TRAFFIC IMPACT STUDY

For

Penns Neck Plaza
West Windsor Township
Mercer County, New Jersey

Prepared For:

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EXECUTIVE SUMMARY

Langan Engineering and Environmental Services has been retained to prepare a traffic impact study for a proposed mixed-use redevelopment in West Windsor Township, Mercer County, New Jersey. The site, which is designated as an Area in Need of Redevelopment (AINR), is currently occupied by a gas service station, two multifamily units, three single family properties, two abandoned structures, and two vacant lots. The project, upon completion, will replace the existing uses with a 5,670 square foot (sf) Convenience Market w/ 16 Gas Pumps, a 2,500 sf Coffee/Donut Shop w/ Drive-Through Windows, a 2,500 sf Fast-Food Restaurant w/ Drive-Through Windows, and a 3,500 sf Urgent Care Clinic.

The site is located along U.S. Route 1 northbound and is bordered to the east by residential land uses, to the north by Washington Road (County Route (CR) 571), and to the south by NJ Transit rail tracks. Access to the existing development area is provided via five curbline openings along U.S. Route 1, one curbline opening within the U.S. Route1/Washington Road (CR 571) traffic circle, and four curbline opening along Washington Road (CR 571).

As part of the redevelopment, all existing driveways accessing the development area will be closed. In addition, a portion of Varsity Avenue, which provides direct access to the residential neighborhood to the east of U.S. Route 1, will be permanently closed with the construction of the development. All traffic previously utilizing Varsity Avenue to access the residential neighborhood will be rerouted to Washington Road (CR 571) to access the neighborhood via Wilder Avenue, Pierson Avenue, or Wallington Drive. Access to the site will be provided via two new driveways. The first driveway will intersect U.S. Route 1 northbound and will provide right-in/right-out access to the development. The second driveway will intersect Washington Road (CR 571) and will provide full-movement access to the development.

We prepared trip generation estimates for the for the proposed mixed-use development using data compiled for Land Use Code 630 (Clinic), Land Use Code 934 (Fast Food Restaurant with Drive Through Window), Land Use Code 937 (Coffee/Donut Shop with Drive-Through Window), and Land Use Code 960 (Super Convenience Market/Gas Station (> 3,000 SF)) by the Institute of Transportation Engineers (ITE) as contained in the publication Trip Generation, 11th Edition, and in agreement with the NJDOT HAPS Program. Langan estimates that the redevelopment will generate approximately 285 new trips (146 enter, 139 exit) during the weekday morning peak hour, 211 new trips (105 enter, 106 exit) during the weekday evening peak hour, and 283 new trips (144 enter, 139 exit) during the Saturday midday peak hour.

We determined the directional distribution of the site-generated trips based on an examination of census demographic data, a gravity model, and existing and expected travel patterns in the study area. We conducted capacity analyses at the following locations (intersection, weave,

merge) to determine level of service (LOS) operating conditions for the No-Build and Build conditions:

Intersections:

- U.S. Route 1 and Washington Road (CR 571) - North Signal
- U.S. Route 1 and Washington Road (CR 571) – South Signal
- U.S. Route 1 and Varsity Avenue
- U.S. Route 1 and Site Driveway
- Washington Road (CR 571) and Site Driveway

Merge Segments:

- U.S. Route 1 Northbound and On Ramp from Alexander Road Westbound (No-Build Condition)

Weave Segments:

- U.S. Route 1 Northbound between On Ramp from Alexander Road Westbound and Washington Road Circle – Primary Weave Segment
- U.S. Route 1 Northbound between On Ramp from Alexander Road Westbound and Proposed Site Driveway – Secondary South Weave Segment
- U.S. Route 1 Northbound between Proposed Site Driveway and Washington Road Circle – Secondary North Weave Segment

Langan established existing area traffic volumes by arranging for turning movement traffic counts to be conducted during the weekday morning, weekday evening, and Saturday midday peak periods on a typical weekday and Saturday at the study intersections. We then projected future traffic volumes to include existing traffic, new traffic created by both background growth and approved developments in the area, and new traffic generated by the proposed development.

Based on the analyses herein we recommend the following mitigation to improve operations:

- Extend the Alexander Road westbound to U.S. Route 1 northbound acceleration lane, which currently terminates to the south of the proposed site driveway location, along the properties frontage on U.S. Route 1 northbound to create a collector-distributor lane. The proposed collector/ distributer lane will extend past the proposed driveway and will terminate at the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.
- At the location of the proposed driveway, U.S. Route 1 northbound will provide three through mainline lanes and a collector-distributor lane, which will extend to the U.S. Route 1 and Washington Road (CR 571) intersection terminating as a northbound right-turn lane.

- Widen Washington Road (CR 571) along the project frontage in accordance with the Mercer County Master Plan roadway section to provide a shoulder area and sidewalk.
- Restripe Washington Road (CR 571) to provide a left-turn lane westbound at the proposed driveway.

Langan finds that the proposed redevelopment of the property as a coordinated development site is consistent with good traffic planning practice and the State Highway Access Code. The removal of the existing Gas Station and its multiple driveways within the intersection of U.S. Route 1 and Washington Road (CR 571) will improve safety and traffic operations. The assemblage of properties and coordinated development provides the ability to locate a single shared driveway located away from the U.S. Route 1 traffic signal. Lastly, the consolidation of driveways on Route 1 reduces points of access and the proposed widening along the property frontage to provide a collector-distributer lane provides for improved operations along the U.S. Route 1 frontage and efficient access for the project.

The driveways and proposed parking lot layouts have been designed to provide efficient access and on-site circulation to accommodate both passenger vehicles and trucks. We expect that the proposed parking supply of 127 parking spaces will adequately accommodate anticipated parking demands. We note that at the time of site plan approval a Waiver will be required to provide 7 additional parking spaces over the ordinance maximum parking requirement. The waiver results from each electrical vehicle charging station parking space counting as two regular spaces per State DCA standards. A waiver will also be required to provide slightly larger parking stalls adjacent to the proposed convenience store. The larger spaces provide for improved ease and safety of maneuvering in the high turnover areas adjacent to the convenience store and meet the convenience store proto-typical to provide a safe vehicular and pedestrian environment. A waiver is also required to provide one loading space while two are required. The proposed drive –thru cafes are typically serviced during off-peak hours and delivery trucks generally utilize the adjacent parking aisles for service deliveries. A separate loading area would result in unnecessary increased pavement areas that would be underutilized and is not necessary for the proposed cafe. Each drive-thru cafe is designed with a state-of-art duel order board system. The duel order board system has evolved in the industry over the past several years to provide for efficient order and queue processing. Typically, a drive thru tenant seeks a combined queue area from the pickup window to the order board approach of 8 to 11 vehicles. Both drive-thru cafes have been designed to provide to a five vehicle queue area between the pickup window and the order board and an additional combined six vehicle queue area from the order board to the drive thru entry. The proposed queue area meets typical industry design standards and will accommodate the typical queues for the drive-thru service.

INTRODUCTION

Langan Engineering and Environmental Services has been retained to prepare a traffic impact study for a proposed mixed-use redevelopment in West Windsor Township, Mercer County, New Jersey.

Project Description

The site, which is designated as an Area in Need of Redevelopment (AINR), is currently occupied by a gas service station, two multifamily units, three single family properties, two abandoned structures, and two vacant lots. The project, upon completion, will replace the existing uses with a 5,670 square foot (sf) Convenience Market w/ 16 Gas Pumps, a 2,500 sf Coffee/Donut Shop w/ Drive-Through Windows, a 2,500 sf Fast-Food Restaurant w/ Drive-Through Windows, and a 3,500 sf Urgent Care Clinic. The site is designated as Block 38, Lots 1, 2, 3, 25 and 45, and Block 39, Lots 4, 5, 7, 16 and 27 according to West Windsor Township tax maps. Figure 1, contained in Appendix B, shows the site location.

The site is located along U.S. Route 1 northbound and is bordered to the east by residential land uses, to the north by Washington Road (County Route (CR) 571), and to the south by NJ Transit rail tracks. Access to the existing development area is provided via five curbline openings along U.S. Route 1, one curbline opening within the U.S. Route1/Washington Road (CR 571) traffic circle, and four curbline opening along Washington Road (CR 571).

As part of the redevelopment, all existing driveways accessing the development area will be closed. In addition, a portion of Varsity Avenue, which provides direct access to the residential neighborhood to the east of U.S. Route 1, will be permanently closed with the construction of the development. All traffic previously utilizing Varsity Avenue to access the residential neighborhood will be rerouted to Washington Road (CR 571) to access the neighborhood via Wilder Avenue, Pierson Avenue, or Wallington Drive. Access to the site will be provided via two new driveways. The first driveway will intersect U.S. Route 1 northbound and will provide right-in/right-out access to the development. The second driveway will intersect Washington Road (CR 571) and will provide full-movement access to the development.

Study Area

We conducted capacity analyses at the following locations (intersection, weave, merge):

Intersections:

- U.S. Route 1 and Washington Road (CR 571) - North Signal

- U.S. Route 1 and Washington Road (CR 571) – South Signal
- U.S. Route 1 and Varsity Avenue
- U.S. Route 1 and Site Driveway
- Washington Road (CR 571) and Site Driveway

Merge Segments:

- U.S. Route 1 Northbound and On Ramp from Alexander Road Westbound (No-Build Condition)

Weave Segments:

- U.S. Route 1 Northbound between On Ramp from Alexander Road Westbound and Washington Road Circle – Primary Weave Segment
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An inventory of the physical road conditions is presented in the section "Description of Existing Conditions."

Scope of Study

Langan undertook the following steps to prepare this study in accordance with standard traffic engineering methodologies:

1. Conducted a field examination of the site and surrounding road network to inventory physical and regulatory conditions including the number of lanes, lane assignments, channelization, traffic-control devices, lateral clearances and other factors that limit traffic capacity.
2. Obtained turning movement counts at the study intersections. Turning movement counts were collected on a typical weekday, when schools were in session for in-person learning, and a typical Saturday during the peak periods. The existing weekday morning and evening, and Saturday midday peak hour traffic volumes were identified based on the traffic count data.
3. Established existing traffic volumes using the obtained traffic count data.
4. Established 2026 Base traffic volumes by applying the New Jersey Department of Transportation (NJDOT) Mercer County growth factor of 1.5 percent per year to the existing traffic volumes.
5. Obtained information on adjacent developments in the study area and added projected trips generated by the other developments to the 2026 Base traffic volumes to establish the 2026 No-Build traffic volumes.
6. Prepared peak hour trip generation estimates for the proposed development based on trip generation data published by the Institute of Transportation Engineers (ITE).
7. Developed trip distribution based on an examination of demographic data, a gravity model, and existing and expected travel patterns in the study area.
8. Assigned site-generated trips to the development access driveways and surrounding road network based on the likely travel routes motorists will use to travel to and from the development.
9. Established 2026 Build traffic volumes by adding the site-generated trips to the 2026 No-Build traffic volumes.
10. Performed intersection capacity analyses for the weekday morning, weekday evening, and Saturday midday peak hours using Synchro Software.

DESCRIPTION OF EXISTING CONDITIONS

This section describes the roads, intersections and traffic volumes in the area of the proposed development located in West Windsor Township, Mercer County, New Jersey.

Roads

U.S. Route 1

U.S. Route 1 is an urban principal arterial and is under the New Jersey Department of Transportation jurisdiction. The roadway has a general north-south orientation. U.S. Route 1 provides three travel lanes in each direction with no shoulders. The roadway is divided by a concrete median and has a posted speed limit of 55 MPH.

Washington Road (County Route 571)

Washington Road is an urban principal arterial and is under the jurisdiction of Mercer County. The roadway has an east-west orientation. Washington Road generally provides one travel lane per direction with variable width shoulders along its length. The roadway has a posted speed limit of 40 MPH to the east of U.S. Route 1 and 50 MPH to the west of U.S. Route 1.

Varsity Avenue

Washington Road is local road under the jurisdiction of West Windsor Township. The roadway has an east-west orientation. Varsity Avenue generally provides one travel lane per direction. The roadway has a posted speed limit of 25 MPH.

Study Locations

U.S. Route 1 and Washington Road (CR 571)

Washington Road (CR 571) intersects U.S. Route 1 to form a modified traffic circle under signal control. The eastbound Washington Road approach intersects U.S. Route 1 at the southern signal and provides one shared left-turn/through lane, one exclusive through lane, and one right-turn lane. The westbound Washington Road approach intersects U.S. Route 1 at the northern signal and provides one shared left-turn/through lane, one exclusive through lane, and one right-turn lane. The northbound U.S. Route 1 approach intersects Washington Road at the southern signal and provides two exclusive through lanes and one shared through/right-turn lane. All northbound left-turns and U-turns are made via the Washington Road westbound shared left-turn-through lane at the northern signal. The southbound U.S. Route 1 approach intersects Washington Road at the northern signal and provides two exclusive through lanes and one shared through/right-turn lane. All southbound left-turns and U-turns are made via the Washington Road eastbound

shared left-turn-through lane at the southern signal. Note that vehicles traveling eastbound along Washington Road enter the traffic circle via two ingress yield-controlled lanes. The leftmost lane feeds the shared left-turn/through lane and the rightmost lane feeds the exclusive through lane and the right-turn lane. Vehicles traveling westbound along Washington Road enter the circle via one ingress yield-controlled lane that feeds all three westbound lanes. The intersection operates under a 200-second background cycle length with two phases during the weekday morning and evening peak hours. Note that the intersection is part of the NJDOT adaptive system along U.S. Route 1, which prioritizes the green time given the U.S. Route 1 approaches.

U.S. Route 1 and Varsity Avenue

Varsity Avenue intersects U.S. Route 1 to form a T-shaped intersection under stop-control. The westbound Varsity Avenue approach provides one right-turn lane and is stop-controlled. The northbound U.S. Route 1 approach provides two exclusive through lanes and one shared through/right-turn lane.

U.S. Route 1 Northbound and On Ramp from Alexander Road Westbound Merge Section

The On Ramp from Alexander Road Westbound merges into the U.S. Route 1 northbound. The northbound U.S. Route 1 provides three through lanes at the merge. The Alexander Road on ramp provides one acceleration lane at the merge. The location provides a three-lane approach section with one ramp lanes from the merge.

Traffic Volumes

We arranged for turning movement counts to be conducted during the weekday morning, weekday evening, and Saturday midday peak periods on a typical weekday and Saturday at the study intersections to examine traffic conditions near the development. Note that the weekday counts were conducted when schools were in session for in-person learning. Specifically, turning movement counts were conducted on Wednesday, 7 December 2022, from 7:00 AM to 10:00 AM and from 3:00 PM to 7:00 PM, and on Saturday, 10 December 2022, from 10:00 AM to 3:00 PM. In addition, Automatic Traffic Recorder (ATR) counts were conducted on both sides of U.S. Route 1 and Washington Road (CR 571) from Tuesday, 6 December 2022, to Wednesday, 14 December 2022. Additionally, we utilized 2018 traffic volume data published by the New Jersey Department of Transportation (NJDOT) for the Westbound Alexander Road On Ramp to establish traffic volumes representative of typical traffic conditions along the existing ramp.

Based on the traffic counts, the weekday morning peak hour occurred from 8:00 AM to 9:00 AM, the weekday evening peak hour occurred from 3:45 PM to 4:45 PM, and the Saturday midday peak hour occurred from 1:45 AM to 2:45 PM.

Appendix B contains the traffic count summaries. Figure 2 shows the existing peak-hour traffic volumes.

ESTIMATE OF FUTURE CONDITIONS

This section of the report covers background traffic growth, no-build condition, site-generated trips, trip distribution, and future traffic volumes. We anticipate the development will be constructed and operating by the end of 2026. Accordingly, we projected traffic volumes to include existing traffic and new traffic created by background growth to derive the 2026 base traffic volumes. We took into account adjacent developments and added the traffic to the base traffic volumes to establish the 2026 No-Build traffic volumes. We then added the site-generated trips to the 2026 No-Build traffic volumes to derive the 2026 Build traffic volumes.

Background Traffic Growth

We increased 2022 Existing peak-hour traffic volumes by a compounded annual growth rate of 1.5 percent, established by NJDOT for Mercer County for short-term growth projections to derive the 2026 Base traffic volumes.

Figure 3 illustrates the 2026 Base traffic volumes.

