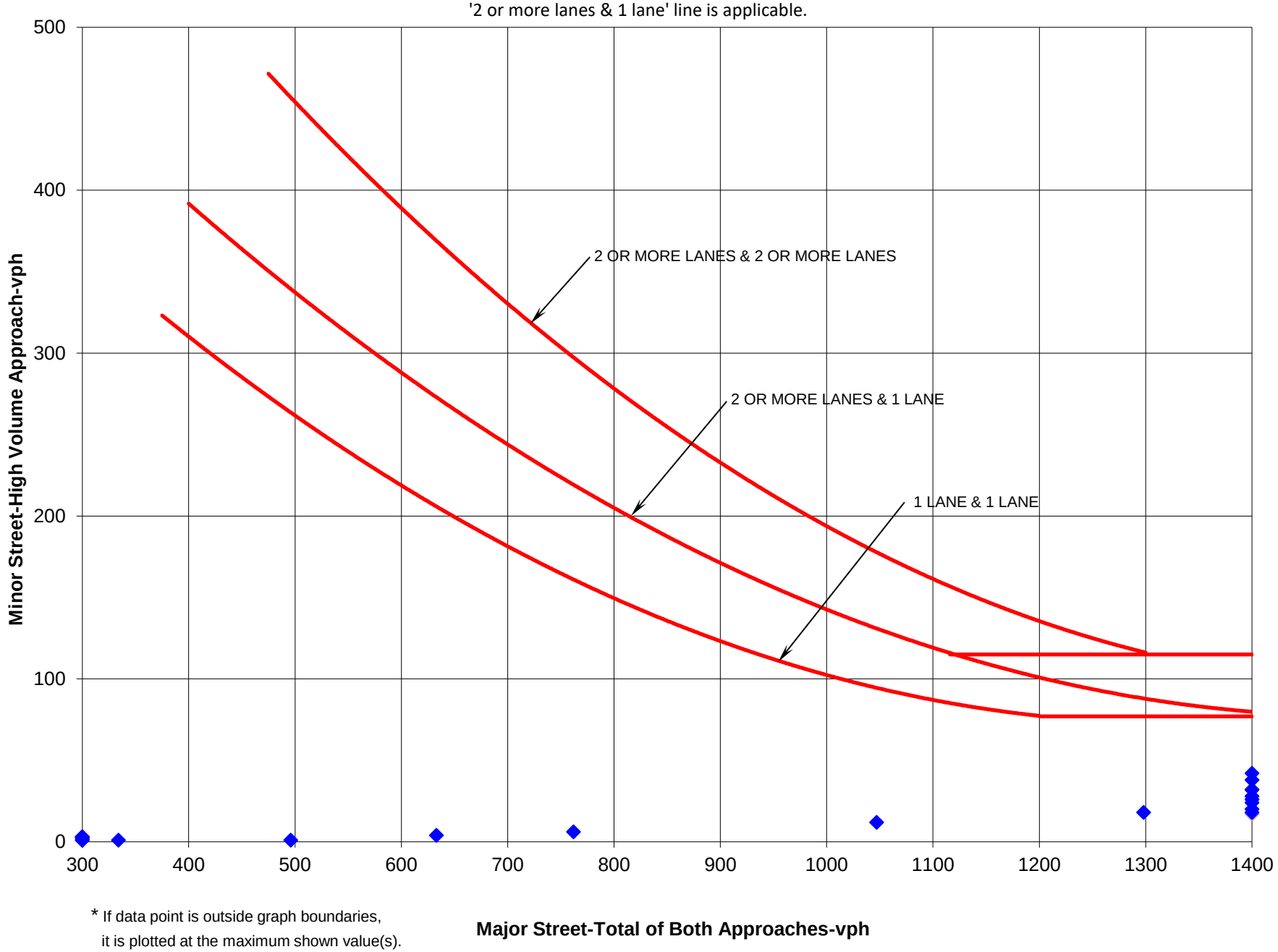
Major Street Lanes: 2
Minor Street Lanes: 1

Use Figure: 4C-1 2&1

Rank	Major Street Volume	Minor Street Volume	Figure 4C-1			Figure 4C-2		
			1&1	2&1	2&2	1&1	2&1	2&2
1	126	3	-	N	-	-	-	-
2	45	1	-	N	-	-	-	-
3	21	2	-	N	-	-	-	-
4	24	3	-	N	-	-	-	-
5	42	1	-	N	-	-	-	-
6	89	3	-	N	-	-	-	-
7	334	1	-	N	-	-	-	-
8	762	6	-	N	-	-	-	-
9	1402	17	-	N	-	-	-	-
10	1928	32	-	N	-	-	-	-
11	1738	24	-	N	-	-	-	-
12	1709	20	-	N	-	-	-	-
13	1773	18	-	N	-	-	-	-
14	1919	26	-	N	-	-	-	-
15	1876	26	-	N	-	-	-	-
16	2057	32	-	N	-	-	-	-
17	2196	28	-	N	-	-	-	-
18	1877	42	-	N	-	-	-	-
19	1700	38	-	N	-	-	-	-
20	1298	18	-	N	-	-	-	-
21	1047	12	-	N	-	-	-	-
22	633	4	-	N	-	-	-	-
23	496	1	-	N	-	-	-	-
24	288	3	-	N	-	-	-	-
			0	0	0	0	0	0
Warrant 2 is not satisfied.			N	N	N	N	N	N

Warrant 2

Figure 4C-1 Four Hour Volume Warrant



* If data point is outside graph boundaries, it is plotted at the maximum shown value(s).

General Description of Intersection

Project Number: 21166

2022 Without

Name of Major Roadway: SR 89A

Direction: E/W

# of EB Lanes: 2

# of WB Lanes: 2

85th percentile speed: 40 *mph*

Control #:

Section #:

Route #:

Name of Minor Roadway: Southwest Drive

Direction: N/S

# of NB Lanes: 0

# of SB Lanes: 1

85th percentile speed: 25 *mph*

Control #:

Section #:

Route #:

City: Sedona

Population: 10,300

County:

District:

Data Source: 24-hour approach

Date of Survey: 9/2/2021 *(press Ctrl + ;)*

Day of Week: Thursday

Weather: Sunny

Surface Conditions: Dry

Smooth

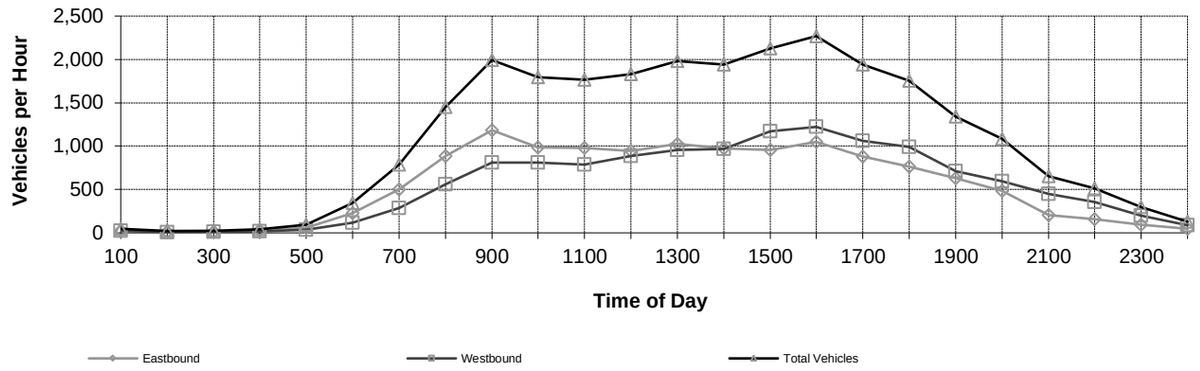
Enter Traffic Volumes:

Automated Traffic Counts

Street: **SR 89A**
Location: **Southwest Drive**

City/State: **Sedona, AZ**
Project #: **21166**
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **26,219**



Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	22		25	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	13		8	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	11		13	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	28		16	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	58		34	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	226		119	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	502		285	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	888		560	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	1183		808	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	987		809	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	980		785	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	945		887	

Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:15 PM				
12:30 PM				
12:45 PM				
1:00 PM	1025		957	
1:15 PM				
1:30 PM				
1:45 PM				
2:00 PM	972		966	
2:15 PM				
2:30 PM				
2:45 PM				
3:00 PM	956		1169	
3:15 PM				
3:30 PM				
3:45 PM				
4:00 PM	1047		1221	
4:15 PM				
4:30 PM				
4:45 PM				
5:00 PM	879		1060	
5:15 PM				
5:30 PM				
5:45 PM				
6:00 PM	763		993	
6:15 PM				
6:30 PM				
6:45 PM				
7:00 PM	629		712	
7:15 PM				
7:30 PM				
7:45 PM				
8:00 PM	485		597	
8:15 PM				
8:30 PM				
8:45 PM				
9:00 PM	202		452	
9:15 PM				
9:30 PM				
9:45 PM				
10:00 PM	155		357	
10:15 PM				
10:30 PM				
10:45 PM				
11:00 PM	96		201	
11:15 PM				
11:30 PM				
11:45 PM				
12:00 AM	44		86	
	13,097		13,121	
	24-Hour Volume		26,219	

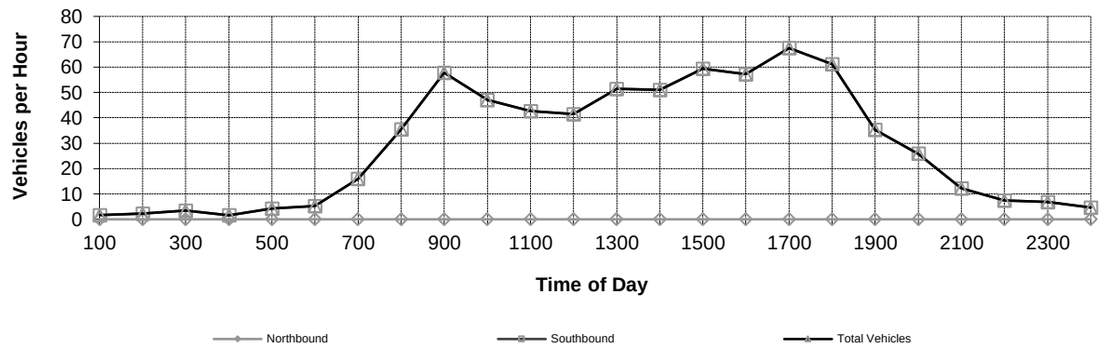
Equipment ID#:

Automated Traffic Counts

Street: **Southwest Drive**
Location: **SR 89A**

City/State: **Sedona, AZ**
Project #:
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **699**



Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	0		2	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	0		2	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	0		3	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	0		2	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	0		4	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	0		5	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	0		16	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	0		36	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	0		58	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	0		47	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	0		43	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	0		41	

Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:59 PM				
12:30 PM				
12:45 PM				
1:00 PM	0		52	
1:59 PM				
1:30 PM				
1:45 PM				
2:00 PM	0		51	
2:59 PM				
2:30 PM				
2:45 PM				
3:00 PM	0		60	
3:59 PM				
3:30 PM				
3:45 PM				
4:00 PM	0		57	
4:59 PM				
4:30 PM				
12:00 AM				
5:00 PM	0		68	
5:59 PM				
5:30 PM				
5:45 PM				
6:00 PM	0		61	
6:59 PM				
6:30 PM				
6:45 PM				
7:00 PM	0		35	
7:59 PM				
7:30 PM				
7:45 PM				
8:00 PM	0		26	
8:59 PM				
8:30 PM				
8:45 PM				
9:00 PM	0		12	
9:59 PM				
9:30 PM				
9:45 PM				
10:00 PM	0		7	
10:59 PM				
10:30 PM				
10:45 PM				
11:00 PM	0		7	
11:59 PM				
11:30 PM				
11:45 PM				
12:00 AM	0		5	
	0		699	
24-Hour Volume			699	

Equipment ID#:

TRAFFIC SURVEY - COUNT ANALYSIS

2009 MUTCD WARRANTS

2022 Without

County: _____ **District No.:** _____

City: Sedona **Population:** 10,300 **Survey Date:** 9/2/2021

	Route #	Name	Control	Section	85% Speed
Major		SR 89A		-	40
Minor		Southwest Drive		-	25

Warrant 1: Eight- Hour Volumes

Condition A

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural
1		1	500	350	150	105
2 or more		1	**600**	420	**150**	105
2 or more		2 or more	600	420	200	140
1		2 or more	500	350	200	140

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 1

Time		Volume		Criteria		
Begin	End	Major	Minor	Major >= 600	Minor >= 150	Both Meet
12:00 AM	1:00 AM	46.49151	1.6115077	N	N	N
1:00 AM	2:00 AM	21.71575	2.3357539	N	N	N
2:00 AM	3:00 AM	24.82719	3.4071893	N	N	N
3:00 AM	4:00 AM	43.39293	1.5729311	N	N	N
4:00 AM	5:00 AM	91.96302	4.2430154	N	N	N
5:00 AM	6:00 AM	344.9877	5.3277192	N	N	N
6:00 AM	7:00 AM	787.1156	15.995607	Y	N	N
7:00 AM	8:00 AM	1448.287	35.586727	Y	N	N
8:00 AM	9:00 AM	1991.763	57.843372	Y	N	N
9:00 AM	10:00 AM	1795.417	47.137317	Y	N	N
10:00 AM	11:00 AM	1765.413	42.632975	Y	N	N
11:00 AM	12:00 PM	1831.49	41.390224	Y	N	N
12:00 PM	1:00 PM	1982.39	51.530489	Y	N	N
1:00 PM	2:00 PM	1937.978	50.977558	Y	N	N
2:00 PM	3:00 PM	2125.002	59.502165	Y	N	N
3:00 PM	4:00 PM	2268.518	57.158112	Y	N	N
4:00 PM	5:00 PM	1939.216	67.516159	Y	N	N
5:00 PM	6:00 PM	1756.349	61.108704	Y	N	N
6:00 PM	7:00 PM	1340.882	35.282264	Y	N	N
7:00 PM	8:00 PM	1081.558	25.857536	Y	N	N
8:00 PM	9:00 PM	653.8511	12.271096	Y	N	N
9:00 PM	10:00 PM	512.3109	7.4108551	N	N	N
10:00 PM	11:00 PM	297.5019	6.8019292	N	N	N
11:00 PM	12:00 AM	130.1788	4.7187934	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition A is not satisfied

Warrant 1 not satisfied.

Warrant 1: Eight- Hour Volumes

Condition B

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural*
1		1	750	525	75	53
2 or more		1	**900**	630	**75**	53
2 or more		2 or more	900	630	100	70
1		2 or more	750	525	100	70

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 2

Time		Volume		Criteria Major	Minor	
Begin	End	Major	Minor	>= 900	>=75	Both Meet
12:00 AM	1:00 AM	46.49151	1.6115077	N	N	N
1:00 AM	2:00 AM	21.71575	2.3357539	N	N	N
2:00 AM	3:00 AM	24.82719	3.4071893	N	N	N
3:00 AM	4:00 AM	43.39293	1.5729311	N	N	N
4:00 AM	5:00 AM	91.96302	4.2430154	N	N	N
5:00 AM	6:00 AM	344.9877	5.3277192	N	N	N
6:00 AM	7:00 AM	787.1156	15.995607	N	N	N
7:00 AM	8:00 AM	1448.287	35.586727	Y	N	N
8:00 AM	9:00 AM	1991.763	57.843372	Y	N	N
9:00 AM	10:00 AM	1795.417	47.137317	Y	N	N
10:00 AM	11:00 AM	1765.413	42.632975	Y	N	N
11:00 AM	12:00 PM	1831.49	41.390224	Y	N	N
12:00 PM	1:00 PM	1982.39	51.530489	Y	N	N
1:00 PM	2:00 PM	1937.978	50.977558	Y	N	N
2:00 PM	3:00 PM	2125.002	59.502165	Y	N	N
3:00 PM	4:00 PM	2268.518	57.158112	Y	N	N
4:00 PM	5:00 PM	1939.216	67.516159	Y	N	N
5:00 PM	6:00 PM	1756.349	61.108704	Y	N	N
6:00 PM	7:00 PM	1340.882	35.282264	Y	N	N
7:00 PM	8:00 PM	1081.558	25.857536	Y	N	N
8:00 PM	9:00 PM	653.8511	12.271096	N	N	N
9:00 PM	10:00 PM	512.3109	7.4108551	N	N	N
10:00 PM	11:00 PM	297.5019	6.8019292	N	N	N
11:00 PM	12:00 AM	130.1788	4.7187934	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition B is not satisfied

Warrant 1 not satisfied.

Warrant 2: Four Hour Vehicular Volumes

This warrant is similar to Warrant 1A, except that the required traffic volumes must be present for at least four hours of an average day. The traffic volumes required are based on curves (Figure 4C-2) shown in the MUTCD.

*** The required traffic volumes for Warrant 2 do not meet for any one hour.**

Warrant 2 is not satisfied

Warrant 3, Condition A- Peak Hour Delay

This warrant is intended for application where traffic conditions will cause undue delay to traffic entering or crossing the major street. The peak hour delay warrant is satisfied when the following conditions exist for one hour (any four consecutive 15-minute periods) of an average weekday:

(1) The total delay by the traffic on a side street controlled by a stop sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach, **and**

(2) the volume on the side street (one direction) equals or exceeds 100 vph for one moving lane of traffic and 150 vph for two moving lanes, **and**

(3) the total traffic volume serviced during 1 hour equals or exceeds 800 vph for an intersection with four (or more) approaches or 650 vph for three approaches.

***Part 1 - N/A**
***Part 2 - N/A**
***Part 3 - N/A**

Warrant 3, Condition B - Peak Hour Volume

This warrant applies to traffic entering from the minor street which encounters undue delay crossing the main street. This wa is satisfied when the main street and side street traffic volumes satisfy the curves shown in Figure 4C-4 of the TMUTCD.

Warrant 3 is N/A.

Warrant 4: Pedestrian Volume

Required*	Existing
100 or more for each of any four hours	_____
OR	
190 or more during any one hour	_____

* For predominant pedestrian crossing speeds less than 3.5 ft/sec, the pedestrian volume may be reduced as much as 50 percent.

Gap Requirements

YES	NO	Is the nearest signal located more than 300 feet away?
YES	NO	For traffic flow which is not platooned, are there less than 60 gaps per hour of adequate length for the pedestrians to cross the street?

Warrant 4 is N/A.

Warrant 5: School Crossing

YES NO Is the number of adequate gaps in traffic stream during the period when the children are using the crossing less than the number of minutes in the same period?

Warrant 5 is N/A.

Warrant 6: Coordinate Systems

YES NO Are the adjacent signals in a signal system?
YES NO Would the resultant spacing be 1000 feet or more?

Warrant 6 is N/A.

Warrant 7: Crash Experience

YES NO Is 80% or more of one of Warrants #1, #2, or #3 met?
YES NO Have there been more than five accidents susceptible to correction by a traffic signal in 12 months?

Warrant 7 is N/A.

Warrant 8: Roadway Network

YES NO Does the major street having an existing or immediately projected entering volume of > 1000 vehicles per hour of a typical weekday?

YES NO Do 5-year projected traffic volumes meet Warrants 1, 2, or 3?

YES NO Is there an entering traffic volume of at least 1000 vehicles per hour for each of any 5 hours on a Saturday or Sunday?

Warrant 8 is N/A.

Summary:

Warrants satisfied: none

Warrants not satisfied: 1, 2

Warrants not applicable: 3, 4, 5, 6, 7, 8

Warrants not included in study: none

Warrant 2 - Four Hour Vehicular Volumes

85th % speed: <= 40 mph
Population: >= 10,000

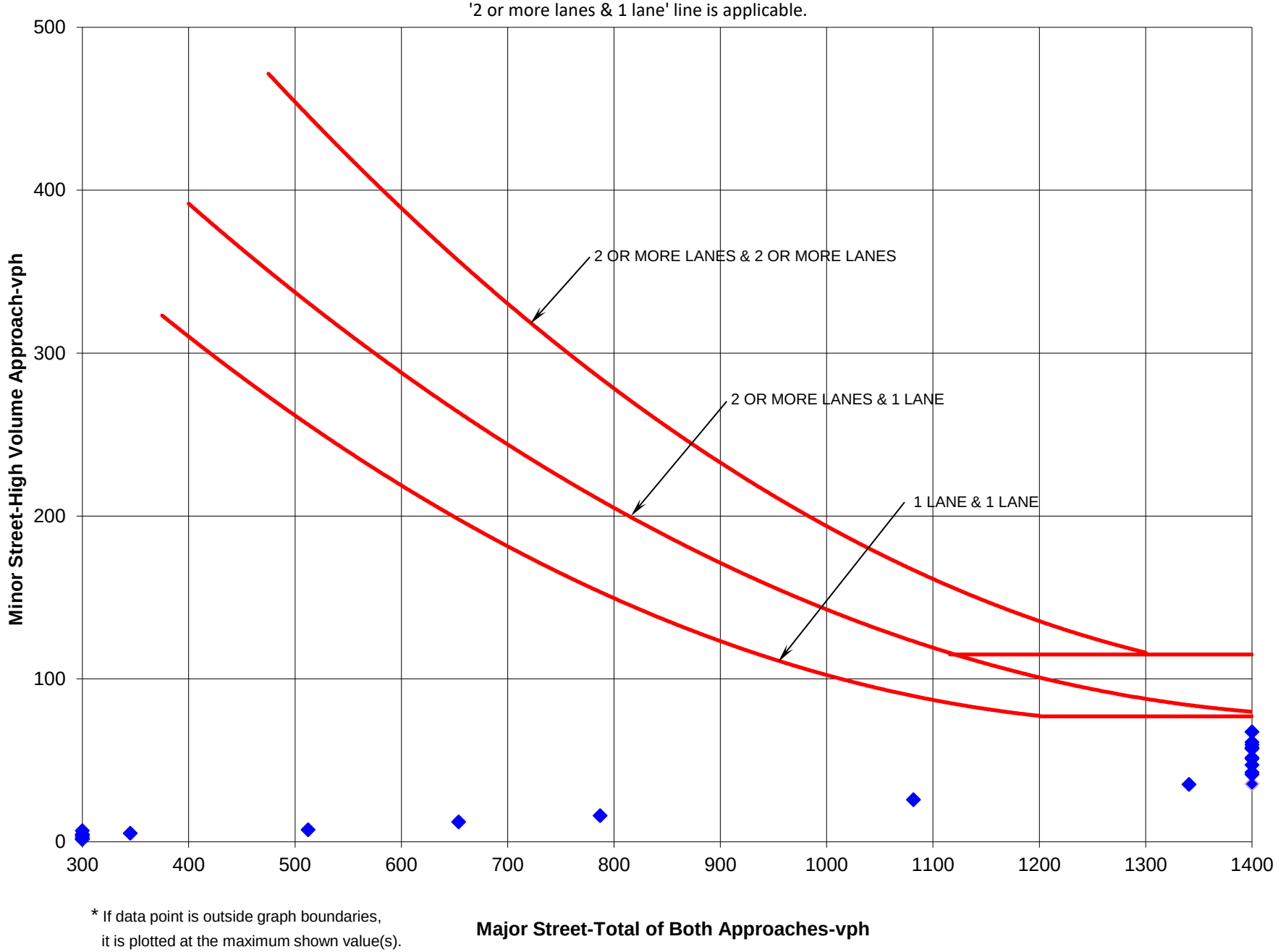
Major Street Lanes: 2
Minor Street Lanes: 1

Use Figure: 4C-1 2&1

Rank	Major Street Volume	Minor Street Volume	Figure 4C-1			Figure 4C-2		
			1&1	2&1	2&2	1&1	2&1	2&2
1	130.1787934	4.71879336	-	N	-	-	-	-
2	46.49150771	1.61150771	-	N	-	-	-	-
3	21.71575386	2.33575386	-	N	-	-	-	-
4	24.82718931	3.40718931	-	N	-	-	-	-
5	43.39293112	1.57293112	-	N	-	-	-	-
6	91.96301542	4.24301542	-	N	-	-	-	-
7	344.9877192	5.3277192	-	N	-	-	-	-
8	787.115607	15.995607	-	N	-	-	-	-
9	1448.286727	35.586727	-	N	-	-	-	-
10	1991.763372	57.8433721	-	N	-	-	-	-
11	1795.417317	47.1373171	-	N	-	-	-	-
12	1765.412975	42.6329746	-	N	-	-	-	-
13	1831.490224	41.3902242	-	N	-	-	-	-
14	1982.390489	51.5304891	-	N	-	-	-	-
15	1937.977558	50.977558	-	N	-	-	-	-
16	2125.002165	59.5021654	-	N	-	-	-	-
17	2268.518112	57.158112	-	N	-	-	-	-
18	1939.216159	67.5161587	-	N	-	-	-	-
19	1756.348704	61.1087044	-	N	-	-	-	-
20	1340.882264	35.2822641	-	N	-	-	-	-
21	1081.557536	25.8575362	-	N	-	-	-	-
22	653.8510959	12.2710959	-	N	-	-	-	-
23	512.3108551	7.41085506	-	N	-	-	-	-
24	297.5019292	6.80192922	-	N	-	-	-	-
			0	0	0	0	0	0
Warrant 2 is not satisfied.			N	N	N	N	N	N

Warrant 2

Figure 4C-1 Four Hour Volume Warrant



* If data point is outside graph boundaries, it is plotted at the maximum shown value(s).

