APPENDIX B

Lackawanna Cut-Off Restoration – Passenger Rail Study

B.1 - TRAFFIC ANALYSIS

B.2 – VEHICLE ACCESS AND USER ACCOMODATION CONSIDERATIONS

Appendix B.1 – Traffic Analysis

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LEVEL OF SERVICE AND DELAY (SECONDS) SUMMARY
(WEEKDAY AM PEAK HOUR)

Intersection	Approach	2019 Existing	2030 No-Build	2030 Build
River Road (T-663) & Paper Mill Road	SB	B (10.4)	B (10.6)	B (10.8)
	EB	A (3.1)	A (3.2)	A (3.2)
	WB	A (0.0)	A (0.0)	A (0.0)
	ILOS	A (1.6)	A (1.6)	A (1.5)
River Road (T-663) & Minisink Park Eastern Driveway	NB	A (9.7)	A (9.8)	A (9.9)
	EB	A (0.0)	A (0.0)	A (0.0)
	WB	A (0.2)	A (0.2)	A (0.2)
	ILOS	A (0.5)	A (0.5)	A (0.5)
River Road (T-663) & Minisink Park Western Driveway/Proposed Driveway	NB	A (9.5)	A (9.6)	E (35.2)
	SB	-	-	D (31.6)
	EB	A (0.0)	A (0.0)	A (7.9)
	WB	A (0.2)	A (0.2)	A (0.2)
	ILOS	A (0.5)	A (0.5)	A (6.5)
River Road (T-663) & PA Welcome Center Driveway	NB	A (8.7)	A (9.5)	B (14.5)
	EB	A (0.0)	A (0.0)	A (0.0)
	WB	A (0.2)	A (0.2)	A (0.3)
	ILOS	A (0.3)	A (0.5)	A (0.2)
River Road (T-663), PA 611 & I-80 Ramps C & D, and Ramps E & F (SR 8024), Broad Street (SR 2028)	NB	A (6.2)	A (6.5)	B (13.4)
	SB	A (5.7)	A (5.9)	B (11.7)
	EB	A (4.7)	A (4.8)	A (7.2)
	WB	A (6.8)	A (7.1)	A (7.0)
	ILOS	A (6.2)	A (6.5)	B (11.3)
Broad Street (SR 2028) & Park and Ride Driveway	NB	A (7.7)	A (7.7)	A (7.7)
	SB	A (0.0)	A (0.0)	A (0.0)
	EB	B (10.2)	B (10.4)	B (10.5)
	ILOS	A (0.4)	A (0.3)	A (0.3)
Broad Street (SR 2028) and PA 611, I-80 Ramp A / Hotel Driveway	NB	A (0.6)	A (0.6)	A (0.5)
	SB	A (0.2)	A (0.2)	A (0.2)
	EB	B (11.4)	B (11.8)	B (12.4)
	WB	B (11.9)	B (12.3)	B (12.9)
	ILOS	A (1.9)	A (2.0)	A (1.9)

LEVEL OF SERVICE AND DELAY (SECONDS) SUMMARY
(WEEKDAY PM PEAK HOUR)

Intersection	Approach	2019 Existing	2030 No-Build	2030 Build
River Road (T-663) & Paper Mill Road	SB	B (10.5)	B (10.6)	B (10.7)
	EB	A (0.2)	A (0.1)	A (0.1)
	WB	A (0.0)	A (0.0)	A (0.0)
	ILOS	A (0.5)	A (0.5)	A (0.4)
River Road (T-663) & Minisink Park Eastern Driveway	NB	B (10.6)	B (10.8)	B (10.9)
	EB	A (0.0)	A (0.0)	A (0.0)
	WB	A (0.3)	A (0.3)	A (0.3)
	ILOS	A (0.4)	A (0.4)	A (0.3)
River Road (T-663) & Minisink Park Western Driveway/Proposed Driveway	NB	B (10.7)	B (10.9)	C (22.6)
	SB	-	-	C (18.4)
	EB	A (0.0)	A (0.0)	A (0.0)
	WB	A (0.3)	A (0.3)	A (0.3)
	ILOS	A (0.4)	A (0.4)	B (10.5)
River Road (T-663) & PA Welcome Center Driveway	NB	B (11.0)	B (11.3)	C (18.1)
	EB	A (0.0)	A (0.0)	A (0.0)
	WB	A (0.3)	A (0.3)	A (0.1)
	ILOS	A (0.6)	A (0.6)	A (0.4)
River Road (T-663), PA 611 & I-80 Ramps C & D, and Ramps E & F (SR 8024), Broad Street (SR 2028)	NB	A (7.9)	A (8.4)	A (8.3)
	SB	A (6.4)	A (6.7)	A (7.5)
	EB	A (6.2)	A (6.5)	A (7.2)
	WB	A (6.1)	A (6.3)	A (21.6)
	ILOS	A (6.8)	A (7.2)	A (14.3)
Broad Street (SR 2028) & Park and Ride Driveway	NB	A (0.2)	A (0.1)	A (0.2)
	SB	A (0.0)	A (0.0)	A (0.0)
	EB	B (11.6)	B (11.9)	B (11.8)
	ILOS	A (1.3)	A (1.3)	A (1.3)
Broad Street (SR 2028), PA 611 & I-80 Ramp A / Hotel Driveway	NB	A (0.2)	A (0.2)	A (0.2)
	SB	A (0.2)	A (0.2)	A (0.1)
	EB	B (12.3)	B (12.8)	A (9.0)
	WB	B (11.4)	B (11.6)	B (12.0)
	ILOS	A (2.2)	A (2.3)	A (0.8)

ILOS = Overall Intersection Level of Service. Unsignalized ILOS calculated using Figure 5 of *Policies and Procedures for Transportation Impact Studies*.

Introduction

This Appendix provides detailed information regarding the preliminary traffic analysis completed for the proposed parking garage and rail station located along River Road in Smithfield Township, Monroe County, PA. The project site is comprised of 4.65 acres along the northern side of River Road between the I-81 Bridge to the west and the railroad tracks to the east, as shown in **Figure 1**. The site is currently vacant. The proposed development will consist of a rail station with a 900-vehicle parking garage. The purpose of this study is to evaluate potential traffic impacts a proposed parking garage and rail station may have on the local roadway network.

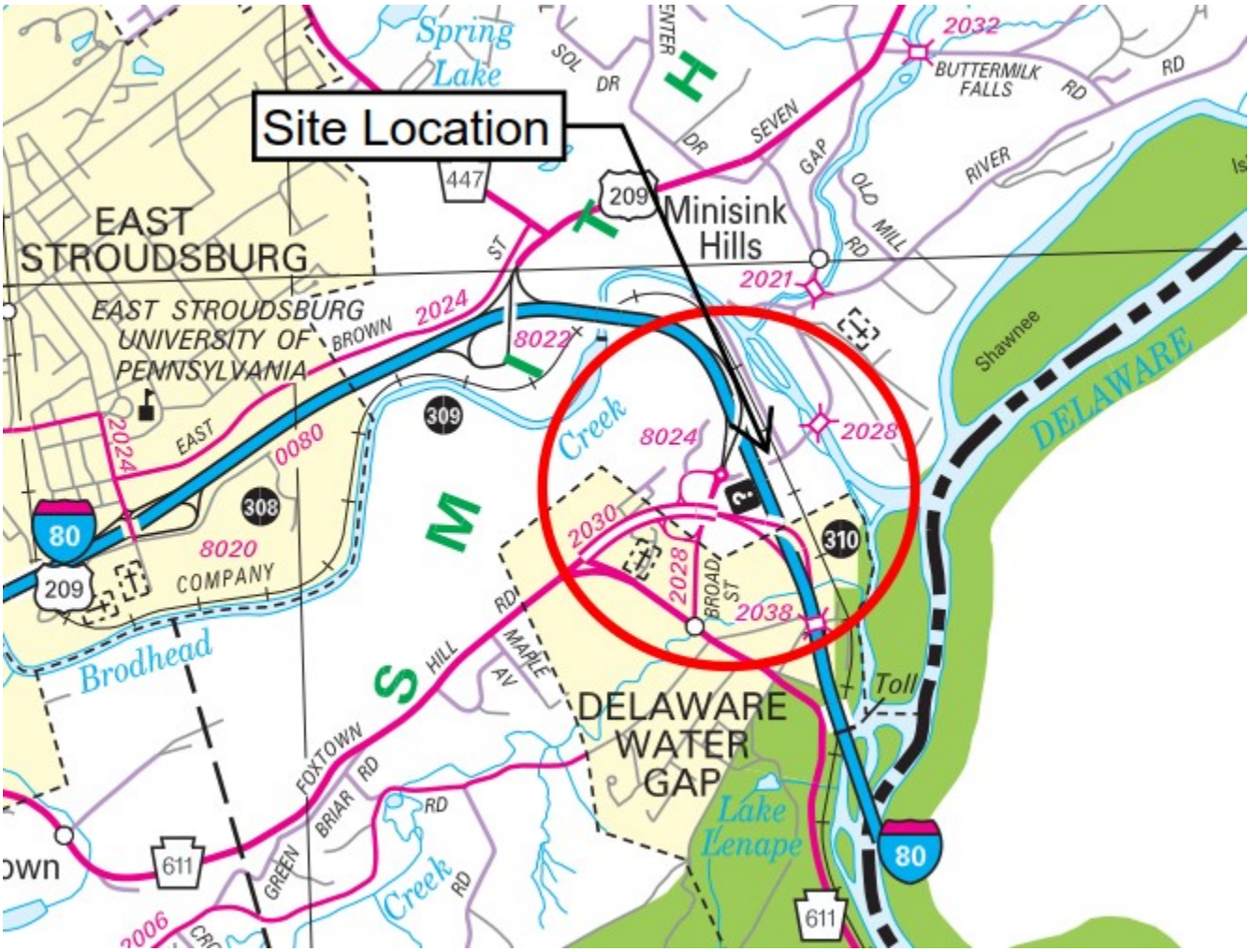


Figure 1. Location Map and One Mile Radius of Site

Existing Roadway Network

The study area is shown in **Figure 2** and consists of seven intersections along River Road (T-663) and Broad Street (SR 2028). All of the intersections are stop controlled with the exception of River Road and Broad Street. A roundabout was recently constructed at this intersection.

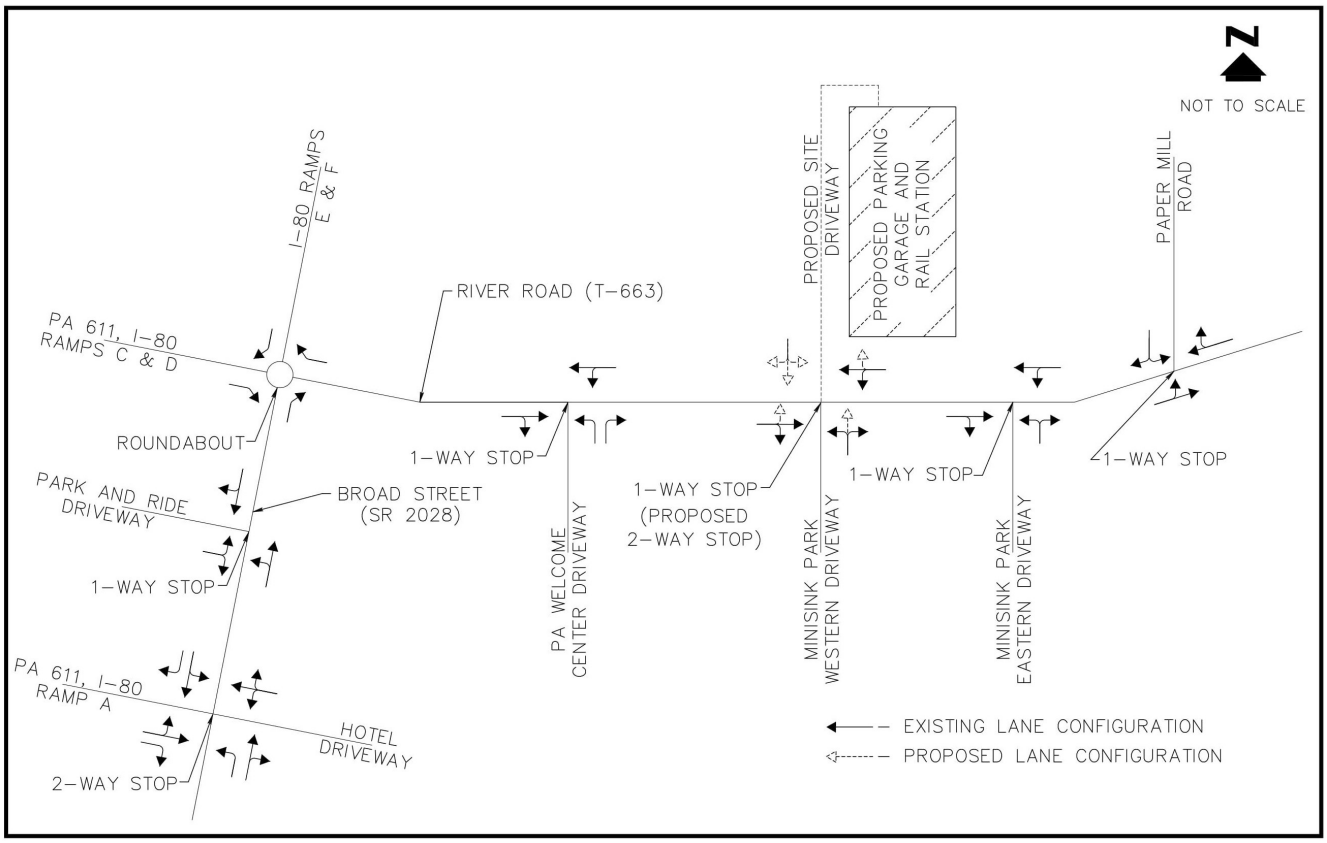


Figure 2. Study Area Schematic

A summary of these roadways is shown in **Table 1** below. Intersection approach photographs can also be found in **Attachment A.**

TABLE 1
EXISTING STUDY AREA ROADWAY CHARACTERISTICS

Route	Name	Federal Functional Classification	Roadway Direction/ Orientation	ADT Volumes	Posted Speed Limit
(T-663)	River Road	Urban Minor Arterial	East-West	3,906 (Bi-direction)	35 mph
(SR 2028)	Broad Street	Urban Minor Arterial	North-South	1,796 (Bi-direction)	25 mph

Transit

There is a state-owned park and ride lot located along Broad Street approximately 300' south of the River Road. The park and ride lot has approximately 125 park spaces all of which are usually filled before 7:00 AM. Martz Transit provides express bus service into Mid-Town Manhattan and has two facilities in the Water Gap area. They operate a full-service terminal less than one mile south of River Road on Foxtown Hill Road. This facility has a parking lot which will accommodate approximately 450 to 500 vehicles. Martz also has a park and ride lot which is located approximately 1 1/2 miles north of River Road on Independence Road (PA 447). This lot is also very well utilized and provides parking for approximately 500+ vehicles. Martz provides express bus service from both lots. A nominal parking

fee is charged at both lots in addition to the cost of bus fare. The Martz buses from the Fox Hill Road Terminal make stops at the public lot on Broad Street until it reaches capacity.

The Monroe County Transit Authority provides local bus service in the East Stroudsburg area known as the "Pocono Pony." The Pony provides service between Mount Pocono, Pocono Summit, and East Stroudsburg. Current service routes do not appear to extend to the Delaware Water Gap. There are stops along the Pony's existing route which will provide walkable access to PNRRA's proposed rail station at Bridge and Crystal Street in East Stroudsburg. It was assumed that current Pony Users would avail themselves of this access point to the PNRRA's rail service line making it unlikely that the transit authority would extend additional service to PNRRA's rail service at the Delaware Water Gap Station.

Given the suburban environment and adequate parking capacity of the proposed garage, it was assumed only a limited number of patrons will use a ride-hailing, ride-sharing or personal drop off services such as taxis, Uber, Lyft, shuttle buses, or spousal drop offs as a part of their commute. While we feel an area needs to be set aside for these services we also anticipate most patrons will use a personal automobile and will park in the proposed parking garage.

Pedestrian/Bike Facilities

Sidewalks and pedestrian facilities connect the Park & Ride to the PA Welcome Center and continue northeast along River Road before terminating just before Brodhead Creek at Minisink Park, where the trails continue into the park and into the woods. Sidewalks are also located along the eastern side of Broad Street heading south into the town of Delaware Water Gap. While bicyclists were observed using these facilities there are no designated bike trails or routes within the study area.

Proposed Site Access Driveways

The project site will be served by one (1) site access location; an enter-exit driveway on River Road (T-663). The driveway will be located roughly directly across from the existing Minisink Park Western Driveway.

Sight Distance Analysis

The anticipated sight distance measurements for the proposed driveway locations were compared to the PennDOT desirable sight distances outlined in Pennsylvania Code Title 67, Chapter 441.8(h), "Access to and Occupancy of Highways by Driveways and Local Roads." **Table 2** summarizes our findings.

TABLE 2
SIGHT DISTANCE ANALYSIS
PROPOSED ENTER-EXIT DRIVEWAY

	Direction	Speed (mph)	Sight Distance (feet)			
			Grade[1] (%)	Desirable	Req'd	Available
Entering Left Turns	To Approaching Vehicles	35	-2	100	300	495
Exiting Movements	To the Left	35	+1.5	100	350	447
	To the Right	35	-2	100	440	440

[1]=Roadway Grade Approaching Driveway

[2]=Distance to Adjacent Intersection

As shown in **Table 2**, the measured sight distances at the proposed site access location meets or exceeds the PennDOT sight distance requirements. This is based on the assumption that trees bordering River Road (T-663) on the proposed site would be removed if the site were to be developed.

Driveway Classification

All driveways accessing state-owned roadways are classified according to the Pennsylvania Code Title 67, Chapter 441.8, "Driveway Design Requirements" as one of the following:

- Minimum Use – Less than 25 vehicles per day
- Low-Volume – 25 to 750 vehicles per day
- Medium-Volume – 750 to 1500 vehicles per day
- High-Volume – Greater than 1500 vehicles per day

The average weekday trip generation rate for the parking garage is projected to be 809 vehicles entering the site, and the same 809 vehicles exiting the site. As defined in Chapter 441.1, each in and out vehicle accounts for two trips or an ADT of two. Therefore the garage driveway falls into the Medium-Volume classification and can be accommodated with 14' wide lanes and a 4' wide median divider. Vehicle the classification for the site driveway is shown in **Table 3**. Trip Generation Calculations can be found in **Attachment D.**

TABLE 3
DRIVEWAY CLASSIFICATION

Roadway	Driveway	Weekday Trips	Weekday Vehicles	Classification
River Road (T-663)	Exit-Enter	1618	809	Medium-Volume

Existing Traffic Conditions

Miovision turning movement counts were conducted at the study area intersections in 15-minute periods during the Weekday AM (6:00-8:00 AM) and Weekday PM (4:00-6:00 PM) peak periods. Data for heavy vehicles, pedestrians, and buses observed during the counts were recorded. Manual turning movement count reports and peak hour volume figures are provided in **Attachment C**. Count dates and peak hours observed for the study area intersections are shown in **Table 4.** While some of the intersections showed peak hours at slightly different time frames the network's overall morning peak hour appears to occur from 7:00 AM to 8:00 AM and the evening peak hour occurs from 5:00 PM to 6:00 PM. It is important to note the peak hour of the proposed parking garage is, according to the 2008 EA, anticipated to occur more than an hour earlier than the peak hour of the adjacent roadway. As is the norm, the network traffic analysis was conducted during the peak hour of the adjacent roadway.

TABLE 4
STUDY AREA INTERSECTION OBSERVED PEAK HOURS

Intersection	Traffic Count Date	Time Period	Intersection Peak Hour[1]
River Road (T-663) & Paper Mill Road	Tuesday, November 19, 2019	Weekday AM	6:30 to 7:30 AM
	Tuesday, November 19, 2019	Weekday PM	5:00 to 6:00 PM
River Road (T-663) & Minisink Park Eastern Driveway	Tuesday, November 19, 2019	Weekday AM	6:30 to 7:30 AM
	Tuesday, November 19, 2019	Weekday PM	5:00 to 6:00 PM
River Road (T-663) & Minisink Park Western Driveway/Proposed Driveway	Tuesday, November 19, 2019	Weekday AM	7:00 to 8:00 AM
	Tuesday, November 19, 2019	Weekday PM	5:00 to 6:00 PM
River Road (T-663) & PA Welcome Center Driveway	Tuesday, November 19, 2019	Weekday AM	7:00 to 8:00 AM
	Tuesday, November 19, 2019	Weekday PM	5:00 to 6:00 PM
River Road (T-663), PA 611 & I-80 Ramps C & D, and Ramps E & F (SR 8024), Broad Street (SR 2028)	Tuesday, November 19, 2019	Weekday AM	7:00 to 8:00 AM
	Tuesday, November 19, 2019	Weekday PM	5:00 to 6:00 PM
Broad Street (SR 2028) & Park and Ride Driveway	Tuesday, November 19, 2019	Weekday AM	7:00 to 8:00 AM
	Tuesday, November 19, 2019	Weekday PM	5:00 to 6:00 PM
Broad Street (SR 2028), PA 611 & I-80 Ramp A / Hotel Driveway	Tuesday, November 19, 2019	Weekday AM	7:00 to 8:00 AM
	Tuesday, November 19, 2019	Weekday PM	5:00 to 6:00 PM

[1]The peak hour consists of four consecutive 15-minute intervals where the highest volumes occur.

Existing Site

Currently the site is an undeveloped forested parcel of land. The Western Minisink driveway is located on the opposite side of River Road (T-663) from the proposed site and serves a small fifty vehicle parking lot for access to the parks' trails and athletic fields. **Figure D-1** in **Attachment D** shows the AM and PM Peak Hour, No-Build traffic volumes for 2019 (Current Day).

Background Growth

A background growth factor was developed for the study area intersections based upon the Growth Factors for August 2019 to July 2020 obtained from the PennDOT Bureau of Planning and Research (BPR). The BPR recommends using a background growth factor of 0.67% per year in Monroe County for Rural Non-Interstate roadways. This corresponds to an overall growth factor of 7.62% for the 11 year period between our current year 2019 (year of traffic data collection) and the design year of 2030. **Figure D-2** in **Attachment D** shows the AM and PM Peak Hour No-Build traffic volumes for the 2030 (Design Year).

Trip Generation

Trip generation data for the proposed Parking Garage and Train Station was obtained from the 2008 NJ Transit Environmental Assessment Report. Information from this report was adjusted to accurately reflect the Demand expected to be generated from the development during the peak hour of the adjacent side street.

Based on the 2008 NJ Transit Environmental Assessment Report, a 900 vehicle garage and train station is expected to generate 890 Passengers during the overall peak period. Based on this information as well as additional information provided in the NJ Report, total Peak Hour trips were used to calculate the total vehicular trips generated by the development. Trips were calculated during the following time periods:

- Weekday AM Peak Hour (7:00 AM to 8:00 AM)
- Weekday PM Peak Hour (5:00 PM to 6:00 PM)

Trip Distribution and Assignment

Trips projected to be generated by the proposed development were distributed throughout the study area intersections based upon existing traffic patterns, site access locations, and the existing roadway characteristics. The projected trips were divided into new and diverted trips, which were treated differently in terms of distribution.

New Trips

New trips were distributed in accordance with information found in the 2008 NJ Transit Environmental Assessment Report. This information anticipates

- 77% of induced vehicle trips will be associated with origins and destinations to and from the west along I-80,
- 14% of induced vehicle trips will be associated with origins and destinations to and from the south along Broad Street, and
- 9% of induced vehicle trips will be associated with origins and destinations to and from the east and north along River Road.

Diverted Link Trips

It is expected, that a certain percentage of the total customers attracted to the new rail station and parking garage are already in the system and are currently being served at the existing park and ride lot or one of the two Martz facilities along Broad Street or Independence Road. These customers are anticipated to “divert” from their existing travel route and follow a new travel route to the proposed parking garage. An estimation was made that only 1/3 of the overall trips anticipated to arrive at the proposed garage would be diverted link trips and 2/3 would be new trips. We feel this estimation is conservative and will result in a slight over statement of impacts to the existing traffic network.

The public park and ride lot along Broad Street is currently filled to capacity well before the network peak hour. Since there is no charge for parking at this lot and given the current high demand of commuter activity in the area, we assume this lot will continue to be filled well before the network peak hour. Therefore, we do not anticipate any diverted link traffic will be associated with this lot. Of the number of diverted peak hour trips, we assumed 75% will be diverted from the Martz Terminal along Broad Street and 25% will be diverted from the Martz Park and Ride Lot along Independence Road. This percentage reflects the number of scheduled bus routes assigned to these lots that have morning

destinations in Mid-Town Manahatten. More information on this can be found in the Trip Generation and Distribution Calculations in **Attachment D**.

To develop 2030 Build Condition traffic volumes, the site-generated vehicular trips and the diverted link trips for the proposed development were combined with the 2030 No-Build condition traffic volumes. **Figure D-10** in **Attachment D** shows the AM and PM Peak Hour, Build traffic volumes for the 2030 (Design Year).

Auxiliary Turn Lane Warrant Analysis

A PennDOT auxiliary turn-lane warrant analysis was performed at the proposed site driveway location to determine the need for an auxiliary turn lane at this location. The analysis was performed in accordance with PennDOT Publication 46, Chapter 11 and Strike-off Letter 470-08-07.

Based upon the above referenced methodology, the results are as follows:

- River Road (T-663) and Proposed Site Driveway:
  - Left-turn lane warrants are satisfied during the 2030 weekday AM peak hours at the proposed driveway intersection for the Eastbound direction along River Road. The proposed turn lane length is 175 feet. This finding must be considered with LOS and Queue findings for this intersection and this approach and it should be noted the LOS and Queue reports show no LOS or Queue concerns for this intersection.

The auxiliary turn-lane warrant analysis worksheets are provided in **Attachment E.**

Signal Warrant Analysis

A PennDOT Signal warrant analysis was performed at the proposed site driveway location to determine the need for signalized control at this intersection The analysis was performed in accordance with sections 4C.01-4C.10 of the 2009 MUTCD and sections 4.3 of the PennDOT Publication 46, Traffic Engineering Manual.

Based upon the above referenced methodologies, the results are as follows:

- River Road (T-663) and Proposed Site Driveway:
  - Signal Warrants are Not Satisfied during the Build 2030 conditions.

Levels of Service Definitions

Levels of Service is defined in terms of average control delay per vehicle, which is a measure of lost travel time, fuel consumption and driver frustration. Highway capacity analysis uses Level of Service (LOS) to qualitatively relate capacity to operational conditions. HCM LOS is delay-based and ranges from “A” to “F”, with “A” being the best operating condition and “F” being the worst. Generally, LOS “C” is desirable, but in built-up or suburban areas with substantial traffic congestion or flows, LOS “D” or “E” is considered acceptable. LOS for intersections is measured by control delay per vehicle. **Table 5** shows the relationship between LOS and delay for signalized and unsignalized intersections.

TABLE 5
LEVEL OF SERVICE CRITERIA

LOS	Control Delay Per Vehicle (seconds/vehicle)		Description
	Signalized	Un-signalized	
A	≤ 10.0	≤ 10.0	Very low delay, good progression; most vehicles do not stop at intersection.
B	10.1 to 20.0	10.1 to 15.0	Generally good signal progression and/or short cycle length.
C	20.1 to 35.0	15.1 to 25.0	Fair progression and/or longer cycle length; significant number of vehicles stop at intersection.
D	35.1 to 55.0	25.1 to 35.0	Congestion becomes noticeable; individual cycle failures; longer delays from unfavorable progression, long cycle length, or high volume/capacity ratios; most vehicles stop at intersection.
E	55.1 to 80.0	35.1 to 50.0	Considered limit of acceptable delay, indicative of poor progression, long cycle length, high volume/capacity ratio; frequent individual cycle failures.
F	> 80.0	> 50.0	Unacceptable delay, frequently an indication of over saturation.

Capacity Analysis Methodology

Capacity analyses were performed for each of the analyzed peak hours at the study area intersections. A level-of-service analysis of the study area intersections was conducted in accordance with the methodology presented in the *2010 Highway Capacity Manual* (HCM), utilizing *Synchro 10,* a Trafficware software package. The following conditions were analyzed:

- 2019 No-Build Conditions – Current Year without development;
- 2030 No-Build Conditions – Design year without development; and
- 2030 Build Conditions – Design year with development.

The Synchro capacity analysis reports are provided in **Attachment** F.

Study Area Levels of Service

Figures showing the Levels of Service (LOS) for the study area intersections for the weekday AM, and weekday PM peak hours are shown in **Attachment F** for 2019 and 2030 No-Build conditions, and 2030 Build conditions.

PennDOT's *Policies and Procedures for Transportation Impact Studies*, pages 30 through 42 provide guidance on the LOS requirements for signalized and unsignalized intersections. Under the 2019 and 2030 Build conditions, all study area intersections will operate within the LOS criteria outlined in PennDOT's TIS guidelines. The two intersections affected the most in terms of capacity are discussed further below.

- River Road (T-663) and Proposed Site Driveway/Minisink Park Western Driveway
  - This intersection is expected to operate at an overall LOS of A (0.4 seconds of delay) in 2030 for the No Build PM condition. For the 2030 Build PM condition, this intersection is expected to operate at an overall LOS of B (10.5 seconds of delay). The PM condition was compared as it had greater overall delay increase than the AM condition.
- River Road (T-663) and PA 611, I-80 Ramps C & D and I-80 Exit Ramps E & F / Broad Street (SR 2028)
  - This intersection is expected to operate at an overall LOS of A (7.2 seconds of delay) in 2030 for the No Build PM condition. For the 2030 Build PM condition, this intersection is expected to operate at an overall LOS of B (14.3 seconds of delay). The PM condition was compared as it had greater overall delay increase than the AM condition.

Queue Analysis

A queue analysis was conducted for the intersection of River Road (T-663) & Minisink Park Western Driveway/Proposed Driveway for the 2030 AM and PM build conditions using SimTraffic. The SimTraffic queueing analysis reports are provided in **Attachment F**.

Analysis shows a maximum queue of 72' for the EB Lane during the 2030 AM Build condition. this is assuming the garage gate can accommodate the traffic flow without vehicles spilling back onto the roadway. Analysis also shows a maximum queue of 148' for the SB Lane during the 2030 PM Build Condition. all other approaches had maximum queues less than the two listed above.

Conclusions

Based on the analyses, the following initial conclusions are presented:

1. The measured sight distance at the proposed driveway location will meet or exceed PENNDOT's minimum intersection sight distance requirements.

2. Capacity analyses were completed to determine the Level of Service (LOS) at the study area intersections during the 2019 No-Build, 2030 No-Build, and 2030 Build conditions. Levels of Service (LOS) for the study area intersections are provided in **Appendix B.** All study area intersections will operate within the LOS criteria outlined in PennDOT's TIS guidelines without mitigation.

3. A queue analysis was conducted for the River Road (T-663) & Minisink Park Western Driveway/Proposed Driveway intersection for the AM and PM Peak hour. Analysis shows a maximum queue of 72 ft for the EB Lane during the 2030 AM build condition, and a maximum queue of 148 ft for the SB lane during the 2030 PM Build Condition. All other approaches had maximum queues less than the two listed above.

4. Left-turn lane warrants <u>are satisfied</u> during the 2030 weekday AM peak hours at the proposed driveway intersection for the Eastbound direction along River Road. This turn lane, although warranted, is likely not required as there is no significant drop in LOS or delay for this movement in the Build condition as compared to the No-Build condition. The proposed turn lane length is 175 ft; however, construction of the turn lane at this length would require reconstruction of the I-80 overpass bridge near the site. Since the left turn lane is likely not required, cost of construction of this lane and reconstruction of the I-80 bridge is not included in the conceptual cost estimates in this report.

5. Signal Warrants <u>are not satisfied</u> during the Build 2030 conditions for the River Road (T-663) and Proposed Driveway / Minisink Park Western Driveway intersection.

Attachment A – Site Photographs & Existing Field Condition Sketches

Picture 1: Project site, left side of rail line north of River Road

Picture 2: Roundabout intersection at River Road and Broad Street.

Picture 3: River Road looking westbound from slightly east of Minisink Park Driveway East.

Picture 4: River Road looking Eastbound from proposed driveway location.

Picture 5: River Road looking Westbound from proposed driveway location.

Picture 6: River Road looking Westbound , showing I-80 underpass.

Picture 7: River road looking Eastbound from roundabout westbound approach.

Attachment B – Driveway Sight Distance Measurements

Because this is a local road, the PUB 70 values will be recorded here. This form was used for convenience.

M-950S
(03-04)
PENNDOT

DRIVEWAY SIGHT DISTANCE MEASUREMENTS

(FOR LOCAL ROADS, USE PENNDOT PUB 70)

APPLICANT _____ APPLICATION NO. _____

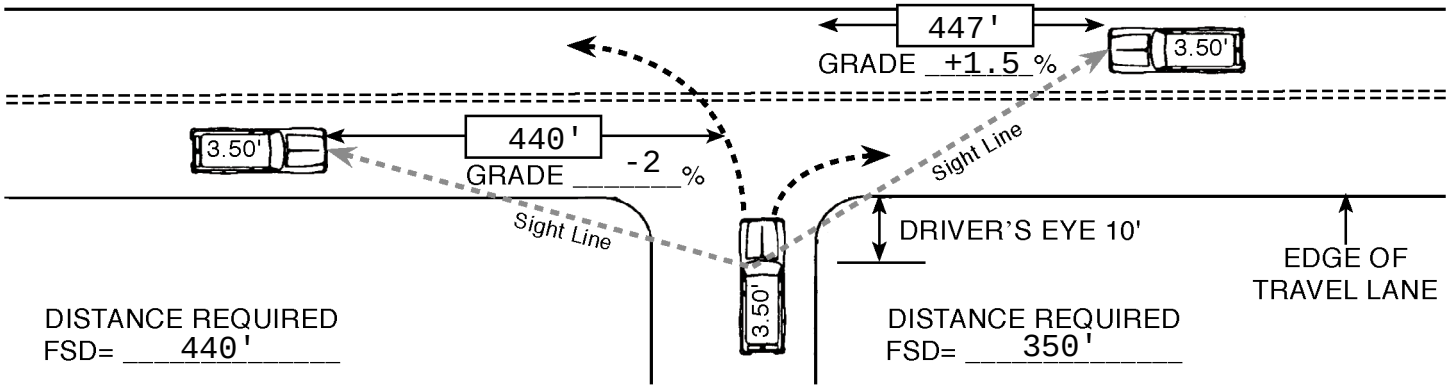
S.R. N/A - T-663 SEG. N/A OFFSET N/A LEGAL SPEED LIMIT 35 MPH

MEASURED BY Greenman Pedersen Inc. DATE 11/13/2019

FOR DEPARTMENT USE ONLY: Safe-Running Speed _____ 85th Percentile Speed _____

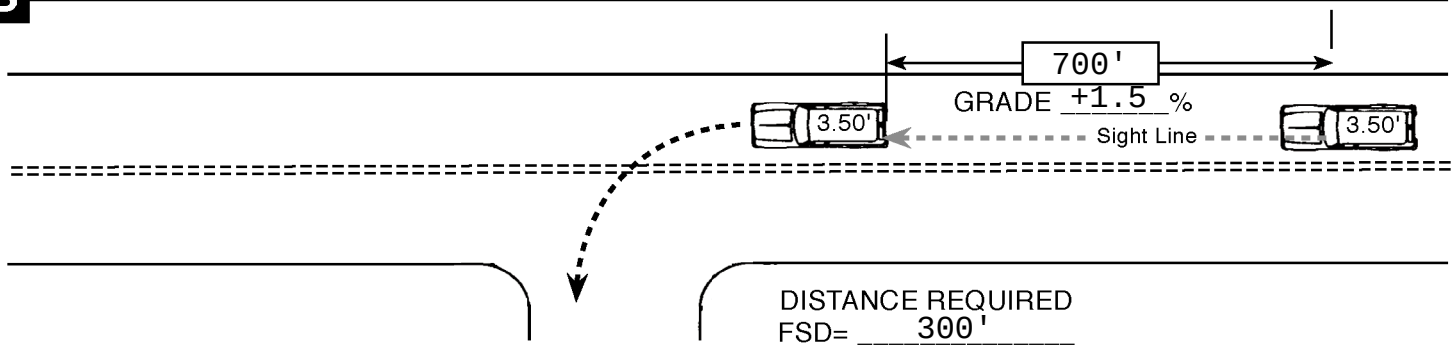
Proposed Garage Driveway

A



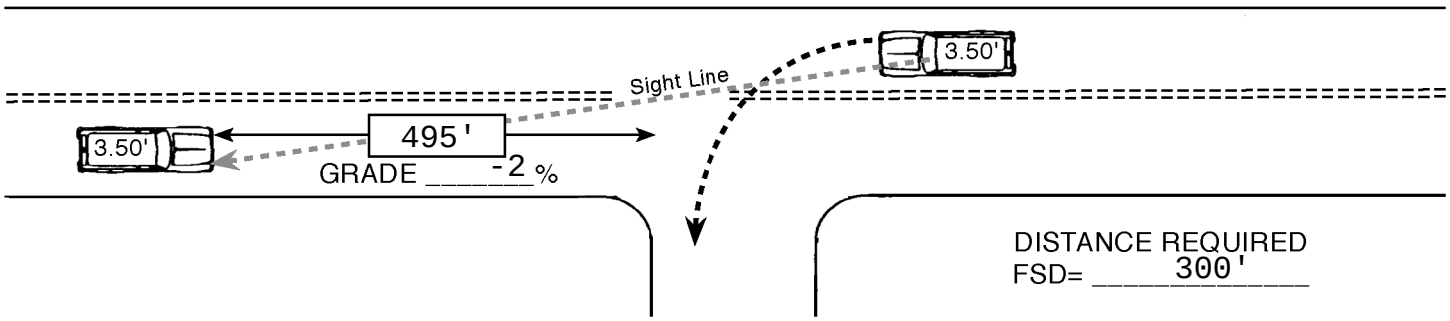
THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

B



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER ON THE ROADWAY CAN CONTINUOUSLY SEE THE REAR OF A VEHICLE WHICH IS LOCATED IN THE DRIVER'S TRAVEL LANE AND WHICH IS POSITIONED TO MAKE A LEFT TURN INTO A DRIVEWAY.

C



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER OF A VEHICLE INTENDING TO MAKE A LEFT TURN INTO A DRIVEWAY CAN CONTINUOUSLY SEE A VEHICLE APPROACHING FROM THE OPPOSITE DIRECTION.

Attachment C – Turning Movement Count Data

TRI-STATE TRAFFIC DATA

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184 Baker Rd

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Monroe County, PA
Broad St & Foxtown Hill Rd Ramp
Tuesday, November 19, 2019
Location: 40.988704, -75.144592

Count Name: Broad St/Foxtown Hill Rd Ramp
Site Code:
Start Date: 11/19/2019
Page No: 1

Turning Movement Data

Start Time	Foxtown Hill Rd Ramps Eastbound						Business Driveway Westbound						Broad Street Northbound						Broad Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:00 AM	5	0	2	0	0	7	0	1	0	0	0	1	3	21	0	0	0	24	0	17	10	0	0	27	59
6:15 AM	3	0	0	0	0	3	1	0	0	0	0	1	2	37	0	0	0	39	0	29	11	0	0	40	83
6:30 AM	7	0	2	0	0	9	2	0	0	0	0	2	3	32	0	0	0	35	2	31	25	0	0	58	104
6:45 AM	6	0	2	0	0	8	1	0	0	0	0	1	4	41	0	0	0	45	0	28	19	0	0	47	101
Hourly Total	21	0	6	0	0	27	4	1	0	0	0	5	12	131	0	0	0	143	2	105	65	0	0	172	347
7:00 AM	8	0	1	0	0	9	0	0	1	0	0	1	3	23	0	0	0	26	2	27	11	0	0	40	76
7:15 AM	7	0	0	0	0	7	0	0	0	0	1	0	3	40	0	0	0	43	0	26	13	0	0	39	89
7:30 AM	10	0	2	0	0	12	0	0	0	0	1	0	3	41	0	0	0	44	0	26	13	0	0	39	95
7:45 AM	4	0	1	0	0	5	0	0	0	0	0	0	4	70	0	0	0	74	2	36	9	0	0	47	126
Hourly Total	29	0	4	0	0	33	0	0	1	0	2	1	13	174	0	0	0	187	4	115	46	0	0	165	386
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 PM	15	0	4	0	0	19	0	0	0	0	0	0	2	57	0	0	0	59	1	53	3	0	0	57	135
5:15 PM	14	1	0	0	0	15	1	0	1	0	0	2	1	52	3	0	1	56	1	33	5	0	0	39	112
5:30 PM	12	0	2	0	0	14	2	0	0	0	0	2	0	38	1	0	0	39	0	42	5	0	0	47	102
5:45 PM	12	0	0	0	0	12	0	1	1	0	0	2	2	31	2	0	0	35	3	45	5	0	0	53	102
Hourly Total	53	1	6	0	0	60	3	1	2	0	0	6	5	178	6	0	1	189	5	173	18	0	0	196	451
6:00 PM	14	0	0	0	0	14	0	0	2	0	0	2	0	48	0	0	0	48	1	21	9	0	0	31	95
6:15 PM	20	0	2	0	0	22	1	0	2	0	0	3	1	54	2	0	0	57	0	22	3	0	0	25	107
6:30 PM	22	1	2	0	0	25	0	0	0	0	0	0	1	30	0	0	0	31	2	31	2	0	0	35	91
6:45 PM	15	0	1	0	0	16	0	0	3	0	1	3	0	38	4	0	0	42	1	17	1	0	0	19	80
Hourly Total	71	1	5	0	0	77	1	0	7	0	1	8	2	170	6	0	0	178	4	91	15	0	0	110	373
Grand Total	174	2	21	0	0	197	8	2	10	0	3	20	32	653	12	0	1	697	15	484	144	0	0	643	1557
Approach %	88.3	1.0	10.7	0.0	-	-	40.0	10.0	50.0	0.0	-	-	4.6	93.7	1.7	0.0	-	-	2.3	75.3	22.4	0.0	-	-	-
Total %	11.2	0.1	1.3	0.0	-	12.7	0.5	0.1	0.6	0.0	-	1.3	2.1	41.9	0.8	0.0	-	44.8	1.0	31.1	9.2	0.0	-	41.3	-
Lights	163	1	21	0	-	185	8	2	9	0	-	19	31	632	12	0	-	675	13	454	141	0	-	608	1487
% Lights	93.7	50.0	100.0	-	-	93.9	100.0	100.0	90.0	-	-	95.0	96.9	96.8	100.0	-	-	96.8	86.7	93.8	97.9	-	-	94.6	95.5
Buses	10	0	0	0	-	10	0	0	0	0	-	0	0	5	0	0	-	5	0	3	0	0	-	3	18
% Buses	5.7	0.0	0.0	-	-	5.1	0.0	0.0	0.0	-	-	0.0	0.0	0.8	0.0	-	-	0.7	0.0	0.6	0.0	-	-	0.5	1.2
Trucks	1	1	0	0	-	2	0	0	1	0	-	1	1	16	0	0	-	17	2	27	3	0	-	32	52
% Trucks	0.6	50.0	0.0	-	-	1.0	0.0	0.0	10.0	-	-	5.0	3.1	2.5	0.0	-	-	2.4	13.3	5.6	2.1	-	-	5.0	3.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	33.3	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	66.7	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Monroe County, PA
Broad St & Foxtown Hill Rd Ramp
Tuesday, November 19, 2019
Location: 40.988704, -75.144592

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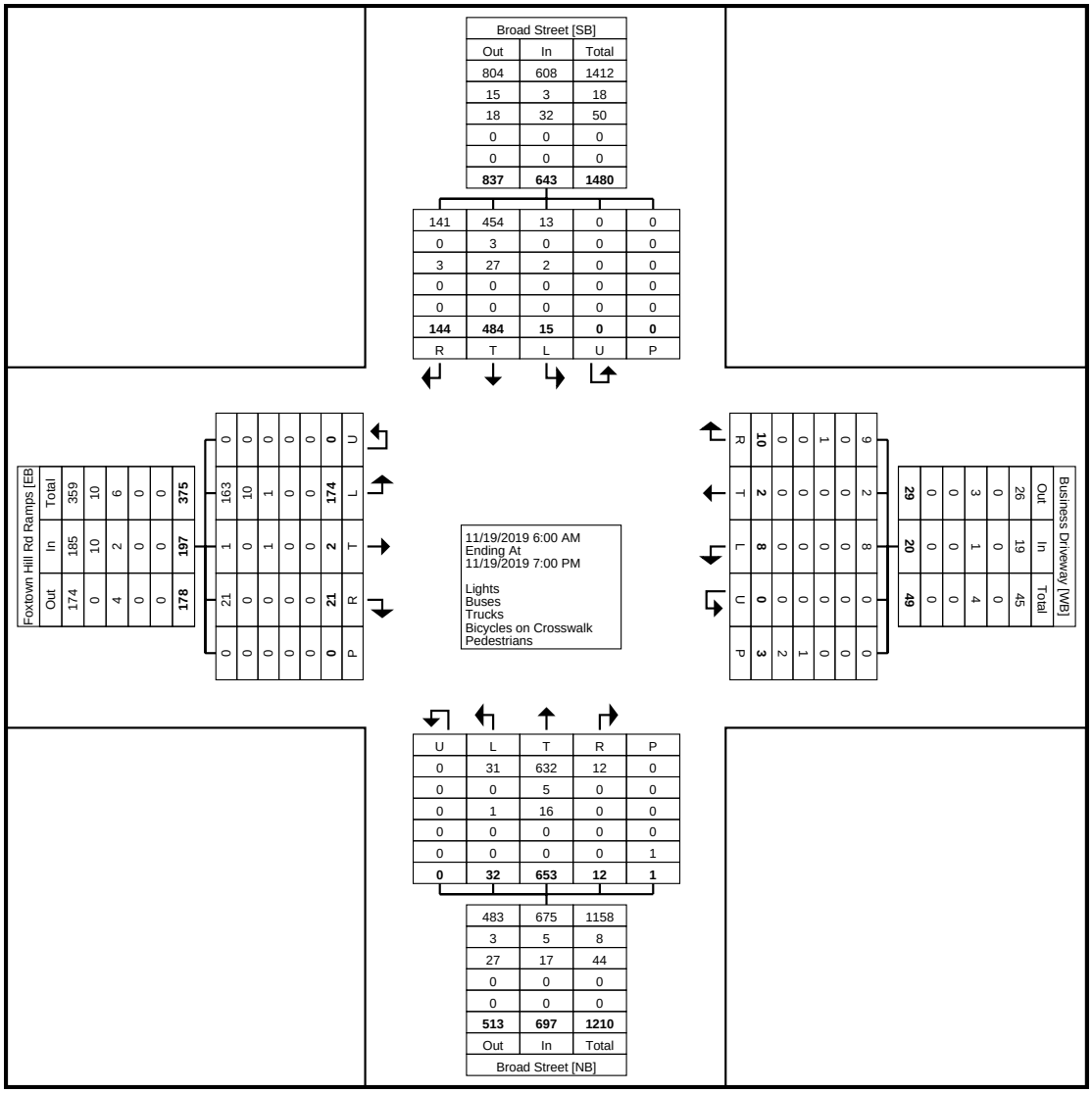
Count Name: Broad St/Foxtown Hill Rd Ramp
Site Code:
Start Date: 11/19/2019



Turning Movement Data Plot

Monroe County, PA
Broad St & Foxtown Hill Rd Ramp
Tuesday, November 19, 2019
Location: 40.988704, -75.144592

