Traffic Impact Study

for the proposed

Evans Street Apartments

Village of Williamsville,
Erie County, New York

July 2019

Project No. 39041

Prepared For:

People Inc.
1219 North Forest
Williamsville, NY 14221
Attn: Jocelyn S. Bos

Prepared By:

SRF ASSOCIATES
www.srfa.net
Transportation Planning / Engineering / Design

3495 Winton Place
Building E, Suite 110
Rochester, New York 14623

TABLE OF CONTENTS

LIST OF TABLES ii
LIST OF FIGURES ii
LIST OF APPENDICES ii
LIST OF REFERENCES ii
EXECUTIVE SUMMARY iii

I. INTRODUCTION 1
II. LOCATION 1
III. EXISTING HIGHWAY SYSTEM 1
IV. EXISTING TRAFFIC CONDITIONS 2
V. FUTURE AREA DEVELOPMENT AND LOCAL GROWTH 2
VI. PROPOSED DEVELOPMENT 3
VII. FULL DEVELOPMENT VOLUMES 4
VIII. CAPACITY ANALYSIS 4
IX. CONCLUSIONS & RECOMMENDATIONS 6
X. FIGURES 7

LIST OF TABLES

TABLE I EXISTING HIGHWAY SYSTEM 1
TABLE II PROJECTED TRIP GENERATION 3
TABLE III CAPACITY ANALYSIS RESULTS 5

LIST OF FIGURES

FIGURE 1 SITE LOCATION & STUDY AREA
FIGURE 2 LANE GEOMETRY & AVERAGE DAILY TRAFFIC
FIGURE 3 PEAK HOUR VOLUMES – 2019 EXISTING CONDITIONS
FIGURE 4 PEAK HOUR VOLUMES – 2020 BACKGROUND CONDITIONS
FIGURE 5 CONCEPT SITE PLAN
FIGURE 6 TRIP DISTRIBUTION
FIGURE 7 SITE GENERATED TRIPS
FIGURE 8 PEAK HOUR VOLUMES – FULL DEVELOPMENT CONDITIONS

LIST OF APPENDICES

A1. COLLECTED TRAFFIC VOLUME DATA
A2. MISCELLANEOUS TRAFFIC DATA AND CALCULATIONS
A3. LOS CRITERIA/DEFINITIONS
A4. LEVEL OF SERVICE CALCULATIONS – EXISTING CONDITIONS
A5. LEVEL OF SERVICE CALCULATIONS – BACKGROUND CONDITIONS
A6. LEVEL OF SERVICE CALCULATIONS – FULL DEVELOPMENT CONDITIONS

LIST OF REFERENCES

1. HCM 2010 Highway Capacity Manual. Transportation Research Board. The National Academies, Washington, DC: 2010.
2. Trip Generation, 10th Edition. Institute of Transportation Engineers. Washington, DC. 2017.
3. New York State Department of Transportation Traffic Data Viewer. 2019. Retrieved from https://www.dot.ny.gov/tdv.

EXECUTIVE SUMMARY

OVERVIEW

The purpose of this report is to identify and evaluate the potential traffic impacts associated with the proposed Evans Street Apartments to be located at 135 Evans Street in the Village of Williamsville, Erie County, New York. The operating characteristics of the proposed access points and impacts to the adjacent roadway network are identified and mitigating measures, if any, are provided to minimize capacity or safety concerns.

To define traffic impact, the analysis establishes existing traffic conditions, projects background traffic flow including area growth and/or additional traffic resulting from new developments in the area and determines the traffic operations that would result from the development of the proposed project.

The proposed development is located within the parcel at 135 Evans Street currently occupied by Blocher Homes, an assisted living facility. The parcel is located between the Essjay Road/Evans Street intersection and the intersection of Eagle Street/Evans Street. The study area consists of the following intersections:

- Evans Street/Essjay Road (signalized)
- Essjay Road/Village Point Lane (unsignalized)
- Evans Street/Eagle Street (four-way stop)
- Evans Street/Existing Northern Driveway (unsignalized)
- Evans Street/Existing Southern Driveway (unsignalized)

The proposed project includes 87 apartments; 72 one bedroom and 15 two bedrooms. The project will be constructed over an approximately 15-month period. Access to the proposed project will be provided by the existing Blocher Homes northern driveway along Evans Street and one proposed driveway onto Village Point Lane, which is a Town of Amherst roadway. It should be noted that the proposed project will remove the existing Blocher Homes southern driveway onto Evans Street as well as residential driveway for an existing home to be demolished on the project site.

The Village of Williamsville and Town of Amherst officials were contacted to discuss projects within the study area that are under construction and/or approved. One project was identified: a 12,000 sq. ft. office addition to the YMCA building on Tech Drive. The YMCA location is not in the immediate vicinity of the project site. To account for any additional traffic related to the YMCA addition, as well any unanticipated background growth in the area aside from this specific development, a 0.5% per year growth rate for the respective build out period based upon a review of the historical traffic in the project area by the NYSDOT.

CONCLUSIONS & RECOMMENDATIONS

This study evaluates the potential traffic impacts resulting from the proposed 135 Evans Street Apartment development in Williamsville, NY. Based upon the analyses, the results indicate that the proposed project will not have any potentially significant traffic impacts on the existing roadway network. The following sets forth conclusions and recommendations based upon the results of the analyses:

1. The traffic analysis conducted by our company supports our professional opinion that the proposed project will not result in any potentially significant adverse traffic impacts. The traffic analysis contained in this report provides the Village of Williamsville's

municipal boards and committees and other governmental agencies including the Erie County Department of Public Works with detailed information to enable an assessment of the potential traffic impacts of the proposed project pursuant to the State Environmental Quality Review Act ("SEQRA").

2. The proposed projected is expected to generate approximately 10 entering/32 exiting vehicle trips during the AM peak hour and 33 entering/19 exiting vehicle trips during the PM peak hour under the proposed development conditions.

3. The existing north site driveway is expected to operate at LOS "D" during the AM peak hour and LOS "E" during the PM peak hour. Due to the heavy volumes of existing traffic along Evans Street during both the AM and PM peaks, vehicles exiting the site through the north driveway are expected to experience longer delays. However, if a resident observes a queue at the north driveway along Evans Street, they have the option to use the rear driveway connection along Village Point Lane which leads to the Evans Street/Essjay Road signalized intersection.

   Traffic simulations were performed using an extension of SYNCHRO intersection analysis software called SimTraffic. SimTraffic is a dynamic simulation model that takes into account the traffic flow and gap conditions at intersections and can more accurately reflect actual operating conditions. A close inspection of traffic conditions during the AM and PM peak hours reveal that a maximum queue of two to three vehicles are expected to build up at the existing north driveway along Evans Street, which is acceptable. No mitigation is warranted or recommended at this intersection.

4. The proposed driveway along Village Point Lane is expected to operate at a highly acceptable LOS "A" during both the AM and PM peak hours. The proposed driveway will have one entering and one exiting lane and will be stop controlled at its intersection with Village Point Lane.

I. INTRODUCTION

The purpose of this report is to identify the potential traffic impacts associated with the proposed 135 Evans Street Apartment development in the Village of Williamsville, Erie County, New York. The operating characteristics of the proposed access points and impacts to the adjacent roadway network are identified and mitigating measures, if any, are provided to minimize capacity or safety concerns.

To determine traffic impact, this analysis establishes existing traffic conditions, projects background traffic flow including area growth and/or additional traffic resulting from new development in the area and determine the traffic operations that would result from the full development of the proposed project.

II. LOCATION

The proposed development is located within the current lot occupied by Blocher Homes, an assisted living facility. The lot is located between the Essjay Road Evans Street intersection and the intersection of Eagle Street and Evans Street. The study area consists of the following intersections:

- Evans Street/Essjay Road (signalized)
- Essjay Road/Village Point Lane (unsignalized)
- Evans Street/Eagle Street (four-way stop)
- Evans Street/Existing Northern Driveway (unsignalized)
- Evans Street/Existing Southern Driveway (unsignalized)

The site location and study area are shown in **Figure 1** (all figures are included at the end of the report).

III. EXISTING HIGHWAY SYSTEM

The following information outlined in **Table 1** provides a description of the existing roadway network within the projected study area. **Figure 2** illustrates the lane geometry at each of the study intersections and the Average Daily Traffic (ADT) volumes on the study roadways.

TABLE 1
EXISTING HIGHWAY SYSTEM

ROADWAY	ROUTE[1]	FUNC. CLASS[2]	JURIS.[3]	SPEED LIMIT[4]	# OF TRAVEL LANES[5]	TRAVEL PATTERN/ DIRECTION	EST. ADT[6]	AADT SOURCE[7]
Evans Street	CR 195	Minor Arterial	ECDPW	30	2	Two way/ North-South	15,865	NYSDOT (2013)
Main Street	N/A	Principal Arterial	NYSDOT	35	4	Two way/ North-South	34,543	NYSDOT (2015)

Notes:
1. "CR" = County Road.
2. State Functional Classification of Roadway: All are Urban.

3. Jurisdiction: "ECDPW" = Erie County Department of Public Works.
4. Posted of Statewide Limit in Miles per Hour (MPH).
5. Excludes turning/auxiliary lanes developed at intersections.
6. Estimated ADT in Vehicles per Day (VPD).
7. Source (Year).

There are pedestrian sidewalk facilities along both sides of Evans Street, Eagle Street, and Village Point Lane. The nearest transit stop is located at the intersection of Main Street and Evans Street.

IV. EXISTING TRAFFIC CONDITIONS

A. Peak Intervals for Analysis

Given the functional characteristics of the land uses proposed for the site (apartments), the peak hours selected for analysis are weekday commuter AM and PM peaks. The combination of site traffic and adjacent through traffic procedures are greatest demand during these time periods.

B. Existing Traffic Volume Data

Turning movement traffic counts were collected on Thursday, June 13, and Friday June 14, 2019 by SRF Associates ("SRF") at the study area intersections, as noted in *Section II*. Traffic counts were conducted between 7:00-9:00 AM and 4:30-6:00 PM for the weekday commuter AM and PM peak hours. The peak hour traffic periods generally occurred between 8:00-9:00 AM and 4:30-5:30 PM.

All turning movement count data was collected on a typical weekday while local schools were in session and no adverse weather conditions impacted traffic. The traffic volumes were reviewed and compared for reasonableness to historical peak hour traffic data provided by the local transportation planning agency, Greater Buffalo Niagara Regional Transportation Council (GBNRTC). The weekday AM and PM peak hour volumes are reflected in **Figure 3**.

C. Field Observations

The study intersections were observed during both peak intervals to assess current traffic operations. Signal timing information for intersections within the study area was utilized to determine peak hour phasing plans and phase durations during each interval. This information was used to support and/or calibrate capacity analysis models described in detail later in this report.

V. FUTURE AREA DEVELOPMENT AND LOCAL GROWTH

The Village of Williamsville and Town of Amherst officials were contacted to discuss projects within the study area that are under construction and/or approved. One project was identified: a 12,000 sq. ft office addition to the YMCA building on Tech Drive. To account for any additional traffic related to the YMCA addition, as well any unanticipated background growth in the area aside from this specific development, a 0.5% per year growth rate for the respective

build out period based upon a review of the historical traffic in the project area by the NYSDOT. The background traffic volumes for 2020 are depicted in **Figure 4**.

VI. PROPOSED DEVELOPMENT

A. Description

The proposed project includes 87 apartments; 72 one bedroom and 15 two bedrooms. The development will be constructed over a 15-month period. Access to the proposed development will be provided by the existing Blocher Homes northern driveway along Evans Street and one proposed driveway along Village Point Lane. It should be noted that the proposed project will remove the existing Blocher Homes southern driveway. **Figure 5** illustrates the proposed Site Layout Plan.

B. Site Traffic Generation

The next step in the evaluation is to determine the additional traffic attributable to the development as defined, vehicle trips entering and exiting the site. The volume of traffic generated by a site is dependent on the intended land use and size of the development. Trip generation is an estimate of the number of trips generated by a specific building or land use. These trips represent the volume of traffic entering and exiting the development. Data contained in Trip Generation 10th Edition (2017), published by the Institute of Transportation Engineers (ITE), was used to project the volume of traffic generate by the proposed project. Data published by the ITE is the nationally accepted standard for generating trips for new uses. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of adjacent street traffic, in this case, the weekday AM and PM peaks, represent a more critical volume when analyzing the capacity of the system; those intervals will provide the basis of this analysis. All trip generation information has been included in the Appendices.

Table II shows the total site generated trips for the weekday AM and PM peak hours for the proposed development.

TABLE II
SITE GENERATED TRIPS

DESCRIPTION	SIZE/ UNITS	AM PEAK		PM PEAK	
		ENTER	EXIT	ENTER	EXIT
Multifamily Housing	87	10	32	33	19

The proposed project is expected to generate approximately 10 entering/32 exiting vehicle trips during the AM peak hour and 33 entering/19 exiting vehicle trips during the PM peak hour under full build conditions.

C. Site Traffic Distribution

The cumulative effect of site traffic on the transportation network is dependent on the origins and destinations of that traffic and location of the access drive serving the site.

The proposed arrival/departure distribution of traffic to be generated at this site is considered a function of several parameters, including the following:

- Employment centers in the local area and region;
- Site access drive locations and internal roadway circulation;
- Existing highway network;
- Existing traffic patterns; and
- Existing traffic conditions and controls

Figure 6 shows the anticipated trip distribution pattern percentages for the proposed 135 Evans Street Apartment development. **Figure 7** show the resulting total site generated traffic as assigned to the study area intersections for the weekday commuter AM and PM peak hour periods for the full development of the proposed project respectively.

VII. FULL DEVELOPMENT VOLUMES

The projected design hour traffic volumes were developed for the weekday AM and PM peak hours by combining the future background traffic conditions (Figure 4) and projected site generated volumes for the proposed development (Figure 7) to yield the total traffic conditions expected under the full development conditions respectively. **Figure 8** illustrates the total weekday AM and PM peak hour volumes anticipated for the proposed development under full build conditions.

VIII. CAPACITY ANALYSIS

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, capacity analysis typically focuses on intersection, as opposed to highway segments.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions and LOS "F" the worst. Suggested ranges of service capacity and explanation of Levels of Service are included in the Appendix.

The standard procedure for capacity analysis of signalized and un-signalized intersections is outlines in the Highway Capacity Manual ("HCM") 2010 Edition published by the Transportation Research Board. Traffic analysis software, SYNCHRO 9, which is based on the procedures and methodologies contained in the HCM, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service ("LOS") based on the HCM 2010 Edition as an indicator of how well intersections operate.

Existing and background operating conditions during the peak study periods were evaluated to determine a basis for comparison with the projected future conditions. The future traffic conditions generated by the proposed development under the full build out conditions were analyzed to assess the operations of the intersections in the study area. Capacity results for existing, background, and full development conditions are listed in **Table III**. The following discussion summarizes capacity conditions. All capacity analysis calculations are included in the Appendices.

TABLE III
CAPACITY ANALYSIS

INTERSECTION	2019 EXISITING CONDITIONS				2020 BACKGROUND CONDITIONS				FULL DEVELOPMENT CONDITIONS			
	AM		PM		AM		PM		AM		PM	
1. Proposed Driveway/Village Point Lane (U)												
EB – Proposed Driveway	N/A				N/A				A	8.8	A	8.8
2. Essjay Road/Village Point Lane (U)												
EB left – Village Point Lane	A	7.7	A	9.5	A	7.7	A	9.5	A	7.7	A	9.5
WB left – Village Point Lane	A	0.0	A	7.7	A	0.0	A	7.7	A	8.6	A	7.7
NB – Essjay Road	C	16.5	C	19.2	C	16.6	C	19.3	C	16.2	C	19.3
SB – Essjay Road	B	12.3	C	16.3	B	12.4	C	16.3	B	12.6	C	16.4
3. Evans Street/Essjay Road (S)												
WB left – Essjay Street	C	25.5	D	41.1	C	25.6	D	41.8	C	25.7	D	42.2
WB right – Essjay Street	A	9.3	A	3.5	A	9.3	A	3.5	A	9.0	A	3.5
NB thru – Evans Street	A	4.7	B	17.4	A	4.7	B	17.3	A	4.7	B	17.5
NB right – Evans Road	A	1.4	A	2.5	A	1.4	A	2.5	A	1.4	A	2.5
SB left - Evans Road	A	4.2	B	11.4	A	4.2	B	11.4	A	4.3	B	11.4
SB thru - Evans Street	A	5.6	B	15.8	A	5.8	B	15.8	A	5.8	B	16.1
Overall LOS	**A**	**6.4**	**C**	**21.6**	**A**	**6.4**	**C**	**21.8**	**A**	**6.5**	**C**	**22.0**
4. Evans Street/North Driveway (U)												
WB – North Driveway	A	0.0	D	31.1	A	0.0	A	0.0	D	27.2	E	38.9
SB left – Evans Street	A	9.3	A	0.0	A	9.3	A	0.0	A	9.3	A	9.4
5. Evans Street/South Driveway (U)												
WB – South Driveway	B	13.8	D	25.8	N/A				N/A			
SB left – Evans Street	A	9.2	A	9.2								
6. Evans Street/Eagle Street (U)												
EB – Eagle Street	C	19.1	B	12.7	C	18.8	B	12.6	C	19.3	B	12.7
WB – Eagle Street	B	14.9	B	12.1	B	14.7	B	12.1	B	15.0	B	12.1
NB – Evans Street	F	64.7	F	55.9	F	65.8	F	55.4	F	68.3	F	61.1
SB – Evans Street	F	110.3	F	74.6	F	112.7	F	72.8	F	124.0	F	79.0

Notes:

1. EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound
2. A (7.9) = Level of Service (Delay in second per vehicle)
3. NA = Approach not analyzed and/or does not exist under this condition.
4. Green shaded cells indicate low delays, yellow/orange shaded cells indicated moderate delays, red shaded cells indicate longer delays.

Proposed Driveway / Village Point Lane

The proposed driveway along Village Point Lane is expected to operate at a highly acceptable LOS "A" during both the AM and PM peak hours. The proposed driveway will have one entering and one exiting lane and will be stop controlled at its intersection with Village Point Lane.

Essjay Road / Village Point Lane
All approaches at the intersection of Essjay Road and Village Point Lane operate at an acceptable LOS "C" or better during both peak hours under all conditions. No changes in LOS as a result of the proposed project, therefore no mitigation is warranted or recommended at this intersection.

Evans Street / Essjay Road
All approaches at the intersection of Evans Street and Essjay Road operate at a LOS "D" or better during both peak hours under all conditions. No changes in LOS as a result of the proposed project, therefore no mitigation is warranted or recommended at this intersection.

Evans Street / North Driveway
The existing north site driveway is expected to operate at LOS "D" during the AM peak hour and LOS "E" during the PM peak hour. Due to the heavy volumes of existing traffic along Evans Street during both the AM and PM peaks, vehicles exiting the site through the north driveway are expected to experience longer delays. However, if a resident observes a queue at the north driveway along Evans Street, they have the option to use the rear driveway connection along Village Point Lane which leads to the Evans Street/Essjay Road signalized intersection.

Traffic simulations were performed using an extension of SYNCHRO intersection analysis software called SimTraffic. SimTraffic is a dynamic simulation model that takes into account the traffic flow and gap conditions at intersections and can more accurately reflect actual operating conditions. A close inspection of traffic conditions during the AM and PM peak hours reveal that a maximum queue of two to three vehicles are expected to build up at the existing north driveway along Evans Street, which is acceptable. No mitigation is warranted or recommended at this intersection.

Evans Street / South Driveway
This project proposes to remove the existing south driveway along Evans Street.

Evans Street / Eagle Street
The intersection of Evans Street and Eagle Street currently operates at LOS "F" in both the northbound and southbound directions during both the AM and PM peak hours. There are no changes in LOS as a result of the proposed project, therefore no mitigation is warranted or recommended at this intersection.

IX. CONCLUSIONS & RECOMMENDATIONS

This study evaluates the potential traffic impacts resulting from the proposed 135 Evans Street Apartment development in Williamsville, NY. Based upon the analyses, the results indicate that the proposed development will not have any significant traffic impacts on the existing roadway network. The following sets forth conclusions and recommendations based upon the results of the analyses:

1. The traffic analysis conducted by our company supports our professional opinion that the proposed project will not result in any potentially significant adverse traffic impacts. The traffic analysis contained in this report provides the Village of Williamsville's municipal boards and committees and other governmental agencies including the Erie County Department of Public Works with detailed information to enable an assessment

of the potential traffic impacts of the proposed project pursuant to the State Environmental Quality Review Act ("SEQRA").

2. The proposed projected is expected to generate approximately 10 entering/32 exiting vehicle trips during the AM peak hour and 33 entering/19 exiting vehicle trips during the PM peak hour under the proposed development conditions.

3. The existing north site driveway is expected to operate at LOS "D" during the AM peak hour and LOS "E" during the PM peak hour. Due to the heavy volumes of existing traffic along Evans Street during both the AM and PM peaks, vehicles exiting the site through the north driveway are expected to experience longer delays. However, if a resident observes a queue at the north driveway along Evans Street, they have the option to use the rear driveway connection along Village Point Lane which leads to the Evans Street/Essjay Road signalized intersection.

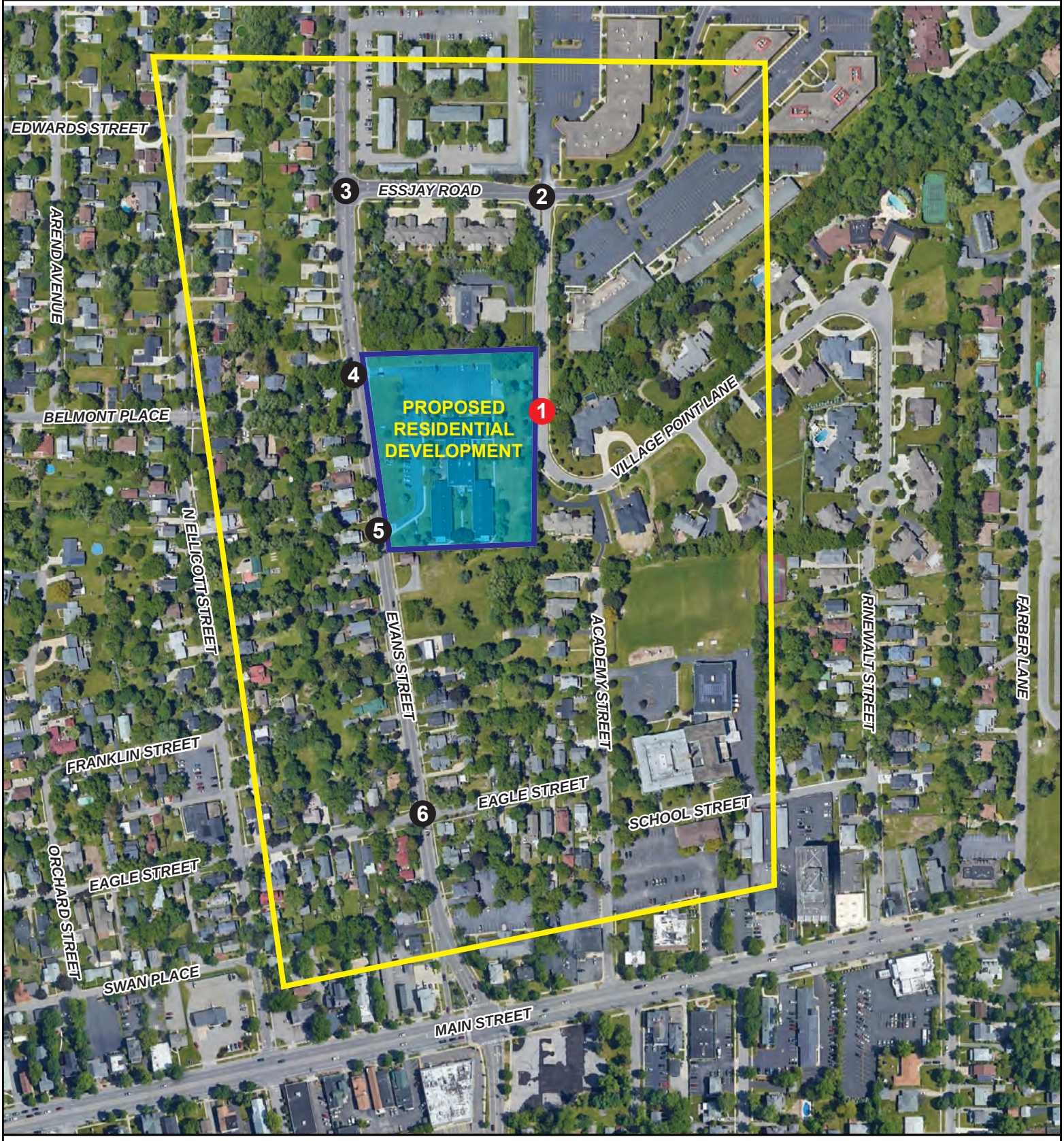
   Traffic simulations were performed using an extension of SYNCHRO intersection analysis software called SimTraffic. SimTraffic is a dynamic simulation model that takes into account the traffic flow and gap conditions at intersections and can more accurately reflect actual operating conditions. A close inspection of traffic conditions during the AM and PM peak hours reveal that a maximum queue of two to three vehicles are expected to build up at the existing north driveway along Evans Street, which is acceptable. No mitigation is warranted or recommended at this intersection.