General Description of Intersection

Project Number: 21166

2025 Without

Name of Major Roadway: SR 89A

Direction: E/W

# of EB Lanes: 2

# of WB Lanes: 2

85th percentile speed: 40 *mph*

Control #:

Section #:

Route #:

Name of Minor Roadway: Southwest Drive

Direction: N/S

# of NB Lanes: 0

# of SB Lanes: 1

85th percentile speed: 25 *mph*

Control #:

Section #:

Route #:

City: Sedona

Population: 10,300

County:

District:

Data Source: 24-hour approach

Date of Survey: 9/2/2021 *(press Ctrl + ;)*

Day of Week: Thursday

Weather: Sunny

Surface Conditions: Dry

Smooth

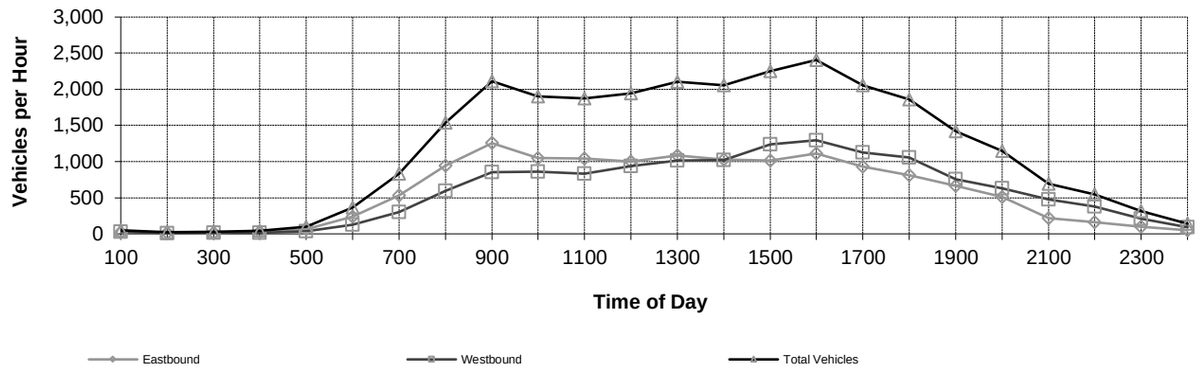
Enter Traffic Volumes:

Automated Traffic Counts

Street: **SR 89A**
Location: **Southwest Drive**

City/State: **Sedona, AZ**
Project #: **21166**
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **27,803**



Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	23		26	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	14		9	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	12		14	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	29		17	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	61		36	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	240		126	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	533		302	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	942		594	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	1255		857	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	1047		857	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	1040		832	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	1002		940	

Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:15 PM				
12:30 PM				
12:45 PM				
1:00 PM	1087		1015	
1:15 PM				
1:30 PM				
1:45 PM				
2:00 PM	1031		1024	
2:15 PM				
2:30 PM				
2:45 PM				
3:00 PM	1013		1240	
3:15 PM				
3:30 PM				
3:45 PM				
4:00 PM	1110		1295	
4:15 PM				
4:30 PM				
4:45 PM				
5:00 PM	933		1124	
5:15 PM				
5:30 PM				
5:45 PM				
6:00 PM	809		1053	
6:15 PM				
6:30 PM				
6:45 PM				
7:00 PM	667		755	
7:15 PM				
7:30 PM				
7:45 PM				
8:00 PM	514		633	
8:15 PM				
8:30 PM				
8:45 PM				
9:00 PM	214		479	
9:15 PM				
9:30 PM				
9:45 PM				
10:00 PM	165		379	
10:15 PM				
10:30 PM				
10:45 PM				
11:00 PM	102		213	
11:15 PM				
11:30 PM				
11:45 PM				
12:00 AM	47		91	
	13,891		13,912	
24-Hour Volume			27,803	

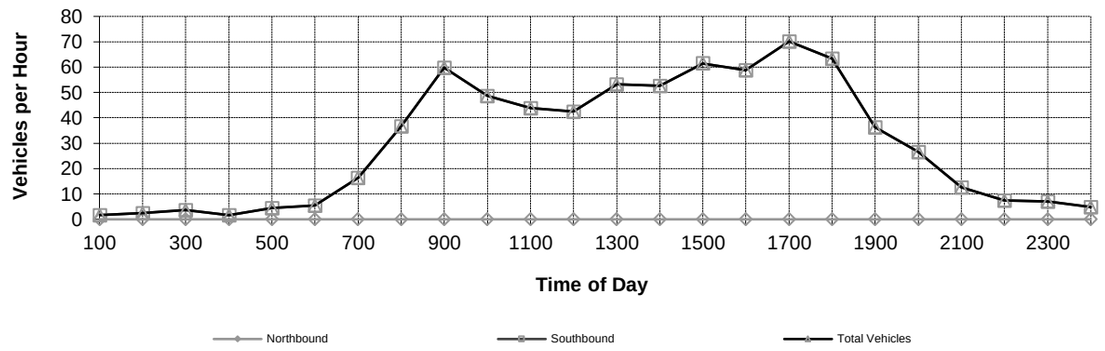
Equipment ID#:

Automated Traffic Counts

Street: **Southwest Drive**
Location: **SR 89A**

City/State: **Sedona, AZ**
Project #:
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **722**



Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	0		2	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	0		2	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	0		4	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	0		2	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	0		4	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	0		5	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	0		16	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	0		37	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	0		60	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	0		49	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	0		44	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	0		43	

Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:59 PM				
12:30 PM				
12:45 PM				
1:00 PM	0		53	
1:59 PM				
1:30 PM				
1:45 PM				
2:00 PM	0		53	
2:59 PM				
2:30 PM				
2:45 PM				
3:00 PM	0		61	
3:59 PM				
3:30 PM				
3:45 PM				
4:00 PM	0		59	
4:59 PM				
4:30 PM				
12:00 AM				
5:00 PM	0		70	
5:59 PM				
5:30 PM				
5:45 PM				
6:00 PM	0		63	
6:59 PM				
6:30 PM				
6:45 PM				
7:00 PM	0		36	
7:59 PM				
7:30 PM				
7:45 PM				
8:00 PM	0		27	
8:59 PM				
8:30 PM				
8:45 PM				
9:00 PM	0		13	
9:59 PM				
9:30 PM				
9:45 PM				
10:00 PM	0		7	
10:59 PM				
10:30 PM				
10:45 PM				
11:00 PM	0		7	
11:59 PM				
11:30 PM				
11:45 PM				
12:00 AM	0		5	
	0		722	
24-Hour Volume			722	

Equipment ID#:

TRAFFIC SURVEY - COUNT ANALYSIS

2009 MUTCD WARRANTS

2025 Without

County: _____ **District No.:** _____

City: Sedona **Population:** 10,300 **Survey Date:** 9/2/2021

	Route #	Name	Control	Section	85% Speed
Major		SR 89A		-	40
Minor		Southwest Drive		-	25

Warrant 1: Eight- Hour Volumes

Condition A

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural
1		1	500	350	150	105
2 or more		1	**600**	420	**150**	105
2 or more		2 or more	600	420	200	140
1		2 or more	500	350	200	140

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 1

Time		Volume		Criteria		
Begin	End	Major	Minor	Major >= 600	Minor >= 150	Both Meet
12:00 AM	1:00 AM	49.30095	1.6739399	N	N	N
1:00 AM	2:00 AM	23.02683	2.4606182	N	N	N
2:00 AM	3:00 AM	26.32556	3.5944858	N	N	N
3:00 AM	4:00 AM	46.01508	1.6353633	N	N	N
4:00 AM	5:00 AM	97.51948	4.4303119	N	N	N
5:00 AM	6:00 AM	365.8401	5.3901514	N	N	N
6:00 AM	7:00 AM	834.6889	16.3702	Y	N	N
7:00 AM	8:00 AM	1535.817	36.648074	Y	N	N
8:00 AM	9:00 AM	2112.133	59.841201	Y	N	N
9:00 AM	10:00 AM	1903.924	48.635689	Y	N	N
10:00 AM	11:00 AM	1872.11	43.881618	Y	N	N
11:00 AM	12:00 PM	1942.182	42.514003	Y	N	N
12:00 PM	1:00 PM	2102.198	53.153725	Y	N	N
1:00 PM	2:00 PM	2055.1	52.600794	Y	N	N
2:00 PM	3:00 PM	2253.425	61.499995	Y	N	N
3:00 PM	4:00 PM	2405.619	58.906212	Y	N	N
4:00 PM	5:00 PM	2056.401	70.138309	Y	N	N
5:00 PM	6:00 PM	1862.483	63.481126	Y	N	N
6:00 PM	7:00 PM	1421.919	36.406043	Y	N	N
7:00 PM	8:00 PM	1146.924	26.606722	Y	N	N
8:00 PM	9:00 PM	693.3707	12.520825	Y	N	N
9:00 PM	10:00 PM	543.2772	7.4732872	N	N	N
10:00 PM	11:00 PM	315.4824	6.9892257	N	N	N
11:00 PM	12:00 AM	138.0452	4.9060898	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition A is not satisfied

Warrant 1 not satisfied.

Warrant 1: Eight- Hour Volumes

Condition B

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural*
1		1	750	525	75	53
2 or more		1	**900**	630	**75**	53
2 or more		2 or more	900	630	100	70
1		2 or more	750	525	100	70

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 2

Time		Volume		Criteria		
				Major	Minor	
Begin	End	Major	Minor	>= 900	>=75	Both Meet
12:00 AM	1:00 AM	49.30095	1.6739399	N	N	N
1:00 AM	2:00 AM	23.02683	2.4606182	N	N	N
2:00 AM	3:00 AM	26.32556	3.5944858	N	N	N
3:00 AM	4:00 AM	46.01508	1.6353633	N	N	N
4:00 AM	5:00 AM	97.51948	4.4303119	N	N	N
5:00 AM	6:00 AM	365.8401	5.3901514	N	N	N
6:00 AM	7:00 AM	834.6889	16.3702	N	N	N
7:00 AM	8:00 AM	1535.817	36.648074	Y	N	N
8:00 AM	9:00 AM	2112.133	59.841201	Y	N	N
9:00 AM	10:00 AM	1903.924	48.635689	Y	N	N
10:00 AM	11:00 AM	1872.11	43.881618	Y	N	N
11:00 AM	12:00 PM	1942.182	42.514003	Y	N	N
12:00 PM	1:00 PM	2102.198	53.153725	Y	N	N
1:00 PM	2:00 PM	2055.1	52.600794	Y	N	N
2:00 PM	3:00 PM	2253.425	61.499995	Y	N	N
3:00 PM	4:00 PM	2405.619	58.906212	Y	N	N
4:00 PM	5:00 PM	2056.401	70.138309	Y	N	N
5:00 PM	6:00 PM	1862.483	63.481126	Y	N	N
6:00 PM	7:00 PM	1421.919	36.406043	Y	N	N
7:00 PM	8:00 PM	1146.924	26.606722	Y	N	N
8:00 PM	9:00 PM	693.3707	12.520825	N	N	N
9:00 PM	10:00 PM	543.2772	7.4732872	N	N	N
10:00 PM	11:00 PM	315.4824	6.9892257	N	N	N
11:00 PM	12:00 AM	138.0452	4.9060898	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition B is not satisfied

Warrant 1 not satisfied.