No-Build Traffic Volumes

The use of the NJDOT calculated regional growth rate typical accounts for area development projects/ growth that can be expected to influence traffic volumes in the region. To be conservative, in addition to general background growth, we have incorporated additional traffic growth associated with several area developments that will influence traffic on the immediate adjacent roadway network. In preparing the future traffic projections, we included the traffic associated with the following approved developments on the study intersections:

- Ellsworth's Center Redevelopment
- 400 Steps LLC
- 47 Princeton Hightstown Road
- Transit Village at Princeton Junction
- Princeton University Lake Campus GDP
- Bridgepoint 8 Industrial Park

Traffic associated with these developments was developed based on their respective traffic studies. Figure 4 illustrates the traffic associated with the adjacent development. In order to develop the 2026 No-Build traffic volumes the total adjacent development traffic was added to the 2026 Base traffic volumes. Figure 5 shows the 2026 No-Build traffic volumes.

Site-Generated Trips

We prepared trip generation estimates for the proposed mixed-use development using data compiled for Land Use Code 630 (Clinic), Land Use Code 934 (Fast Food Restaurant with Drive Through Window), Land Use Code 937 (Coffee/Donut Shop with Drive-Through Window), and Land Use Code 960 (Super Convenience Market/Gas Station (> 3,000 SF)) by the Institute of Transportation Engineers (ITE) as contained in the publication Trip Generation, 11th Edition, and in agreement with the NJDOT HAPS Program.

Additionally, a certain percentage of traffic attracted to retail uses generally relates to the volume of traffic passing by a site. These trips are diverted from the adjacent passing travel stream and will continue along the original trip path when exiting. Such trips are known as "pass-by" trips. Pass-by trips are not considered "new" to an area. We used pass-by percentages contained in the ITE's Trip Generation Handbook, 3rd edition, as well as accepted rates published by NJDOT. For the LUC 934, we used pass-by percentages of 49% for the weekday morning peak hour, 50% for the weekday evening peak hour, and 50% for the Saturday midday peak hour. Note that Saturday pass-by data is not provided for LUC 934, therefore we conservatively estimated a 50% pass-by. For the LUC 937, we used pass-by percentages of 63% for the weekday morning peak hour, 66% for the weekday evening peak hour, and 50% for the Saturday midday peak hour. For the LUC 960, we used pass-by percentages of 76% for the weekday morning peak hour, 76% for the weekday evening peak hour, and 50% for the Saturday midday peak hour.

The future trip generation estimates are summarized on the following page in Table 1.

Table 1 – Trip Generation Estimates

Use	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Total Trips									
3,500 sf Clinic	10	8	18	7	9	16	10	8	18
2,500 sf Fast-Food Restaurant W/ Drive-Thru	66	61	127	65	63	128	70	68	138
2,500 sf Coffee/Donut Shop W/ Drive-Thru	123	122	245	54	54	108	110	109	219
5,670 square foot (sf) Convenience Market w/ 16 Gas Pumps	235	236	471	196	197	393	181	181	362
Total Trips	**434**	**427**	**861**	**322**	**323**	**645**	**371**	**366**	**737**
Pass-By Trips									
2,500 sf Fast-Food Restaurant W/ Drive-Thru*	- 31	- 31	- 62	- 32	- 32	- 64	- 35	-35	- 70
2,500 sf Coffee/Donut Shop W/ Drive-Thru*	- 78	- 78	- 156	- 36	- 36	- 72	- 55	- 55	- 110
5,670 square foot (sf) Convenience Market w/ 16 Gas Pumps*	- 179	- 179	- 358	- 149	- 149	- 298	- 137	- 137	- 274
Total Pass-By Trips	*- 288*	*- 288*	*- 576*	*- 217*	*- 217*	*- 434*	*- 227*	*- 227*	*- 454*
New Trips									
3,500 sf Clinic	10	8	18	7	9	16	10	8	18
2,500 sf Fast-Food Restaurant W/ Drive-Thru	35	30	65	33	31	64	35	33	68
2,500 sf Coffee/Donut Shop W/ Drive-Thru	45	44	89	18	18	36	55	54	109
5,670 square foot (sf) Convenience Market w/ 16 Gas Pumps	56	57	113	47	48	95	44	44	88
Total New Trips	**146**	**139**	**285**	**105**	**106**	**211**	**144**	**139**	**283**

*LUC 934 Pass-By: 49% AM peak hour, 50% PM peak hour, and 50% Saturday midday peak hour
LUC 937 Pass-By: 63% AM peak hour, 66% PM peak hour, and 50% Saturday midday peak hour
LUC 960 Pass-By: 76% AM peak hour, 76% PM peak hour, and 50% Saturday midday peak hour

Trip Distribution

We determined the directional distribution of the site-generated trips based on an examination of census demographic data, a 5-mile gravity model, and existing and expected travel patterns in the study area. Table 2 shows the directional distribution of site traffic. Figure 7 shows the pass-by trip distributions. Figures 12, 13, and 14 show the pass-by trips for the proposed redevelopment. The total pass-by trips are shown in Figure 16.

Table 2 – Trip Distribution

Direction (To/From)	Arrival & Departure Distributions
U.S. Route 1 (North)	10%
U.S. Route 1 (South)	13%
Washington Road (East)	68%
Washington Road (West)	9%
Total	**100%**

Figure 6 shows the arrival and departure distributions for the proposed redevelopment. The site-generated trips were then applied to the adjacent roadway system as per the above distributions.

Figures 8, 9, 10, and 11 show the new site-generated trips for the proposed redevelopment. Figure 15 illustrates the total new site-generated trips. The total site-generated trips assigned to the roadway network for the proposed development are shown in Figure 17.

Build Traffic Volumes

As previously mentioned, a portion of Varsity Avenue, which provides direct access to the residential neighborhood to the east of U.S. Route 1, will be permanently closed with the construction of the development. All traffic previously utilizing Varsity Avenue to access the residential neighborhood will be rerouted to Washington Road (CR 571) to access the neighborhood via Wilder Avenue, Pierson Avenue, or Wallington Drive. The existing volumes associated with the Varsity Avenue closure are to be rerouted from the surrounding roadway network for the Build condition as shown on Figure 18. The 2026 Build traffic volumes were derived by adding the total site-generated trips and the existing re-routed trips to the 2026 No-Build traffic volumes. Figure 19 illustrates the 2026 Build traffic volumes. Note that the proposed collector-distributor lane separates the street entering traffic from the mainline though traffic, therefore, for analysis purposes the through volumes along U.S. Route 1 at the site driveway conservatively include two thirds (2/3) of the Alexander Road westbound On Ramp volumes and the volumes associated with the upstream Washington Road South Signal northbound right-turn volumes.

ANALYSIS OF TRAFFIC OPERATIONS

This section describes the capacity analysis we conducted to assess traffic operations for the No-Build and Build conditions. Capacity analysis provides an indication of the adequacy of road facilities to serve traffic demand.

Level of Service Criteria

Level of Service (LOS) is the term used to denote different operating conditions that occur on a given road segment under various traffic volume demands. LOS is a qualitative measure that considers a number of factors including road geometry, speed, travel delay and freedom to maneuver. LOS designations range from A to F and provide an index of operational qualities of a road segment or an intersection. LOS A represents the best operating conditions; LOS F represents the worst.

LOS designations are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection. For unsignalized intersections, the analysis considers the operation of all movements that conflict with other movements, such as main-line left turns and traffic exiting a side street. The evaluation criteria used to analyze the study area intersections are based on the Highway Capacity Manual, 6th edition (HCM), published by the Transportation Research Board and Synchro Software.

The HCM defines LOS for signalized intersections as follows:

LOS	Control Delay per Vehicle
A	≤10 sec
B	>10 and ≤20 sec
C	>20 and ≤35 sec
D	>35 and ≤55 sec
E	>55 and ≤80 sec
F	>80 sec

The HCM defines LOS for unsignalized intersections as follows:

LOS	Delay Range (sec/veh)
A	≤10 sec
B	>10 and ≤15 sec
C	>15 and ≤25 sec
D	>25 and ≤35 sec
E	>35 and ≤50 sec
F	>50 sec

The HCM defines LOS for merge segments as follows:

LOS	Delay Range (sec/veh)
A	≤10 sec
B	>10 – 20
C	>20 – 28
D	>28 – 35
E	>35
F	Demand exceeds capacity

The HCM defines LOS for weaving segments as follows:

LOS	Density (pc/mi/ln)
A	0 – 12 sec
B	>12 – 24
C	>24 – 32
D	>32 – 36
E	>36 – 43
F	>43, or demand exceeds capacity

Capacity Analysis

We conducted capacity analyses for the intersections in the study area and found that the proposed redevelopment will be accommodated on the roadways with implementation of recommended roadway improvements. Table 3 summarizes the 2026 No-Build and Build levels of service (LOS) at each relevant study intersection during the weekday morning and evening, and Saturday midday peak hours. Following are discussions pertaining to each of the intersections analyzed for the project. The capacity analysis printouts are contained in Appendix C.

Table 3 – Intersection Capacity Analysis Summary

Location	Movement		2026 No-Build Condition			2026 Build Condition		
			AM	PM	SAT	AM	PM	SAT
Signalized Intersections								
U.S. Route 1 and Washington Road (North Signal)	WB	L,T	F (171.5)	E (66.0)	D (42.7)	F (167.0)	E (72.8)	D (47.1)
		R	B (19.3)	C (33.3)	C (21.3)	D (42.1)	D (49.2)	C (30.9)
	NB	T	B (13.6)	D (43.4)	B (11.0)	A (4.1)	B (12.4)	A (6.6)
	SB	T,R	C (28.2)	E (77.4)	D (51.0)	C (32.8)	E (76.6)	D (53.4)
	Overall		**C (34.3)**	**E (60.6)**	**C (32.5)**	**C (33.0)**	**D (46.7)**	**C (32.6)**
U.S. Route 1 and Washington Road (South Signal)	EB	L,T	F (90.8)	F (125.1)	D (45.0)	E (72.9)	F (125.6)	D (47.9)
		R	E (61.9)	F (146.3)	F (112.1)	F (65.1)	F (153.7)	F (111.9)
	NB	T,R	D (50.3)	E (75.5)	C (31.0)	-	-	-
		T	-	-	-	B (19.2)	C (30.6)	B (19.9)
		R	-	-	-	A (8.5)	A (9.1)	B (11.6)
	SB	T	A (8.8)	C (32.9)	C (21.7)	B (11.8)	C (33.6)	C (25.6)
	Overall		**C (33.6)**	**E (62.6)**	**C (33.0)**	**B (18.9)**	**D (42.4)**	**C (29.8)**
Unsignalized Intersections								
U.S. Route 1 and Varsity Avenue	WB	R	F (74.3)	F (75.6)	F (59.1)	-	-	-
U.S. Route 1 and Site Driveway	WB	R	-	-	-	B (14.7)	C (15.7)	B (12.9)
Washington Road and Site Driveway	WB	L	-	-	-	A (8.5)	A (8.7)	A (8.8)
	NB	L	-	-	-	E (45.4)	D (28.0)	E (43.2)
		R	-	-	-	B (11.3)	B (12.2)	B (12.3)
Merge Segments								
U.S. Route 1 NB and On Ramp from Alexander Rd WB			C (23.4)	C (24.1)	B (17.2)	-	-	-
Weave Segments								
U.S Route 1 NB between On Ramp from Alexander Rd WB and Washington Rd Primary Weave			-	-	-	C (21.9)	C (22.6)	B (17.1)
U.S Route 1 NB between On Ramp from Alexander Rd WB and Prop. Site Drwy Secondary South Weave			-	-	-	B (18.2)	B (18.4)	B (14.5)
U.S Route 1 NB between On Ramp from Prop. Site Drwy and Washington Rd Secondary North Weave			-	-	-	B (18.9)	B (18.8)	B (15.0)

Intersection Level of Service (Average vehicle delay [seconds per vehicle])
Merge & Weave Segments Level of Service (Average Density [passenger cars per mile per lane])

U.S. Route 1 and Washington Road (CR 571) – North Signal

The signalized intersection is expected to operate at an overall LOS C during the weekday morning peak hour, at an overall LOS E during the weekday evening peak hour, and at an overall LOS C during the Saturday midday peak hour under the No-Build condition. Under the Build condition, the intersection is expected to continue to operate at an overall LOS C during the weekday morning peak hour, at an overall LOS D during the weekday evening peak hour, and at an overall LOS C during the Saturday midday peak hour.

U.S. Route 1 and Washington Road (CR 571) – South Signal

The signalized intersection is expected to operate at an overall LOS C during the weekday morning and Saturday midday peak hours and at an overall LOS E during the weekday evening peak hour under the No-Build condition.

As part of the redevelopment, it is proposed to extend the Alexander Road to U.S. Route 1 northbound acceleration lane, which currently terminates to the south of the proposed site driveway location, along the properties frontage on U.S. Route 1 northbound to create a collector-distributor lane. The proposed lane will extend past the proposed driveway, and will terminate at the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane. The northbound U.S. Route 1 approach will provide three through lanes and one right-turn lane.

With the above recommendations implemented, the signalized intersection is expected to operate at an overall LOS C during both the weekday morning and Saturday midday peak hours and at an overall LOS D during the weekday evening peak hour.

U.S. Route 1 and Varsity Avenue

The westbound right-turn movements is expected to operate at LOS F during all three peak hours. Note that as part of the redevelopment, a portion of Varsity Avenue will be closed and wil no longer provide a direct connection to U.S. Route 1.

U.S. Route 1 and Site Driveway

Geometry

The site driveway will intersect U.S. Route 1 to form a T-shaped intersection under stop-control. Subject to NJDOT permitting, the northbound U.S. Route 1 approach would provide three through mainline lanes and a collector-distributor lane. The westbound site driveway approach will provide one right-turn lane. The intersection would be a right-in/right-out access under stop-control. The proposed collector-distributor lane separates the street entering traffic from the mainline though traffic, therefore, for analysis purposes the through volumes along U.S. Route 1 at the site driveway conservatively include two thirds (2/3) of the Alexander Road westbound On Ramp volumes and the volumes associated with the upstream Washington Road South Signal northbound right-turn volumes.

Analysis

With the above recommendations implemented, under the Build condition, the westbound right-turn movement is expected to operate at LOS B during both the weekday morning and Saturday Midday peak hours and at LOS C during the weekday evening peak hour.

We prepared a queue analysis of the proposed site driveway westbound right-turn lane during the weekday morning and evening, and Saturday midday peak hours. The following table illustrates the 95th percentile queues calculated.

Table 4 – U.S. Route 1 and Propose Site Driveway: Queue Summary

Time	Movement		Storage	95th Percentile Queue
Weekday Morning Peak Hour	WB	R	205′	45′
Weekday Evening Peak Hour				38′
Saturday Midday Peak Hour				30′

The 95th percentile queues calculated for the proposed site driveway westbound right-turn lane, during all three peak periods, would not exceed the available storage length. The calculated queues will not affect traffic flow along U.S. Route 1.

Washington Road (CR 571) and Site Driveway

Geometry

The site driveway will intersect Washington Road (CR 571) to form a T-shaped intersection under stop-control. The eastbound Washington Road (CR 571) approach will provide on shared through/right-turn lane. The westbound Washington Road (CR 571) approach will provide ones left-turn lane and one through lane. The northbound site driveway approach will provide one left-turn lane, one right-turn lane, and will be stop-controlled.

Analysis

All movements at the stop-controlled intersection are expected to operate at LOS E or better during all three peak hours under the Build condition.

We prepared a queue analysis of the proposed site driveway northbound left-turn lane and right-turn lane and the proposed westbound left-turn lane along Washington Road (CR 571) during the weekday morning and evening, and Saturday midday peak hours. The following table illustrates the 95th percentile queues calculated.

Table 5 – Washington Road (CR 571) and Propose Site Driveway: Queue Summary

Time	Movement		Storage	95th Percentile Queue
Weekday Morning Peak Hour	WB	L	100′	10′
	NB	L	100′	80′
		R	-	15′
Weekday Evening Peak Hour	WB	L	100′	8′
	NB	L	100′	40′
		R	-	13′
Saturday Midday Peak Hour	WB	L	100′	10′
	NB	L	100′	65′
		R	-	18′

The 95th percentile queues calculated for the proposed site driveway northbound left-turn lane and right-turn lane and the proposed westbound left-turn lane along Washington Road (CR 571), during all three peak periods, would not exceed the available storage length. The calculated queues will not affect traffic flow along Washington Road (CR 571).

U.S. Route 1 Northbound and On Ramp from Alexander Road Westbound Merge Section

The merge is expected to operate at a LOS C during both the weekday morning and evening peak hours and at a LOS B during the Saturday midday peak hour under the No-Build condition. As part of the redevelopment, it is proposed to extend the Alexander Road westbound to U.S. Route 1 northbound acceleration lane, which currently terminates to the south of the proposed site driveway location, along the properties frontage on U.S. Route 1 northbound. The proposed extension will remove the existing merge segment and will create a weaving a segment between the Alexander Road On Ramp and the Washington Road Southern Signal intersection.