4. The proposed driveway along Village Point Lane is expected to operate at a highly acceptable LOS "A" during both the AM and PM peak hours. The proposed driveway will have one entering and one exiting lane and will be stop controlled at its intersection with Village Point Lane.

X. FIGURES

Figures 1 through 8 are included on the following pages.

FIGURE 1 - SITE LOCATION AND STUDY AREA



Legend

- Study Intersection
- Proposed Intersection
- Site Location
- Study Area

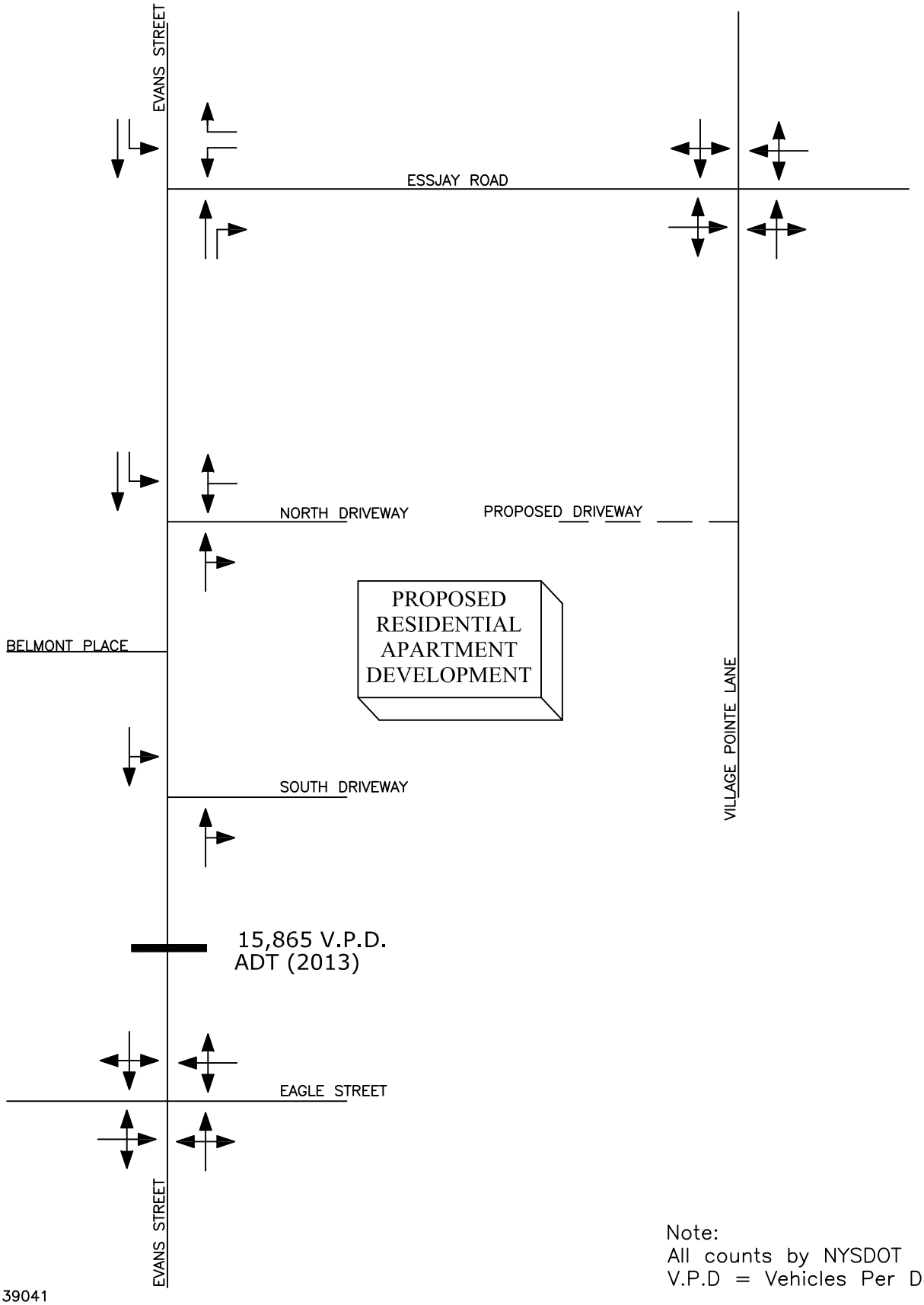
PROPOSED EVANS STREET APARTMENTS

VILLAGE OF WILLIAMSVILLE, NY

0 200 400 800
Feet

N

SRF ASSOCIATES
www.srfa.net
Transportation Planning / Engineering / Design



Note:
All counts by NYSDOT
V.P.D = Vehicles Per Day

PROJECT NO: 39041

KEY

N

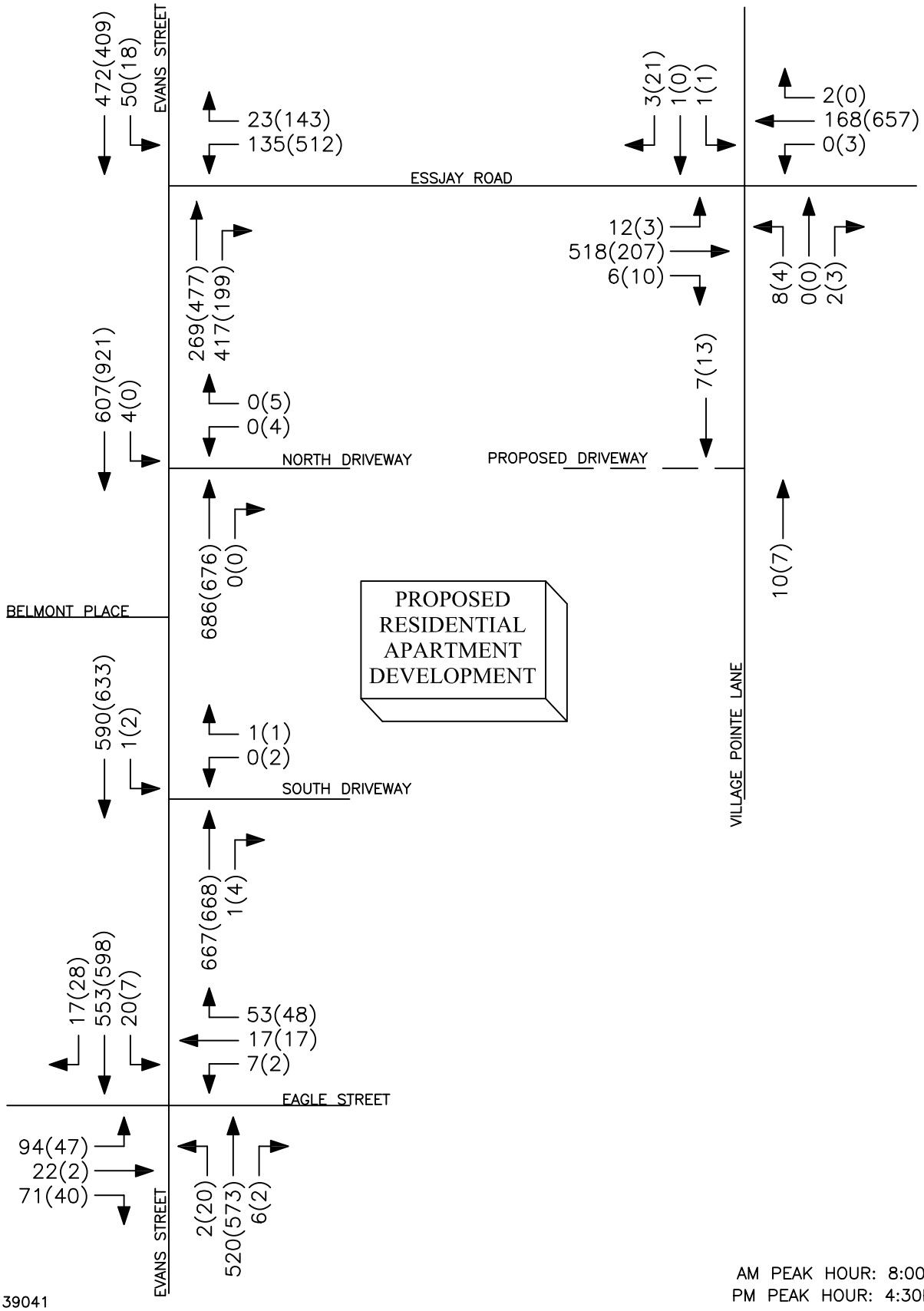
NOT TO SCALE

FIGURE 2

LANE GEOMETRY &
AVERAGE DAILY TRAFFIC

PROPOSED RESIDENTIAL DEVELOPMENT,
VILLAGE OF WILLIAMSVILLE, NY

SRF ASSOCIATES
Transportation Planning / Engineering / Design
www.srfa.net / (585) 272-4660



AM PEAK HOUR: 8:00AM–9:00AM
PM PEAK HOUR: 4:30PM–5:30PM

PROJECT NO: 39041

KEY

N

NOT TO SCALE

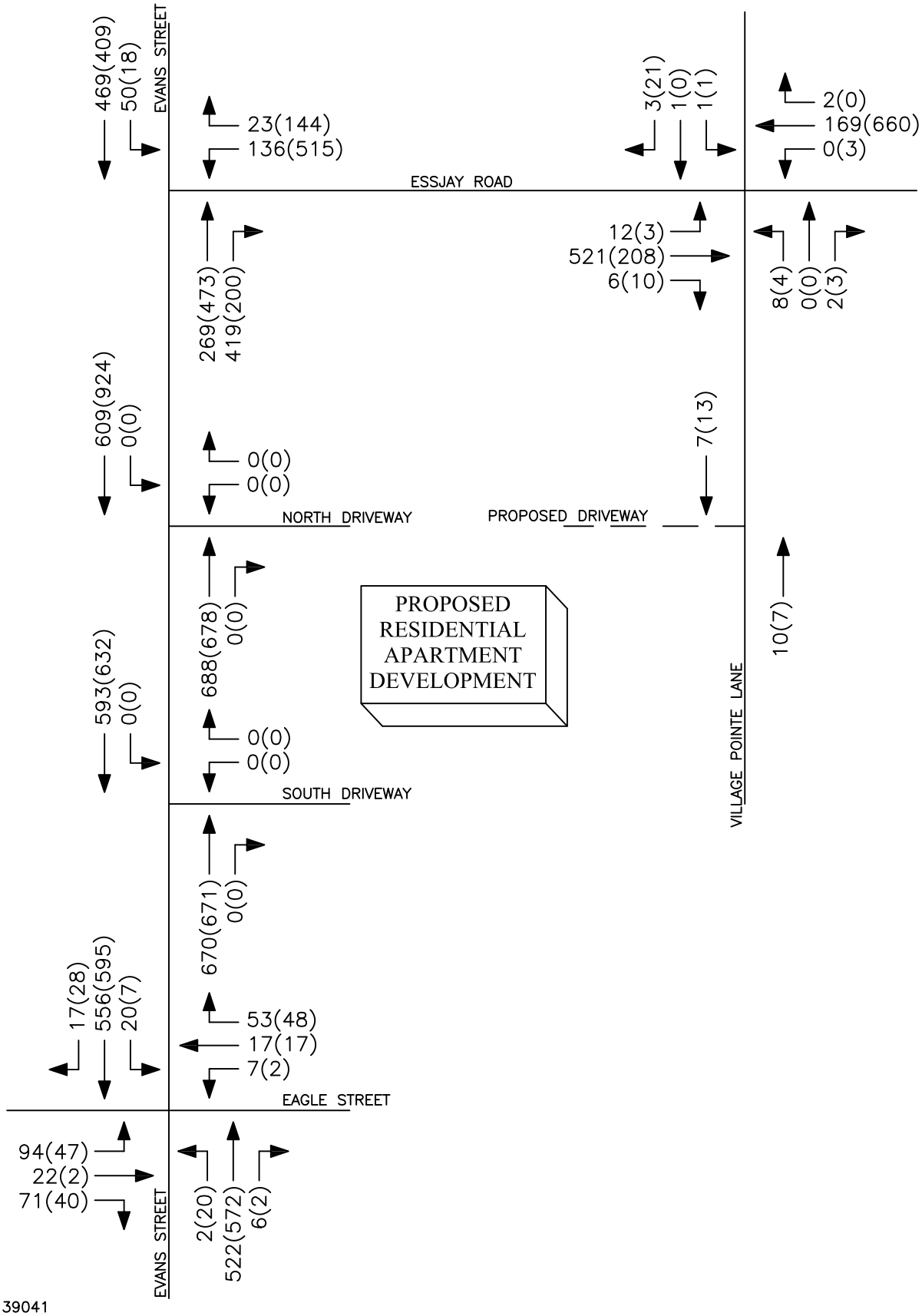
00(00) = AM(PM)

FIGURE 3

PEAK HOUR VOLUMES
2019 EXISTING CONDITIONS

PROPOSED RESIDENTIAL DEVELOPMENT,
VILLAGE OF WILLIAMSVILLE, NY

SRF ASSOCIATES
Transportation Planning / Engineering / Design
www.srfa.net / (585) 272-4660



PROJECT NO: 39041

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 4

PEAK HOUR VOLUMES
2020 BACKGROUND CONDITIONS

PROPOSED RESIDENTIAL DEVELOPMENT,
VILLAGE OF WILLIAMSVILLE, NY

SRF ASSOCIATES
Transportation Planning / Engineering / Design
www.srfa.net / (585) 272-4660

NEW CURB CUT TO VILLAGE POINTE LANE

1,500 SF BIO RET.

600 SF BIO RET.

900 SF BIO RET.

EXISTING BUILDING
39 UNITS

NEW ADDITION
48 UNITS

10 3 8 6 6 3 9 9 9 8 10 8 8 14 14

UNIT COUNT:
39 UNITS: RENOVATE EXST. BLDG.
+ 48 UNITS: NEW ADDITION
= 87 TOTAL UNITS

72 - ONE BEDROOM
15 - TWO BEDROOM

REQUIRED PARKING: 132 SPACES

BUILDING AREA OR REQUIREMENT	REGULATION	REFERENCE STANDARD IN 112-17
FRONT YARD BUILDING SETBACK	11-20 FEET WITH APPROVED PUBLIC OPEN SPACE	B(2)(c), B(2) (d)

OUT

IN

FRONT SETBACK LINE

UP RAMP

UP RAMP

10' 0" FRONT SET BACK, TYP

RETURNED GREEN SPACE TBD IN CONJUNCTION WITH STEPPED RETAINING WALL DESIGN

UP RAMP

SIDEWALK

SIDEWALK

EVANS STREET

1 **PROPOSED SITE PLAN**
SCALE: 1/16" = 1'-0"

N

LONG ASSOCIATES ARCHITECTS
189 Genesee Avenue, Buffalo, New York 14223
(716) 833-1870 | longassociatesarchitects.com

PROGRESS PRINT
NOT FOR
CONSTRUCTION

REVISIONS
NO. DESCRIPTION

JOB TITLE
RENOVATIONS / ADDITIONS
135 EVANS STREET
WILLIAMSVILLE, NEW YORK 14221

PEOPLE INC.
1219 NORTH FOREST ROAD
WILLIAMSVILLE, NEW YORK 14221

DRAWING TITLE
PROPOSED SITE PLAN

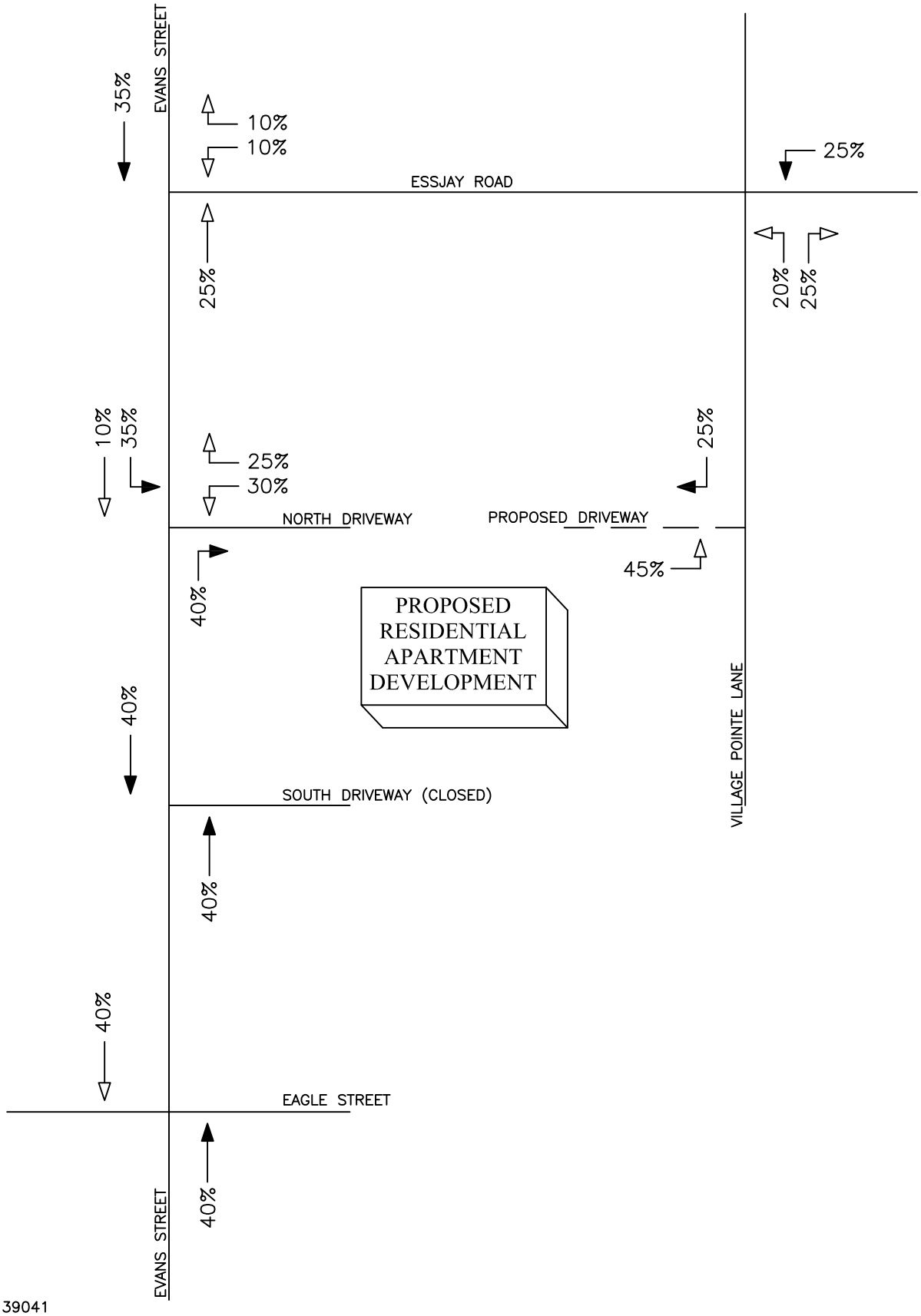
DATE: 5/29/2019

DRAWN BY: RG

DRAWING NO.
SP-101

JOB NO.
2018 - 21

FILE:



PROJECT NO: 39041

KEY

NOT TO SCALE

00(00) = AM(PM)

N → = ENTERING TRIPS

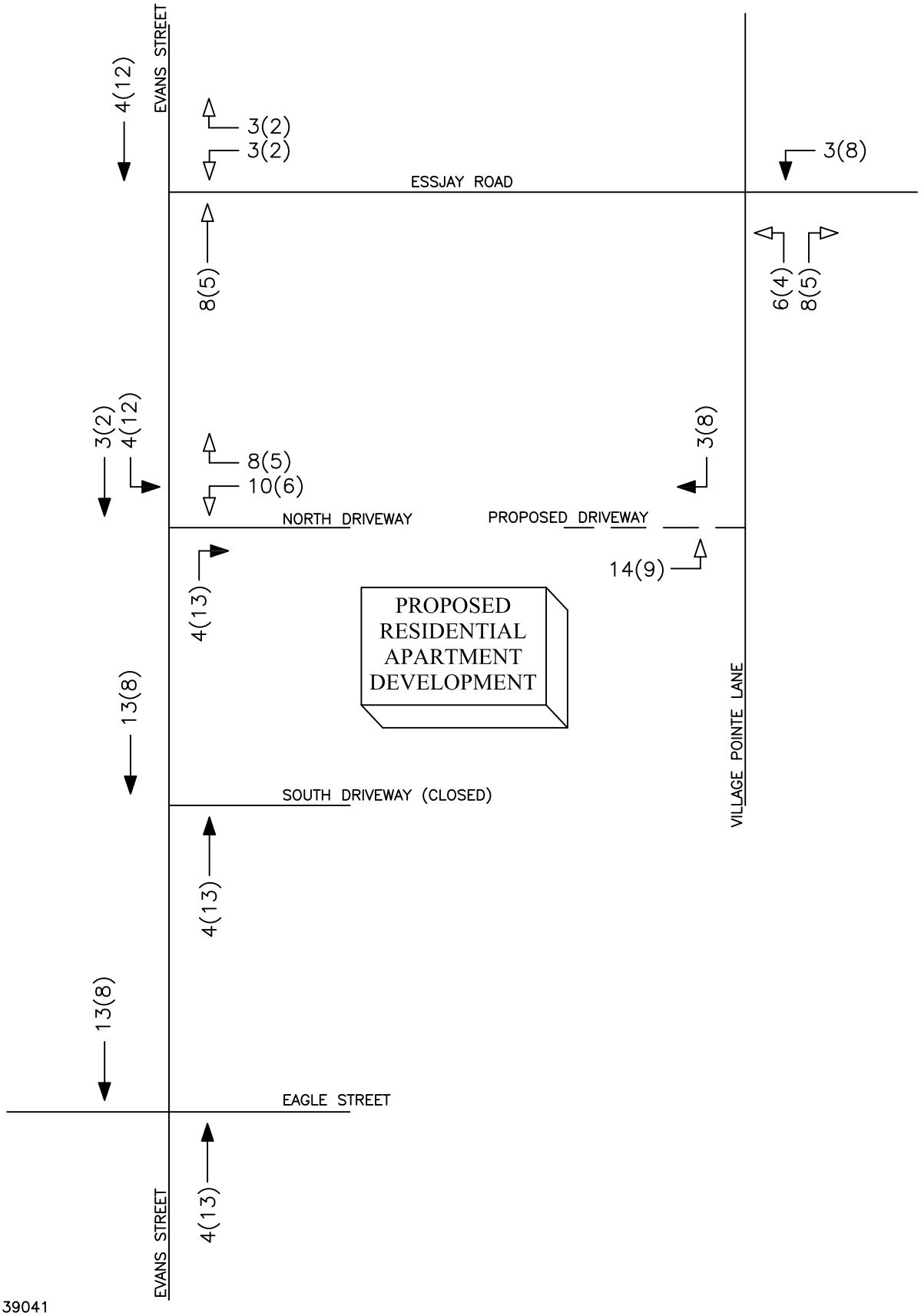
→ = EXITING TRIPS

FIGURE 6

TRIP DISTRIBUTION

PROPOSED RESIDENTIAL DEVELOPMENT,
VILLAGE OF WILLIAMSVILLE, NY

SRF ASSOCIATES
Transportation Planning / Engineering / Design
www.srfa.net / (585) 272-4660