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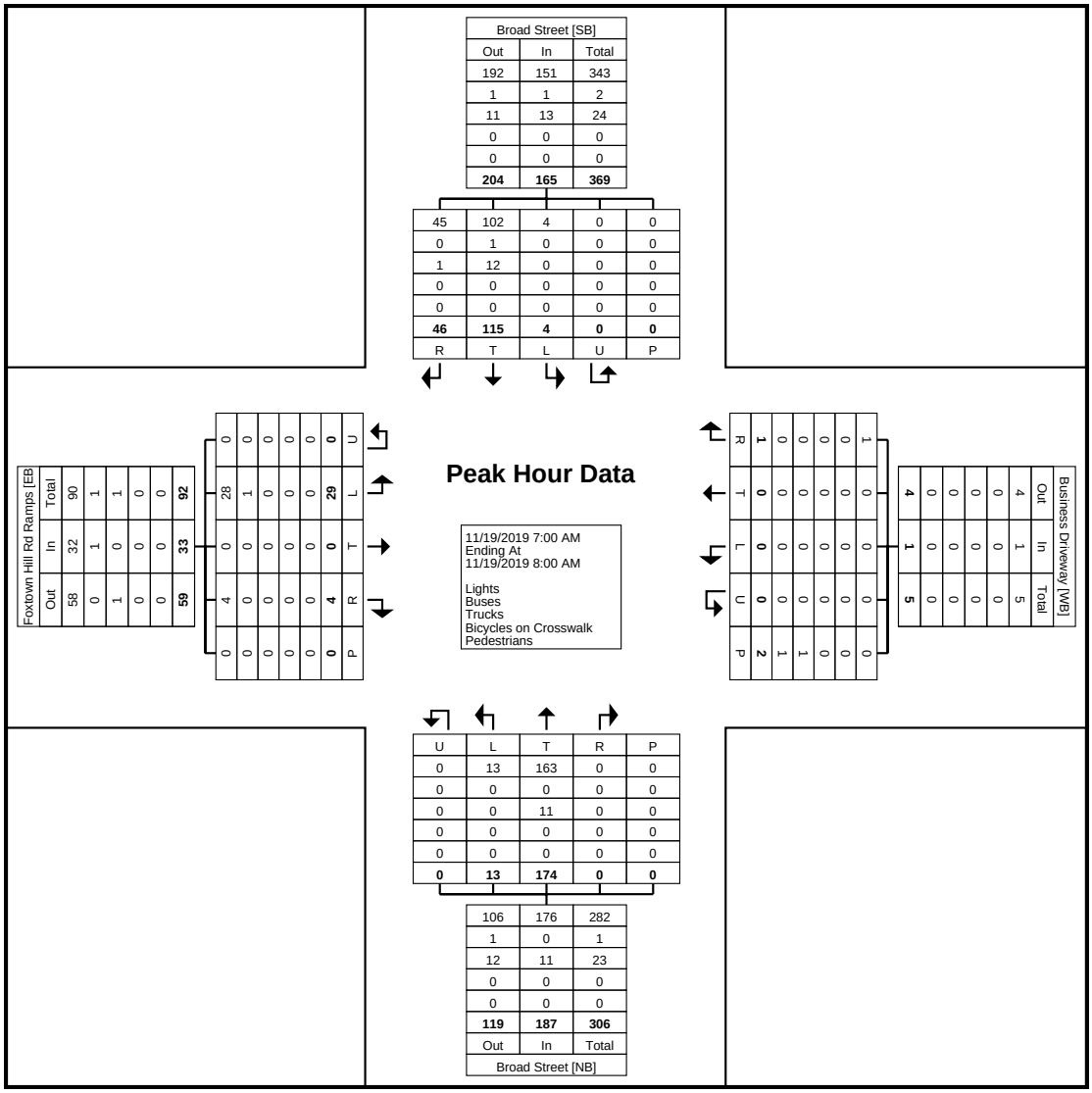
Turning Movement Peak Hour Data (7:00 AM)

Start Time	Foxtown Hill Rd Ramps Eastbound						Business Driveway Westbound						Broad Street Northbound						Broad Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	8	0	1	0	0	9	0	0	1	0	0	1	3	23	0	0	0	26	2	27	11	0	0	40	76
7:15 AM	7	0	0	0	0	7	0	0	0	0	1	0	3	40	0	0	0	43	0	26	13	0	0	39	89
7:30 AM	10	0	2	0	0	12	0	0	0	0	1	0	3	41	0	0	0	44	0	26	13	0	0	39	95
7:45 AM	4	0	1	0	0	5	0	0	0	0	0	0	4	70	0	0	0	74	2	36	9	0	0	47	126
Total	29	0	4	0	0	33	0	0	1	0	2	1	13	174	0	0	0	187	4	115	46	0	0	165	386
Approach %	87.9	0.0	12.1	0.0	-	-	0.0	0.0	100.0	0.0	-	-	7.0	93.0	0.0	0.0	-	-	2.4	69.7	27.9	0.0	-	-	-
Total %	7.5	0.0	1.0	0.0	-	8.5	0.0	0.0	0.3	0.0	-	0.3	3.4	45.1	0.0	0.0	-	48.4	1.0	29.8	11.9	0.0	-	42.7	-
PHF	0.725	0.000	0.500	0.000	-	0.688	0.000	0.000	0.250	0.000	-	0.250	0.813	0.621	0.000	0.000	-	0.632	0.500	0.799	0.885	0.000	-	0.878	0.766
Lights	28	0	4	0	-	32	0	0	1	0	-	1	13	163	0	0	-	176	4	102	45	0	-	151	360
% Lights	96.6	-	100.0	-	-	97.0	-	-	100.0	-	-	100.0	100.0	93.7	-	-	-	94.1	100.0	88.7	97.8	-	-	91.5	93.3
Buses	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	2
% Buses	3.4	-	0.0	-	-	3.0	-	-	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.9	0.0	-	-	0.6	0.5
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	11	0	0	-	11	0	12	1	0	-	13	24
% Trucks	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	0.0	6.3	-	-	-	5.9	0.0	10.4	2.2	-	-	7.9	6.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (7:00 AM)

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Monroe County, PA
Broad St & Foxtown Hill Rd Ramp
Tuesday, November 19, 2019
Location: 40.988704, -75.144592

Count Name: Broad St/Foxtown Hill Rd Ramp
Site Code:
Start Date: 11/19/2019

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Foxtown Hill Rd Ramps Eastbound						Business Driveway Westbound						Broad Street Northbound						Broad Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	15	0	4	0	0	19	0	0	0	0	0	0	2	57	0	0	0	59	1	53	3	0	0	57	135
5:15 PM	14	1	0	0	0	15	1	0	1	0	0	2	1	52	3	0	1	56	1	33	5	0	0	39	112
5:30 PM	12	0	2	0	0	14	2	0	0	0	0	2	0	38	1	0	0	39	0	42	5	0	0	47	102
5:45 PM	12	0	0	0	0	12	0	1	1	0	0	2	2	31	2	0	0	35	3	45	5	0	0	53	102
Total	53	1	6	0	0	60	3	1	2	0	0	6	5	178	6	0	1	189	5	173	18	0	0	196	451
Approach %	88.3	1.7	10.0	0.0	-	-	50.0	16.7	33.3	0.0	-	-	2.6	94.2	3.2	0.0	-	-	2.6	88.3	9.2	0.0	-	-	-
Total %	11.8	0.2	1.3	0.0	-	13.3	0.7	0.2	0.4	0.0	-	1.3	1.1	39.5	1.3	0.0	-	41.9	1.1	38.4	4.0	0.0	-	43.5	-
PHF	0.883	0.250	0.375	0.000	-	0.789	0.375	0.250	0.500	0.000	-	0.750	0.625	0.781	0.500	0.000	-	0.801	0.417	0.816	0.900	0.000	-	0.860	0.835
Lights	48	1	6	0	-	55	3	1	2	0	-	6	5	175	6	0	-	186	4	168	17	0	-	189	436
% Lights	90.6	100.0	100.0	-	-	91.7	100.0	100.0	100.0	-	-	100.0	100.0	98.3	100.0	-	-	98.4	80.0	97.1	94.4	-	-	96.4	96.7
Buses	4	0	0	0	-	4	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	6
% Buses	7.5	0.0	0.0	-	-	6.7	0.0	0.0	0.0	-	-	0.0	0.0	0.6	0.0	-	-	0.5	0.0	0.6	0.0	-	-	0.5	1.3
Trucks	1	0	0	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	1	4	1	0	-	6	9
% Trucks	1.9	0.0	0.0	-	-	1.7	0.0	0.0	0.0	-	-	0.0	0.0	1.1	0.0	-	-	1.1	20.0	2.3	5.6	-	-	3.1	2.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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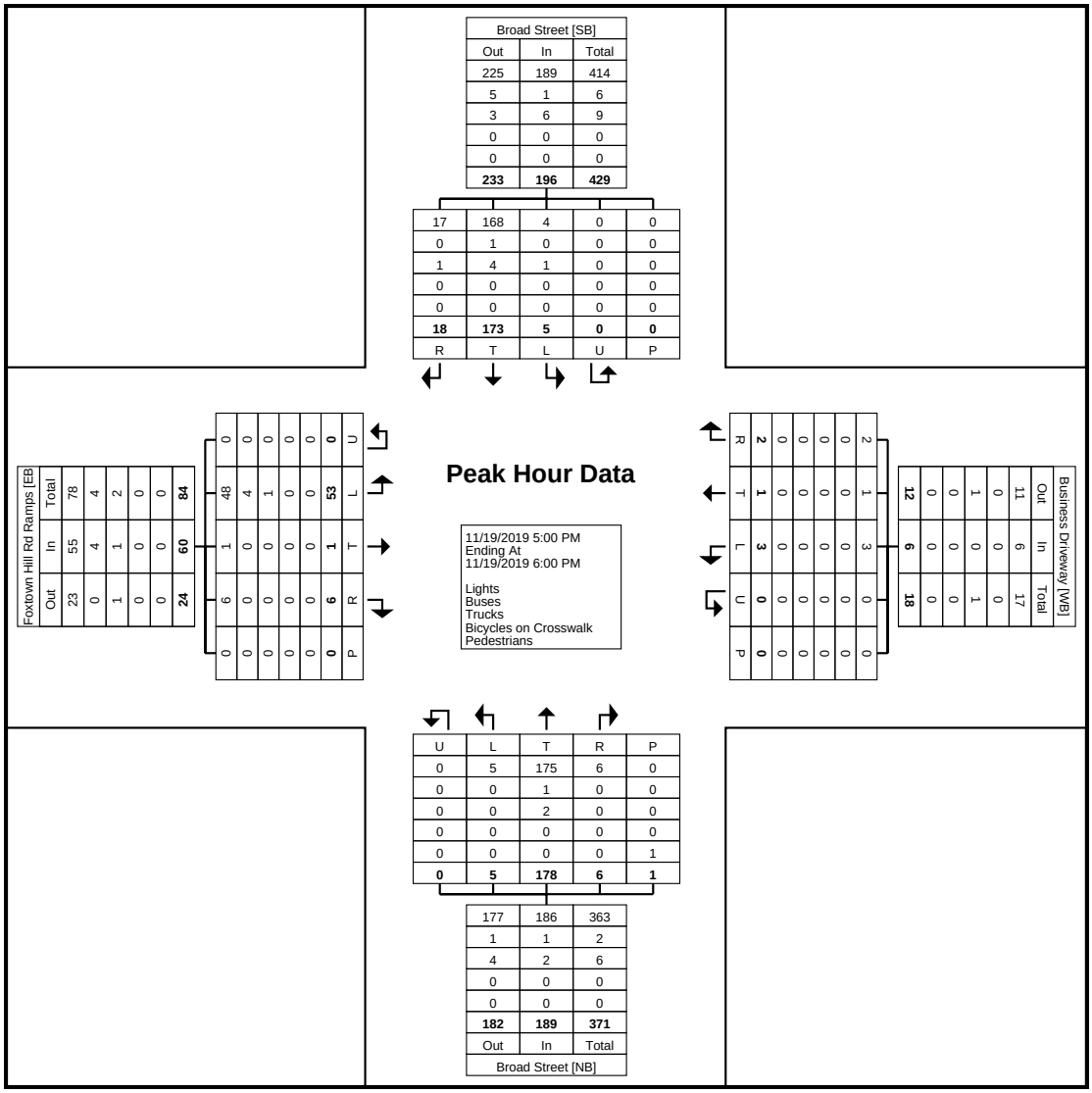

Turning Movement Peak Hour Data Plot (5:00 PM)

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Monroe County, PA
Broad St & Park Ride Lot
Tuesday, November 19, 2019
Location: 40.990479, -75.143779

Count Name: Broad St/Park Ride Lot
Site Code:
Start Date: 11/19/2019

Turning Movement Data

Start Time	Park Ride Lot Eastbound					Broad Street Northbound					Broad Street Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	0	0	0	0	0	27	0	0	27	27	0	0	0	27	54
6:15 AM	0	0	0	0	0	0	41	0	0	41	43	0	0	0	43	84
6:30 AM	1	0	0	0	1	0	41	0	0	41	55	0	0	0	55	97
6:45 AM	0	0	0	0	0	0	47	0	0	47	47	0	0	0	47	94
Hourly Total	1	0	0	0	1	0	156	0	0	156	172	0	0	0	172	329
7:00 AM	0	0	0	0	0	0	31	0	0	31	42	0	0	0	42	73
7:15 AM	3	0	0	0	3	0	48	0	0	48	40	3	0	0	43	94
7:30 AM	0	0	0	0	0	0	51	0	0	51	38	0	0	0	38	89
7:45 AM	0	0	0	0	0	0	77	0	0	77	50	0	0	0	50	127
Hourly Total	3	0	0	0	3	0	207	0	0	207	170	3	0	0	173	383
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 PM	12	4	0	0	16	0	75	0	0	75	54	5	0	0	59	150
5:15 PM	10	0	0	0	10	0	67	0	0	67	39	5	0	0	44	121
5:30 PM	15	0	0	1	15	0	50	0	0	50	49	3	0	0	52	117
5:45 PM	16	2	0	0	18	0	47	0	0	47	51	2	0	0	53	118
Hourly Total	53	6	0	1	59	0	239	0	0	239	193	15	0	0	208	506
6:00 PM	3	0	0	0	3	1	64	0	0	65	29	2	0	0	31	99
6:15 PM	4	1	0	0	5	1	78	0	0	79	27	2	0	0	29	113
6:30 PM	8	3	0	0	11	1	50	0	0	51	31	1	0	0	32	94
6:45 PM	13	2	0	0	15	1	55	0	0	56	18	4	1	0	23	94
Hourly Total	28	6	0	0	34	4	247	0	0	251	105	9	1	0	115	400
Grand Total	85	12	0	1	97	4	849	0	0	853	640	27	1	0	668	1618
Approach %	87.6	12.4	0.0	-	-	0.5	99.5	0.0	-	-	95.8	4.0	0.1	-	-	-
Total %	5.3	0.7	0.0	-	6.0	0.2	52.5	0.0	-	52.7	39.6	1.7	0.1	-	41.3	-
Lights	85	12	0	-	97	4	816	0	-	820	605	27	1	-	633	1550
% Lights	100.0	100.0	-	-	100.0	100.0	96.1	-	-	96.1	94.5	100.0	100.0	-	94.8	95.8
Buses	0	0	0	-	0	0	16	0	-	16	3	0	0	-	3	19
% Buses	0.0	0.0	-	-	0.0	0.0	1.9	-	-	1.9	0.5	0.0	0.0	-	0.4	1.2
Trucks	0	0	0	-	0	0	17	0	-	17	32	0	0	-	32	49
% Trucks	0.0	0.0	-	-	0.0	0.0	2.0	-	-	2.0	5.0	0.0	0.0	-	4.8	3.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Monroe County, PA
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Location: 40.990479, -75.143779

Count Name: Broad St/Park Ride Lot
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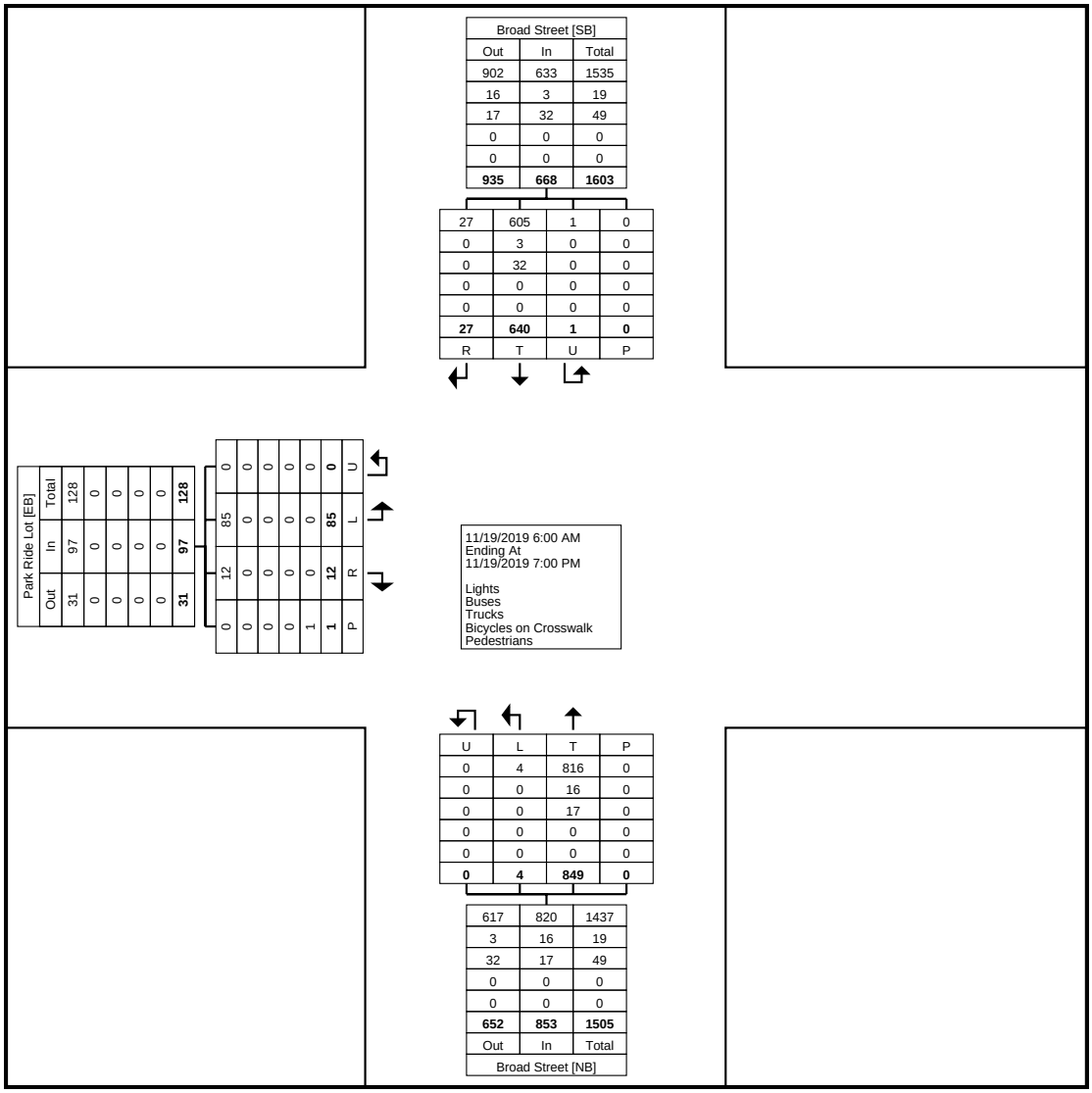
Start Date: 11/19/2019



Turning Movement Data Plot

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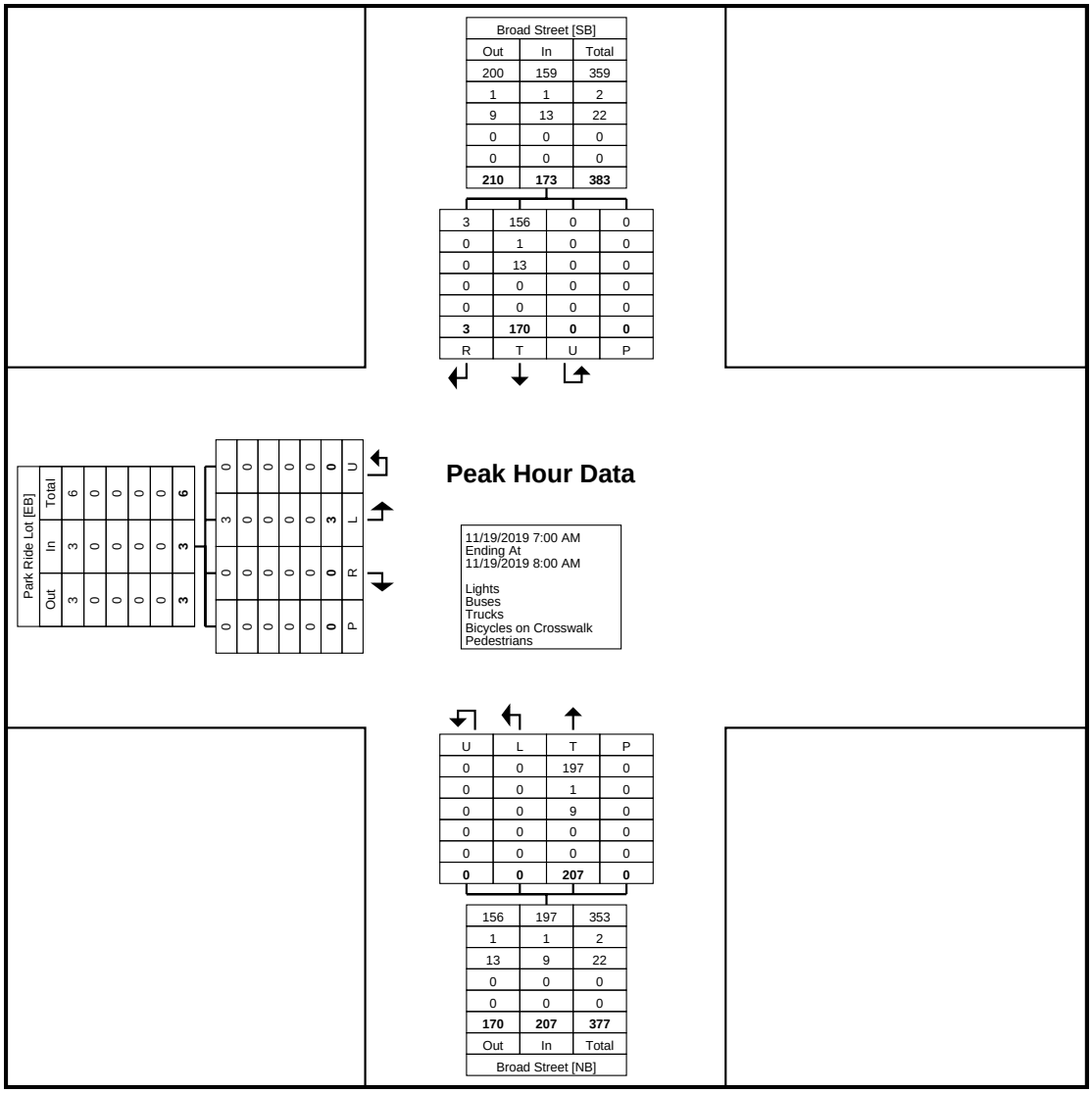
Broad St & Park Ride Lot
Tuesday, November 19, 2019
Location: 40.990479, -75.143779

Count Name: Broad St/Park Ride Lot
Site Code:
Start Date: 11/19/2019

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Park Ride Lot Eastbound					Broad Street Northbound					Broad Street Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	31	0	0	31	42	0	0	0	42	73
7:15 AM	3	0	0	0	3	0	48	0	0	48	40	3	0	0	43	94
7:30 AM	0	0	0	0	0	0	51	0	0	51	38	0	0	0	38	89
7:45 AM	0	0	0	0	0	0	77	0	0	77	50	0	0	0	50	127
Total	3	0	0	0	3	0	207	0	0	207	170	3	0	0	173	383
Approach %	100.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	98.3	1.7	0.0	-	-	-
Total %	0.8	0.0	0.0	-	0.8	0.0	54.0	0.0	-	54.0	44.4	0.8	0.0	-	45.2	-
PHF	0.250	0.000	0.000	-	0.250	0.000	0.672	0.000	-	0.672	0.850	0.250	0.000	-	0.865	0.754
Lights	3	0	0	-	3	0	197	0	-	197	156	3	0	-	159	359
% Lights	100.0	-	-	-	100.0	-	95.2	-	-	95.2	91.8	100.0	-	-	91.9	93.7
Buses	0	0	0	-	0	0	1	0	-	1	1	0	0	-	1	2
% Buses	0.0	-	-	-	0.0	-	0.5	-	-	0.5	0.6	0.0	-	-	0.6	0.5
Trucks	0	0	0	-	0	0	9	0	-	9	13	0	0	-	13	22
% Trucks	0.0	-	-	-	0.0	-	4.3	-	-	4.3	7.6	0.0	-	-	7.5	5.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (7:00 AM)

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Monroe County, PA
Broad St & Park Ride Lot
Tuesday, November 19, 2019
Location: 40.990479, -75.143779

Count Name: Broad St/Park Ride Lot
Site Code:
Start Date: 11/19/2019

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Park Ride Lot Eastbound					Broad Street Northbound					Broad Street Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
5:00 PM	12	4	0	0	16	0	75	0	0	75	54	5	0	0	59	150
5:15 PM	10	0	0	0	10	0	67	0	0	67	39	5	0	0	44	121
5:30 PM	15	0	0	1	15	0	50	0	0	50	49	3	0	0	52	117
5:45 PM	16	2	0	0	18	0	47	0	0	47	51	2	0	0	53	118
Total	53	6	0	1	59	0	239	0	0	239	193	15	0	0	208	506
Approach %	89.8	10.2	0.0	-	-	0.0	100.0	0.0	-	-	92.8	7.2	0.0	-	-	-
Total %	10.5	1.2	0.0	-	11.7	0.0	47.2	0.0	-	47.2	38.1	3.0	0.0	-	41.1	-
PHF	0.828	0.375	0.000	-	0.819	0.000	0.797	0.000	-	0.797	0.894	0.750	0.000	-	0.881	0.843
Lights	53	6	0	-	59	0	231	0	-	231	186	15	0	-	201	491
% Lights	100.0	100.0	-	-	100.0	-	96.7	-	-	96.7	96.4	100.0	-	-	96.6	97.0
Buses	0	0	0	-	0	0	5	0	-	5	1	0	0	-	1	6
% Buses	0.0	0.0	-	-	0.0	-	2.1	-	-	2.1	0.5	0.0	-	-	0.5	1.2
Trucks	0	0	0	-	0	0	3	0	-	3	6	0	0	-	6	9
% Trucks	0.0	0.0	-	-	0.0	-	1.3	-	-	1.3	3.1	0.0	-	-	2.9	1.8
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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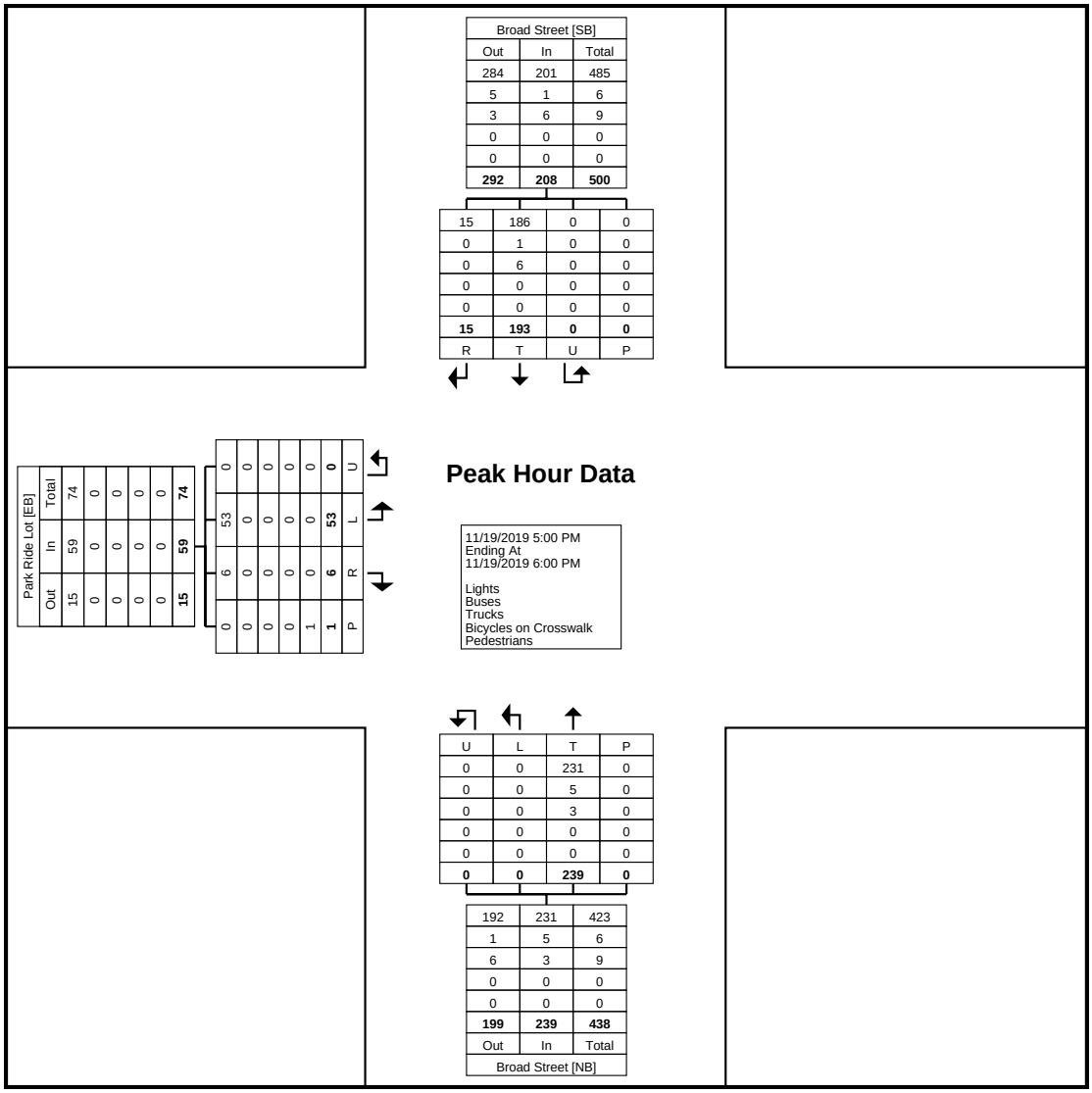
Monroe County, PA
Broad St & Park Ride Lot
Tuesday, November 19, 2019
Location: 40.990479, -75.143779

Count Name: Broad St/Park Ride Lot
Site Code:
Start Date: 11/19/2019



Turning Movement Peak Hour Data Plot (5:00 PM)

Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -75.143264

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Count Name: River Rd/Broad St Roundabout
Site Code:
Start Date: 11/19/2019

Turning Movement Data

Start Time	Foxtown Hill Ramps Eastbound				Broad Street Northbound			I-80 On/Off Ramps Southbound				
	Thru	Right	Peds	App. Total	Right	Peds	App. Total	Left	Thru	Right	App. Total	Int. Total
6:00 AM	0	1	0	1	27	0	27	5	29	12	46	74
6:15 AM	2	1	0	3	41	0	41	5	41	11	57	101
6:30 AM	3	2	0	5	42	0	42	10	53	5	68	115
6:45 AM	7	0	0	7	48	0	48	15	50	5	70	125
Hourly Total	12	4	0	16	158	0	158	35	173	33	241	415
7:00 AM	2	3	0	5	32	0	32	6	37	6	49	86
7:15 AM	2	2	0	4	49	0	49	8	44	10	62	115
7:30 AM	0	0	0	0	50	0	50	10	38	7	55	105
7:45 AM	0	0	0	0	77	0	77	8	48	16	72	149
Hourly Total	4	5	0	9	208	0	208	32	167	39	238	455
8:00 AM	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
5:00 PM	17	8	0	25	87	0	87	24	50	11	85	197
5:15 PM	30	4	0	34	78	0	78	23	42	9	74	186
5:30 PM	28	5	0	33	65	0	65	15	55	16	86	184
5:45 PM	19	0	0	19	62	0	62	18	60	13	91	172
Hourly Total	94	17	0	111	292	0	292	80	207	49	336	739
6:00 PM	15	3	0	18	64	0	64	18	25	13	56	138
6:15 PM	11	5	0	16	76	0	76	20	25	12	57	149
6:30 PM	11	5	0	16	63	0	63	16	28	7	51	130
6:45 PM	22	1	0	23	69	0	69	12	22	12	46	138
Hourly Total	59	14	0	73	272	0	272	66	100	44	210	555
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	169	40	0	209	930	0	930	213	647	165	1025	2164
Approach %	80.9	19.1	-	-	100.0	-	-	20.8	63.1	16.1	-	-
Total %	7.8	1.8	-	9.7	43.0	-	43.0	9.8	29.9	7.6	47.4	-
Lights	154	36	-	190	899	-	899	203	615	155	973	2062
% Lights	91.1	90.0	-	90.9	96.7	-	96.7	95.3	95.1	93.9	94.9	95.3
Buses	11	0	-	11	15	-	15	0	3	9	12	38
% Buses	6.5	0.0	-	5.3	1.6	-	1.6	0.0	0.5	5.5	1.2	1.8
Trucks	4	4	-	8	16	-	16	10	29	1	40	64
% Trucks	2.4	10.0	-	3.8	1.7	-	1.7	4.7	4.5	0.6	3.9	3.0
Bicycles on Crosswalk	-	-	0	-	-	0	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	0	-	-	-	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-

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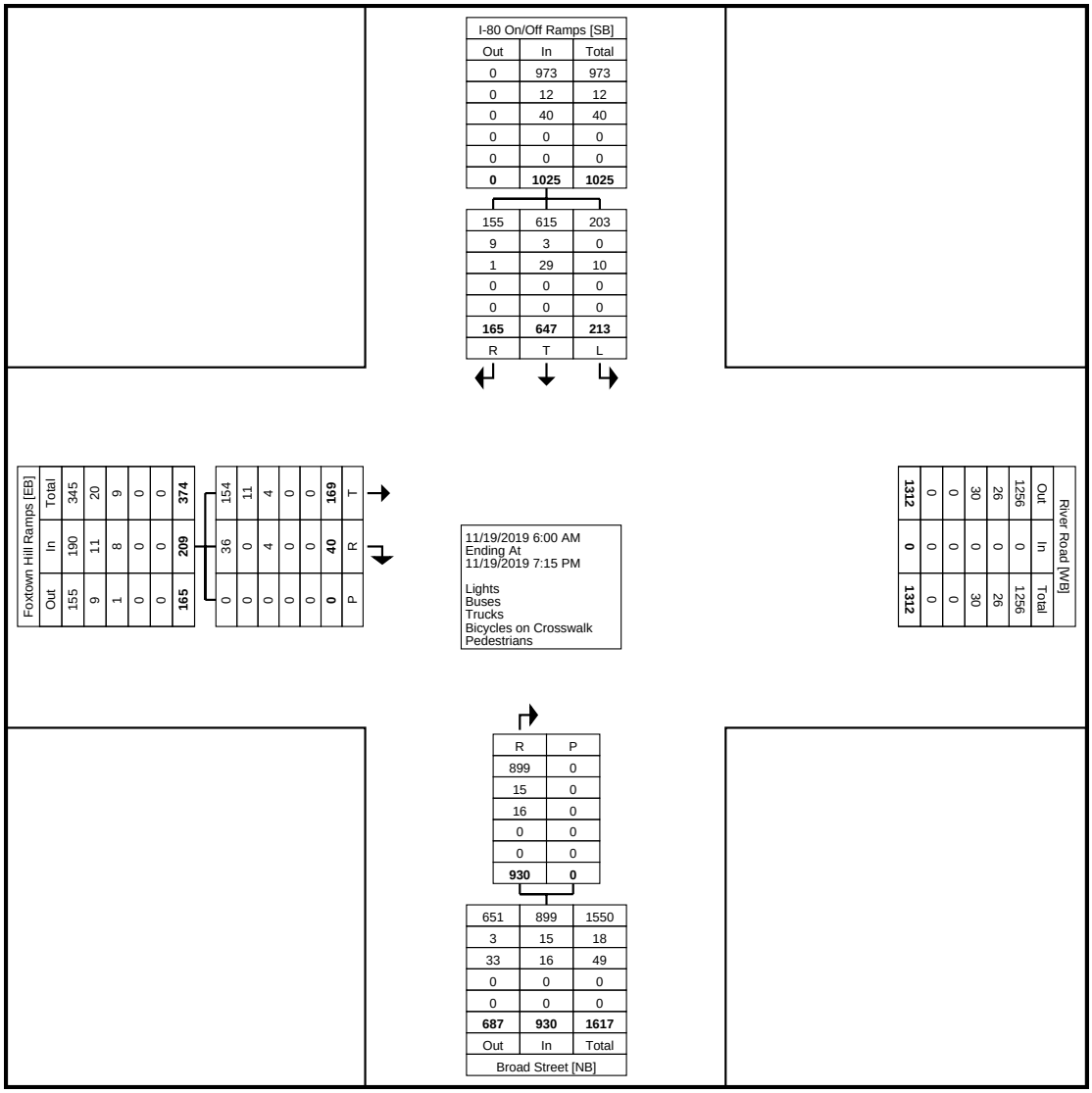

Turning Movement Data Plot

Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -
75.143264

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Turning Movement Peak Hour Data (7:00 AM)

Start Time	Foxtown Hill Ramps Eastbound				Broad Street Northbound			I-80 On/Off Ramps Southbound				
	Thru	Right	Peds	App. Total	Right	Peds	App. Total	Left	Thru	Right	App. Total	Int. Total
7:00 AM	2	3	0	5	32	0	32	6	37	6	49	86
7:15 AM	2	2	0	4	49	0	49	8	44	10	62	115
7:30 AM	0	0	0	0	50	0	50	10	38	7	55	105
7:45 AM	0	0	0	0	77	0	77	8	48	16	72	149
Total	4	5	0	9	208	0	208	32	167	39	238	455
Approach %	44.4	55.6	-	-	100.0	-	-	13.4	70.2	16.4	-	-
Total %	0.9	1.1	-	2.0	45.7	-	45.7	7.0	36.7	8.6	52.3	-
PHF	0.500	0.417	-	0.450	0.675	-	0.675	0.800	0.870	0.609	0.826	0.763
Lights	4	4	-	8	198	-	198	32	155	39	226	432
% Lights	100.0	80.0	-	88.9	95.2	-	95.2	100.0	92.8	100.0	95.0	94.9
Buses	0	0	-	0	1	-	1	0	1	0	1	2
% Buses	0.0	0.0	-	0.0	0.5	-	0.5	0.0	0.6	0.0	0.4	0.4
Trucks	0	1	-	1	9	-	9	0	11	0	11	21
% Trucks	0.0	20.0	-	11.1	4.3	-	4.3	0.0	6.6	0.0	4.6	4.6
Bicycles on Crosswalk	-	-	0	-	-	0	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	0	-	-	-	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-

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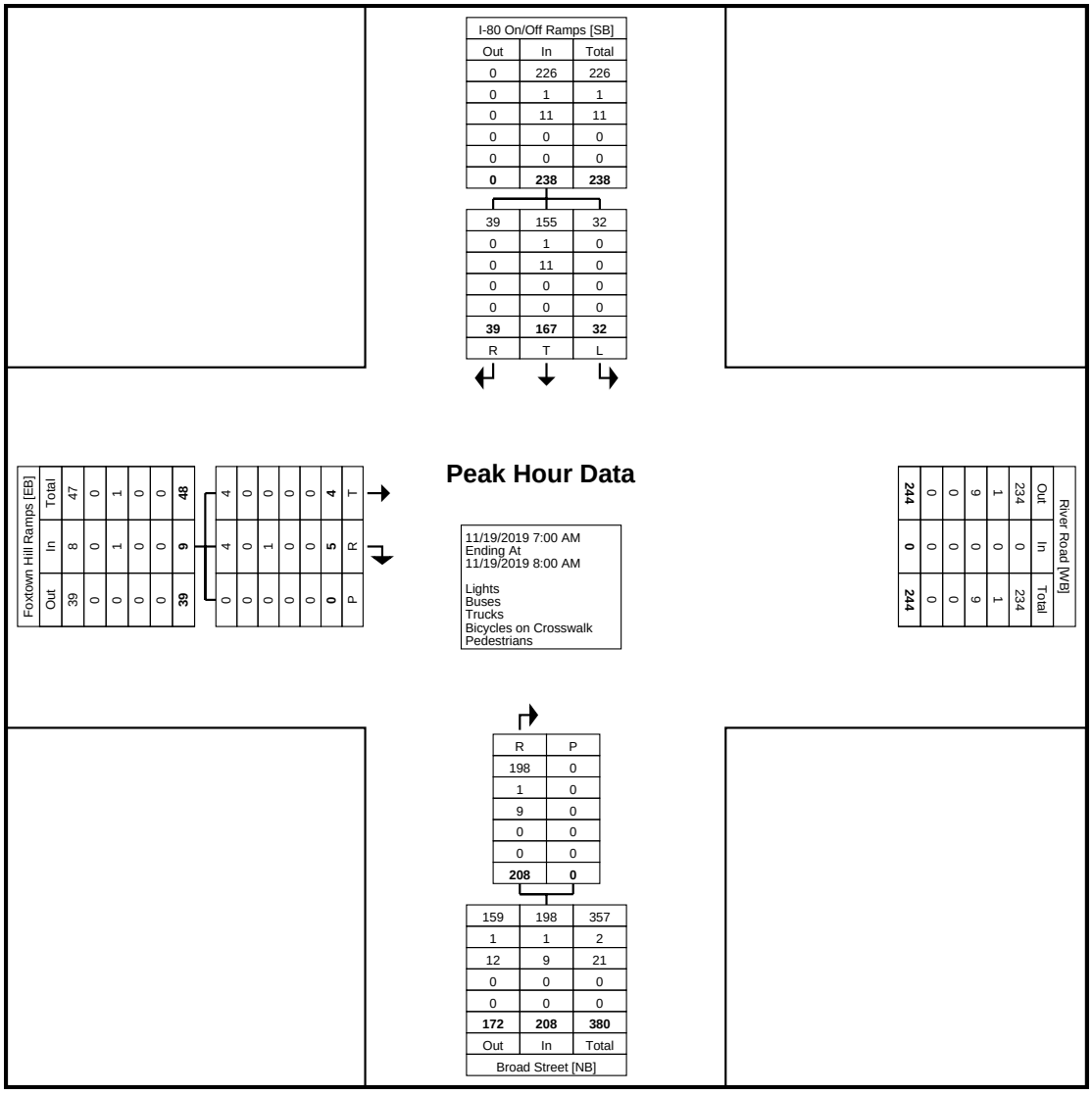

Turning Movement Peak Hour Data Plot (7:00 AM)

Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -75.143264

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Turning Movement Peak Hour Data (5:00 PM)

Start Time	Foxtown Hill Ramps Eastbound				Broad Street Northbound			I-80 On/Off Ramps Southbound				
	Thru	Right	Peds	App. Total	Right	Peds	App. Total	Left	Thru	Right	App. Total	Int. Total
5:00 PM	17	8	0	25	87	0	87	24	50	11	85	197
5:15 PM	30	4	0	34	78	0	78	23	42	9	74	186
5:30 PM	28	5	0	33	65	0	65	15	55	16	86	184
5:45 PM	19	0	0	19	62	0	62	18	60	13	91	172
Total	94	17	0	111	292	0	292	80	207	49	336	739
Approach %	84.7	15.3	-	-	100.0	-	-	23.8	61.6	14.6	-	-
Total %	12.7	2.3	-	15.0	39.5	-	39.5	10.8	28.0	6.6	45.5	-
PHF	0.783	0.531	-	0.816	0.839	-	0.839	0.833	0.863	0.766	0.923	0.938
Lights	90	16	-	106	283	-	283	77	202	46	325	714
% Lights	95.7	94.1	-	95.5	96.9	-	96.9	96.3	97.6	93.9	96.7	96.6
Buses	4	0	-	4	5	-	5	0	1	3	4	13
% Buses	4.3	0.0	-	3.6	1.7	-	1.7	0.0	0.5	6.1	1.2	1.8
Trucks	0	1	-	1	4	-	4	3	4	0	7	12
% Trucks	0.0	5.9	-	0.9	1.4	-	1.4	3.8	1.9	0.0	2.1	1.6
Bicycles on Crosswalk	-	-	0	-	-	0	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	0	-	-	-	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-

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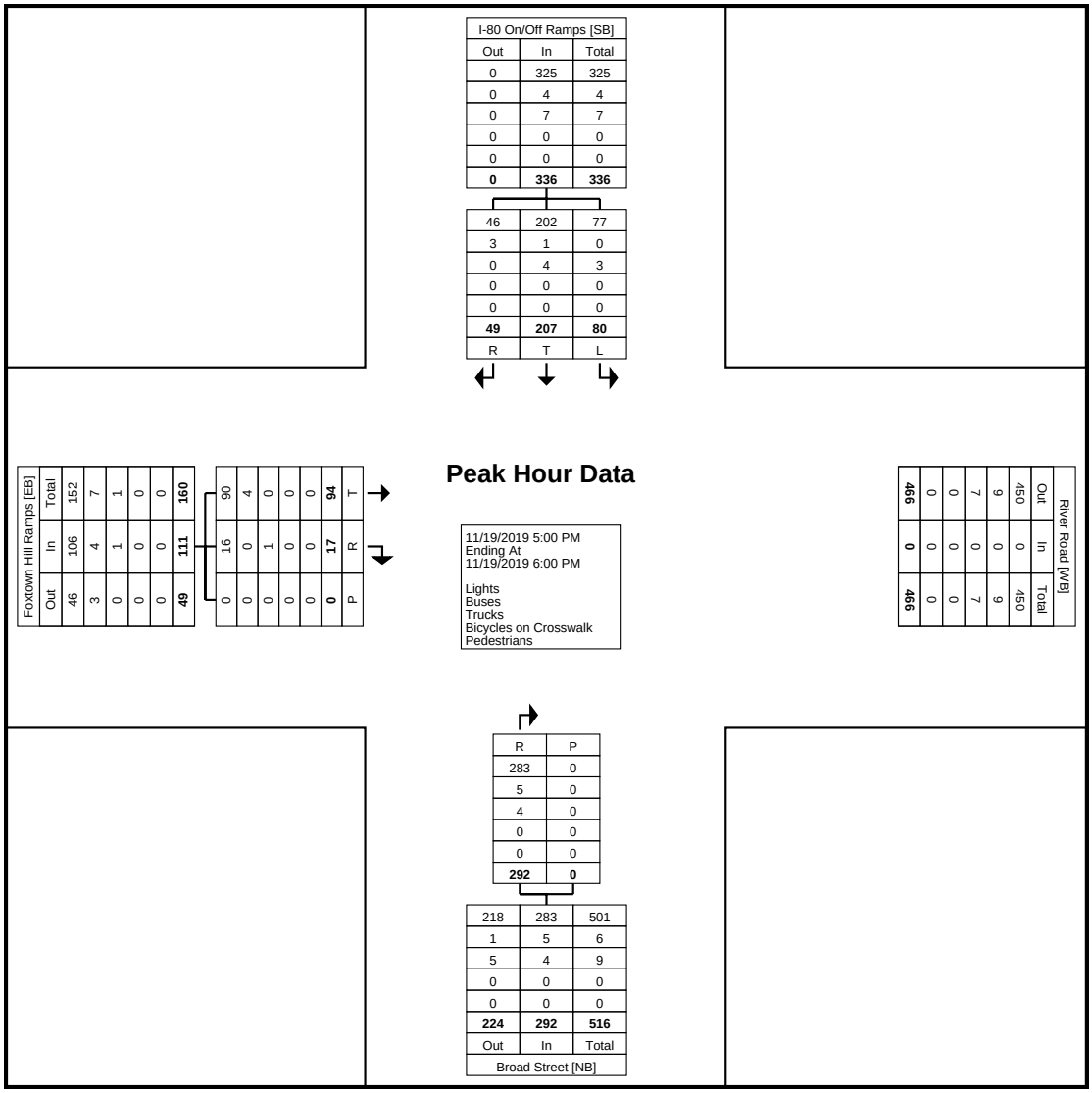