U.S. Route 1 Northbound between On Ramp from Alexander Road Westbound and Washington Road Circle – Primary Weave Segment

Geometry

The following improvements are proposed which would result in a new weave section with the proposed site driveway intersection with U.S. Route 1.

- Extend the Alexander Road westbound to U.S. Route 1 northbound acceleration lane, which currently terminates to the south of the proposed site driveway location, along the properties frontage on U.S. Route 1 northbound to create a collector-distributor lane. The proposed lane will extend past the proposed driveway, and will terminate at the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.
- At the location of the proposed driveway, U.S. Route 1 northbound will provide three through mainline lanes and a collector-distributor lane, which will extend to the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.

The U.S. Route 1 northbound main road between the On Ramp from Alexander Road Westbound and the Washington Road South Signal intersection form a new primary weave section. The northbound U.S. Route 1 main road provides three through lanes and one proposed collector-distributor lane. The proposed configuration will provide a four-lane weave section with two weaving lanes.

Analysis

The primary weave segment is expected to operate at a LOS C during both the weekday morning and evening peak hours and at a LOS B during the Saturday midday peak hour under the Build condition.

U.S. Route 1 Northbound between On Ramp from Alexander Road Westbound and Proposed Site Driveway – Secondary South Weave Segment

Geometry

The following improvements are proposed which would result in a new weave section with the proposed site driveway intersection with U.S. Route 1.

- Extend the Alexander Road westbound to U.S. Route 1 northbound acceleration lane, which currently terminates to the south of the proposed site driveway location, along the properties frontage on U.S. Route 1 northbound to create a collector-distributor lane. The proposed lane will extend past the proposed driveway, and will terminate at the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.
- At the location of the proposed driveway, U.S. Route 1 northbound will provide three through mainline lanes and a collector-distributor lane, which will extend to the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.

The U.S. Route 1 northbound main road between the On Ramp from Alexander Road Westbound and the proposed site driveway form a new secondary weave section. The northbound U.S. Route 1 main road provides three through lanes and one proposed collector-distributor lane. The proposed configuration will provide a four-lane weave section with two weaving lanes.

Analysis

The primary weave segment is expected to operate at a LOS B during all three peak hours under the Build condition.

U.S. Route 1 Northbound between Proposed Site Driveway and Washington Road Circle – Secondary North Weave Segment

Geometry

The following improvements are proposed which would result in a new weave section with the proposed site driveway intersection with U.S. Route 1.

- Extend the Alexander Road westbound to U.S. Route 1 northbound acceleration lane, which currently terminates to the south of the proposed site driveway location, along the properties frontage on U.S. Route 1 northbound to create a collector-distributor lane. The proposed lane will extend past the proposed driveway, and will terminate at the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.
- At the location of the proposed driveway, U.S. Route 1 northbound will provide three through mainline lanes and a collector-distributor lane, which will extend to the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.

The U.S. Route 1 northbound main road between the proposed site driveway and the Washington Road South Signal form a new secondary weave section. The northbound U.S. Route 1 main road provides three through lanes and one proposed collector-distributor lane. The proposed configuration will provide a four-lane weave section with two weaving lanes.

Analysis

The primary weave segment is expected to operate at a LOS B during all three peak hours under the Build condition.

CONCLUSIONS

Langan finds that the proposed redevelopment of the property as a coordinated development site is consistent with good traffic planning practice and the State Highway Access Code. The removal of the existing Gas Station and its multiple driveways within the intersection of U.S. Route 1 and Washington Road (CR 571) will improve safety and traffic operations. The assemblage of properties and coordinated development provides the ability to locate a single shared driveway located away from the U.S. Route 1 traffic signal. Lastly, the consolidation of driveways on U.S. Route 1 reduces points of access and the proposed widening along the property frontage to provide a collector/ distributer lane provides for improved operations along the U.S. Route 1 frontage and efficient access for the project. Based on our analyses we recommend the following:

- Extend the Alexander Road westbound to U.S. Route 1 northbound acceleration lane, which currently terminates to the south of the proposed site driveway location, along the properties frontage on U.S. Route 1 northbound to create a collector-distributor lane. The proposed lane will extend past the proposed driveway, and will terminate at the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.
- At the location of the proposed driveway, U.S. Route 1 northbound will provide three through mainline lanes and a collector-distributor lane, which will extend to the U.S. Route 1 and Washington Road (CR 571) intersection as a northbound right-turn lane.
- Widen Washington Road along the project frontage in accordance with the Mercer County Master Plan roadway section to provide a shoulder area and sidewalk.
- Restripe Washington Road to provide a left-turn lane westbound at the proposed driveway.

The driveways and proposed parking lot layouts have been designed to provide efficient access and on-site circulation to accommodate both passenger vehicles and trucks. We expect that the proposed parking supply of 127 parking spaces will adequately accommodate anticipated parking demands. We note that at the time of site plan approval a Waiver will be required to provide 7 additional parking spaces over the ordinance maximum parking requirement. The waiver results from each electrical vehicle charging station parking space counting as two regular spaces per State DCA standards. A waiver will also be required to provide slightly larger parking stalls adjacent to the proposed convenience store. The larger spaces provide for improved ease and safety of maneuvering in the high turnover areas adjacent to the convenience store and meet the convenience store proto-typical to provide a safe vehicular and pedestrian environment. A waiver is also required to provide one loading space while two are required. The proposed drive –thru

cafes are typically serviced during off-peak hours and delivery trucks generally utilize the adjacent parking aisles for service deliveries. A separate loading area would result in unnecessary increased pavement areas that would be underutilized and is not necessary for the proposed cafe. Each drive-thru cafe is designed with a state-of-art duel order board system. The duel order board system has evolved in the industry over the past several years to provide for efficient order and queue processing. Typically, a drive thru tenant seeks a combined queue area from the pickup window to the order board approach of 8 to 11 vehicles. Both drive-thru cafes have been designed to provide to a five vehicle queue area between the pickup window and the order board and an additional combined six vehicle queue area from the order board to the drive thru entry. The proposed queue area meets typical industry design standards and will accommodate the typical queues for the drive-thru service.

APPENDIX A
FIGURES

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NJ Certificate of Authorization No.24GA27996400

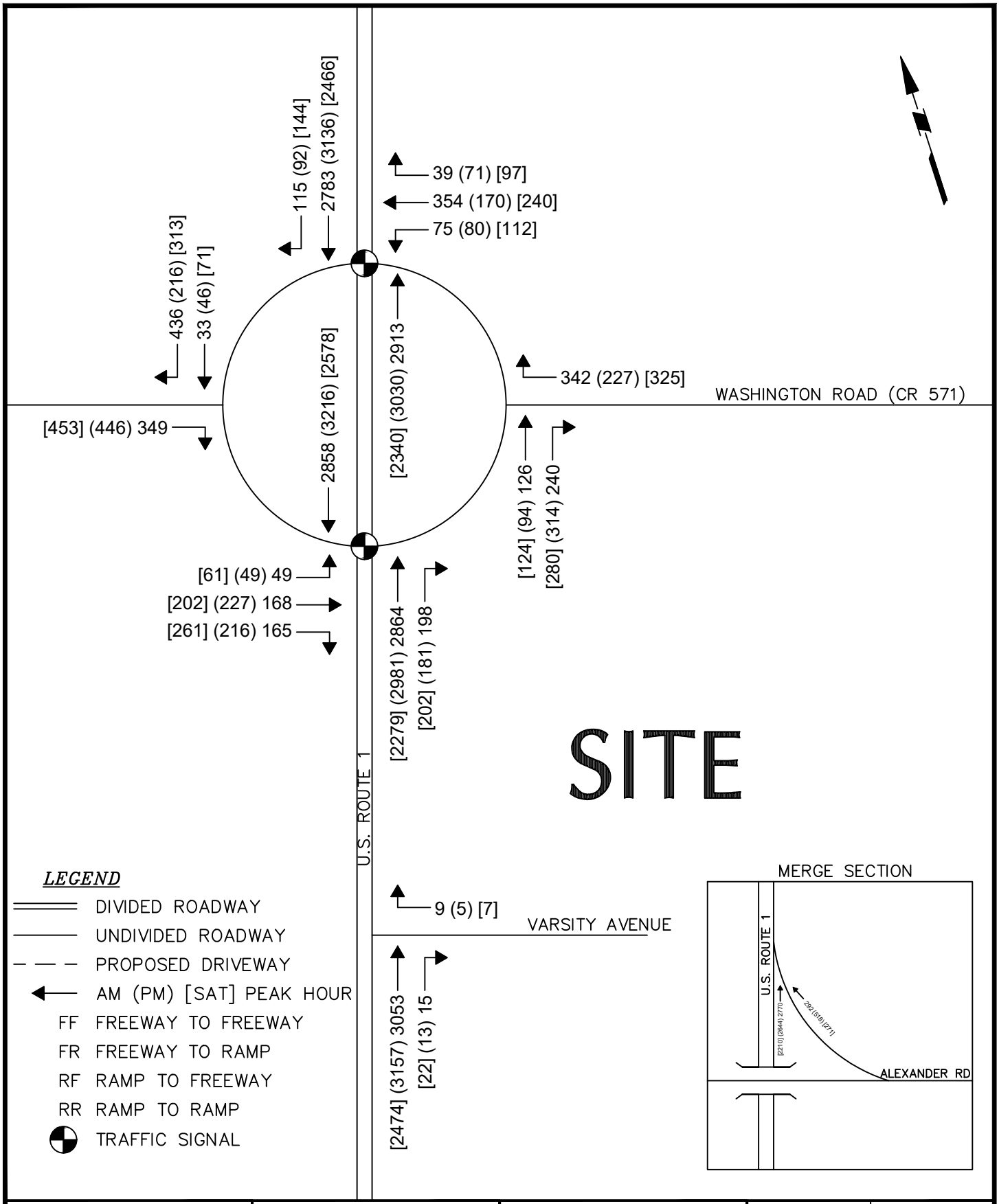
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
SITE LOCATION MAP

Project No.	130137901
Date	01/30/2023
Drawn By	EJV
Checked By	KP

Figure
FIGURE 1
Sheet 1 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 1-SITE



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Project
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BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

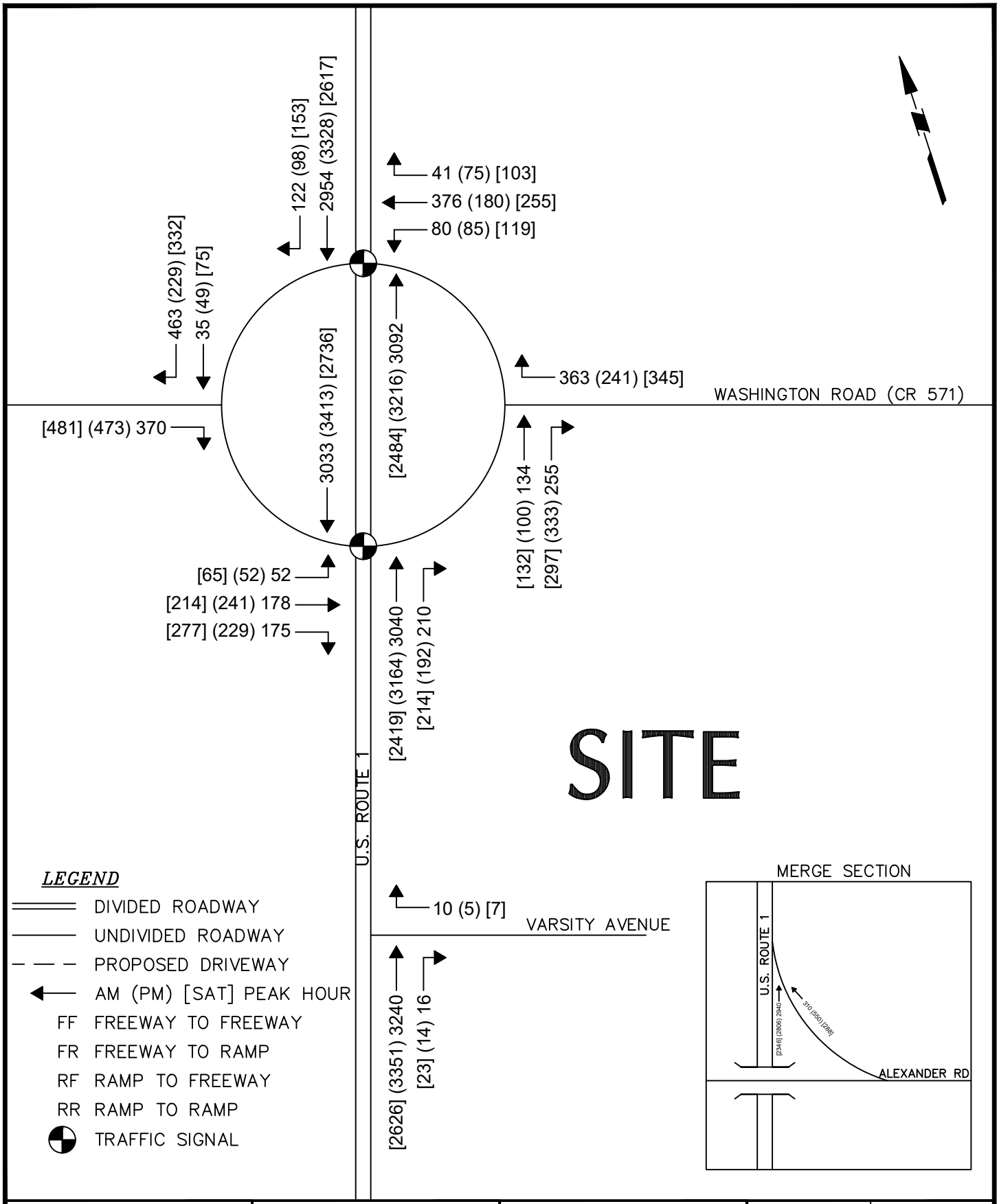
Drawing Title
2022 EXISTING TRAFFIC VOLUMES

Project No.	130137901
Date	01/30/2023
Drawn By	EJV
Checked By	KP

Figure
FIGURE 2

Sheet 2 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 2-EX



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Project
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BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

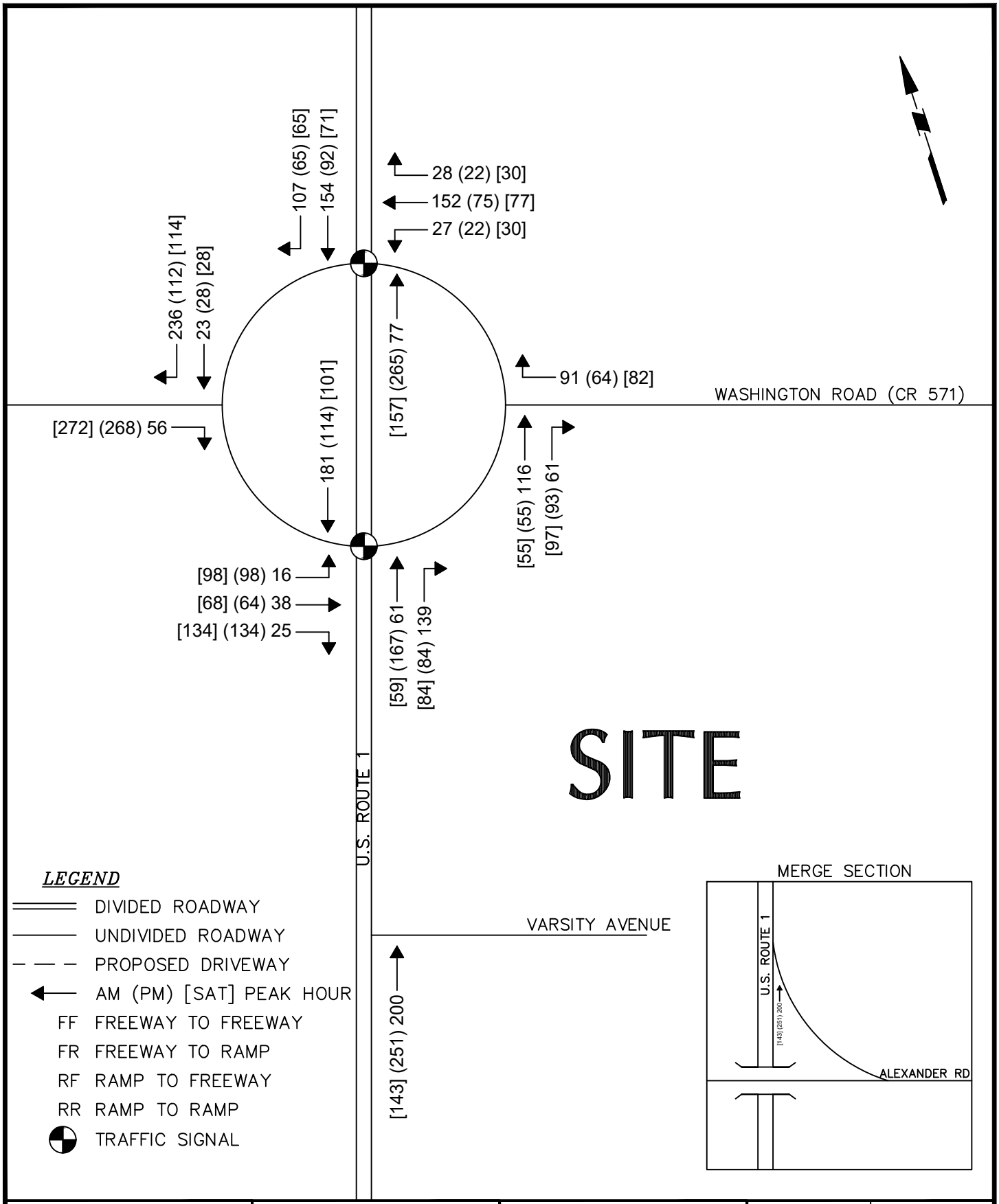
Drawing Title
2026 BASE TRAFFIC VOLUMES

Project No.	130137901
Date	01/30/2023
Drawn By	EJV
Checked By	KP

Figure
FIGURE 3

Sheet 3 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 3-BASE



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Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