PROJECT NO: 39041

KEY

NOT TO SCALE

00(00) = AM(PM)

N

→ = ENTERING TRIPS

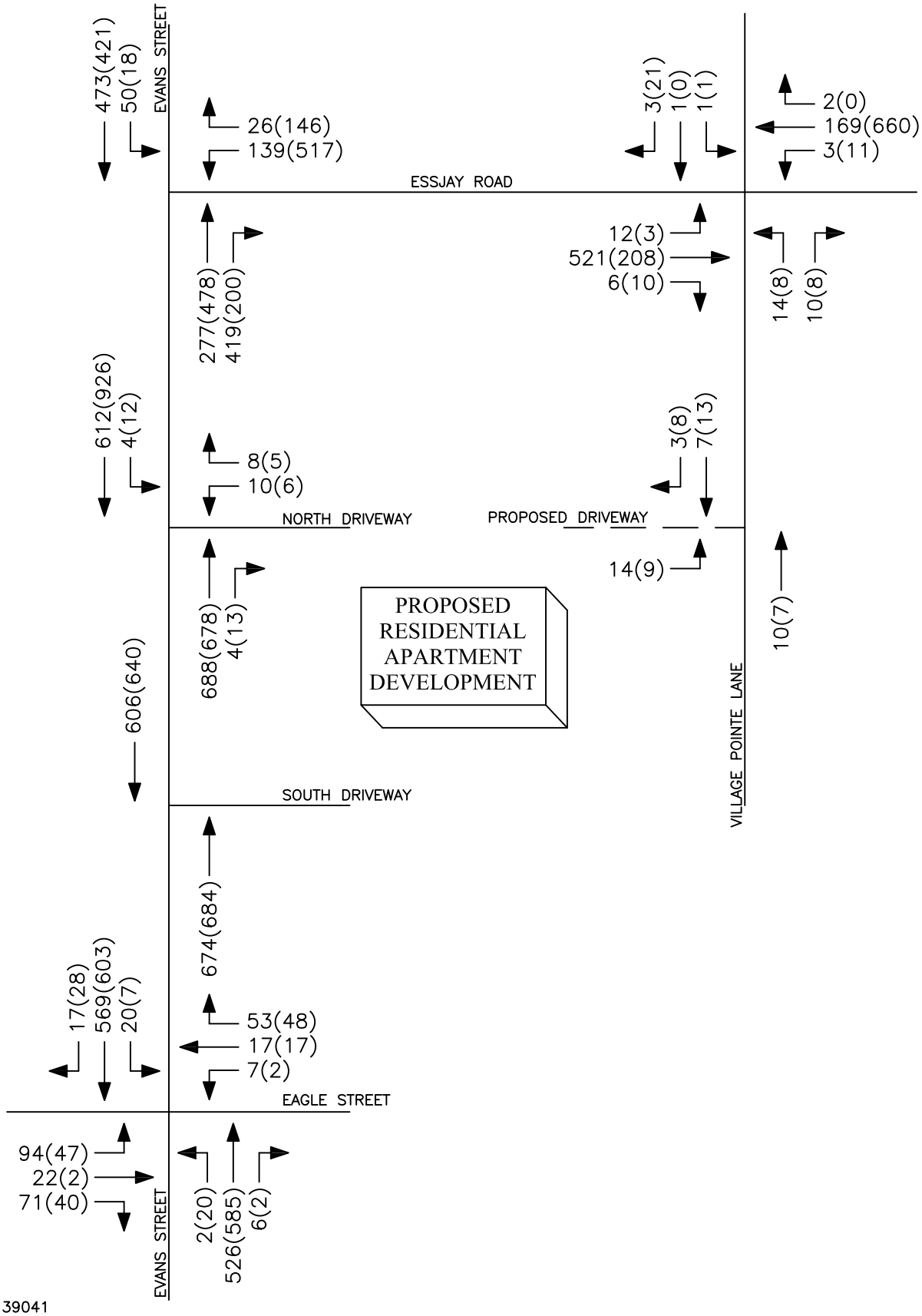
→ = EXITING TRIPS

FIGURE 7

SITE GENERATED TRIPS

PROPOSED RESIDENTIAL DEVELOPMENT,
VILLAGE OF WILLIAMSVILLE, NY

SRF ASSOCIATES
Transportation Planning / Engineering / Design
www.srfa.net / (585) 272-4660



PROJECT NO: 39041

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 8

PEAK HOUR VOLUMES
FULL DEVELOPMENT CONDITIONS

PROPOSED RESIDENTIAL DEVELOPMENT,
VILLAGE OF WILLIAMSVILLE, NY

SRF ASSOCIATES
Transportation Planning / Engineering / Design
www.srfa.net / (585) 272-4660

APPENDICES

A1

Collected Traffic Volume Data

SRF Associates

3495 Winton Pl
Rochester, NY, 14623

File Name : Not Named 2
Site Code : 22222222
Start Date : 6/14/2019
Page No : 1

Groups Printed- Unshifted - Bank 1

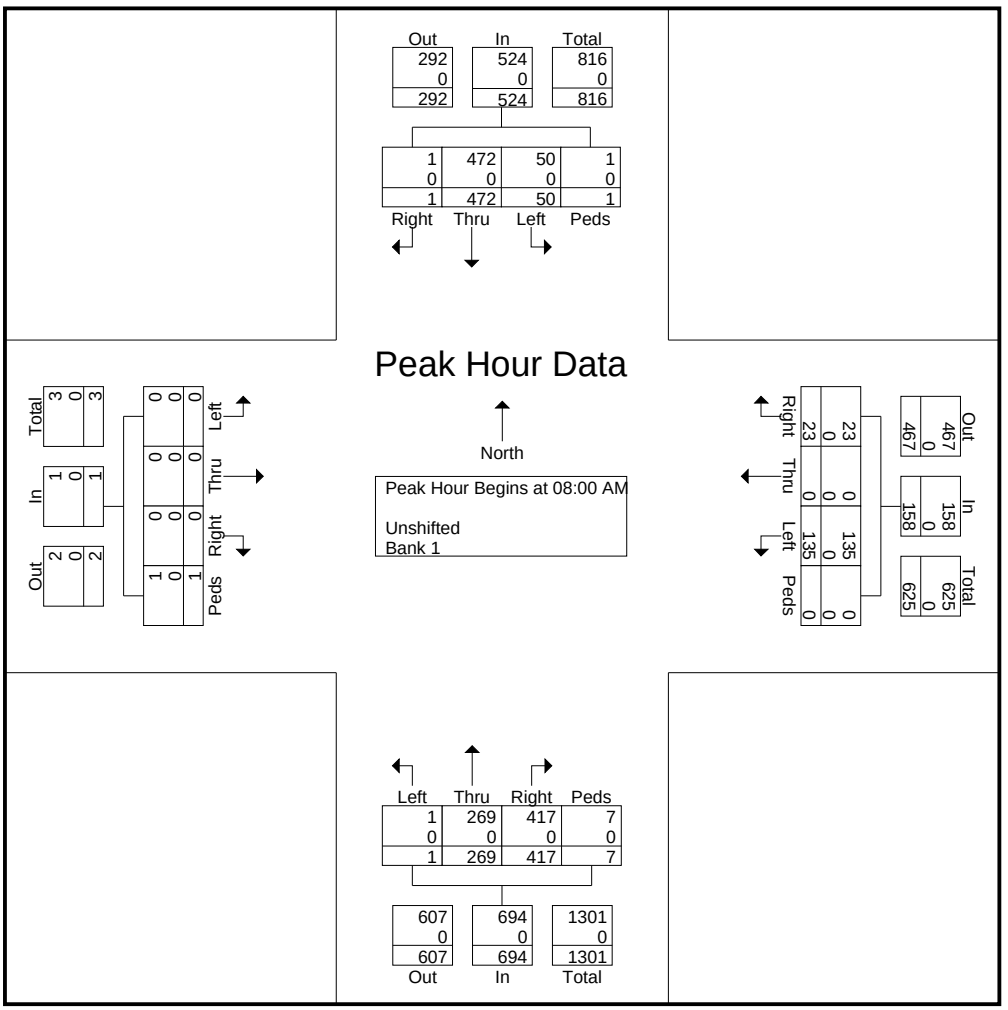
	From North					From East					From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	80	11	0	91	0	0	18	0	18	59	37	1	0	97	0	0	0	0	0	206
07:15 AM	0	114	9	1	124	5	0	28	0	33	86	56	0	4	146	0	0	0	0	0	303
07:30 AM	0	123	19	0	142	5	0	37	0	42	106	60	0	1	167	0	0	0	0	0	351
07:45 AM	0	90	32	1	123	4	0	44	1	49	110	61	0	1	172	0	0	0	0	0	344
Total	0	407	71	2	480	14	0	127	1	142	361	214	1	6	582	0	0	0	0	0	1204
08:00 AM	0	92	14	0	106	4	0	23	0	27	119	74	0	2	195	0	0	0	0	0	328
08:15 AM	0	132	9	0	141	2	0	37	0	39	96	53	0	2	151	0	0	0	0	0	331
08:30 AM	0	115	16	1	132	9	0	34	0	43	100	65	0	3	168	0	0	0	0	0	343
08:45 AM	1	133	11	0	145	8	0	41	0	49	102	77	1	0	180	0	0	0	1	1	375
Total	1	472	50	1	524	23	0	135	0	158	417	269	1	7	694	0	0	0	1	1	1377
Grand Total	1	879	121	3	1004	37	0	262	1	300	778	483	2	13	1276	0	0	0	1	1	2581
Apprch %	0.1	87.5	12.1	0.3		12.3	0	87.3	0.3		61	37.9	0.2	1		0	0	0	100		
Total %	0	34.1	4.7	0.1	38.9	1.4	0	10.2	0	11.6	30.1	18.7	0.1	0.5	49.4	0	0	0	0	0	
Unshifted	1	879	121	3	1004	37	0	262	1	300	778	483	2	13	1276	0	0	0	1	1	2581
% Unshifted	100	100	100	100	100	100	0	100	100	100	100	100	100	100	100	0	0	0	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SRF Associates

3495 Winton Pl
Rochester, NY, 14623

File Name : Not Named 2
Site Code : 22222222
Start Date : 6/14/2019
Page No : 2

	From North					From East					From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	92	14	0	106	4	0	23	0	27	119	74	0	2	195	0	0	0	0	0	328
08:15 AM	0	132	9	0	141	2	0	37	0	39	96	53	0	2	151	0	0	0	0	0	331
08:30 AM	0	115	16	1	132	9	0	34	0	43	100	65	0	3	168	0	0	0	0	0	343
08:45 AM	1	133	11	0	145	8	0	41	0	49	102	77	1	0	180	0	0	0	1	1	375
Total Volume	1	472	50	1	524	23	0	135	0	158	417	269	1	7	694	0	0	0	1	1	1377
% App. Total	0.2	90.1	9.5	0.2		14.6	0	85.4	0		60.1	38.8	0.1	1		0	0	0	100		
PHF	.250	.887	.781	.250	.903	.639	.000	.823	.000	.806	.876	.873	.250	.583	.890	.000	.000	.000	.250	.250	.918
Unshifted	1	472	50	1	524	23	0	135	0	158	417	269	1	7	694	0	0	0	1	1	1377
% Unshifted	100	100	100	100	100	100	0	100	0	100	100	100	100	100	100	0	0	0	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



SRF Associates

3495 Winton Pl
Rochester, NY, 14623

File Name : Not Named 1
Site Code : 11111111
Start Date : 6/13/2019
Page No : 1

Groups Printed- Unshifted - Bank 1

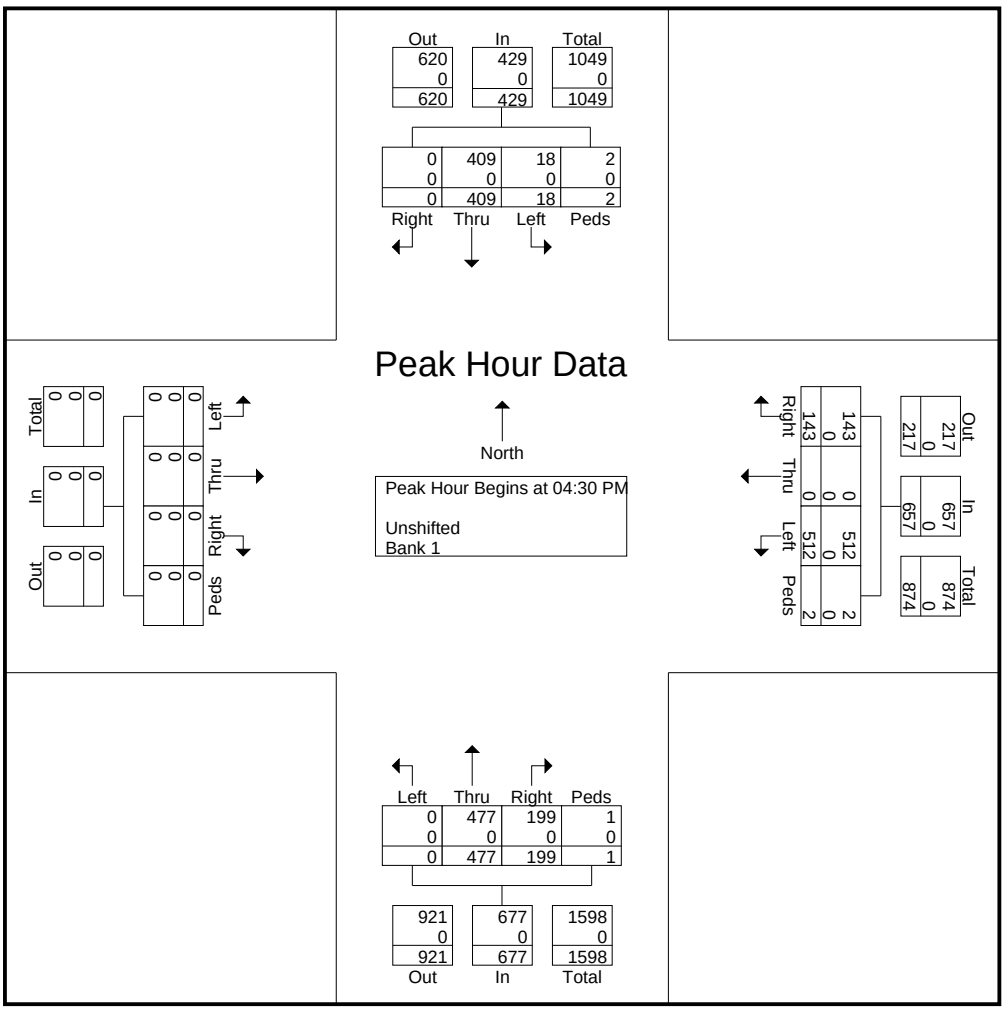
	From North					From East					From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	0	112	1	1	114	50	0	159	0	209	44	102	0	0	146	0	0	0	0	0	469
04:45 PM	0	114	7	0	121	34	0	111	0	145	59	114	0	0	173	0	0	0	0	0	439
Total	0	226	8	1	235	84	0	270	0	354	103	216	0	0	319	0	0	0	0	0	908
05:00 PM	0	95	7	0	102	44	0	127	0	171	45	145	0	0	190	0	0	0	0	0	463
05:15 PM	0	88	3	1	92	15	0	115	2	132	51	116	0	1	168	0	0	0	0	0	392
05:30 PM	0	120	3	1	124	18	0	77	1	96	59	135	0	0	194	0	0	0	0	0	414
05:45 PM	0	96	5	0	101	10	0	62	0	72	49	101	0	0	150	0	0	0	0	0	323
Total	0	399	18	2	419	87	0	381	3	471	204	497	0	1	702	0	0	0	0	0	1592
Grand Total	0	625	26	3	654	171	0	651	3	825	307	713	0	1	1021	0	0	0	0	0	2500
Apprch %	0	95.6	4	0.5		20.7	0	78.9	0.4		30.1	69.8	0	0.1		0	0	0	0		
Total %	0	25	1	0.1	26.2	6.8	0	26	0.1	33	12.3	28.5	0	0	40.8	0	0	0	0	0	
Unshifted	0	625	26	3	654	171	0	651	3	825	307	713	0	1	1021	0	0	0	0	0	2500
% Unshifted	0	100	100	100	100	100	0	100	100	100	100	100	0	100	100	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SRF Associates

3495 Winton Pl
Rochester, NY, 14623

File Name : Not Named 1
Site Code : 11111111
Start Date : 6/13/2019
Page No : 2

	From North					From East					From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	112	1	1	114	50	0	159	0	209	44	102	0	0	146	0	0	0	0	0	469
04:45 PM	0	114	7	0	121	34	0	111	0	145	59	114	0	0	173	0	0	0	0	0	439
05:00 PM	0	95	7	0	102	44	0	127	0	171	45	145	0	0	190	0	0	0	0	0	463
05:15 PM	0	88	3	1	92	15	0	115	2	132	51	116	0	1	168	0	0	0	0	0	392
Total Volume	0	409	18	2	429	143	0	512	2	657	199	477	0	1	677	0	0	0	0	0	1763
% App. Total	0	95.3	4.2	0.5		21.8	0	77.9	0.3		29.4	70.5	0	0.1		0	0	0	0		
PHF	.000	.897	.643	.500	.886	.715	.000	.805	.250	.786	.843	.822	.000	.250	.891	.000	.000	.000	.000	.000	.940
Unshifted	0	409	18	2	429	143	0	512	2	657	199	477	0	1	677	0	0	0	0	0	1763
% Unshifted	0	100	100	100	100	100	0	100	100	100	100	100	0	100	100	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Essjay Rd/Village Point Ln - TMC
Tue Jun 18, 2019
Forced Peak (8 AM - 9 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 670167, Location: 42.969408, -78.737678

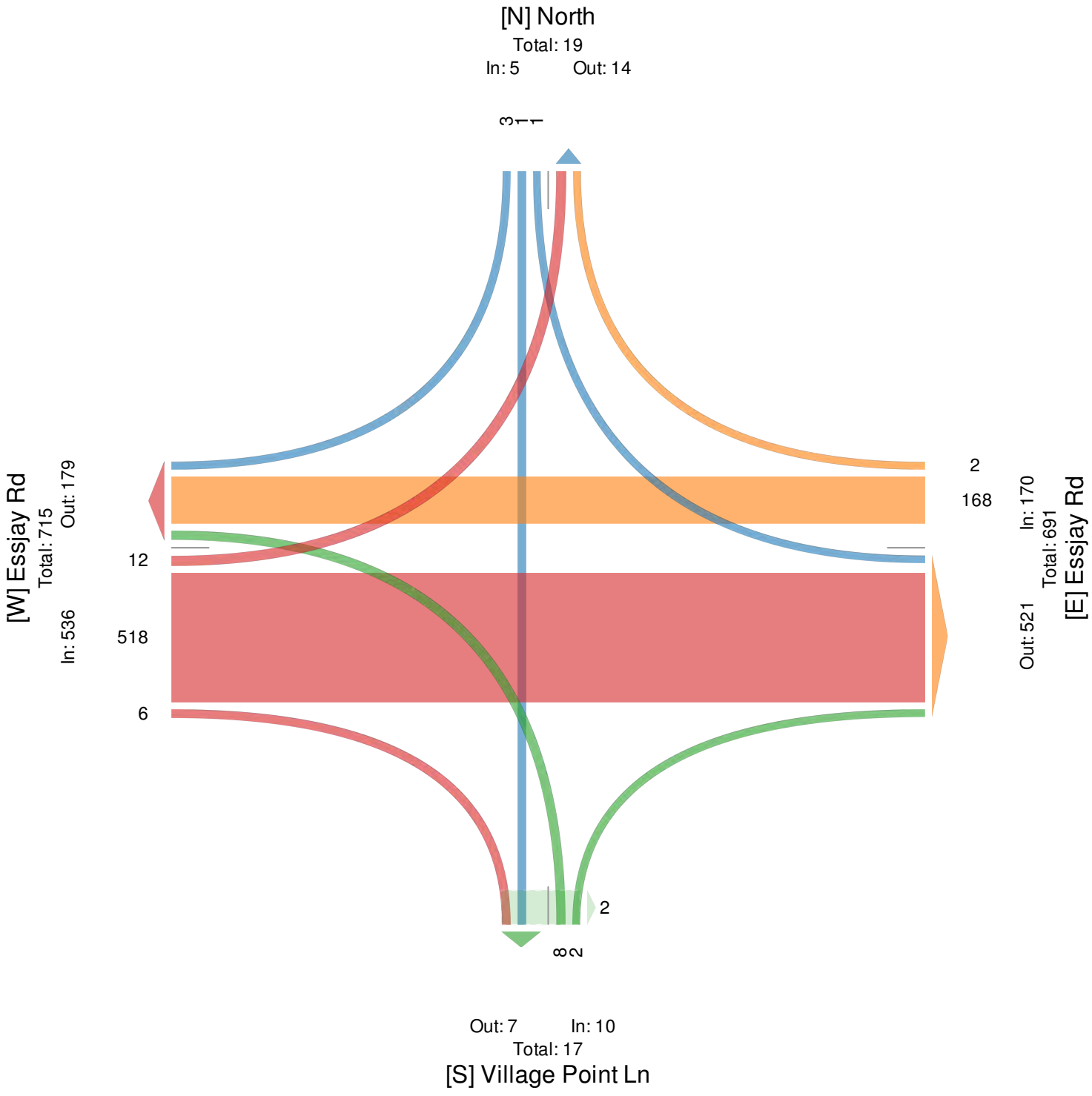
Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg	North						Essjay Rd						Village Point Ln						Essjay Rd						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2019-06-18 8:00AM	1	0	0	0	**1**	0	0	35	0	0	**35**	0	0	0	1	0	**1**	1	1	140	3	0	**144**	0	**181**
8:15AM	2	0	0	0	**2**	0	2	39	0	0	**41**	0	1	0	1	0	**2**	1	3	130	5	0	**138**	0	**183**
8:30AM	0	0	1	0	**1**	0	0	43	0	0	**43**	0	1	0	2	0	**3**	0	2	126	2	0	**130**	0	**177**
8:45AM	0	1	0	0	**1**	0	0	51	0	0	**51**	0	0	0	4	0	**4**	0	0	122	2	0	**124**	0	**180**
Total	3	1	1	0	**5**	0	2	168	0	0	**170**	0	2	0	8	0	**10**	2	6	518	12	0	**536**	0	**721**
% Approach	60.0%	20.0%	20.0%	0%	**-**	-	1.2%	98.8%	0%	0%	**-**	-	20.0%	0%	80.0%	0%	**-**	-	1.1%	96.6%	2.2%	0%	**-**	-	-
% Total	0.4%	0.1%	0.1%	0%	**0.7%**	-	0.3%	23.3%	0%	0%	**23.6%**	-	0.3%	0%	1.1%	0%	**1.4%**	-	0.8%	71.8%	1.7%	0%	**74.3%**	-	-
PHF	0.375	0.250	0.250	-	**0.625**	-	0.250	0.824	-	-	**0.833**	-	0.500	-	0.500	-	**0.625**	-	0.500	0.925	0.600	-	**0.931**	-	0.985
Lights	3	1	1	0	**5**	-	2	167	0	0	**169**	-	2	0	8	0	**10**	-	6	514	12	0	**532**	-	716
% Lights	100%	100%	100%	0%	**100%**	-	100%	99.4%	0%	0%	**99.4%**	-	100%	0%	100%	0%	**100%**	-	100%	99.2%	100%	0%	**99.3%**	-	99.3%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	4
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.6%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Essjay Rd/Village Point Ln - TMC
Tue Jun 18, 2019
Forced Peak (8 AM - 9 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 670167, Location: 42.969408, -78.737678

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US



Evans St/Eagle Rd - TMC
Wed Jun 19, 2019
Forced Peak (8 AM - 9 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 670165, Location: 42.965343, -78.738689