Turning Movement Peak Hour Data Plot (5:00 PM)

Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -75.143264

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Count Name: River Rd/Broad St Roundabout
Site Code:
Start Date: 11/19/2019

Turning Movement Data

Start Time	River Road Westbound				Broad Street Northbound				I-80 On/Off Ramps Southbound			
	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Right	Peds	App. Total	Int. Total
6:00 AM	19	6	0	25	1	21	10	32	27	0	27	84
6:15 AM	30	5	0	35	0	27	21	48	30	0	30	113
6:30 AM	34	10	0	44	2	31	20	53	30	0	30	127
6:45 AM	28	4	0	32	3	36	32	71	37	0	37	140
Hourly Total	111	25	0	136	6	115	83	204	124	0	124	464
7:00 AM	22	11	0	33	0	25	19	44	30	0	30	107
7:15 AM	25	16	0	41	0	46	19	65	35	0	35	141
7:30 AM	24	15	0	39	0	32	29	61	33	0	33	133
7:45 AM	23	26	0	49	1	57	23	81	45	0	45	175
Hourly Total	94	68	0	162	1	160	90	251	143	0	143	556
8:00 AM	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
5:00 PM	20	17	0	37	4	55	69	128	60	0	60	225
5:15 PM	14	9	0	23	1	46	83	130	58	0	58	211
5:30 PM	23	25	0	48	2	45	62	109	54	0	54	211
5:45 PM	21	13	0	34	4	46	43	93	58	0	58	185
Hourly Total	78	64	0	142	11	192	257	460	230	0	230	832
6:00 PM	16	9	0	25	2	47	53	102	40	0	40	167
6:15 PM	12	6	0	18	0	51	57	108	43	0	43	169
6:30 PM	12	6	0	18	1	44	46	91	39	0	39	148
6:45 PM	7	13	0	20	3	48	47	98	36	0	36	154
Hourly Total	47	34	0	81	6	190	203	399	158	0	158	638
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	330	191	0	521	24	657	633	1314	655	0	655	2490
Approach %	63.3	36.7	-	-	1.8	50.0	48.2	-	100.0	-	-	-
Total %	13.3	7.7	-	20.9	1.0	26.4	25.4	52.8	26.3	-	26.3	-
Lights	324	184	-	508	22	619	612	1253	622	-	622	2383
% Lights	98.2	96.3	-	97.5	91.7	94.2	96.7	95.4	95.0	-	95.0	95.7
Buses	1	1	-	2	2	18	4	24	9	-	9	35
% Buses	0.3	0.5	-	0.4	8.3	2.7	0.6	1.8	1.4	-	1.4	1.4
Trucks	5	6	-	11	0	20	17	37	24	-	24	72
% Trucks	1.5	3.1	-	2.1	0.0	3.0	2.7	2.8	3.7	-	3.7	2.9
Bicycles on Crosswalk	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-

Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -75.143264

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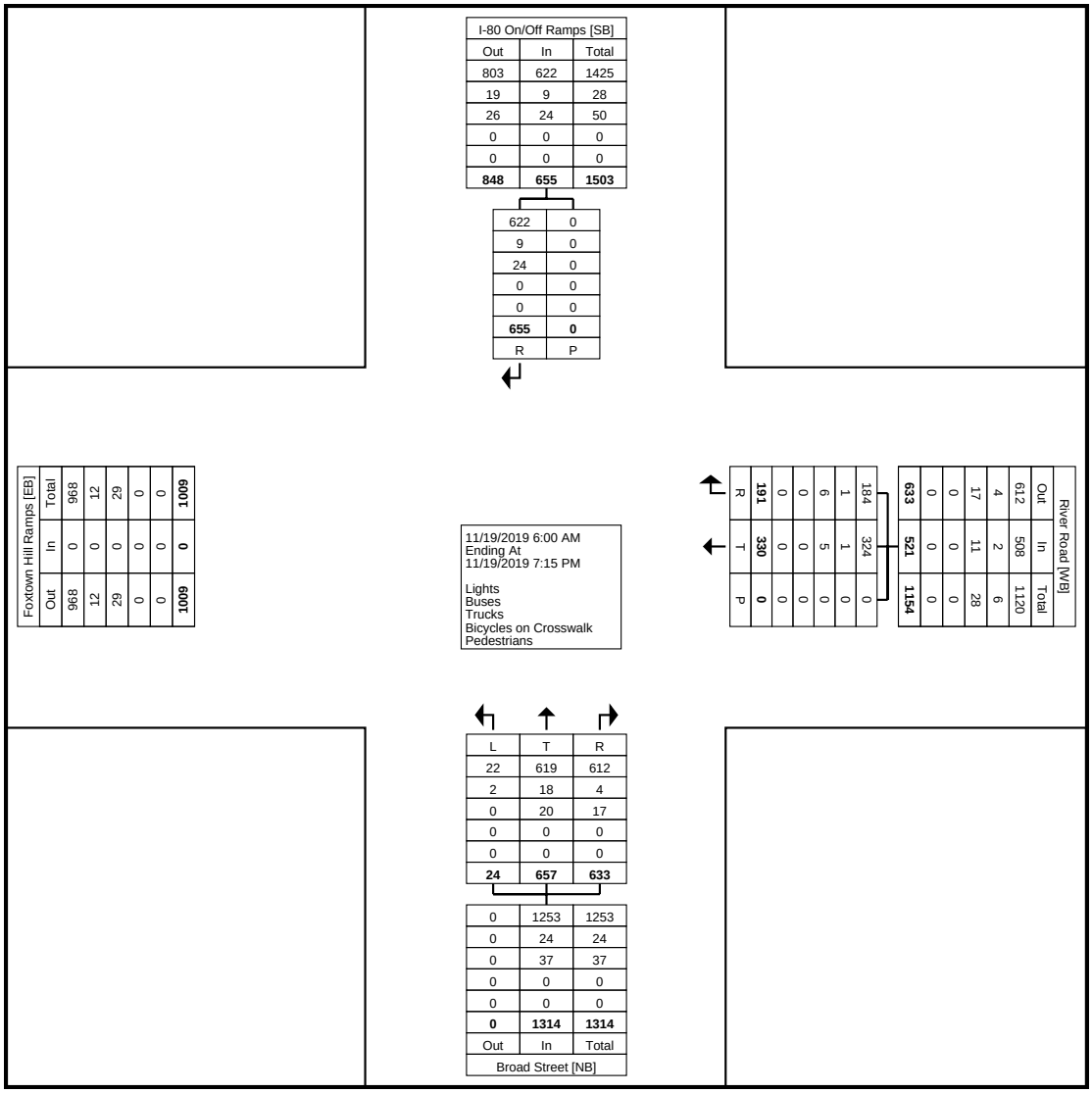

Turning Movement Data Plot

Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -75.143264

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Turning Movement Peak Hour Data (7:00 AM)

Start Time	River Road Westbound				Broad Street Northbound				I-80 On/Off Ramps Southbound			
	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Right	Peds	App. Total	Int. Total
7:00 AM	22	11	0	33	0	25	19	44	30	0	30	107
7:15 AM	25	16	0	41	0	46	19	65	35	0	35	141
7:30 AM	24	15	0	39	0	32	29	61	33	0	33	133
7:45 AM	23	26	0	49	1	57	23	81	45	0	45	175
Total	94	68	0	162	1	160	90	251	143	0	143	556
Approach %	58.0	42.0	-	-	0.4	63.7	35.9	-	100.0	-	-	-
Total %	16.9	12.2	-	29.1	0.2	28.8	16.2	45.1	25.7	-	25.7	-
PHF	0.940	0.654	-	0.827	0.250	0.702	0.776	0.775	0.794	-	0.794	0.794
Lights	93	67	-	160	1	147	89	237	137	-	137	534
% Lights	98.9	98.5	-	98.8	100.0	91.9	98.9	94.4	95.8	-	95.8	96.0
Buses	0	0	-	0	0	1	0	1	1	-	1	2
% Buses	0.0	0.0	-	0.0	0.0	0.6	0.0	0.4	0.7	-	0.7	0.4
Trucks	1	1	-	2	0	12	1	13	5	-	5	20
% Trucks	1.1	1.5	-	1.2	0.0	7.5	1.1	5.2	3.5	-	3.5	3.6
Bicycles on Crosswalk	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-

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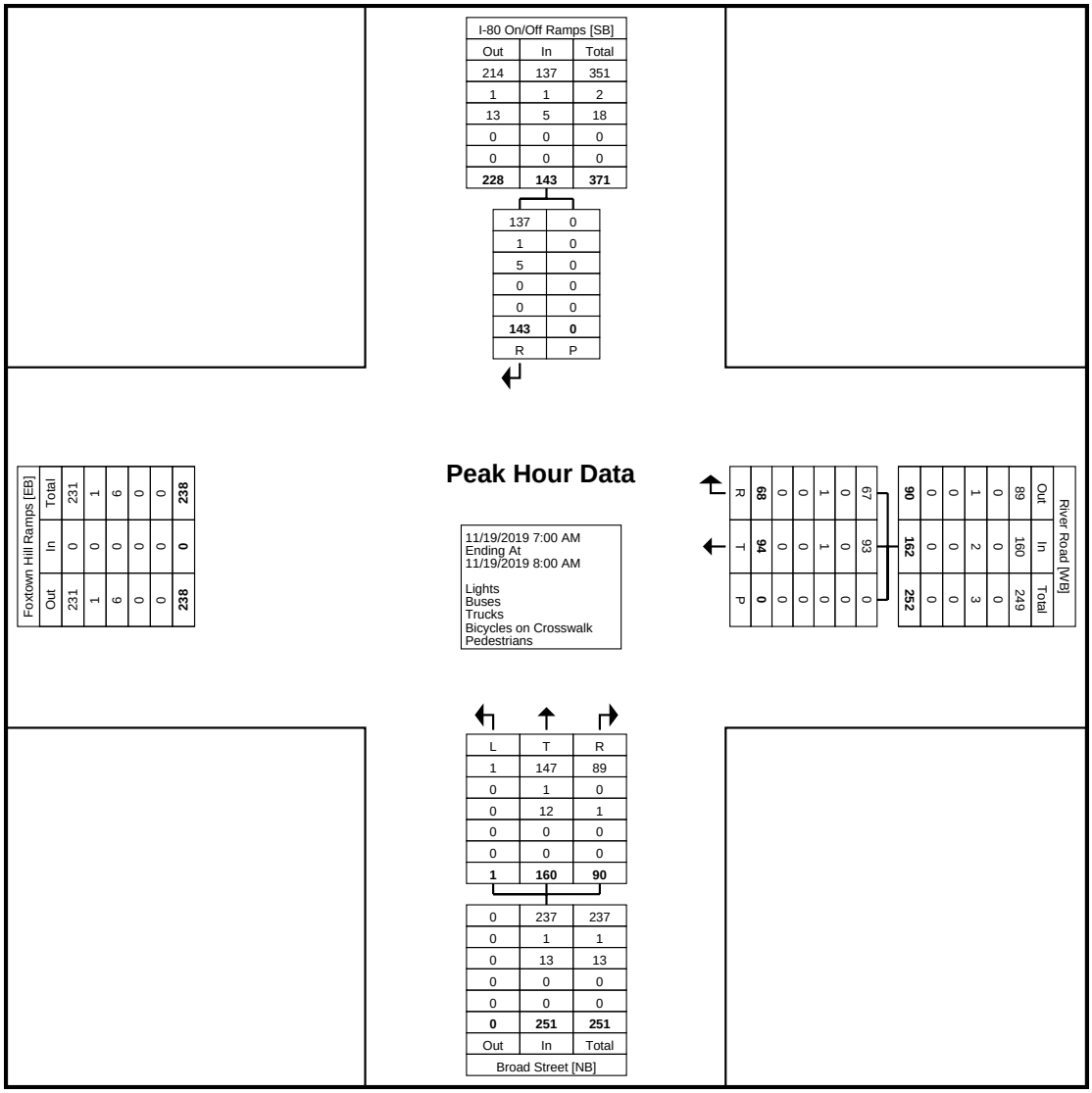
Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -75.143264

Count Name: River Rd/Broad St Roundabout
Site Code:
Start Date: 11/19/2019



Turning Movement Peak Hour Data Plot (7:00 AM)

Monroe County, PA
River Rd & Broad St
Roundabout
Tuesday, November 19, 2019
Location: 40.991409, -75.143264

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
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Turning Movement Peak Hour Data (5:00 PM)

Start Time	River Road Westbound				Broad Street Northbound				I-80 On/Off Ramps Southbound			
	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Right	Peds	App. Total	Int. Total
5:00 PM	20	17	0	37	4	55	69	128	60	0	60	225
5:15 PM	14	9	0	23	1	46	83	130	58	0	58	211
5:30 PM	23	25	0	48	2	45	62	109	54	0	54	211
5:45 PM	21	13	0	34	4	46	43	93	58	0	58	185
Total	78	64	0	142	11	192	257	460	230	0	230	832
Approach %	54.9	45.1	-	-	2.4	41.7	55.9	-	100.0	-	-	-
Total %	9.4	7.7	-	17.1	1.3	23.1	30.9	55.3	27.6	-	27.6	-
PHF	0.848	0.640	-	0.740	0.688	0.873	0.774	0.885	0.958	-	0.958	0.924
Lights	76	61	-	137	11	182	252	445	221	-	221	803
% Lights	97.4	95.3	-	96.5	100.0	94.8	98.1	96.7	96.1	-	96.1	96.5
Buses	0	0	-	0	0	7	2	9	4	-	4	13
% Buses	0.0	0.0	-	0.0	0.0	3.6	0.8	2.0	1.7	-	1.7	1.6
Trucks	2	3	-	5	0	3	3	6	5	-	5	16
% Trucks	2.6	4.7	-	3.5	0.0	1.6	1.2	1.3	2.2	-	2.2	1.9
Bicycles on Crosswalk	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-

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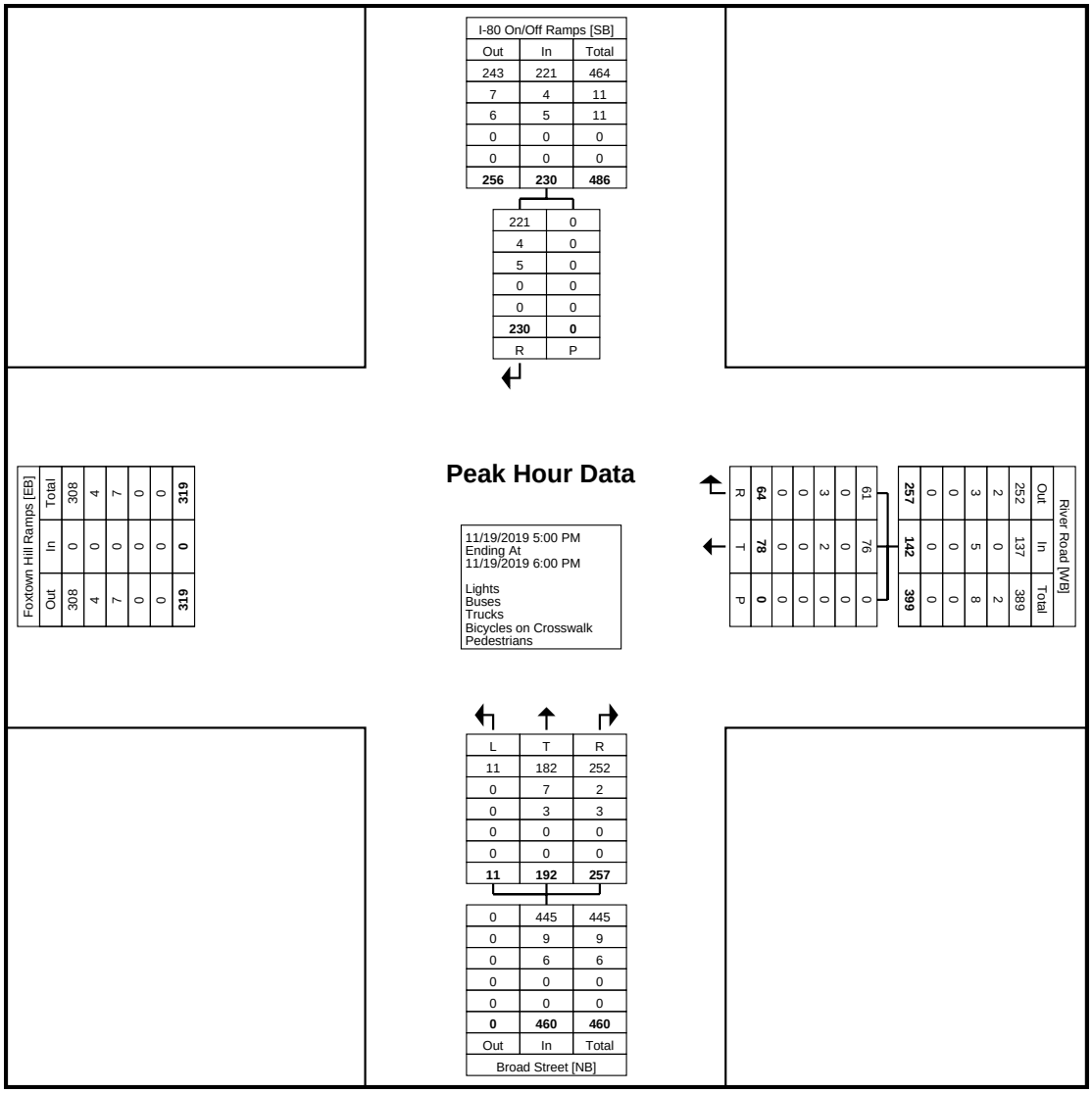

Turning Movement Peak Hour Data Plot (5:00 PM)

TRI-STATE TRAFFIC DATA
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Monroe County, PA
River Rd & Paper Mill Rd/Park
Tuesday, November 19, 2019
Location: 40.992137, -75.139632

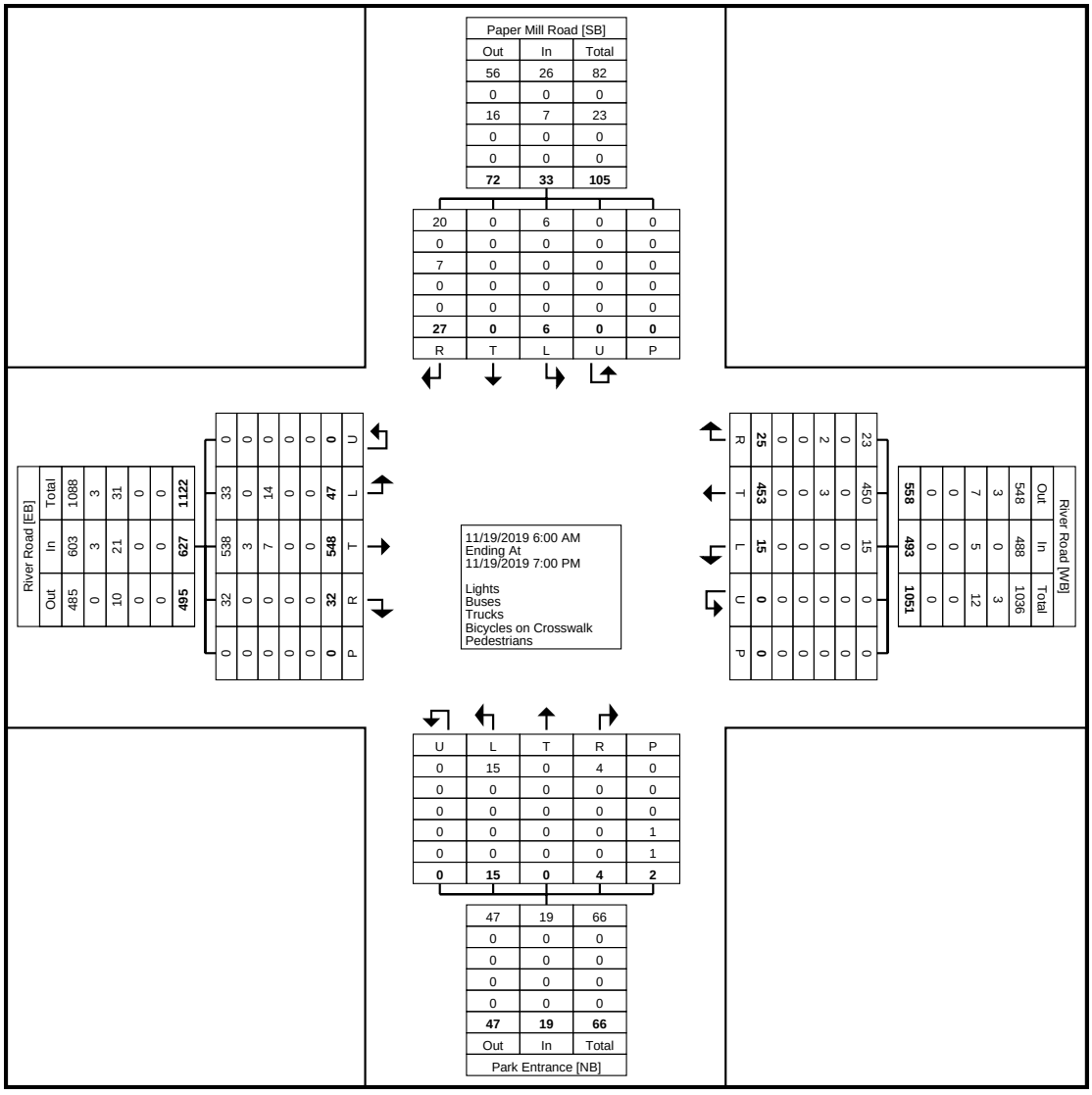
Count Name: River Rd/Paper Mill Rd
Site Code:
Start Date: 11/19/2019

Turning Movement Data

Start Time	River Road Eastbound						River Road Westbound						Park Entrance Northbound						Paper Mill Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:00 AM	3	9	0	0	0	12	0	24	4	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	40
6:15 AM	4	16	0	0	0	20	0	31	2	0	0	33	0	0	0	0	0	0	0	0	1	0	0	1	54
6:30 AM	11	8	0	0	0	19	0	47	10	0	0	57	0	0	0	0	0	0	1	0	0	0	0	1	77
6:45 AM	13	14	1	0	0	28	0	29	3	0	0	32	0	0	0	0	0	0	1	0	1	0	0	2	62
Hourly Total	31	47	1	0	0	79	0	131	19	0	0	150	0	0	0	0	0	0	2	0	2	0	0	4	233
7:00 AM	5	14	0	0	0	19	0	29	0	0	0	29	1	0	0	0	0	1	2	0	5	0	0	7	56
7:15 AM	1	17	0	0	0	18	0	36	0	0	0	36	0	0	0	0	0	0	0	0	3	0	0	3	57
7:30 AM	0	26	0	0	0	26	0	35	1	0	0	36	0	0	0	0	2	0	0	0	0	0	0	0	62
7:45 AM	2	20	1	0	0	23	0	49	0	0	0	49	0	0	0	0	0	0	1	0	1	0	0	2	74
Hourly Total	8	77	1	0	0	86	0	149	1	0	0	150	1	0	0	0	2	1	3	0	9	0	0	12	249
8:00 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
5:00 PM	3	67	0	0	0	70	0	29	0	0	0	29	0	0	0	0	0	0	0	0	3	0	0	3	102
5:15 PM	2	75	5	0	0	82	1	18	1	0	0	20	0	0	2	0	0	2	0	0	2	0	0	2	106
5:30 PM	0	57	1	0	0	58	1	38	0	0	0	39	0	0	0	0	0	0	0	0	3	0	0	3	100
5:45 PM	1	48	2	0	0	51	5	24	0	0	0	29	1	0	0	0	0	1	0	0	3	0	0	3	84
Hourly Total	6	247	8	0	0	261	7	109	1	0	0	117	1	0	2	0	0	3	0	0	11	0	0	11	392
6:00 PM	0	44	5	0	0	49	1	19	0	0	0	20	4	0	0	0	0	4	1	0	2	0	0	3	76
6:15 PM	0	47	9	0	0	56	2	18	1	0	0	21	2	0	1	0	0	3	0	0	1	0	0	1	81
6:30 PM	1	44	4	0	0	49	5	13	3	0	0	21	3	0	1	0	0	4	0	0	2	0	0	2	76
6:45 PM	1	42	4	0	0	47	0	14	0	0	0	14	4	0	0	0	0	4	0	0	0	0	0	0	65
Hourly Total	2	177	22	0	0	201	8	64	4	0	0	76	13	0	2	0	0	15	1	0	5	0	0	6	298
Grand Total	47	548	32	0	0	627	15	453	25	0	0	493	15	0	4	0	2	19	6	0	27	0	0	33	1172
Approach %	7.5	87.4	5.1	0.0	-	-	3.0	91.9	5.1	0.0	-	-	78.9	0.0	21.1	0.0	-	-	18.2	0.0	81.8	0.0	-	-	-
Total %	4.0	46.8	2.7	0.0	-	53.5	1.3	38.7	2.1	0.0	-	42.1	1.3	0.0	0.3	0.0	-	1.6	0.5	0.0	2.3	0.0	-	2.8	-
Lights	33	538	32	0	-	603	15	450	23	0	-	488	15	0	4	0	-	19	6	0	20	0	-	26	1136
% Lights	70.2	98.2	100.0	-	-	96.2	100.0	99.3	92.0	-	-	99.0	100.0	-	100.0	-	-	100.0	100.0	-	74.1	-	-	78.8	96.9
Buses	0	3	0	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	3
% Buses	0.0	0.5	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.3
Trucks	14	7	0	0	-	21	0	3	2	0	-	5	0	0	0	0	-	0	0	0	7	0	-	7	33
% Trucks	29.8	1.3	0.0	-	-	3.3	0.0	0.7	8.0	-	-	1.0	0.0	-	0.0	-	-	0.0	0.0	-	25.9	-	-	21.2	2.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-

Monroe County, PA
River Rd & Paper Mill Rd/Park
Tuesday, November 19, 2019
Location: 40.992137, -75.139632

Count Name: River Rd/Paper Mill Rd
Site Code:
Start Date: 11/19/2019



Turning Movement Data Plot

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Monroe County, PA
River Rd & Paper Mill Rd/Park
Tuesday, November 19, 2019
Location: 40.992137, -75.139632

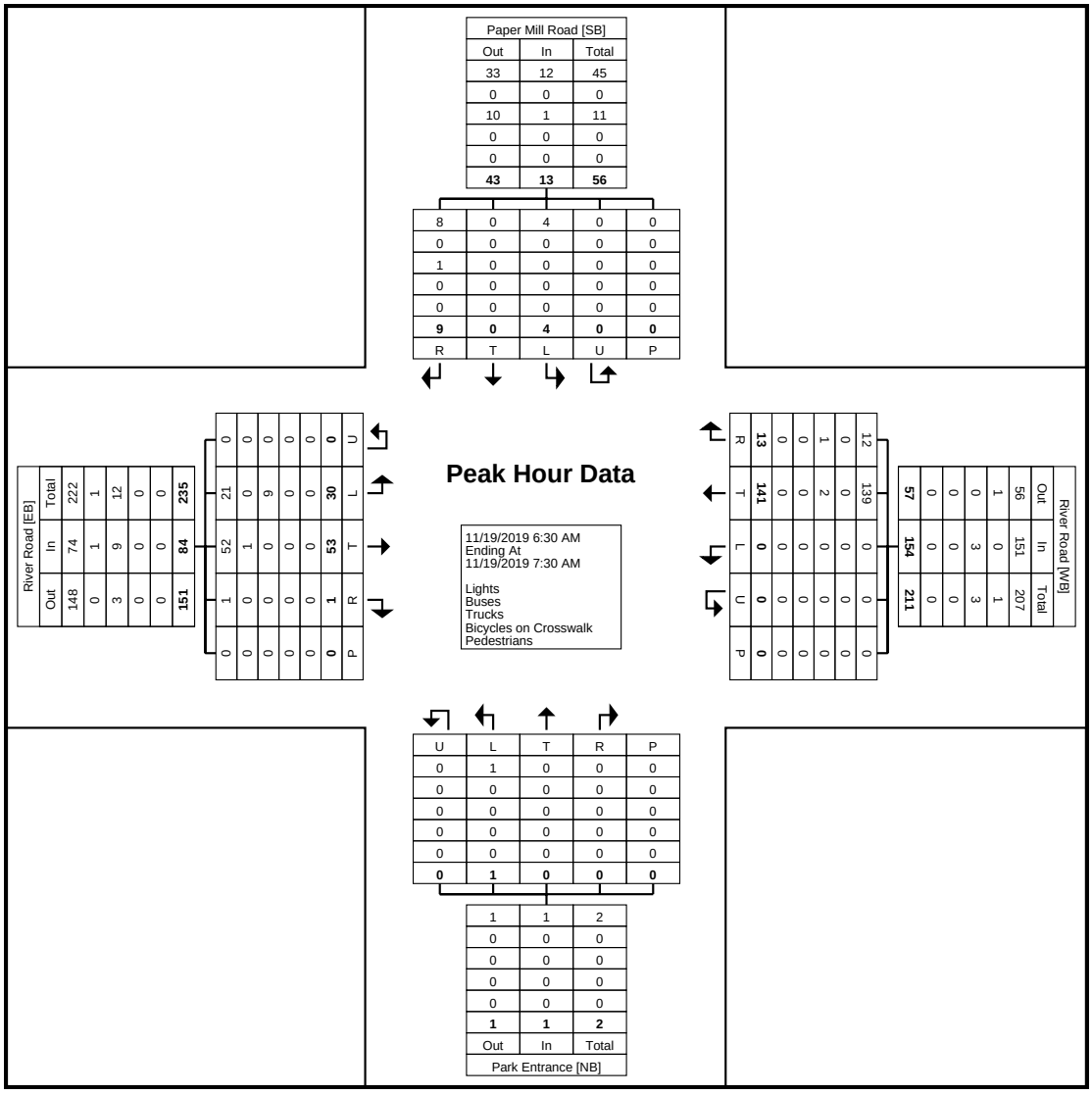
Count Name: River Rd/Paper Mill Rd
Site Code:
Start Date: 11/19/2019

Turning Movement Peak Hour Data (6:30 AM)

Start Time	River Road Eastbound						River Road Westbound						Park Entrance Northbound						Paper Mill Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:30 AM	11	8	0	0	0	19	0	47	10	0	0	57	0	0	0	0	0	0	1	0	0	0	0	1	77
6:45 AM	13	14	1	0	0	28	0	29	3	0	0	32	0	0	0	0	0	0	1	0	1	0	0	2	62
7:00 AM	5	14	0	0	0	19	0	29	0	0	0	29	1	0	0	0	0	1	2	0	5	0	0	7	56
7:15 AM	1	17	0	0	0	18	0	36	0	0	0	36	0	0	0	0	0	0	0	0	3	0	0	3	57
Total	30	53	1	0	0	84	0	141	13	0	0	154	1	0	0	0	0	1	4	0	9	0	0	13	252
Approach %	35.7	63.1	1.2	0.0	-	-	0.0	91.6	8.4	0.0	-	-	100.0	0.0	0.0	0.0	-	-	30.8	0.0	69.2	0.0	-	-	-
Total %	11.9	21.0	0.4	0.0	-	33.3	0.0	56.0	5.2	0.0	-	61.1	0.4	0.0	0.0	0.0	-	0.4	1.6	0.0	3.6	0.0	-	5.2	-
PHF	0.577	0.779	0.250	0.000	-	0.750	0.000	0.750	0.325	0.000	-	0.675	0.250	0.000	0.000	0.000	-	0.250	0.500	0.000	0.450	0.000	-	0.464	0.818
Lights	21	52	1	0	-	74	0	139	12	0	-	151	1	0	0	0	-	1	4	0	8	0	-	12	238
% Lights	70.0	98.1	100.0	-	-	88.1	-	98.6	92.3	-	-	98.1	100.0	-	-	-	-	100.0	100.0	-	88.9	-	-	92.3	94.4
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	1.9	0.0	-	-	1.2	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	-	0.0	-	-	0.0	0.4
Trucks	9	0	0	0	-	9	0	2	1	0	-	3	0	0	0	0	-	0	0	0	1	0	-	1	13
% Trucks	30.0	0.0	0.0	-	-	10.7	-	1.4	7.7	-	-	1.9	0.0	-	-	-	-	0.0	0.0	-	11.1	-	-	7.7	5.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Monroe County, PA
River Rd & Paper Mill Rd/Park
Tuesday, November 19, 2019
Location: 40.992137, -75.139632

Count Name: River Rd/Paper Mill Rd
Site Code:
Start Date: 11/19/2019



Turning Movement Peak Hour Data Plot (6:30 AM)

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Monroe County, PA
River Rd & Paper Mill Rd/Park
Tuesday, November 19, 2019
Location: 40.992137, -75.139632

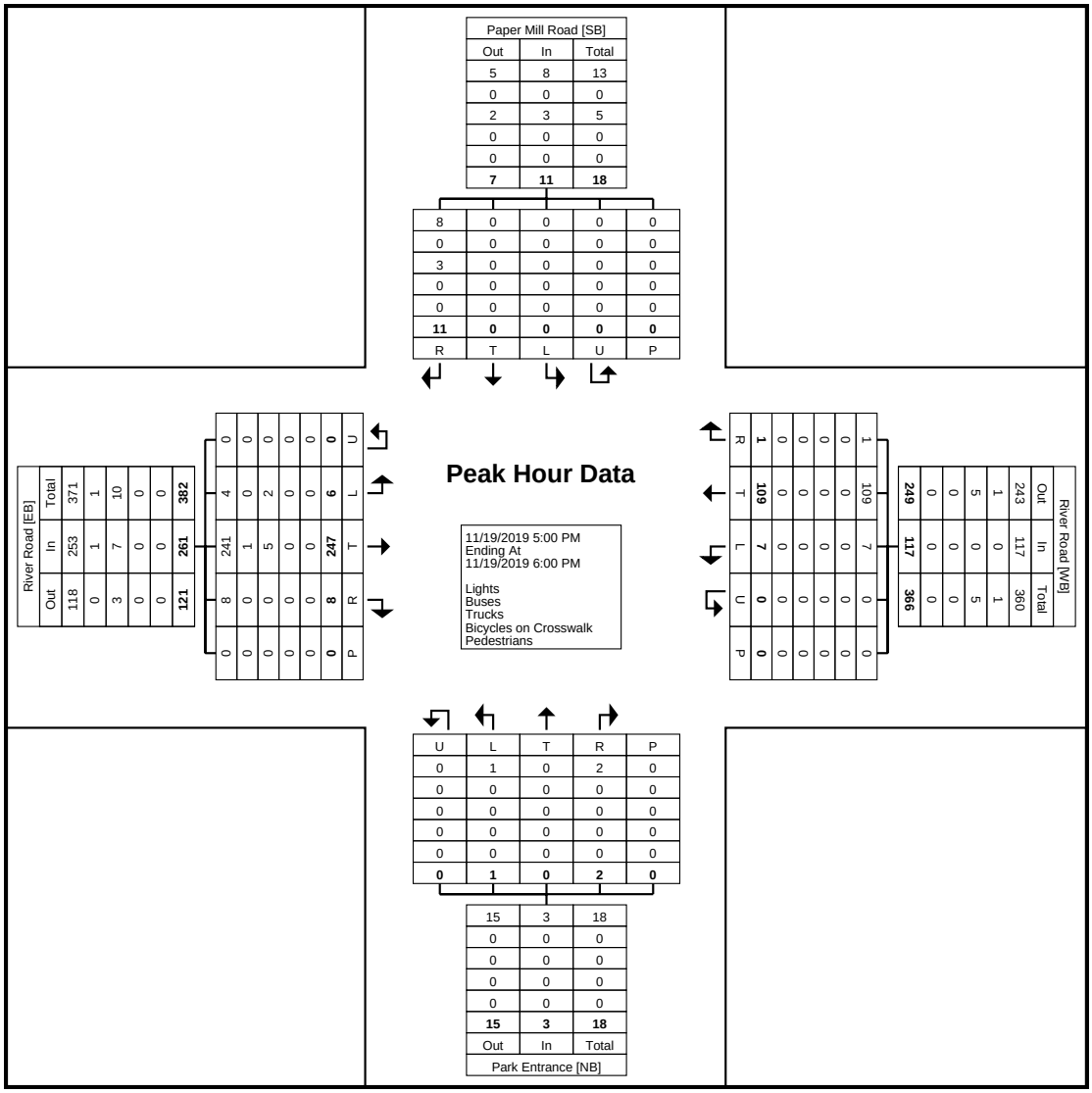
Count Name: River Rd/Paper Mill Rd
Site Code:
Start Date: 11/19/2019

Turning Movement Peak Hour Data (5:00 PM)

Start Time	River Road Eastbound						River Road Westbound						Park Entrance Northbound						Paper Mill Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	3	67	0	0	0	70	0	29	0	0	0	29	0	0	0	0	0	0	0	0	3	0	0	3	102
5:15 PM	2	75	5	0	0	82	1	18	1	0	0	20	0	0	2	0	0	2	0	0	2	0	0	2	106
5:30 PM	0	57	1	0	0	58	1	38	0	0	0	39	0	0	0	0	0	0	0	0	3	0	0	3	100
5:45 PM	1	48	2	0	0	51	5	24	0	0	0	29	1	0	0	0	0	1	0	0	3	0	0	3	84
Total	6	247	8	0	0	261	7	109	1	0	0	117	1	0	2	0	0	3	0	0	11	0	0	11	392
Approach %	2.3	94.6	3.1	0.0	-	-	6.0	93.2	0.9	0.0	-	-	33.3	0.0	66.7	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	1.5	63.0	2.0	0.0	-	66.6	1.8	27.8	0.3	0.0	-	29.8	0.3	0.0	0.5	0.0	-	0.8	0.0	0.0	2.8	0.0	-	2.8	-
PHF	0.500	0.823	0.400	0.000	-	0.796	0.350	0.717	0.250	0.000	-	0.750	0.250	0.000	0.250	0.000	-	0.375	0.000	0.000	0.917	0.000	-	0.917	0.925
Lights	4	241	8	0	-	253	7	109	1	0	-	117	1	0	2	0	-	3	0	0	8	0	-	8	381
% Lights	66.7	97.6	100.0	-	-	96.9	100.0	100.0	100.0	-	-	100.0	100.0	-	100.0	-	-	100.0	-	-	72.7	-	-	72.7	97.2
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	0.4	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	0.3
Trucks	2	5	0	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	10
% Trucks	33.3	2.0	0.0	-	-	2.7	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	-	-	27.3	-	-	27.3	2.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Monroe County, PA
River Rd & Paper Mill Rd/Park
Tuesday, November 19, 2019
Location: 40.992137, -75.139632

Count Name: River Rd/Paper Mill Rd
Site Code:
Start Date: 11/19/2019



Turning Movement Peak Hour Data Plot (5:00 PM)

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Monroe County, PA
River Rd & Welcome Center
Tuesday, November 19, 2019
Location: 40.991799, -75.140563

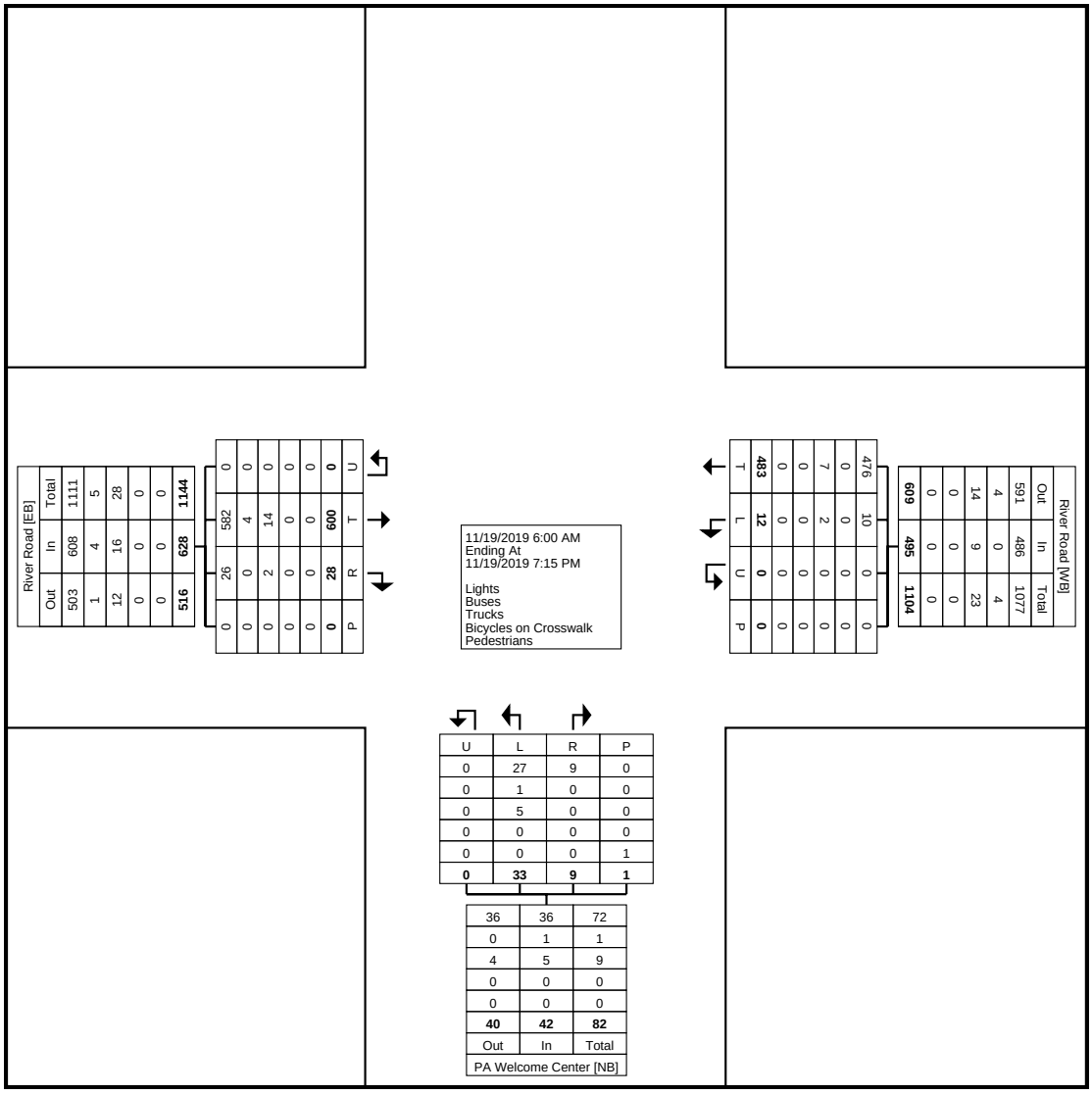
Count Name: River Rd/Welcome Center
Site Code:
Start Date: 11/19/2019

Turning Movement Data

Start Time	River Road Eastbound					River Road Westbound					PA Welcome Center Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	11	0	0	0	11	1	24	0	0	25	0	0	0	0	0	36
6:15 AM	21	0	0	0	21	1	32	0	0	33	2	0	0	0	2	56
6:30 AM	18	2	0	0	20	2	42	0	0	44	2	0	0	0	2	66
6:45 AM	31	1	0	0	32	1	29	0	0	30	3	0	0	0	3	65
Hourly Total	81	3	0	0	84	5	127	0	0	132	7	0	0	0	7	223
7:00 AM	19	0	0	0	19	1	34	0	0	35	0	0	0	0	0	54
7:15 AM	16	2	0	0	18	0	39	0	0	39	1	0	0	0	1	58
7:30 AM	26	3	0	0	29	0	36	0	0	36	4	1	0	1	5	70
7:45 AM	22	1	0	0	23	0	48	0	0	48	0	0	0	0	0	71
Hourly Total	83	6	0	0	89	1	157	0	0	158	5	1	0	1	6	253
8:00 AM	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
5:00 PM	67	3	0	0	70	1	29	0	0	30	3	0	0	0	3	103
5:15 PM	76	6	0	0	82	1	20	0	0	21	4	1	0	0	5	108
5:30 PM	58	3	0	0	61	0	47	0	0	47	3	2	0	0	5	113
5:45 PM	39	0	0	0	39	0	27	0	0	27	4	2	0	0	6	72
Hourly Total	240	12	0	0	252	2	123	0	0	125	14	5	0	0	19	396
6:00 PM	51	2	0	0	53	2	25	0	0	27	3	1	0	0	4	84
6:15 PM	56	1	0	0	57	1	15	0	0	16	0	0	0	0	0	73
6:30 PM	45	1	0	0	46	1	17	0	0	18	2	2	0	0	4	68
6:45 PM	44	3	0	0	47	0	19	0	0	19	2	0	0	0	2	68
Hourly Total	196	7	0	0	203	4	76	0	0	80	7	3	0	0	10	293
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	600	28	0	0	628	12	483	0	0	495	33	9	0	1	42	1165
Approach %	95.5	4.5	0.0	-	-	2.4	97.6	0.0	-	-	78.6	21.4	0.0	-	-	-
Total %	51.5	2.4	0.0	-	53.9	1.0	41.5	0.0	-	42.5	2.8	0.8	0.0	-	3.6	-
Lights	582	26	0	-	608	10	476	0	-	486	27	9	0	-	36	1130
% Lights	97.0	92.9	-	-	96.8	83.3	98.6	-	-	98.2	81.8	100.0	-	-	85.7	97.0
Buses	4	0	0	-	4	0	0	0	-	0	1	0	0	-	1	5
% Buses	0.7	0.0	-	-	0.6	0.0	0.0	-	-	0.0	3.0	0.0	-	-	2.4	0.4
Trucks	14	2	0	-	16	2	7	0	-	9	5	0	0	-	5	30
% Trucks	2.3	7.1	-	-	2.5	16.7	1.4	-	-	1.8	15.2	0.0	-	-	11.9	2.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Monroe County, PA
River Rd & Welcome Center
Tuesday, November 19, 2019
Location: 40.991799, -75.140563

Count Name: River Rd/Welcome Center
Site Code:
Start Date: 11/19/2019



River Road [EB]								
Out	503	1	12	0	0	**516**	0	0	0	0	0	**0**	P
In	608	4	16	0	0	**628**	26	0	2	0	0	**28**	R
Total	1111	5	28	0	0	**1144**	582	4	14	0	0	**600**	T
							0	0	0	0	0	**0**	U

River Road [WB]								
Out	591	4	14	0	0	**609**	0	0	0	0	0	476	T
In	486	0	9	0	0	**495**	0	0	0	0	0	10	L
Total	1077	4	23	0	0	**1104**	0	0	0	0	0	0	U
							0	0	0	0	0	0	P