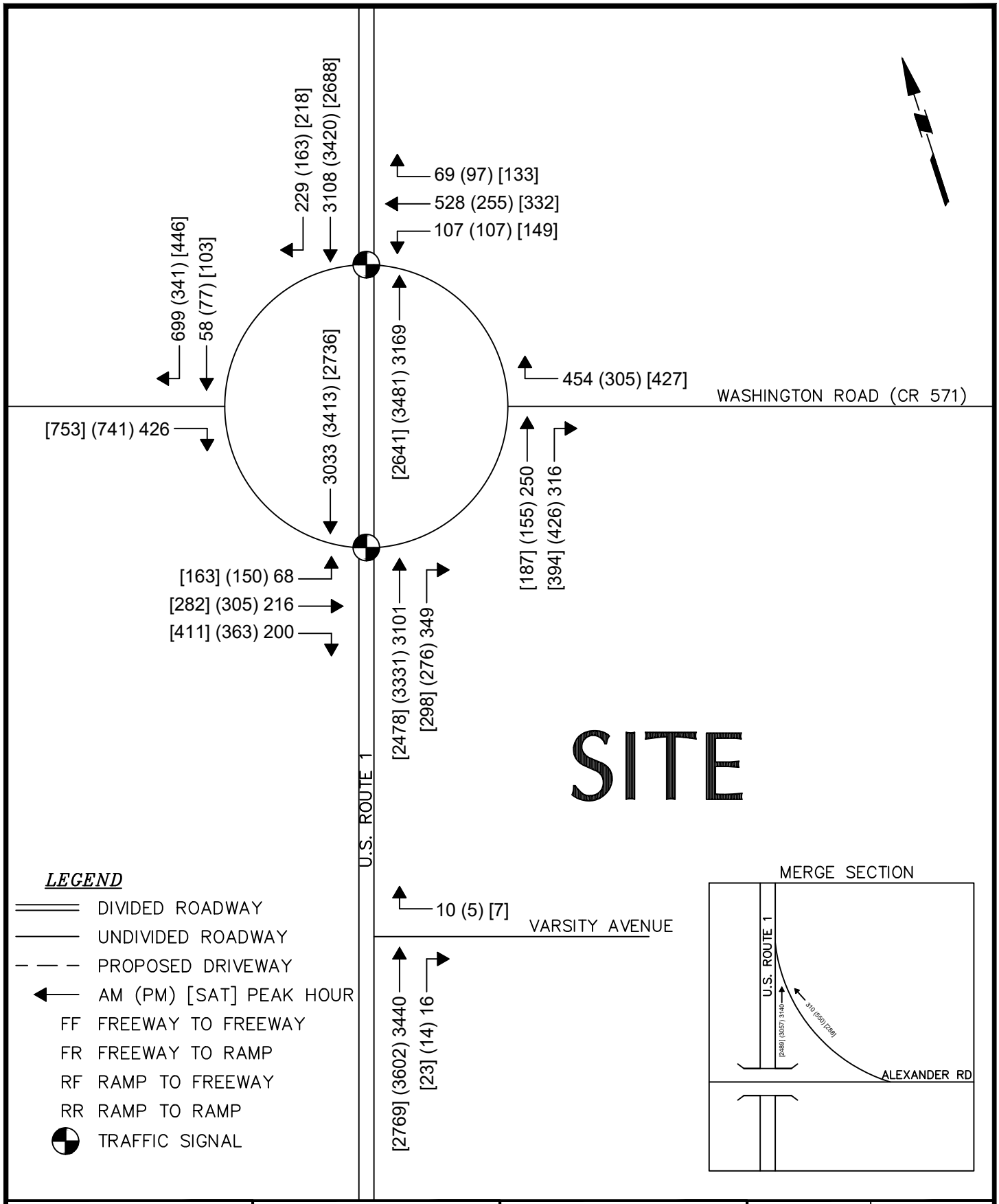
Drawing Title
ADJACENT DEVELOPMENT TRAFFIC VOLUMES

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 4

Sheet 4 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 4-ADJ



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Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

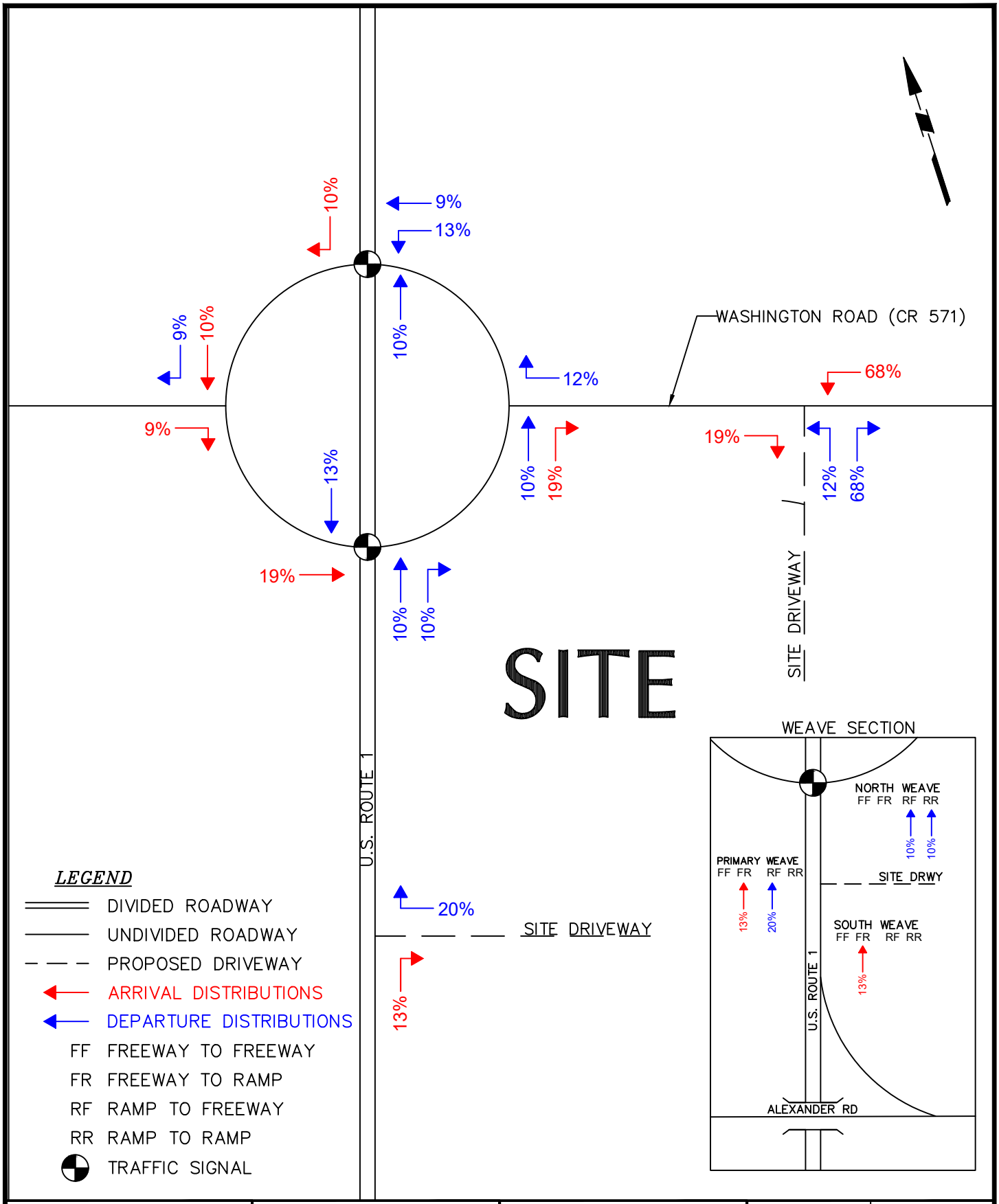
Drawing Title
2026 NO-BUILD TRAFFIC VOLUMES

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 5

Sheet 5 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 5-NO



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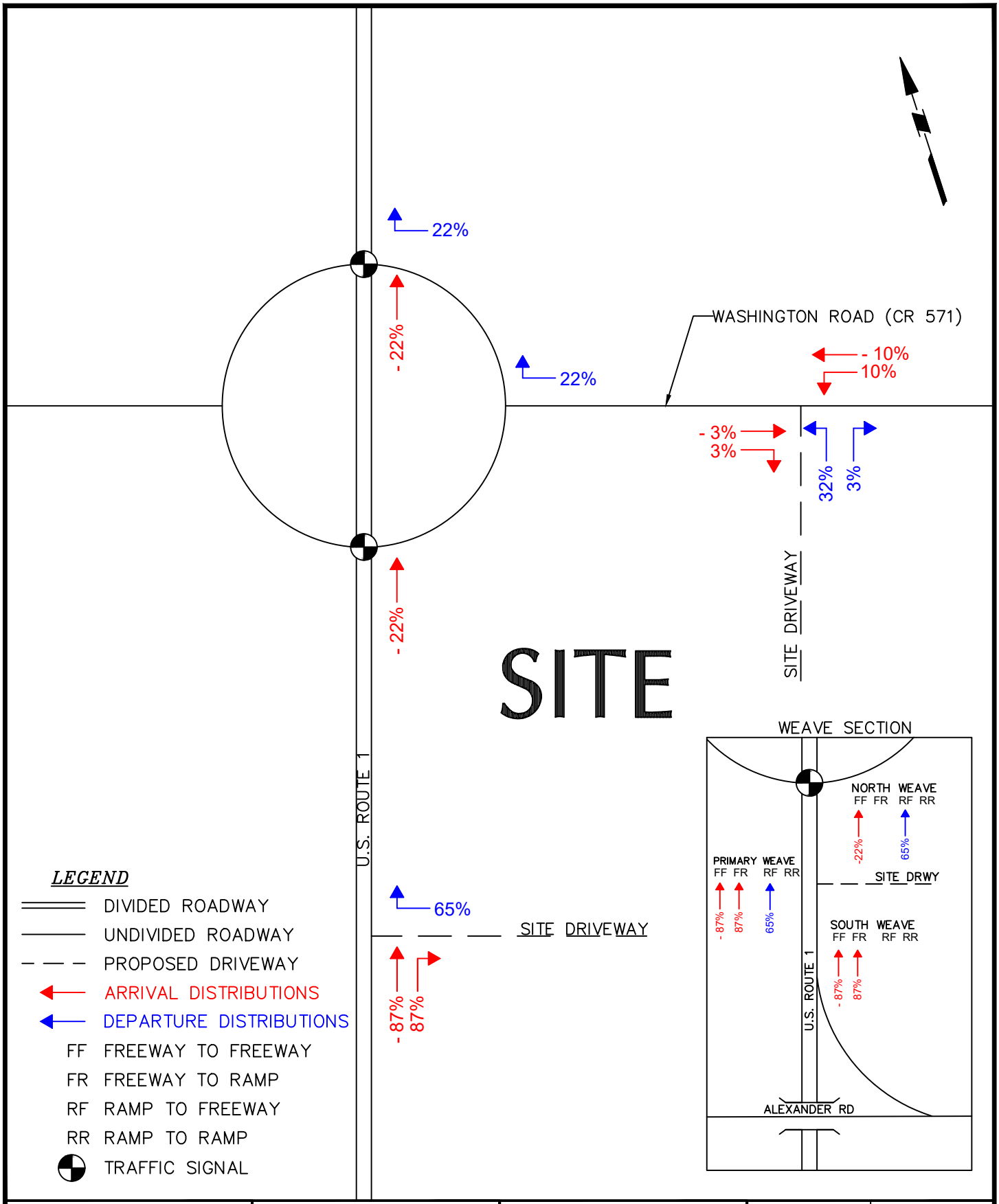
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
ARRIVAL & DEPARTURE DISTRIBUTIONS: NEW TRIPS

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 6
Sheet 6 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 6-NEW AD



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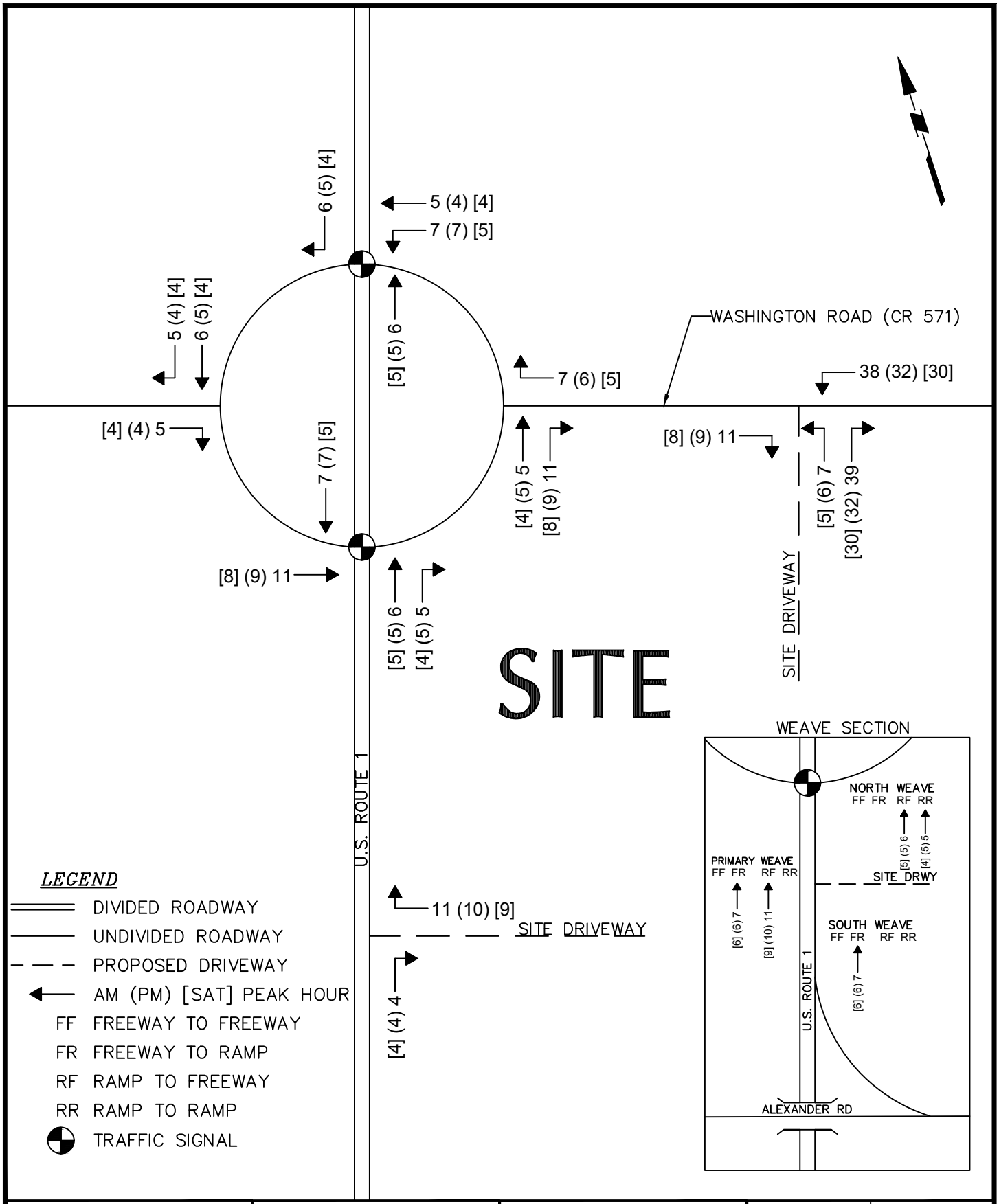
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
ARRIVAL & DEPARTURE DISTRIBUTIONS: PASS-BY TRIPS