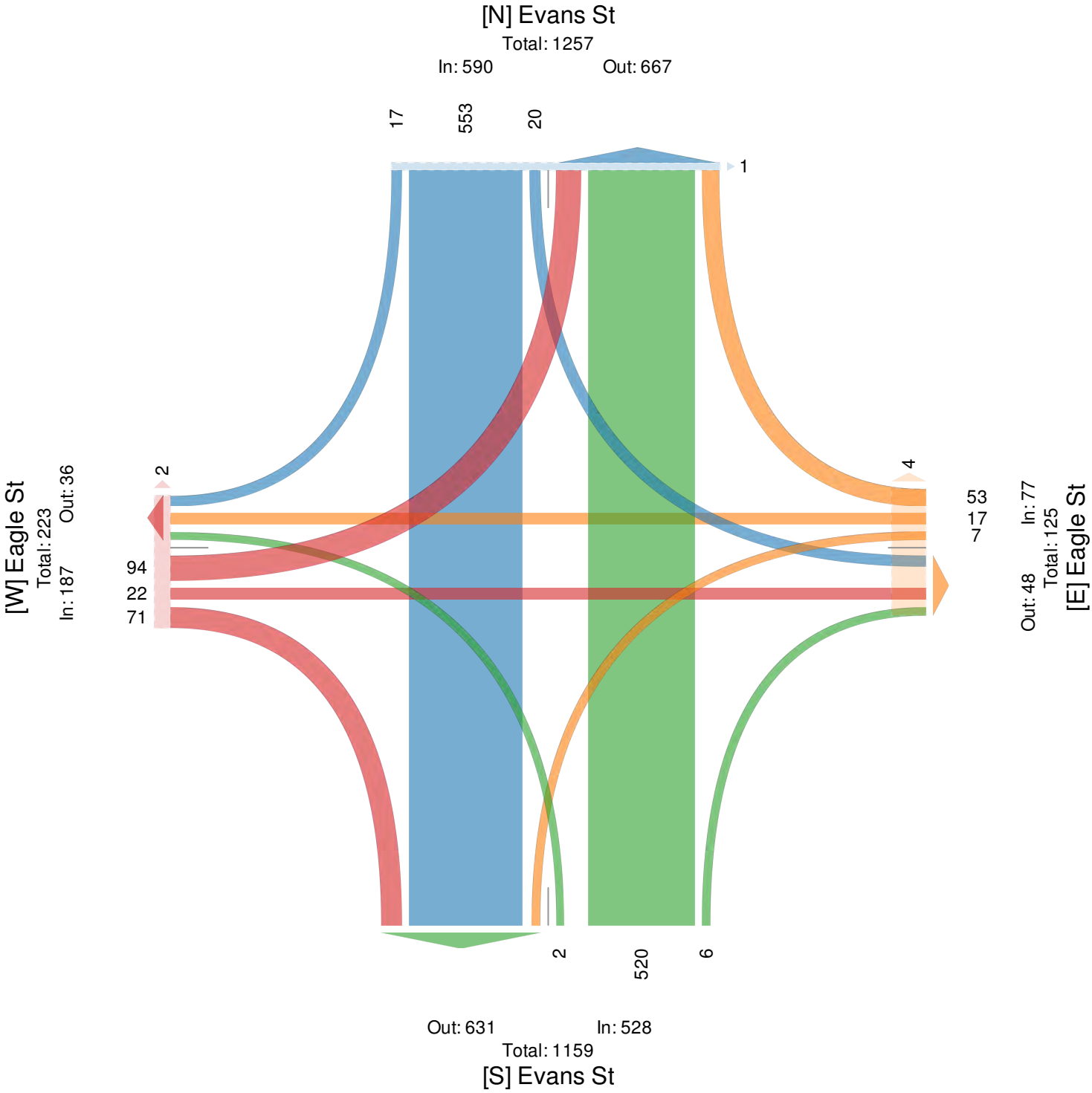
Provided by: Tri-State Traffic Data, Inc.
184 Baker Road, Coatesville, PA, 19320, US

Leg	Evans St						Eagle St						Evans St						Eagle St						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2019-06-19 8:00AM	1	136	7	0	**144**	0	21	8	5	0	**34**	1	3	131	0	0	**134**	0	15	10	35	0	**60**	0	**372**
8:15AM	3	148	5	0	**156**	0	17	2	2	0	**21**	3	3	132	1	0	**136**	0	22	9	27	0	**58**	2	**371**
8:30AM	8	135	4	0	**147**	0	6	4	0	0	**10**	0	0	133	1	0	**134**	0	15	2	17	0	**34**	0	**325**
8:45AM	5	134	4	0	**143**	1	9	3	0	0	**12**	0	0	124	0	0	**124**	0	19	1	15	0	**35**	0	**314**
Total	17	553	20	0	**590**	1	53	17	7	0	**77**	4	6	520	2	0	**528**	0	71	22	94	0	**187**	2	**1382**
% Approach	2.9%	93.7%	3.4%	0%	-	-	68.8%	22.1%	9.1%	0%	-	-	1.1%	98.5%	0.4%	0%	-	-	38.0%	11.8%	50.3%	0%	-	-	-
% Total	1.2%	40.0%	1.4%	0%	**42.7%**	-	3.8%	1.2%	0.5%	0%	**5.6%**	-	0.4%	37.6%	0.1%	0%	**38.2%**	-	5.1%	1.6%	6.8%	0%	**13.5%**	-	-
PHF	0.531	0.934	0.714	-	**0.946**	-	0.631	0.531	0.350	-	**0.566**	-	0.500	0.977	0.500	-	**0.971**	-	0.807	0.550	0.671	-	**0.779**	-	0.929
Lights	16	527	19	0	**562**	-	49	14	6	0	**69**	-	4	504	2	0	**510**	-	70	21	93	0	**184**	-	1325
% Lights	94.1%	95.3%	95.0%	0%	**95.3%**	-	92.5%	82.4%	85.7%	0%	**89.6%**	-	66.7%	96.9%	100%	0%	**96.6%**	-	98.6%	95.5%	98.9%	0%	**98.4%**	-	95.9%
Articulated Trucks and Single-Unit Trucks	0	6	1	0	**7**	-	0	1	0	0	**1**	-	2	6	0	0	**8**	-	0	1	0	0	**1**	-	17
% Articulated Trucks and Single-Unit Trucks	0%	1.1%	5.0%	0%	**1.2%**	-	0%	5.9%	0%	0%	**1.3%**	-	33.3%	1.2%	0%	0%	**1.5%**	-	0%	4.5%	0%	0%	**0.5%**	-	1.2%
Buses	1	20	0	0	**21**	-	4	2	1	0	**7**	-	0	10	0	0	**10**	-	1	0	1	0	**2**	-	40
% Buses	5.9%	3.6%	0%	0%	**3.6%**	-	7.5%	11.8%	14.3%	0%	**9.1%**	-	0%	1.9%	0%	0%	**1.9%**	-	1.4%	0%	1.1%	0%	**1.1%**	-	2.9%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	25.0%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	75.0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Evans St/Eagle Rd - TMC
Wed Jun 19, 2019
Forced Peak (8 AM - 9 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 670165, Location: 42.965343, -78.738689

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US



Evans St/Eagle Rd - TMC
Wed Jun 19, 2019
Forced Peak (4:30 PM - 5:30 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 670165, Location: 42.965343, -78.738689

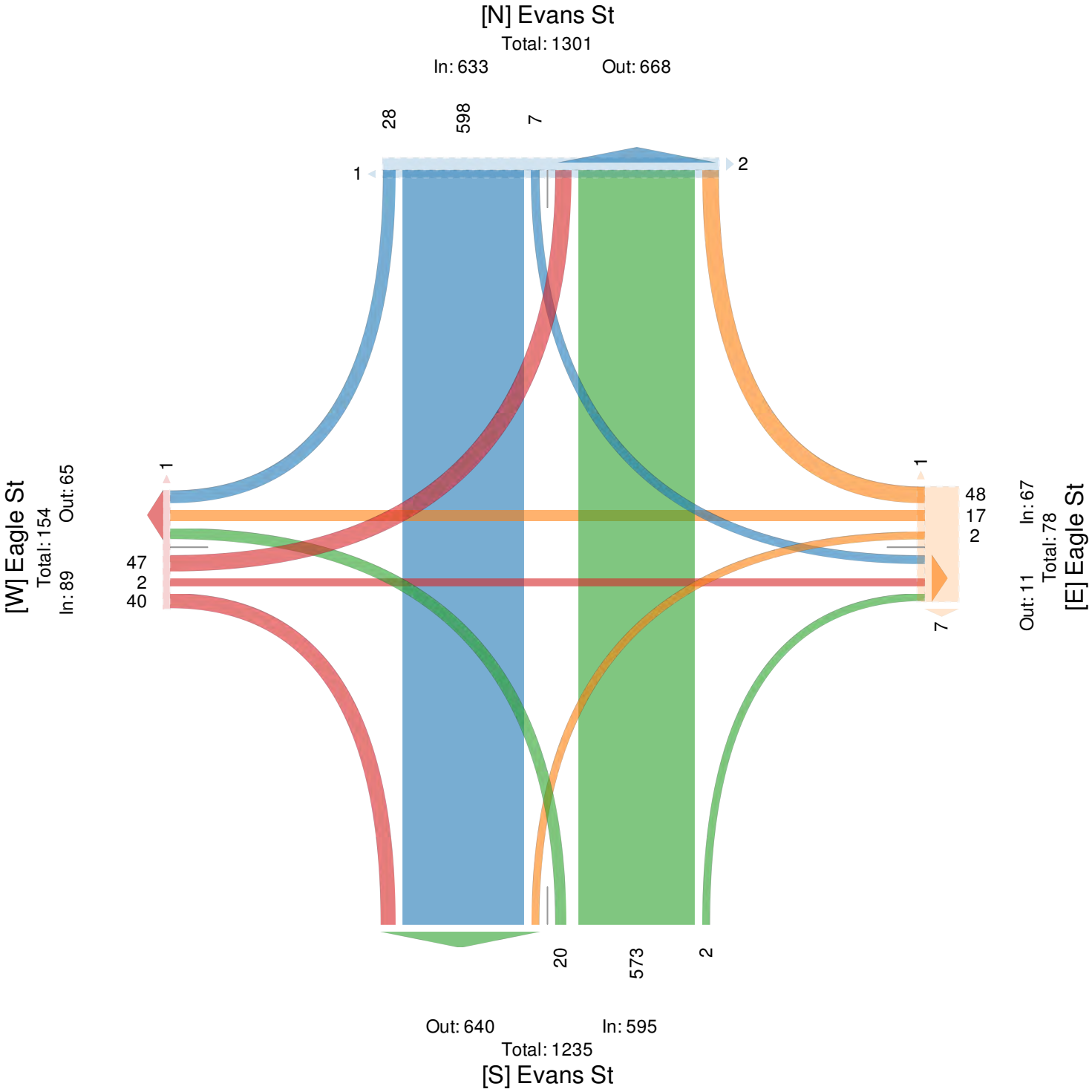
Provided by: Tri-State Traffic Data, Inc.
184 Baker Road, Coatesville, PA, 19320, US

Leg	Evans St						Eagle St						Evans St						Eagle St						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2019-06-19 4:30PM	5	148	4	0	**157**	2	13	1	1	0	**15**	2	2	132	3	0	**137**	0	13	0	6	0	**19**	0	**328**
4:45PM	8	144	1	0	**153**	0	8	5	0	0	**13**	0	0	147	3	0	**150**	0	10	2	15	0	**27**	0	**343**
5:00PM	7	160	2	0	**169**	1	9	6	0	0	**15**	5	0	147	5	0	**152**	0	6	0	11	0	**17**	0	**353**
5:15PM	8	146	0	0	**154**	0	18	5	1	0	**24**	1	0	147	9	0	**156**	0	11	0	15	0	**26**	1	**360**
Total	28	598	7	0	**633**	3	48	17	2	0	**67**	8	2	573	20	0	**595**	0	40	2	47	0	**89**	1	**1384**
% Approach	4.4%	94.5%	1.1%	0%	-	-	71.6%	25.4%	3.0%	0%	-	-	0.3%	96.3%	3.4%	0%	-	-	44.9%	2.2%	52.8%	0%	-	-	-
% Total	2.0%	43.2%	0.5%	0%	**45.7%**	-	3.5%	1.2%	0.1%	0%	**4.8%**	-	0.1%	41.4%	1.4%	0%	**43.0%**	-	2.9%	0.1%	3.4%	0%	**6.4%**	-	-
PHF	0.875	0.934	0.438	-	**0.936**	-	0.667	0.708	0.500	-	**0.698**	-	0.250	0.974	0.556	-	**0.954**	-	0.769	0.250	0.783	-	**0.824**	-	0.961
Lights	28	596	7	0	**631**	-	48	17	2	0	**67**	-	2	571	20	0	**593**	-	40	2	47	0	**89**	-	1380
% Lights	100%	99.7%	100%	0%	**99.7%**	-	100%	100%	100%	0%	**100%**	-	100%	99.7%	100%	0%	**99.7%**	-	100%	100%	100%	0%	**100%**	-	99.7%
Articulated Trucks and Single-Unit Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	3
% Articulated Trucks and Single-Unit Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Evans St/Eagle Rd - TMC
Wed Jun 19, 2019
Forced Peak (4:30 PM - 5:30 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 670165, Location: 42.965343, -78.738689

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US



www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Williamsville, NY
Essjay Rd & Village Point Lane
Tuesday, June 18, 2019
Location: 42.969408, -78.737678

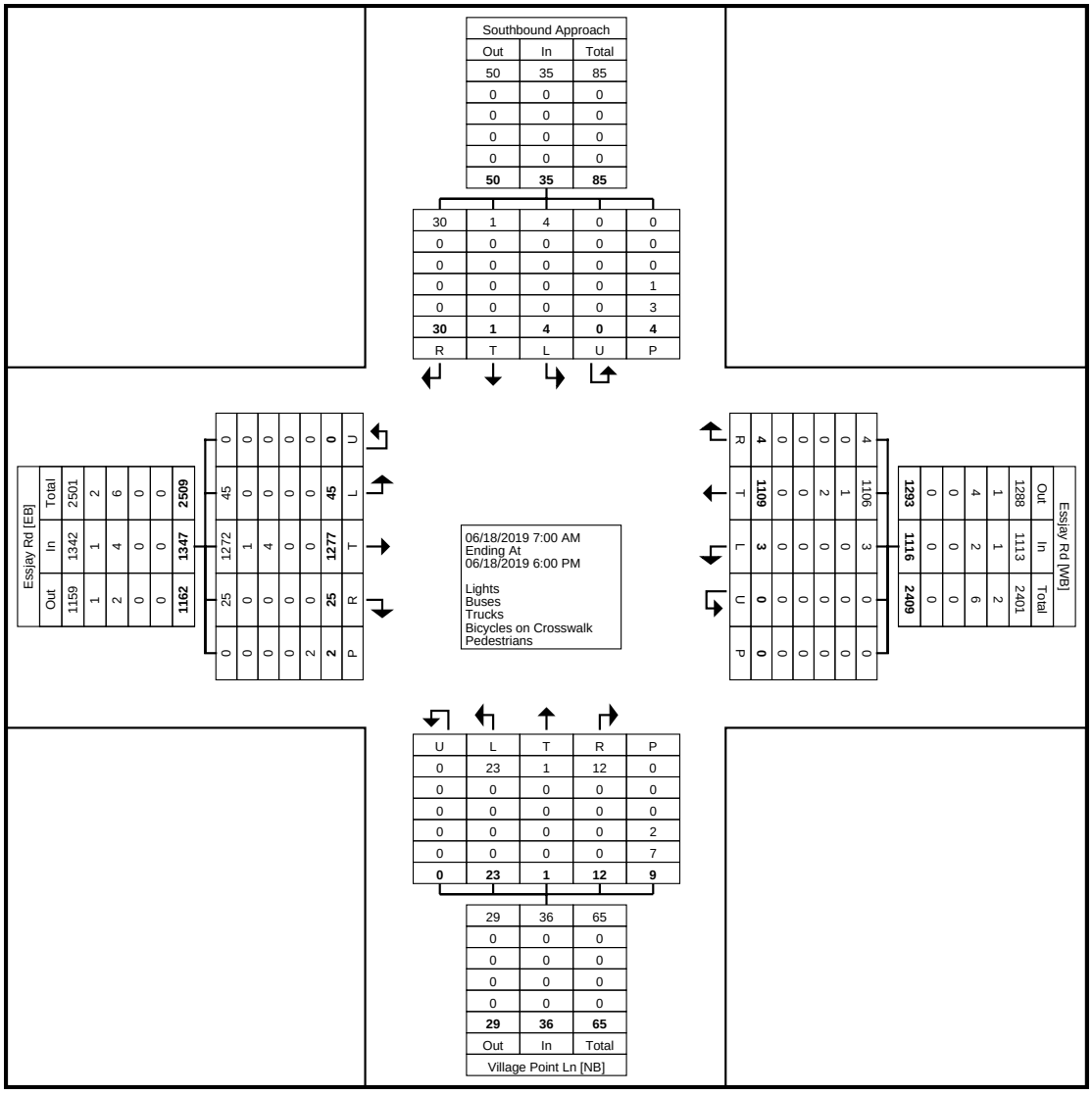
Count Name: Essjay Rd/Village Point Ln
Site Code:
Start Date: 06/18/2019

Turning Movement Data

Start Time	Southbound Approach Southbound						Essjay Rd Westbound						Village Point Ln Northbound						Essjay Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	0	1	0	0	1	0	20	0	0	0	20	0	0	1	0	1	1	0	76	10	0	0	86	108
7:15 AM	0	0	0	0	1	0	1	24	0	0	0	25	0	1	1	0	2	2	0	93	11	0	0	104	131
7:30 AM	0	0	1	0	1	1	0	30	0	0	0	30	1	0	5	0	1	6	2	112	6	0	0	120	157
7:45 AM	1	0	0	0	0	1	1	27	0	0	0	28	1	0	0	0	0	1	3	157	3	0	0	163	193
Hourly Total	1	0	2	0	2	3	2	101	0	0	0	103	2	1	7	0	4	10	5	438	30	0	0	473	589
8:00 AM	1	0	0	0	0	1	0	35	0	0	0	35	0	0	1	0	1	1	1	140	3	0	0	144	181
8:15 AM	2	0	0	0	0	2	2	39	0	0	0	41	1	0	1	0	1	2	3	130	5	0	0	138	183
8:30 AM	0	0	1	0	0	1	0	43	0	0	0	43	1	0	2	0	0	3	2	126	2	0	0	130	177
8:45 AM	0	1	0	0	0	1	0	51	0	0	0	51	0	0	4	0	0	4	0	122	2	0	0	124	180
Hourly Total	3	1	1	0	0	5	2	168	0	0	0	170	2	0	8	0	2	10	6	518	12	0	0	536	721
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	9	0	0	0	1	9	0	199	1	0	0	200	1	0	1	0	1	2	2	53	1	0	0	56	267
4:45 PM	5	0	0	0	0	5	0	129	0	0	0	129	0	0	2	0	0	2	1	56	0	0	0	57	193
Hourly Total	14	0	0	0	1	14	0	328	1	0	0	329	1	0	3	0	1	4	3	109	1	0	0	113	460
5:00 PM	5	0	0	0	0	5	0	210	0	0	0	210	0	0	0	0	1	0	3	48	1	0	0	52	267
5:15 PM	2	0	1	0	1	3	0	119	2	0	0	121	2	0	1	0	1	3	4	50	1	0	2	55	182
5:30 PM	3	0	0	0	0	3	0	102	0	0	0	102	2	0	1	0	0	3	3	60	0	0	0	63	171
5:45 PM	2	0	0	0	0	2	0	81	0	0	0	81	3	0	3	0	0	6	1	54	0	0	0	55	144
Hourly Total	12	0	1	0	1	13	0	512	2	0	0	514	7	0	5	0	2	12	11	212	2	0	2	225	764
Grand Total	30	1	4	0	4	35	4	1109	3	0	0	1116	12	1	23	0	9	36	25	1277	45	0	2	1347	2534
Approach %	85.7	2.9	11.4	0.0	-	-	0.4	99.4	0.3	0.0	-	-	33.3	2.8	63.9	0.0	-	-	1.9	94.8	3.3	0.0	-	-	-
Total %	1.2	0.0	0.2	0.0	-	1.4	0.2	43.8	0.1	0.0	-	44.0	0.5	0.0	0.9	0.0	-	1.4	1.0	50.4	1.8	0.0	-	53.2	-
Lights	30	1	4	0	-	35	4	1106	3	0	-	1113	12	1	23	0	-	36	25	1272	45	0	-	1342	2526
% Lights	100.0	100.0	100.0	-	-	100.0	100.0	99.7	100.0	-	-	99.7	100.0	100.0	100.0	-	-	100.0	100.0	99.6	100.0	-	-	99.6	99.7
Buses	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	2
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.1	0.1
Trucks	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	4	0	0	-	4	6
% Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.3	0.2
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	25.0	-	-	-	-	-	-	-	-	-	-	-	22.2	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	7	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	75.0	-	-	-	-	-	-	-	-	-	-	-	77.8	-	-	-	-	-	100.0	-	-

Williamsville, NY
Essjay Rd & Village Point Lane
Tuesday, June 18, 2019
Location: 42.969408, -78.737678

Count Name: Essjay Rd/Village Point Ln
Site Code:
Start Date: 06/18/2019



Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

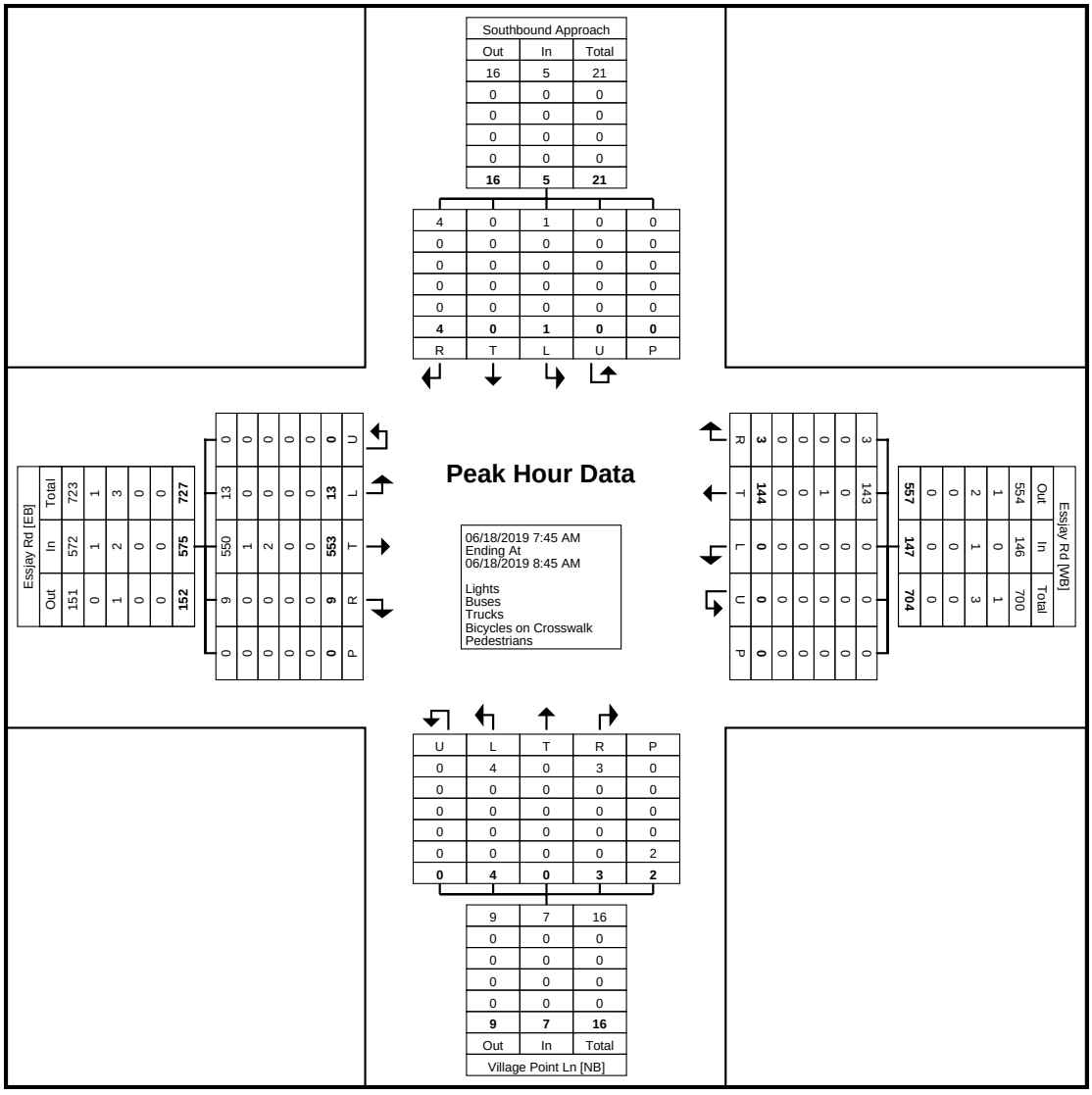
Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Williamsville, NY
Essjay Rd & Village Point Lane
Tuesday, June 18, 2019
Location: 42.969408, -78.737678