Warrant 2: Four Hour Vehicular Volumes

This warrant is similar to Warrant 1A, except that the required traffic volumes must be present for at least four hours of an average day. The traffic volumes required are based on curves (Figure 4C-2) shown in the MUTCD.

*** The required traffic volumes for Warrant 2 do not meet for any one hour.**

Warrant 2 is not satisfied

Warrant 3, Condition A- Peak Hour Delay

This warrant is intended for application where traffic conditions will cause undue delay to traffic entering or crossing the major street. The peak hour delay warrant is satisfied when the following conditions exist for one hour (any four consecutive 15-minute periods) of an average weekday:

(1) The total delay by the traffic on a side street controlled by a stop sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach, **and**

(2) the volume on the side street (one direction) equals or exceeds 100 vph for one moving lane of traffic and 150 vph for two moving lanes, **and**

(3) the total traffic volume serviced during 1 hour equals or exceeds 800 vph for an intersection with four (or more) approaches or 650 vph for three approaches.

***Part 1 - N/A**
***Part 2 - N/A**
***Part 3 - N/A**

Warrant 3, Condition B - Peak Hour Volume

This warrant applies to traffic entering from the minor street which encounters undue delay crossing the main street. This wa is satisfied when the main street and side street traffic volumes satisfy the curves shown in Figure 4C-4 of the TMUTCD.

Warrant 3 is N/A.

Warrant 4: Pedestrian Volume

Required*	Existing
100 or more for each of any four hours	_____
OR	
190 or more during any one hour	_____

* For predominant pedestrian crossing speeds less than 3.5 ft/sec, the pedestrian volume may be reduced as much as 50 percent.

Gap Requirements

YES	NO	Is the nearest signal located more than 300 feet away?
YES	NO	For traffic flow which is not platooned, are there less than 60 gaps per hour of adequate length for the pedestrians to cross the street?

Warrant 4 is N/A.

Warrant 5: School Crossing

YES NO Is the number of adequate gaps in traffic stream during the period when the children are using the crossing less than the number of minutes in the same period?

Warrant 5 is N/A.

Warrant 6: Coordinate Systems

YES NO Are the adjacent signals in a signal system?
YES NO Would the resultant spacing be 1000 feet or more?

Warrant 6 is N/A.

Warrant 7: Crash Experience

YES NO Is 80% or more of one of Warrants #1, #2, or #3 met?
YES NO Have there been more than five accidents susceptible to correction by a traffic signal in 12 months?

Warrant 7 is N/A.

Warrant 8: Roadway Network

YES NO Does the major street having an existing or immediately projected entering volume of > 1000 vehicles per hour of a typical weekday?

YES NO Do 5-year projected traffic volumes meet Warrants 1, 2, or 3?

YES NO Is there an entering traffic volume of at least 1000 vehicles per hour for each of any 5 hours on a Saturday or Sunday?

Warrant 8 is N/A.

Summary:

Warrants satisfied: none

Warrants not satisfied: 1, 2

Warrants not applicable: 3, 4, 5, 6, 7, 8

Warrants not included in study: none

Warrant 2 - Four Hour Vehicular Volumes

85th % speed: <= 40 mph
Population: >= 10,000

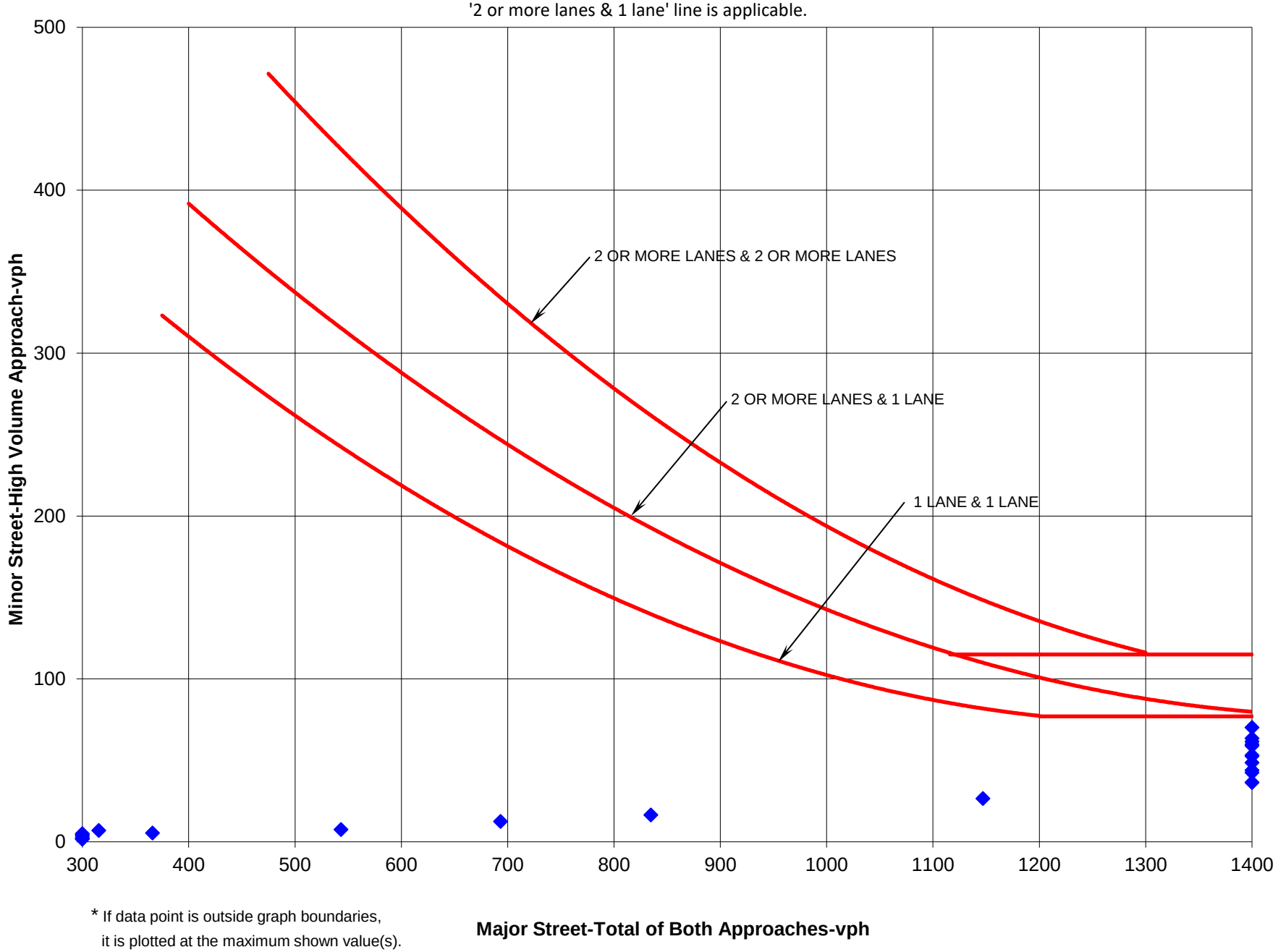
Major Street Lanes: 2
Minor Street Lanes: 1

Use Figure: 4C-1 2&1

Rank	Major Street Volume	Minor Street Volume	Figure 4C-1			Figure 4C-2		
			1&1	2&1	2&2	1&1	2&1	2&2
1	138.0452455	4.90608984	-	N	-	-	-	-
2	49.30095491	1.67393987	-	N	-	-	-	-
3	23.02682922	2.46061818	-	N	-	-	-	-
4	26.32556115	3.59448579	-	N	-	-	-	-
5	46.01508184	1.63536328	-	N	-	-	-	-
6	97.51947766	4.4303119	-	N	-	-	-	-
7	365.8400606	5.39015136	-	N	-	-	-	-
8	834.6889129	16.3702	-	N	-	-	-	-
9	1535.816615	36.6480737	-	N	-	-	-	-
10	2112.132577	59.8412012	-	N	-	-	-	-
11	1903.924411	48.635689	-	N	-	-	-	-
12	1872.109536	43.8816178	-	N	-	-	-	-
13	1942.182444	42.514003	-	N	-	-	-	-
14	2102.197804	53.1537253	-	N	-	-	-	-
15	2055.10029	52.6007941	-	N	-	-	-	-
16	2253.425119	61.4999945	-	N	-	-	-	-
17	2405.619135	58.9062124	-	N	-	-	-	-
18	2056.401323	70.1383094	-	N	-	-	-	-
19	1862.483376	63.4811265	-	N	-	-	-	-
20	1421.919208	36.406043	-	N	-	-	-	-
21	1146.924008	26.6067221	-	N	-	-	-	-
22	693.3706532	12.5208246	-	N	-	-	-	-
23	543.2772064	7.47328722	-	N	-	-	-	-
24	315.4823913	6.9892257	-	N	-	-	-	-
			0	0	0	0	0	0
Warrant 2 is not satisfied.			N	N	N	N	N	N

Warrant 2

Figure 4C-1 Four Hour Volume Warrant



* If data point is outside graph boundaries, it is plotted at the maximum shown value(s).

General Description of Intersection

Project Number: 21166

2022 With

Name of Major Roadway: SR 89A

Direction: E/W

# of EB Lanes: 2

# of WB Lanes: 2

85th percentile speed: 35 *mph*

Control #:

Section #:

Route #:

Name of Minor Roadway: Southwest Drive

Direction: N/S

# of NB Lanes: 0

# of SB Lanes: 2

85th percentile speed: 25 *mph*

Control #:

Section #:

Route #:

City: Sedona

Population: 10,300

County:

District:

Data Source: 24-hour approach

Date of Survey: 9/2/2021 *(press Ctrl + ;)*

Day of Week: Thursday

Weather: Sunny

Surface Conditions: Dry

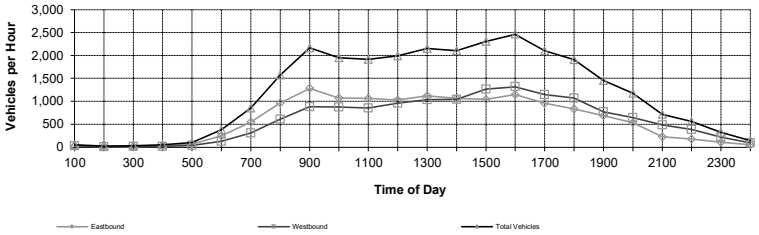
Smooth

Enter Traffic Volumes:

Automated Traffic Counts

Street: **SR 89A**
Location: **Southwest Drive**

City/State: **Sedona, AZ**
Project #: **21166**
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**



24-Hour Volume: **28,483**

Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	24		27	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	15		9	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	12		15	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	30		17	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	62		37	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	245		130	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	545		310	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	964		610	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	1285		879	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	1073		877	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	1066		852	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	1029		960	