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 7

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 7-PASS AD



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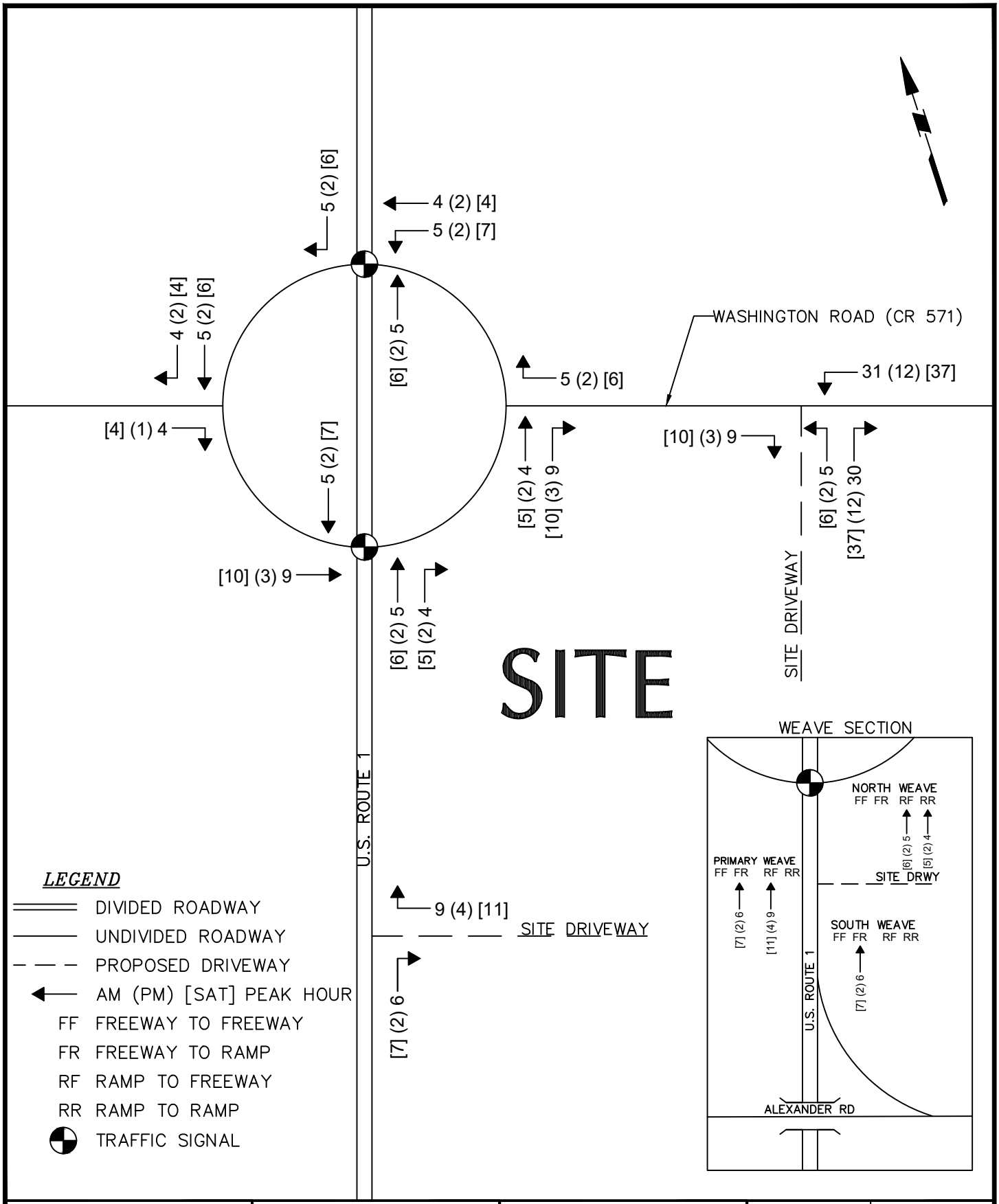
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
NEW SITE-GENERATED TRIPS: SUPER CONVENIENCE MARKET W/ GAS

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 8
Sheet 8 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 8-NGAS



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Project
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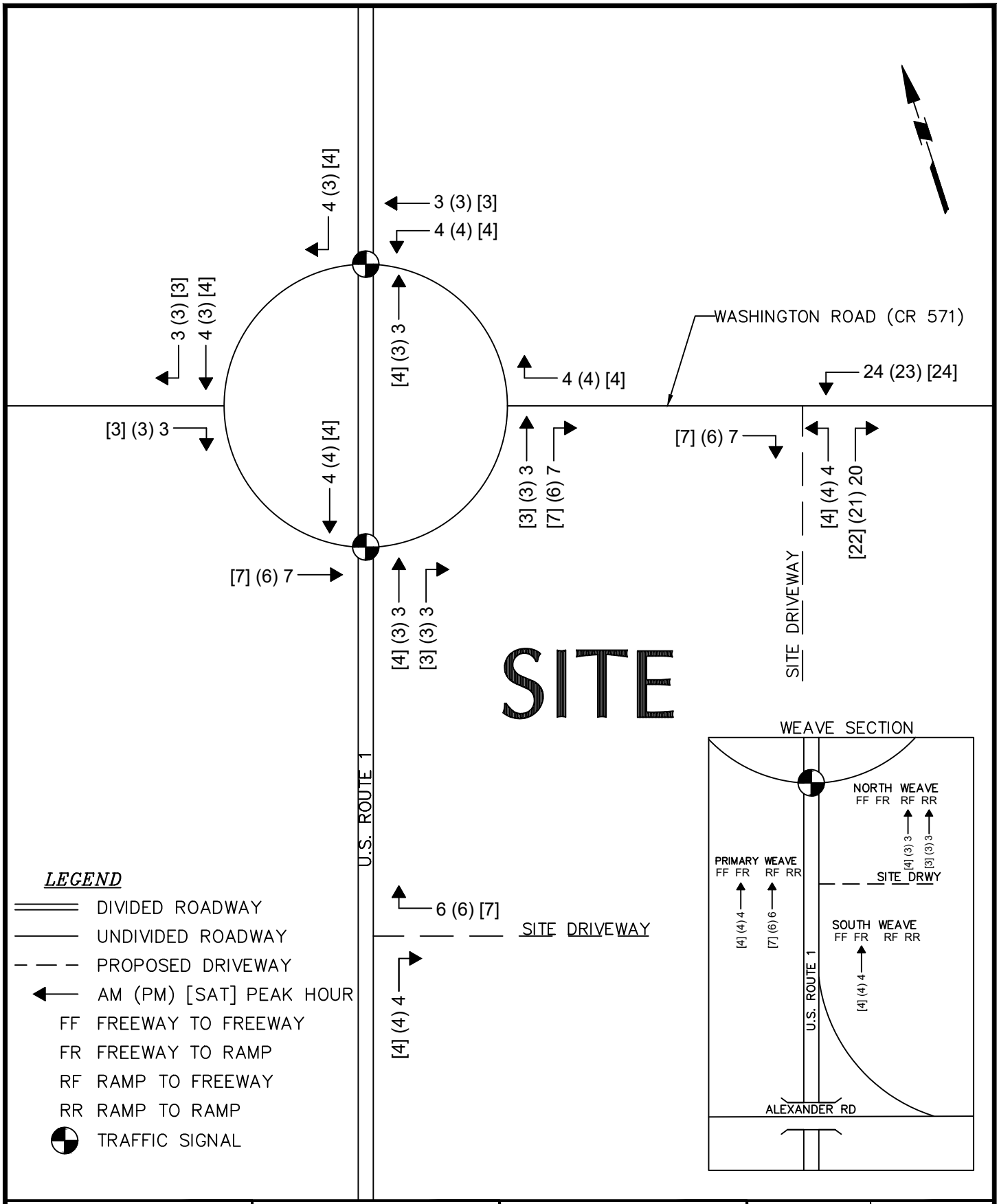
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
NEW SITE-GENERATED TRIPS: COFFEE / DONUT SHOP W/ DRIVE-THROUGH WINDOW

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 9
Sheet 9 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 9-NCOF



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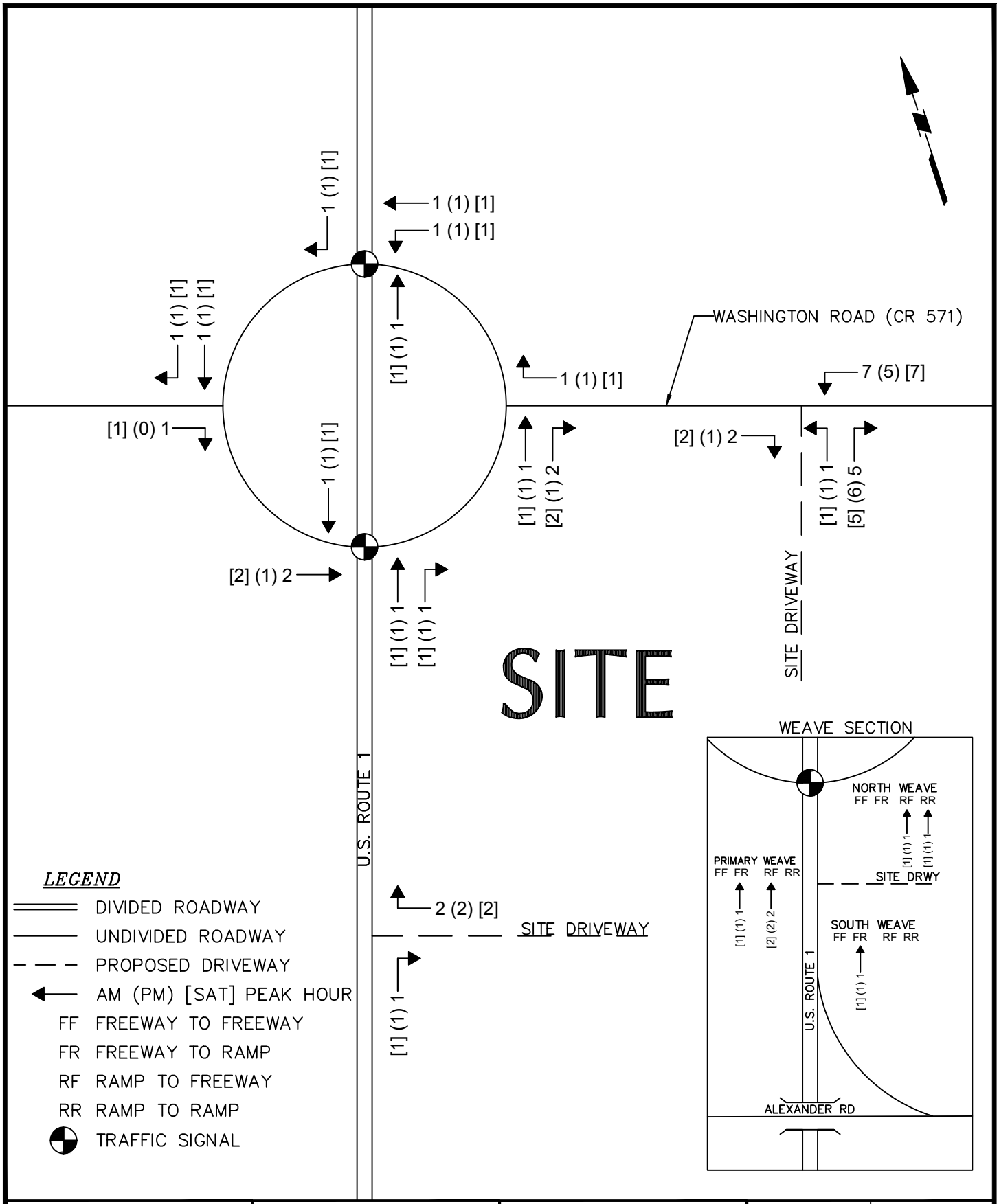
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
NEW SITE-GENERATED TRIPS: FAST-FOOD RESTAURANT W/ DRIVE-THROUGH WINDOW

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 10
Sheet 10 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 10-NFF



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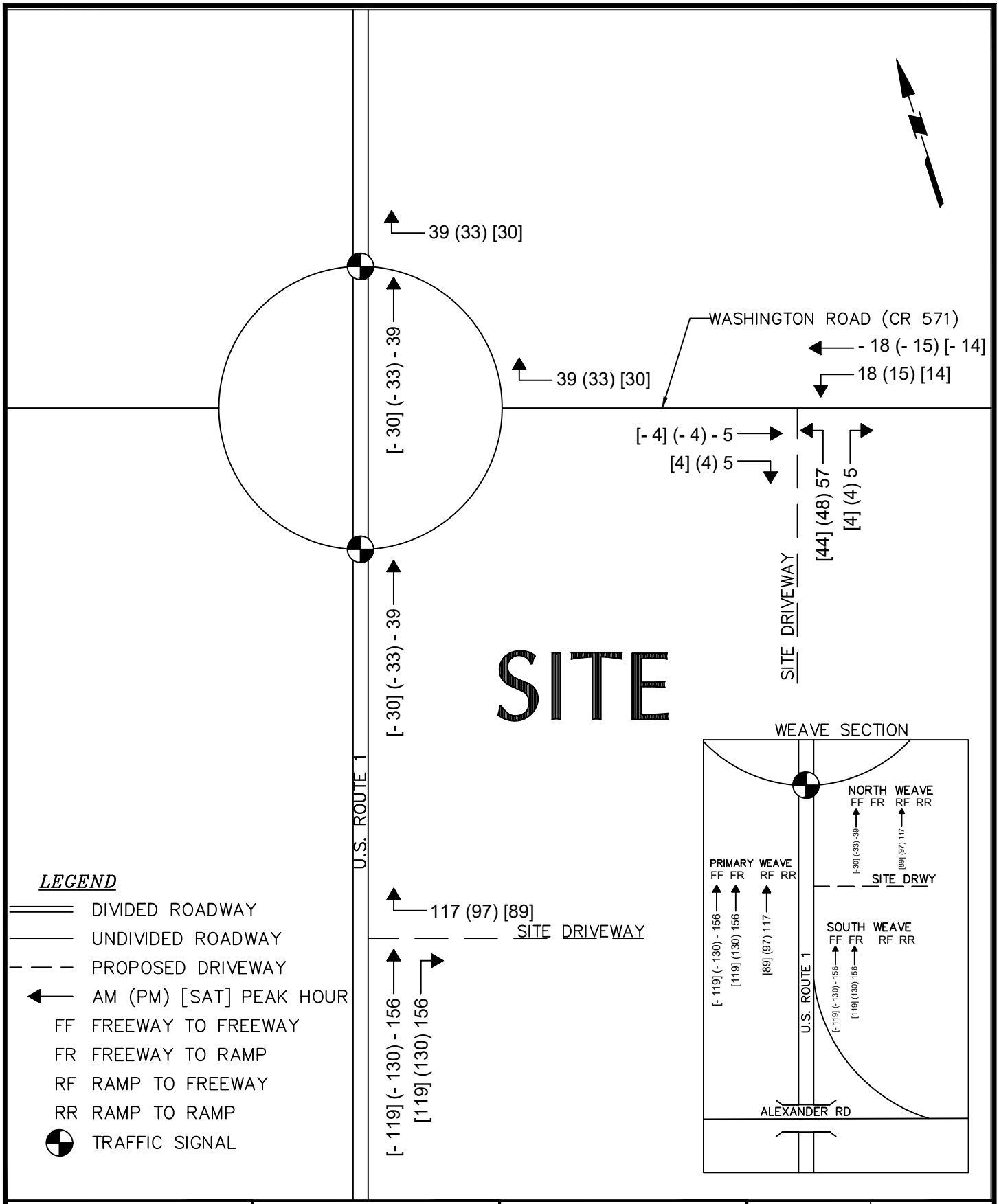
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
NEW SITE-GENERATED TRIPS: CLINIC

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 11
Sheet 11 of 19



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NJ Certificate of Authorization No.24GA27996400