Count Name: Essjay Rd/Village Point Ln
Site Code:
Start Date: 06/18/2019

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Southbound Approach Southbound						Essjay Rd Westbound						Village Point Ln Northbound						Essjay Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:45 AM	1	0	0	0	0	1	1	27	0	0	0	28	1	0	0	0	0	1	3	157	3	0	0	163	193
8:00 AM	1	0	0	0	0	1	0	35	0	0	0	35	0	0	1	0	1	1	1	140	3	0	0	144	181
8:15 AM	2	0	0	0	0	2	2	39	0	0	0	41	1	0	1	0	1	2	3	130	5	0	0	138	183
8:30 AM	0	0	1	0	0	1	0	43	0	0	0	43	1	0	2	0	0	3	2	126	2	0	0	130	177
Total	4	0	1	0	0	5	3	144	0	0	0	147	3	0	4	0	2	7	9	553	13	0	0	575	734
Approach %	80.0	0.0	20.0	0.0	-	-	2.0	98.0	0.0	0.0	-	-	42.9	0.0	57.1	0.0	-	-	1.6	96.2	2.3	0.0	-	-	-
Total %	0.5	0.0	0.1	0.0	-	0.7	0.4	19.6	0.0	0.0	-	20.0	0.4	0.0	0.5	0.0	-	1.0	1.2	75.3	1.8	0.0	-	78.3	-
PHF	0.500	0.000	0.250	0.000	-	0.625	0.375	0.837	0.000	0.000	-	0.855	0.750	0.000	0.500	0.000	-	0.583	0.750	0.881	0.650	0.000	-	0.882	0.951
Lights	4	0	1	0	-	5	3	143	0	0	-	146	3	0	4	0	-	7	9	550	13	0	-	572	730
% Lights	100.0	-	100.0	-	-	100.0	100.0	99.3	-	-	-	99.3	100.0	-	100.0	-	-	100.0	100.0	99.5	100.0	-	-	99.5	99.5
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Buses	0.0	-	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.1
Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	3
% Trucks	0.0	-	0.0	-	-	0.0	0.0	0.7	-	-	-	0.7	0.0	-	0.0	-	-	0.0	0.0	0.4	0.0	-	-	0.3	0.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (7:45 AM)

www.TSTData.com
184 Baker Rd

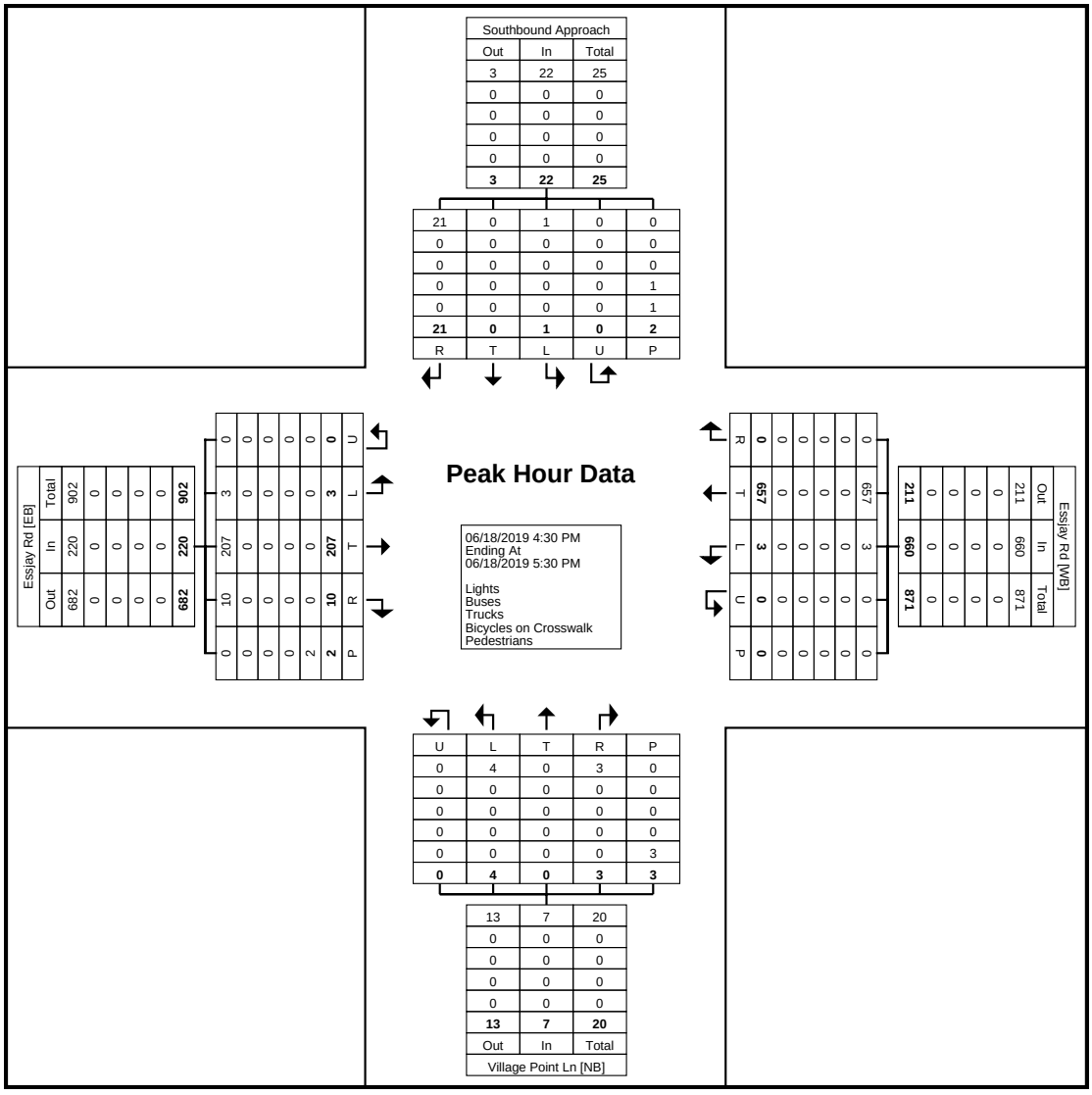
Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Williamsville, NY
Essjay Rd & Village Point Lane
Tuesday, June 18, 2019
Location: 42.969408, -78.737678

Count Name: Essjay Rd/Village Point Ln
Site Code:
Start Date: 06/18/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Southbound Approach Southbound						Essjay Rd Westbound						Village Point Ln Northbound						Essjay Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:30 PM	9	0	0	0	1	9	0	199	1	0	0	200	1	0	1	0	1	2	2	53	1	0	0	56	267
4:45 PM	5	0	0	0	0	5	0	129	0	0	0	129	0	0	2	0	0	2	1	56	0	0	0	57	193
5:00 PM	5	0	0	0	0	5	0	210	0	0	0	210	0	0	0	0	1	0	3	48	1	0	0	52	267
5:15 PM	2	0	1	0	1	3	0	119	2	0	0	121	2	0	1	0	1	3	4	50	1	0	2	55	182
Total	21	0	1	0	2	22	0	657	3	0	0	660	3	0	4	0	3	7	10	207	3	0	2	220	909
Approach %	95.5	0.0	4.5	0.0	-	-	0.0	99.5	0.5	0.0	-	-	42.9	0.0	57.1	0.0	-	-	4.5	94.1	1.4	0.0	-	-	-
Total %	2.3	0.0	0.1	0.0	-	2.4	0.0	72.3	0.3	0.0	-	72.6	0.3	0.0	0.4	0.0	-	0.8	1.1	22.8	0.3	0.0	-	24.2	-
PHF	0.583	0.000	0.250	0.000	-	0.611	0.000	0.782	0.375	0.000	-	0.786	0.375	0.000	0.500	0.000	-	0.583	0.625	0.924	0.750	0.000	-	0.965	0.851
Lights	21	0	1	0	-	22	0	657	3	0	-	660	3	0	4	0	-	7	10	207	3	0	-	220	909
% Lights	100.0	-	100.0	-	-	100.0	-	100.0	100.0	-	-	100.0	100.0	-	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Trucks	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Turning Movement Peak Hour Data Plot (4:30 PM)

JOB# 39041 Evans St: 7-9am

Driveway SB

TIME	RTO	LTO	RTI	LTI
7:00am				
7:15am				
7:30am				
7:45am				
8:00				
8:15				

JOB# 39041 Evans St: 7-9am

Driveway SB

TIME	RTO	LTO	RTI	LTI
8:30am	1			
8:45am			1	1

JOB# 39041 Evans St: 7-9am

Driveway NB

TIME	RTO	LTO	RTI	LTI
7:00am				2
7:15am		1	1	1
7:30am				1
7:45am	1			1
8:00				2
8:15				

JOB# 39041 Evans St: 7-9am

Driveway NB

TIME	RTO	LTO	RTI	LTI
8:30am				2
8:45am				

JOB# 39041 Evans St: 4:30-6pm

Driveway NB

TIME	RTO	LTO	RTI	LTI
4:30pm	2	1		
4:45 pm	2	1		
5:00pm	1	2		
5:15 pm				
5:30 pm				
5:45 pm				

JOB# 39041 Evans St: 4:30-6pm

Driveway SB

TIME	RTO	LTO	RTI	LTI
4:30pm	1	1	1	
4:45 pm			1	
5:00pm		1	2	1
5:15 pm				1
5:30 pm				
5:45 pm				

A2

Miscellaneous Traffic Data and Calculations

Peak Hour Data for Intersection

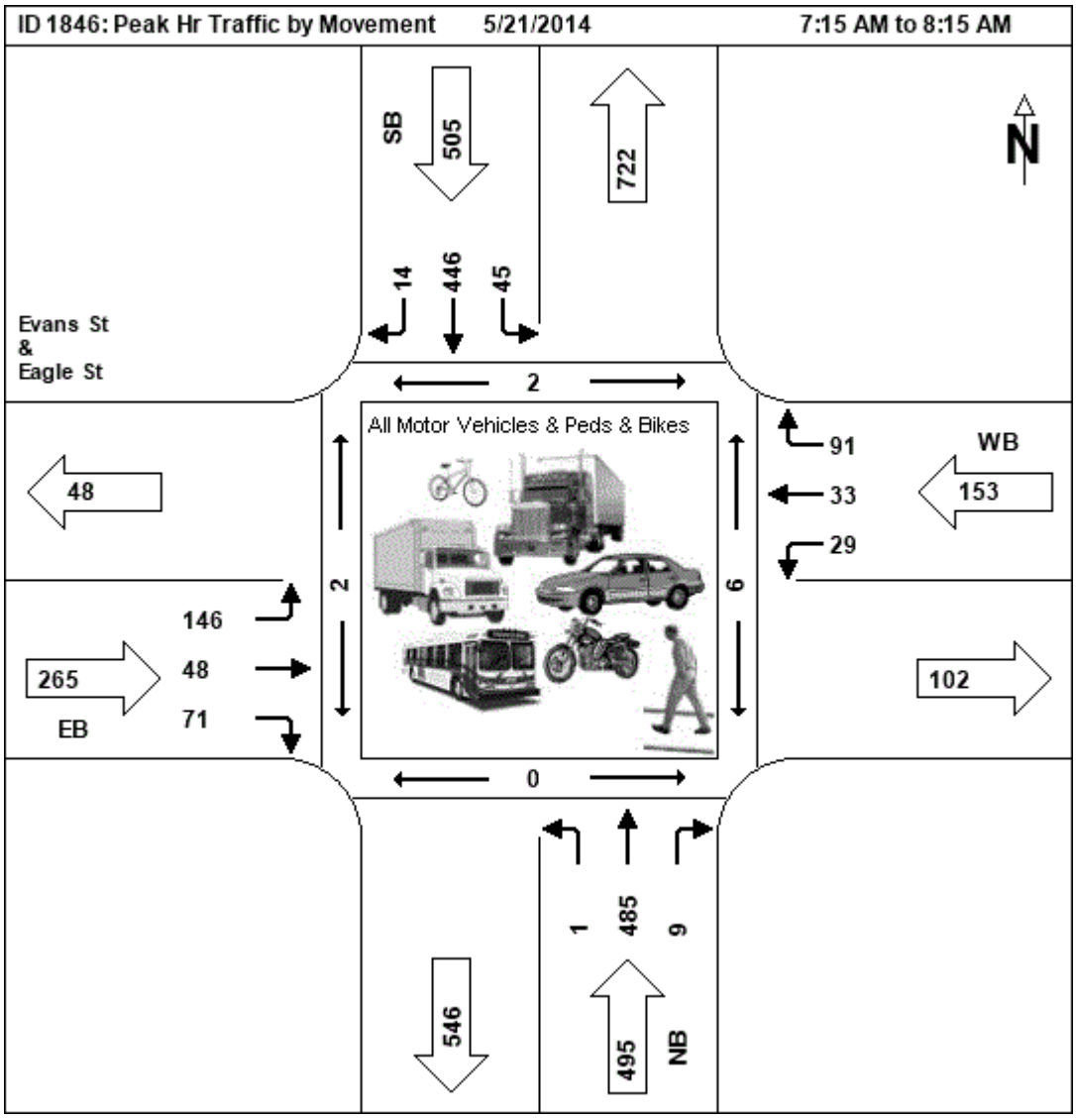
Int ID: 1846
Community: Amherst
Road 1: Evans St
Road 2: Eagle St
Corridor:
Road 3:
Road 4:

|<< < > >>| 1-2 of 2

AM Peak Hour
05/21/2014

Start Time	NB Left	NB Thru	NB Right	NB Ped	NB App Total	EB Left	EB Thru	EB Right	EB Ped	EB App Total	SB Left	SB Thru	SB Right	SB Ped	SB App Total	WB Left	WB Thru	WB Right	WB Ped	WB App Total	Int Total
7:15 AM	0	120	2	2	122	16	7	25	0	48	9	133	2	0	144	0	0	7	1	7	321
7:30 AM	1	133	3	3	137	37	9	19	0	65	11	114	4	1	129	5	10	27	1	42	373
7:45 AM	0	131	2	0	133	51	11	16	0	78	6	103	4	1	113	4	6	25	0	35	359
8:00 AM	0	101	2	1	103	42	21	11	0	74	19	96	4	0	119	20	17	32	0	69	365
Total	1	485	9	6	495	146	48	71	0	265	45	446	14	2	505	29	33	91	2	153	1418
PHF	0.25	0.91	0.75		0.90	0.72	0.57	0.71		0.85	0.59	0.84	0.88		0.88	0.36	0.49	0.71		0.55	
HV %	0	2	11			0	0	0			0	3	7			24	9	5			

☑ Cars ☑ Trucks ☑ Pedestrians ☑ Bikes

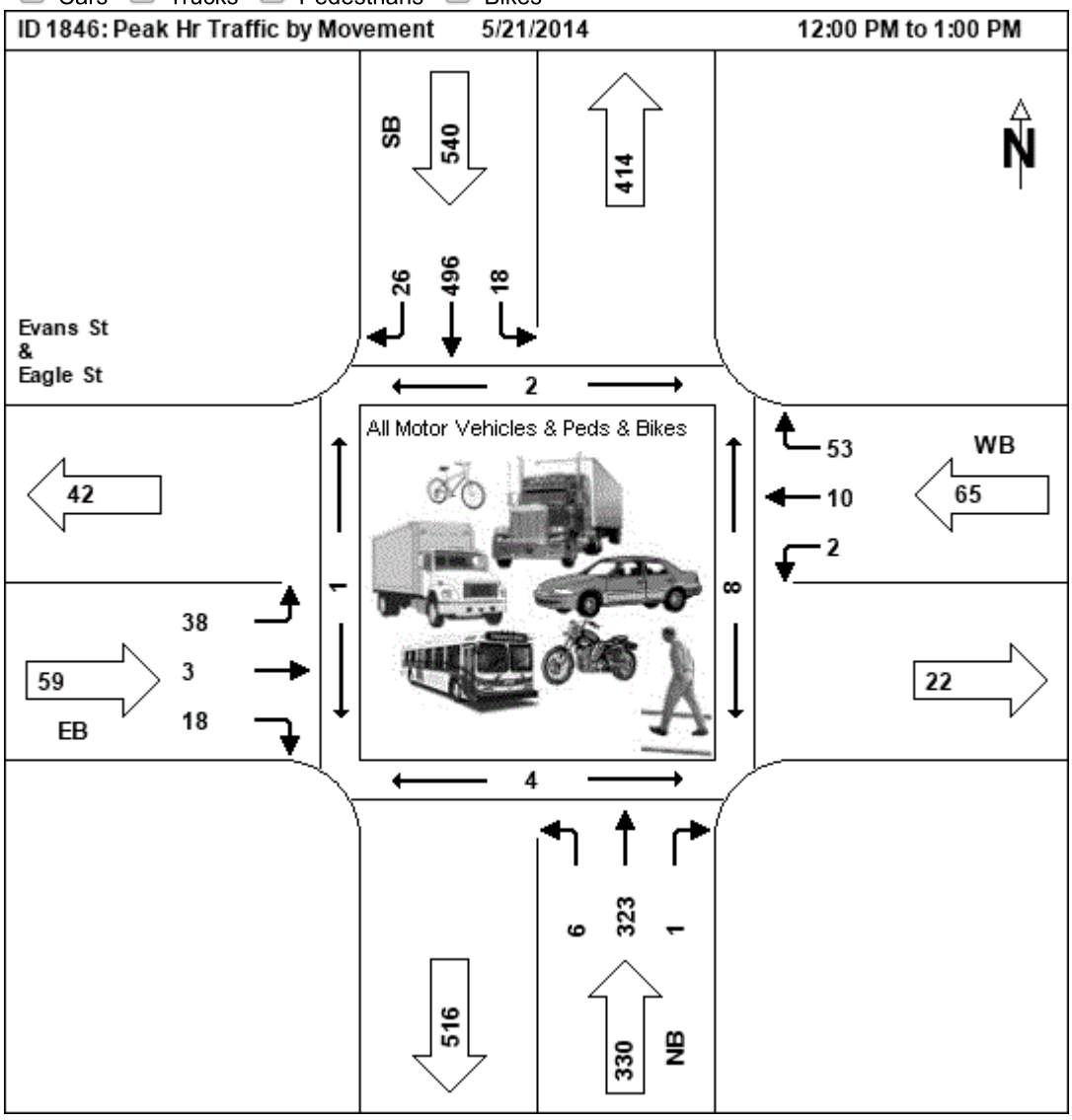


Midday Peak Hour
05/21/2014

Start Time	NB Left	NB Thru	NB Right	NB Ped	NB App Total	EB Left	EB Thru	EB Right	EB Ped	EB App Total	SB Left	SB Thru	SB Right	SB Ped	SB App Total	WB Left	WB Thru	WB Right	WB Ped	WB App Total	Int Total
12:00 PM	1	104	0	4	105	6	0	6	4	12	3	133	8	1	144	1	2	10	0	13	274

12:15 PM	3	90	1	0	94	9	1	3	0	13	4	134	7	0	145	0	3	14	0	17	269
12:30 PM	1	88	0	4	89	12	1	6	0	19	1	114	6	0	121	0	1	15	2	16	245
12:45 PM	1	41	0	0	42	11	1	3	0	15	10	115	5	0	130	1	4	14	0	19	206
Total	6	323	1	8	330	38	3	18	4	59	18	496	26	1	540	2	10	53	2	65	994
PHF	0.50	0.78	0.25		0.79	0.79	0.75	0.75		0.78	0.45	0.93	0.81		0.93	0.50	0.63	0.88		0.86	
HV %	0	2	0			3	0	6			0	2	0			0	10	2			

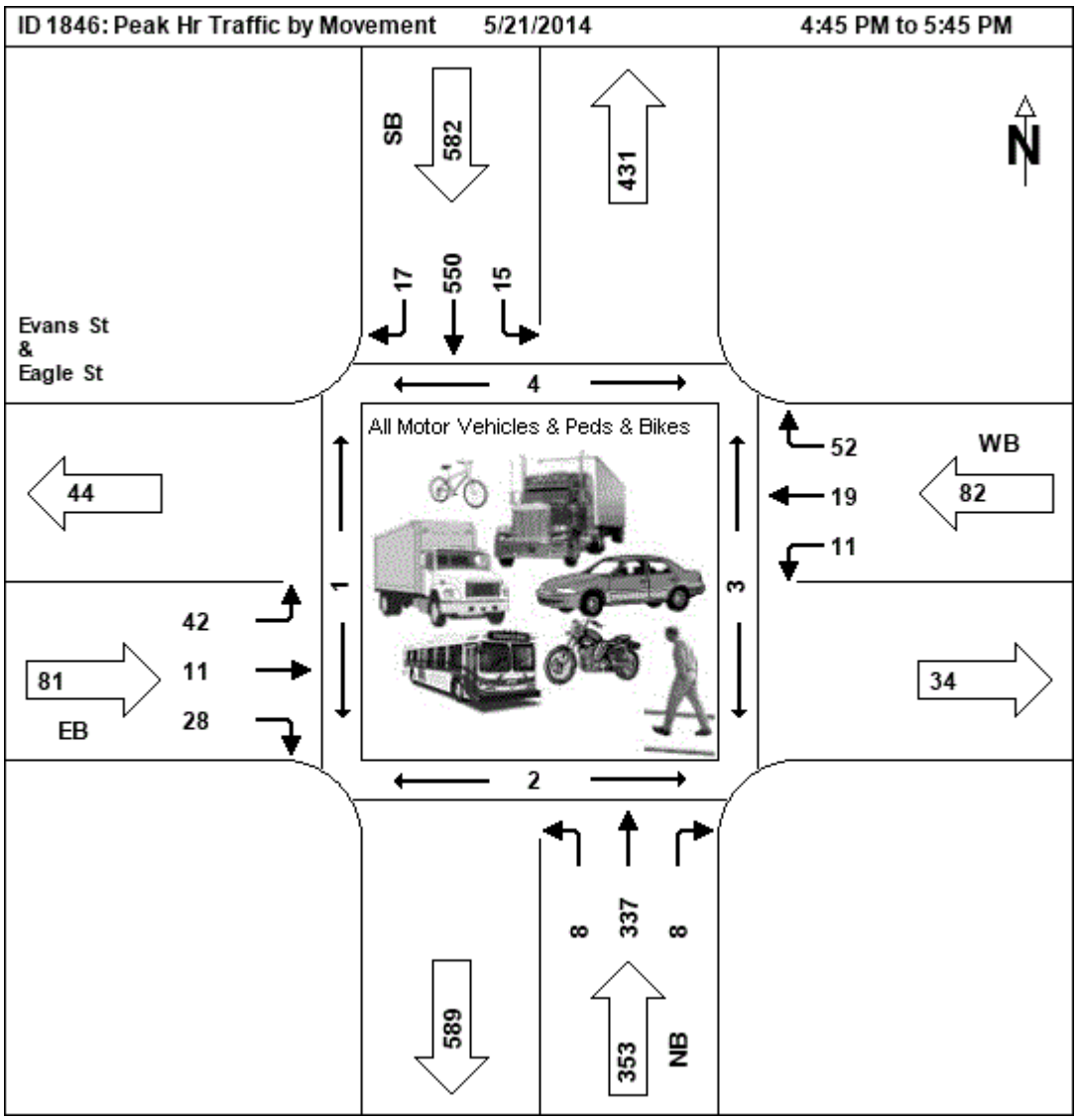
☑ Cars ☑ Trucks ☑ Pedestrians ☑ Bikes



PM Peak Hour
05/21/2014

Start Time	NB Left	NB Thru	NB Right	NB Ped	NB App Total	EB Left	EB Thru	EB Right	EB Ped	EB App Total	SB Left	SB Thru	SB Right	SB Ped	SB App Total	WB Left	WB Thru	WB Right	WB Ped	WB App Total	Int Total
4:45 PM	1	73	1	1	75	14	1	7	0	22	6	124	1	0	131	3	4	22	2	29	257
5:00 PM	4	74	0	2	78	13	2	8	0	23	1	139	7	0	147	2	4	8	0	14	262
5:15 PM	0	100	3	0	103	9	3	9	2	21	3	141	4	1	148	4	6	16	2	26	298
5:30 PM	3	90	4	0	97	6	5	4	0	15	5	146	5	0	156	2	5	6	0	13	281
Total	8	337	8	3	353	42	11	28	2	81	15	550	17	1	582	11	19	52	4	82	1098
PHF	0.50	0.84	0.50		0.86	0.75	0.55	0.78		0.88	0.63	0.94	0.61		0.93	0.69	0.79	0.59		0.71	
HV %	0	1	0			2	0	0			0	1	0			0	0	0			