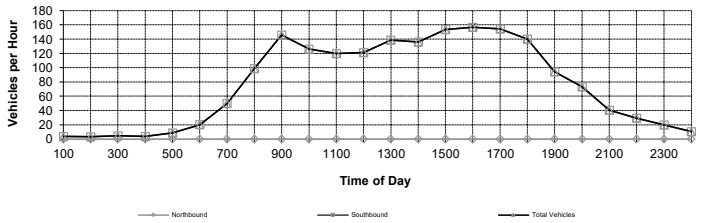
Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:15 PM				
12:30 PM				
12:45 PM				
1:00 PM	1117		1037	
1:15 PM				
1:30 PM				
1:45 PM				
2:00 PM	1060		1046	
2:15 PM				
2:30 PM				
2:45 PM				
3:00 PM	1045		1263	
3:15 PM				
3:30 PM				
3:45 PM				
4:00 PM	1144		1320	
4:15 PM				
4:30 PM				
4:45 PM				
5:00 PM	962		1145	
5:15 PM				
5:30 PM				
5:45 PM				
6:00 PM	836		1073	
6:15 PM				
6:30 PM				
6:45 PM				
7:00 PM	687		770	
7:15 PM				
7:30 PM				
7:45 PM				
8:00 PM	530		645	
8:15 PM				
8:30 PM				
8:45 PM				
9:00 PM	224		486	
9:15 PM				
9:30 PM				
9:45 PM				
10:00 PM	172		384	
10:15 PM				
10:30 PM				
10:45 PM				
11:00 PM	106		217	
11:15 PM				
11:30 PM				
11:45 PM				
12:00 AM	49		92	
	14,281		14,202	
	24-Hour Volume		28,483	

Equipment ID#:

Automated Traffic Counts

Street: **Southwest Drive**
Location: **SR 89A**

City/State: **Sedona, AZ**
Project #:
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**



24-Hour Volume: **1,852**

Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	0		4	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	0		3	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	0		5	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	0		4	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	0		8	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	0		20	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	0		50	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	0		99	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	0		146	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	0		126	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	0		120	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	0		121	

Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:59 PM				
12:30 PM				
12:45 PM				
1:00 PM	0		139	
1:59 PM				
1:30 PM				
1:45 PM				
2:00 PM	0		136	
2:59 PM				
2:30 PM				
2:45 PM				
3:00 PM	0		153	
3:59 PM				
3:30 PM				
3:45 PM				
4:00 PM	0		157	
4:59 PM				
4:30 PM				
12:00 AM				
5:00 PM	0		154	
5:59 PM				
5:30 PM				
5:45 PM				
6:00 PM	0		140	
6:59 PM				
6:30 PM				
6:45 PM				
7:00 PM	0		94	
7:59 PM				
7:30 PM				
7:45 PM				
8:00 PM	0		73	
8:59 PM				
8:30 PM				
8:45 PM				
9:00 PM	0		40	
9:59 PM				
9:30 PM				
9:45 PM				
10:00 PM	0		29	
10:59 PM				
10:30 PM				
10:45 PM				
11:00 PM	0		20	
11:59 PM				
11:30 PM				
11:45 PM				
12:00 AM	0		11	
	0		1,852	
	24-Hour Volume		1,852	

Equipment ID#:

TRAFFIC SURVEY - COUNT ANALYSIS

2009 MUTCD WARRANTS

2022 With

	County:				**District No.:**	
	City:	Sedona	**Population:**	10,300	**Survey Date:**	9/2/2021
	Route #	**Name**		**Control**	**Section**	**85% Speed**
Major		SR 89A			-	35
Minor		Southwest Drive			-	25

Warrant 1: Eight- Hour Volumes

Condition A

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural
1		1	500	350	150	105
2 or more		1	600	420	150	105
2 or more		2 or more	**600**	420	**200**	140
1		2 or more	500	350	200	140

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 1

Time		Volume		Criteria		
				Major	Minor	
Begin	End	Major	Minor	>= 600	>= 200	Both Meet
12:00 AM	1:00 AM	50.51614	3.6932864	N	N	N
1:00 AM	2:00 AM	23.63442	3.4702915	N	N	N
2:00 AM	3:00 AM	27.03882	4.7797544	N	N	N
3:00 AM	4:00 AM	47.15101	3.5230133	N	N	N
4:00 AM	5:00 AM	99.94984	8.469005	N	N	N
5:00 AM	6:00 AM	374.6898	20.096262	N	N	N
6:00 AM	7:00 AM	854.9772	50.084508	Y	N	N
7:00 AM	8:00 AM	1573.302	98.940525	Y	N	N
8:00 AM	9:00 AM	2163.91	145.88292	Y	N	N
9:00 AM	10:00 AM	1950.471	125.98544	Y	N	N
10:00 AM	11:00 AM	1917.785	119.78271	Y	N	N
11:00 AM	12:00 PM	1989.495	121.13682	Y	N	N
12:00 PM	1:00 PM	2153.579	138.53697	Y	N	N
1:00 PM	2:00 PM	2105.345	136.09638	Y	N	N
2:00 PM	3:00 PM	2308.61	153.20467	Y	N	N
3:00 PM	4:00 PM	2464.371	156.53723	Y	N	N
4:00 PM	5:00 PM	2107.096	154.38018	Y	N	N
5:00 PM	6:00 PM	1908.396	139.77731	Y	N	N
6:00 PM	7:00 PM	1456.684	94.176914	Y	N	N
7:00 PM	8:00 PM	1174.9	73.095592	Y	N	N
8:00 PM	9:00 PM	710.1983	40.484385	Y	N	N
9:00 PM	10:00 PM	556.4065	29.29101	N	N	N
10:00 PM	11:00 PM	323.1697	19.763788	N	N	N
11:00 PM	12:00 AM	141.453	10.56904	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition A is not satisfied

Warrant 1 satisfied.

Warrant 1: Eight- Hour Volumes

Condition B

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural*
1		1	750	525	75	53
2 or more		1	900	630	75	53
2 or more		2 or more	**900**	630	**100**	70
1		2 or more	750	525	100	70

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 2

Time		Volume		Criteria		
Begin	End	Major	Minor	Major >= 900	Minor >=100	Both Meet
12:00 AM	1:00 AM	50.51614	3.6932864	N	N	N
1:00 AM	2:00 AM	23.63442	3.4702915	N	N	N
2:00 AM	3:00 AM	27.03882	4.7797544	N	N	N
3:00 AM	4:00 AM	47.15101	3.5230133	N	N	N
4:00 AM	5:00 AM	99.94984	8.469005	N	N	N
5:00 AM	6:00 AM	374.6898	20.096262	N	N	N
6:00 AM	7:00 AM	854.9772	50.084508	N	N	N
7:00 AM	8:00 AM	1573.302	98.940525	Y	N	N
8:00 AM	9:00 AM	2163.91	145.88292	Y	Y	Y
9:00 AM	10:00 AM	1950.471	125.98544	Y	Y	Y
10:00 AM	11:00 AM	1917.785	119.78271	Y	Y	Y
11:00 AM	12:00 PM	1989.495	121.13682	Y	Y	Y
12:00 PM	1:00 PM	2153.579	138.53697	Y	Y	Y
1:00 PM	2:00 PM	2105.345	136.09638	Y	Y	Y
2:00 PM	3:00 PM	2308.61	153.20467	Y	Y	Y
3:00 PM	4:00 PM	2464.371	156.53723	Y	Y	Y
4:00 PM	5:00 PM	2107.096	154.38018	Y	Y	Y
5:00 PM	6:00 PM	1908.396	139.77731	Y	Y	Y
6:00 PM	7:00 PM	1456.684	94.176914	Y	N	N
7:00 PM	8:00 PM	1174.9	73.095592	Y	N	N
8:00 PM	9:00 PM	710.1983	40.484385	N	N	N
9:00 PM	10:00 PM	556.4065	29.29101	N	N	N
10:00 PM	11:00 PM	323.1697	19.763788	N	N	N
11:00 PM	12:00 AM	141.453	10.56904	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 10

Hours Required: 8

Condition B is satisfied

Warrant 1 satisfied.

Warrant 2: Four Hour Vehicular Volumes

This warrant is similar to Warrant 1A, except that the required traffic volumes must be present for at least four hours of an average day. The traffic volumes required are based on curves (Figure 4C-2) shown in the MUTCD.

*** The required traffic is present for at least four hours.**

Warrant 2 is satisfied

Warrant 3, Condition A- Peak Hour Delay

This warrant is intended for application where traffic conditions will cause undue delay to traffic entering or crossing the major street. The peak hour delay warrant is satisfied when the following conditions exist for one hour (any four consecutive 15-minute periods) of an average weekday:

(1) The total delay by the traffic on a side street controlled by a stop sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach, **and**

(2) the volume on the side street (one direction) equals or exceeds 100 vph for one moving lane of traffic and 150 vph for two moving lanes, **and**

(3) the total traffic volume serviced during 1 hour equals or exceeds 800 vph for an intersection with four (or more) approaches or 650 vph for three approaches.

***Part 1 - N/A**
***Part 2 - N/A**
***Part 3 - N/A**

Warrant 3, Condition B - Peak Hour Volume

This warrant applies to traffic entering from the minor street which encounters undue delay crossing the main street. This w is satisfied when the main street and side street traffic volumes satisfy the curves shown in Figure 4C-4 of the TMUTCD.

Warrant 3 is N/A.

Warrant 4: Pedestrian Volume

Required*	Existing
100 or more for each of any four hours	_____
OR	
190 or more during any one hour	_____

* For predominant pedestrian crossing speeds less than 3.5 ft/sec, the pedestrian volume may be reduced as much as 50 percent.

Gap Requirements

YES	NO	Is the nearest signal located more than 300 feet away?
YES	NO	For traffic flow which is not platooned, are there less than 60 gaps per hour of adequate length for the pedestrians to cross the street?

Warrant 4 is N/A.

Warrant 5: School Crossing

YES NO Is the number of adequate gaps in traffic stream during the period when the children are using the crossing less than the number of minutes in the same period?

Warrant 5 is N/A.

Warrant 6: Coordinate Systems

YES NO Are the adjacent signals in a signal system?
YES NO Would the resultant spacing be 1000 feet or more?

Warrant 6 is N/A.

Warrant 7: Crash Experience

YES NO Is 80% or more of one of Warrants #1, #2, or #3 met?
YES NO Have there been more than five accidents susceptible to correction by a traffic signal in 12 months?

Warrant 7 is N/A.

Warrant 8: Roadway Network

YES NO Does the major street having an existing or immediately projected entering volume of > 1000 vehicles per hour of a typical weekday?

YES NO Do 5-year projected traffic volumes meet Warrants 1, 2, or 3?

YES NO Is there an entering traffic volume of at least 1000 vehicles per hour for each of any 5 hours on a Saturday or Sunday?

Warrant 8 is N/A.