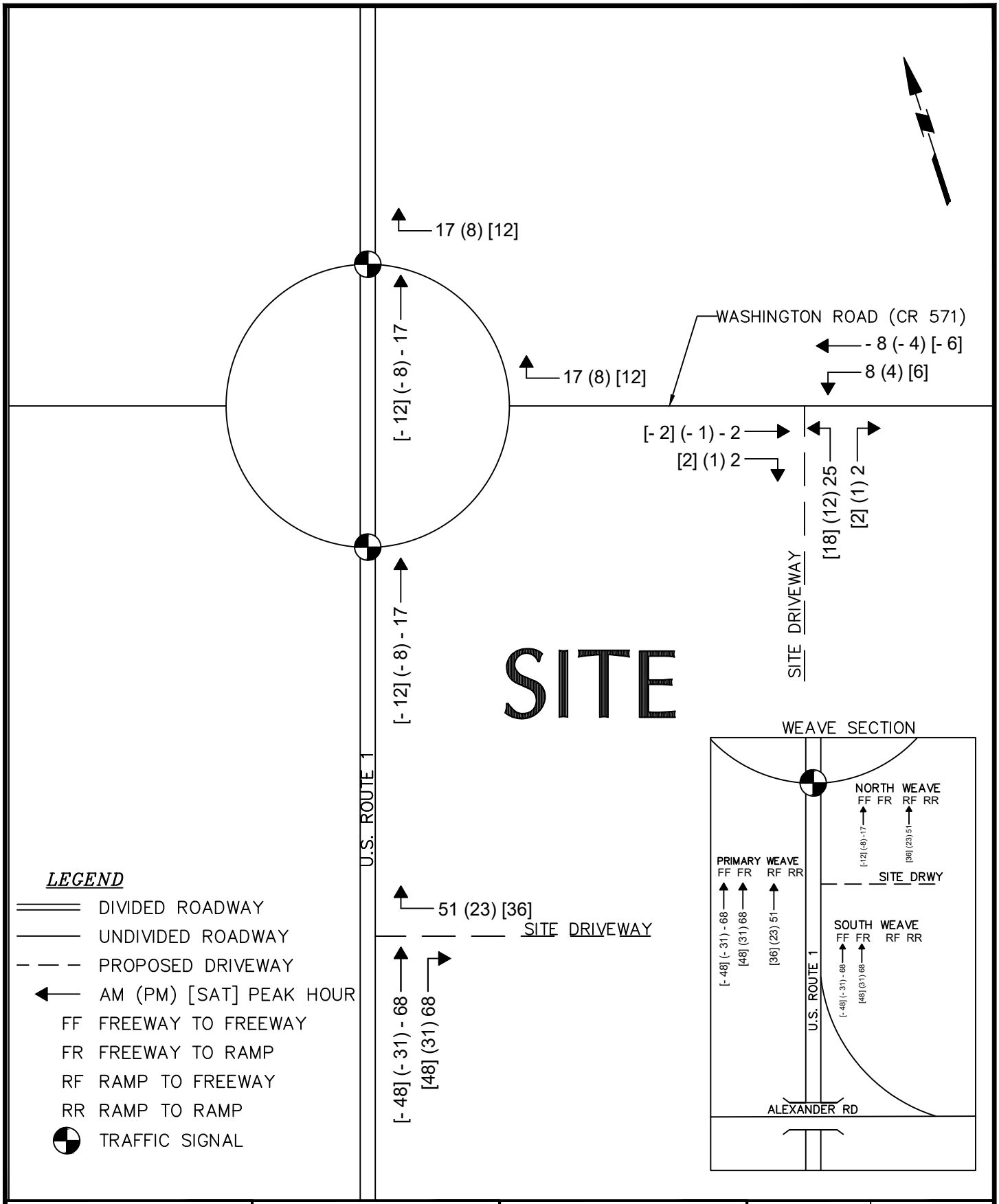
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
PASS-BY TRIPS: SUPER CONVENIENCE MARKET /W GAS

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 12
Sheet 12 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 12-PGAS



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1 University Square Drive, Suite 110
Princeton, NJ 08540
T: 609.282.8000 F: 609.282.8001 www.langan.com
NJ Certificate of Authorization No.24GA27996400

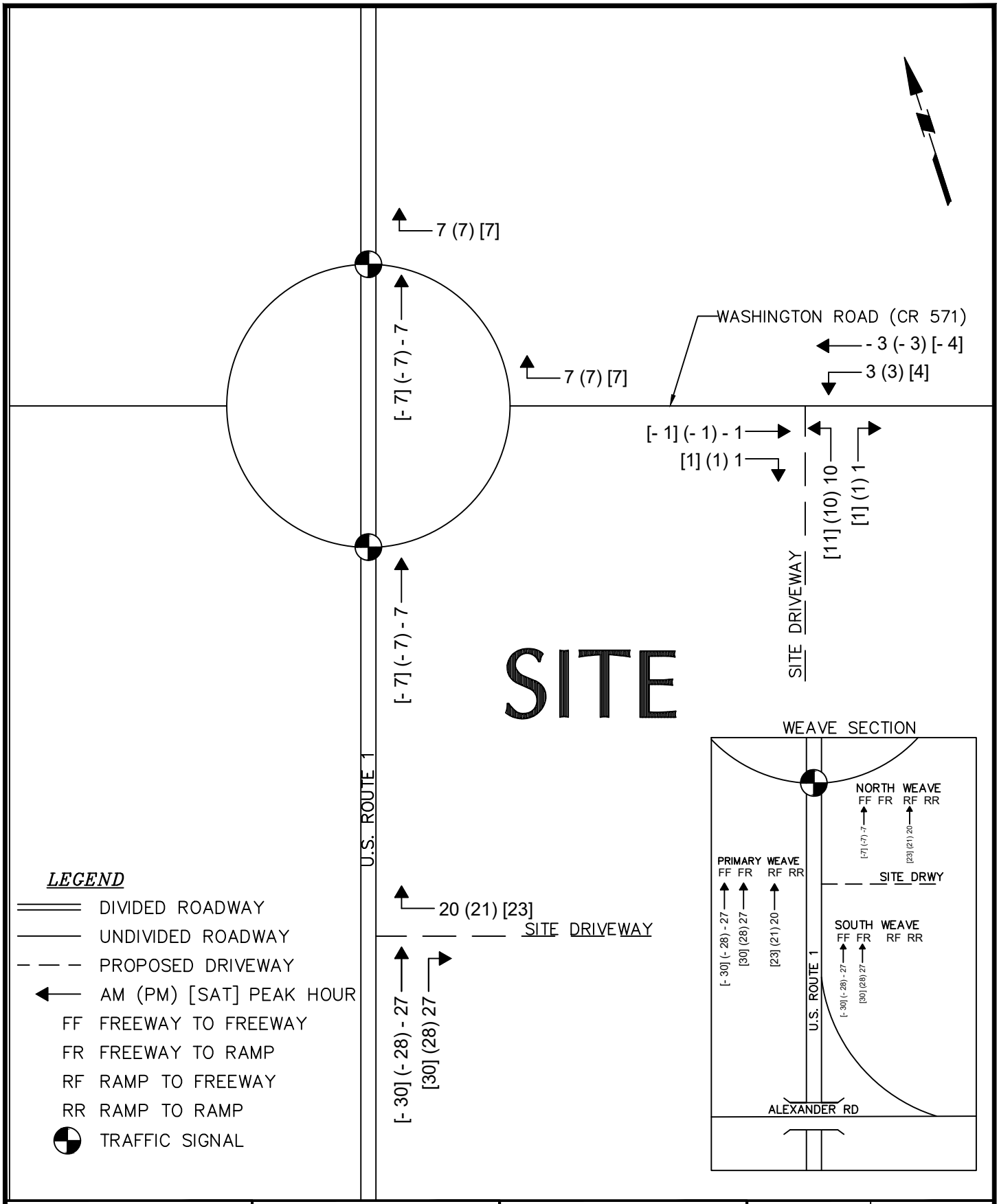
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
PASS-BY TRIPS: COFFEE/DONUT SHOP W/ DRIVE-THROUGH WINDOW

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 13

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 13-PCOF



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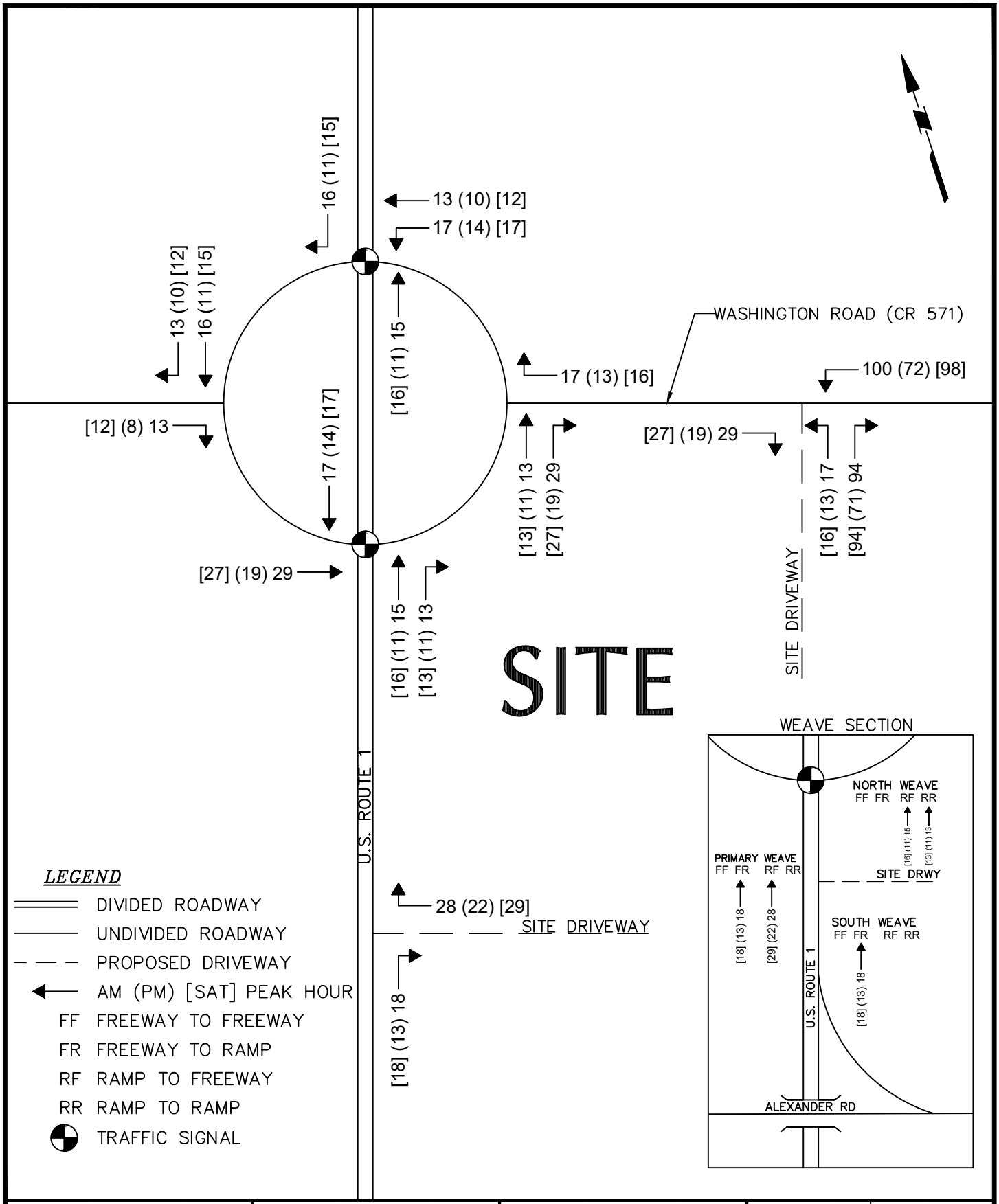
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
PASS-BY TRIPS: FAST-FOOD RESTAURANT W/ DRIVE-THROUGH WINDOW

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 14

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 14-PFF



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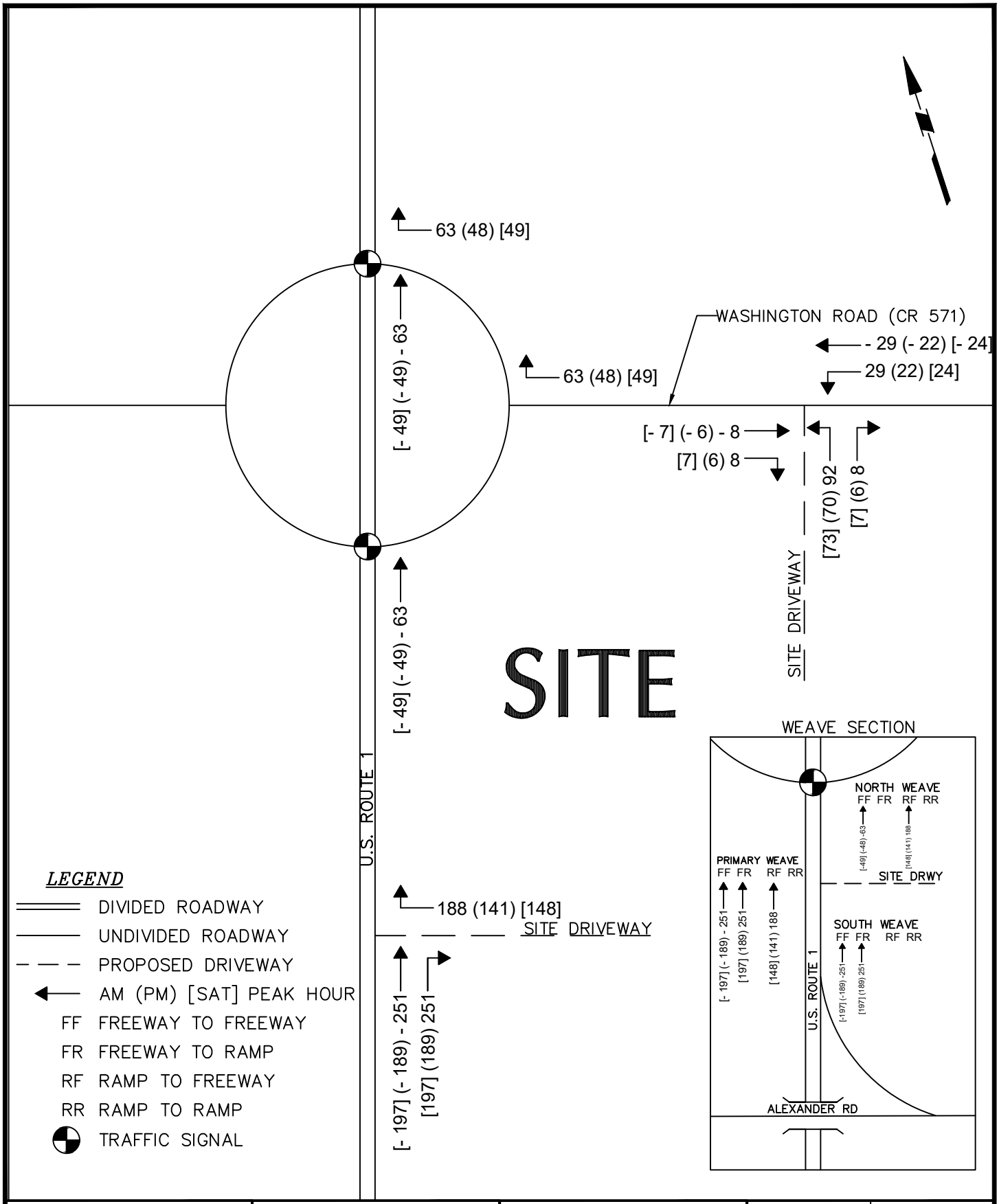
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
TOTAL NEW SITE-GENERATED TRIPS

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 15
Sheet 15 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 15-TNEW