☑ Cars ☑ Trucks ☑ Pedestrians ☑ Bikes


ID 1846: Peak Hr Traffic by Movement
5/21/2014
4:45 PM to 5:45 PM
SB
582
431
17
550
15
Evans St
&
Eagle St
4
All Motor Vehicles & Peds & Bikes
52
19
11
WB
82
44
1
3
42
11
28
81
EB
34
2
8
337
8
589
353
NB

Peak Hour Data for Intersection

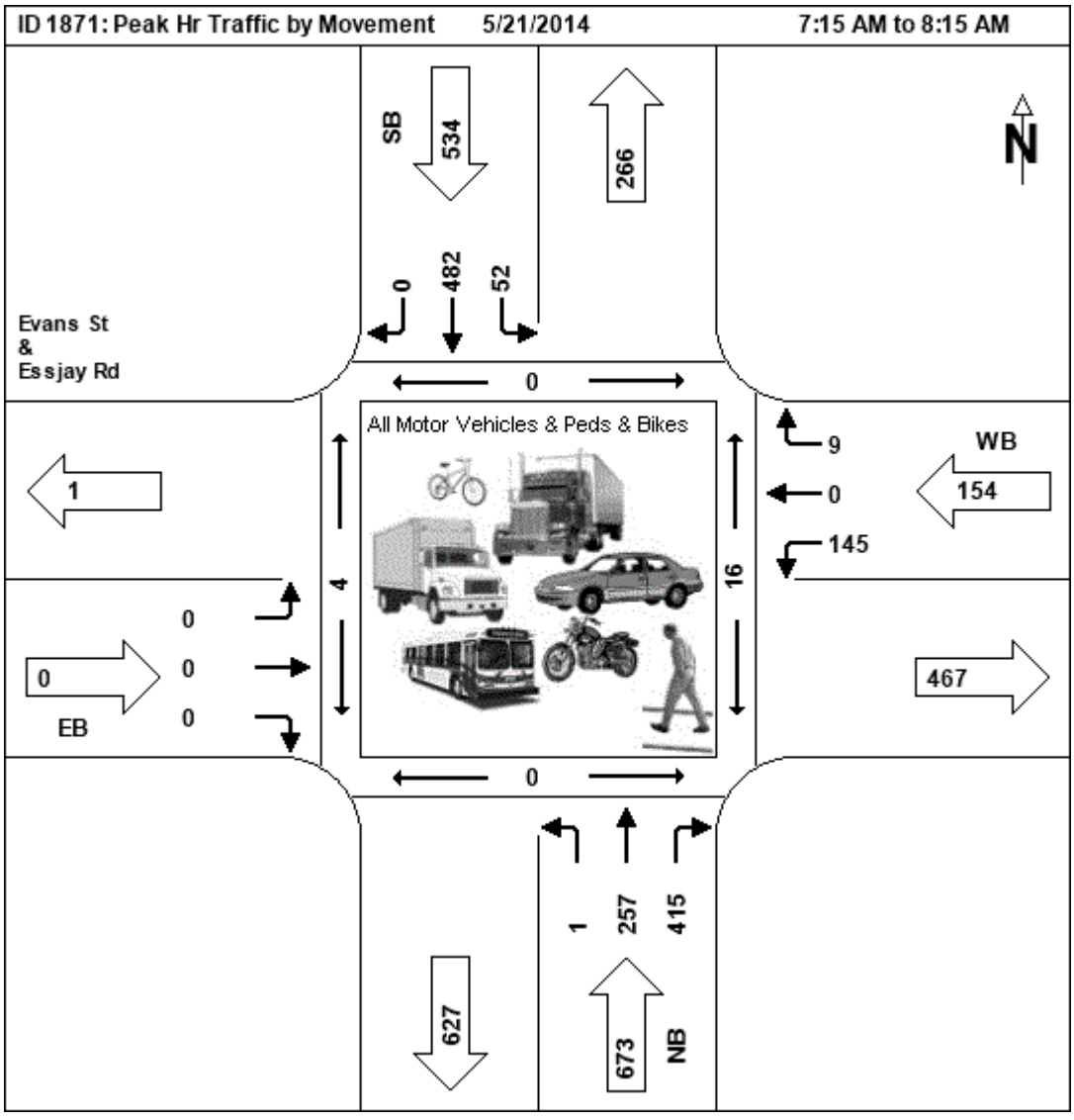
Int ID: 1871
Community: Amherst
Road 1: Evans St
Road 2: Essjay Rd
Corridor:
Road 3:
Road 4:

|<< < > >>| 1-1 of 1

AM Peak Hour
05/21/2014

Start Time	NB Left	NB Thru	NB Right	NB Ped	NB App Total	EB Left	EB Thru	EB Right	EB Ped	EB App Total	SB Left	SB Thru	SB Right	SB Ped	SB App Total	WB Left	WB Thru	WB Right	WB Ped	WB App Total	Int Total
7:15 AM	0	58	70	12	128	0	0	0	0	0	4	130	0	1	134	43	0	1	0	44	306
7:30 AM	0	81	131	0	212	0	0	0	0	0	13	140	0	2	153	28	0	1	0	29	394
7:45 AM	0	51	137	1	188	0	0	0	0	0	14	101	0	1	115	43	0	5	0	48	351
8:00 AM	1	67	77	3	145	0	0	0	0	0	21	111	0	0	132	31	0	2	0	33	310
Total	1	257	415	16	673	0	0	0	0	0	52	482	0	4	534	145	0	9	0	154	1361
PHF	0.25	0.79	0.76		0.79						0.62	0.86			0.87	0.84		0.45		0.80	
HV %	0	7	0								0	1				1		0			

Cars Trucks Pedestrians Bikes

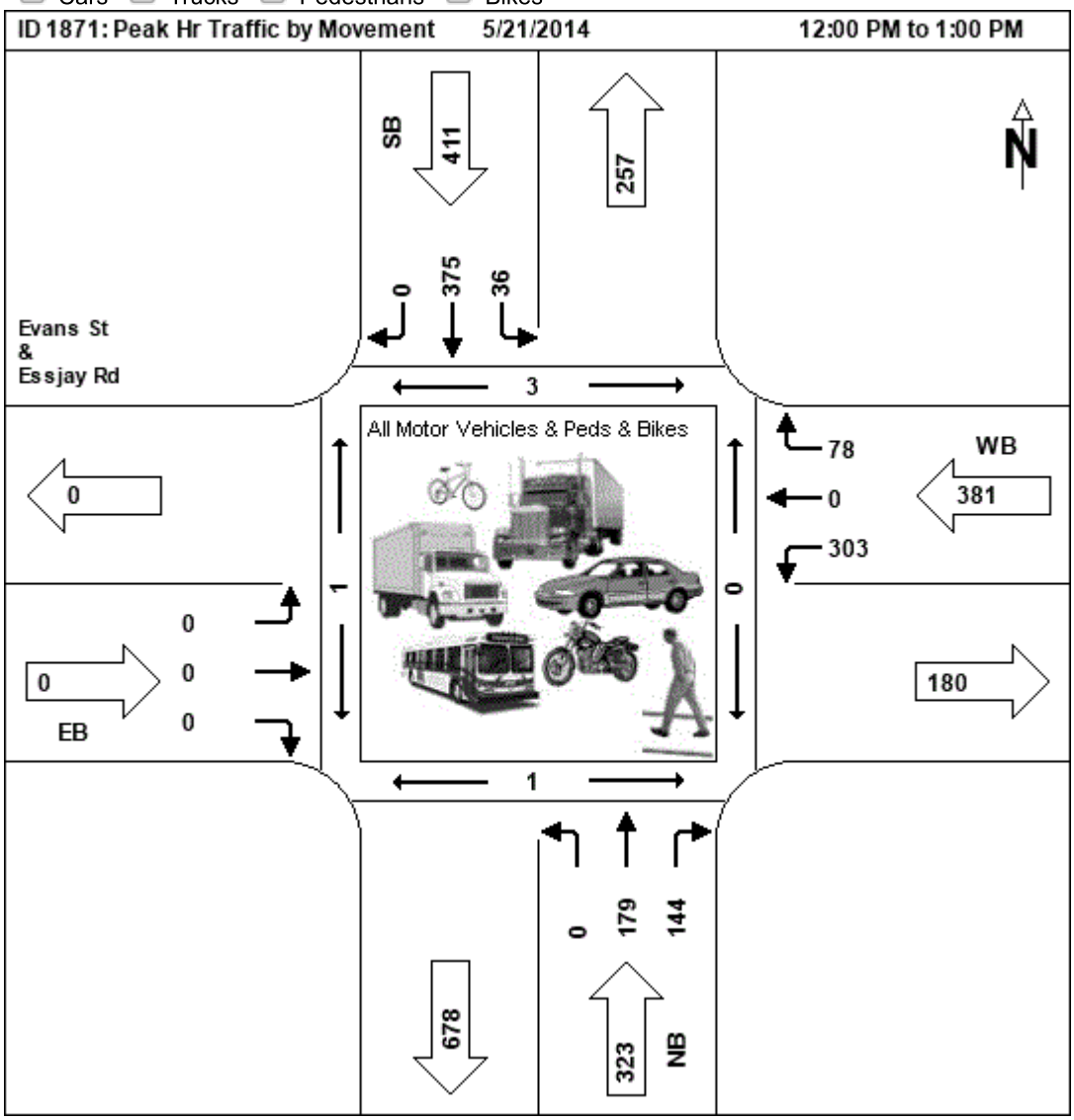


Midday Peak Hour
05/21/2014

Start Time	NB Left	NB Thru	NB Right	NB Ped	NB App Total	EB Left	EB Thru	EB Right	EB Ped	EB App Total	SB Left	SB Thru	SB Right	SB Ped	SB App Total	WB Left	WB Thru	WB Right	WB Ped	WB App Total	Int Total
12:00 PM	0	46	22	0	68	0	0	0	1	0	10	109	0	1	119	93	0	27	3	120	307

12:15 PM	0	49	43	0	92	0	0	0	0	0	13	95	0	0	108	72	0	16	0	88	288
12:30 PM	0	40	38	0	78	0	0	0	0	0	5	87	0	0	92	74	0	21	0	95	265
12:45 PM	0	44	41	0	85	0	0	0	0	0	8	84	0	0	92	64	0	14	0	78	255
Total	0	179	144	0	323	0	0	0	1	0	36	375	0	1	411	303	0	78	3	381	1115
PHF		0.91	0.84		0.88						0.69	0.86			0.86	0.81		0.72		0.79	
HV %		3	1								0	1				0		0			

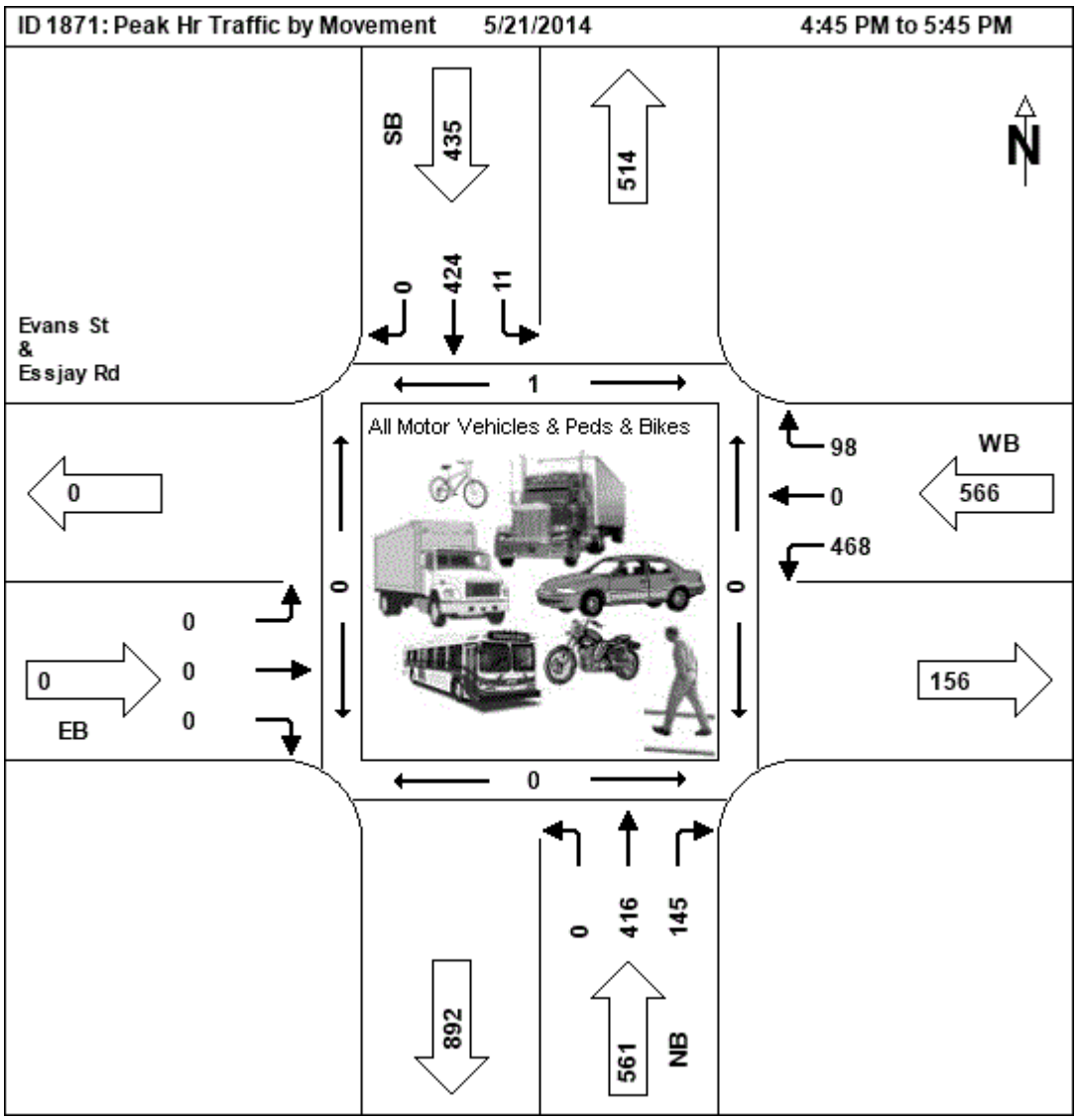
☑ Cars ☑ Trucks ☑ Pedestrians ☑ Bikes



PM Peak Hour
05/21/2014

	NB					EB					SB					WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:45 PM	0	95	39	0	134	0	0	0	0	0	1	113	0	0	114	107	0	26	0	133	381
5:00 PM	0	99	33	0	132	0	0	0	0	0	3	77	0	0	80	138	0	36	0	174	386
5:15 PM	0	124	33	0	157	0	0	0	0	0	2	108	0	0	110	106	0	16	0	122	389
5:30 PM	0	98	40	0	138	0	0	0	0	0	5	126	0	0	131	117	0	20	1	137	406
Total	0	416	145	0	561	0	0	0	0	0	11	424	0	0	435	468	0	98	1	566	1562
PHF		0.84	0.91		0.89						0.55	0.84			0.83	0.85		0.68		0.81	
HV %		1	1								0	0				0		0			

☑ Cars ☑ Trucks ☑ Pedestrians ☑ Bikes


ID 1871: Peak Hr Traffic by Movement
5/21/2014
4:45 PM to 5:45 PM
SB
435
514
0
424
11
Evans St
&
Essjay Rd
1
All Motor Vehicles & Peds & Bikes
98
WB
0
566
468
0
0
0
0
0
0
EB
156
0
892
0
416
145
561
NB

From:	DePriest, Keaton
To:	Paul Valente
Subject:	RE: Williamsville Development
Date:	Wednesday, June 26, 2019 11:24:20 AM
Attachments:	image001.png

Good morning Paul,

At this time, there are no major road construction projects occurring within the village limits.

We only have a few repaving projects scheduled for this summer on village roads.

As far as development, there are really no major projects under construction in that section of the village. There are two housing developments set to be constructed in the southwest portion of the village, which I wouldn't say is in the vicinity of Eagle and Evans streets.

If you need anything further, please let me know!

Keaton

Keaton T. DePriest
Director of Community Development
Village of Williamsville
716-632-4120 ext. 3017

www.walkablewilliamsville.com

From: Paul Valente [mailto:pvalente@srfa.net]
Sent: Tuesday, June 25, 2019 3:50 PM
To: DePriest, Keaton <kdepriest@village.williamsville.ny.us>
Subject: Williamsville Development

Good Afternoon Keaton,

I'm contacting you in regards to a traffic study I am working on in the Village of Williamsville near the intersection of Eagle Street/Evans Street. Could you provide me any info about projects under construction or approved for construction in the vicinity that we should include in our traffic analysis. Please feel free to give me a call at (585)-272-4660 if you have any questions for me. Thanks.

Paul Valente, F.E.
Transportation Engineer/Designer

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
VILLAGE OF WILLIAMSVILLE, NY
AM PEAK

			Num of yrs 1								
LOCATION NUMBER	INTERSECTION DESCRIPTION	2019 Existing Volume	Bkgd Volume 0.50%	Existing Site Trips	2020 Background Volume	Proposed Apartments Enter Dist. %	Exit Dist. %	Trips IN 10	Trips OUT 32	Total Site Trips	FULL Build Volumes
1	Proposed Driveway Village Pointe Lane										
	SR ST SL	7	7		7	25%		3		3	3 7
	WR WT WL										
	NR NT NL	10	10		10						10
	ER ET EL						45%		14	14	14
2	Essjay Road Village Pointe Lane										
	SR ST SL	3 1 1	3 1 1		3 1 1						3 1 1
	WR WT WL	2 168	2 169		2 169	25%		3		3	2 169 3
	NR NT NL	2 8	2 8		2 8		25% 20%		8 6	8 6	10 14
	ER ET EL	6 518 12	6 521 12		6 521 12						6 521 12

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
VILLAGE OF WILLIAMSVILLE, NY
AM PEAK

Num of yrs: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2019 Existing Volume	Bkgd Volume 0.50%	Existing Site Trips	2020 Background Volume	Proposed Apartments				Total Site Trips	FULL Build Volumes
						Enter Dist. %	Exit Dist. %	Trips IN 10	Trips OUT 32		
3	Essjay Road Evans Street										
	SR										
	ST	472	474	-5	469	35%		4		4	473
	SL	50	50		50						50
	WR	23	23		23		10%		3	3	26
	WT										
	WL	135	136		136		10%		3	3	139
	NR	417	419		419						419
	NT	269	270	-1	269		25%		8	8	277
	NL										
	ER										
	ET										
	EL										
4	Existing North Driveway Evans Street										
	SR										
	ST	607	610	-1	609		10%		3	3	612
	SL	4	4	-4		35%		4		4	4
	WR						25%		8	8	8
	WT										
	WL						30%		10	10	10
	NR					40%		4		4	4
	NT	686	689	-1	688						688
	NL										
	ER										
	ET										
	EL										

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
VILLAGE OF WILLIAMSVILLE, NY
AM PEAK

Num of yrs: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2019 Existing Volume	Bkgd Volume 0.50%	Existing Site Trips	2020 Background Volume	Proposed Apartments				Total Site Trips	FULL Build Volumes
						Enter Dist. %	Exit Dist. %	Trips IN 10	Trips OUT 32		
5	Existing South Driveway Evans Street										
	SR										
	ST	590	593		593		40%		13	13	606
	SL	1	1	-1							
	WR	1	1	-1							
	WT										
	WL										
	NR	1	1	-1							
	NT	667	670		670	40%		4		4	674
	NL										
	ER										
	ET										
	EL										
6	Eagle Street Evans Street										
	SR	17	17		17						17
	ST	553	556		556		40%		13	13	569
	SL	20	20		20						20
	WR	53	53		53						53
	WT	17	17		17						17
	WL	7	7		7						7
	NR	6	6		6						6
	NT	520	523	-1	522	40%		4		4	526
	NL	2	2		2						2
	ER	71	71		71						71
	ET	22	22		22						22
	EL	94	94		94						94

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
VILLAGE OF WILLIAMSVILLE, NY
PM PEAK

Num of yrs: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2019 Existing Volume	Bkgd Volume 0.50%	Existing Site Trips	2020 Background Volume	Proposed Apartments				Total Site Trips	FULL Build Volumes
						Enter Dist. %	Exit Dist. %	Trips IN 33	Trips OUT 19		
1	Proposed Driveway Village Pointe Lane										
	SR					25%		8		8	8
	ST	13	13		13						13
	SL										
	WR										
	WT										
	WL										
	NR										
	NT	7	7		7						7
	NL										
	ER										
	ET										
	EL						45%		9	9	9
2	Essjay Road Village Pointe Lane										
	SR	21	21		21						21
	ST										
	SL	1	1		1						1
	WR										
	WT	657	660		660						660
	WL	3	3		3	25%		8		8	11
	NR	3	3		3		25%		5	5	8
	NT										
	NL	4	4		4		20%		4	4	8
	ER	10	10		10						10
	ET	207	208		208						208
	EL	3	3		3						3

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
VILLAGE OF WILLIAMSVILLE, NY
PM PEAK

Num of yrs: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2019 Existing Volume	Bkgd Volume 0.50%	Existing Site Trips	2020 Background Volume	Proposed Apartments				Total Site Trips	FULL Build Volumes
						Enter Dist. %	Exit Dist. %	Trips IN 33	Trips OUT 19		
3	Essjay Road Evans Street										
	SR										
	ST	409	411	-2	409	35%		12		12	421
	SL	18	18		18						18
	WR	143	144		144		10%		2	2	146
	WT										
	WL	512	515		515		10%		2	2	517
	NR	199	200		200						200
	NT	477	479	-6	473		25%		5	5	478
	NL										
	ER										
	ET										
	EL										
4	Existing North Driveway Evans Street										
	SR										
	ST	921	926	-2	924		10%		2	2	926
	SL					35%		12		12	12
	WR	5	5	-5			25%		5	5	5
	WT										
	WL	4	4	-4			30%		6	6	6
	NR					40%		13		13	13
	NT	676	679	-1	678						678
	NL										
	ER										
	ET										
	EL										

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
VILLAGE OF WILLIAMSVILLE, NY
PM PEAK