Summary:

Warrants satisfied: 1, 2

Warrants not satisfied: none

Warrants not applicable: 3, 4, 5, 6, 7, 8

Warrants not included in study: none

Warrant 2 - Four Hour Vehicular Volumes

85th % speed: <= 40 mph
Population: >= 10,000

Major Street Lanes: 2
Minor Street Lanes: 2

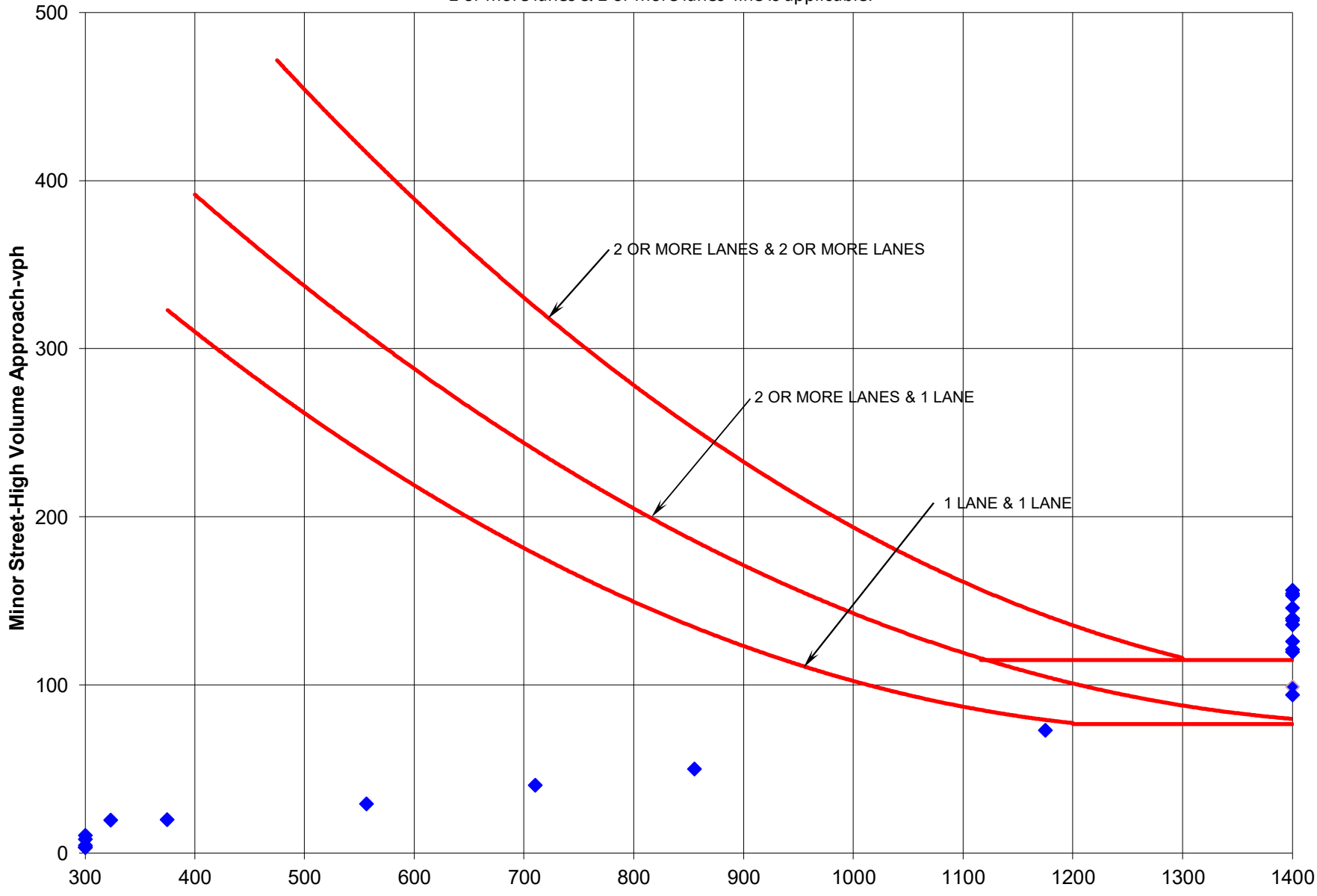
Use Figure: 4C-1 2&2

Rank	Major Street Volume	Minor Street Volume	Figure 4C-1			Figure 4C-2		
			1&1	2&1	2&2	1&1	2&1	2&2
1	141.4530385	10.56904	-	-	N	-	-	-
2	50.51613692	3.69328644	-	-	N	-	-	-
3	23.63442022	3.47029146	-	-	N	-	-	-
4	27.03882015	4.77975443	-	-	N	-	-	-
5	47.15101285	3.52301333	-	-	N	-	-	-
6	99.94984167	8.46900504	-	-	N	-	-	-
7	374.6897557	20.0962622	-	-	N	-	-	-
8	854.977169	50.0845079	-	-	N	-	-	-
9	1573.302338	98.9405255	-	-	N	-	-	-
10	2163.909897	145.882924	-	-	Y	-	-	-
11	1950.471165	125.985442	-	-	Y	-	-	-
12	1917.784529	119.782709	-	-	Y	-	-	-
13	1989.495291	121.136823	-	-	Y	-	-	-
14	2153.578869	138.536966	-	-	Y	-	-	-
15	2105.345424	136.096385	-	-	Y	-	-	-
16	2308.610232	153.204668	-	-	Y	-	-	-
17	2464.370544	156.537229	-	-	Y	-	-	-
18	2107.095546	154.38018	-	-	Y	-	-	-
19	1908.396123	139.777308	-	-	Y	-	-	-
20	1456.68398	94.1769143	-	-	N	-	-	-
21	1174.899611	73.095592	-	-	N	-	-	-
22	710.1982823	40.4843846	-	-	N	-	-	-
23	556.4064555	29.2910099	-	-	N	-	-	-
24	323.1697383	19.7637877	-	-	N	-	-	-
			0	0	10	0	0	0
Warrant 2 is satisfied.			N	N	Y	N	N	N

Warrant 2

Figure 4C-1 Four Hour Volume Warrant

'2 or more lanes & 2 or more lanes' line is applicable.



* If data point is outside graph boundaries, it is plotted at the maximum shown value(s).

General Description of Intersection

Project Number:	21166

2025 With

Name of Major Roadway:	SR 89A
Direction:	E/W
# of EB Lanes:	2
# of WB Lanes:	2
85th percentile speed:	40 *mph*
Control #:	
Section #:	
Route #:	

Name of Minor Roadway:	Southwest Drive
Direction:	N/S
# of NB Lanes:	0
# of SB Lanes:	2
85th percentile speed:	25 *mph*
Control #:	
Section #:	
Route #:	

City:	Sedona
Population:	10,300
County:	
District:	
Data Source:	24-hour approach
Date of Survey:	9/2/2021 *(press Ctrl + ;)*
Day of Week:	Thursday
Weather:	Sunny
Surface Conditions:	Dry
	Smooth

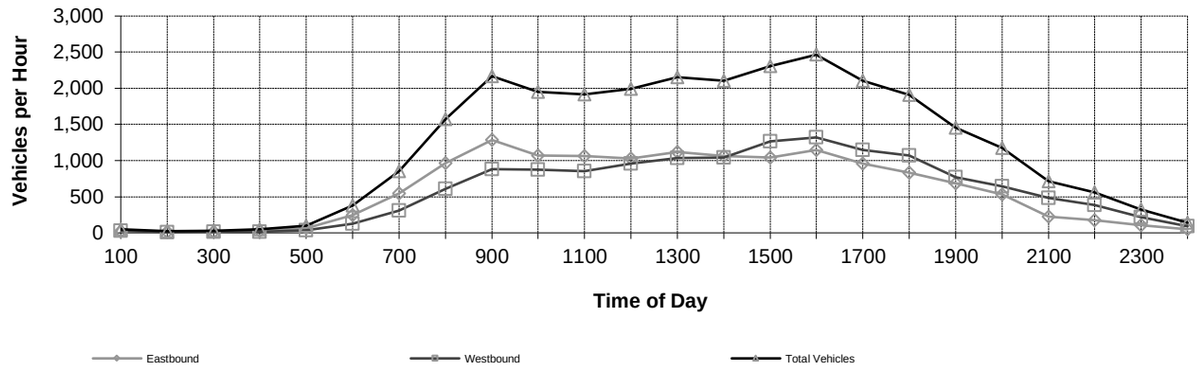
Enter Traffic Volumes:

Automated Traffic Counts

Street: **SR 89A**
Location: **Southwest Drive**

City/State: **Sedona, AZ**
Project #: **21166**
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **28,483**



Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	24		27	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	15		9	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	12		15	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	30		17	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	62		37	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	245		130	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	545		310	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	964		610	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	1285		879	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	1073		877	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	1066		852	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	1029		960	

Time	Eastbound		Westbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:15 PM				
12:30 PM				
12:45 PM				
1:00 PM	1117		1037	
1:15 PM				
1:30 PM				
1:45 PM				
2:00 PM	1060		1046	
2:15 PM				
2:30 PM				
2:45 PM				
3:00 PM	1045		1263	
3:15 PM				
3:30 PM				
3:45 PM				
4:00 PM	1144		1320	
4:15 PM				
4:30 PM				
4:45 PM				
5:00 PM	962		1145	
5:15 PM				
5:30 PM				
5:45 PM				
6:00 PM	836		1073	
6:15 PM				
6:30 PM				
6:45 PM				
7:00 PM	687		770	
7:15 PM				
7:30 PM				
7:45 PM				
8:00 PM	530		645	
8:15 PM				
8:30 PM				
8:45 PM				
9:00 PM	224		486	
9:15 PM				
9:30 PM				
9:45 PM				
10:00 PM	172		384	
10:15 PM				
10:30 PM				
10:45 PM				
11:00 PM	106		217	
11:15 PM				
11:30 PM				
11:45 PM				
12:00 AM	49		92	
	14,281		14,202	
			24-Hour Volume	28,483

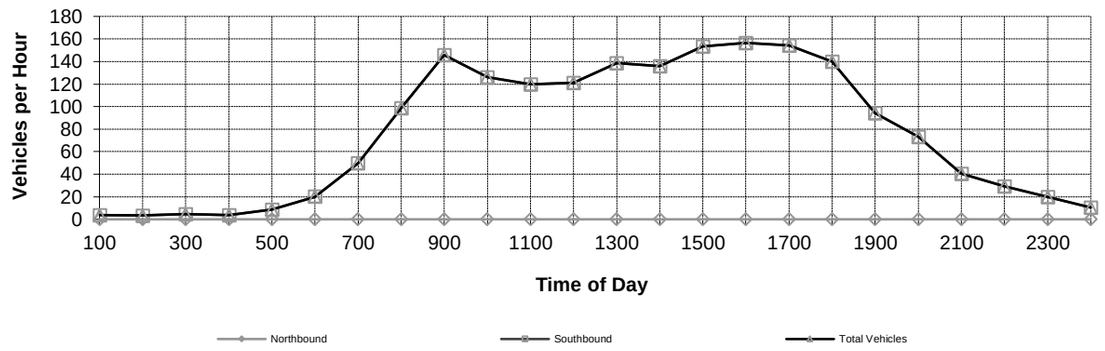
Equipment ID#:

Automated Traffic Counts

Street: **Southwest Drive**
Location: **SR 89A**

City/State: **Sedona, AZ**
Project #:
Date: **9/2/2021**
Day of Week: **Thursday**
Data Source: **24-hour approach**

24-Hour Volume: **1,852**



Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 AM				
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	0		4	
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	0		3	
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	0		5	
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	0		4	
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	0		8	
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	0		20	
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	0		50	
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	0		99	
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	0		146	
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	0		126	
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	0		120	
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	0		121	

Time	Northbound		Southbound	
	Vehicles	Peds	Vehicles	Peds
12:00 PM				
12:59 PM				
12:30 PM				
12:45 PM				
1:00 PM	0		139	
1:59 PM				
1:30 PM				
1:45 PM				
2:00 PM	0		136	
2:59 PM				
2:30 PM				
2:45 PM				
3:00 PM	0		153	
3:59 PM				
3:30 PM				
3:45 PM				
4:00 PM	0		157	
4:59 PM				
4:30 PM				
12:00 AM				
5:00 PM	0		154	
5:59 PM				
5:30 PM				
5:45 PM				
6:00 PM	0		140	
6:59 PM				
6:30 PM				
6:45 PM				
7:00 PM	0		94	
7:59 PM				
7:30 PM				
7:45 PM				
8:00 PM	0		73	
8:59 PM				
8:30 PM				
8:45 PM				
9:00 PM	0		40	
9:59 PM				
9:30 PM				
9:45 PM				
10:00 PM	0		29	
10:59 PM				
10:30 PM				
10:45 PM				
11:00 PM	0		20	
11:59 PM				
11:30 PM				
11:45 PM				
12:00 AM	0		11	
	0		1,852	
24-Hour Volume			1,852	

Equipment ID#:

TRAFFIC SURVEY - COUNT ANALYSIS

2009 MUTCD WARRANTS

2025 With

County: _____ **District No.:** _____

City: Sedona **Population:** 10,300 **Survey Date:** 9/2/2021

	Route #	Name	Control	Section	85% Speed
Major		SR 89A		-	40
Minor		Southwest Drive		-	25