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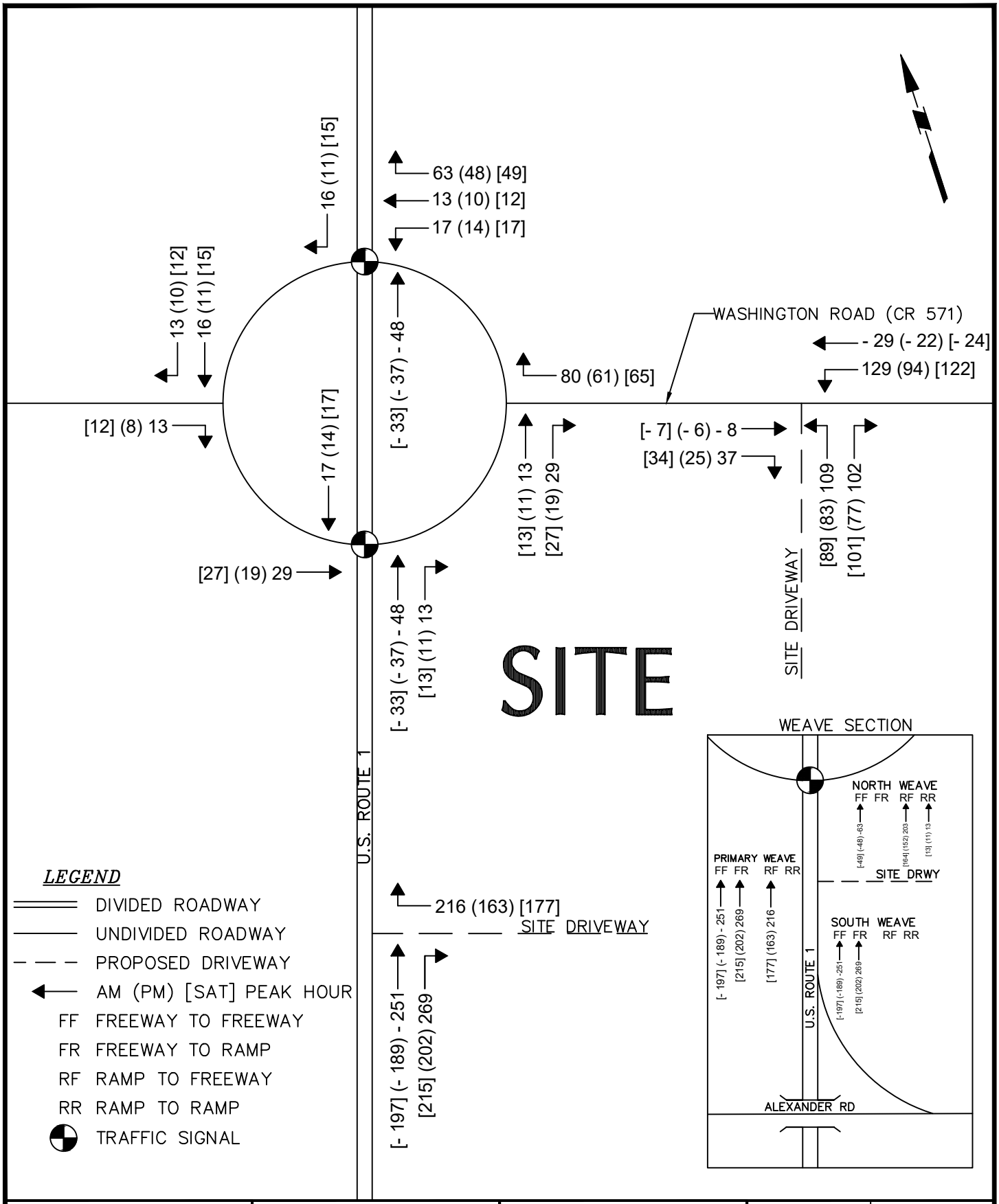
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
TOTAL PASS-BY TRIPS

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 16
Sheet 16 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 16-PASS



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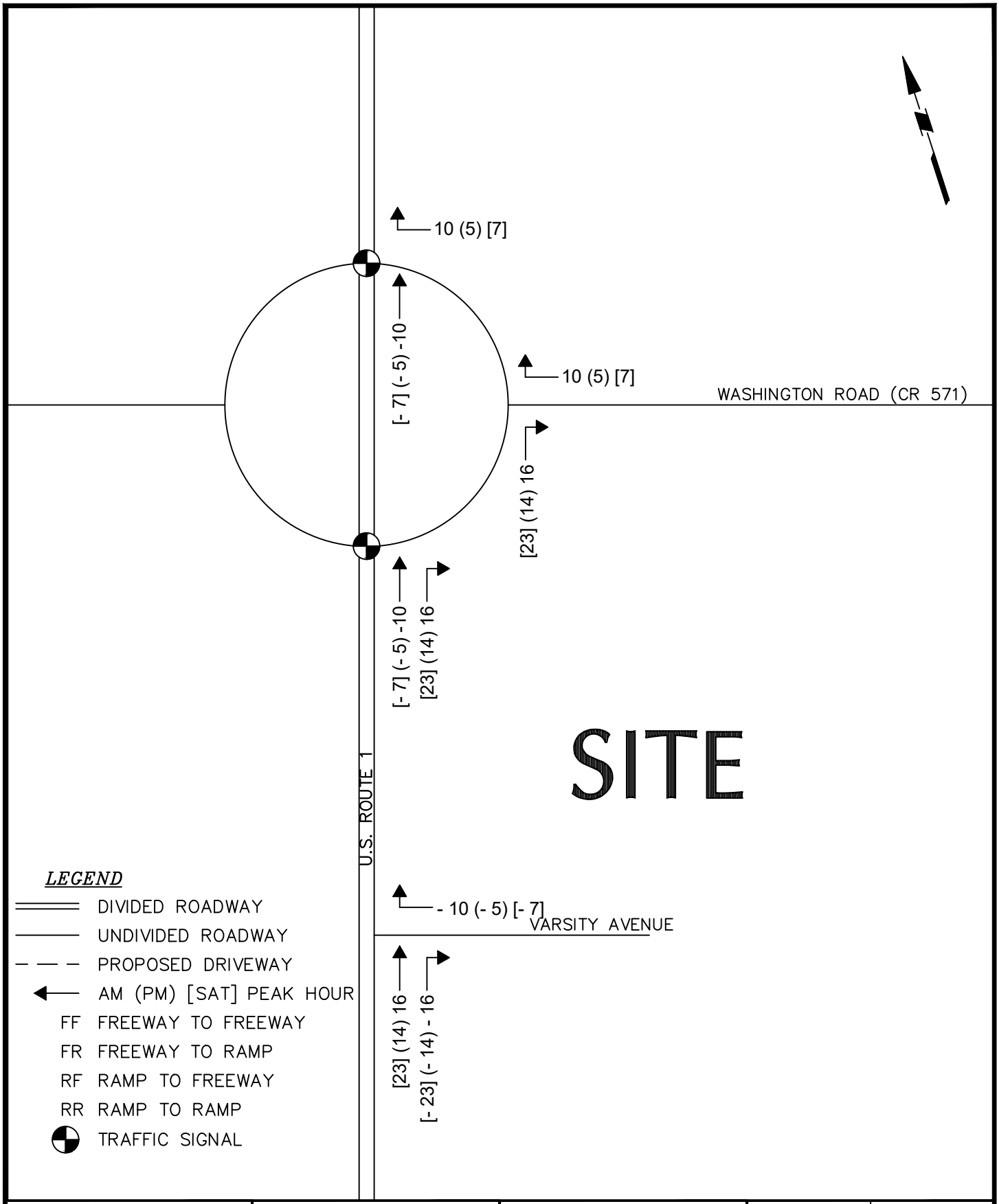
Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
TOTAL SITE-GENERATED TRIPS

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 17
Sheet 17 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 17-TOTAL



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Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

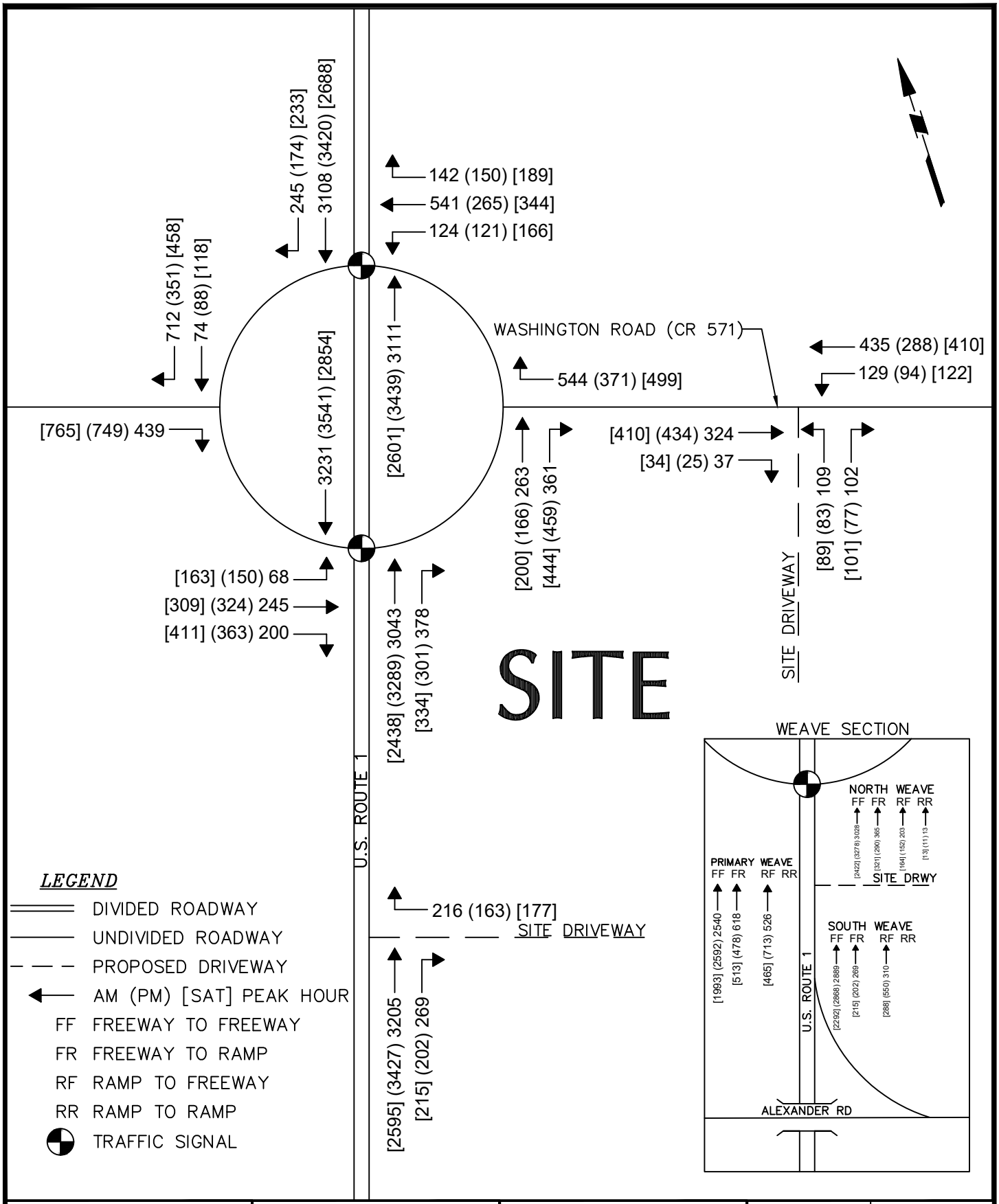
Drawing Title
EXISTING REROUTED TRAFFIC VOLUMES

Project No.	130137901
Date	01/30/2023
Drawn By	EJV
Checked By	KP

Figure
FIGURE 18

Sheet 18 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 18-REROUTE



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Project
PENNS NECK PLAZA
BLOCK No. 38, LOT No. 1,2,3,25,48
BLOCK No. 39, LOT No. 4,7,16,27
WEST WINDSOR
MERCER COUNTY NEW JERSEY

Drawing Title
2026 BUILD TRAFFIC VOLUMES

Project No. 130137901
Date 01/30/2023
Drawn By EJV
Checked By KP

Figure
FIGURE 19

Sheet 19 of 19

Filename: \\langan.com\data\LAW\data9\130137901\Project Data_Discipline\Traffic\Figures & Tables\2023-01 TIS\2023-01 TIS Figures.dwg Date: 2/9/2023 Time: 13:00 User: eviloria Style Table: Langan.stb Layout: 19-BUILD

APPENDIX B
TRAFFIC COUNTS

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West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

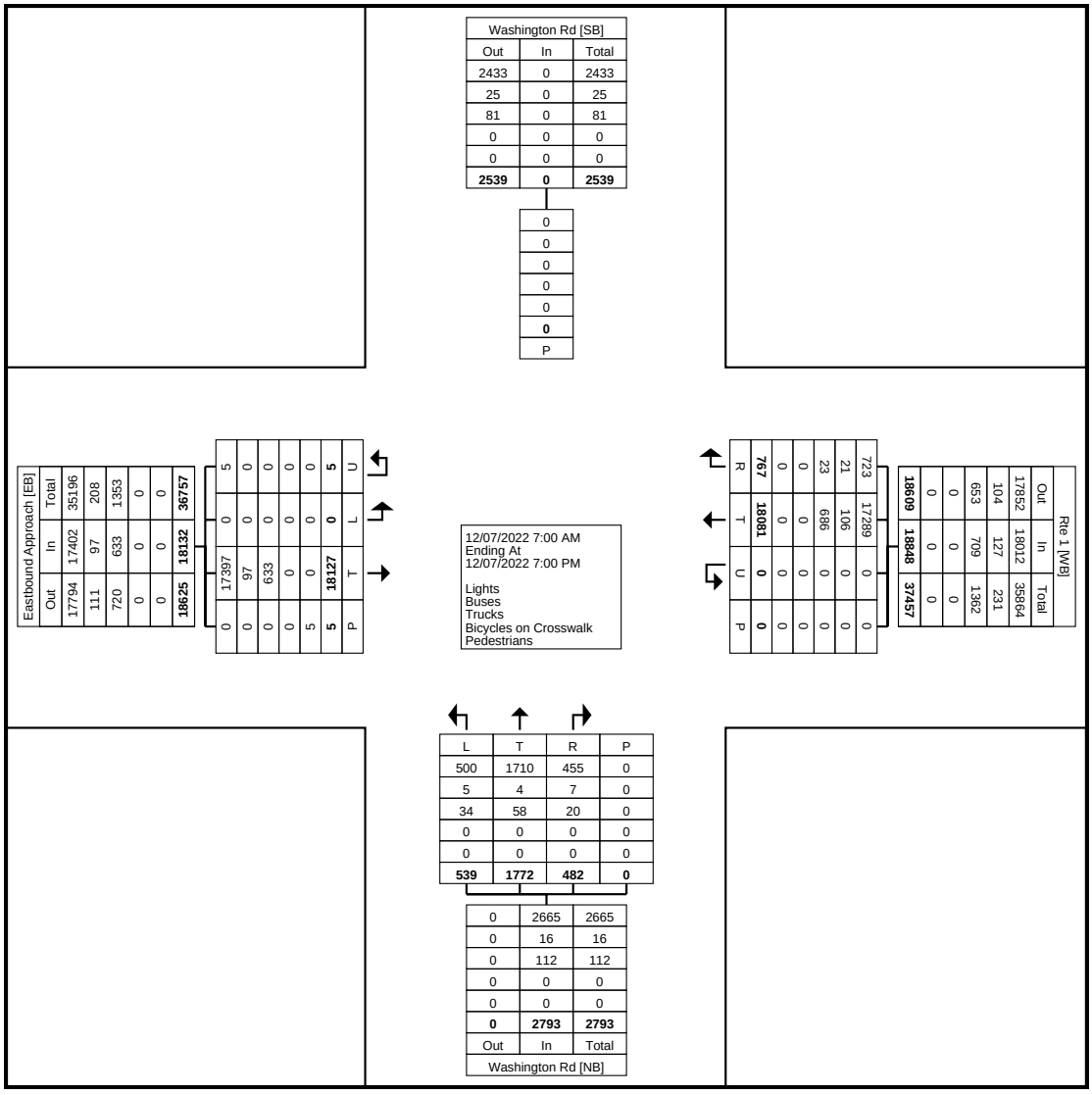
Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Data