Num of yrs: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2019 Existing Volume	Bkgd Volume 0.50%	Existing Site Trips	2020 Background Volume	Proposed Apartments				Total Site Trips	FULL Build Volumes
						Enter Dist. %	Exit Dist. %	Trips IN 33	Trips OUT 19		
5	Existing South Driveway Evans Street										
	SR										
	ST	633	636	-4	632		40%		8	8	640
	SL	2	2	-2							
	WR	1	1	-1							
	WT										
	WL	2	2	-2							
	NR	4	4	-4							
	NT	668	671		671	40%		13		13	684
	NL										
	ER										
	ET										
	EL										
6	Eagle Street Evans Street										
	SR	28	28		28						28
	ST	598	601	-6	595		40%		8	8	603
	SL	7	7		7						7
	WR	48	48		48						48
	WT	17	17		17						17
	WL	2	2		2						2
	NR	2	2		2						2
	NT	573	576	-4	572	40%		13		13	585
	NL	20	20		20						20
	ER	40	40		40						40
	ET	2	2		2						2
	EL	47	47		47						47

Project Information	
Project Name:	135 Evans Street
No:	39041
Date:	6/13/2019
City:	Williamsville
State/Province:	New York
Zip/Postal Code:	
Country:	
Client Name:	People Inc.
Analyst's Name:	SRF & Associates
Edition:	ITE-TGM 10th Edition

Land Use	Units	AM Peak (8:00-9:00)		PM Peak (4:30-5:30)	
		Entry	Exit	Entry	Exit
Apartments (ITE 220)	87	10	32	33	19
Total Trips		10	32	33	19

SRF & Associates
Traffic Engineering & Planning Consultants

3495 Winton Place, Building E, Suite 110
Rochester, New York 14623
(585) 272-4660 (Phone) (585) 272-4662 (Fax)

Project: 135 Evans St. Proposed Apartments (TIS)

Project No: 39041
Date: 6/19
Observer: AGF
Peak: AM

Signal Timing Worksheet

Street: Evans Street			
↰↳	↓↳	↰↑	↓↑
			2.06
			0.47
			0.47
			0.46
			0.46
			0.47
			2.11
			0.48

Street: ESSjay ↰ ↱			
↱↓	→	←	←
			0.18
			0.16
			0.16
			0.18
			0.18
			0.16
			0.18
			0.18

Average Timings

			1.21

			0.17

Phasing Plan

SRF & Associates
Traffic Engineering & Planning Consultants

3495 Winton Place, Building E, Suite 110
Rochester, New York 14623
(585) 272-4660 (Phone) (585) 272-4662 (Fax)

Project: EVANS STREET APARTMENTS

Project No: 39041

Date: 6/27/2019

Observer: MIKE MEADOWS

Peak: PM PEAK

Signal Timing Worksheet

Street: EVANS STREET

↓ ↑
RED .37
~~.45~~
44
43
42
42
41
41
42

Street: ESSJAY ROAD

← ↓
.45
.32
.46
38
35
36
36
21

Average Timings

			43

		36	

Phasing Plan

A3

Level of Service:
Criteria and Definitions

Level of Service Criteria

Highway Capacity Manual 2016

SIGNALIZED INTERSECTIONS

Level of Service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15 minute analysis period. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	>80

UNSIGNALIZED INTERSECTIONS

Level of Service for unsignalized intersections is also defined in terms of delay. However, the delay criteria are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. The total delay threshold for any given Level of Service is less for an unsignalized intersection than for a signalized intersection. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 - 50
F	>50

A4

Level of Service Calculations: Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	518	6	0	168	2	8	0	2	1	1	3
Future Volume (vph)	12	518	6	0	168	2	8	0	2	1	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.999			0.975			0.925	
Flt Protected		0.999						0.961			0.989	
Satd. Flow (prot)	0	1859	0	0	1861	0	0	1745	0	0	1704	0
Flt Permitted		0.999						0.961			0.989	
Satd. Flow (perm)	0	1859	0	0	1861	0	0	1745	0	0	1704	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		470			427			585			255	
Travel Time (s)		10.7			9.7			13.3			5.8	
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.63	0.63	0.63	0.63	0.63	0.63
Adj. Flow (vph)	13	557	6	0	202	2	13	0	3	2	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	576	0	0	204	0	0	16	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	518	6	0	168	2	8	0	2	1	1	3
Future Vol, veh/h	12	518	6	0	168	2	8	0	2	1	1	3
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	83	83	83	63	63	63	63	63	63
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	557	6	0	202	2	13	0	3	2	2	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	204	0	0	563	0	0	793	790	560	791	792	203
Stage 1	-	-	-	-	-	-	586	586	-	203	203	-
Stage 2	-	-	-	-	-	-	207	204	-	588	589	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1368	-	-	1008	-	-	306	322	528	307	322	838
Stage 1	-	-	-	-	-	-	496	497	-	799	733	-
Stage 2	-	-	-	-	-	-	795	733	-	495	495	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1368	-	-	1008	-	-	300	317	528	302	317	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	300	317	-	302	317	-
Stage 1	-	-	-	-	-	-	489	490	-	788	733	-
Stage 2	-	-	-	-	-	-	789	733	-	485	488	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	16.5	12.3
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	328	1368	-	-	1008	-	-	498
HCM Lane V/C Ratio	0.048	0.009	-	-	-	-	-	0.016
HCM Control Delay (s)	16.5	7.7	0	-	0	-	-	12.3
HCM Lane LOS	C	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	135	23	269	417	50	472
Future Volume (vph)	135	23	269	417	50	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	305		130	125	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.576	
Satd. Flow (perm)	1770	1583	1863	1583	1073	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		28		469		
Link Speed (mph)	30		30			30
Link Distance (ft)	470		453			451
Travel Time (s)	10.7		10.3			10.3
Peak Hour Factor	0.81	0.81	0.89	0.89	0.90	0.90
Adj. Flow (vph)	167	28	302	469	56	524
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	28	302	469	56	524
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	14.0	14.0	43.0	43.0	43.0	43.0
Minimum Split (s)	18.0	18.0	47.0	47.0	47.0	47.0
Total Split (s)	18.0	18.0	47.0	47.0	47.0	47.0
Total Split (%)	27.7%	27.7%	72.3%	72.3%	72.3%	72.3%
Maximum Green (s)	14.0	14.0	43.0	43.0	43.0	43.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	14.2	14.2	44.8	44.8	44.8	44.8
Actuated g/C Ratio	0.23	0.23	0.73	0.73	0.73	0.73
v/c Ratio	0.41	0.07	0.22	0.37	0.07	0.39
Control Delay	25.5	9.3	4.7	1.4	4.2	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	9.3	4.7	1.4	4.2	5.8
LOS	C	A	A	A	A	A
Approach Delay	23.2		2.7			5.6
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 61.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Evans St & Essjay Rd

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	686	0	4	607
Future Volume (vph)	0	0	686	0	4	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	1863	0	1863	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	1863	0	1863	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	294		391			453
Travel Time (s)	6.7		8.9			10.3
Peak Hour Factor	0.50	0.50	0.89	0.89	0.90	0.90
Adj. Flow (vph)	0	0	771	0	4	674
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	771	0	4	674
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	686	0	4	607
Future Vol, veh/h	0	0	686	0	4	607
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	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	771	0	4	674

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1453	771	0	0	771	0
Stage 1	771	-	-	-	-	-
Stage 2	682	-	-	-	-	-
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	144	400	-	-	844	-
Stage 1	456	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	143	400	-	-	844	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	456	-	-	-	-	-
Stage 2	499	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	844	-
HCM Lane V/C Ratio	-	-	-	0.005	-
HCM Control Delay (s)	-	-	0	9.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	667	1	1	590
Future Volume (vph)	0	1	667	1	1	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1611	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1611	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	307		689			391
Travel Time (s)	7.0		15.7			8.9
Peak Hour Factor	0.50	0.50	0.89	0.89	0.90	0.90
Adj. Flow (vph)	0	2	749	1	1	656
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	750	0	0	657
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	667	1	1	590
Future Vol, veh/h	0	1	667	1	1	590
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	50	50	89	89	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	749	1	1	656

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1408	750	0	0	750	0
Stage 1	750	-	-	-	-	-
Stage 2	658	-	-	-	-	-
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	153	411	-	-	859	-
Stage 1	467	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	153	411	-	-	859	-
Mov Cap-2 Maneuver	153	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	514	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	411	859	-
HCM Lane V/C Ratio	-	-	0.005	0.001	-
HCM Control Delay (s)	-	-	13.8	9.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	22	71	7	17	53	2	520	6	20	553	17
Future Volume (vph)	94	22	71	7	17	53	2	520	6	20	553	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.949			0.907			0.999			0.996	
Flt Protected		0.975			0.996						0.998	
Satd. Flow (prot)	0	1724	0	0	1683	0	0	1861	0	0	1852	0
Flt Permitted		0.975			0.996						0.998	
Satd. Flow (perm)	0	1724	0	0	1683	0	0	1861	0	0	1852	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			427			282			689	
Travel Time (s)		7.6			9.7			6.4			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.57	0.57	0.57	0.97	0.97	0.97	0.95	0.95	0.95
Adj. Flow (vph)	121	28	91	12	30	93	2	536	6	21	582	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	0	0	135	0	0	544	0	0	621	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	68.8%	ICU Level of Service C	
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	71.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	22	71	7	17	53	2	520	6	20	553	17
Future Vol, veh/h	94	22	71	7	17	53	2	520	6	20	553	17
Peak Hour Factor	0.78	0.78	0.78	0.57	0.57	0.57	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	28	91	12	30	93	2	536	6	21	582	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.1	14.9	64.7	110.3
HCM LOS	C	B	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	9%	3%
Vol Thru, %	98%	12%	22%	94%
Vol Right, %	1%	38%	69%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	528	187	77	590
LT Vol	2	94	7	20
Through Vol	520	22	17	553
RT Vol	6	71	53	17
Lane Flow Rate	544	240	135	621
Geometry Grp	1	1	1	1
Degree of Util (X)	0.996	0.508	0.296	1.147
Departure Headway (Hd)	6.924	8.062	8.389	6.651
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	528	451	431	547
Service Time	4.924	6.062	6.389	4.719
HCM Lane V/C Ratio	1.03	0.532	0.313	1.135
HCM Control Delay	64.7	19.1	14.9	110.3
HCM Lane LOS	F	C	B	F
HCM 95th-tile Q	13.8	2.8	1.2	20.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	207	10	3	657	0	4	0	3	1	0	21
Future Volume (vph)	3	207	10	3	657	0	4	0	3	1	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994						0.944			0.872	
Flt Protected		0.999						0.972			0.997	
Satd. Flow (prot)	0	1850	0	0	1863	0	0	1709	0	0	1619	0
Flt Permitted		0.999						0.972			0.997	
Satd. Flow (perm)	0	1850	0	0	1863	0	0	1709	0	0	1619	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		470			427			585			255	
Travel Time (s)		10.7			9.7			13.3			5.8	
Peak Hour Factor	0.97	0.97	0.97	0.79	0.79	0.79	0.58	0.58	0.58	0.61	0.61	0.61
Adj. Flow (vph)	3	213	10	4	832	0	7	0	5	2	0	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	0	0	836	0	0	12	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	207	10	3	657	0	4	0	3	1	0	21
Future Vol, veh/h	3	207	10	3	657	0	4	0	3	1	0	21
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	79	79	79	58	58	58	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	213	10	4	832	0	7	0	5	2	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	832	0	0	223	0	0	1081	1064	218	1067	1069	832
Stage 1	-	-	-	-	-	-	224	224	-	840	840	-
Stage 2	-	-	-	-	-	-	857	840	-	227	229	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	801	-	-	1346	-	-	195	223	822	200	221	369
Stage 1	-	-	-	-	-	-	779	718	-	360	381	-
Stage 2	-	-	-	-	-	-	352	381	-	776	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	801	-	-	1346	-	-	176	221	822	197	219	369
Mov Cap-2 Maneuver	-	-	-	-	-	-	176	221	-	197	219	-
Stage 1	-	-	-	-	-	-	776	715	-	359	379	-
Stage 2	-	-	-	-	-	-	317	379	-	768	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	19.2	16.3
HCM LOS			C	C

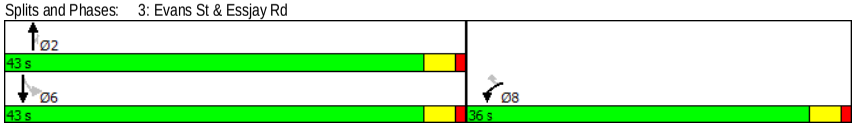
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	265	801	-	-	1346	-	-	355
HCM Lane V/C Ratio	0.046	0.004	-	-	0.003	-	-	0.102
HCM Control Delay (s)	19.2	9.5	0	-	7.7	0	-	16.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	512	143	477	199	18	409
Future Volume (vph)	512	143	477	199	18	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	305		130	125	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.310	
Satd. Flow (perm)	1770	1583	1863	1583	577	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		181		224		
Link Speed (mph)	30		30			30
Link Distance (ft)	470		453			451
Travel Time (s)	10.7		10.3			10.3
Peak Hour Factor	0.79	0.79	0.89	0.89	0.89	0.89
Adj. Flow (vph)	648	181	536	224	20	460
Shared Lane Traffic (%)						
Lane Group Flow (vph)	648	181	536	224	20	460
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	32.0	32.0	39.0	39.0	39.0	39.0
Minimum Split (s)	36.0	36.0	43.0	43.0	43.0	43.0
Total Split (s)	36.0	36.0	43.0	43.0	43.0	43.0
Total Split (%)	45.6%	45.6%	54.4%	54.4%	54.4%	54.4%
Maximum Green (s)	32.0	32.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	32.0	32.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.41	0.41	0.49	0.49	0.49	0.49
v/c Ratio	0.91	0.24	0.58	0.25	0.07	0.50
Control Delay	41.1	3.5	17.4	2.5	11.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	3.5	17.4	2.5	11.4	15.8
LOS	D	A	B	A	B	B
Approach Delay	32.9		13.0			15.7
Approach LOS	C		B			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 79			
Actuated Cycle Length: 79			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 21.6		Intersection LOS: C	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Evans St & Essjay Rd



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	5	676	0	0	921
Future Volume (vph)	4	5	676	0	0	921
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925					
Flt Protected	0.978					
Satd. Flow (prot)	1685	0	1863	0	1863	1863
Flt Permitted	0.978					
Satd. Flow (perm)	1685	0	1863	0	1863	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	294		391			453
Travel Time (s)	6.7		8.9			10.3
Peak Hour Factor	0.50	0.50	0.89	0.89	0.89	0.89
Adj. Flow (vph)	8	10	760	0	0	1035
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	760	0	0	1035
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.5%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	5	676	0	0	921
Future Vol, veh/h	4	5	676	0	0	921
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	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	760	0	0	1035

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1795	760	0	0	760	0
Stage 1	760	-	-	-	-	-
Stage 2	1035	-	-	-	-	-
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	88	406	-	-	852	-
Stage 1	462	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	88	406	-	-	852	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	462	-	-	-	-	-
Stage 2	342	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.1	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	156	852	-
HCM Lane V/C Ratio	-	-	0.115	-	-
HCM Control Delay (s)	-	-	31.1	0	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	1	668	4	2	633
Future Volume (vph)	2	1	668	4	2	633
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955		0.999			
Flt Protected	0.968					
Satd. Flow (prot)	1722	0	1861	0	0	1863
Flt Permitted	0.968					
Satd. Flow (perm)	1722	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	307		689			391
Travel Time (s)	7.0		15.7			8.9
Peak Hour Factor	0.50	0.50	0.89	0.89	0.89	0.89
Adj. Flow (vph)	4	2	751	4	2	711
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	755	0	0	713
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	1	668	4	2	633
Future Vol, veh/h	2	1	668	4	2	633
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	50	50	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	2	751	4	2	711

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1468	753	0	0	755	0
Stage 1	753	-	-	-	-	-
Stage 2	715	-	-	-	-	-
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	141	410	-	-	855	-
Stage 1	465	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	140	410	-	-	855	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	483	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.8	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	179	855	-
HCM Lane V/C Ratio	-	-	0.034	0.003	-
HCM Control Delay (s)	-	-	25.8	9.2	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	2	40	2	17	48	20	573	2	7	598	28
Future Volume (vph)	47	2	40	2	17	48	20	573	2	7	598	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939			0.903						0.994	
Flt Protected		0.974			0.998			0.998			0.999	
Satd. Flow (prot)	0	1704	0	0	1679	0	0	1859	0	0	1850	0
Flt Permitted		0.974			0.998			0.998			0.999	
Satd. Flow (perm)	0	1704	0	0	1679	0	0	1859	0	0	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			427			282			689	
Travel Time (s)		7.6			9.7			6.4			15.7	
Peak Hour Factor	0.82	0.82	0.82	0.70	0.70	0.70	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	57	2	49	3	24	69	21	603	2	7	636	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	96	0	0	626	0	0	673	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.0%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	58.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	2	40	2	17	48	20	573	2	7	598	28
Future Vol, veh/h	47	2	40	2	17	48	20	573	2	7	598	28
Peak Hour Factor	0.82	0.82	0.82	0.70	0.70	0.70	0.95	0.95	0.95	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	2	49	3	24	69	21	603	2	7	636	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.7	12.1	55.9	74.6
HCM LOS	B	B	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	53%	3%	1%
Vol Thru, %	96%	2%	25%	94%
Vol Right, %	0%	45%	72%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	595	89	67	633
LT Vol	20	47	2	7
Through Vol	573	2	17	598
RT Vol	2	40	48	28
Lane Flow Rate	626	109	96	673
Geometry Grp	1	1	1	1
Degree of Util (X)	0.983	0.219	0.188	1.055
Departure Headway (Hd)	5.816	7.554	7.369	5.64
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	479	490	640
Service Time	3.816	5.554	5.369	3.711
HCM Lane V/C Ratio	1	0.228	0.196	1.052
HCM Control Delay	55.9	12.7	12.1	74.6
HCM Lane LOS	F	B	B	F
HCM 95th-tile Q	14.5	0.8	0.7	18.1

A5

Level of Service Calculations: Background Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	521	6	0	169	2	8	0	2	1	1	3
Future Volume (vph)	12	521	6	0	169	2	8	0	2	1	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.999			0.975			0.925	
Flt Protected		0.999						0.961			0.989	
Satd. Flow (prot)	0	1859	0	0	1861	0	0	1745	0	0	1704	0
Flt Permitted		0.999						0.961			0.989	
Satd. Flow (perm)	0	1859	0	0	1861	0	0	1745	0	0	1704	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		470			427			585			255	
Travel Time (s)		10.7			9.7			13.3			5.8	
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.63	0.63	0.63	0.63	0.63	0.63
Adj. Flow (vph)	13	560	6	0	204	2	13	0	3	2	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	579	0	0	206	0	0	16	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	521	6	0	169	2	8	0	2	1	1	3
Future Vol, veh/h	12	521	6	0	169	2	8	0	2	1	1	3
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	83	83	83	63	63	63	63	63	63
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	560	6	0	204	2	13	0	3	2	2	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	206	0	0	566	0	0	798	795	563	796	797	205
Stage 1	-	-	-	-	-	-	589	589	-	205	205	-
Stage 2	-	-	-	-	-	-	209	206	-	591	592	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1365	-	-	1006	-	-	304	320	526	305	319	836
Stage 1	-	-	-	-	-	-	494	495	-	797	732	-
Stage 2	-	-	-	-	-	-	793	731	-	493	494	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1365	-	-	1006	-	-	298	316	526	300	315	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	298	316	-	300	315	-
Stage 1	-	-	-	-	-	-	487	488	-	786	732	-
Stage 2	-	-	-	-	-	-	787	731	-	483	487	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	16.6	12.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	326	1365	-	-	1006	-	-	495
HCM Lane V/C Ratio	0.049	0.009	-	-	-	-	-	0.016
HCM Control Delay (s)	16.6	7.7	0	-	0	-	-	12.4
HCM Lane LOS	C	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	136	23	269	419	50	469
Future Volume (vph)	136	23	269	419	50	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	305		130	125	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.576	
Satd. Flow (perm)	1770	1583	1863	1583	1073	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		28		471		
Link Speed (mph)	30		30			30
Link Distance (ft)	470		453			451
Travel Time (s)	10.7		10.3			10.3
Peak Hour Factor	0.81	0.81	0.89	0.89	0.90	0.90
Adj. Flow (vph)	168	28	302	471	56	521
Shared Lane Traffic (%)						
Lane Group Flow (vph)	168	28	302	471	56	521
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	14.0	14.0	43.0	43.0	43.0	43.0
Minimum Split (s)	18.0	18.0	47.0	47.0	47.0	47.0
Total Split (s)	18.0	18.0	47.0	47.0	47.0	47.0
Total Split (%)	27.7%	27.7%	72.3%	72.3%	72.3%	72.3%
Maximum Green (s)	14.0	14.0	43.0	43.0	43.0	43.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	14.2	14.2	44.8	44.8	44.8	44.8
Actuated g/C Ratio	0.23	0.23	0.73	0.73	0.73	0.73
v/c Ratio	0.41	0.07	0.22	0.37	0.07	0.38
Control Delay	25.6	9.3	4.7	1.4	4.2	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	9.3	4.7	1.4	4.2	5.8
LOS	C	A	A	A	A	A
Approach Delay	23.2		2.7			5.6
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 61.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Evans St & Essjay Rd

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	688	0	4	609
Future Volume (vph)	0	0	688	0	4	609
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	1863	0	1863	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	1863	0	1863	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	294		391			453
Travel Time (s)	6.7		8.9			10.3
Peak Hour Factor	0.50	0.50	0.89	0.89	0.90	0.90
Adj. Flow (vph)	0	0	773	0	4	677
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	773	0	4	677
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	688	0	4	609
Future Vol, veh/h	0	0	688	0	4	609
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	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	773	0	4	677

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1458	773	0	0	773	0
Stage 1	773	-	-	-	-	-
Stage 2	685	-	-	-	-	-
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	143	399	-	-	842	-
Stage 1	455	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	142	399	-	-	842	-
Mov Cap-2 Maneuver	142	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	498	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	842	-
HCM Lane V/C Ratio	-	-	-	0.005	-
HCM Control Delay (s)	-	-	0	9.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	670	0	0	593
Future Volume (vph)	0	0	670	0	0	593
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	307		689			391
Travel Time (s)	7.0		15.7			8.9
Peak Hour Factor	0.50	0.50	0.89	0.89	0.90	0.90
Adj. Flow (vph)	0	0	753	0	0	659
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	753	0	0	659
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	670	0	0	593
Future Vol, veh/h	0	0	670	0	0	593
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	50	50	89	89	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	753	0	0	659

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1412	753	0	0	753	0
Stage 1	753	-	-	-	-	-
Stage 2	659	-	-	-	-	-
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	152	410	-	-	857	-
Stage 1	465	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	410	-	-	857	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	515	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	857	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	22	71	7	17	53	2	522	6	20	556	17
Future Volume (vph)	94	22	71	7	17	53	2	522	6	20	556	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.949			0.907			0.999			0.996	
Flt Protected		0.975			0.996						0.998	
Satd. Flow (prot)	0	1724	0	0	1683	0	0	1861	0	0	1852	0
Flt Permitted		0.975			0.996						0.998	
Satd. Flow (perm)	0	1724	0	0	1683	0	0	1861	0	0	1852	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			427			282			689	
Travel Time (s)		7.6			9.7			6.4			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.57	0.57	0.57	0.97	0.97	0.97	0.95	0.95	0.95
Adj. Flow (vph)	121	28	91	12	30	93	2	538	6	21	585	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	0	0	135	0	0	546	0	0	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	73
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	22	71	7	17	53	2	522	6	20	556	17
Future Vol, veh/h	94	22	71	7	17	53	2	522	6	20	556	17
Peak Hour Factor	0.78	0.78	0.78	0.57	0.57	0.57	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	28	91	12	30	93	2	538	6	21	585	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.8	14.7	65.8	112.7
HCM LOS	C	B	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	9%	3%
Vol Thru, %	98%	12%	22%	94%
Vol Right, %	1%	38%	69%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	530	187	77	593
LT Vol	2	94	7	20
Through Vol	522	22	17	556
RT Vol	6	71	53	17
Lane Flow Rate	546	240	135	624
Geometry Grp	1	1	1	1
Degree of Util (X)	1	0.508	0.296	1.155
Departure Headway (Hd)	6.934	7.929	8.26	6.659
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	530	458	438	556
Service Time	4.934	5.929	6.26	4.622
HCM Lane V/C Ratio	1.03	0.524	0.308	1.122
HCM Control Delay	65.8	18.8	14.7	112.7
HCM Lane LOS	F	C	B	F
HCM 95th-tile Q	14	2.8	1.2	21.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	208	10	3	660	0	4	0	3	1	0	21
Future Volume (vph)	3	208	10	3	660	0	4	0	3	1	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994						0.944			0.872	
Flt Protected		0.999						0.972			0.997	
Satd. Flow (prot)	0	1850	0	0	1863	0	0	1709	0	0	1619	0
Flt Permitted		0.999						0.972			0.997	
Satd. Flow (perm)	0	1850	0	0	1863	0	0	1709	0	0	1619	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		470			427			585			255	
Travel Time (s)		10.7			9.7			13.3			5.8	
Peak Hour Factor	0.97	0.97	0.97	0.79	0.79	0.79	0.58	0.58	0.58	0.61	0.61	0.61
Adj. Flow (vph)	3	214	10	4	835	0	7	0	5	2	0	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	0	0	839	0	0	12	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	208	10	3	660	0	4	0	3	1	0	21
Future Vol, veh/h	3	208	10	3	660	0	4	0	3	1	0	21
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	79	79	79	58	58	58	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	214	10	4	835	0	7	0	5	2	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	835	0	0	224	0	0	1085	1068	219	1071	1073	835
Stage 1	-	-	-	-	-	-	225	225	-	843	843	-
Stage 2	-	-	-	-	-	-	860	843	-	228	230	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	798	-	-	1345	-	-	194	222	821	198	220	368
Stage 1	-	-	-	-	-	-	778	718	-	358	380	-
Stage 2	-	-	-	-	-	-	351	380	-	775	714	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	798	-	-	1345	-	-	175	220	821	195	218	368
Mov Cap-2 Maneuver	-	-	-	-	-	-	175	220	-	195	218	-
Stage 1	-	-	-	-	-	-	775	715	-	357	378	-
Stage 2	-	-	-	-	-	-	316	378	-	767	711	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	19.3	16.3
HCM LOS			C	C