Warrant 1: Eight- Hour Volumes

Condition A

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural
1		1	500	350	150	105
2 or more		1	600	420	150	105
2 or more		2 or more	**600**	420	**200**	140
1		2 or more	500	350	200	140

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 1

Time		Volume		Criteria		
Begin	End	Major	Minor	Major >= 600	Minor >= 200	Both Meet
12:00 AM	1:00 AM	50.51614	3.6932864	N	N	N
1:00 AM	2:00 AM	23.63442	3.4702915	N	N	N
2:00 AM	3:00 AM	27.03882	4.7797544	N	N	N
3:00 AM	4:00 AM	47.15101	3.5230133	N	N	N
4:00 AM	5:00 AM	99.94984	8.469005	N	N	N
5:00 AM	6:00 AM	374.6898	20.096262	N	N	N
6:00 AM	7:00 AM	854.9772	50.084508	Y	N	N
7:00 AM	8:00 AM	1573.302	98.940525	Y	N	N
8:00 AM	9:00 AM	2163.91	145.88292	Y	N	N
9:00 AM	10:00 AM	1950.471	125.98544	Y	N	N
10:00 AM	11:00 AM	1917.785	119.78271	Y	N	N
11:00 AM	12:00 PM	1989.495	121.13682	Y	N	N
12:00 PM	1:00 PM	2153.579	138.53697	Y	N	N
1:00 PM	2:00 PM	2105.345	136.09638	Y	N	N
2:00 PM	3:00 PM	2308.61	153.20467	Y	N	N
3:00 PM	4:00 PM	2464.371	156.53723	Y	N	N
4:00 PM	5:00 PM	2107.096	154.38018	Y	N	N
5:00 PM	6:00 PM	1908.396	139.77731	Y	N	N
6:00 PM	7:00 PM	1456.684	94.176914	Y	N	N
7:00 PM	8:00 PM	1174.9	73.095592	Y	N	N
8:00 PM	9:00 PM	710.1983	40.484385	Y	N	N
9:00 PM	10:00 PM	556.4065	29.29101	N	N	N
10:00 PM	11:00 PM	323.1697	19.763788	N	N	N
11:00 PM	12:00 AM	141.453	10.56904	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 0

Hours Required: 8

Condition A is not satisfied

Warrant 1 satisfied.

Warrant 1: Eight- Hour Volumes

Condition B

Number of Lanes			Major Street Both Approaches Required		Minor Street High Volume Approach Required	
Major	Street	Minor Street	Urban	Rural*	Urban	Rural*
1		1	750	525	75	53
2 or more		1	900	630	75	53
2 or more		2 or more	**900**	630	**100**	70
1		2 or more	750	525	100	70

*Criteria when the 85th percentile speed is greater than 40 mph or when the population is less than 10,000

Warrant 2

Time		Volume		Criteria Major	Minor	
Begin	End	Major	Minor	>= 900	>=100	Both Meet
12:00 AM	1:00 AM	50.51614	3.6932864	N	N	N
1:00 AM	2:00 AM	23.63442	3.4702915	N	N	N
2:00 AM	3:00 AM	27.03882	4.7797544	N	N	N
3:00 AM	4:00 AM	47.15101	3.5230133	N	N	N
4:00 AM	5:00 AM	99.94984	8.469005	N	N	N
5:00 AM	6:00 AM	374.6898	20.096262	N	N	N
6:00 AM	7:00 AM	854.9772	50.084508	N	N	N
7:00 AM	8:00 AM	1573.302	98.940525	Y	N	N
8:00 AM	9:00 AM	2163.91	145.88292	Y	Y	Y
9:00 AM	10:00 AM	1950.471	125.98544	Y	Y	Y
10:00 AM	11:00 AM	1917.785	119.78271	Y	Y	Y
11:00 AM	12:00 PM	1989.495	121.13682	Y	Y	Y
12:00 PM	1:00 PM	2153.579	138.53697	Y	Y	Y
1:00 PM	2:00 PM	2105.345	136.09638	Y	Y	Y
2:00 PM	3:00 PM	2308.61	153.20467	Y	Y	Y
3:00 PM	4:00 PM	2464.371	156.53723	Y	Y	Y
4:00 PM	5:00 PM	2107.096	154.38018	Y	Y	Y
5:00 PM	6:00 PM	1908.396	139.77731	Y	Y	Y
6:00 PM	7:00 PM	1456.684	94.176914	Y	N	N
7:00 PM	8:00 PM	1174.9	73.095592	Y	N	N
8:00 PM	9:00 PM	710.1983	40.484385	N	N	N
9:00 PM	10:00 PM	556.4065	29.29101	N	N	N
10:00 PM	11:00 PM	323.1697	19.763788	N	N	N
11:00 PM	12:00 AM	141.453	10.56904	N	N	N

Total number of hours, both the major(both approaches) and minor(high volume approach) met: 10

Hours Required: 8

Condition B is satisfied

Warrant 1 satisfied.

Warrant 2: Four Hour Vehicular Volumes

This warrant is similar to Warrant 1A, except that the required traffic volumes must be present for at least four hours of an average day. The traffic volumes required are based on curves (Figure 4C-2) shown in the MUTCD.

*** The required traffic is present for at least four hours.**

Warrant 2 is satisfied

Warrant 3, Condition A- Peak Hour Delay

This warrant is intended for application where traffic conditions will cause undue delay to traffic entering or crossing the major street. The peak hour delay warrant is satisfied when the following conditions exist for one hour (any four consecutive 15-minute periods) of an average weekday:

(1) The total delay by the traffic on a side street controlled by a stop sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach, **and**

(2) the volume on the side street (one direction) equals or exceeds 100 vph for one moving lane of traffic and 150 vph for two moving lanes, **and**

(3) the total traffic volume serviced during 1 hour equals or exceeds 800 vph for an intersection with four (or more) approaches or 650 vph for three approaches.

***Part 1 - N/A**
***Part 2 - N/A**
***Part 3 - N/A**

Warrant 3, Condition B - Peak Hour Volume

This warrant applies to traffic entering from the minor street which encounters undue delay crossing the main street. This wa is satisfied when the main street and side street traffic volumes satisfy the curves shown in Figure 4C-4 of the TMUTCD.

Warrant 3 is N/A.

Warrant 4: Pedestrian Volume

Required*	Existing
100 or more for each of any four hours	_____
OR	
190 or more during any one hour	_____

* For predominant pedestrian crossing speeds less than 3.5 ft/sec, the pedestrian volume may be reduced as much as 50 percent.

Gap Requirements

YES	NO	Is the nearest signal located more than 300 feet away?
YES	NO	For traffic flow which is not platooned, are there less than 60 gaps per hour of adequate length for the pedestrians to cross the street?

Warrant 4 is N/A.

Warrant 5: School Crossing

YES	NO	Is the number of adequate gaps in traffic stream during the period when the children are using the crossing less than the number of minutes in the same period?

Warrant 5 is N/A.

Warrant 6: Coordinate Systems

YES	NO	Are the adjacent signals in a signal system?
YES	NO	Would the resultant spacing be 1000 feet or more?

Warrant 6 is N/A.

Warrant 7: Crash Experience

YES	NO	Is 80% or more of one of Warrants #1, #2, or #3 met?
YES	NO	Have there been more than five accidents susceptible to correction by a traffic signal in 12 months?

Warrant 7 is N/A.

Warrant 8: Roadway Network

YES	NO	Does the major street having an existing or immediately projected entering volume of > 1000 vehicles per hour of a typical weekday?
YES	NO	Do 5-year projected traffic volumes meet Warrants 1, 2, or 3?
YES	NO	Is there an entering traffic volume of at least 1000 vehicles per hour for each of any 5 hours on a Saturday or Sunday?

Warrant 8 is N/A.

Summary:

Warrants satisfied: 1, 2

Warrants not satisfied: none

Warrants not applicable: 3, 4, 5, 6, 7, 8

Warrants not included in study: none

Warrant 2 - Four Hour Vehicular Volumes

85th % speed: <= 40 mph
Population: >= 10,000

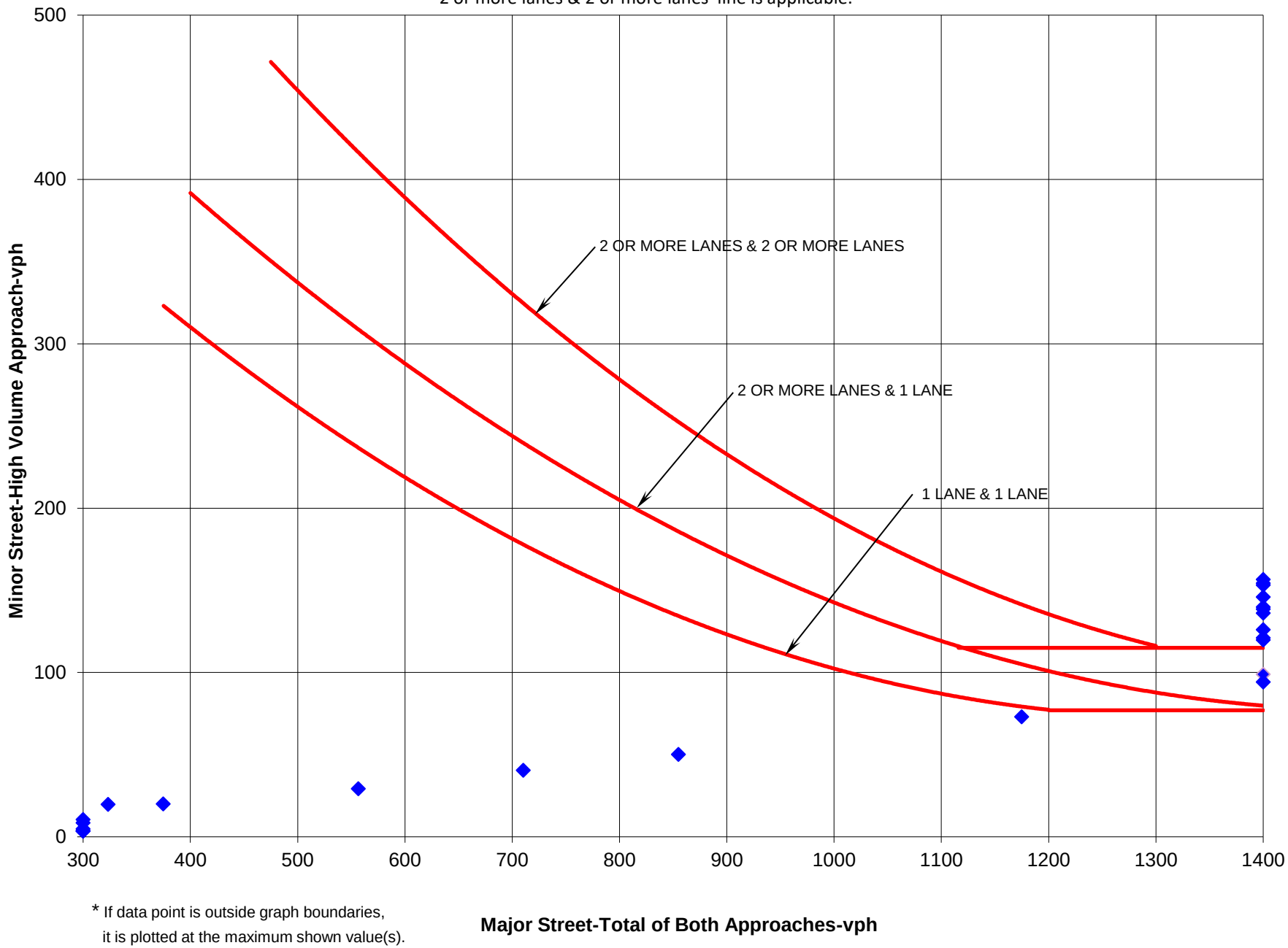
Major Street Lanes: 2
Minor Street Lanes: 2