U	L	R	P
0	27	9	0
0	1	0	0
0	5	0	0
0	0	0	0
0	0	0	1
0	**33**	**9**	**1**

36	36	72
0	1	1
4	5	9
0	0	0
0	0	0
40	**42**	**82**
Out	In	Total
PA Welcome Center [NB]		

Turning Movement Data Plot

www.TSTData.com
184 Baker Rd

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

Monroe County, PA
River Rd & Welcome Center
Tuesday, November 19, 2019
Location: 40.991799, -75.140563

Count Name: River Rd/Welcome Center
Site Code:
Start Date: 11/19/2019

Turning Movement Peak Hour Data (7:00 AM)

Start Time	River Road Eastbound					River Road Westbound					PA Welcome Center Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	19	0	0	0	19	1	34	0	0	35	0	0	0	0	0	54
7:15 AM	16	2	0	0	18	0	39	0	0	39	1	0	0	0	1	58
7:30 AM	26	3	0	0	29	0	36	0	0	36	4	1	0	1	5	70
7:45 AM	22	1	0	0	23	0	48	0	0	48	0	0	0	0	0	71
Total	83	6	0	0	89	1	157	0	0	158	5	1	0	1	6	253
Approach %	93.3	6.7	0.0	-	-	0.6	99.4	0.0	-	-	83.3	16.7	0.0	-	-	-
Total %	32.8	2.4	0.0	-	35.2	0.4	62.1	0.0	-	62.5	2.0	0.4	0.0	-	2.4	-
PHF	0.798	0.500	0.000	-	0.767	0.250	0.818	0.000	-	0.823	0.313	0.250	0.000	-	0.300	0.891
Lights	82	6	0	-	88	1	155	0	-	156	5	1	0	-	6	250
% Lights	98.8	100.0	-	-	98.9	100.0	98.7	-	-	98.7	100.0	100.0	-	-	100.0	98.8
Buses	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
Trucks	1	0	0	-	1	0	2	0	-	2	0	0	0	-	0	3
% Trucks	1.2	0.0	-	-	1.1	0.0	1.3	-	-	1.3	0.0	0.0	-	-	0.0	1.2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Monroe County, PA
River Rd & Welcome Center
Tuesday, November 19, 2019
Location: 40.991799, -75.140563

Count Name: River Rd/Welcome Center
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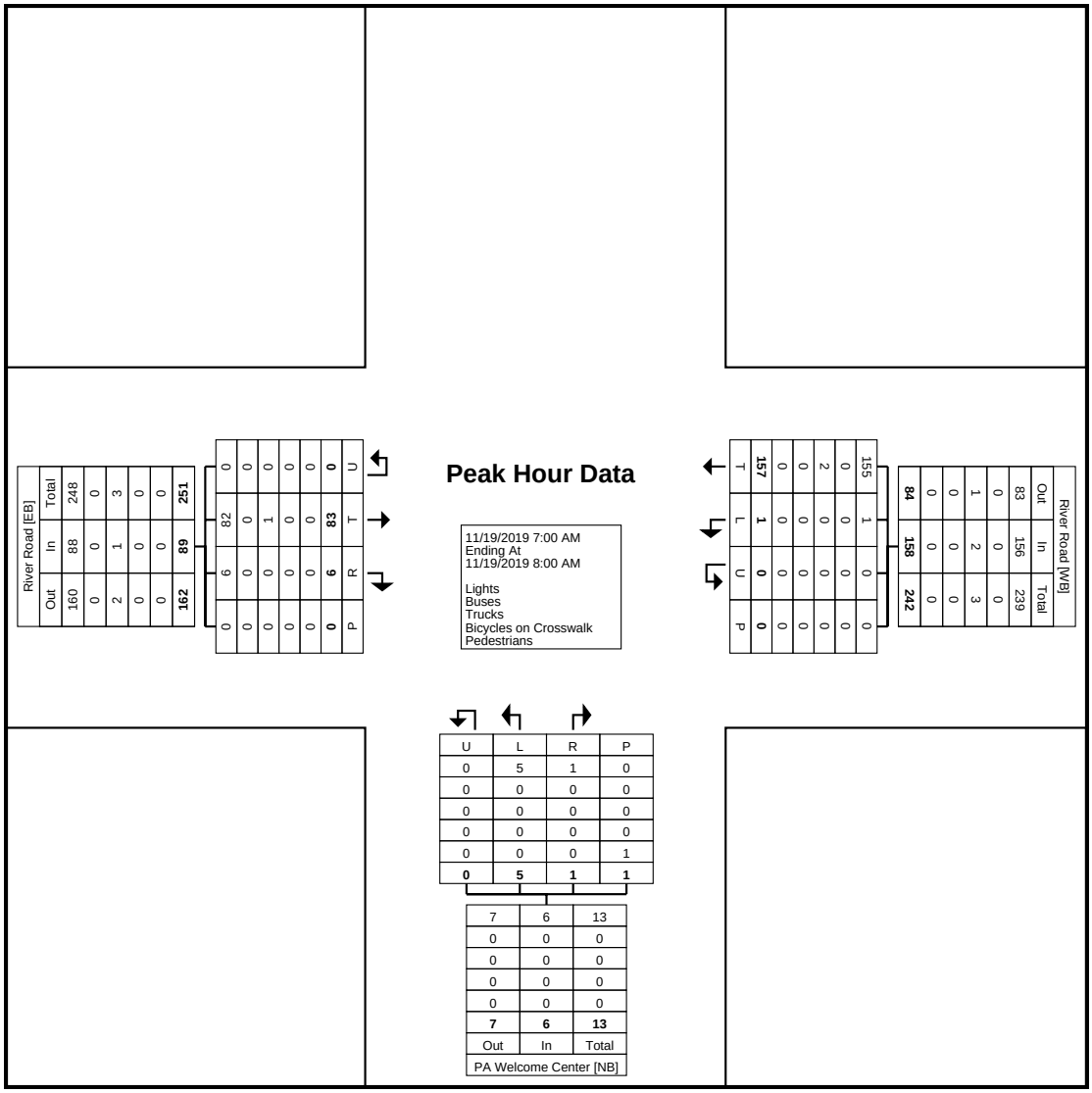
Start Date: 11/19/2019



Turning Movement Peak Hour Data Plot (7:00 AM)

www.TSTData.com
184 Baker Rd

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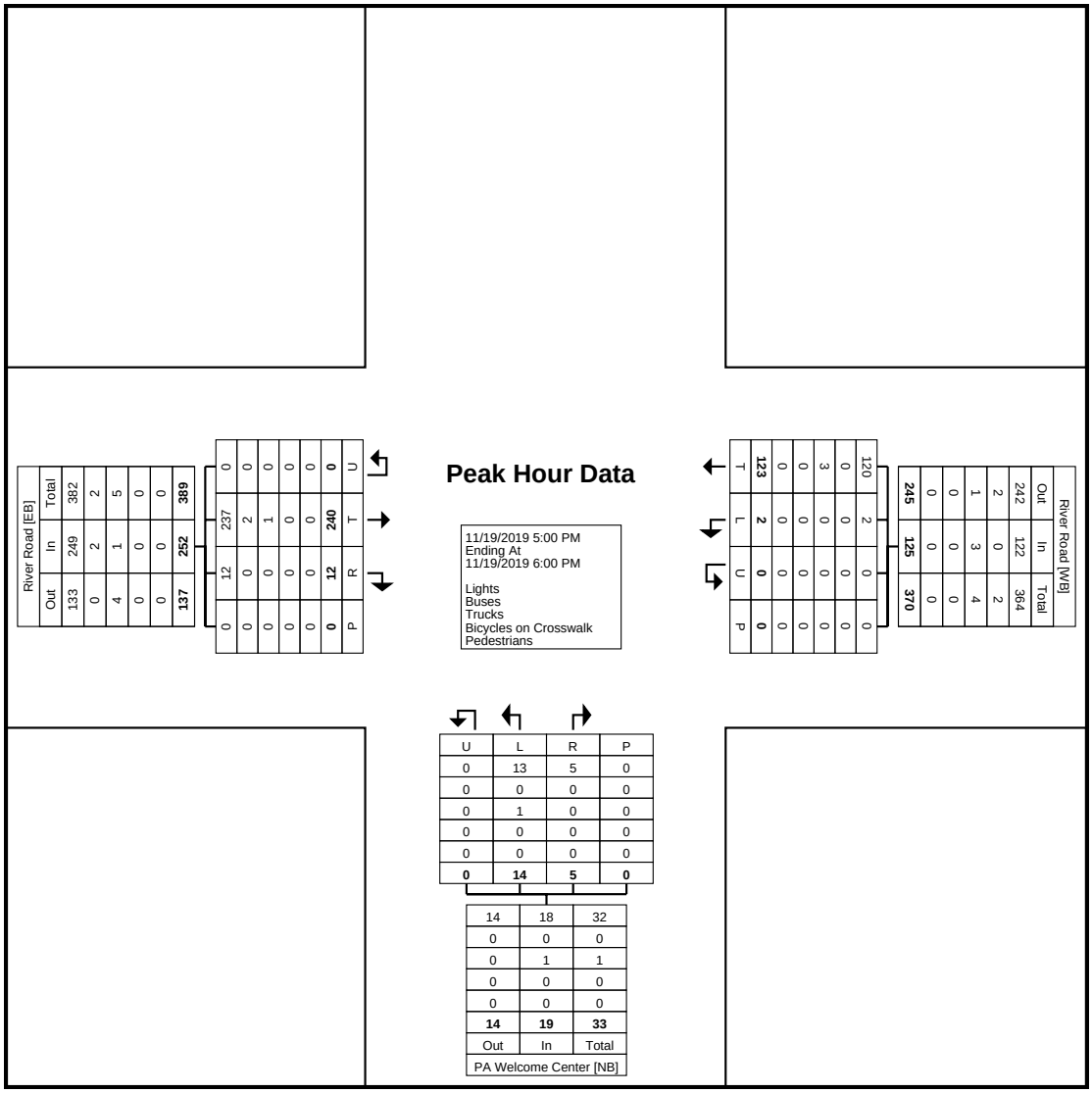
Monroe County, PA
River Rd & Welcome Center
Tuesday, November 19, 2019
Location: 40.991799, -75.140563

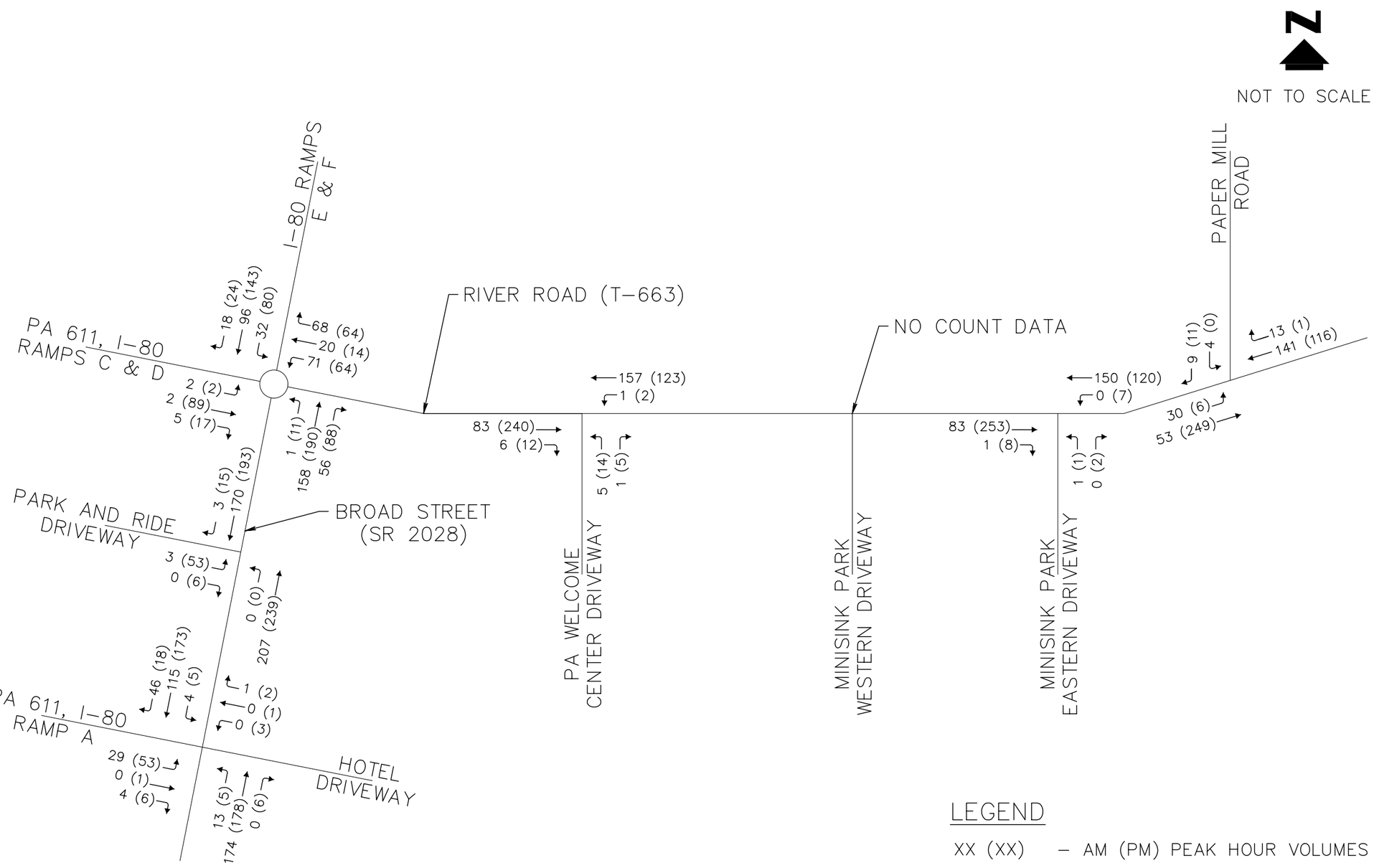
Count Name: River Rd/Welcome Center
Site Code:
Start Date: 11/19/2019

Turning Movement Peak Hour Data (5:00 PM)

Start Time	River Road Eastbound					River Road Westbound					PA Welcome Center Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
5:00 PM	67	3	0	0	70	1	29	0	0	30	3	0	0	0	3	103
5:15 PM	76	6	0	0	82	1	20	0	0	21	4	1	0	0	5	108
5:30 PM	58	3	0	0	61	0	47	0	0	47	3	2	0	0	5	113
5:45 PM	39	0	0	0	39	0	27	0	0	27	4	2	0	0	6	72
Total	240	12	0	0	252	2	123	0	0	125	14	5	0	0	19	396
Approach %	95.2	4.8	0.0	-	-	1.6	98.4	0.0	-	-	73.7	26.3	0.0	-	-	-
Total %	60.6	3.0	0.0	-	63.6	0.5	31.1	0.0	-	31.6	3.5	1.3	0.0	-	4.8	-
PHF	0.789	0.500	0.000	-	0.768	0.500	0.654	0.000	-	0.665	0.875	0.625	0.000	-	0.792	0.876
Lights	237	12	0	-	249	2	120	0	-	122	13	5	0	-	18	389
% Lights	98.8	100.0	-	-	98.8	100.0	97.6	-	-	97.6	92.9	100.0	-	-	94.7	98.2
Buses	2	0	0	-	2	0	0	0	-	0	0	0	0	-	0	2
% Buses	0.8	0.0	-	-	0.8	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.5
Trucks	1	0	0	-	1	0	3	0	-	3	1	0	0	-	1	5
% Trucks	0.4	0.0	-	-	0.4	0.0	2.4	-	-	2.4	7.1	0.0	-	-	5.3	1.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (5:00 PM)



LEGEND

XX (XX) – AM (PM) PEAK HOUR VOLUMES

GPI

GREENMAN-PEDERSEN INC.
52 GLENMAURA NATIONAL BLVD.
SUITE 302, P.O. BOX 5777
SCRANTON, PA 18505-5777
TELE: 570.342.3700
FAX: 570.342.4080
www.gpinet.com

PNRRA
DELAWARE WATER GAP SITE
TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

EXISTING (2019)
RAW TRAFFIC VOLUMES

FIGURE
C-1

DRAWN SFB | CHECKED

DATE 12/5/19 | JOB NO. 2019407

SHEET
SHEET 1 OF 1

Attachment D – Traffic Volume Development Worksheets & Figures

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JOB SCR-2019407 PNRRA Water Gap Garage
SHEET NO. 1 OF 7
CALCULATED BY MAB DATE 12-2-2019
CHECKED BY _____ DATE _____
SCALE _____

Trip Generation & Trip Distribution Research & Assumptions

⇒ Summary of Trip Generation/Distribution Information from Environmental Assesment (June 2008) and Appendix E

Page

EA ES - Scranton to Midtown Manhattan/Hoboken
- Trains will operate on approx 45 minute headways during peak periods & 2-3 hour headway off peak. 9 eastbound & 9 westbound trains, 1st train leaves Scranton @ 4:00 AM

ES 1 - Number of commuters to New York City from Western end of study area increased from 1000 in 1990 to 4000+ in 2000
- Transit service to Manhattan is provided by frequent bus service

ES 3 - First Train leaves Scranton @ 4:00 AM

ES 4 - Planned park-and-ride @ Delaware Water Gap will be a 5-level garage with approx 900 parking spaces

ES 16 - Project related vehicle traffic increases are anticipated during peak periods @ Water Gap. EA assumes this will be mitigated by modifying timings at I-80 ramps & River Road (SR 2028).

P. 19 Travel time for bus service is anticipated to increase due to increasing congestion on I-80. Lincoln Tunnel Express Bus Lane (XBL) is reaching capacity & will not accommodate increase in bus volume.

P 27 The planned parking garage is five stories for 900 vehicles.

P 31 Travel time estimates
- Scranton to Hoboken 3 hours 20 minutes
- Delaware Water Gap to Hoboken 1 hour 58 minutes
- Scranton to Delaware Water Gap 1 hour 22 minutes ⇐

P 38 Build years is 2030

DWG 980 daily Boarding (Eastbound Only)
890 AM Peak "Period" Boardings
90 Off Peak Boarding

6:00	8:15	NOON
6:45	9:00	2:30
7:30	9:45	5:00

AM Peak Period is 6:00 AM – 10:00 AM

$\frac{4 \text{ hour}}{45 \text{ min headway}} = 5.33 \Rightarrow$ 6 trains in peak period

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JOB SCR-2019407 PNRRA Water Gap
SHEET NO. 2 OF 7
CALCULATED BY MAB DATE 12-2-2019
CHECKED BY _____ DATE _____
SCALE _____

ES-4 East Stroudsburg Station is at Crystal Street & Bridge Street

P91 Annual Growth rate of 1.5 percent was used in original study
Current estimation of growth rate is 0.67 annually
for Monroe County.

P101 The proposed mitigation for the I-80 Ramp/River Road/Broad St in the EA was a signalized intersection. A roundabout was constructed instead.

E-3 DWG station is expected to service primarily riders from the west using I-80 to arrive at the station

E-16 - Expect 890 passenger to board during AM Peak Period
- Expect 297 passenger will board most heavily utilized train departing DWG @ 6:07 AM. arriving Hoboken @ 7:55 AM 1 hour 48 minutes by rail. Currently 1 hour 40 minutes by bus to Port Authority in town.
⇒ Train is slower & probably more expensive

- 270 of the 297 passenger are expected to drive to the station for the most heavily used train

- off peak ridership is expected to be negligible

- Reverse patterns are expected during the PM peak period

- Appendix notes the peak period of the garage does not coincide with Adjacent roadway peak.

E-17 Distribution Percentages
- To/From I-80 in the west 77%
- To/From Broad Street south 14%
- To/From River Road E&N 9%

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JOB SCR- 2019407 PNRRA Water Gap
SHEET NO. 3 OF 7
CALCULATED BY MAB DATE 12-2-2019
CHECKED BY _____ DATE _____
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⇒ Refer to Monroe County Transit Authority Route Schedule
No existing routes serve the DWG area. With a PNRRA station being proposed for East Stroudsburg at Crystal Street & Bridge Street walking distance from the Pocono Pony's Red line, it is unlikely that local transit service will be extended to the DWG parking garage.

⇒ Greyhound does not offer Commuter Service to NYC from this area.

⇒ Refer to Martz info packet & PNR Aerial Photos
Martz operates 2 park & ride lots in the area which may be impacted. The Stroudsburg Park & ride lot is located along Independence Road off U.S. 209, west on I-80. This lot has an estimated capacity of 450 vehicles. The Martz Stroudsburg/DWG Terminal is located on SR 611 southwest of the proposed garage. This lot has an estimated capacity of approximately 400 vehicles.
There is also a Public PNR Lot of Broad St across from the Welcome Center. This lot has a capacity of approx 125 vehicles & is usually filled before the AM Peak Hour.
Buses from the Martz DWG Terminal cycle through the Public PNR prior to getting on I-80 EB & heading into NYC.

The Independence Road PNR has 2 scheduled bus services for commuters Heading to Midtown Manhattan
The SR 611 Terminal lot has 7 scheduled bus services for AM Commuters Heading to Midtown Manhattan

⇒ Refer to telephone discussions with Martz representatives

- The morning buses to NYC are usually at capacity
- Buses are express to NYC, no local stops with exception of SR 611 buses swinging through the Broad St. PNR Lot
- The Broad Street PNR is not owned by Martz. It serves public car poolers
- Martz weekend service only goes as far as the Port Authority Garage on the weekend. Service doesn't extend to Madison Avenue or Wall St.

890 Passengers will board during AM Period
AM Period is 6:00 AM to 10:00 AM
Headways are ≈ 45 minutes
1 hour 22 min
1ST Train leave Scranton @ 4:00 AM & arrives @ DWG at 5:22 AM
Expected train arrivals in DWG
5:22 6:07 6:52 7:37 8:22 9:07 + 3 additional trains to give us 9 trains EB daily.

Martz Bus Service provides 7 buses departing DWG between 4:55 AM & 8:30 AM, Headways range from 5 mins to 25 minutes & average 13.33 minutes

We expect 297 of the 890 Peak Period passengers to be on the 6:07 train. We will assume a passenger distribution that serves the bulk of the passenger between the hours that Martz is currently serving. The report indicates the 297 passengers will arrive in 270 vehicles. $\frac{297}{270} = 1.1$

NOTE: Travel Time to Hoboken = 1 hr 58 min

Departure Time	5:22	6:07	6:52	7:37	8:22	9:07	
% Passengers	20.6%	33.3%	25%	11%	5%	5%	= 100%
No. Passengers	183	297	223	98	45	45	≈ 890 Passengers
Vehicles	165	270	201	89	42	42	≈ 809 vehicles

$\frac{297}{270} = \frac{890}{X}$ $X = 809$

290 vehs.

The peak period of the adjacent street occurs between 7:00AM & 8:00 AM which is 1 to 1½ hours after the peak hour of train travel. For this study (and considering 45 minute headways) we assume our peak hour may encompass both the 6:52 AM & 7:37 AM departures. This would create a peak hour demand of 290 vehs

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JOB SCR-2019407 PNRRA Water Gap
SHEET NO. 5 OF 7
CALCULATED BY MAB DATE 12-2-2019
CHECKED BY _____ DATE _____
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There is an expectation that a percentage of this demand is in the current system in the form of passenger departing from the two Martz PNR Lots as well as the Public PNR Lot on Broad Street.

We are going to conservatively estimate that 90 (about 1/3) of the 290 vehicles will divert from the two Martz PNR lots. The Public PNR Lot on Broad Street is filled to capacity well before the adjacent street peak hour. We will assume no vehicle diversions from the Public PNR Lot. Of the 90 vehicles diverting from the Martz PNR Lots we will assume 7/9 = 75% will divert from the Martz DWG Terminal Lot & 25% will divert from the Martz PNR Lot. The percentages reflect the number of bus schedule assigned to those routes.

We also assume that local transit service will not have a significant impact since there is already local service provided near the proposed station in Stroudsburg.

Given the adequate parking capacity we also assume a minimal need for taxi, Uber, spousal drop off services.

Total Peak hour vehicles entering = 290
Total Peak hour vehicles exiting = minimal

New veh = 290 − 90 = 200
Diverted from Martz PNR Lot = 22
Diverted from Martz Terminal Lot = 68
} 290

Distribution @ I-80 North/West = 77%
Broad St. South = 14%
River Road E&N = 9%

Traffic Study

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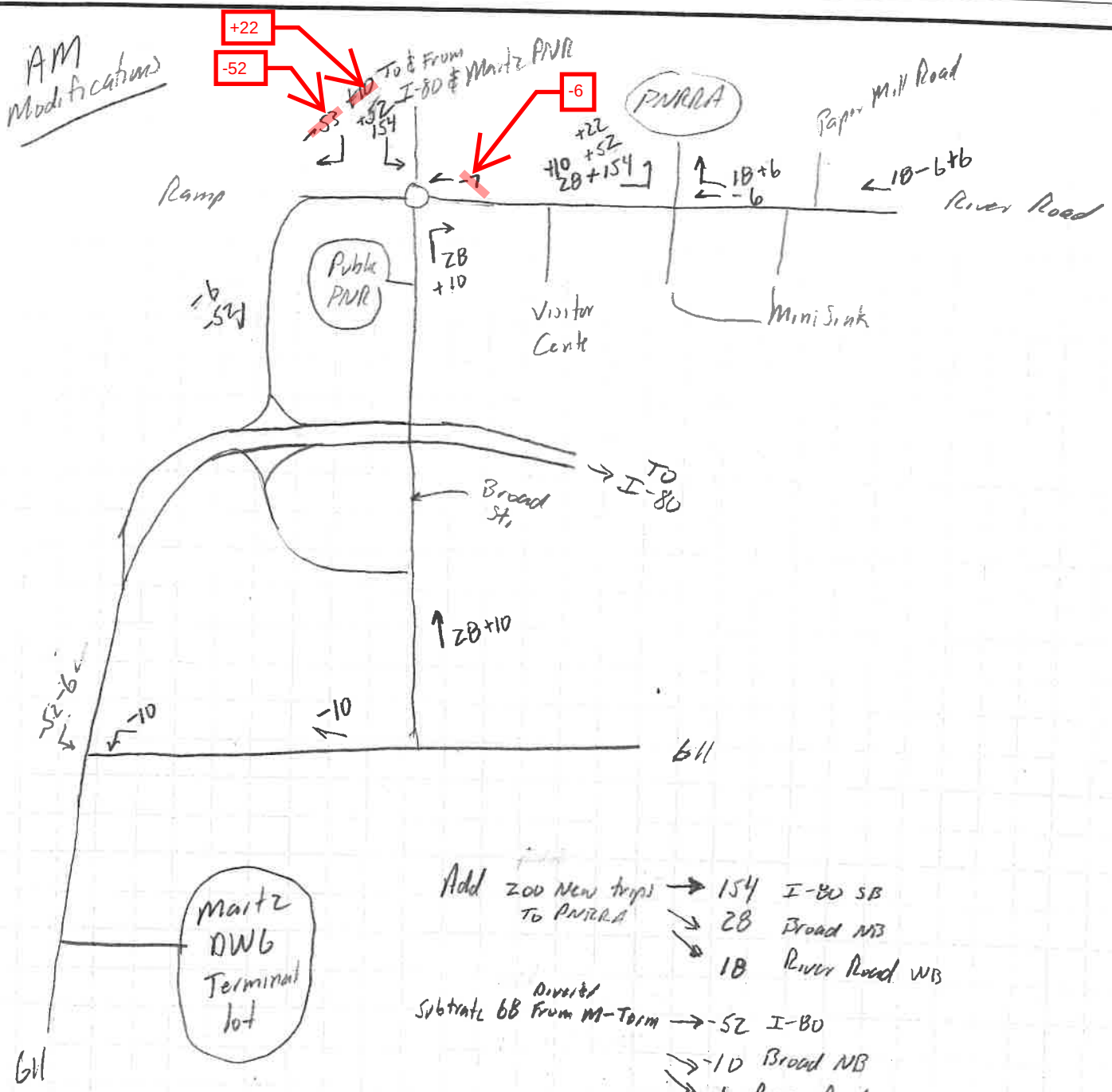
JOB SCR-2019407 PNRRA Water Gap
SHEET NO. 6 OF 7
CALCULATED BY MAB DATE 12-2-2019
CHECKED BY DATE
SCALE



Add 200 New trips To PNRRA → 154 I-80 SB
→ 28 Broad NB
→ 18 River Road WB

Substrate 68 Diverted From M-Term → -52 I-80
→ -10 Broad NB
→ -6 River Road WB

Add 68 Diverted to PNRRA → +52 I-80 SB
→ +10 Broad NB
→ +6 River Road WB

Add 22 Diverted → +22 I-80 SB
From M-PNR Lot
To PNRRA

Assume no diversion Associate with destination South & East

Traffic Study

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CONSTRUCTION SERVICES
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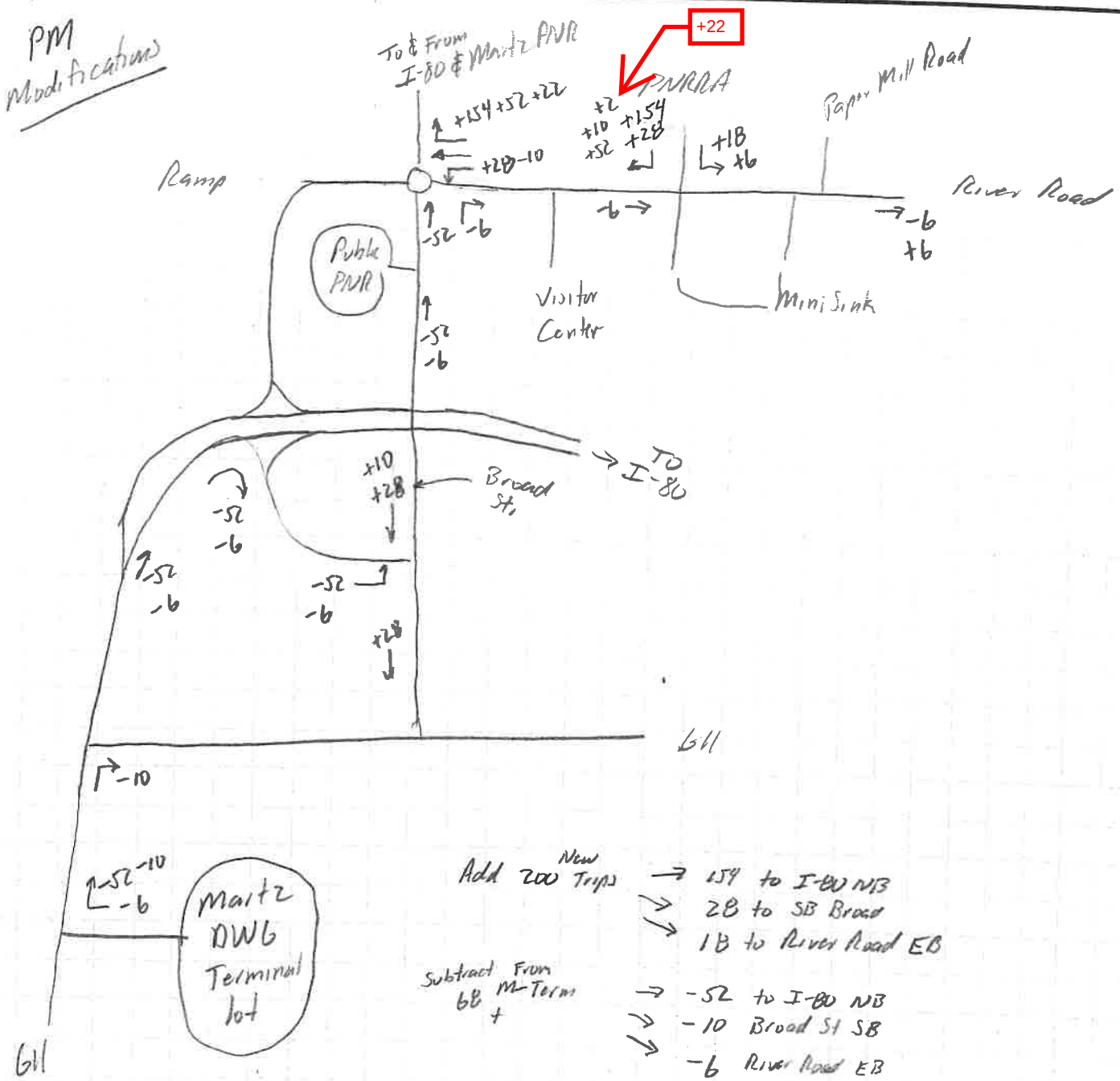
JOB SCR-2019407 PNRRA Water Gap
SHEET NO. 7 OF 7
CALCULATED BY MAB DATE 12-2-2019
CHECKED BY DATE
SCALE



Add 200 New Trips → 154 to I-80 NB
→ 28 to SB Broad
→ 18 to River Road EB

Subtract From 68 M-Term + → -52 to I-80 NB
→ -10 Broad St SB
→ -6 River Road EB

Add 68 From PNRRA → +52 to I-80 NB
→ +10 to Broad SB
→ +6 River Road EB

Add 22 from PNRRA to Maritz PNR → +22

GPI Greenman - Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers and Inspectors

JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY	PAS	DATE	12/13/2019
SUBJECT	Delaware Water Gap Station		

			Existing Lane Settings						*Volume Development*								
Intersection	**Intersection Name**	**Movement**	**Lane Width**	**Storage Length**	**Grade (%)**	**Speed (MPH)**	**PHF**	**HV (%)**	**2019 Existing**	**Committed Developments**	**2019 Opening Year (No Build)**	**2030 Design Year (No Build)**	**Total Trip Distribution**	**Total Pass-by**	**2019 Opening Year (Build)**	**2030 Design Year (Build)**
1	River Road (T-663) & Paper Mill Rd	SB L	12'		8%	30	0.818	0.0%	5		5	5			5	5
		SB R						11.0%	10		10	11			10	11
		EB L			1%	35		30.0%	35		35	38			35	38
		EB T	10'					2.0%	55		55	59			55	59
		WB T	10'		0%	35		1.0%	155		155	167	18		173	185
		WB R						8.0%	15		15	16			15	16
2	River Road (T-663) & Minisink Park E Driveway	NB L	10'		1%	25	0.818	0.0%	5		5	5			10	5
		NB T									0	0			0	0
		NB R						0.0%	5		5	5			10	5
		EB L			1%	35					0	0			0	0
		EB T	10'					2.0%	85		85	91			80	91
		EB R						0.0%	5		5	5			0	5
		WB L			0%	35		0.0%	5		5	5			0	5
		WB T	10'					1.0%	160		160	172	18		183	190
		WB R									0	0			0	0
3	River Road (T-663) & Minisink Park W Driveway/Proposed Driveway	NB L	10'		2%	25	0.92	0.0%	5		5	5			0	5
		NB T									0	0			0	0
		NB R						0.0%	5		5	5			0	5
		SB L									0	0			0	5
		SB T									0	0			0	0
		SB R									0	0			0	5
		EB L			2%	35					0	0	266		266	266
		EB T	10'					2.0%	85		85	91			80	91
		EB R						0.0%	5		5	5			10	5
		WB L			-2%	35		0.0%	5		5	5			10	5
		WB T	10'					2.0%	160		160	172	-6		159	166
		WB R									0	0	24		24	24
4	River Road (T-663) & PA Welcome Center Driveway	NB L	16'		-2%	25	0.891	0.0%	5		5	5			5	5
		NB T									0	0			0	0
		NB R	16'	25'				0.0%	5		5	5			5	5
		SB L									0	0			0	0
		SB T									0	0			0	0
		SB R									0	0			0	0
		EB L			-2%	35					0	0			0	0
		EB T	15'					1.0%	85		85	91	266		351	357
		EB R						0.0%	5		5	5			5	5
		WB L			2%	35		0.0%	5		5	5			5	5
		WB T	11'					1.0%	160		160	172	-6		154	166
		WB R									0	0			0	0
5	River Road (T-663) & PA 611, I-80 Ramps C & D and I-80 Ramps E & F/ Broad Sreet (SR 2028)	NB L			2%	25	0.779	0.0%	5		5	5			5	5
		NB T	16'					5.0%	165		165	178			165	178
		NB R						5.0%	55		55	59	38		93	97
		SB L			-1%	25		0.0%	30		30	32	228		258	260
		SB T	16'					5.0%	100		100	108			100	108
		SB R						5.0%	15		15	16	-52		-37	-36
		EB L			-1%	25		5.0%	5		5	5			5	5
		EB T	16'					5.0%	5		5	5			5	5
		EB R						20.0%	5		5	5			5	5
		WB L			4%	35		5.0%	70		70	75			70	75
		WB T	16'					5.0%	25		25	27	-6		19	21
		WB R						2.0%	70		70	75			70	75
6	Broad Street (SR 2028) & Park and Ride Driveway	NB L	11'		0%	25	0.754	0.0%	5		5	5			5	5
		NB T	11'					5.0%	220		220	237	38		258	275
		NB R									0	0			0	0
		SB L									0	0			0	0
		SB T	16'		0%	25		8.0%	170		170	183			170	183
		SB R						0.0%	5		5	5			5	5
		EB L			-2%	25		0.0%	5		5	5			5	5
		EB T	12'								0	0			0	0
		EB R						0.0%	5		5	5			5	5
		WB L									0	0			0	0
		WB T									0	0			0	0
		WB R									0	0			0	0

GPI Greenman - Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers and Inspectors

JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY	PAS	DATE	12/13/2019
SUBJECT	Delaware Water Gap Station		

			Existing Lane Settings						*Volume Development*								
Intersection	**Intersection Name**	**Movement**	**Lane Width**	**Storage Length**	**Grade (%)**	**Speed (MPH)**	**PHF**	**HV (%)**	**2019 Existing**	**Committed Developments**	**2019 Opening Year (No Build)**	**2030 Design Year (No Build)**	**Total Trip Distribution**	**Total Pass-by**	**2019 Opening Year (Build)**	**2030 Design Year (Build)**
7	Broad Street (SR 2028) & PA 611, I-80 Ramp A / Hotel Driveway	NB L	11'	75'	1%	25	0.766	0.0%	15		15	16			15	16
		NB T	11'					6.0%	185		185	199	38		223	237
		NB R						0.0%	5		5	5			5	5
		SB L			1%	25		0.0%	5		5	5			5	5
		SB T	11'					11.0%	120		120	129			120	129
		SB R	11'					2.0%	50		50	54			50	54
		EB L			-4%	25		3.0%	35		35	38			35	38
		EB T	13'					0.0%	5		5	5			5	5
		EB R	13'					0.0%	5		5	5			5	5
		WB L			3%	25		0.0%	5		5	5			5	5
		WB T	12'					0.0%	5		5	5			5	5
		WB R						0.0%	5		5	5			5	5

GPI Greenman - Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers and Inspectors

JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

			Existing Lane Settings						*Volume Development*						
Intersection	**Intersection Name**	**Movement**	**Lane Width**	**Storage Length**	**Grade (%)**	**Speed (MPH)**	**PHF**	**HV (%)**	**2019 Existing**	**2019 Opening Year (No Build)**	**2030 Design Year (No Build)**	**Total Trip Distribution**	**Total Pass-by**	**2019 Opening Year (Build)**	**2030 Design Year (Build)**
1	River Road (T-663) & Paper Mill Rd	NB L	'	'			0.925			0	0			0	0
		NB T	'							0	0			0	0
		NB R	'	'						0	0			0	0
		SB L	12'	'				0.0%	5	5	5			5	5
		SB T	'							0	0			0	0
		SB R	'	'				27.0%	10	10	11			10	11
		EB L	'	'				33.0%	5	5	5			5	5
		EB T	10'					2.0%	250	250	269	18		268	287
		EB R	'	'						0	0			0	0
		WB L	'	'						0	0			0	0
		WB T	10'					0.0%	125	125	135			125	135
		WB R	'	'				0.0%	5	5	5			5	5
2	River Road (T-663) & Minisink Park E Driveway	NB L	10'	'			0.925	0.0%	5	5	5			10	5
		NB T	'							0	0			0	0
		NB R	'	'				0.0%	5	5	5			10	5
		SB L	'	'						0	0			0	0
		SB T	'							0	0			0	0
		SB R	'	'						0	0			0	0
		EB L	'	'						0	0			0	0
		EB T	10'					2.0%	250	250	269	18		263	287
		EB R	'	'				0.0%	5	5	5			0	5
		WB L	'	'				0.0%	5	5	5			0	5
		WB T	10'					0.0%	130	130	140			135	140
		WB R	'	'						0	0			0	0
3	River Road (T-663) & Minisink Park W Driveway/Proposed Driveway	NB L	10'	'			0.92	0.0%	5	5	5			0	5
		NB T	'							0	0			0	0
		NB R	'	'				0.0%	5	5	5			0	5
		SB L	'	'						0	0	24		24	24
		SB T	'							0	0			0	0
		SB R	'	'						0	0	266		266	266
		EB L	'	'						0	0			0	5
		EB T	10'					2.0%	250	250	269	-6		239	263
		EB R	'	'				0.0%	5	5	5			10	5
		WB L	'	'				0.0%	5	5	5			10	5
		WB T	10'					2.0%	130	130	140			135	140
		WB R	'	'						0	0			0	5
4	River Road (T-663) & PA Welcome Center Driveway	NB L	16'	'			0.876	7.0%	15	15	16			15	16
		NB T	'							0	0			0	0
		NB R	16'	'				0.0%	5	5	5			5	5
		SB L	'	'						0	0			0	0
		SB T	'							0	0			0	0
		SB R	'	'						0	0			0	0
		EB L	'	'						0	0			0	0
		EB T	15'					1.0%	250	250	269	-6		244	263
		EB R	'	'				0.0%	10	10	11			10	11
		WB L	'	'				0.0%	5	5	5			5	5
		WB T	11'					2.0%	130	130	140	266		396	406
		WB R	'	'						0	0			0	0
5	River Road (T-663) & PA 611, I-80 Ramps C & D and I-80 Ramps E & F/ Broad Sreet (SR 2028)	NB L	'	'			0.931	0.0%	10	10	11			10	11
		NB T	16'					4.0%	190	190	204	-52		138	152
		NB R	'	'				4.0%	90	90	97	-6		84	91
		SB L	'	'				4.0%	80	80	86			80	86
		SB T	16'					4.0%	145	145	156			145	156
		SB R	'	'				4.0%	25	25	27			25	27
		EB L	'	'				6.0%	5	5	5			5	5
		EB T	16'					4.0%	90	90	97			90	97
		EB R	'	'				4.0%	20	20	22			20	22
		WB L	'	'				4.0%	65	65	70	38		103	108
		WB T	16'					4.0%	15	15	16			15	16
		WB R	'	'				5.0%	65	65	70	228		293	298
6	Broad Street (SR 2028) & Park and Ride Driveway	NB L	11'	'			0.843	0.0%	5	5	5			5	5
		NB T	11'					3.0%	240	240	258	-58		182	200
		NB R	'	'						0	0			0	0
		SB L	'	'						0	0			0	0
		SB T	16'					4.0%	215	215	231	38		253	269
		SB R	'	'				0.0%	15	15	16			15	16
		EB L	'	'				0.0%	50	50	54			50	54
		EB T	12'							0	0			0	0
		EB R	'	'				0.0%	5	5	5			5	5
		WB L	'	'						0	0			0	0
		WB T	'							0	0			0	0
		WB R	'	'						0	0			0	0

GPI Greenman - Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers and Inspectors

JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

			Existing Lane Settings						*Volume Development*						
Intersection	**Intersection Name**	**Movement**	**Lane Width**	**Storage Length**	**Grade (%)**	**Speed (MPH)**	**PHF**	**HV (%)**	**2019 Existing**	**2019 Opening Year (No Build)**	**2030 Design Year (No Build)**	**Total Trip Distribution**	**Total Pass-by**	**2019 Opening Year (Build)**	**2030 Design Year (Build)**
7	Broad Street (SR 2028) & PA 611, I-80 Ramp A / Hotel Driveway	NB L	11'	'			0.835	0.0%	5	5	5			5	5
		NB T	11'					2.0%	180	180	194			180	194
		NB R	'	'				0.0%	5	5	5			5	5
		SB L	'	'				20.0%	5	5	5			5	5
		SB T	11'					3.0%	190	190	204	38		228	242
		SB R	11'	'				6.0%	25	25	27			25	27
		EB L	'	'				9.0%	55	55	59	-58		-3	1
		EB T	13'					0.0%	5	5	5			5	5
		EB R	13'	'				0.0%	5	5	5			5	5
		WB L	'	'				0.0%	5	5	5			5	5
		WB T	12'					0.0%	5	5	5			5	5
		WB R	'	'				0.0%	10	10	11			10	11

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JOB	SCR-2019497		
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SUBJECT	Delaware Water Gap Station		

Trip Generation

	Land Use Code/ Description		New		Pass-by			Internal Capture		Total Trips
			Trips	%	Trips	Split %	% Total	Trips	%	
AM Peak Hour	Rail Station (New Trips)	Enter	200	100%	0	50%	0%	0		200
		Exit	0	0%	0	50%				
		Subtotal	**200**	**100%**	**0**	**100%**				
	Park and Ride	Enter	22	100%	0	50%	0%	0		22
		Exit	0	0%	0	50%				
		Subtotal	**22**	**100%**	**0**	**100%**				
	Bus Station	Enter	68	100%	0	50%	0%	0		68
		Exit	0	0%	0	50%				
		Subtotal	**68**	**100%**	**0**	**100%**				
		Enter	0	50%	0	50%	0%	0		
		Exit		50%	0	50%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
	Net Trips (Proposed-Existing)	**Enter**	290		0		**290**			**290**
		Exit	0		0		**0**			
		Totals	**290**		**0**		**290**	**0**		

GPI Greenman - Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers and Inspectors

JOB	SCR-2019497		
SHEET	2	OF	3
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

Trip Generation

	Land Use Code/ Description		New		Pass-by			Internal Capture		Total Trips
			Trips	%	Trips	Split %	% Total	Trips	%	
PM Peak Hour	Rail Station (New Trips)	Enter	0	0%	0	50%	0%	0		200
		Exit	200	100%	0	50%				
		Subtotal	**200**	**100%**	**0**	**100%**				
	Park and Ride	Enter	0	0%	0	50%	0%	0		22
		Exit	22	100%	0	50%				
		Subtotal	**22**	**100%**	**0**	**100%**				
	Bus Station	Enter	0	0%	0	50%	0%	0		68
		Exit	68	100%	0	50%				
		Subtotal	**68**	**100%**	**0**	**100%**				
		Enter	0	50%	0	50%	0%	0		
		Exit	0	50%	0	50%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0		**0**			**290**
		Exit	290		0		**290**			
		Totals	**290**		**0**		**290**	**0**		

GPI Greenman - Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers and Inspectors

JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

Trip Generation

	Land Use Code/ Description		New		Pass-by			Internal Capture		Total Trips
			Trips	%	Trips	Split %	% Total	Trips	%	
Peak Hour	Rail Station (New Trips)	Enter	0	50%	0	50%	56%	0		
		Exit	0	50%	0	50%				
		Subtotal	**0**	**100%**	**0**	**100%**				
	Park and Ride	Enter	0	51%	0	50%	40%	0		
		Exit	0	49%	0	50%				
		Subtotal	**0**	**100%**	**0**	**100%**				
	Bus Station	Enter	0	50%	0	50%	56%	0		
		Exit	0	50%	0	50%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0	50%	0	50%	56%	0		
		Exit	0	50%	0	50%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0		**0**			**0**
		Exit	0		0		**0**			
		Totals	**0**		**0**		**0**	**0**		

GPI Greenman - Pedersen, Inc.