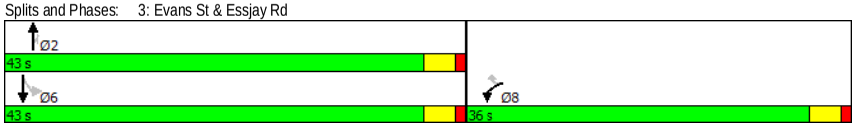
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	264	798	-	-	1345	-	-	354
HCM Lane V/C Ratio	0.046	0.004	-	-	0.003	-	-	0.102
HCM Control Delay (s)	19.3	9.5	0	-	7.7	0	-	16.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	515	144	473	200	18	409
Future Volume (vph)	515	144	473	200	18	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	305		130	125	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.314	
Satd. Flow (perm)	1770	1583	1863	1583	585	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		182		225		
Link Speed (mph)	30		30			30
Link Distance (ft)	470		453			451
Travel Time (s)	10.7		10.3			10.3
Peak Hour Factor	0.79	0.79	0.89	0.89	0.89	0.89
Adj. Flow (vph)	652	182	531	225	20	460
Shared Lane Traffic (%)						
Lane Group Flow (vph)	652	182	531	225	20	460
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	32.0	32.0	39.0	39.0	39.0	39.0
Minimum Split (s)	36.0	36.0	43.0	43.0	43.0	43.0
Total Split (s)	36.0	36.0	43.0	43.0	43.0	43.0
Total Split (%)	45.6%	45.6%	54.4%	54.4%	54.4%	54.4%
Maximum Green (s)	32.0	32.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	32.0	32.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.41	0.41	0.49	0.49	0.49	0.49
v/c Ratio	0.91	0.24	0.58	0.25	0.07	0.50
Control Delay	41.8	3.5	17.3	2.5	11.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	3.5	17.3	2.5	11.4	15.8
LOS	D	A	B	A	B	B
Approach Delay	33.5		12.9			15.6
Approach LOS	C		B			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 79			
Actuated Cycle Length: 79			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 21.8		Intersection LOS: C	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Evans St & Essjay Rd



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	678	0	0	924
Future Volume (vph)	0	0	678	0	0	924
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	1863	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	294		391			453
Travel Time (s)	6.7		8.9			10.3
Peak Hour Factor	0.50	0.50	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	762	0	0	1038
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	762	0	0	1038
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	678	0	0	924
Future Vol, veh/h	0	0	678	0	0	924
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	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	762	0	0	1038

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1800	762	0	0	762	0
Stage 1	762	-	-	-	-	-
Stage 2	1038	-	-	-	-	-
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	88	405	-	-	850	-
Stage 1	461	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	88	405	-	-	850	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	461	-	-	-	-	-
Stage 2	341	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	850	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	671	0	0	632
Future Volume (vph)	0	0	671	0	0	632
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	307		689			391
Travel Time (s)	7.0		15.7			8.9
Peak Hour Factor	0.50	0.50	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	754	0	0	710
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	754	0	0	710
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	671	0	0	632
Future Vol, veh/h	0	0	671	0	0	632
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	50	50	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	754	0	0	710

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1464	754	0	0	754	0
Stage 1	754	-	-	-	-	-
Stage 2	710	-	-	-	-	-
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	141	409	-	-	856	-
Stage 1	465	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	141	409	-	-	856	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	487	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	856	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	2	40	2	17	48	20	572	2	7	595	28
Future Volume (vph)	47	2	40	2	17	48	20	572	2	7	595	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939			0.903						0.994	
Flt Protected		0.974			0.998			0.998			0.999	
Satd. Flow (prot)	0	1704	0	0	1679	0	0	1859	0	0	1850	0
Flt Permitted		0.974			0.998			0.998			0.999	
Satd. Flow (perm)	0	1704	0	0	1679	0	0	1859	0	0	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			427			282			689	
Travel Time (s)		7.6			9.7			6.4			15.7	
Peak Hour Factor	0.82	0.82	0.82	0.70	0.70	0.70	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	57	2	49	3	24	69	21	602	2	7	633	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	96	0	0	625	0	0	670	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.0%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	57.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	2	40	2	17	48	20	572	2	7	595	28
Future Vol, veh/h	47	2	40	2	17	48	20	572	2	7	595	28
Peak Hour Factor	0.82	0.82	0.82	0.70	0.70	0.70	0.95	0.95	0.95	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	2	49	3	24	69	21	602	2	7	633	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.6	12.1	55.4	72.8
HCM LOS	B	B	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	53%	3%	1%
Vol Thru, %	96%	2%	25%	94%
Vol Right, %	0%	45%	72%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	594	89	67	630
LT Vol	20	47	2	7
Through Vol	572	2	17	595
RT Vol	2	40	48	28
Lane Flow Rate	625	109	96	670
Geometry Grp	1	1	1	1
Degree of Util (X)	0.981	0.219	0.188	1.049
Departure Headway (Hd)	5.81	7.542	7.356	5.636
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	632	479	491	643
Service Time	3.81	5.542	5.356	3.709
HCM Lane V/C Ratio	0.989	0.228	0.196	1.042
HCM Control Delay	55.4	12.6	12.1	72.8
HCM Lane LOS	F	B	B	F
HCM 95th-tile Q	14.4	0.8	0.7	17.8

A6

Level of Service Calculations: Full Development Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	0	0	10	7	3
Future Volume (vph)	14	0	0	10	7	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.958	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1785	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1785	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	115			485	545	
Travel Time (s)	2.6			11.0	12.4	
Peak Hour Factor	0.50	0.50	0.63	0.63	0.63	0.63
Adj. Flow (vph)	28	0	0	16	11	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	16	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	0	0	10	7	3
Future Vol, veh/h	14	0	0	10	7	3
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	50	50	63	63	63	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	0	0	16	11	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	30	14	16	0	-	0
Stage 1	14	-	-	-	-	-
Stage 2	16	-	-	-	-	-
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	984	1066	1602	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	984	1066	1602	-	-	-
Mov Cap-2 Maneuver	984	-	-	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	984	-	-
HCM Lane V/C Ratio	-	-	0.028	-	-
HCM Control Delay (s)	0	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	521	6	3	169	2	14	0	10	1	1	3
Future Volume (vph)	12	521	6	3	169	2	14	0	10	1	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.999			0.943			0.925	
Flt Protected		0.999			0.999			0.972			0.989	
Satd. Flow (prot)	0	1859	0	0	1859	0	0	1707	0	0	1704	0
Flt Permitted		0.999			0.999			0.972			0.989	
Satd. Flow (perm)	0	1859	0	0	1859	0	0	1707	0	0	1704	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		470			427			545			255	
Travel Time (s)		10.7			9.7			12.4			5.8	
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.63	0.63	0.63	0.63	0.63	0.63
Adj. Flow (vph)	13	560	6	4	204	2	22	0	16	2	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	579	0	0	210	0	0	38	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	521	6	3	169	2	14	0	10	1	1	3
Future Vol, veh/h	12	521	6	3	169	2	14	0	10	1	1	3
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	83	83	83	63	63	63	63	63	63
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	560	6	4	204	2	22	0	16	2	2	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	206	0	0	566	0	0	806	803	563	810	805	205
Stage 1	-	-	-	-	-	-	589	589	-	213	213	-
Stage 2	-	-	-	-	-	-	217	214	-	597	592	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1365	-	-	1006	-	-	300	317	526	298	316	836
Stage 1	-	-	-	-	-	-	494	495	-	789	726	-
Stage 2	-	-	-	-	-	-	785	725	-	490	494	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1365	-	-	1006	-	-	293	311	526	285	310	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	293	311	-	285	310	-
Stage 1	-	-	-	-	-	-	487	488	-	778	723	-
Stage 2	-	-	-	-	-	-	776	722	-	469	487	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	16.2	12.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	359	1365	-	-	1006	-	-	484
HCM Lane V/C Ratio	0.106	0.009	-	-	0.004	-	-	0.016
HCM Control Delay (s)	16.2	7.7	0	-	8.6	0	-	12.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.1

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	139	26	277	419	50	473
Future Volume (vph)	139	26	277	419	50	473
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	305		130	125	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.571	
Satd. Flow (perm)	1770	1583	1863	1583	1064	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		32		471		
Link Speed (mph)	30		30			30
Link Distance (ft)	470		453			451
Travel Time (s)	10.7		10.3			10.3
Peak Hour Factor	0.81	0.81	0.89	0.89	0.90	0.90
Adj. Flow (vph)	172	32	311	471	56	526
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	32	311	471	56	526
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	14.0	14.0	43.0	43.0	43.0	43.0
Minimum Split (s)	18.0	18.0	47.0	47.0	47.0	47.0
Total Split (s)	18.0	18.0	47.0	47.0	47.0	47.0
Total Split (%)	27.7%	27.7%	72.3%	72.3%	72.3%	72.3%
Maximum Green (s)	14.0	14.0	43.0	43.0	43.0	43.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	14.2	14.2	44.8	44.8	44.8	44.8
Actuated g/C Ratio	0.23	0.23	0.73	0.73	0.73	0.73
v/c Ratio	0.42	0.08	0.23	0.37	0.07	0.39
Control Delay	25.7	9.0	4.7	1.4	4.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	9.0	4.7	1.4	4.3	5.8
LOS	C	A	A	A	A	A
Approach Delay	23.1		2.7			5.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 61.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 6.5		Intersection LOS: A	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Evans St & Essjay Rd

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	8	688	4	4	612
Future Volume (vph)	10	8	688	4	4	612
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.940		0.999			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1704	0	1861	0	1770	1863
Flt Permitted	0.973				0.950	
Satd. Flow (perm)	1704	0	1861	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	294		391			453
Travel Time (s)	6.7		8.9			10.3
Peak Hour Factor	0.50	0.50	0.89	0.89	0.90	0.90
Adj. Flow (vph)	20	16	773	4	4	680
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	777	0	4	680
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	8	688	4	4	612
Future Vol, veh/h	10	8	688	4	4	612
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	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	16	773	4	4	680

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1463	775	0	0	777	0
Stage 1	775	-	-	-	-	-
Stage 2	688	-	-	-	-	-
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	142	398	-	-	839	-
Stage 1	454	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	141	398	-	-	839	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	454	-	-	-	-	-
Stage 2	497	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.2	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	198	839	-
HCM Lane V/C Ratio	-	-	0.182	0.005	-
HCM Control Delay (s)	-	-	27.2	9.3	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	22	71	7	17	53	2	526	6	20	569	17
Future Volume (vph)	94	22	71	7	17	53	2	526	6	20	569	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.949			0.907			0.999			0.996	
Flt Protected		0.975			0.996						0.998	
Satd. Flow (prot)	0	1724	0	0	1683	0	0	1861	0	0	1852	0
Flt Permitted		0.975			0.996						0.998	
Satd. Flow (perm)	0	1724	0	0	1683	0	0	1861	0	0	1852	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			427			282			689	
Travel Time (s)		7.6			9.7			6.4			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.57	0.57	0.57	0.97	0.97	0.97	0.95	0.95	0.95
Adj. Flow (vph)	121	28	91	12	30	93	2	542	6	21	599	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	0	0	135	0	0	550	0	0	638	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.7%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	78.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	22	71	7	17	53	2	526	6	20	569	17
Future Vol, veh/h	94	22	71	7	17	53	2	526	6	20	569	17
Peak Hour Factor	0.78	0.78	0.78	0.57	0.57	0.57	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	28	91	12	30	93	2	542	6	21	599	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.3	15	68.3	124
HCM LOS	C	B	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	9%	3%
Vol Thru, %	99%	12%	22%	94%
Vol Right, %	1%	38%	69%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	534	187	77	606
LT Vol	2	94	7	20
Through Vol	526	22	17	569
RT Vol	6	71	53	17
Lane Flow Rate	551	240	135	638
Geometry Grp	1	1	1	1
Degree of Util (X)	1.009	0.509	0.297	1.184
Departure Headway (Hd)	6.978	8.148	8.49	6.68
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	523	446	426	542
Service Time	4.978	6.148	6.49	4.741
HCM Lane V/C Ratio	1.054	0.538	0.317	1.177
HCM Control Delay	68.3	19.3	15	124
HCM Lane LOS	F	C	B	F
HCM 95th-tile Q	14.3	2.8	1.2	22.7

Intersection: 1: Village Point Lane & Proposed Driveway

Movement	EB
Directions Served	LR
Maximum Queue (ft)	36
Average Queue (ft)	13
95th Queue (ft)	38
Link Distance (ft)	87
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Village Point Lane/Villange Point Lane & Essjay Rd

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	38	27	39	30
Average Queue (ft)	3	2	17	4
95th Queue (ft)	20	14	42	21
Link Distance (ft)	391	397	481	226
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Evans St & Essjay Rd

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	R	T	R	L	T
Maximum Queue (ft)	129	46	111	85	69	159
Average Queue (ft)	61	10	46	48	27	73
95th Queue (ft)	109	32	94	79	59	138
Link Distance (ft)	391		394			417
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		305		130	125	
Storage Blk Time (%)			0			1
Queuing Penalty (veh)			0			0

Intersection: 4: Evans St & North Driveway

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	38	31
Average Queue (ft)	13	3
95th Queue (ft)	37	17
Link Distance (ft)	258	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Evans St & Eagle St

Movement	EB	WB	NB	B8	SB
Directions Served	LTR	LTR	LTR	T	LTR
Maximum Queue (ft)	89	64	230	7	302
Average Queue (ft)	48	32	105	0	140
95th Queue (ft)	75	54	187	8	250
Link Distance (ft)	303	397	222	163	631
Upstream Blk Time (%)			1		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	0	0	7	13	8
Future Volume (vph)	9	0	0	7	13	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.948	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1766	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1766	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	116			507	543	
Travel Time (s)	2.6			11.5	12.3	
Peak Hour Factor	0.50	0.50	0.58	0.58	0.61	0.61
Adj. Flow (vph)	18	0	0	12	21	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	0	12	34	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	0	0	7	13	8
Future Vol, veh/h	9	0	0	7	13	8
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	50	50	58	58	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	0	12	21	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	40	28	34	0	-	0
Stage 1	28	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	972	1047	1578	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	972	1047	1578	-	-	-
Mov Cap-2 Maneuver	972	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	1011	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	972	-	-
HCM Lane V/C Ratio	-	-	0.019	-	-
HCM Control Delay (s)	0	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	208	10	11	660	0	8	0	8	1	0	21
Future Volume (vph)	3	208	10	11	660	0	8	0	8	1	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994						0.932			0.872	
Flt Protected		0.999			0.999			0.976			0.997	
Satd. Flow (prot)	0	1850	0	0	1861	0	0	1694	0	0	1619	0
Flt Permitted		0.999			0.999			0.976			0.997	
Satd. Flow (perm)	0	1850	0	0	1861	0	0	1694	0	0	1619	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		470			427			543			255	
Travel Time (s)		10.7			9.7			12.3			5.8	
Peak Hour Factor	0.97	0.97	0.97	0.79	0.79	0.79	0.58	0.58	0.58	0.61	0.61	0.61
Adj. Flow (vph)	3	214	10	14	835	0	14	0	14	2	0	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	0	0	849	0	0	28	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	208	10	11	660	0	8	0	8	1	0	21
Future Vol, veh/h	3	208	10	11	660	0	8	0	8	1	0	21
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	79	79	79	58	58	58	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	214	10	14	835	0	14	0	14	2	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	835	0	0	224	0	0	1105	1088	219	1095	1093	835
Stage 1	-	-	-	-	-	-	225	225	-	863	863	-
Stage 2	-	-	-	-	-	-	880	863	-	232	230	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	798	-	-	1345	-	-	188	216	821	191	214	368
Stage 1	-	-	-	-	-	-	778	718	-	349	372	-
Stage 2	-	-	-	-	-	-	342	372	-	771	714	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	798	-	-	1345	-	-	168	211	821	185	209	368
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	211	-	185	209	-
Stage 1	-	-	-	-	-	-	775	715	-	348	365	-
Stage 2	-	-	-	-	-	-	304	365	-	755	711	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	19.3	16.4
HCM LOS			C	C

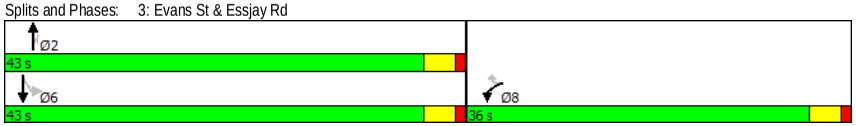
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	279	798	-	-	1345	-	-	352
HCM Lane V/C Ratio	0.099	0.004	-	-	0.01	-	-	0.102
HCM Control Delay (s)	19.3	9.5	0	-	7.7	0	-	16.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	517	146	478	200	18	421
Future Volume (vph)	517	146	478	200	18	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	305		130	125	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.309	
Satd. Flow (perm)	1770	1583	1863	1583	576	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		185		225		
Link Speed (mph)	30		30			30
Link Distance (ft)	470		453			451
Travel Time (s)	10.7		10.3			10.3
Peak Hour Factor	0.79	0.79	0.89	0.89	0.89	0.89
Adj. Flow (vph)	654	185	537	225	20	473
Shared Lane Traffic (%)						
Lane Group Flow (vph)	654	185	537	225	20	473
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	32.0	32.0	39.0	39.0	39.0	39.0
Minimum Split (s)	36.0	36.0	43.0	43.0	43.0	43.0
Total Split (s)	36.0	36.0	43.0	43.0	43.0	43.0
Total Split (%)	45.6%	45.6%	54.4%	54.4%	54.4%	54.4%
Maximum Green (s)	32.0	32.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	32.0	32.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.41	0.41	0.49	0.49	0.49	0.49
v/c Ratio	0.91	0.25	0.58	0.25	0.07	0.51
Control Delay	42.2	3.5	17.5	2.5	11.4	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	3.5	17.5	2.5	11.4	16.1
LOS	D	A	B	A	B	B
Approach Delay	33.7		13.0			15.9
Approach LOS	C		B			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 79			
Actuated Cycle Length: 79			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 22.0		Intersection LOS: C	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Evans St & Essjay Rd



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	5	678	13	12	926
Future Volume (vph)	6	5	678	13	12	926
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.939		0.997			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1702	0	1857	0	1770	1863
Flt Permitted	0.973				0.950	
Satd. Flow (perm)	1702	0	1857	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	294		391			453
Travel Time (s)	6.7		8.9			10.3
Peak Hour Factor	0.50	0.50	0.89	0.89	0.89	0.89
Adj. Flow (vph)	12	10	762	15	13	1040
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	777	0	13	1040
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	5	678	13	12	926
Future Vol, veh/h	6	5	678	13	12	926
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	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	10	762	15	13	1040

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1836	770	0	0	777	0
Stage 1	770	-	-	-	-	-
Stage 2	1066	-	-	-	-	-
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	83	401	-	-	839	-
Stage 1	457	-	-	-	-	-
Stage 2	331	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	82	401	-	-	839	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	457	-	-	-	-	-
Stage 2	326	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.9	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	128	839	-
HCM Lane V/C Ratio	-	-	0.172	0.016	-
HCM Control Delay (s)	-	-	38.9	9.4	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	2	40	2	17	48	20	585	2	7	603	28
Future Volume (vph)	47	2	40	2	17	48	20	585	2	7	603	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939			0.903						0.994	
Flt Protected		0.974			0.998			0.998			0.999	
Satd. Flow (prot)	0	1704	0	0	1679	0	0	1859	0	0	1850	0
Flt Permitted		0.974			0.998			0.998			0.999	
Satd. Flow (perm)	0	1704	0	0	1679	0	0	1859	0	0	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			427			282			689	
Travel Time (s)		7.6			9.7			6.4			15.7	
Peak Hour Factor	0.82	0.82	0.82	0.70	0.70	0.70	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	57	2	49	3	24	69	21	616	2	7	641	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	96	0	0	639	0	0	678	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.7%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	62.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	2	40	2	17	48	20	585	2	7	603	28
Future Vol, veh/h	47	2	40	2	17	48	20	585	2	7	603	28
Peak Hour Factor	0.82	0.82	0.82	0.70	0.70	0.70	0.95	0.95	0.95	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	2	49	3	24	69	21	616	2	7	641	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.7	12.1	61.1	79
HCM LOS	B	B	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	53%	3%	1%
Vol Thru, %	96%	2%	25%	95%
Vol Right, %	0%	45%	72%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	607	89	67	638
LT Vol	20	47	2	7
Through Vol	585	2	17	603
RT Vol	2	40	48	28
Lane Flow Rate	639	109	96	679
Geometry Grp	1	1	1	1
Degree of Util (X)	1.004	0.22	0.189	1.069
Departure Headway (Hd)	5.836	7.61	7.426	5.668
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	474	486	638
Service Time	3.836	5.61	5.426	3.738
HCM Lane V/C Ratio	1.021	0.23	0.198	1.064
HCM Control Delay	61.1	12.7	12.1	79
HCM Lane LOS	F	B	B	F
HCM 95th-tile Q	15.4	0.8	0.7	18.8

Intersection: 1: Village Point Lane & Proposed Driveway

Movement	EB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	87
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Village Point Lane & Essjay Rd

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	26	68	37	41
Average Queue (ft)	1	5	11	16
95th Queue (ft)	12	42	35	41
Link Distance (ft)	391	397	479	226
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Evans St & Essjay Rd

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	R	T	R	L	T
Maximum Queue (ft)	352	184	254	204	79	258
Average Queue (ft)	196	40	145	59	17	132
95th Queue (ft)	311	116	226	149	53	216
Link Distance (ft)	391		394			417
Upstream Blk Time (%)	0	0				
Queuing Penalty (veh)	1	0				
Storage Bay Dist (ft)		305		130	125	
Storage Blk Time (%)	1		9			7
Queuing Penalty (veh)	2		17			1

Intersection: 4: Evans St & North Driveway

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	32	37
Average Queue (ft)	9	7
95th Queue (ft)	31	28
Link Distance (ft)	258	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Evans St & Eagle St

Movement	EB	WB	NB	B8	SB
Directions Served	LTR	LTR	LTR	T	LTR
Maximum Queue (ft)	67	60	234	26	249
Average Queue (ft)	35	30	110	1	119
95th Queue (ft)	58	53	188	21	209
Link Distance (ft)	303	397	222	163	631
Upstream Blk Time (%)			1	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 21