Use Figure: 4C-1 2&2

Rank	Major Street Volume	Minor Street Volume	Figure 4C-1			Figure 4C-2		
			1&1	2&1	2&2	1&1	2&1	2&2
1	141.4530385	10.56904	-	-	N	-	-	-
2	50.51613692	3.69328644	-	-	N	-	-	-
3	23.63442022	3.47029146	-	-	N	-	-	-
4	27.03882015	4.77975443	-	-	N	-	-	-
5	47.15101285	3.52301333	-	-	N	-	-	-
6	99.94984167	8.46900504	-	-	N	-	-	-
7	374.6897557	20.0962622	-	-	N	-	-	-
8	854.977169	50.0845079	-	-	N	-	-	-
9	1573.302338	98.9405255	-	-	N	-	-	-
10	2163.909897	145.882924	-	-	Y	-	-	-
11	1950.471165	125.985442	-	-	Y	-	-	-
12	1917.784529	119.782709	-	-	Y	-	-	-
13	1989.495291	121.136823	-	-	Y	-	-	-
14	2153.578869	138.536966	-	-	Y	-	-	-
15	2105.345424	136.096385	-	-	Y	-	-	-
16	2308.610232	153.204668	-	-	Y	-	-	-
17	2464.370544	156.537229	-	-	Y	-	-	-
18	2107.095546	154.38018	-	-	Y	-	-	-
19	1908.396123	139.777308	-	-	Y	-	-	-
20	1456.68398	94.1769143	-	-	N	-	-	-
21	1174.899611	73.095592	-	-	N	-	-	-
22	710.1982823	40.4843846	-	-	N	-	-	-
23	556.4064555	29.2910099	-	-	N	-	-	-
24	323.1697383	19.7637877	-	-	N	-	-	-
			0	0	10	0	0	0
Warrant 2 is satisfied.			N	N	Y	N	N	N

Warrant 2

Figure 4C-1 Four Hour Volume Warrant



* If data point is outside graph boundaries, it is plotted at the maximum shown value(s).

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

Crash Data

Southwest Circle K TIA
2016-2020 Crash Summary

IncidentID	IncidentDate	CollisionManner	TotalInjuries	TotalFatalities	Onroad	CrossingFeature
3727397	11/20/2020	3	0	0	SR-89A	Tortilla Dr
3608757	10/11/2019	4	0	0	SR-89A	Tortilla Dr
3525388	4/25/2019	6	0	0	Tortilla Dr	SR-89A
3457437	11/6/2018	2	0	0	SR-89A	Tortilla Dr
3234849	5/16/2017	4	0	0	SR-89A	Tortilla Dr
3058684	2/15/2016	3	0	0	SR-89A	Tortilla Dr
3506508	3/19/2019	6	0	0	SR-89A	Southwest Dr
3566494	8/22/2019	4	0	0	SR-89A	Southwest Dr
3608755	10/7/2019	3	0	0	SR-89A	Southwest Dr
3405734	6/9/2018	6	0	0	SR-89A	Tortilla Dr
3379115	5/11/2018	2	2	0	SR-89A	Southwest Dr
3379117	5/8/2018	2	1	0	SR-89A	Southwest Dr
3204850	2/24/2017	1	0	0	SR-89A	Southwest Dr
3234851	4/28/2017	4	1	0	SR-89A	Southwest Dr
3187800	11/26/2016	3	2	0	SR-89A	Southwest Dr
3426852	9/24/2018	4	0	0	SR-89A	Tortilla Dr

LEGEND

Collision Manner

1 - Single Vehicle
2 - Angle
3 - Left Turn
4 - Rear End
5 - Head On
6 - Sideswipe Same Direction
7 - Sideswipe Opposite Direction
8 - Rear to Side
9 - Rear to Rear
10 - U Turn
97 - Other
99 - Unknown

SOUTHWEST CIRCLE K
SOUTHWEST DRIVE/STATE ROUTE 89A (SR 89A)
TRAFFIC IMPACT ANALYSIS

APPENDIX

Comment Resolution

Southwest Circle K
TIA Dated 1 November 2021
Comment Resolution

7/31/2023

Item No.	Page No.	Reviewer	Code	Comment	Response
				Sedona	
1	General	Sedona	A	Provide ADOT comments for the Traffic Impact Analysis.	Report has been submitted to ADOT. See below.
2	General	Sedona	A	The current edition of the ITE Trip Generation is the 11th Edition (September 2021). Please update the analysis to that edition.	See revised report.
3	General	Sedona	A	Show circulation & wheel paths for the fuel tank truck.	See revised site plan.
4	General	Sedona	D	Please clarify what adequate LOS and inadequate delay are. City of Sedona (LOS D – City Streets, ADOT roadways and intersections – LOS C).	Per ADOT standards, and meeting with ADOT and Sedona on 21 June 2023, Sedona is considered an urban area and LOS D is acceptable.
5	General	Sedona	D	Mitigation measures should be identified for any movement, driveway, or intersection that does not meet the agency driven LOS criteria.	See Mitigation section of the report.
6	General	Sedona	A	In the study methodology, note that the 2025 conditions have the growth factor and the traffic from the Navajo Lofts added as the 2025 "without" project analysis.(similar to what is noted on page 19).	See revised report.
7	General	Sedona	A	Update Tables 4, 5, 6, 7 and 8, and related text, based on the trip generation update and LOS criteria.	See revised report.
8	General	Sedona	D	Since the warrant analysis is for intersections on State Route 89A, ADOT TGP 611 should be used to prepare the warrant evaluation.	The portion of the traffic signal warrant analysis outlined in the TIA, along with supporting crash data and capacity analysis in the other sections of the TIA, have been deemed appropriate for the traffic signal warrant analysis by both ADOT and Sedona.
9	General	Sedona	D	Crash Analysis: There are two key patterns (angle/left turn crashes and rear end/sideswipe crashes) that are apparent for Tortilla and SR 89A and Southwest and SR 89A. Both of these patterns represent a significant number of crashes at the two locations and are associated with the majority of the injury crashes. These types of crash patterns are typically experienced in areas of high congestion and limited right turn lanes and should be discussed in the report.	Six observed crashes within a five year study period, along a high traffic volume roadway, is not discernible pattern.

A - Will Comply
B - Consultant to Evaluate
C - Sedona/ADOT to Evaluate
D - See Response

Southwest Circle K
TIA Dated 1 November 2021
Comment Resolution

7/31/2023

Item No.	Page No.	Reviewer	Code	Comment	Response
10	General	Sedona	D	Mitigation (starting on Page 35) i) Please remove commentary that notes that the poor LOS experienced along SR 89A driveways is not significant – not enough gaps is a factor, not a mitigation measure. Please provide feasible mitigation measures to improve the operation of these driveways and intersections to mitigate the project's impacts. ii) The report notes that the installation of a traffic signal at the Southwest Drive SR 89A intersection will mitigate the poor intersection operation but does not note it as a mitigating measure due to the project specific impact as shown in Tables 7, 8 and 17. ii. No mitigation is recommended to address the poor intersection operation at Tortilla and SR 89A. iii.Specific mitigation measures for the unacceptable LOS delay driveways and intersections along SR 89A are not provided. iv. Please provide a detailed sketch to scale showing how the right turn lanes that are warranted along westbound SR 89A at Southwest and at the eastern site driveway could be constructed given the dimensions noted in the report. v. For the proposed traffic signal at Southwest and SR 89A, please provide how a traffic signal could be installed considering the location of the driveways on the southside of SR 89A. vi. The report notes that the installation of a traffic signal at the Southwest Drive SR 89A intersection will mitigate the poor intersection operation but does not note it as a mitigating measure due to the project specific impact (Tables 7, 8 and 17). The conclusion should note that since the warrants for signalization combined with the poor intersection LOS, that the project should contribute to the signalization and require construction before the project is constructed. vii. Please remove commentary that notes that the poor LOS experienced along SR 89A driveways is not significant – not enough gaps is a factor, generic statement that with roadways like 89A, that poor LOS is to be expected are not mitigation measures. Please provide feasible mitigation measures to improve the operation of these driveways and intersections to mitigate the project's impacts.	i) Text does not say 'insignificant'. Poor levels of service can only be mitigated by closure of driveways or installation of multiple traffic signals, both unrealistic. Further mitigation measures are limited. ii) ADOT's priority is to maintain traffic flow on SR 89a. Traffic signals impede such flow. Furthermore the intersection operates inadequately without the project. In addition, there has been discussion with ADOT that the intersection of Tortilla Drive/SR 89a would be signalized in the future making signal spacing inadequate with Southwest Drive. Knowing these issues, a traffic signal was not recommended at Southwest Drive/SR 89a. ii. See response to ii) above and Mitigation section of the report. iii. See response to i) above and Mitigation section of the report. iv. Per meeting with ADOT and Sedona on 21 June 2023, a westbound right turn lane is not required at East Access. See revised site plan and report. v. A traffic signal is not proposed. See response to ii) above. vi. A traffic signal is not proposed. See response to ii) above. vii. See response to i) above.
11	37	Sedona	A	On the fourth paragraph from the bottom of page 37, please clarify that the Navajo Lofts traffic is included in the base 2022 and 2025 traffic conditions. The current text is not clear.	Traffic signal warrants at Southwest Drive/SR 89a are expected to be met with both the Navajo Lots and Circle K project. See revised report.
12	General	Sedona	A	Update Figure 14 with the proposed lane configurations (right turn lanes not shown) and any mitigated lane geometry/signalization is not shown. There are two location 7's on the figure.	See revised report.
				ADOT	
13	General	Ryan Wolff	A	The TIA states right turn lanes are warranted at intersections 3 and 6 and should be installed but then they are not proposed in figure 14 (also intersection 6 is mislabeled as intersection 7 in this figure) or shown on the site plan.	See revised report.
14	General	Ryan Wolff	D	Has there been discussion on extending Cantabile St to Southwest Dr to separate the apartments and gas station and allow cross access? This would also provide better connectivity if Southwest were to be signalized in the future.	There is not currently a plan to extend Cantabile Street to Southwest Drive.
15	General	Ryan Wolff	A	A dedicated left turn lane out of Southwest is warranted and should be installed with this project.	See revised report.
16	General	Chuck King	D	We require a completed application at the time of the submission for tracking purposes and to provide contact information for the encroachment owner and the civil engineer.	Noted.

A - Will Comply
B - Consultant to Evaluate
C - Sedona/ADOT to Evaluate
D - See Response

Mail:
102 Roadrunner Dr.
Sedona, AZ 86336
Site:
7500 W. SR 89A
Sedona, AZ 86336
(928) 204-2234
sedonaaz.gov
FAX (928) 204-7137

Wastewater Department

February 18, 2021

Robin Nash
Helix Engineering, LLC
3240 E. Union Hills Dr., Suite #113
Phoenix, AZ 85050

SUBJECT: WILL SERVE SEWER – 2820 W. SR89A
APN 408-24-536C

This letter is in response to your request regarding sewer service availability for the property referenced above.

The parcel has sewer availability, due to sewer being available adjacent to the point of access to the property, as defined in City Code section 13.15. Currently, the parcel is being billed the sewer standby fee. However, depending on the scope and impact of the development proposal, adequate capacity may not be available. Available sewer capacity is on a first come-first served basis, and there are no guarantees of sewer capacity for this property until a development proposal is approved.

In conclusion, sewer service is available on this property and, if adequate capacity is available at the time of development approval, sewer will be served by the city of Sedona. If you have any questions or concerns, please contact me at (928) 203-5069.

Sincerely,

Roxanne Holland, PE
Director of Wastewater

RH:ms
cc: J. Andy Dickey, Director of Public Works/City Engineer (e-copy)
James Crowley, Associate Engineer (e-copy)
Hanako Ueda, Assistant Engineer (e-copy)
Sal Valenzuela, Chief Public Works Inspector (e-copy)
Marsha Beckwith, Accounting Technician (e-copy)
Streets file: SR89A