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JOB	SCR-2019497		
SHEET	2	OF	3
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

Trip Generation

	Land Use Code/ Description		New		Pass-by			Internal Capture		Total Trips
			Trips	%	Trips	Split %	% Total	Trips	%	
Peak Hour	Rail Station (New Trips)	Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
	Park and Ride	Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
	Bus Station	Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0		**0**			**0**
		Exit	0		0		**0**			
		Totals	**0**		**0**		**0**	**0**		

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JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

Trip Generation

	Land Use Code/ Description		New		Pass-by			Internal Capture		Total Trips
			Trips	%	Trips	Split %	% Total	Trips	%	
Peak Hour	Rail Station (New Trips)	Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
	Park and Ride	Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
	Bus Station	Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0			0		
		Exit	0	100%	0	100%				
		Subtotal	**0**	**100%**	**0**	**100%**				
		Enter	0		0		**0**			**0**
		Exit	0		0		**0**			
		Totals	**0**		**0**		**0**	**0**		

GPI Greenman - Pedersen, Inc.

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JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

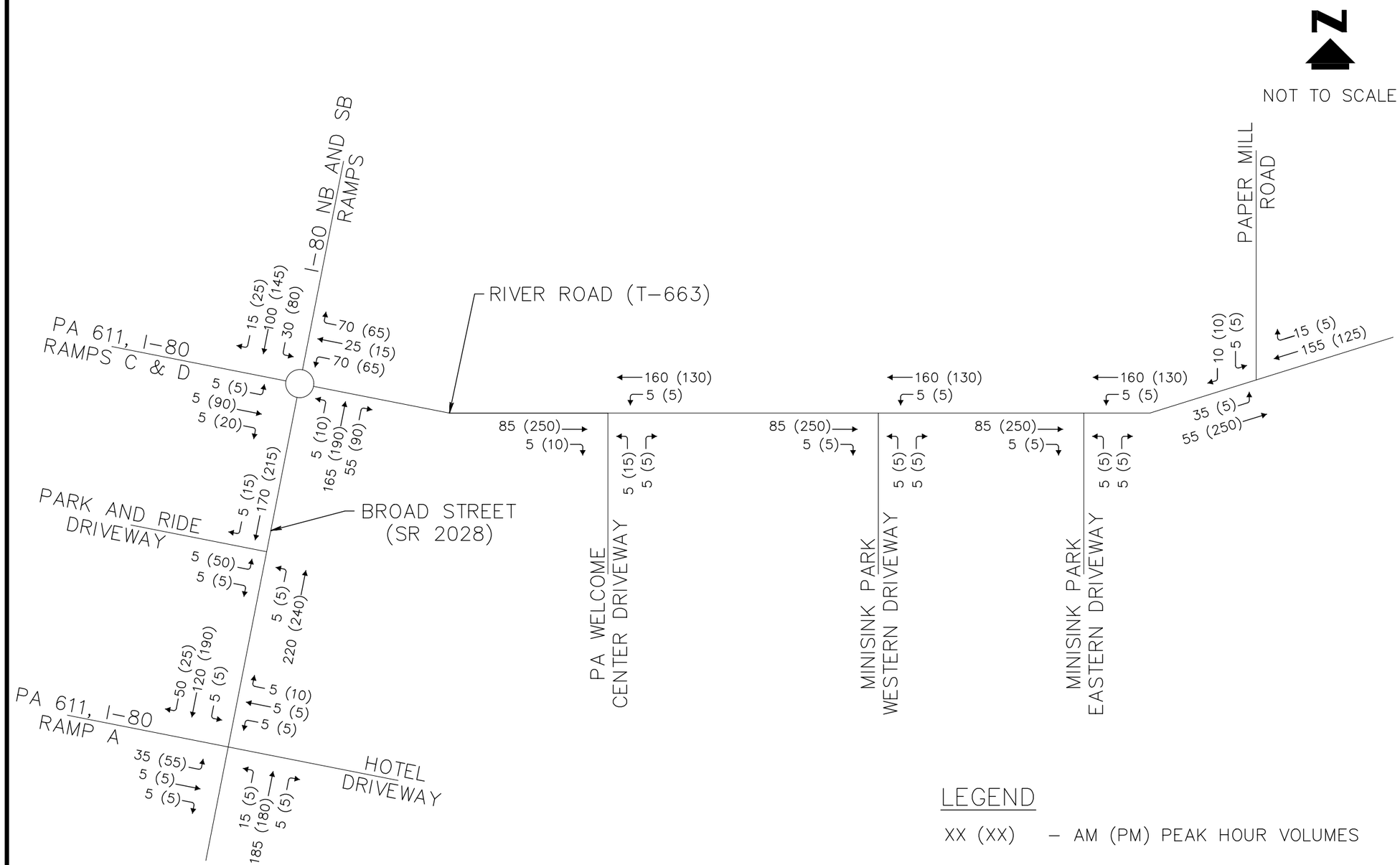
			Rail Station (New Trips)						Park and Ride						Bus Station						Total	Total
Intersection ID	Intersection Name	Movement	Trip Dist % by Enter %	Trip Dist % by Exit %	Total New Trips	Trip Dist % by Enter %	Trip Dist % by Exit %	Total Pass-by	Trip Dist % by Enter %	Trip Dist % by Exit %	Total New	Trip Dist % by Enter %	Trip Dist % by Exit %	Total	Trip Dist % by Enter %	Trip Dist % by Exit %	Total New Trips	Pass-by % by Enter %	Pass-by % by Exit %	Total Pass-by	Total New Trips	Total Pass-by Trips
1	River Road (T-663) & Paper Mill Rd	NB U																				
		NB L															0					
		NB T																				
		NB R																				
		SB U																				
		SB L																				
		SB T																				
		SB R															0					
		EB U																				
		EB L															0					
		EB T																				
		EB R															0					
		WB U																				
		WB L																				
		WB T	9%	0%	18																18	
		WB R																				
2	River Road (T-663) & Minisink Park E Driveway	NB U																				
		NB L															0			0		
		NB T																				
		NB R															0			0		
		SB U																				
		SB L																				
		SB T																				
		SB R																				
		EB U																				
		EB L																				
		EB T															0			0		
		EB R																				
		WB U																				
		WB L																				
		WB T	9%		18												0				18	
		WB R																				
3	River Road (T-663) & Minisink Park W Driveway/Proposed Driveway	NB U																				
		NB L																				
		NB T																				
		NB R																				
		SB U																				
		SB L																				
		SB T																				
		SB R																				
		EB U																				
		EB L	91%		182				100%		22				91%		62				266	
		EB T																				
		EB R																				
		WB U																				
		WB L																				
		WB T	0%		0	0%		0	0%		0	0%		0	-9%		-6				-6	
		WB R	9%		18			0			0			0	9%		6				24	
4	River Road (T-663) & PA Welcome Center Driveway	NB U																				
		NB L																				
		NB T																				
		NB R																		0		
		SB U																				
		SB L																				
		SB T																				
		SB R																				
		EB U																				
		EB L																				
		EB T	91%		182				100%		22				91%		62			0	266	
		EB R																				
		WB U																				
		WB L																				
		WB T			0			0			0			0	-9%		-6				-6	
		WB R																				
5	River Road (T-663) & PA 611, I-80 Ramps C & D and I-80 Ramps E & F/ Broad Sreet (SR 2028)	NB U																				
		NB L																				
		NB T																				
		NB R	14%		28						0				14%		10				38	
		SB U																				
		SB L	77%		154				100%		22				77%		52				228	
		SB T																				
		SB R			0						0				-77%		-52				-52	
		EB U																				
		EB L																				
		EB T																				
		EB R																				
		WB U																				
		WB L																				
		WB T									0				-9%		-6				-6	
		WB R																				
6	Broad Street (SR 2028) & Park and Ride Driveway	NB U																				
		NB L																				
		NB T	14%		28						0				14%		10				38	
		NB R																				
		SB U																				
		SB L																				
		SB T																				
		SB R																				
		EB U																				
		EB L																				
		EB T																				
		EB R																				
		WB U																				
		WB L																				
		WB T																				
		WB R																				
7	Broad Street (SR 2028) & PA 611, I-80 Ramp A / Hotel Driveway	NB U																				
		NB L																				
		NB T	14%		28						0				14%		10				38	
		NB R																				
		SB U																				
		SB L																				
		SB T																				
		SB R																				
		EB U																				
		EB L																				
		EB T																				
		EB R																				
		WB U																				
		WB L																				
		WB T																				
		WB R																				

GPI Greenman - Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers and Inspectors

JOB	SCR-2019497		
SHEET		OF	
CALC BY	SFB	DATE	11/27/2019
CHKD BY		DATE	
SUBJECT	Delaware Water Gap Station		

			Rail Station (New Trips)						Park and Ride						Bus Station						Total	Total
Intersection ID	Intersection Name	Movement	Trip Dist % by		Total New	Pass-by % by		Total	Trip Dist % by		Total New	Pass-by % by		Total	Trip Dist % by		Total New	Pass-by % by		Total	New	Pass-by
			Enter %	Exit %	Trips	Enter %	Exit %	Pass-by	Enter %	Exit %	Trips	Enter %	Exit %	Pass-by	Enter %	Exit %	Trips	Enter %	Exit %	Pass-by	Trips	Trips
1	River Road (T-663) & Paper Mill Rd	NB U																				
		NB L													0%			0%				
		NB T																				
		NB R																				
		SB U																				
		SB L																				
		SB T																				
		SB R													0%			0%				
		EB U																				
		EB L														0%			0%			
		EB T		9%	18																18	
		EB R														0%			0%			
		WB U																				
		WB L																				
		WB T																				
		WB R																				
2	River Road (T-663) & Minisink Park E Driveway	NB U																				
		NB L														0%			0%	0		
		NB T																				
		NB R														0%			0%	0		
		SB U																				
		SB L																				
		SB T																				
		SB R																				
		EB U																				
		EB L																				
		EB T		9%	18													0%	0%	0	18	
		EB R																0%				
		WB U																				
		WB L																				
		WB T																				
		WB R																				
3	River Road (T-663) & Minisink Park W Driveway/Proposed Driveway	NB U																				
		NB L																	0%			
		NB T																				
		NB R																	0%			
		SB U																				
		SB L		9%	18											9%	6				24	
		SB T																				
		SB R		91%	182					100%	22					91%	62				266	
		EB U																				
		EB L																				
		EB T														-9%	-6	0%		0	-6	
		EB R																0%		0		
		WB U																				
		WB L																0%		0		
		WB T																		0		
		WB R																				
4	River Road (T-663) & PA Welcome Center Driveway	NB U																				
		NB L																				
		NB T																				
		NB R													0%			0%				
		SB U																				
		SB L																				
		SB T																				
		SB R																				
		EB U																				
		EB L																				
		EB T														-9%	-6	0%			-6	
		EB R																				
		WB U																				
		WB L																				
		WB T		91%	182					100%	22					91%	62		0%		266	
		WB R														0%			0%			
5	River Road (T-663) & PA 611, I-80 Ramps C & D and I-80 Ramps E & F/ Broad Sreet (SR 2028)	NB U																				
		NB L																				
		NB T														-77%	-52				-52	
		NB R														-9%	-6				-6	
		SB U																				
		SB L													0%			0%				
		SB T																				
		SB R																				
		EB U																				
		EB L																				
		EB T													0%			0%				
		EB R																				
		WB U																				
		WB L		14%	28											14%	10		0%		38	
		WB T														0%			0%			
		WB R		77%	154					100%	22					77%	52				228	
6	Broad Street (SR 2028) & Park and Ride Driveway	NB U																				
		NB L																				
		NB T														-86%	-58				-58	
		NB R																				
		SB U																				
		SB L																				
		SB T		14%	28											14%	10				38	
		SB R																				
		EB U																				
		EB L																				
		EB T																				
		EB R																				
		WB U																				
		WB L																				
		WB T																				
		WB R																				
7	Broad Street (SR 2028) & PA 611, I-80 Ramp A / Hotel Driveway	NB U																				
		NB L																				
		NB T																				
		NB R																				
		SB U																				
		SB L																				
		SB T		14%	28											14%	10				38	
		SB R																				
		EB U																				
		EB L														-86%	-58				-58	
		EB T																				
		EB R																				
		WB U																				
		WB L																				
		WB T																				
		WB R																				



LEGEND

XX (XX) – AM (PM) PEAK HOUR VOLUMES

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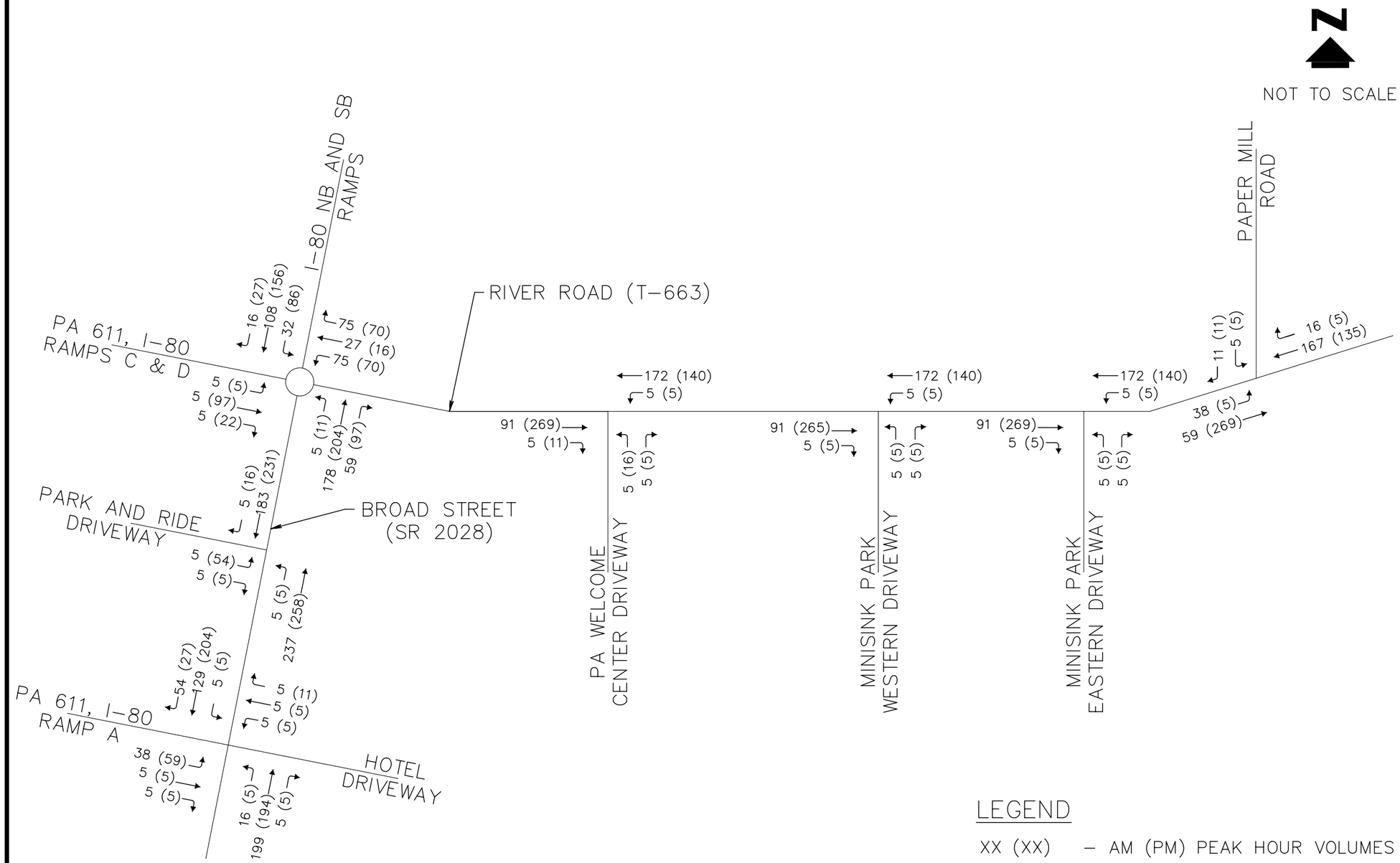
DELAWARE WATER GAP SITE
TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

(2019) BALANCED TRAFFIC VOLUMES FOR AM AND PM PEAK DESIGN HOUR

FIGURE D-1

DRAWN SFB	CHECKED	SHEET
DATE 12/5/19	JOB NO. 2019407	SHEET 1 OF 10



LEGEND

XX (XX) – AM (PM) PEAK HOUR VOLUMES

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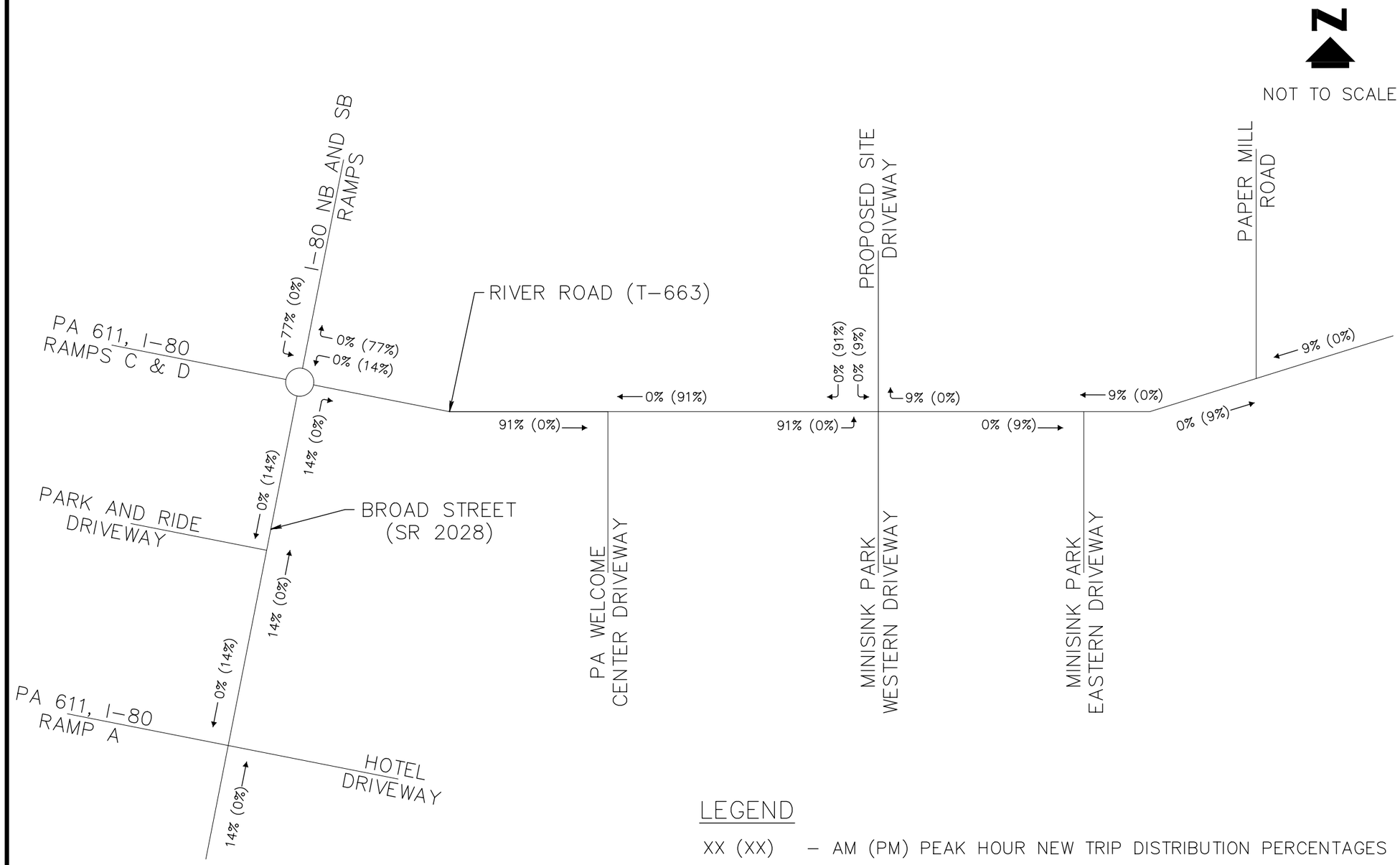
DESIGN YEAR (2030), NO-BUILD CONDITION TRAFFIC VOLUMES

FIGURE D-2

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET



LEGEND

XX (XX) – AM (PM) PEAK HOUR NEW TRIP DISTRIBUTION PERCENTAGES

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TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

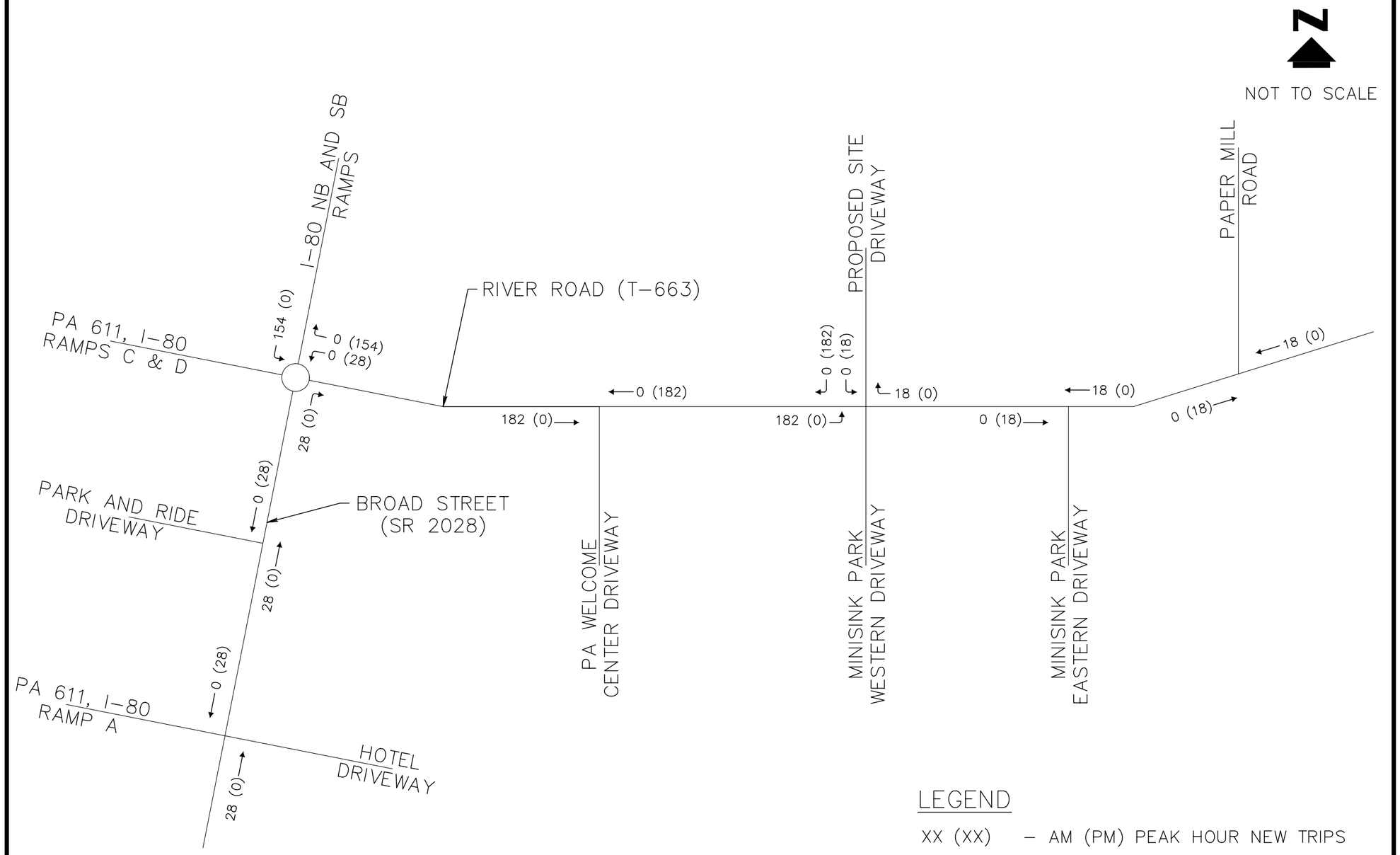
NEW TRIP DISTRIBUTION PERCENTAGES (PROVIDED BY PNRRA)

FIGURE D-3

DRAWN	SFB	CHECKED	
DATE	11/18/19	JOB NO.	2019407

SHEET

SHEET 3 OF 10



LEGEND

XX (XX) – AM (PM) PEAK HOUR NEW TRIPS

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SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

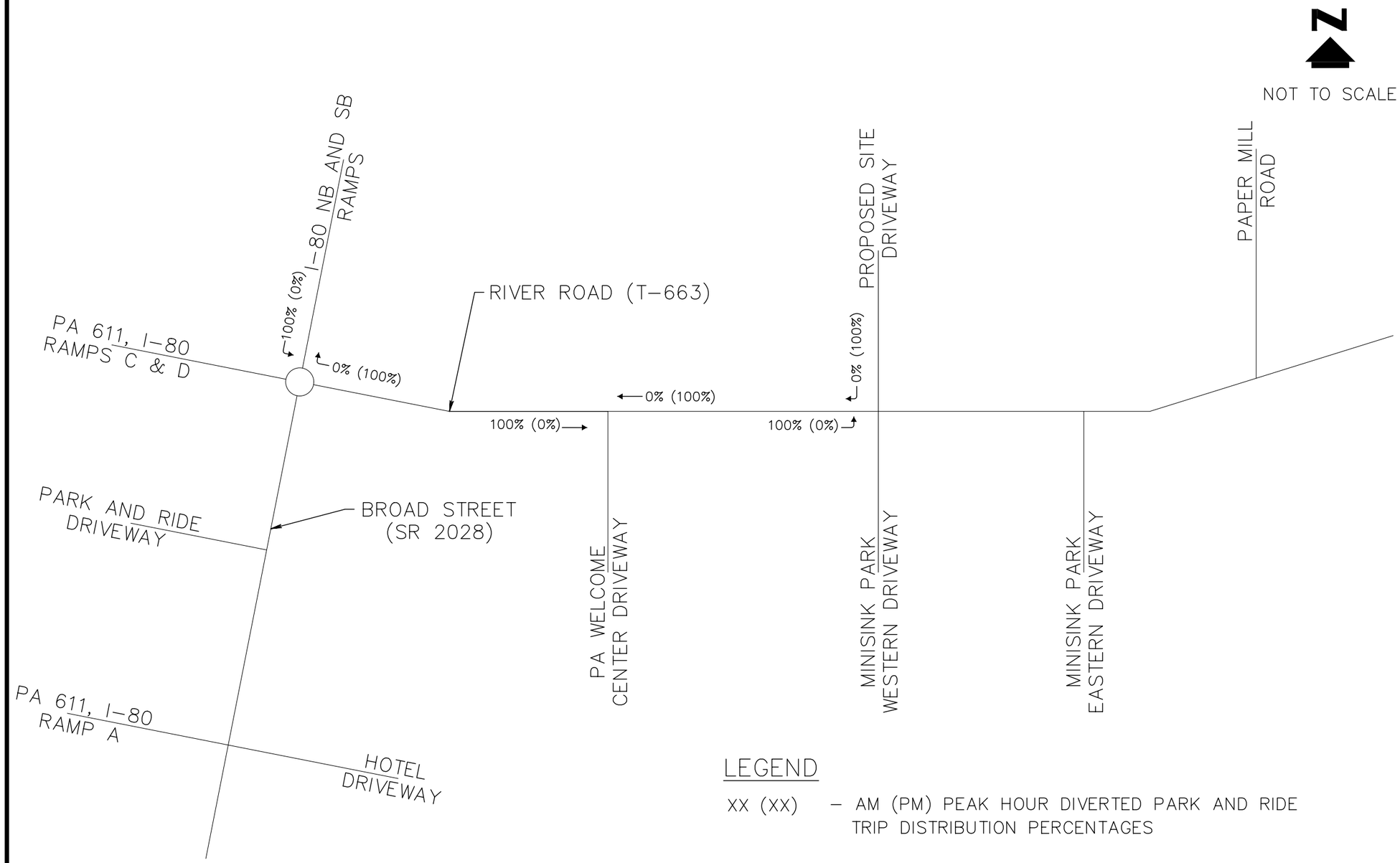
NEW TRIPS

FIGURE D-4

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET



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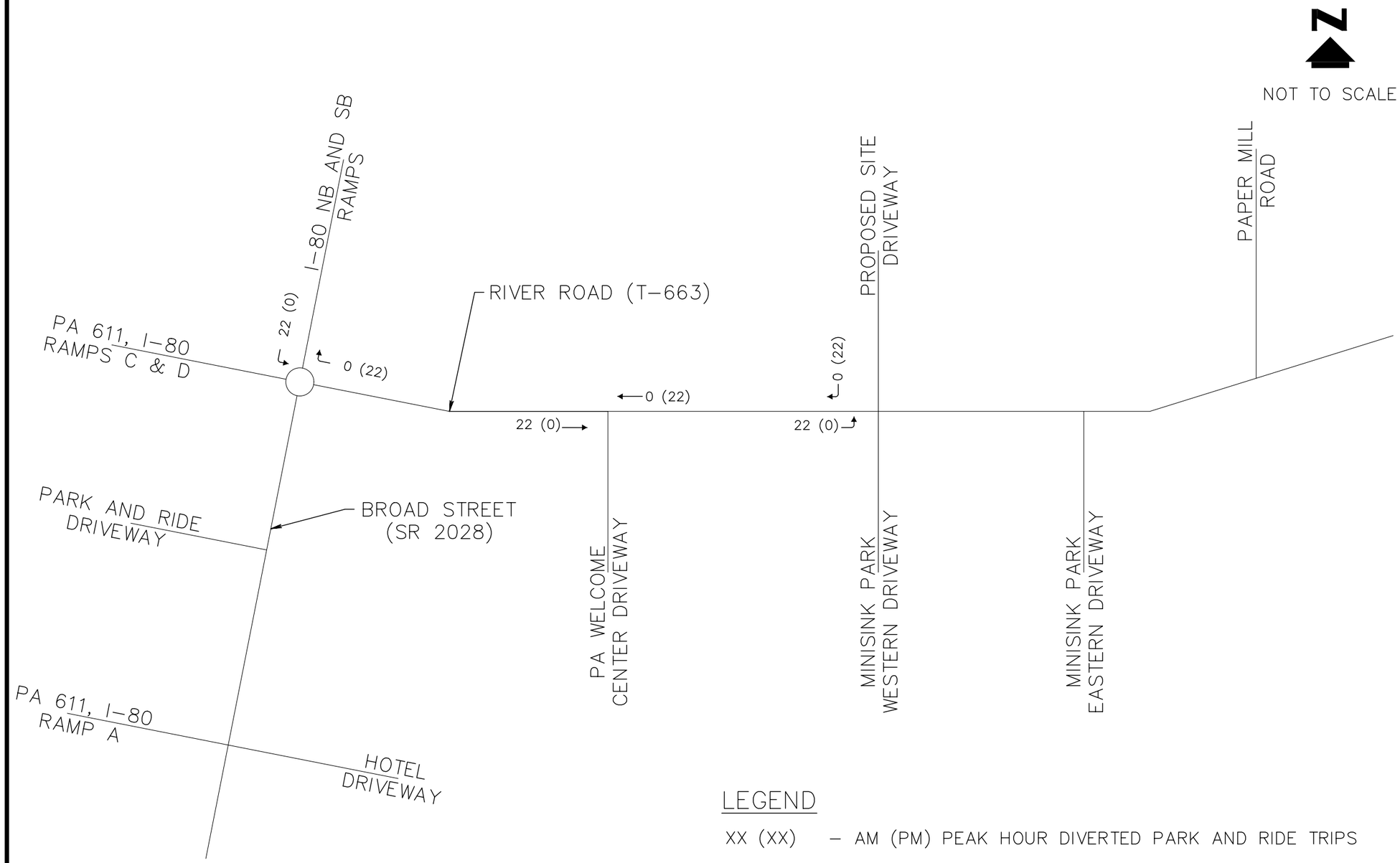
SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

DIVERTED PARK AND RIDE TRIP ADJUSTMENT PERCENTAGES

FIGURE D-5

DRAWN SFB | CHECKED | DATE 11/18/19 | JOB NO. 2019407

SHEET



LEGEND

XX (XX) – AM (PM) PEAK HOUR DIVERTED PARK AND RIDE TRIPS

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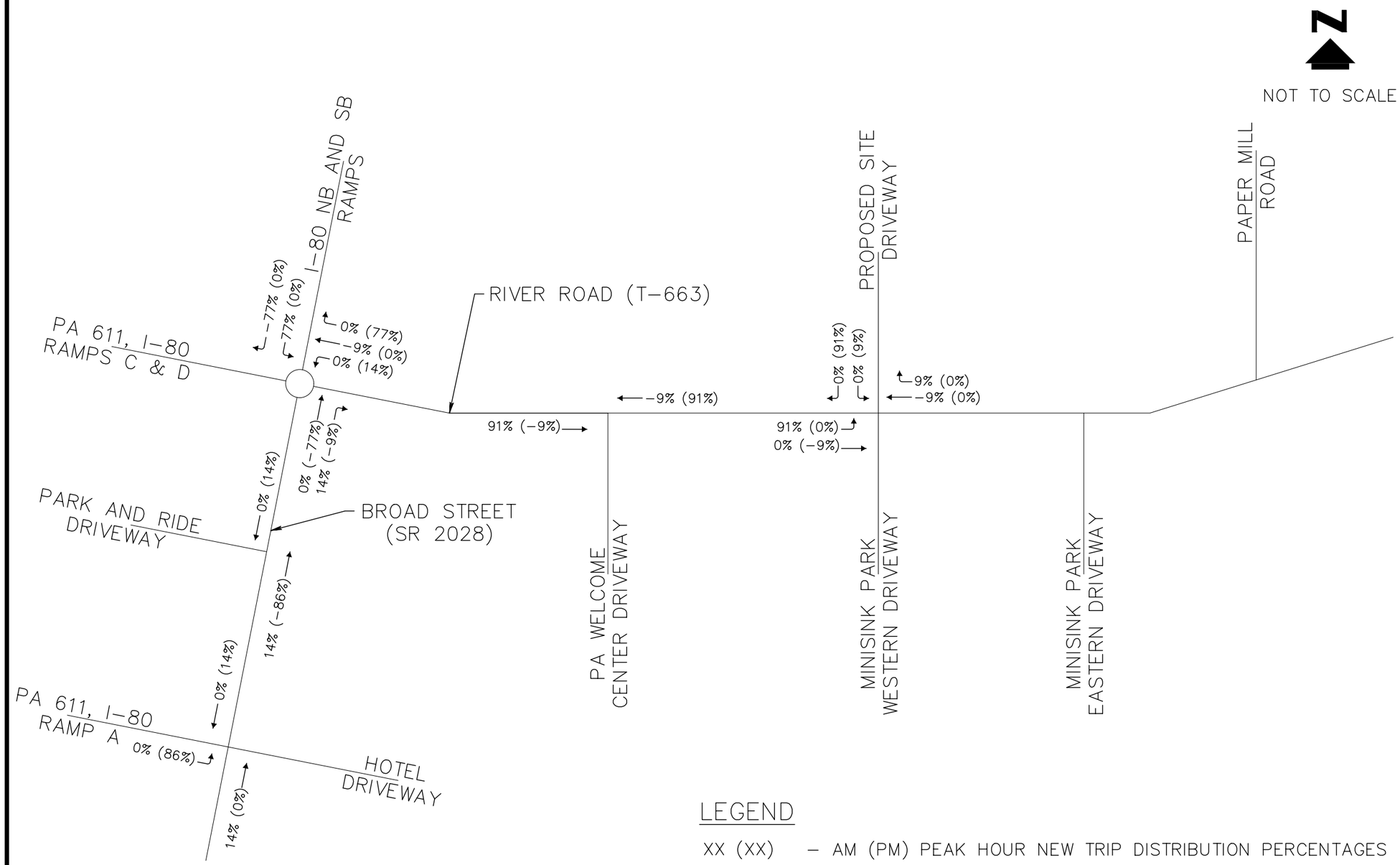
TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

DIVERTED PARK AND RIDE TRIP ADJUSTMENT TRIPS

FIGURE D – 6

DRAWN SFB	CHECKED	SHEET
DATE 11/18/19	JOB NO. 2019407	SHEET 6 OF 10



LEGEND

XX (XX) – AM (PM) PEAK HOUR NEW TRIP DISTRIBUTION PERCENTAGES

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TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

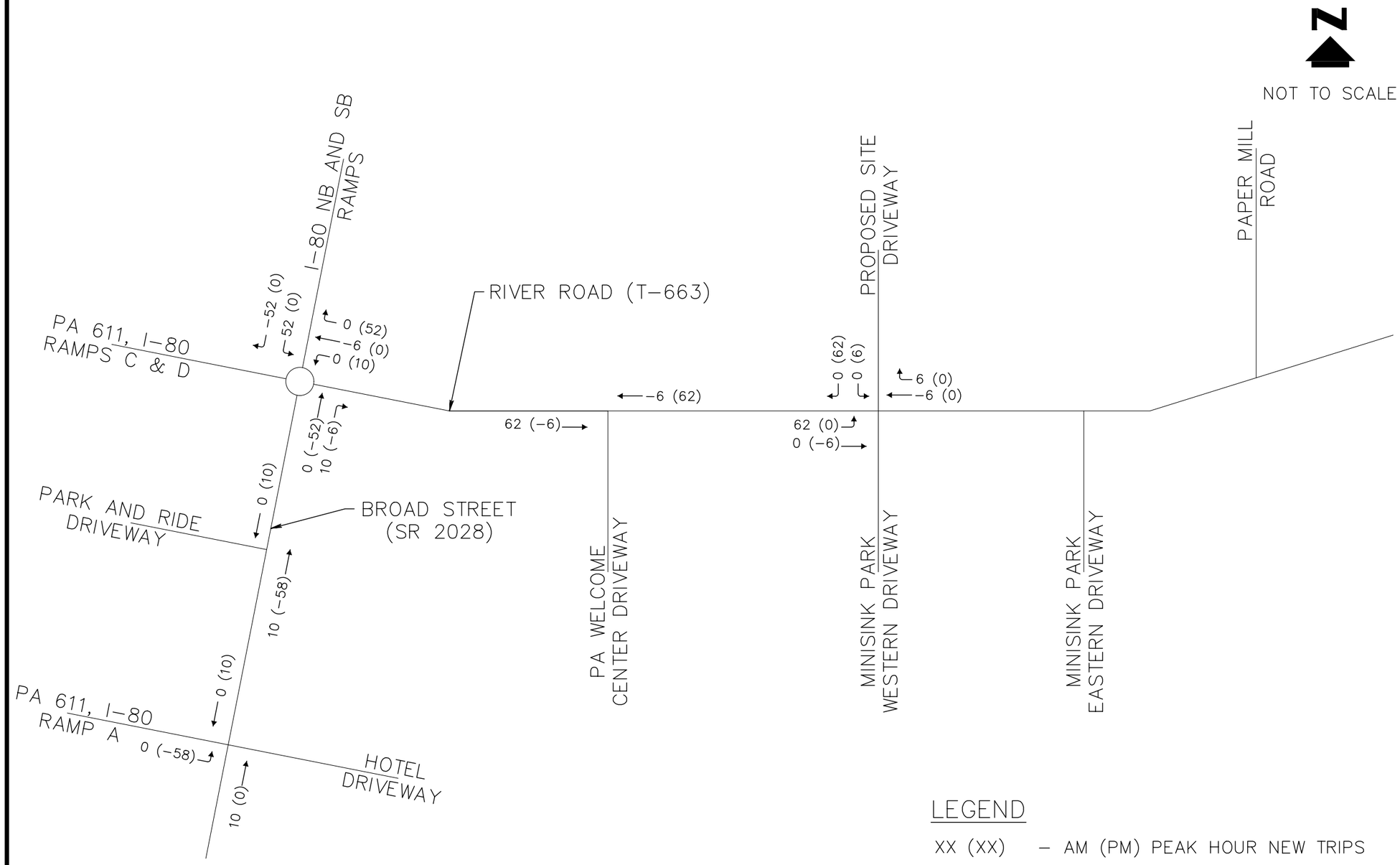
DIVERTED BUS STATION
TRIP ADJUSTMENT
PERCENTAGES

FIGURE
D-7

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET
SHEET 7 OF 10



LEGEND

XX (XX) – AM (PM) PEAK HOUR NEW TRIPS

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TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

DIVERTED BUS STATION TRIP ADJUSTMENT TRIPS

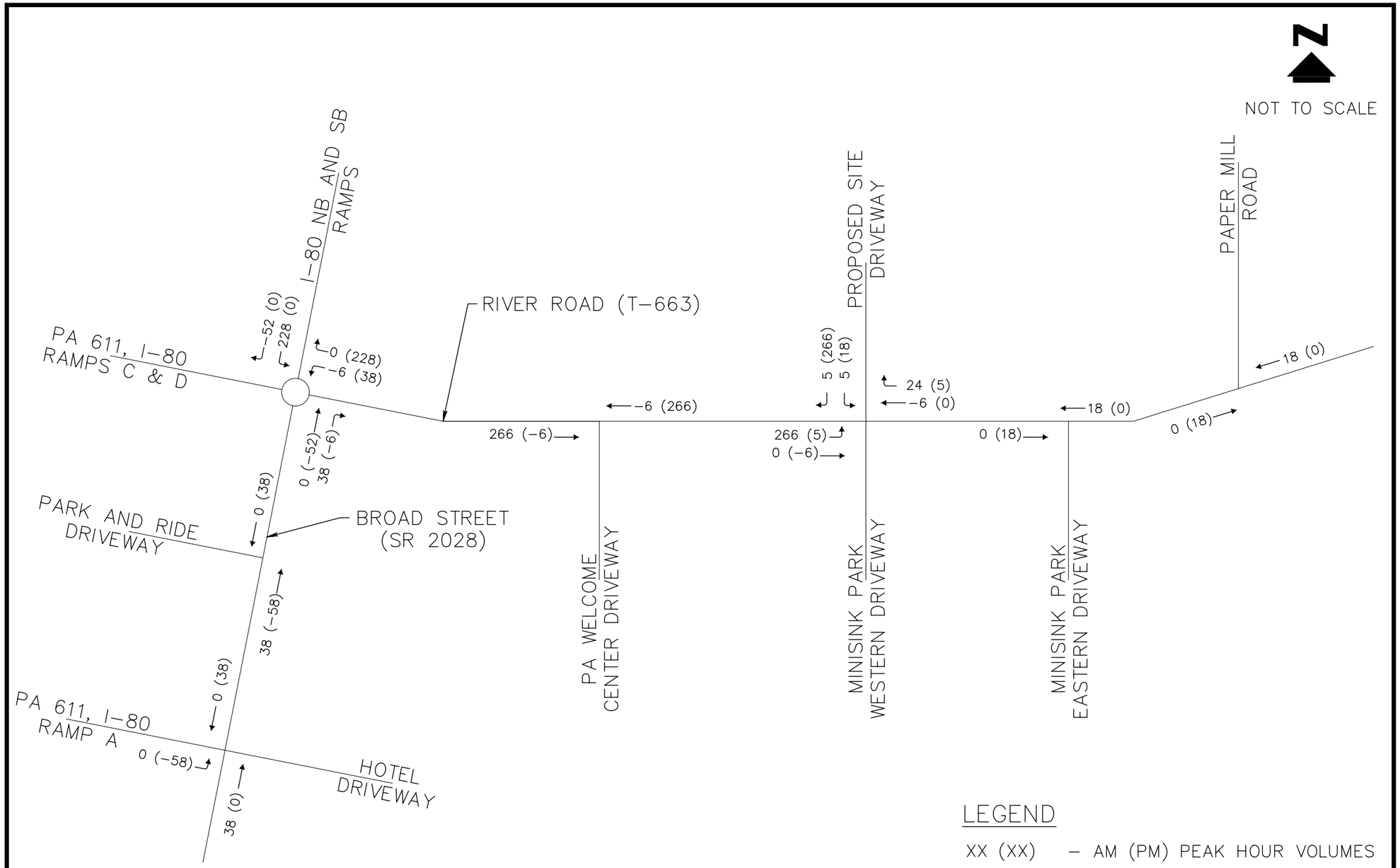
FIGURE D – 8

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET

SHEET 8 OF 10



LEGEND

XX (XX) – AM (PM) PEAK HOUR VOLUMES

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SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

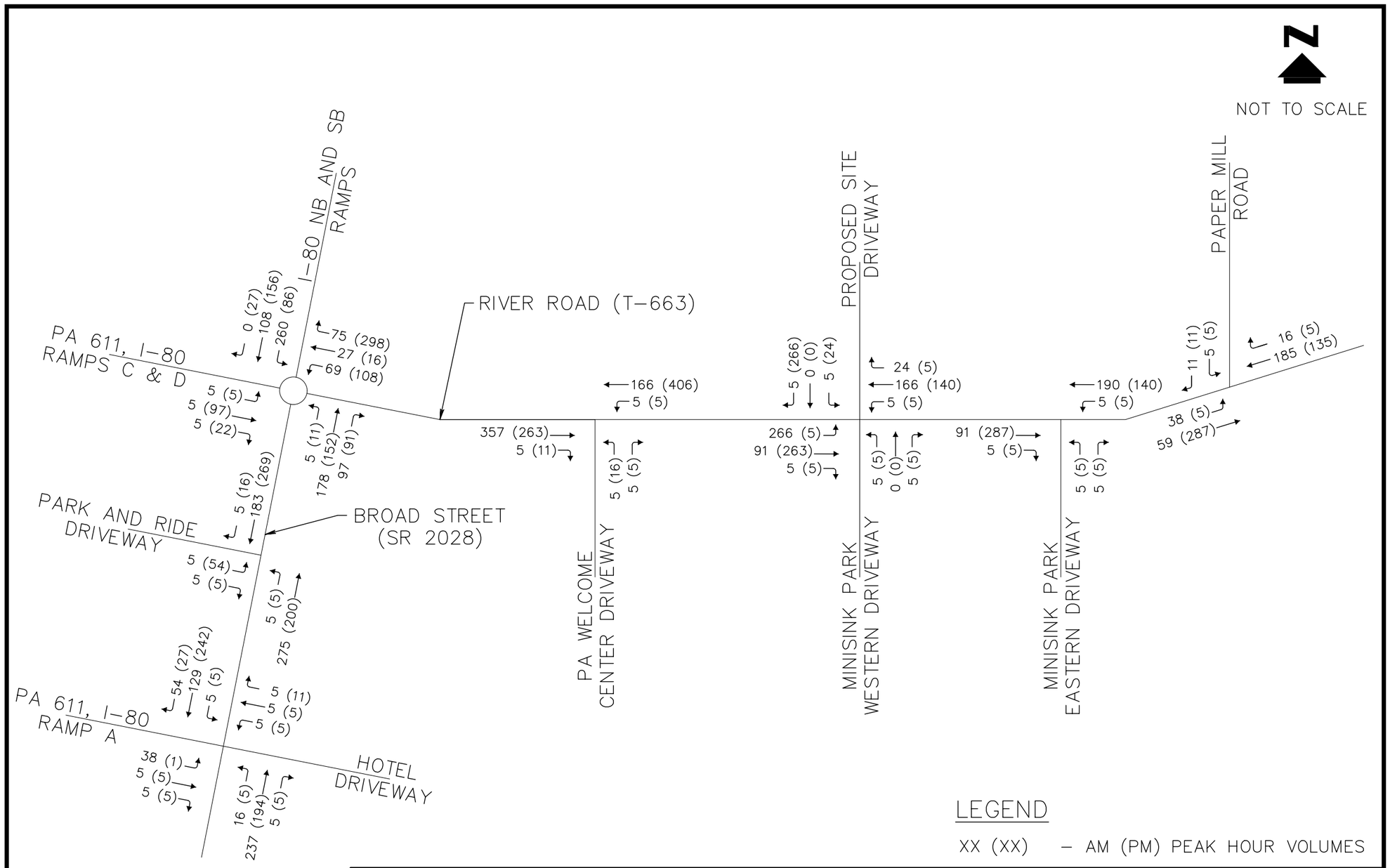
TOTAL TRIP ADJUSTMENTS

FIGURE D-9

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET SHEET 9 OF 10



LEGEND

XX (XX) – AM (PM) PEAK HOUR VOLUMES

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SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

DESIGN YEAR (2030), BUILD CONDITION TRAFFIC VOLUMES

FIGURE D-10

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET

SHEET 10 OF 10

Attachment E – Turn Lane Warrant Analyses

Turn Lane Warrant and Length Analysis Workbook

Introduction

The purpose of this workbook is to aid in the determination of whether or not a left or right turn lane is warranted for an existing or proposed unsignalized or signalized intersection. If warranted, this workbook also calculates the required storage length. The logic, calculations, and warrant graphs contained within this workbook stem from Section 11.16 and the Chapter 11 Appendix of PennDOT Publication 46. All users shall reference Section 11.16 of PennDOT Publication 46 while completing this workbook to verify the accuracy of workbook calculations and findings. This workbook is a tool to make a traffic engineering decision. This workbook is not a substitute for engineering judgment.

In addition to the findings of this workbook, users shall comply with the guidance of Section 11.16 of PennDOT Publication 46 as it relates to use of operational analyses and other warranting factors to determine whether a turn lane is warranted or not. Attach all supplemental documentation.

Assumptions

1. The references cited in Section 11.16 of PennDOT Publication 46 are the basis from which the warrant graphs were derived. Certain lane configurations, speeds, and volume distributions should not be evaluated using this workbook.
2. This workbook allows the user to decide whether or not to include certain turning movement volumes in the overall calculations. Include the turning movement volume and if indicated to be excluded, provide justification.
3. Figure 7 or 8: When the actual left turn percentage (LT%) is between curves, the warranting curve is the lower percentage curve. For example, for a LT% of 8%, the curve that is used to determine if the warrant is met is the 5% curve. If the LT% is less than 1%, a left-turn lane is not considered warranted for the purposes of this workbook.
4. Users shall ensure that the vehicle volumes are adjusted/grown using acceptable engineering practices to reflect the appropriate scenario for which the study is being done.

Instructions

1. This workbook accounts for a single left or right turn lane warrant analysis. Duplicate this file to account for each additional analysis.
2. All pale yellow cells are available for the user to either input information or to provide a decision. Some of these input cells, when selected, provide additional information/drop-down lists for the user to input the correct information. Green cells are self calculating.
3. Begin by filling out the top section of the "Input&Findings" tab. Include all study area information and make sure to indicate which type of turn lane warrant analysis is to be conducted. Next fill out the appropriate information in the "Volume Calculations" section. Follow the imbedded instructions for the remaining entries.
4. The applicable warrant figure and an indication of whether or not the type of turn lane is warranted will be provided in the "Input&Findings" tab. Additionally, if a turn lane is warranted, this tab will also include the required storage length rounded to the next highest 25' increment, if applicable. Refer to the figure tabs to locate and review the warrant findings.
5. Print Output: Users may print one or more tabs using conventional Excel printing procedures. Macro enabled buttons are not provided in this workbook due to its simplicity to print.

Version #	Revision Date	Revision Description
1.0	9/27/2012	Original
2.0	10/1/2012	Included Imbedded Figure 7 and 8 Warrant Comparisons
3.0	11/2/2012	Per Clearance Transmittal T-12-016 Comments
3.1	7/28/2015	Corrected condition calculation for right turn lanes
3.2	12/18/2015	Fixed bug causing incorrect turn lane length outputs for the unsignalized, 40-45MPH, high turn demand volume, Condition C scenario

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Smithfield Township	**Analysis Date:**	12/9/2019
County:	Monroe County	**Conducted By:**	SFB
PennDOT Engineering District:	5	**Checked By:**	
		Agency/Company Name:	GPI

Intersection & Approach Description: River Road (T-663) & Proposed Site Driveway

Analysis Period:	Weekday	**Number of Approach Lanes:**	1
Design Hour:	AM	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Rolling	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	266	0.0%	266
	Through	-	91	0.0%	91
	Right	Yes	5	0.0%	5
Opposing	Left	Yes	5	0.0%	5
	Through	-	166	0.0%	166
	Right	Yes	24	0.0%	24

Advancing Volume:	362
Opposing Volume:	195
Left Turn Volume:	266
% Left Turns in Advancing Volume:	73.48%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left		0	0.0%	N/A
	Through	-	0	0.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **Yes**

Right Turn Lane Warrant Findings

Applicable Warrant Figure: **N/A**

Warrant Met?: **N/A**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	266
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 4.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	**175**	**Feet**
Condition B:	**N/A**	**Feet**
Condition C:	**N/A**	**Feet**
Required Left Turn Lane Storage Length:	**175**	**Feet**

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)

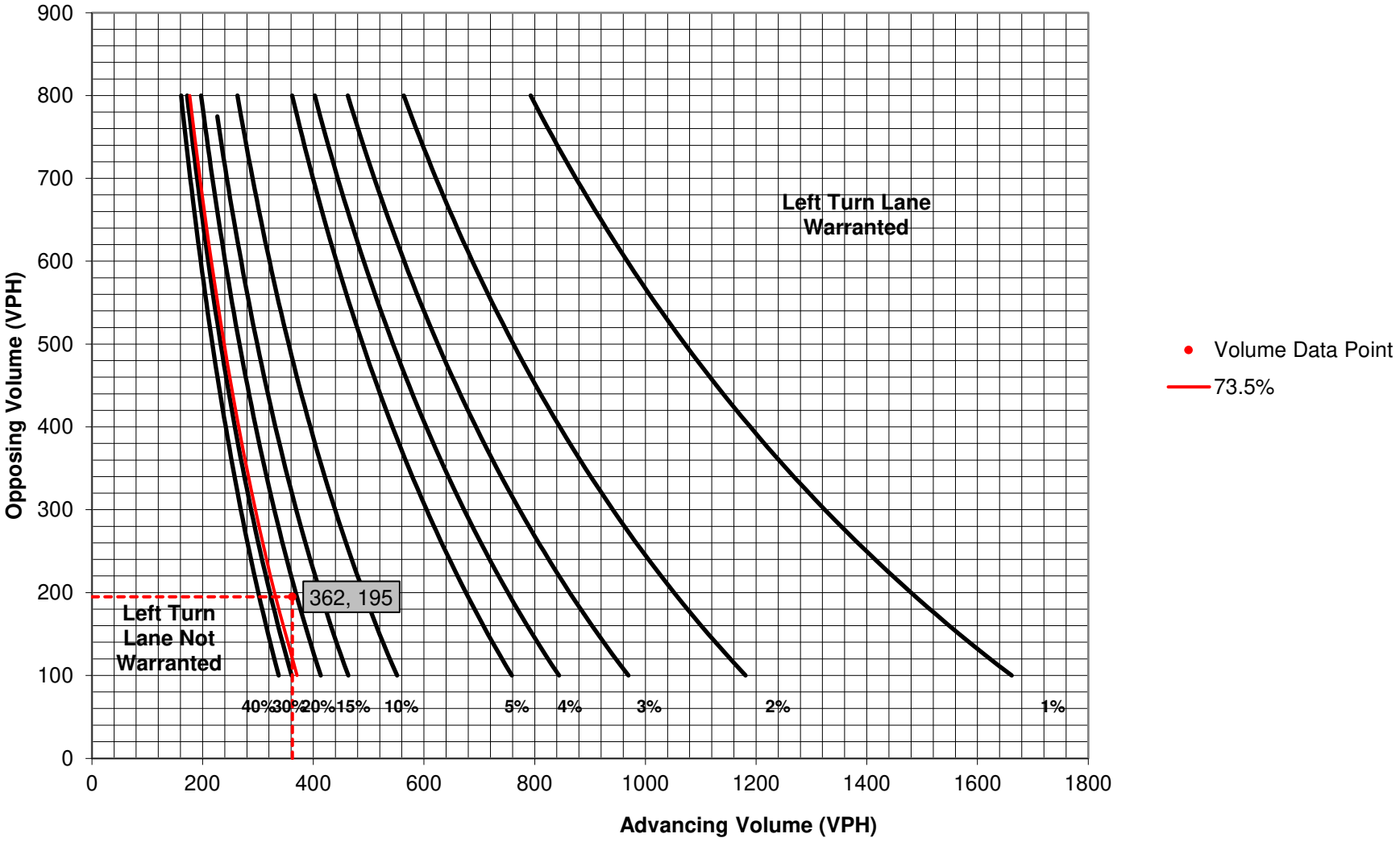


Figure 2. Warrant for left turn lanes on two-lane highways (40 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)

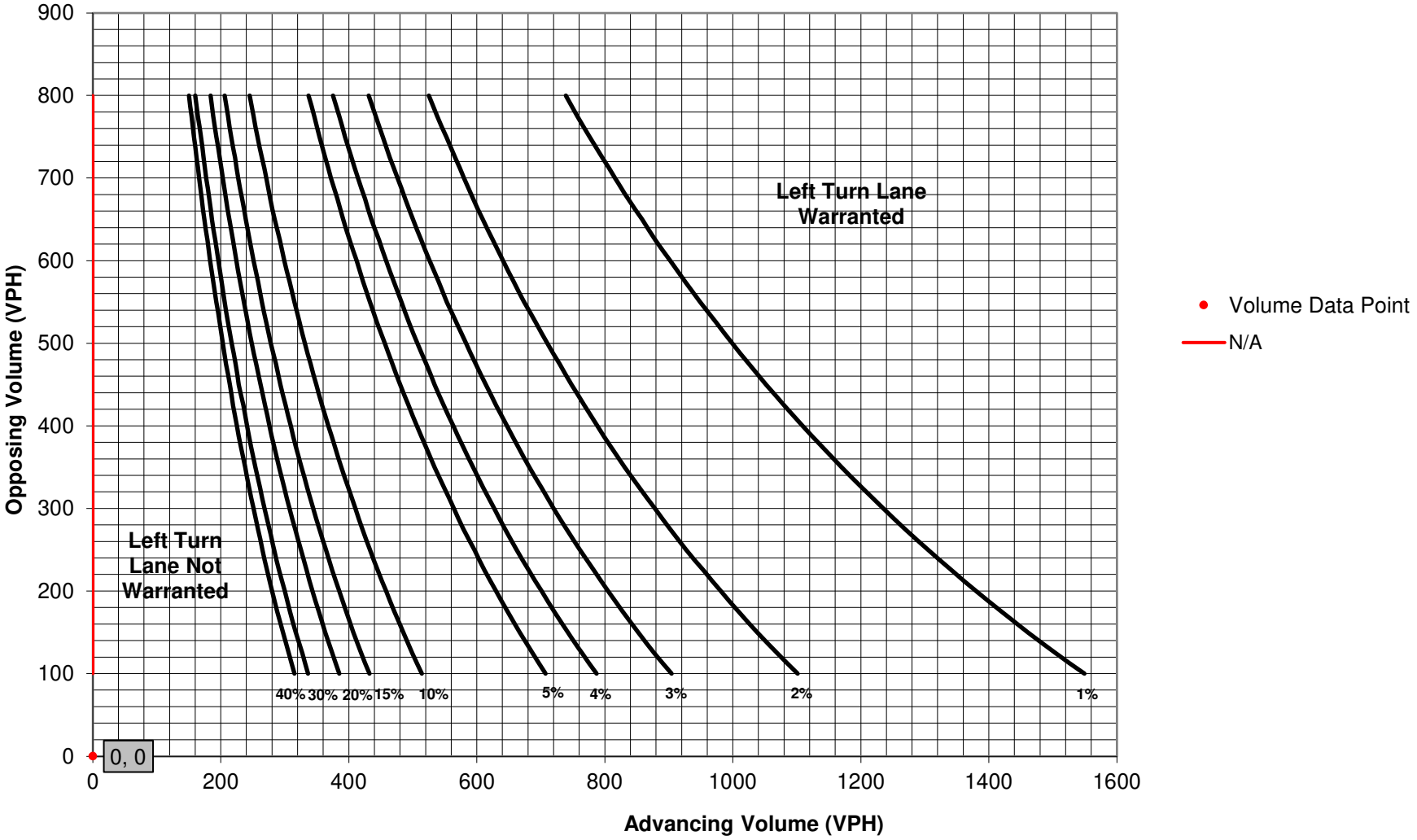


Figure 3. Warrant for left turn lanes on two-lane highways (45 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)

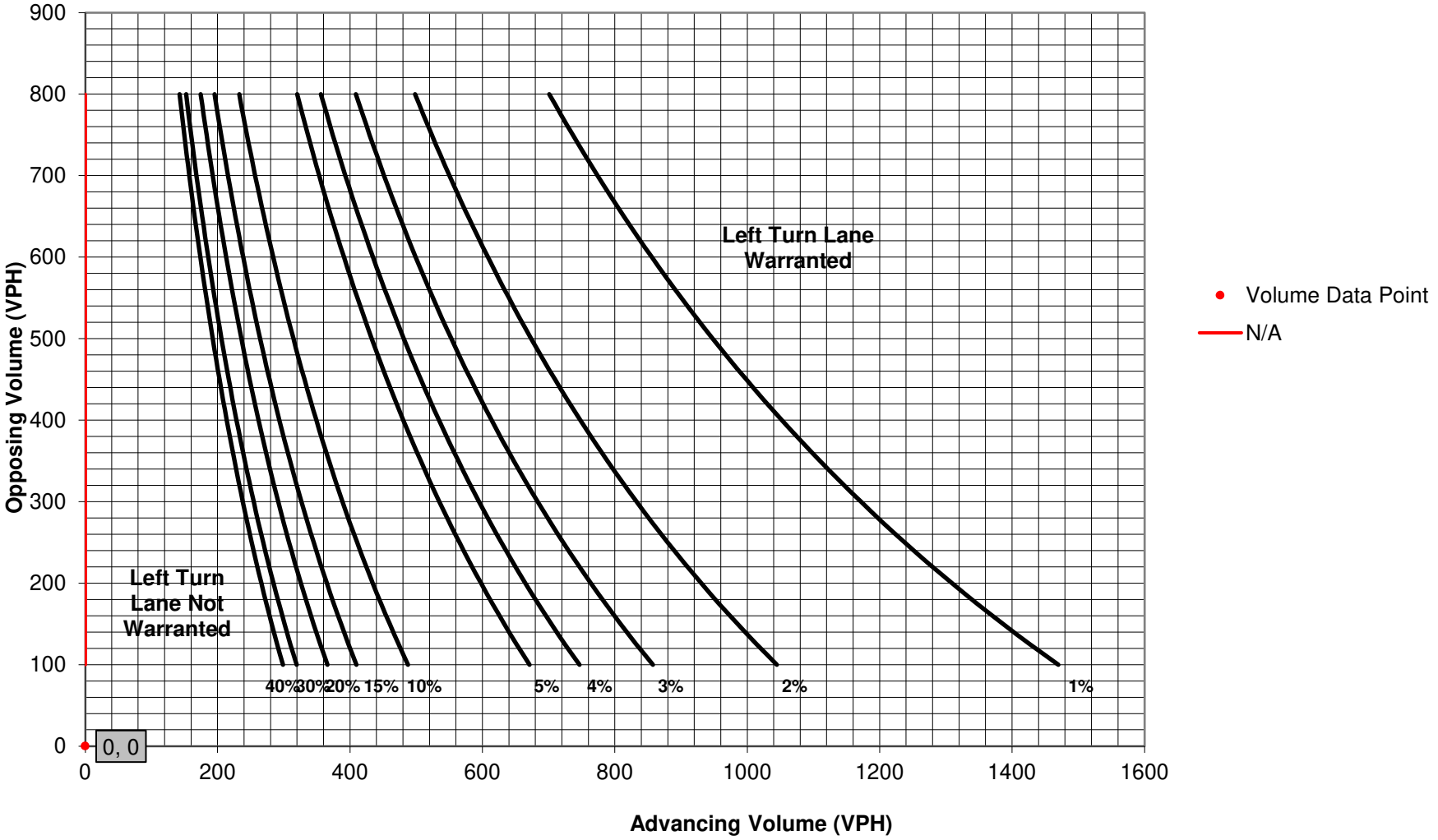


Figure 4. Warrant for left turn storage lanes on two-lane highways (50 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)

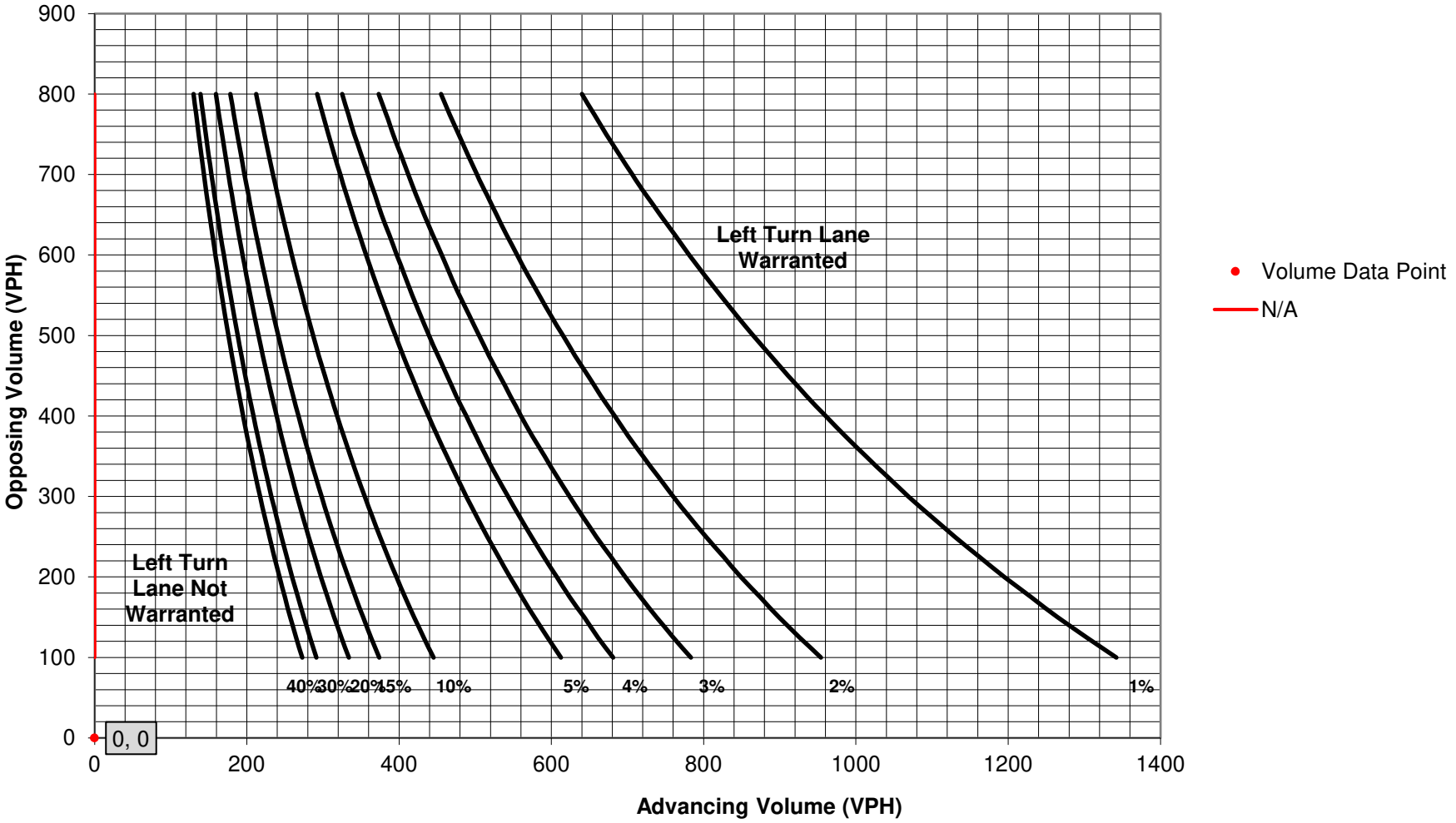


Figure 5. Warrant for left turn storage lanes on two-lane highways (55 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)

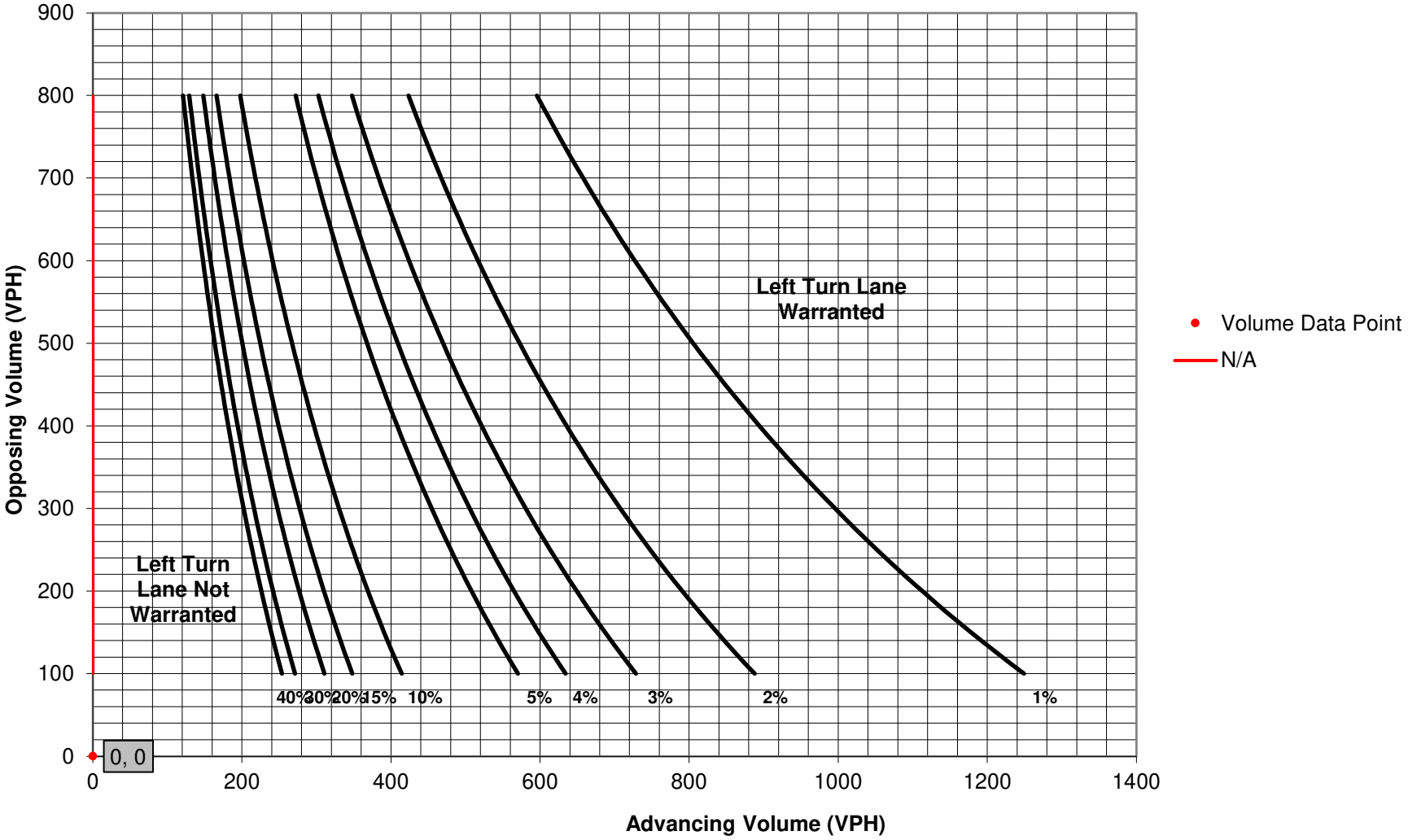


Figure 6. Warrant for left turn storage lanes on two-lane highways (60 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)

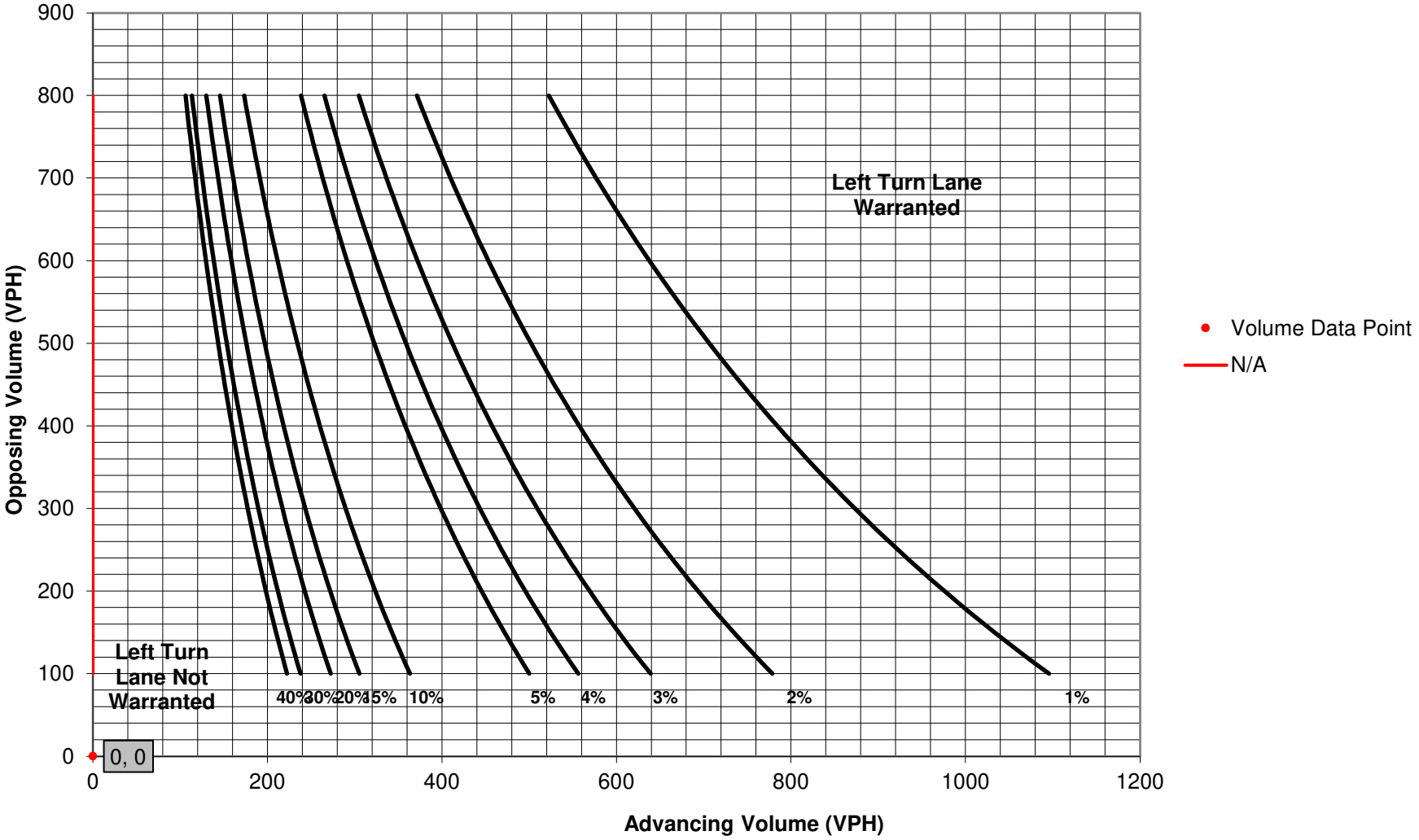


Figure 7. Warrant for left turn lanes on four-lane, undivided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)

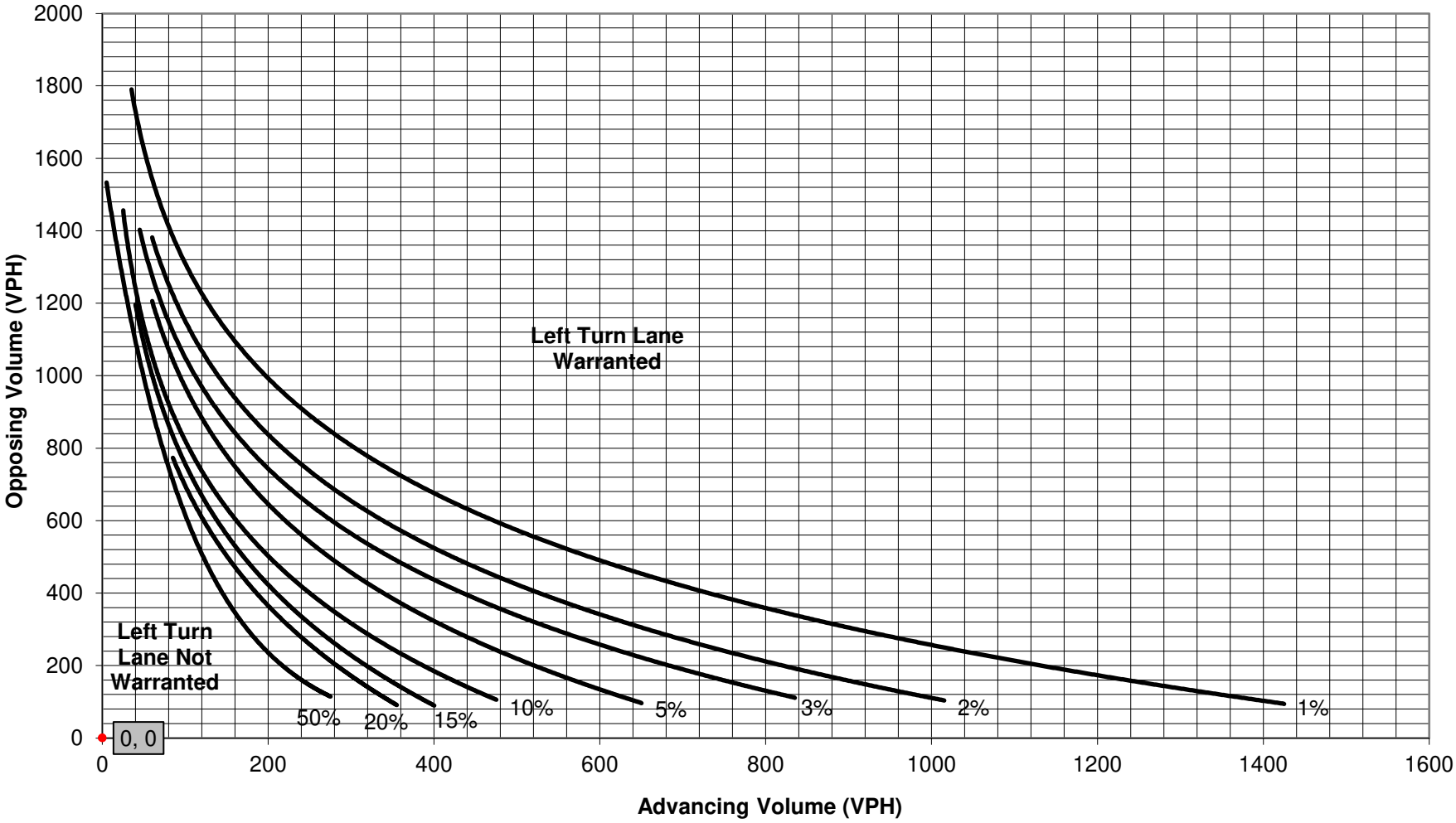


Figure 8. Warrant for left turn lanes on four-lane, divided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)

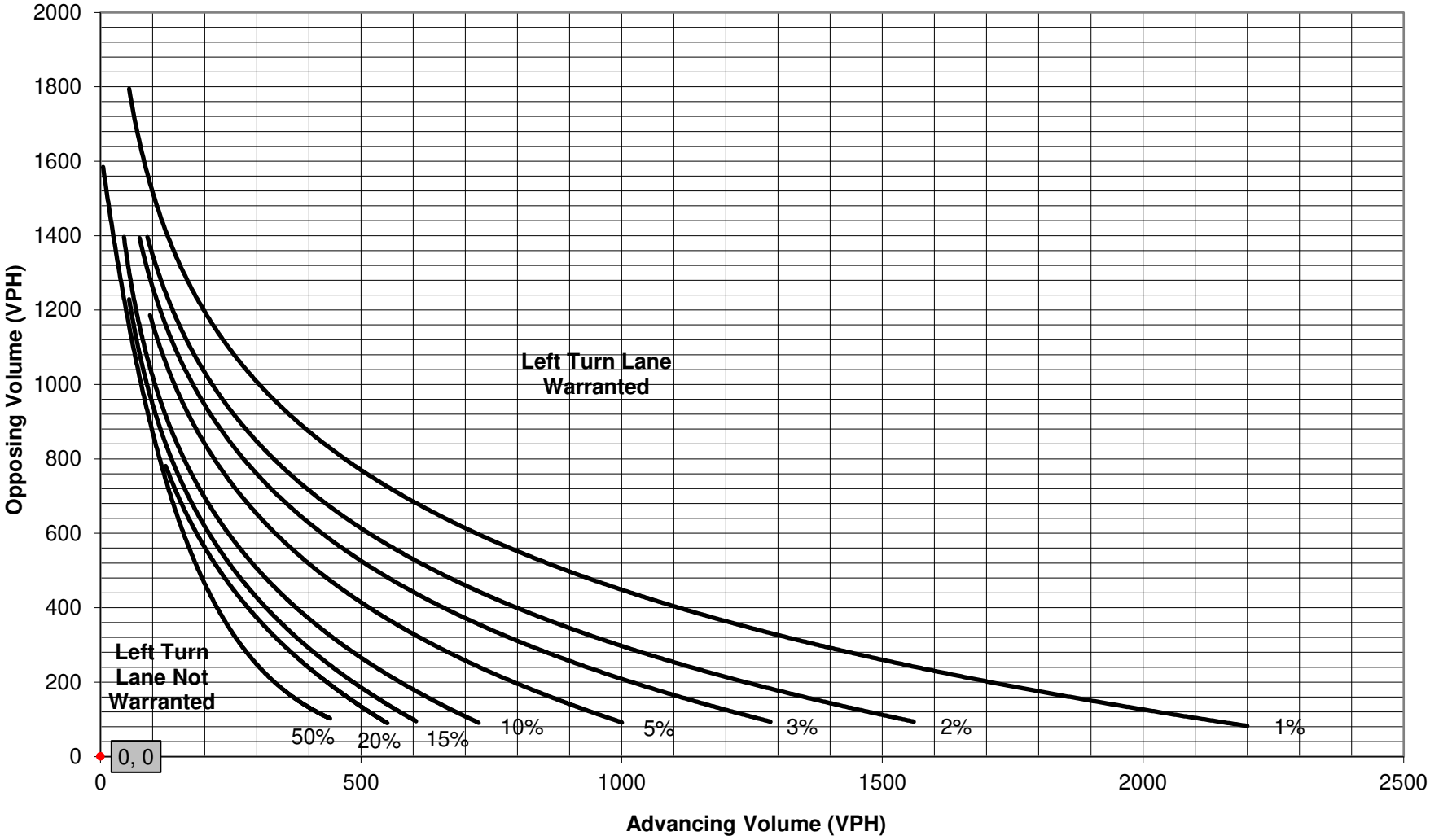


Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)

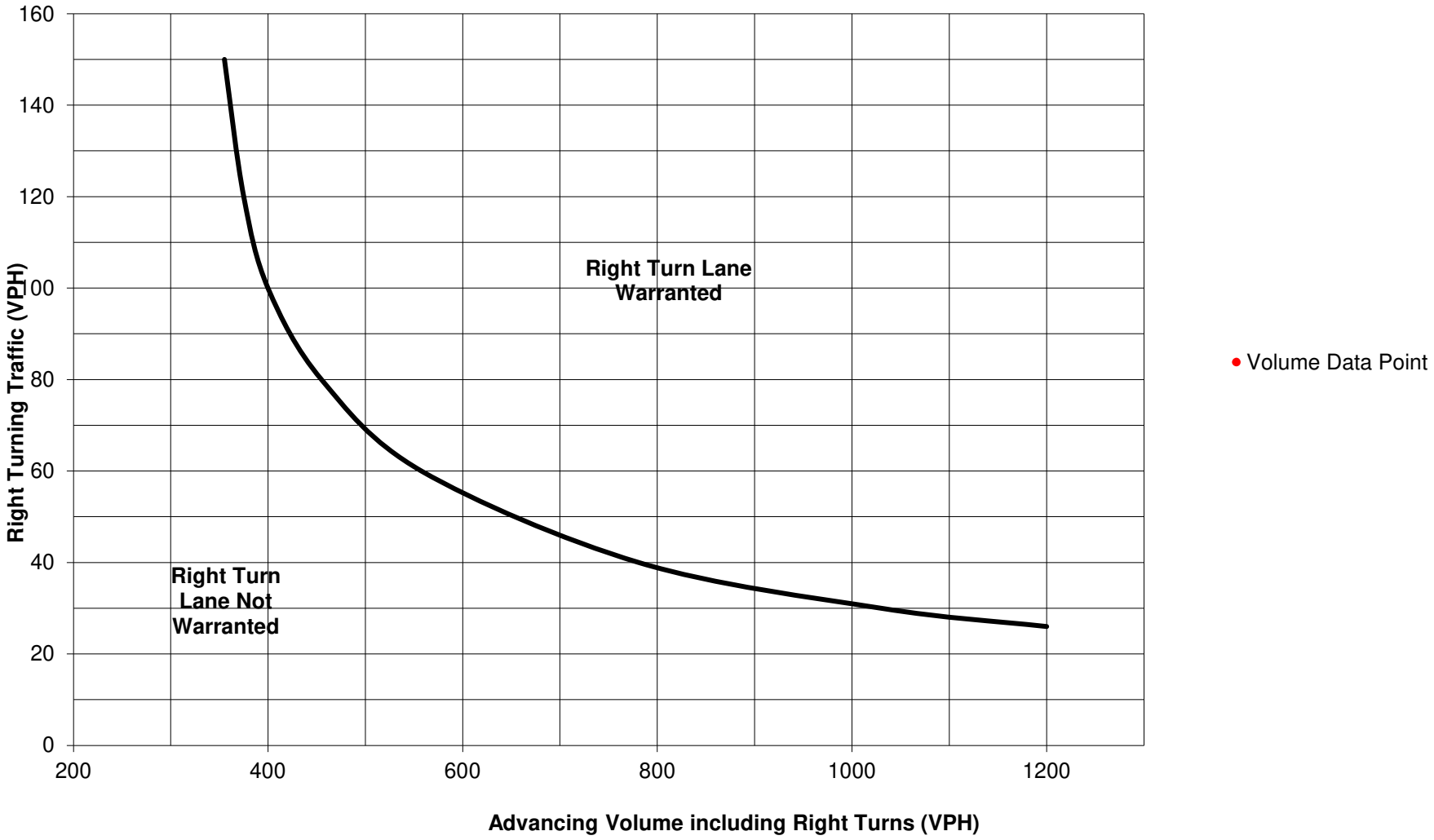


Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)

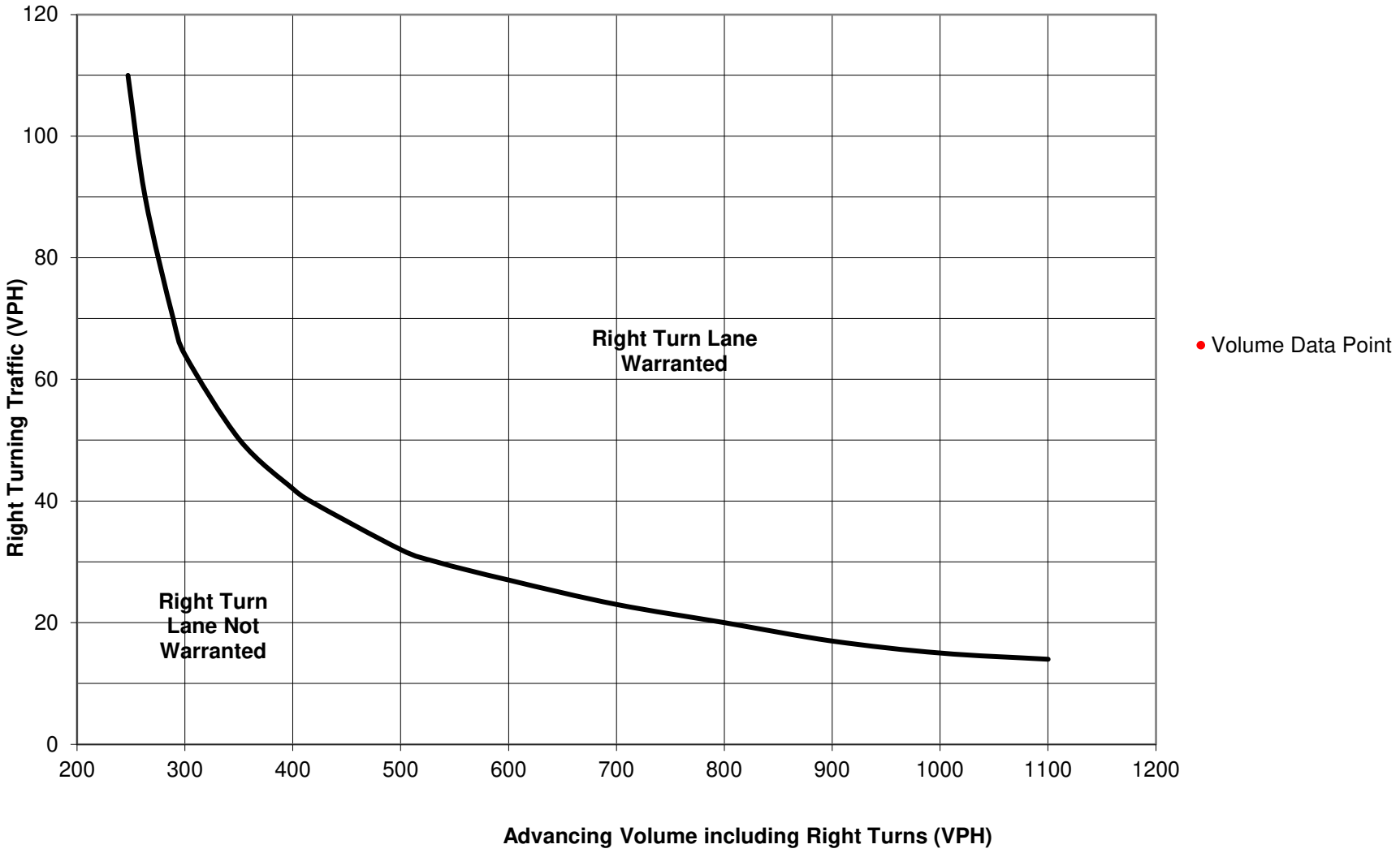


Figure 11. Warrant for right turn lanes on four-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)

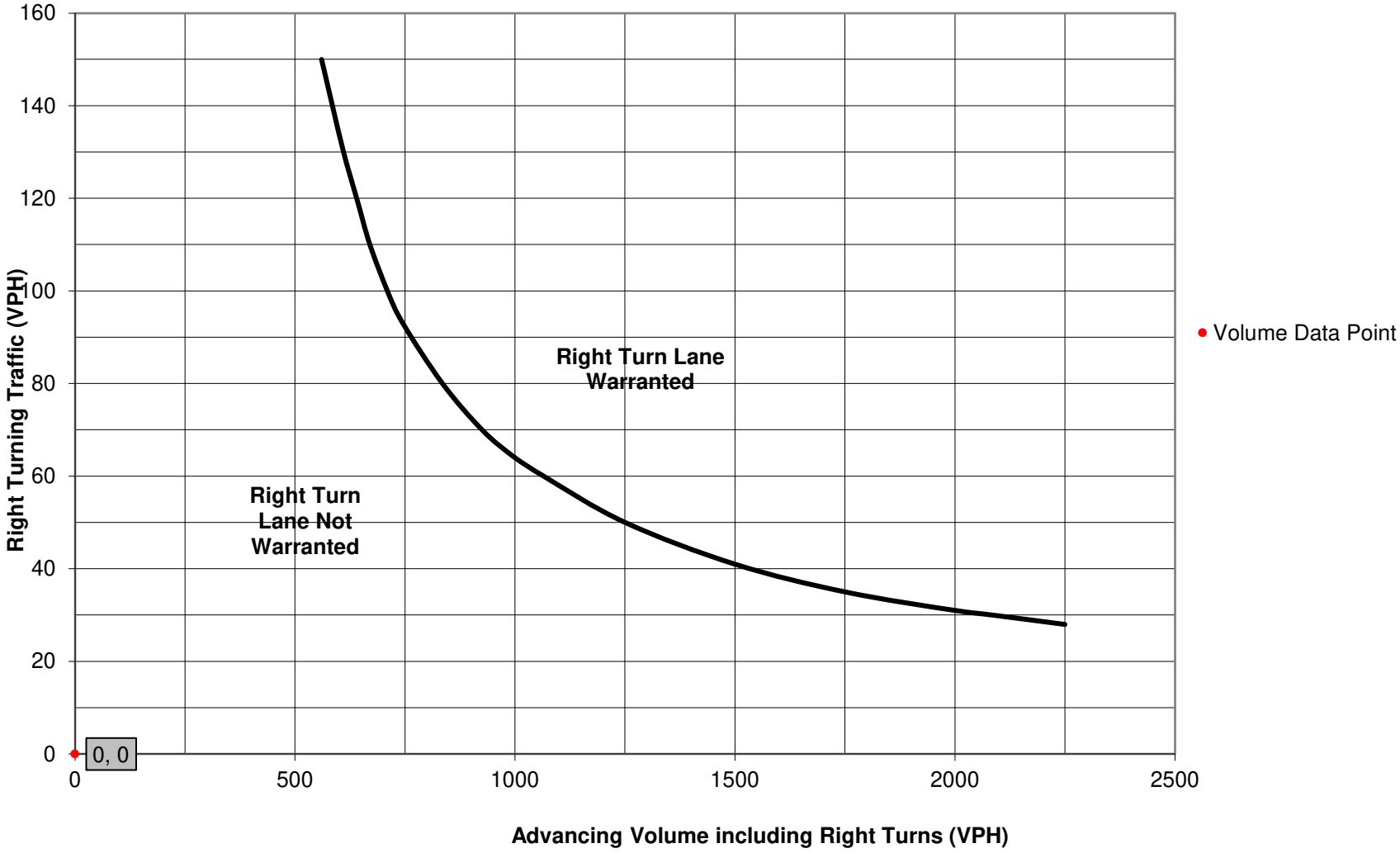
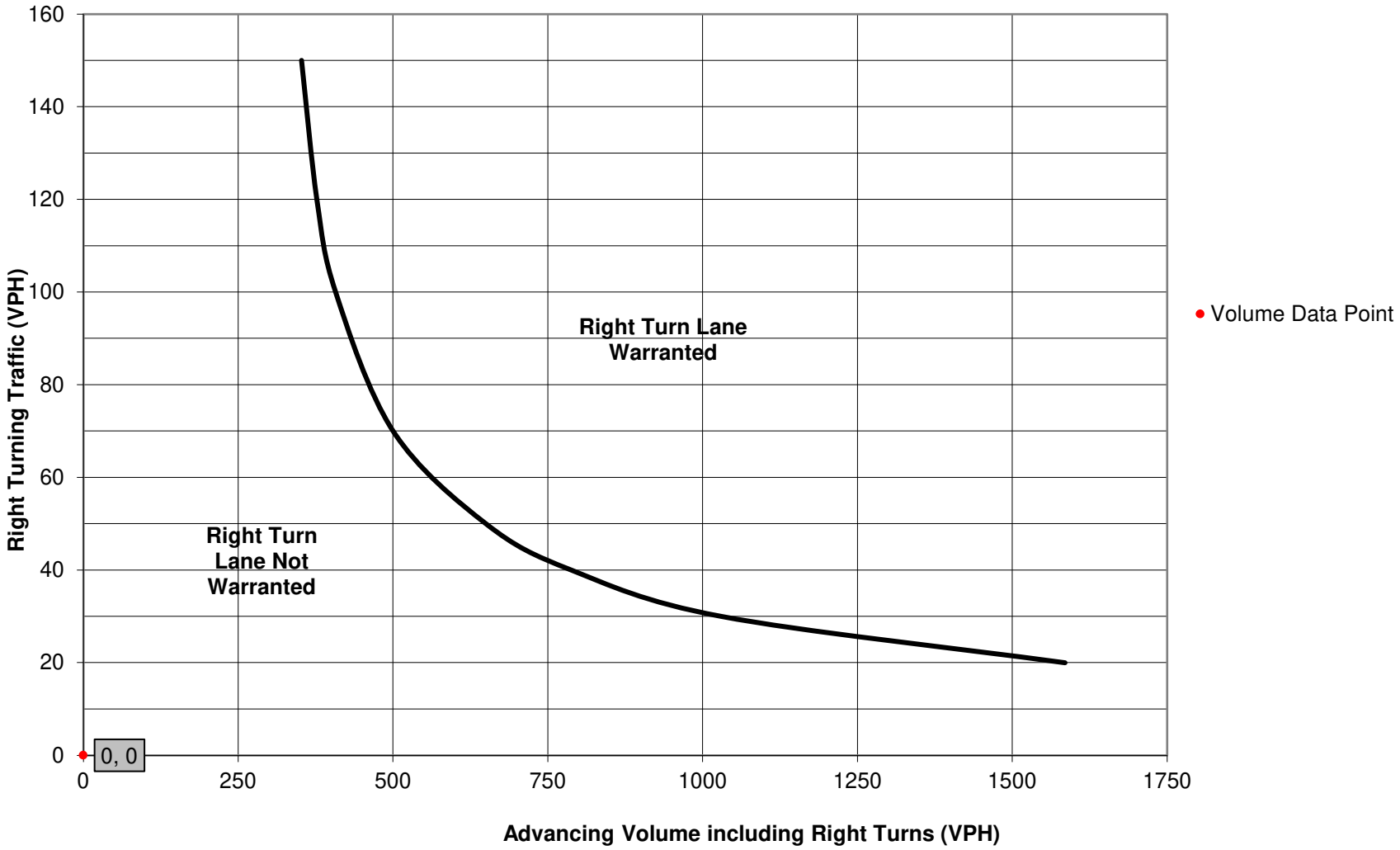
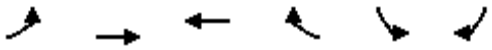


Figure 12. Warrant for right turn lanes on four-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Attachment F – LOS Figures & Synchro Reports



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	35	55	155	15	5	10
Future Volume (vph)	35	55	155	15	5	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	12	12
Grade (%)		1%	0%		8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988		0.910	
Flt Protected		0.981			0.984	
Satd. Flow (prot)	0	1452	1634	0	1442	0
Flt Permitted		0.981			0.984	
Satd. Flow (perm)	0	1452	1634	0	1442	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		123	779		716	
Travel Time (s)		2.4	15.2		16.3	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	30%	2%	1%	8%	0%	11%
Adj. Flow (vph)	43	67	189	18	6	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	110	207	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	55	155	15	5	10
Future Vol, veh/h	35	55	155	15	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	8	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	30	2	1	8	0	11
Mvmt Flow	43	67	189	18	6	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	207	0	-	0	351	198
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	4.4	-	-	-	8	7.11
Critical Hdwy Stg 1	-	-	-	-	7	-
Critical Hdwy Stg 2	-	-	-	-	7	-
Follow-up Hdwy	2.47	-	-	-	3.5	3.399
Pot Cap-1 Maneuver	1214	-	-	-	557	785
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	822	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1214	-	-	-	536	785
Mov Cap-2 Maneuver	-	-	-	-	536	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1214	-	-	-	680
HCM Lane V/C Ratio	0.035	-	-	-	0.027
HCM Control Delay (s)	8.1	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	85	5	5	160	5	5
Future Volume (vph)	85	5	5	160	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			0%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1629	0	0	1678	1521	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1629	0	0	1678	1521	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	195			123	441	
Travel Time (s)	3.8			2.4	12.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	104	6	6	195	6	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	110	0	0	201	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.18	1.18
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	5	5	160	5	5
Future Vol, veh/h	85	5	5	160	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	0	1	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	104	6	6	195	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	110	0	314	107
Stage 1	-	-	-	-	107	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.1	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1493	-	671	950
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1493	-	668	950
Mov Cap-2 Maneuver	-	-	-	-	668	-
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	784	-	-	1493	-
HCM Lane V/C Ratio	0.016	-	-	0.004	-
HCM Control Delay (s)	9.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	85	5	5	160	5	5
Future Volume (vph)	85	5	5	160	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	2%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1621	0	0	1663	1513	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1621	0	0	1663	1513	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	451			195	419	
Travel Time (s)	8.8			3.8	11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	92	5	5	174	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	97	0	0	179	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.19	1.19	1.16	1.16	1.19	1.19
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	5	5	160	5	5
Future Vol, veh/h	85	5	5	160	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	92	5	5	174	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	97	0	279	95
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	184	-
Critical Hdwy	-	-	4.1	-	6.8	6.4
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1509	-	693	962
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	835	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1509	-	690	962
Mov Cap-2 Maneuver	-	-	-	-	690	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	835	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	804	-	-	1509	-
HCM Lane V/C Ratio	0.014	-	-	0.004	-
HCM Control Delay (s)	9.5	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	85	5	5	160	0	5
Future Volume (vph)	85	5	5	160	0	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	11	11	16	16
Grade (%)	-2%			2%	-2%	
Storage Length (ft)		0	0		0	25
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992					0.850
Flt Protected				0.998		
Satd. Flow (prot)	1965	0	0	1703	2060	1751
Flt Permitted				0.998		
Satd. Flow (perm)	1965	0	0	1703	2060	1751
Link Speed (mph)	35			35	25	
Link Distance (ft)	319			451	447	
Travel Time (s)	6.2			8.8	12.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Adj. Flow (vph)	96	6	6	180	0	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	0	186	0	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.13	1.13	0.90	0.90
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

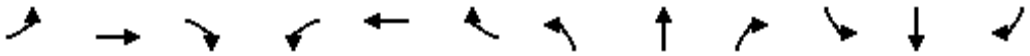
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	5	5	160	0	5
Future Vol, veh/h	85	5	5	160	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	2	-2	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	96	6	6	180	0	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	102	0	291	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	192	-
Critical Hdwy	-	-	4.1	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1503	-	727	968
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	724	968
Mov Cap-2 Maneuver	-	-	-	-	724	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	864	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	968	-	-	1503	-
HCM Lane V/C Ratio	-	0.006	-	-	0.004	-
HCM Control Delay (s)	0	8.7	-	-	7.4	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-



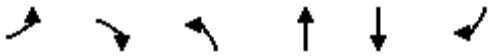
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	5	5	70	25	70	5	165	55	30	100	15
Future Volume (vph)	5	5	5	70	25	70	5	165	55	30	100	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Grade (%)		-1%			4%			2%			-1%	
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		0.955			0.943			0.967			0.986	
Flt Protected		0.984			0.979			0.999			0.990	
Satd. Flow (prot)	0	1751	0	0	1779	0	0	1882	0	0	1925	0
Flt Permitted		0.984			0.979			0.999			0.990	
Satd. Flow (perm)	0	1751	0	0	1779	0	0	1882	0	0	1925	0
Link Speed (mph)		25			35			25			25	
Link Distance (ft)		570			319			345			823	
Travel Time (s)		15.5			6.2			9.4			22.4	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	5%	5%	20%	5%	5%	2%	0%	5%	0%	0%	5%	5%
Adj. Flow (vph)	6	6	6	90	32	90	6	212	71	38	128	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	212	0	0	289	0	0	185	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			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	6.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	18	212	289	185
Demand Flow Rate, veh/h	19	220	300	192
Vehicles Circulating, veh/h	266	235	50	134
Vehicles Exiting, veh/h	60	115	235	321
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.7	6.8	6.2	5.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	19	220	300	192
Cap Entry Lane, veh/h	866	893	1075	988
Entry HV Adj Factor	0.932	0.965	0.965	0.962
Flow Entry, veh/h	18	212	289	185
Cap Entry, veh/h	807	862	1037	950
V/C Ratio	0.022	0.246	0.279	0.194
Control Delay, s/veh	4.7	6.8	6.2	5.7
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	5	220	170	5
Future Volume (vph)	5	5	5	220	170	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	11	11	16	16
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.996	
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1654	0	0	1657	1886	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1654	0	0	1657	1886	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	379			703	345	
Travel Time (s)	10.3			19.2	9.4	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	5%	8%	0%
Adj. Flow (vph)	7	7	7	293	227	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	300	234	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.06	1.06	1.12	1.12	0.91	0.91
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.5%		ICU Level of Service A	
Analysis Period (min) 15			

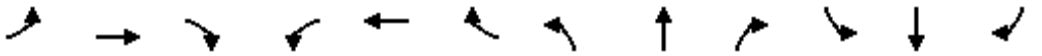
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	220	170	5
Future Vol, veh/h	5	5	5	220	170	5
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, %	-2	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	5	8	0
Mvmt Flow	7	7	7	293	227	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	538	231	234	0	-	0
Stage 1	231	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	539	824	1345	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	536	824	1345	-	-	-
Mov Cap-2 Maneuver	608	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1345	-	700	-	-
HCM Lane V/C Ratio	0.005	-	0.019	-	-
HCM Control Delay (s)	7.7	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
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)	35	5	5	5	5	5	15	185	5	5	120	50
Future Volume (vph)	35	5	5	5	5	5	15	185	5	5	120	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	11	11	11	11	11	11
Grade (%)		-4%			3%			1%			1%	
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
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		0.986			0.955			0.996				0.850
Flt Protected		0.962			0.984		0.950				0.998	
Satd. Flow (prot)	0	1758	0	0	1666	0	1645	1629	0	0	1562	1443
Flt Permitted		0.962			0.984		0.950				0.998	
Satd. Flow (perm)	0	1758	0	0	1666	0	1645	1629	0	0	1562	1443
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		413			447			491			703	
Travel Time (s)		11.3			12.2			13.4			19.2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	6%	0%	0%	11%	2%
Adj. Flow (vph)	45	6	6	6	6	6	19	240	6	6	156	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	18	0	19	246	0	0	162	65
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			11			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.09	1.13	1.13	1.13	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.3%		ICU Level of Service A	
Analysis Period (min) 15			

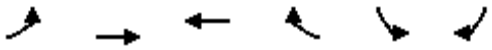
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	5	5	5	5	5	15	185	5	5	120	50
Future Vol, veh/h	35	5	5	5	5	5	15	185	5	5	120	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	75	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	3	-	-	1	-	-	1	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	3	0	0	0	0	0	0	6	0	0	11	2
Mvmt Flow	45	6	6	6	6	6	19	240	6	6	156	65

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	455	452	156	452	449	243	156	0	0	246	0	0
Stage 1	168	168	-	281	281	-	-	-	-	-	-	-
Stage 2	287	284	-	171	168	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.7	5.8	7.7	7.1	6.5	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.33	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	568	560	911	483	472	785	1436	-	-	1332	-	-
Stage 1	863	792	-	697	651	-	-	-	-	-	-	-
Stage 2	766	724	-	812	742	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	550	550	911	469	464	785	1436	-	-	1332	-	-
Mov Cap-2 Maneuver	550	550	-	469	464	-	-	-	-	-	-	-
Stage 1	852	788	-	688	643	-	-	-	-	-	-	-
Stage 2	742	715	-	796	738	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	11.9	0.6	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1436	-	-	619	539	1332	-	-
HCM Lane V/C Ratio	0.014	-	-	0.094	0.036	0.005	-	-
HCM Control Delay (s)	7.5	-	-	11.4	11.9	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	250	125	5	5	10
Future Volume (vph)	5	250	125	5	5	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	12	12
Grade (%)		1%	0%		8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995		0.907	
Flt Protected		0.999			0.985	
Satd. Flow (prot)	0	1628	1672	0	1302	0
Flt Permitted		0.999			0.985	
Satd. Flow (perm)	0	1628	1672	0	1302	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		123	779		716	
Travel Time (s)		2.4	15.2		16.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	33%	2%	0%	0%	0%	27%
Adj. Flow (vph)	5	269	134	5	5	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	274	139	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	250	125	5	5	10
Future Vol, veh/h	5	250	125	5	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	8	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	33	2	0	0	0	27
Mvmt Flow	5	269	134	5	5	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	139	0	-	0	416	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	279	-
Critical Hdwy	4.43	-	-	-	8	7.27
Critical Hdwy Stg 1	-	-	-	-	7	-
Critical Hdwy Stg 2	-	-	-	-	7	-
Follow-up Hdwy	2.497	-	-	-	3.5	3.543
Pot Cap-1 Maneuver	1275	-	-	-	496	824
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1275	-	-	-	494	824
Mov Cap-2 Maneuver	-	-	-	-	494	-
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1275	-	-	-	674
HCM Lane V/C Ratio	0.004	-	-	-	0.024
HCM Control Delay (s)	7.8	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	250	5	5	130	5	5
Future Volume (vph)	250	5	5	130	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			0%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.932	
Flt Protected				0.998	0.976	
Satd. Flow (prot)	1636	0	0	1677	1521	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	1636	0	0	1677	1521	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	195			123	441	
Travel Time (s)	3.8			2.4	12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	269	5	5	140	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	274	0	0	145	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.18	1.18
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	5	5	130	5	5
Future Vol, veh/h	250	5	5	130	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	0	1	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	269	5	5	140	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	274	0	422	272
Stage 1	-	-	-	-	272	-
Stage 2	-	-	-	-	150	-
Critical Hdwy	-	-	4.1	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1301	-	578	766
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1301	-	576	766
Mov Cap-2 Maneuver	-	-	-	-	576	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	875	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	658	-	-	1301	-
HCM Lane V/C Ratio	0.016	-	-	0.004	-
HCM Control Delay (s)	10.6	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	250	5	5	130	5	5
Future Volume (vph)	250	5	5	130	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	2%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.932	
Flt Protected				0.998	0.976	
Satd. Flow (prot)	1628	0	0	1661	1513	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	1628	0	0	1661	1513	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	451			195	419	
Travel Time (s)	8.8			3.8	11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	272	5	5	141	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	277	0	0	146	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.19	1.19	1.16	1.16	1.19	1.19
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	5	5	130	5	5
Future Vol, veh/h	250	5	5	130	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	272	5	5	141	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	277	0	426	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	151	-
Critical Hdwy	-	-	4.1	-	6.8	6.4
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1298	-	562	757
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	867	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1298	-	560	757
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	867	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	644	-	-	1298	-
HCM Lane V/C Ratio	0.017	-	-	0.004	-
HCM Control Delay (s)	10.7	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	250	10	5	130	15	5
Future Volume (vph)	250	10	5	130	15	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	11	11	16	16
Grade (%)	-2%			2%	-2%	
Storage Length (ft)		0	0		0	25
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995					0.850
Flt Protected				0.998	0.950	
Satd. Flow (prot)	1971	0	0	1687	1829	1751
Flt Permitted				0.998	0.950	
Satd. Flow (perm)	1971	0	0	1687	1829	1751
Link Speed (mph)	35			35	25	
Link Distance (ft)	319			451	447	
Travel Time (s)	6.2			8.8	12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	0%	0%	2%	7%	0%
Adj. Flow (vph)	284	11	6	148	17	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	295	0	0	154	17	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.13	1.13	0.90	0.90
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.5%		ICU Level of Service A	
Analysis Period (min) 15			

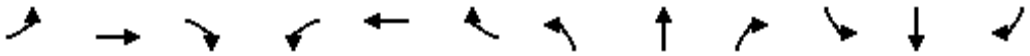
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	10	5	130	15	5
Future Vol, veh/h	250	10	5	130	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	2	-2	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	0	0	2	7	0
Mvmt Flow	284	11	6	148	17	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	295	0	450	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	160	-
Critical Hdwy	-	-	4.1	-	6.07	6
Critical Hdwy Stg 1	-	-	-	-	5.07	-
Critical Hdwy Stg 2	-	-	-	-	5.07	-
Follow-up Hdwy	-	-	2.2	-	3.563	3.3
Pot Cap-1 Maneuver	-	-	1278	-	586	766
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	872	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1278	-	583	766
Mov Cap-2 Maneuver	-	-	-	-	583	-
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	872	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	583	766	-	-	1278	-
HCM Lane V/C Ratio	0.029	0.007	-	-	0.004	-
HCM Control Delay (s)	11.4	9.7	-	-	7.8	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-



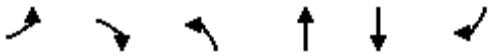
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	90	20	65	15	70	10	190	90	80	145	25
Future Volume (vph)	5	90	20	65	15	70	10	190	90	80	145	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Grade (%)		-1%			4%			2%			-1%	
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		0.976			0.937			0.958			0.986	
Flt Protected		0.998			0.979			0.998			0.984	
Satd. Flow (prot)	0	1919	0	0	1763	0	0	1859	0	0	1913	0
Flt Permitted		0.998			0.979			0.998			0.984	
Satd. Flow (perm)	0	1919	0	0	1763	0	0	1859	0	0	1913	0
Link Speed (mph)		25			35			25			25	
Link Distance (ft)		570			319			345			823	
Travel Time (s)		15.5			6.2			9.4			22.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	4%	4%	4%	4%	4%	0%	4%	4%	4%	4%	4%
Adj. Flow (vph)	5	97	22	70	16	75	11	204	97	86	156	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	161	0	0	312	0	0	269	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			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	124	161	312	269
Demand Flow Rate, veh/h	129	168	324	279
Vehicles Circulating, veh/h	324	228	195	101
Vehicles Exiting, veh/h	56	291	258	295
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.2	6.1	7.9	6.4
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	129	168	324	279
Cap Entry Lane, veh/h	817	900	930	1021
Entry HV Adj Factor	0.962	0.960	0.962	0.963
Flow Entry, veh/h	124	161	312	269
Cap Entry, veh/h	786	864	895	984
V/C Ratio	0.158	0.187	0.348	0.273
Control Delay, s/veh	6.2	6.1	7.9	6.4
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	5	5	240	215	15
Future Volume (vph)	50	5	5	240	215	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	11	11	16	16
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.991	
Flt Protected	0.957			0.999		
Satd. Flow (prot)	1719	0	0	1689	1949	0
Flt Permitted	0.957			0.999		
Satd. Flow (perm)	1719	0	0	1689	1949	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	379			703	345	
Travel Time (s)	10.3			19.2	9.4	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	3%	4%	0%
Adj. Flow (vph)	60	6	6	286	256	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	0	292	274	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.06	1.06	1.12	1.12	0.91	0.91
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	5	5	240	215	15
Future Vol, veh/h	50	5	5	240	215	15
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, %	-2	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	3	4	0
Mvmt Flow	60	6	6	286	256	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	563	265	274	0	-	0
Stage 1	265	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	523	790	1301	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	520	790	1301	-	-	-
Mov Cap-2 Maneuver	598	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1301	-	612	-	-
HCM Lane V/C Ratio	0.005	-	0.107	-	-
HCM Control Delay (s)	7.8	0	11.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

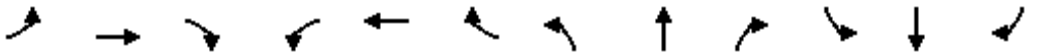
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	5	5	240	215	15
Future Vol, veh/h	50	5	5	240	215	15
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, %	-2	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	3	4	0
Mvmt Flow	60	6	6	286	256	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	563	265	274	0	-	0
Stage 1	265	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	523	790	1301	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	520	790	1301	-	-	-
Mov Cap-2 Maneuver	598	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1301	-	612	-	-
HCM Lane V/C Ratio	0.005	-	0.107	-	-
HCM Control Delay (s)	7.8	0	11.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	5	5	5	5	10	5	180	5	5	190	25
Future Volume (vph)	55	5	5	5	5	10	5	180	5	5	190	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	11	11	11	11	11	11
Grade (%)		-4%			3%			1%			1%	
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
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		0.989			0.932			0.996				0.850
Flt Protected		0.960			0.988		0.950				0.999	
Satd. Flow (prot)	0	1674	0	0	1633	0	1645	1691	0	0	1672	1388
Flt Permitted		0.960			0.988		0.950				0.999	
Satd. Flow (perm)	0	1674	0	0	1633	0	1645	1691	0	0	1672	1388
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		413			447			491			703	
Travel Time (s)		11.3			12.2			13.4			19.2	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	9%	0%	0%	0%	0%	0%	0%	2%	0%	20%	3%	6%
Adj. Flow (vph)	65	6	6	6	6	12	6	214	6	6	226	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	24	0	6	220	0	0	232	30
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			11			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.09	1.13	1.13	1.13	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			

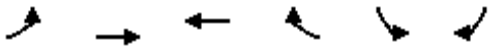
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	5	5	5	5	10	5	180	5	5	190	25
Future Vol, veh/h	55	5	5	5	5	10	5	180	5	5	190	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	75	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	3	-	-	1	-	-	1	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	9	0	0	0	0	0	0	2	0	20	3	6
Mvmt Flow	65	6	6	6	6	12	6	214	6	6	226	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	476	470	226	470	467	217	226	0	0	220	0	0
Stage 1	238	238	-	229	229	-	-	-	-	-	-	-
Stage 2	238	232	-	241	238	-	-	-	-	-	-	-
Critical Hdwy	6.39	5.7	5.8	7.7	7.1	6.5	4.1	-	-	4.3	-	-
Critical Hdwy Stg 1	5.39	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.39	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4	3.3	3.5	4	3.3	2.2	-	-	2.38	-	-
Pot Cap-1 Maneuver	542	549	839	469	459	813	1354	-	-	1250	-	-
Stage 1	791	751	-	749	692	-	-	-	-	-	-	-
Stage 2	791	754	-	737	684	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	525	544	839	458	454	813	1354	-	-	1250	-	-
Mov Cap-2 Maneuver	525	544	-	458	454	-	-	-	-	-	-	-
Stage 1	788	746	-	746	689	-	-	-	-	-	-	-
Stage 2	769	751	-	722	680	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	11.4	0.2	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1354	-	-	570	584	1250	-	-
HCM Lane V/C Ratio	0.004	-	-	0.136	0.041	0.005	-	-
HCM Control Delay (s)	7.7	-	-	12.3	11.4	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	59	167	16	5	11
Future Volume (vph)	38	59	167	16	5	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	12	12
Grade (%)		1%	0%		8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988		0.908	
Flt Protected		0.981			0.984	
Satd. Flow (prot)	0	1452	1633	0	1436	0
Flt Permitted		0.981			0.984	
Satd. Flow (perm)	0	1452	1633	0	1436	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		123	779		716	
Travel Time (s)		2.4	15.2		16.3	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	30%	2%	1%	8%	0%	11%
Adj. Flow (vph)	46	72	204	20	6	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	118	224	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	38	59	167	16	5	11
Future Vol, veh/h	38	59	167	16	5	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	8	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	30	2	1	8	0	11
Mvmt Flow	46	72	204	20	6	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	224	0	-	0	378	214
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	4.4	-	-	-	8	7.11
Critical Hdwy Stg 1	-	-	-	-	7	-
Critical Hdwy Stg 2	-	-	-	-	7	-
Follow-up Hdwy	2.47	-	-	-	3.5	3.399
Pot Cap-1 Maneuver	1196	-	-	-	531	767
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	809	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1196	-	-	-	510	767
Mov Cap-2 Maneuver	-	-	-	-	510	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	809	-

Approach	EB	WB	SB
HCM Control Delay, s	3.2	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1196	-	-	-	663
HCM Lane V/C Ratio	0.039	-	-	-	0.029
HCM Control Delay (s)	8.1	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	91	5	5	172	5	5
Future Volume (vph)	91	5	5	172	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			0%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1629	0	0	1678	1521	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1629	0	0	1678	1521	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	195			123	441	
Travel Time (s)	3.8			2.4	12.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	111	6	6	210	6	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	117	0	0	216	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.18	1.18
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	5	5	172	5	5
Future Vol, veh/h	91	5	5	172	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	0	1	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	111	6	6	210	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	117	0	336	114
Stage 1	-	-	-	-	114	-
Stage 2	-	-	-	-	222	-
Critical Hdwy	-	-	4.1	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1484	-	651	941
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1484	-	648	941
Mov Cap-2 Maneuver	-	-	-	-	648	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	810	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	767	-	-	1484	-
HCM Lane V/C Ratio	0.016	-	-	0.004	-
HCM Control Delay (s)	9.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	91	5	5	172	5	5
Future Volume (vph)	91	5	5	172	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	2%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1622	0	0	1663	1513	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1622	0	0	1663	1513	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	451			195	419	
Travel Time (s)	8.8			3.8	11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	99	5	5	187	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	104	0	0	192	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.19	1.19	1.16	1.16	1.19	1.19
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	5	5	172	5	5
Future Vol, veh/h	91	5	5	172	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	99	5	5	187	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	104	0	299	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	197	-
Critical Hdwy	-	-	4.1	-	6.8	6.4
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1500	-	674	953
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1500	-	671	953
Mov Cap-2 Maneuver	-	-	-	-	671	-
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	788	-	-	1500	-
HCM Lane V/C Ratio	0.014	-	-	0.004	-
HCM Control Delay (s)	9.6	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	91	5	5	172	5	5
Future Volume (vph)	91	5	5	172	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	11	11	16	16
Grade (%)	-2%			2%	-2%	
Storage Length (ft)		0	0		0	25
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992					0.850
Flt Protected				0.998	0.950	
Satd. Flow (prot)	1965	0	0	1703	1957	1751
Flt Permitted				0.998	0.950	
Satd. Flow (perm)	1965	0	0	1703	1957	1751
Link Speed (mph)	35			35	25	
Link Distance (ft)	319			451	447	
Travel Time (s)	6.2			8.8	12.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Adj. Flow (vph)	102	6	6	193	6	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	0	0	199	6	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.13	1.13	0.90	0.90
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

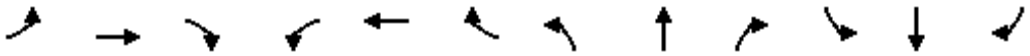
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	5	5	172	5	5
Future Vol, veh/h	91	5	5	172	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	2	-2	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	102	6	6	193	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	108	0	310	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.1	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1495	-	711	961
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1495	-	708	961
Mov Cap-2 Maneuver	-	-	-	-	708	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	853	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	708	961	-	-	1495	-
HCM Lane V/C Ratio	0.008	0.006	-	-	0.004	-
HCM Control Delay (s)	10.1	8.8	-	-	7.4	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-



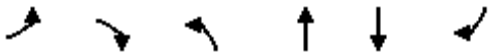
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	5	5	75	27	75	5	178	59	32	108	16
Future Volume (vph)	5	5	5	75	27	75	5	178	59	32	108	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Grade (%)		-1%			4%			2%			-1%	
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		0.955			0.943			0.967			0.986	
Flt Protected		0.984			0.979			0.999			0.990	
Satd. Flow (prot)	0	1751	0	0	1779	0	0	1882	0	0	1925	0
Flt Permitted		0.984			0.979			0.999			0.990	
Satd. Flow (perm)	0	1751	0	0	1779	0	0	1882	0	0	1925	0
Link Speed (mph)		25			35			25			25	
Link Distance (ft)		570			319			345			823	
Travel Time (s)		15.5			6.2			9.4			22.4	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	5%	5%	20%	5%	5%	2%	0%	5%	0%	0%	5%	5%
Adj. Flow (vph)	6	6	6	96	35	96	6	228	76	41	138	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	227	0	0	310	0	0	200	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			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	6.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	18	227	310	200
Demand Flow Rate, veh/h	19	236	321	208
Vehicles Circulating, veh/h	287	251	53	144
Vehicles Exiting, veh/h	65	123	253	343
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	7.1	6.5	5.9
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	19	236	321	208
Cap Entry Lane, veh/h	848	879	1072	978
Entry HV Adj Factor	0.932	0.963	0.965	0.962
Flow Entry, veh/h	18	227	310	200
Cap Entry, veh/h	791	846	1034	941
V/C Ratio	0.022	0.268	0.300	0.213
Control Delay, s/veh	4.8	7.1	6.5	5.9
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	5	237	183	5
Future Volume (vph)	5	5	5	237	183	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	11	11	16	16
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.996	
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1654	0	0	1657	1885	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1654	0	0	1657	1885	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	379			703	345	
Travel Time (s)	10.3			19.2	9.4	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	5%	8%	0%
Adj. Flow (vph)	7	7	7	316	244	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	323	251	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.06	1.06	1.12	1.12	0.91	0.91
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

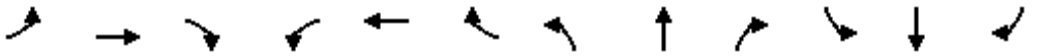
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	237	183	5
Future Vol, veh/h	5	5	5	237	183	5
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, %	-2	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	5	8	0
Mvmt Flow	7	7	7	316	244	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	578	248	251	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	513	807	1326	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	510	807	1326	-	-	-
Mov Cap-2 Maneuver	589	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	760	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1326	-	681	-	-
HCM Lane V/C Ratio	0.005	-	0.02	-	-
HCM Control Delay (s)	7.7	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
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)	38	5	5	5	5	5	16	199	5	5	129	54
Future Volume (vph)	38	5	5	5	5	5	16	199	5	5	129	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	11	11	11	11	11	11
Grade (%)		-4%			3%			1%			1%	
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
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		0.987			0.955			0.997				0.850
Flt Protected		0.961			0.984		0.950				0.998	
Satd. Flow (prot)	0	1757	0	0	1666	0	1645	1630	0	0	1562	1443
Flt Permitted		0.961			0.984		0.950				0.998	
Satd. Flow (perm)	0	1757	0	0	1666	0	1645	1630	0	0	1562	1443
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		413			447			491			703	
Travel Time (s)		11.3			12.2			13.4			19.2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	6%	0%	0%	11%	2%
Adj. Flow (vph)	49	6	6	6	6	6	21	258	6	6	168	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	18	0	21	264	0	0	174	70
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			11			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.09	1.13	1.13	1.13	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.2%		ICU Level of Service A	
Analysis Period (min) 15			

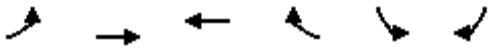
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	5	5	5	5	5	16	199	5	5	129	54
Future Vol, veh/h	38	5	5	5	5	5	16	199	5	5	129	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	75	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	3	-	-	1	-	-	1	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	3	0	0	0	0	0	0	6	0	0	11	2
Mvmt Flow	49	6	6	6	6	6	21	258	6	6	168	70

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	489	486	168	486	483	261	168	0	0	264	0	0
Stage 1	180	180	-	303	303	-	-	-	-	-	-	-
Stage 2	309	306	-	183	180	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.7	5.8	7.7	7.1	6.5	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.33	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	544	540	898	456	449	766	1422	-	-	1312	-	-
Stage 1	853	785	-	676	634	-	-	-	-	-	-	-
Stage 2	749	712	-	799	732	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	526	529	898	442	440	766	1422	-	-	1312	-	-
Mov Cap-2 Maneuver	526	529	-	442	440	-	-	-	-	-	-	-
Stage 1	840	781	-	666	624	-	-	-	-	-	-	-
Stage 2	724	701	-	783	728	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	12.3	0.6	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	588	514	1312	-	-
HCM Lane V/C Ratio	0.015	-	-	0.106	0.038	0.005	-	-
HCM Control Delay (s)	7.6	-	-	11.8	12.3	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	269	135	5	5	11
Future Volume (vph)	5	269	135	5	5	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	12	12
Grade (%)		1%	0%		8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995		0.905	
Flt Protected		0.999			0.986	
Satd. Flow (prot)	0	1629	1672	0	1295	0
Flt Permitted		0.999			0.986	
Satd. Flow (perm)	0	1629	1672	0	1295	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		123	779		716	
Travel Time (s)		2.4	15.2		16.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	33%	2%	0%	0%	0%	27%
Adj. Flow (vph)	5	289	145	5	5	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	294	150	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	269	135	5	5	11
Future Vol, veh/h	5	269	135	5	5	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	8	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	33	2	0	0	0	27
Mvmt Flow	5	289	145	5	5	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	150	0	-	0	447	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	4.43	-	-	-	8	7.27
Critical Hdwy Stg 1	-	-	-	-	7	-
Critical Hdwy Stg 2	-	-	-	-	7	-
Follow-up Hdwy	2.497	-	-	-	3.5	3.543
Pot Cap-1 Maneuver	1262	-	-	-	470	810
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	663	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1262	-	-	-	468	810
Mov Cap-2 Maneuver	-	-	-	-	468	-
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	663	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1262	-	-	-	659
HCM Lane V/C Ratio	0.004	-	-	-	0.026
HCM Control Delay (s)	7.9	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	269	5	5	140	5	5
Future Volume (vph)	269	5	5	140	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			0%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.932	
Flt Protected				0.998	0.976	
Satd. Flow (prot)	1636	0	0	1677	1521	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	1636	0	0	1677	1521	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	195			123	441	
Travel Time (s)	3.8			2.4	12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	289	5	5	151	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	294	0	0	156	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.18	1.18
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	269	5	5	140	5	5
Future Vol, veh/h	269	5	5	140	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	0	1	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	289	5	5	151	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	294	0	453	292
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.1	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1279	-	554	746
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1279	-	552	746
Mov Cap-2 Maneuver	-	-	-	-	552	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	865	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	635	-	-	1279	-
HCM Lane V/C Ratio	0.017	-	-	0.004	-
HCM Control Delay (s)	10.8	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	269	5	5	140	5	5
Future Volume (vph)	269	5	5	140	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	2%			-2%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.932	
Flt Protected				0.998	0.976	
Satd. Flow (prot)	1628	0	0	1661	1513	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	1628	0	0	1661	1513	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	451			195	419	
Travel Time (s)	8.8			3.8	11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	292	5	5	152	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	297	0	0	157	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.19	1.19	1.16	1.16	1.19	1.19
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	269	5	5	140	5	5
Future Vol, veh/h	269	5	5	140	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	-2	2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	292	5	5	152	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	297	0	457	295
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	162	-
Critical Hdwy	-	-	4.1	-	6.8	6.4
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1276	-	537	737
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	856	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1276	-	535	737
Mov Cap-2 Maneuver	-	-	-	-	535	-
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	856	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	620	-	-	1276	-
HCM Lane V/C Ratio	0.018	-	-	0.004	-
HCM Control Delay (s)	10.9	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	269	11	5	140	16	5
Future Volume (vph)	269	11	5	140	16	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	11	11	16	16
Grade (%)	-2%			2%	-2%	
Storage Length (ft)		0	0		0	25
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994					0.850
Flt Protected				0.998	0.950	
Satd. Flow (prot)	1969	0	0	1687	1829	1751
Flt Permitted				0.998	0.950	
Satd. Flow (perm)	1969	0	0	1687	1829	1751
Link Speed (mph)	35			35	25	
Link Distance (ft)	319			451	447	
Travel Time (s)	6.2			8.8	12.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	0%	0%	2%	7%	0%
Adj. Flow (vph)	306	13	6	159	18	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	319	0	0	165	18	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.13	1.13	0.90	0.90
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.6%		ICU Level of Service A	
Analysis Period (min) 15			

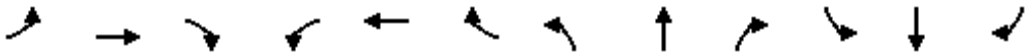
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	269	11	5	140	16	5
Future Vol, veh/h	269	11	5	140	16	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	2	-2	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	0	0	2	7	0
Mvmt Flow	306	13	6	159	18	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	319	0	484	313
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	171	-
Critical Hdwy	-	-	4.1	-	6.07	6
Critical Hdwy Stg 1	-	-	-	-	5.07	-
Critical Hdwy Stg 2	-	-	-	-	5.07	-
Follow-up Hdwy	-	-	2.2	-	3.563	3.3
Pot Cap-1 Maneuver	-	-	1252	-	562	745
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1252	-	559	745
Mov Cap-2 Maneuver	-	-	-	-	559	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	559	745	-	-	1252	-
HCM Lane V/C Ratio	0.033	0.008	-	-	0.005	-
HCM Control Delay (s)	11.7	9.9	-	-	7.9	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-



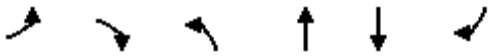
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	97	22	70	16	70	11	204	97	86	156	27
Future Volume (vph)	5	97	22	70	16	70	11	204	97	86	156	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Grade (%)		-1%			4%			2%			-1%	
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		0.976			0.939			0.958			0.986	
Flt Protected		0.998			0.978			0.998			0.984	
Satd. Flow (prot)	0	1919	0	0	1765	0	0	1859	0	0	1913	0
Flt Permitted		0.998			0.978			0.998			0.984	
Satd. Flow (perm)	0	1919	0	0	1765	0	0	1859	0	0	1913	0
Link Speed (mph)		25			35			25			25	
Link Distance (ft)		570			319			345			823	
Travel Time (s)		15.5			6.2			9.4			22.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	4%	4%	4%	4%	4%	0%	4%	4%	4%	4%	4%
Adj. Flow (vph)	5	104	24	75	17	75	12	219	104	92	168	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	167	0	0	335	0	0	289	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			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 59.8%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	133	167	335	289
Demand Flow Rate, veh/h	138	174	348	301
Vehicles Circulating, veh/h	349	245	209	108
Vehicles Exiting, veh/h	60	312	278	311
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	6.3	8.4	6.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	138	174	348	301
Cap Entry Lane, veh/h	797	884	917	1014
Entry HV Adj Factor	0.963	0.962	0.963	0.961
Flow Entry, veh/h	133	167	335	289
Cap Entry, veh/h	767	850	883	975
V/C Ratio	0.173	0.197	0.380	0.297
Control Delay, s/veh	6.5	6.3	8.4	6.7
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	54	5	5	258	231	16
Future Volume (vph)	54	5	5	258	231	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	11	11	16	16
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.991	
Flt Protected	0.956			0.999		
Satd. Flow (prot)	1717	0	0	1689	1949	0
Flt Permitted	0.956			0.999		
Satd. Flow (perm)	1717	0	0	1689	1949	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	379			703	345	
Travel Time (s)	10.3			19.2	9.4	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	3%	4%	0%
Adj. Flow (vph)	64	6	6	307	275	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	0	313	294	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.06	1.06	1.12	1.12	0.91	0.91
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.7%		ICU Level of Service A	
Analysis Period (min) 15			

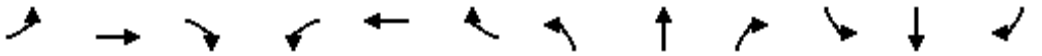
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	54	5	5	258	231	16
Future Vol, veh/h	54	5	5	258	231	16
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, %	-2	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	3	4	0
Mvmt Flow	64	6	6	307	275	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	604	285	294	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	319	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	497	771	1279	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	494	771	1279	-	-	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	768	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1279	-	591	-	-
HCM Lane V/C Ratio	0.005	-	0.119	-	-
HCM Control Delay (s)	7.8	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	5	5	5	5	11	5	194	5	5	204	27
Future Volume (vph)	59	5	5	5	5	11	5	194	5	5	204	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	11	11	11	11	11	11
Grade (%)		-4%			3%			1%			1%	
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
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		0.990			0.930			0.996				0.850
Flt Protected		0.959			0.988		0.950				0.999	
Satd. Flow (prot)	0	1673	0	0	1629	0	1645	1691	0	0	1673	1388
Flt Permitted		0.959			0.988		0.950				0.999	
Satd. Flow (perm)	0	1673	0	0	1629	0	1645	1691	0	0	1673	1388
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		413			447			491			703	
Travel Time (s)		11.3			12.2			13.4			19.2	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	9%	0%	0%	0%	0%	0%	0%	2%	0%	20%	3%	6%
Adj. Flow (vph)	70	6	6	6	6	13	6	231	6	6	243	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	25	0	6	237	0	0	249	32
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			11			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.09	1.13	1.13	1.13	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.0%		ICU Level of Service A	
Analysis Period (min) 15			

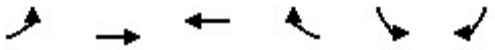
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	5	5	5	5	11	5	194	5	5	204	27
Future Vol, veh/h	59	5	5	5	5	11	5	194	5	5	204	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	75	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	3	-	-	1	-	-	1	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	9	0	0	0	0	0	0	2	0	20	3	6
Mvmt Flow	70	6	6	6	6	13	6	231	6	6	243	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	511	504	243	504	501	234	243	0	0	237	0	0
Stage 1	255	255	-	246	246	-	-	-	-	-	-	-
Stage 2	256	249	-	258	255	-	-	-	-	-	-	-
Critical Hdwy	6.39	5.7	5.8	7.7	7.1	6.5	4.1	-	-	4.3	-	-
Critical Hdwy Stg 1	5.39	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.39	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4	3.3	3.5	4	3.3	2.2	-	-	2.38	-	-
Pot Cap-1 Maneuver	518	529	823	443	437	794	1335	-	-	1231	-	-
Stage 1	777	741	-	732	678	-	-	-	-	-	-	-
Stage 2	776	744	-	719	671	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	500	524	823	432	433	794	1335	-	-	1231	-	-
Mov Cap-2 Maneuver	500	524	-	432	433	-	-	-	-	-	-	-
Stage 1	774	737	-	729	675	-	-	-	-	-	-	-
Stage 2	753	741	-	704	667	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	11.6	0.2	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1335	-	-	541	568	1231	-	-
HCM Lane V/C Ratio	0.004	-	-	0.152	0.044	0.005	-	-
HCM Control Delay (s)	7.7	-	-	12.8	11.6	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	59	185	16	5	11
Future Volume (vph)	38	59	185	16	5	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	12	12
Grade (%)		1%	0%		8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.989		0.908	
Flt Protected		0.981			0.984	
Satd. Flow (prot)	0	1452	1636	0	1436	0
Flt Permitted		0.981			0.984	
Satd. Flow (perm)	0	1452	1636	0	1436	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		123	779		716	
Travel Time (s)		2.4	15.2		16.3	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	30%	2%	1%	8%	0%	11%
Adj. Flow (vph)	46	72	226	20	6	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	118	246	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	38	59	185	16	5	11
Future Vol, veh/h	38	59	185	16	5	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	8	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	30	2	1	8	0	11
Mvmt Flow	46	72	226	20	6	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	246	0	-	0	400	236
Stage 1	-	-	-	-	236	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	4.4	-	-	-	8	7.11
Critical Hdwy Stg 1	-	-	-	-	7	-
Critical Hdwy Stg 2	-	-	-	-	7	-
Follow-up Hdwy	2.47	-	-	-	3.5	3.399
Pot Cap-1 Maneuver	1173	-	-	-	510	741
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	809	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1173	-	-	-	489	741
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	809	-

Approach	EB	WB	SB
HCM Control Delay, s	3.2	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1173	-	-	-	638
HCM Lane V/C Ratio	0.04	-	-	-	0.031
HCM Control Delay (s)	8.2	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	91	5	5	190	5	5
Future Volume (vph)	91	5	5	190	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			0%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1629	0	0	1678	1521	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1629	0	0	1678	1521	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	195			123	441	
Travel Time (s)	3.8			2.4	12.0	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	111	6	6	232	6	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	117	0	0	238	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.18	1.18
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.8%	ICU Level of Service	A
Analysis Period (min)	15		

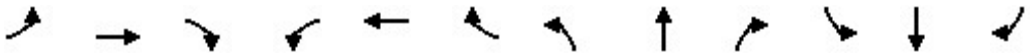
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	5	5	190	5	5
Future Vol, veh/h	91	5	5	190	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	0	1	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	111	6	6	232	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	117	0	358	114
Stage 1	-	-	-	-	114	-
Stage 2	-	-	-	-	244	-
Critical Hdwy	-	-	4.1	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1484	-	632	941
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	790	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1484	-	629	941
Mov Cap-2 Maneuver	-	-	-	-	629	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	790	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	754	-	-	1484	-
HCM Lane V/C Ratio	0.016	-	-	0.004	-
HCM Control Delay (s)	9.9	-	-	7.4	0
HCM Lane LOS	A	-	-	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)	266	91	5	5	166	24	5	0	5	5	0	5
Future Volume (vph)	266	91	5	5	166	24	5	0	5	5	0	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	10	10	10	10	12	10	12	10	12	12	12
Grade (%)		2%			-2%			2%			0%	
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			0.972			0.932			0.932	
Flt Protected		0.960			0.999			0.976			0.976	
Satd. Flow (prot)	0	1564	0	0	1616	0	0	1621	0	0	1605	0
Flt Permitted		0.960			0.999			0.976			0.976	
Satd. Flow (perm)	0	1564	0	0	1616	0	0	1621	0	0	1605	0
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		451			195			419			208	
Travel Time (s)		8.8			3.8			11.4			4.7	
Peak Hour Factor	0.50	0.92	0.92	0.92	0.92	0.50	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	0%	2%	2%	0%	2%	0%	2%	2%	2%
Adj. Flow (vph)	532	99	5	5	180	48	5	0	5	5	0	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	636	0	0	233	0	0	10	0	0	10	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	1.09	1.19	1.19	1.16	1.16	1.06	1.19	1.09	1.19	1.07	1.07	1.07
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	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	266	91	5	5	166	24	5	0	5	5	0	5
Future Vol, veh/h	266	91	5	5	166	24	5	0	5	5	0	5
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, %	-	2	-	-	-2	-	-	2	-	-	0	-
Peak Hour Factor	50	92	92	92	92	50	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	0	2	2	0	2	0	2	2	2
Mvmt Flow	532	99	5	5	180	48	5	0	5	5	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	228	0	0	104	0	0	1383	1404	102	1382	1382	204
Stage 1	-	-	-	-	-	-	1166	1166	-	214	214	-
Stage 2	-	-	-	-	-	-	217	238	-	1168	1168	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.5	6.92	6.4	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.92	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.92	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1340	-	-	1500	-	-	105	119	953	121	144	837
Stage 1	-	-	-	-	-	-	209	235	-	788	725	-
Stage 2	-	-	-	-	-	-	771	690	-	236	267	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1340	-	-	1500	-	-	70	69	953	80	83	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	70	69	-	80	83	-
Stage 1	-	-	-	-	-	-	121	136	-	455	722	-
Stage 2	-	-	-	-	-	-	763	687	-	136	154	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	7.9	0.2	35.2	31.6
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	130	1340	-	-	1500	-	-	146
HCM Lane V/C Ratio	0.084	0.397	-	-	0.004	-	-	0.074
HCM Control Delay (s)	35.2	9.4	0	-	7.4	0	-	31.6
HCM Lane LOS	E	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.3	1.9	-	-	0	-	-	0.2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	357	5	5	166	5	5
Future Volume (vph)	357	5	5	166	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	11	11	16	16
Grade (%)	-2%			2%	-2%	
Storage Length (ft)		0	0		0	25
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					0.850
Flt Protected				0.998	0.950	
Satd. Flow (prot)	1978	0	0	1703	1957	1751
Flt Permitted				0.998	0.950	
Satd. Flow (perm)	1978	0	0	1703	1957	1751
Link Speed (mph)	35			35	25	
Link Distance (ft)	319			451	447	
Travel Time (s)	6.2			8.8	12.2	
Peak Hour Factor	0.50	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Adj. Flow (vph)	714	6	6	187	6	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	720	0	0	193	6	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.13	1.13	0.90	0.90
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

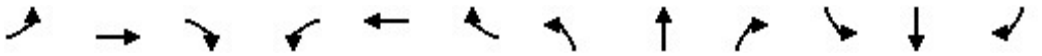
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	357	5	5	166	5	5
Future Vol, veh/h	357	5	5	166	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	2	-2	-
Peak Hour Factor	50	89	89	89	89	89
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	714	6	6	187	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	720	0	916	717
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	199	-
Critical Hdwy	-	-	4.1	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	891	-	338	451
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	858	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	891	-	335	451
Mov Cap-2 Maneuver	-	-	-	-	335	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	858	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	335	451	-	-	891	-
HCM Lane V/C Ratio	0.017	0.012	-	-	0.006	-
HCM Control Delay (s)	15.9	13.1	-	-	9.1	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	5	5	75	21	75	5	178	97	260	108	0
Future Volume (vph)	5	5	5	75	21	75	5	178	97	260	108	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Grade (%)		-1%			4%			2%			-1%	
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		0.955			0.941			0.950				
Flt Protected		0.984			0.979			0.999			0.963	
Satd. Flow (prot)	0	1751	0	0	1776	0	0	1860	0	0	1951	0
Flt Permitted		0.984			0.979			0.999			0.963	
Satd. Flow (perm)	0	1751	0	0	1776	0	0	1860	0	0	1951	0
Link Speed (mph)		25			35			25			25	
Link Distance (ft)		570			319			345			823	
Travel Time (s)		15.5			6.2			9.4			22.4	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.70	0.60	0.78	0.70
Heavy Vehicles (%)	5%	5%	20%	5%	5%	2%	0%	5%	0%	0%	5%	5%
Adj. Flow (vph)	6	6	6	96	27	96	6	228	139	433	138	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	219	0	0	373	0	0	571	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			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	18	219	373	571
Demand Flow Rate, veh/h	19	227	384	578
Vehicles Circulating, veh/h	679	251	445	135
Vehicles Exiting, veh/h	34	578	253	343
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.1	7.0	13.4	11.7
Approach LOS	A	A	B	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	19	227	384	578
Cap Entry Lane, veh/h	573	879	724	987
Entry HV Adj Factor	0.932	0.963	0.970	0.988
Flow Entry, veh/h	18	219	373	571
Cap Entry, veh/h	534	847	703	975
V/C Ratio	0.033	0.258	0.530	0.585
Control Delay, s/veh	7.1	7.0	13.4	11.7
LOS	A	A	B	B
95th %tile Queue, veh	0	1	3	4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	5	275	183	5
Future Volume (vph)	5	5	5	275	183	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	11	11	16	16
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.996	
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1654	0	0	1657	1885	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1654	0	0	1657	1885	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	379			703	345	
Travel Time (s)	10.3			19.2	9.4	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	5%	8%	0%
Adj. Flow (vph)	7	7	7	367	244	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	374	251	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.06	1.06	1.12	1.12	0.91	0.91
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.5%		ICU Level of Service A	
Analysis Period (min) 15			

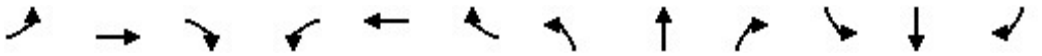
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	275	183	5
Future Vol, veh/h	5	5	5	275	183	5
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, %	-2	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	5	8	0
Mvmt Flow	7	7	7	367	244	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	629	248	251	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	482	807	1326	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	479	807	1326	-	-	-
Mov Cap-2 Maneuver	565	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	725	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1326	-	665	-	-
HCM Lane V/C Ratio	0.005	-	0.02	-	-
HCM Control Delay (s)	7.7	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
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)	38	5	5	5	5	5	16	237	5	5	129	54
Future Volume (vph)	38	5	5	5	5	5	16	237	5	5	129	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	11	11	11	11	11	11
Grade (%)		-4%			3%			1%			1%	
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
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		0.987			0.955			0.997				0.850
Flt Protected		0.961			0.984		0.950				0.998	
Satd. Flow (prot)	0	1757	0	0	1666	0	1645	1630	0	0	1562	1443
Flt Permitted		0.961			0.984		0.950				0.998	
Satd. Flow (perm)	0	1757	0	0	1666	0	1645	1630	0	0	1562	1443
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		413			447			491			703	
Travel Time (s)		11.3			12.2			13.4			19.2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	6%	0%	0%	11%	2%
Adj. Flow (vph)	49	6	6	6	6	6	21	308	6	6	168	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	18	0	21	314	0	0	174	70
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			11			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.09	1.13	1.13	1.13	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.3%		ICU Level of Service A	
Analysis Period (min) 15			

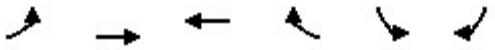
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	5	5	5	5	5	16	237	5	5	129	54
Future Vol, veh/h	38	5	5	5	5	5	16	237	5	5	129	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	75	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	3	-	-	1	-	-	1	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	3	0	0	0	0	0	0	6	0	0	11	2
Mvmt Flow	49	6	6	6	6	6	21	308	6	6	168	70

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	539	536	168	536	533	311	168	0	0	314	0	0
Stage 1	180	180	-	353	353	-	-	-	-	-	-	-
Stage 2	359	356	-	183	180	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.7	5.8	7.7	7.1	6.5	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.33	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	509	511	898	419	417	715	1422	-	-	1258	-	-
Stage 1	853	785	-	630	598	-	-	-	-	-	-	-
Stage 2	712	685	-	799	732	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	490	500	898	405	408	715	1422	-	-	1258	-	-
Mov Cap-2 Maneuver	490	500	-	405	408	-	-	-	-	-	-	-
Stage 1	840	780	-	621	589	-	-	-	-	-	-	-
Stage 2	687	675	-	782	728	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	12.9	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	548	475	1258	-	-
HCM Lane V/C Ratio	0.015	-	-	0.114	0.041	0.005	-	-
HCM Control Delay (s)	7.6	-	-	12.4	12.9	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	287	135	5	5	11
Future Volume (vph)	5	287	135	5	5	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	12	12
Grade (%)		1%	0%		8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995		0.905	
Flt Protected		0.999			0.986	
Satd. Flow (prot)	0	1629	1672	0	1295	0
Flt Permitted		0.999			0.986	
Satd. Flow (perm)	0	1629	1672	0	1295	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		123	779		716	
Travel Time (s)		2.4	15.2		16.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	33%	2%	0%	0%	0%	27%
Adj. Flow (vph)	5	309	145	5	5	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	314	150	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	287	135	5	5	11
Future Vol, veh/h	5	287	135	5	5	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	8	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	33	2	0	0	0	27
Mvmt Flow	5	309	145	5	5	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	150	0	-	0	467	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	319	-
Critical Hdwy	4.43	-	-	-	8	7.27
Critical Hdwy Stg 1	-	-	-	-	7	-
Critical Hdwy Stg 2	-	-	-	-	7	-
Follow-up Hdwy	2.497	-	-	-	3.5	3.543
Pot Cap-1 Maneuver	1262	-	-	-	453	810
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	643	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1262	-	-	-	451	810
Mov Cap-2 Maneuver	-	-	-	-	451	-
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	643	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1262	-	-	-	649
HCM Lane V/C Ratio	0.004	-	-	-	0.027
HCM Control Delay (s)	7.9	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	287	5	5	140	5	5
Future Volume (vph)	287	5	5	140	5	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	1%			0%	1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.932	
Flt Protected				0.998	0.976	
Satd. Flow (prot)	1636	0	0	1677	1521	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	1636	0	0	1677	1521	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	195			123	441	
Travel Time (s)	3.8			2.4	12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	309	5	5	151	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	314	0	0	156	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.17	1.17	1.18	1.18
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.3%		ICU Level of Service A	
Analysis Period (min) 15			

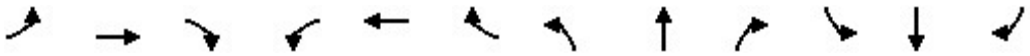
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	287	5	5	140	5	5
Future Vol, veh/h	287	5	5	140	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	0	1	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	309	5	5	151	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	314	0	473	312
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.1	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1258	-	539	727
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1258	-	537	727
Mov Cap-2 Maneuver	-	-	-	-	537	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	865	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	618	-	-	1258	-
HCM Lane V/C Ratio	0.017	-	-	0.004	-
HCM Control Delay (s)	10.9	-	-	7.9	0
HCM Lane LOS	B	-	-	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)	5	263	5	5	140	5	5	0	5	24	0	266
Future Volume (vph)	5	263	5	5	140	5	5	0	5	24	0	266
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	10	10	10	10	12	10	12	10	12	12	12
Grade (%)		2%			-2%			2%			0%	
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		0.998			0.996			0.932			0.876	
Flt Protected		0.999			0.998			0.976			0.996	
Satd. Flow (prot)	0	1626	0	0	1655	0	0	1621	0	0	1540	0
Flt Permitted		0.999			0.998			0.976			0.996	
Satd. Flow (perm)	0	1626	0	0	1655	0	0	1621	0	0	1540	0
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		451			195			419			191	
Travel Time (s)		8.8			3.8			11.4			4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.50	0.50	0.50
Heavy Vehicles (%)	2%	2%	0%	0%	2%	2%	0%	2%	0%	2%	2%	2%
Adj. Flow (vph)	5	286	5	5	152	5	5	0	5	48	0	532
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	296	0	0	162	0	0	10	0	0	580	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	1.09	1.19	1.19	1.16	1.16	1.06	1.19	1.09	1.19	1.07	1.07	1.07
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	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	263	5	5	140	5	5	0	5	24	0	266
Future Vol, veh/h	5	263	5	5	140	5	5	0	5	24	0	266
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, %	-	2	-	-	-2	-	-	2	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	50	50	50
Heavy Vehicles, %	2	2	0	0	2	2	0	2	0	2	2	2
Mvmt Flow	5	286	5	5	152	5	5	0	5	48	0	532

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	157	0	0	291	0	0	730	466	289	466	466	155
Stage 1	-	-	-	-	-	-	299	299	-	165	165	-
Stage 2	-	-	-	-	-	-	431	167	-	301	301	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.5	6.92	6.4	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.92	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.92	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1423	-	-	1282	-	-	314	469	743	507	494	891
Stage 1	-	-	-	-	-	-	691	644	-	837	762	-
Stage 2	-	-	-	-	-	-	578	746	-	708	665	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1423	-	-	1282	-	-	126	465	743	500	490	891
Mov Cap-2 Maneuver	-	-	-	-	-	-	126	465	-	500	490	-
Stage 1	-	-	-	-	-	-	688	641	-	834	759	-
Stage 2	-	-	-	-	-	-	232	743	-	700	662	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	22.6	18.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	215	1423	-	-	1282	-	-	837
HCM Lane V/C Ratio	0.051	0.004	-	-	0.004	-	-	0.693
HCM Control Delay (s)	22.6	7.5	0	-	7.8	0	-	18.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	5.7

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	263	11	5	406	16	5
Future Volume (vph)	263	11	5	406	16	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	11	11	16	16
Grade (%)	-2%			2%	-2%	
Storage Length (ft)		0	0		0	25
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994					0.850
Flt Protected					0.950	
Satd. Flow (prot)	1969	0	0	1689	1829	1751
Flt Permitted					0.950	
Satd. Flow (perm)	1969	0	0	1689	1829	1751
Link Speed (mph)	35			35	25	
Link Distance (ft)	319			451	447	
Travel Time (s)	6.2			8.8	12.2	
Peak Hour Factor	0.88	0.88	0.88	0.50	0.88	0.88
Heavy Vehicles (%)	1%	0%	0%	2%	7%	0%
Adj. Flow (vph)	299	13	6	812	18	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	312	0	0	818	18	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.94	1.13	1.13	0.90	0.90
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.8%		ICU Level of Service A	
Analysis Period (min) 15			

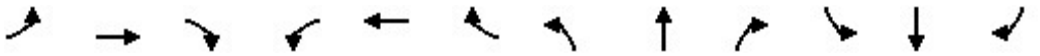
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	263	11	5	406	16	5
Future Vol, veh/h	263	11	5	406	16	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	2	-2	-
Peak Hour Factor	88	88	88	50	88	88
Heavy Vehicles, %	1	0	0	2	7	0
Mvmt Flow	299	13	6	812	18	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	312	0	1130	306
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	824	-
Critical Hdwy	-	-	4.1	-	6.07	6
Critical Hdwy Stg 1	-	-	-	-	5.07	-
Critical Hdwy Stg 2	-	-	-	-	5.07	-
Follow-up Hdwy	-	-	2.2	-	3.563	3.3
Pot Cap-1 Maneuver	-	-	1260	-	250	751
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	463	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1260	-	248	751
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	463	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	248	751	-	-	1260	-
HCM Lane V/C Ratio	0.073	0.008	-	-	0.005	-
HCM Control Delay (s)	20.7	9.8	-	-	7.9	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	97	22	108	16	298	11	152	91	86	156	27
Future Volume (vph)	5	97	22	108	16	298	11	152	91	86	156	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Grade (%)		-1%			4%			2%			-1%	
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		0.976			0.900			0.960			0.986	
Flt Protected		0.998			0.989			0.998			0.984	
Satd. Flow (prot)	0	1919	0	0	1711	0	0	1863	0	0	1913	0
Flt Permitted		0.998			0.989			0.998			0.984	
Satd. Flow (perm)	0	1919	0	0	1711	0	0	1863	0	0	1913	0
Link Speed (mph)		25			35			25			25	
Link Distance (ft)		570			319			345			823	
Travel Time (s)		15.5			6.2			9.4			22.4	
Peak Hour Factor	0.93	0.93	0.93	0.70	0.93	0.60	0.93	0.70	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	4%	4%	4%	4%	4%	0%	4%	4%	4%	4%	4%
Adj. Flow (vph)	5	104	24	154	17	497	12	217	98	92	168	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	668	0	0	327	0	0	289	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			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	133	668	327	289
Demand Flow Rate, veh/h	138	695	340	301
Vehicles Circulating, veh/h	431	243	209	190
Vehicles Exiting, veh/h	60	306	360	748
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	21.6	8.3	7.5
Approach LOS	A	C	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	138	695	340	301
Cap Entry Lane, veh/h	734	886	917	934
Entry HV Adj Factor	0.963	0.962	0.963	0.961
Flow Entry, veh/h	133	668	327	289
Cap Entry, veh/h	707	852	883	898
V/C Ratio	0.188	0.784	0.371	0.322
Control Delay, s/veh	7.2	21.6	8.3	7.5
LOS	A	C	A	A
95th %tile Queue, veh	1	8	2	1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	54	5	5	200	269	16
Future Volume (vph)	54	5	5	200	269	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	11	11	16	16
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.992	
Flt Protected	0.956			0.999		
Satd. Flow (prot)	1717	0	0	1689	1950	0
Flt Permitted	0.956			0.999		
Satd. Flow (perm)	1717	0	0	1689	1950	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	379			703	345	
Travel Time (s)	10.3			19.2	9.4	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	3%	4%	0%
Adj. Flow (vph)	64	6	6	238	320	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	0	244	339	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.06	1.06	1.12	1.12	0.91	0.91
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

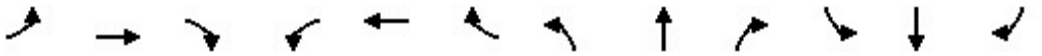
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	54	5	5	200	269	16
Future Vol, veh/h	54	5	5	200	269	16
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, %	-2	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	3	4	0
Mvmt Flow	64	6	6	238	320	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	580	330	339	0	-	0
Stage 1	330	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	512	729	1231	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	509	729	1231	-	-	-
Mov Cap-2 Maneuver	589	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	819	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1231	-	599	-	-
HCM Lane V/C Ratio	0.005	-	0.117	-	-
HCM Control Delay (s)	7.9	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	5	5	5	5	11	5	194	5	5	242	27
Future Volume (vph)	1	5	5	5	5	11	5	194	5	5	242	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	11	11	11	11	11	11
Grade (%)		-4%			3%			1%			1%	
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
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		0.938			0.930			0.996				0.850
Flt Protected		0.996			0.988		0.950				0.999	
Satd. Flow (prot)	0	1760	0	0	1629	0	1645	1691	0	0	1674	1388
Flt Permitted		0.996			0.988		0.950				0.999	
Satd. Flow (perm)	0	1760	0	0	1629	0	1645	1691	0	0	1674	1388
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		413			447			491			703	
Travel Time (s)		11.3			12.2			13.4			19.2	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	9%	0%	0%	0%	0%	0%	0%	2%	0%	20%	3%	6%
Adj. Flow (vph)	1	6	6	6	6	13	6	231	6	6	288	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	25	0	6	237	0	0	294	32
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			11			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.09	1.13	1.13	1.13	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.8%		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	1	5	5	5	5	11	5	194	5	5	242	27
Future Vol, veh/h	1	5	5	5	5	11	5	194	5	5	242	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	75	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	3	-	-	1	-	-	1	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	9	0	0	0	0	0	0	2	0	20	3	6
Mvmt Flow	1	6	6	6	6	13	6	231	6	6	288	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	556	549	288	549	546	234	288	0	0	237	0	0
Stage 1	300	300	-	246	246	-	-	-	-	-	-	-
Stage 2	256	249	-	303	300	-	-	-	-	-	-	-
Critical Hdwy	6.39	5.7	5.8	7.7	7.1	6.5	4.1	-	-	4.3	-	-
Critical Hdwy Stg 1	5.39	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.39	4.7	-	6.7	6.1	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4	3.3	3.5	4	3.3	2.2	-	-	2.38	-	-
Pot Cap-1 Maneuver	488	504	780	410	409	794	1286	-	-	1231	-	-
Stage 1	742	715	-	732	678	-	-	-	-	-	-	-
Stage 2	776	744	-	676	637	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	471	498	780	400	405	794	1286	-	-	1231	-	-
Mov Cap-2 Maneuver	471	498	-	400	405	-	-	-	-	-	-	-
Stage 1	738	711	-	728	675	-	-	-	-	-	-	-
Stage 2	753	740	-	661	633	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	12	0.2	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1286	-	-	904	543	1231	-	-
HCM Lane V/C Ratio	0.005	-	-	0.014	0.046	0.005	-	-
HCM Control Delay (s)	7.8	-	-	9	12	7.9	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection: 1: River Rd (T-663) & Paper Mill Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	53	60
Average Queue (ft)	7	9
95th Queue (ft)	32	36
Link Distance (ft)	81	683
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Minisink Park E Drwy & River Rd (T-663)

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	10
95th Queue (ft)	34
Link Distance (ft)	415
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Minisink Park W Drwy /Proposed Driveway & River Rd (T-663)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	72	31	50	52
Average Queue (ft)	31	1	9	10
95th Queue (ft)	64	10	34	34
Link Distance (ft)	382	135	393	181
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: PA Welcome Cntr Drwy & River Rd (T-663)

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	53	28	37
Average Queue (ft)	3	3	7
95th Queue (ft)	20	16	31
Link Distance (ft)	382	413	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			25
Storage Blk Time (%)		0	1
Queuing Penalty (veh)		0	0

Intersection: 5: Broad St (SR 2028)/I-80 Exit Ramps & US 611 I-80 Ramps N/River Rd (T-663)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	55	105	76
Average Queue (ft)	1	12	36	25
95th Queue (ft)	10	40	80	69
Link Distance (ft)	516	228	265	769
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Broad St (SR 2028) & Park and Ride Drwy

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	53	32
Average Queue (ft)	11	1
95th Queue (ft)	35	10
Link Distance (ft)	332	645
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Broad St (SR 2028) & US 611, I-80 Ramps S/Hotel Drwy

Movement	EB	WB	NB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	53	31	29
Average Queue (ft)	29	15	4
95th Queue (ft)	53	39	20
Link Distance (ft)	381	410	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			75
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: River Rd (T-663) & Paper Mill Rd

Movement	SB
Directions Served	LR
Maximum Queue (ft)	73
Average Queue (ft)	16
95th Queue (ft)	45
Link Distance (ft)	683
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Minisink Park E Drwy & River Rd (T-663)

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	28	31
Average Queue (ft)	1	11
95th Queue (ft)	9	34
Link Distance (ft)	81	415
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Minisink Park W Drwy /Proposed Driveway & River Rd (T-663)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	52	50	148
Average Queue (ft)	2	3	10	64
95th Queue (ft)	14	20	35	110
Link Distance (ft)	381	135	393	163
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: PA Welcome Cntr Drwy & River Rd (T-663)

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	28	28	37
Average Queue (ft)	1	7	6
95th Queue (ft)	9	27	28
Link Distance (ft)	381	413	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			25
Storage Blk Time (%)		2	1
Queuing Penalty (veh)		0	0

Intersection: 5: Broad St (SR 2028)/I-80 Exit Ramps & US 611 I-80 Ramps N/River Rd (T-663)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	51	56	102	91
Average Queue (ft)	17	20	19	22
95th Queue (ft)	47	50	59	66
Link Distance (ft)	516	228	265	769
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Broad St (SR 2028) & Park and Ride Drwy

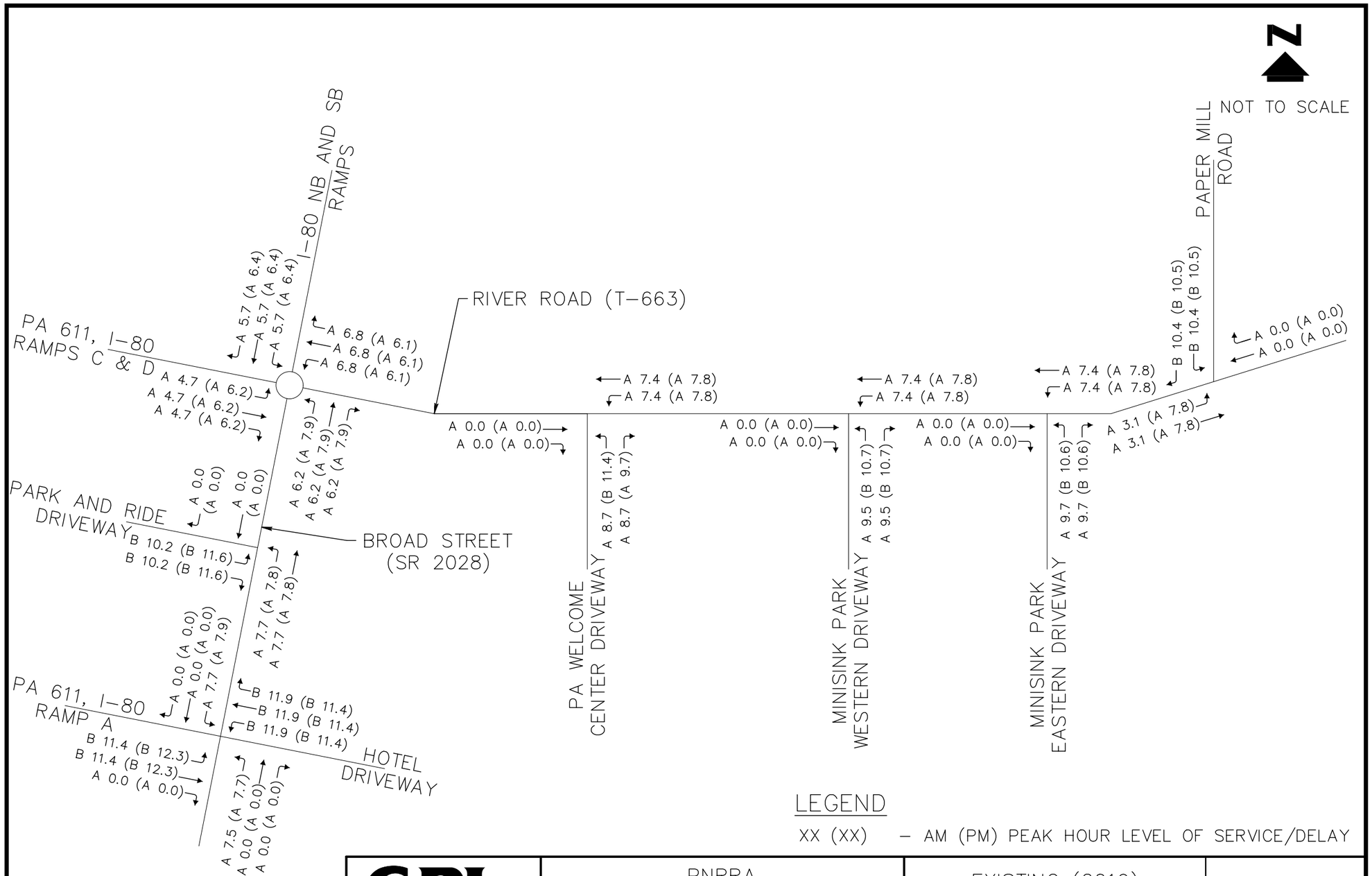
Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	31
Average Queue (ft)	26	1
95th Queue (ft)	49	10
Link Distance (ft)	332	645
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Broad St (SR 2028) & US 611, I-80 Ramps S/Hotel Drwy

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	31
Average Queue (ft)	3	13
95th Queue (ft)	18	37
Link Distance (ft)	381	410
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0



LEGEND

XX (XX) – AM (PM) PEAK HOUR LEVEL OF SERVICE/DELAY

GPI

GREENMAN-PEDERSEN INC.
52 GLENMAURA NATIONAL BLVD.
SUITE 302, P.O. BOX 5777
SCRANTON, PA 18505-5777
TELE: 570.342.3700
FAX: 570.342.4080
www.gpinet.com

PNRRA
DELAWARE WATER GAP SITE
TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

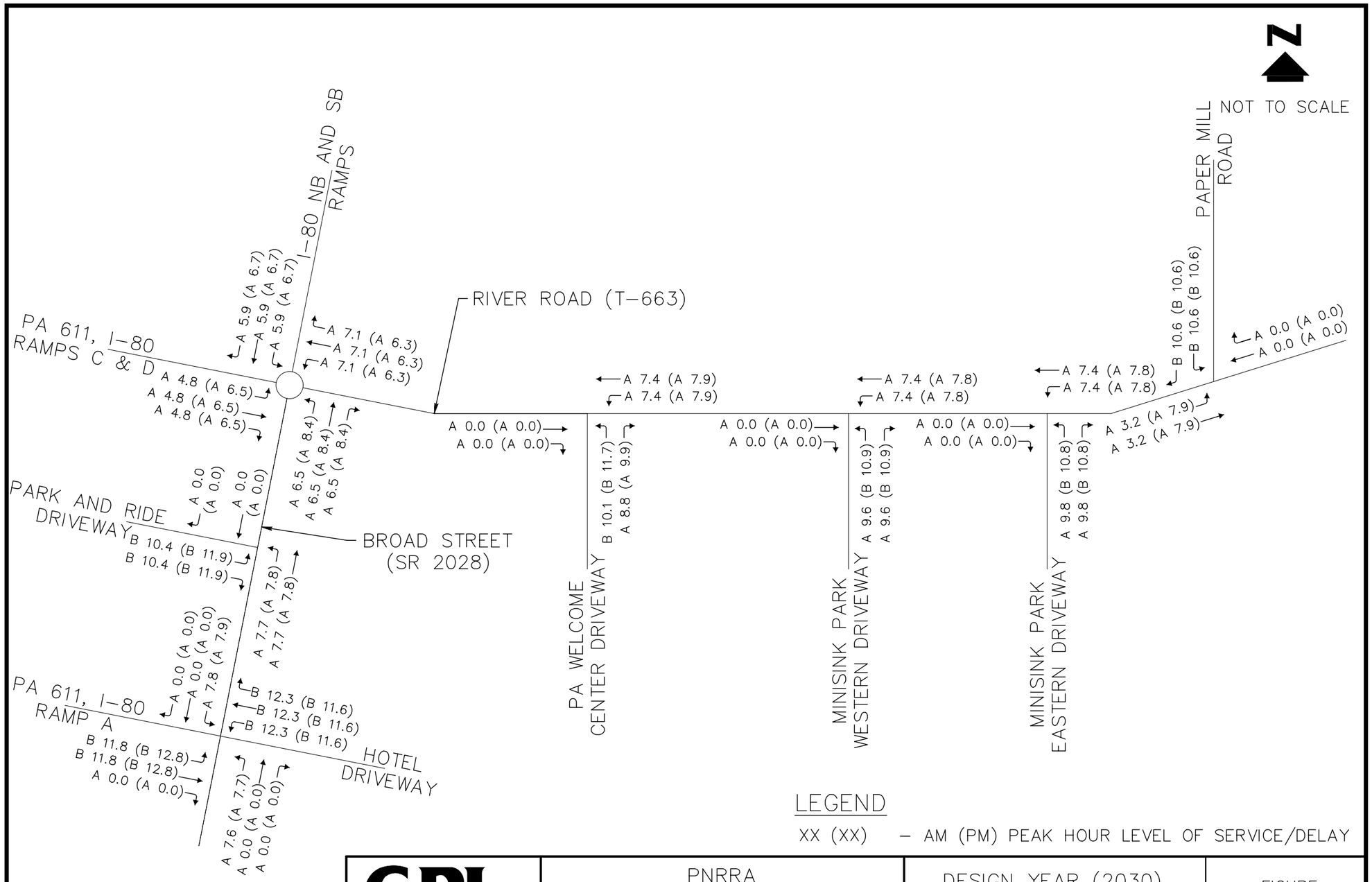
EXISTING (2019)
LEVEL-OF-SERVICE

FIGURE
F – 1

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET
SHEET 1 OF 3



LEGEND

XX (XX) – AM (PM) PEAK HOUR LEVEL OF SERVICE/DELAY

GPI

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PNRRA
DELAWARE WATER GAP SITE
TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

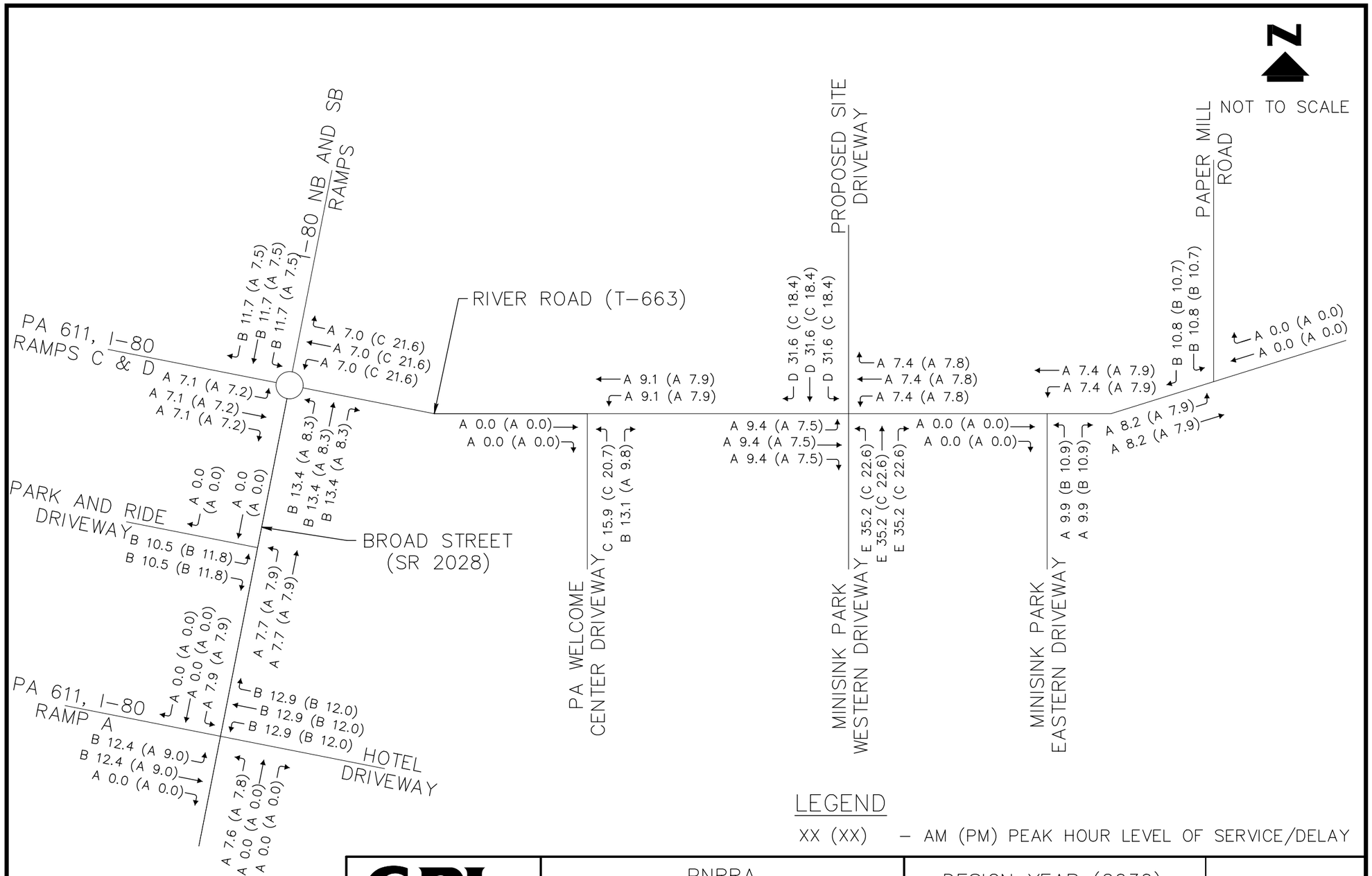
DESIGN YEAR (2030), NO-BUILD CONDITION LEVEL-OF-SERVICE

FIGURE F-2

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET



LEGEND

XX (XX) – AM (PM) PEAK HOUR LEVEL OF SERVICE/DELAY

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PNRRA
DELAWARE WATER GAP SITE
TRANSPORTATION IMPACT ASSESSMENT

SMITHFIELD TOWNSHIP
MONROE COUNTY, PA

DESIGN YEAR (2030), BUILD CONDITION LEVEL-OF-SERVICE

FIGURE F-3

DRAWN SFB | CHECKED

DATE 11/18/19 | JOB NO. 2019407

SHEET SHEET 3 OF 3

Appendix B.2 – Vehicle Access and User Accommodations

VEHICLE ACCESS AND USER ACCOMMODATION CONSIDERATIONS FOR THE DELAWARE WATER GAP RAIL STATION PARKING GARAGE

This study examined issues related to vehicle access and user accommodations for the proposed parking garage and Rail Station at Delaware Water Gap, PA.

Part A: Vehicle Access

The parking garage is proposed to support commuter access to the proposed Rail Station located along River Road in Smithfield Township, Delaware Water Gap, PA. The rail station platform is proposed to be located next to the parking structure.

For purposes of this conceptual evaluation, we will assume similar parameters from previous studies as follows: Trains will operate on 45-minute headways during peak periods and two to three hours headways during non-peak periods. The most heavily utilized train departing Delaware Water Gap at 6:07 AM on its way to Mid-Town Manhattan will carry 297 passengers. Assume a 10% double occupancy rate for the 270 vehicles arriving for the 6:07 AM train. This arrival rate becomes our target trip generation rate which the proposed garage will need to accommodate. Note that peak hour of the garage/station does not coincide with the peak hour of the adjacent street. Therefore, the traffic volumes that were used in the conceptual traffic analysis will vary slightly from those used in this garage entrance assessment.

The general assumption in the industry for departures of mass transit facilities (trains leaving a station, express buses leaving a terminal, ferries leaving a dock)[1] is the majority of customers arrive 10 to 15 minutes prior to departure. This translates into a peak period demand on the revenue collection system associated with the garage to process at least 18 vehicles per minute (270 vehicles/15 minutes). Table One, below identifies processing rates of typical revenue collection facilities.

TABLE ONE
PARKING CONTROL SERVICE RATE

TYPE OF CONTROL	AVG. HEADWAY (Sec./Veh.)
Entering	
Clear Aisle, No Control.	3.6
Ticket Dispenser, No Gate.	5.0
Time Stamped Ticket Handed to Driver.	8.5
Flat Fee with Cashier, No Information Given	9.2
Flat Fee with Cashier, Information Provided.	14.8

[1] WSF Terminal Design Manual, April 2016, page 510-12.

Coded Card Operated Gate.	8.9
Ticket Dispenser with Gate and Sharp Turn on Entrance.	9.5
Ticket Dispenser with Gate and Direct Approach.	5.5
Coin Operated Gate.	20.4
Exiting	
Coded Card, Pre-Paid Ticket, or Token Operated Gate.	9.0
Cashier, Flat-Fee with Gate.	13.4
Cashier, Variable Fee with Gate.	19.5
Coin Operated Gate.	20.4

Source: Entrance-Exit Design and Control for Major Parking Facilities, Robert W. Crommelin, Prepared for presentation at "Seminar '72" Los Angeles Parking Association, Los Angeles, California, October 1972.

Most parking garages have upgraded their operation in recent years to incorporate a system where entering vehicles pass through a vehicle gate that is activated by either pressing a button and dispensing a ticket to the vehicle operator or permit the vehicle operator to swipe a pre-paid, coded magnetic card. Prior to exiting the garage, vehicle operators are expected to pay the parking fee at an automated kiosk in the parking garage's lobby where they receive a validated ticket to insert into the gate at the exit. Vehicle operators with a pre-paid coded magnetic card need to swipe the card at a sensor to activate the gate to exit. Using nine seconds per transaction, such a system will be capable of processing approximately 6 to 7 vehicles a minute.

With a processing demand of 18 vehicles per minute and a processing rate of 6 vehicles a minute, the proposed parking garage would need three gates (in the peak direction) to accommodate the anticipated daily demand for the peak activity period. A three-gate system will result in minimal queue lengths for vehicles waiting to be processed. However, even with three directional gates available to arriving (or departing) vehicles the randomness of the arrivals will still create a need for queue storage in advance of the ticket dispensing area. We used Synchro-SimTraffic software to estimate the anticipated queue lengths associated with each gate arrangement. Table Two represents anticipated queue storage requirements for each of the gate systems.

TABLE TWO
ANTICIPATED QUEUE STORAGE REQUIREMENTS

Number of Ticket Dispensing Gates	Anticipated Maximum Queue Length per Gate
1	3050 feet or 122 vehicles
2	775 feet or 31 vehicles
3	125 feet or 5 vehicles

Electronic toll collection, used on many toll highways, could be adapted to reduce the number of gates required to process the peak 15-minutes demand expected at the parking garage prior to train arrivals. Electronic toll collection typically uses vehicle mounted transponders to identify vehicle passage through the tolling facility. The payment system usually requires users to sign up in advance and load money into a declining-balance account which is debited each time they pass a toll point, or in this case the garage entrance gate. A transponder system typically needs to be backed up with a method to collect tolls for those users who do not have a transponder or are driving a vehicle (perhaps a rental vehicle) that is not equipped with a transponder. A ticket-based or operator-based system is frequently used to accommodate non-transponder vehicles; however, some tolling facilities are installing license plate reading systems to be able to maintain a 100% free flow tolling operation.

An electronic toll collection system which uses transponders and license plate reading technology could increase the processing rate at the entrance to the parking garage by bringing the anticipated headway down to 3.6 seconds per vehicles (see Clear Aisle with No Control in Table One). Such a system would be able to accommodate 16.6 vehicles per minute. This is just short of the peak vehicle demand of 18 vehicles per second. Installing this technology on two, peak directional lanes would easily accommodate the demand. Should one of the directional lanes fail, the processing rate of a single equipped lane is nearly sufficient to accommodate the twice a day, 15-minute peak demand. This would result in a slightly longer queue which could be considered acceptable for a short duration, or until the peak 15-minute demand dissipates.

A mixed system where vehicle transponders are encouraged but ticket dispensing is allowed as an option could be considered but may still require three directional lanes to provide a minimal level of redundancy in the event of a system failure. With a mixed system, a single “Speed” gate-lane is usually reserved for transponder equipped vehicles. A dedicated transponder gate which speeds vehicles through the gate (entering and exiting) will encourage regular users to purchase a transponder. At least one gate-lane would need to be designated as a combination transponder/ticket gate. However, if the combination lane fails a single gate-lane serving both transponder equipped vehicles and non-transponder equipped vehicles will be inadequate to accommodate the demand. Therefore, a third gate would be required to assure a reasonable processing rate can be maintained.

From an operational perspective, the parking garage will require three gated lanes inbound and three gated lanes out bound to accommodate the anticipated peak demands should a standard ticketed gate system be used. This configuration can be implemented with two reversible lanes requiring a maximum cross section of four access-lanes. Similarly, a combination system which uses transponders and ticketed gates will also require the same four access lane cross section. A 100% free flow operation which uses transponders in combination with license plate reading technology will only require two directional lanes inbound and two directional lanes outbound.

Using a single reversible lane will allow this system to operate with a three access-lane cross section.

It needs to be noted that a system with ticket dispensing gates where payment is made prior to exiting the garage has become the industry standard for collecting revenue at parking garages. This is a largely self-contained on-site system where payment and enforcement is handled between the patron and the garage owner. A free flow system that employs transponders and license plate reading devices will be more expensive, and far more involved. The transponders require the parking garage owner to establish an account for the garage patron and monitor that account to make sure there is sufficient funds for billing. In addition to the cost of the equipment a billing department and a customer service department has to be established to manage these accounts. The license plate reading technology also involves privacy issues which may need to be addressed. The Pennsylvania Turnpike Commission is moving forward with this technology indicating some resolution of these privacy issues for that agency.

A fourth possibility would be to allow free access to the parking garage and incorporate the cost of the parking service into the cost of the rail pass or passenger ticket. The proposed garage is rather remote from other land uses that would require parking. The nearest significant grouping of residential buildings is a townhouse community (Water Gap Village Townhomes) which would require a walk of nearly one mile. Therefore, there will likely not be many pedestrian commuters using this facility. Likewise, there are no industrial, commercial, or business-related land uses within convenient walking distance to the garage. The nearest lane use within walking distance would be the recreational fields across River Road. An assessment would need to be made to determine if there is sufficient existing on site parking available for the patrons of the recreational fields. If so, they would have little if any reason to use the parking garage. The Delaware Water Gap Park and Ride Lot located on Broad Street is an open-air park and ride lot which does not charge a fee for parking. This lot is typically full each day. Some existing users of the Park and Ride, and others, may utilize the garage for non-rail trips if there is no parking fee at the garage.

Another minimal cost option for revenue collection may to simply sell daily , weekly, or monthly window tags. The existing park and ride lots managed by Martz in the area charge a flat fee for a tag that needs to be displayed in the window of the parked vehicle. Violators can be tagged with a warning or ticketed and resistant violators can either be booted or towed from the garage. This is a low cost, low tech solution but the majority of parking patron are commuters with very predictable travel patterns. Unless there is a real need for a variety of daily or hourly rates this may prove to be the most cost-efficient way to collect parking revenues for the garage.

Table Three summarizes the methodologies discussed and identifies particular advantages and disadvantages that would impact the overall cost. For purposes of the conceptual costs developed for this study, a ticket dispensing system is assumed.

TABLE THREE
COMPARISON OF REVENUE COLLECTION METHODOLOGIES

Revenue Collection Methodology	Advantages	Disadvantages
Ticket Dispensing Gate	• Proven Technology. • Can accommodate a variety of daily rates	• Moderate Capital Investment and Maintenance. • Requires 3 Gate-Lanes.
Transponder and Ticket Dispensing Gates.	• Typically Requires 2 Directional Lanes.	• Requires two ticketing systems for redundancy. • Significant Capital Investment and Maintenance Costs • May Require 3 Directional Lanes for Redundancy.
Transponder and License Plate Reading Technology.	• Only Requires 2 Directional Lanes.	• Requires two ticketing systems for redundancy. • Significant Capital Investment and Maintenance Costs
Open Access, No fees.	• Minimal Technological Needs. • Minimal Capital Investment. • Only Requires 2 Directional Lanes.	• May Invite Use from Non-Passenger Train Users.
Pre-Paid Window Tag.	• Minimal Technological Needs. • Minimal Capital Investment. • Only Requires 2 Directional Lanes.	• Lacks flexibility for varying rates.

Commuter based garages often need to accommodate passenger arrival modes other that automobiles. Patrons may arrive on foot, on bicycles, from transit buses, passenger car drop-offs, regional shuttles, and ride sharing services. These types of arrivals are considered modal transfers and they need to be accommodated. Pedestrian walkways and crosswalks need to be installed to provide safe, accessible, well lighted walkways to and from the station. Bike racks need to be installed that will provide enough storage for daily bicycle commuter needs.

Part B: User Accommodations

In times of rapid technological developments in transportation, it is a substantial challenge to plan new infrastructure, such as Delaware Water Gap Station and its accompanying parking garage. These structures will be built to serve for several decades. They should therefore account for the anticipated transportation and technology changes and accommodate multiple transportation modes.

The parking garage provides access to the new railway connecting the Delaware Water Gap region/area to North-Eastern New Jersey and New York City. While it thereby provides direct access to the region's mass transit system, the parking garage could also be designed to become a new mobility hub for the Delaware Water Gap region bringing together a multitude of transportation modes and services. It will be important to design the parking garage to account for anticipated mobility patterns or at least flexible enough to change with changes in consumer habits. The following are considerations for design of the facility:

Multimodality

- Suitability to serve as a local or regional mobility center - accommodating and providing supporting infrastructure for public transit; coach buses; shuttles; ride sharing (Uber, Lyft, etc.); car sharing (Zipcar, etc.); bike sharing; other micro-mobility, such as e-scooters; cycling; walking
- Integration of electric vehicle (EV) charging stations
- Development of support infrastructure for active transportation modes:
    - walking – protected walkways within and outside the parking garage; seating areas, benches;
    - cycling – protected bike lanes; bike racks; bicycle repair station/service; bicycle rental
    - bus/train – protected waiting areas; shade and shelter
- Wayfinding to parking garage for drivers, cyclists and pedestrians as well as wayfinding for cyclists and pedestrians from the garage to points of interest
- Design implications of anticipated modal share increase of autonomous vehicles (passenger drop off and pick up areas; vehicle storage; vehicle maintenance areas)
- Role of the Pennsylvania Welcome center – what are the intentions for integrating this existing structure with its parking field in the garage planning?
- Role of the Delaware Water Gap Park & Ride serves by regional shuttles, such as the River Runner Shuttle and feasibility add the parking garage as an additional shuttle spot or relocate the P&R stop to the parking garage
- Need for shuttle (and dedicated parking garage zone) to service resorts and local attractions
- Provision of real-time information on bus and train arrival and departure times
- Design of transit stops centrally located with walkways leading to all facility entrances

- Design of safe drop-off and pick-up zones, including for ride share services
- Provision complementary vehicle maintenance/service station

Other mobility- and accessibility-related considerations

- Provision of (enough) safely and conveniently accessible handicapped parking spots
- Provision of priority parking spots for pregnant women, patrons with children, veterans, etc.

Building

- Solar panels; linked to EV charging stations
- Green roofs and other green infrastructure
- Smart lighting
- Smart ventilation
- The Green Parking Council, acquired by US Green Building Council (managers of LEED) in 2016, has a Parksmart program that awards points for parking structures that offer access to mass transit, encourage carsharing, integrate bicycle parking, offer micro-mobility solutions, and have EV charging stations.
- The Envision framework for sustainable infrastructure (managed by the Institute of Sustainable Infrastructure) award points for encouraging sustainable transportation, including for design that encourages the use of public transit and active transportation