Start Time	Eastbound Approach Eastbound					Rte 1 Westbound					Washington Rd Northbound					Washington Rd Southbound		
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
7:00 AM	0	580	0	0	580	518	35	0	0	553	16	56	22	0	94	0	0	1227
7:15 AM	0	488	0	0	488	584	29	0	0	613	13	65	15	0	93	0	0	1194
7:30 AM	0	484	0	0	484	616	43	0	0	659	11	101	18	0	130	0	0	1273
7:45 AM	0	496	0	0	496	537	25	0	0	562	11	77	14	0	102	0	0	1160
Hourly Total	0	2048	0	0	2048	2255	132	0	0	2387	51	299	69	0	419	0	0	4854
8:00 AM	0	708	0	0	708	669	22	0	0	691	13	82	6	0	101	0	0	1500
8:15 AM	0	720	0	0	720	731	36	0	0	767	20	82	12	0	114	0	0	1601
8:30 AM	0	687	0	0	687	717	23	0	0	740	21	85	10	0	116	0	0	1543
8:45 AM	0	684	0	0	684	666	34	0	0	700	21	105	11	0	137	0	0	1521
Hourly Total	0	2799	0	0	2799	2783	115	0	0	2898	75	354	39	0	468	0	0	6165
9:00 AM	0	511	0	0	511	611	36	0	0	647	20	84	11	0	115	0	0	1273
9:15 AM	0	493	0	0	493	638	32	0	0	670	14	56	19	0	89	0	0	1252
9:30 AM	0	505	1	0	506	565	40	0	0	605	11	52	13	0	76	0	0	1187
9:45 AM	0	596	1	5	597	492	22	0	0	514	23	61	18	0	102	0	0	1213
Hourly Total	0	2105	2	5	2107	2306	130	0	0	2436	68	253	61	0	382	0	0	4925
10:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
3:00 PM	0	556	0	0	556	627	15	0	0	642	29	48	29	0	106	0	0	1304
3:15 PM	0	722	0	0	722	743	17	0	0	760	11	51	16	0	78	0	0	1560
3:30 PM	0	672	2	0	674	658	8	0	0	666	38	53	24	0	115	0	0	1455
3:45 PM	0	803	0	0	803	802	20	0	0	822	23	47	17	0	87	0	0	1712
Hourly Total	0	2753	2	0	2755	2830	60	0	0	2890	101	199	86	0	386	0	0	6031
4:00 PM	0	669	0	0	669	747	26	0	0	773	16	46	22	0	84	0	0	1526
4:15 PM	0	811	0	0	811	826	25	0	0	851	22	37	17	0	76	0	0	1738
4:30 PM	0	747	0	0	747	761	21	0	0	782	19	38	15	0	72	0	0	1601
4:45 PM	0	795	0	0	795	731	25	0	0	756	24	66	17	0	107	0	0	1658
Hourly Total	0	3022	0	0	3022	3065	97	0	0	3162	81	187	71	0	339	0	0	6523
5:00 PM	0	765	0	0	765	670	19	0	0	689	21	43	21	0	85	0	0	1539
5:15 PM	0	780	0	0	780	753	26	0	0	779	24	55	17	0	96	0	0	1655
5:30 PM	0	736	1	0	737	659	30	0	0	689	20	62	21	0	103	0	0	1529
5:45 PM	0	745	0	0	745	704	38	0	0	742	20	61	21	0	102	0	0	1589
Hourly Total	0	3026	1	0	3027	2786	113	0	0	2899	85	221	80	0	386	0	0	6312
6:00 PM	0	614	0	0	614	550	24	0	0	574	18	76	16	0	110	0	0	1298
6:15 PM	0	643	0	0	643	537	34	0	0	571	13	53	24	0	90	0	0	1304
6:30 PM	0	561	0	0	561	464	35	0	0	499	24	67	16	0	107	0	0	1167
6:45 PM	0	556	0	0	556	504	27	0	0	531	23	63	20	0	106	0	0	1193
Hourly Total	0	2374	0	0	2374	2055	120	0	0	2175	78	259	76	0	413	0	0	4962
Grand Total	0	18127	5	5	18132	18081	767	0	0	18848	539	1772	482	0	2793	0	0	39773
Approach %	0.0	100.0	0.0	-	-	95.9	4.1	0.0	-	-	19.3	63.4	17.3	-	-	-	-	-
Total %	0.0	45.6	0.0	-	45.6	45.5	1.9	0.0	-	47.4	1.4	4.5	1.2	-	7.0	-	0.0	-
Lights	0	17397	5	-	17402	17289	723	0	-	18012	500	1710	455	-	2665	-	0	38079
% Lights	-	96.0	100.0	-	96.0	95.6	94.3	-	-	95.6	92.8	96.5	94.4	-	95.4	-	-	95.7
Buses	0	97	0	-	97	106	21	0	-	127	5	4	7	-	16	-	0	240
% Buses	-	0.5	0.0	-	0.5	0.6	2.7	-	-	0.7	0.9	0.2	1.5	-	0.6	-	-	0.6
Trucks	0	633	0	-	633	686	23	0	-	709	34	58	20	-	112	-	0	1454
% Trucks	-	3.5	0.0	-	3.5	3.8	3.0	-	-	3.8	6.3	3.3	4.1	-	4.0	-	-	3.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	5	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Data Plot

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610-466-1469
Serving Transportation Professionals Since 1995

West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Eastbound Approach Eastbound					Rte 1 Westbound					Washington Rd Northbound					Washington Rd Southbound		
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
8:00 AM	0	708	0	0	708	669	22	0	0	691	13	82	6	0	101	0	0	1500
8:15 AM	0	720	0	0	720	731	36	0	0	767	20	82	12	0	114	0	0	1601
8:30 AM	0	687	0	0	687	717	23	0	0	740	21	85	10	0	116	0	0	1543
8:45 AM	0	684	0	0	684	666	34	0	0	700	21	105	11	0	137	0	0	1521
Total	0	2799	0	0	2799	2783	115	0	0	2898	75	354	39	0	468	0	0	6165
Approach %	0.0	100.0	0.0	-	-	96.0	4.0	0.0	-	-	16.0	75.6	8.3	-	-	-	-	-
Total %	0.0	45.4	0.0	-	45.4	45.1	1.9	0.0	-	47.0	1.2	5.7	0.6	-	7.6	-	0.0	-
PHF	0.000	0.972	0.000	-	0.972	0.952	0.799	0.000	-	0.945	0.893	0.843	0.813	-	0.854	-	0.000	0.963
Lights	0	2617	0	-	2617	2625	107	0	-	2732	62	334	39	-	435	-	0	5784
% Lights	-	93.5	-	-	93.5	94.3	93.0	-	-	94.3	82.7	94.4	100.0	-	92.9	-	-	93.8
Buses	0	22	0	-	22	15	5	0	-	20	1	2	0	-	3	-	0	45
% Buses	-	0.8	-	-	0.8	0.5	4.3	-	-	0.7	1.3	0.6	0.0	-	0.6	-	-	0.7
Trucks	0	160	0	-	160	143	3	0	-	146	12	18	0	-	30	-	0	336
% Trucks	-	5.7	-	-	5.7	5.1	2.6	-	-	5.0	16.0	5.1	0.0	-	6.4	-	-	5.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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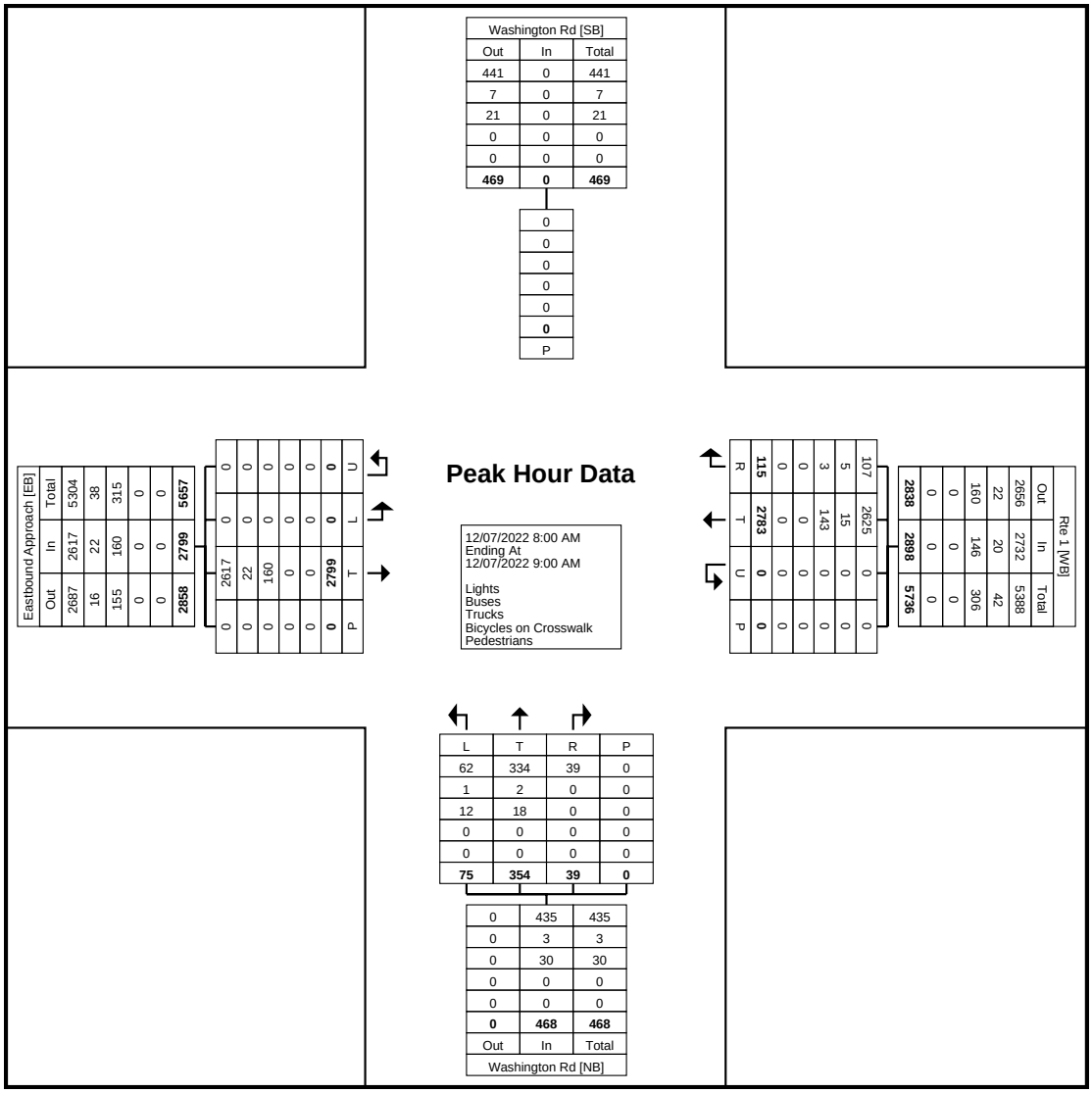
West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Peak Hour Data Plot (8:00 AM)

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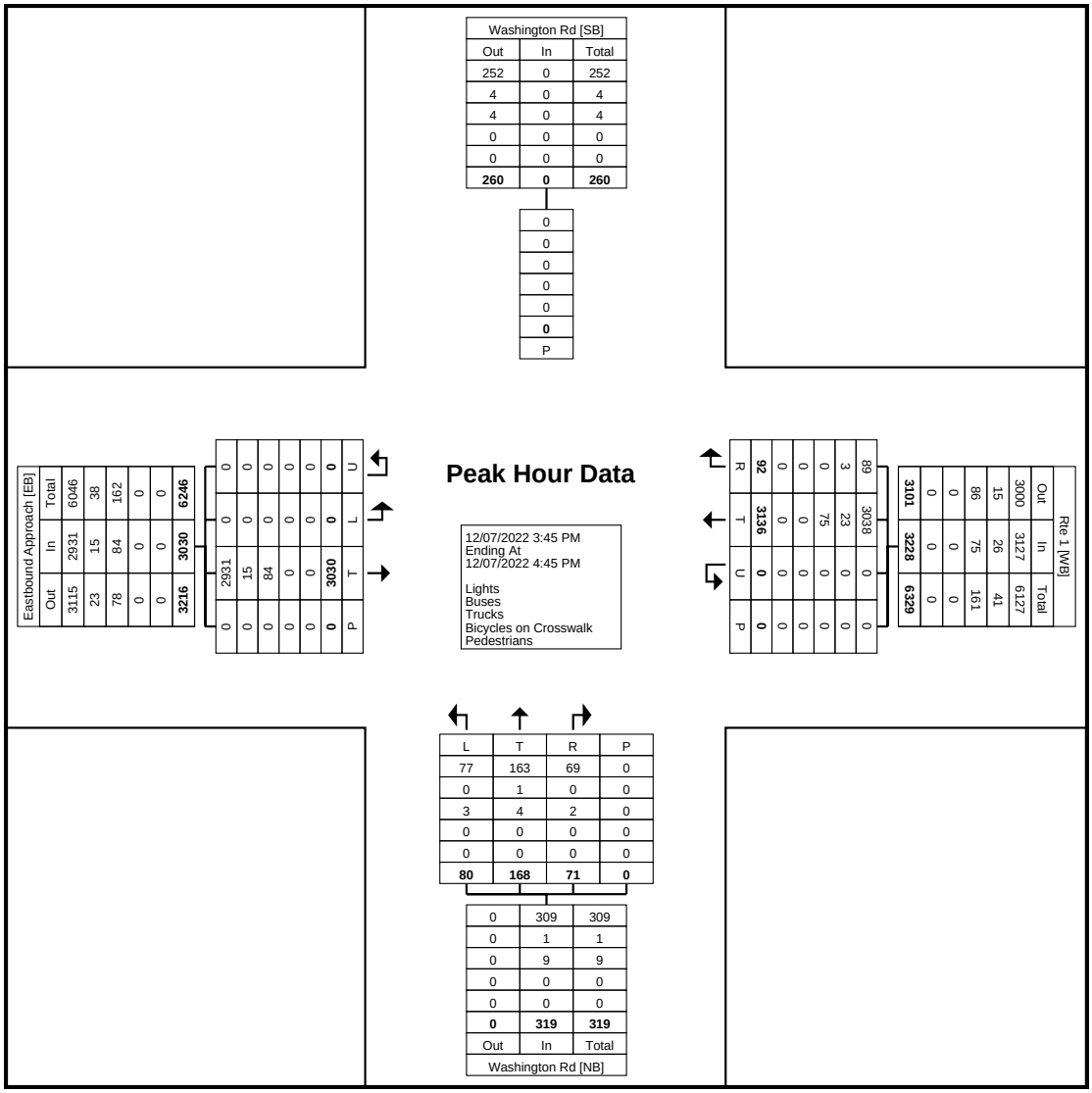
West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Eastbound Approach Eastbound					Rte 1 Westbound					Washington Rd Northbound					Washington Rd Southbound		
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
3:45 PM	0	803	0	0	803	802	20	0	0	822	23	47	17	0	87	0	0	1712
4:00 PM	0	669	0	0	669	747	26	0	0	773	16	46	22	0	84	0	0	1526
4:15 PM	0	811	0	0	811	826	25	0	0	851	22	37	17	0	76	0	0	1738
4:30 PM	0	747	0	0	747	761	21	0	0	782	19	38	15	0	72	0	0	1601
Total	0	3030	0	0	3030	3136	92	0	0	3228	80	168	71	0	319	0	0	6577
Approach %	0.0	100.0	0.0	-	-	97.1	2.9	0.0	-	-	25.1	52.7	22.3	-	-	-	-	-
Total %	0.0	46.1	0.0	-	46.1	47.7	1.4	0.0	-	49.1	1.2	2.6	1.1	-	4.9	-	0.0	-
PHF	0.000	0.934	0.000	-	0.934	0.949	0.885	0.000	-	0.948	0.870	0.894	0.807	-	0.917	-	0.000	0.946
Lights	0	2931	0	-	2931	3038	89	0	-	3127	77	163	69	-	309	-	0	6367
% Lights	-	96.7	-	-	96.7	96.9	96.7	-	-	96.9	96.3	97.0	97.2	-	96.9	-	-	96.8
Buses	0	15	0	-	15	23	3	0	-	26	0	1	0	-	1	-	0	42
% Buses	-	0.5	-	-	0.5	0.7	3.3	-	-	0.8	0.0	0.6	0.0	-	0.3	-	-	0.6
Trucks	0	84	0	-	84	75	0	0	-	75	3	4	2	-	9	-	0	168
% Trucks	-	2.8	-	-	2.8	2.4	0.0	-	-	2.3	3.8	2.4	2.8	-	2.8	-	-	2.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (3:45 PM)

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West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Data

Start Time	Eastbound Approach Eastbound			Washington Rd Northbound			Washington Rd Southbound		
	Left	Peds	App. Total	Thru	Peds	App. Total	Peds	App. Total	Int. Total
7:00 AM	23	0	23	67	0	67	0	0	90
7:15 AM	32	0	32	68	0	68	0	0	100
7:30 AM	45	0	45	84	0	84	0	0	129
7:45 AM	26	0	26	76	0	76	0	0	102
Hourly Total	126	0	126	295	0	295	0	0	421
8:00 AM	29	0	29	73	0	73	0	0	102
8:15 AM	25	0	25	89	0	89	0	0	114
8:30 AM	32	0	32	82	0	82	0	0	114
8:45 AM	40	0	40	85	0	85	0	0	125
Hourly Total	126	0	126	329	0	329	0	0	455
9:00 AM	54	0	54	78	0	78	0	0	132
9:15 AM	23	8	23	80	0	80	0	0	103
9:30 AM	30	0	30	54	0	54	0	0	84
9:45 AM	36	0	36	72	0	72	0	0	108
Hourly Total	143	8	143	284	0	284	0	0	427
10:00 AM	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0
3:00 PM	28	0	28	71	0	71	0	0	99
3:15 PM	29	0	29	50	0	50	0	0	79
3:30 PM	28	0	28	85	0	85	0	0	113
3:45 PM	30	0	30	62	0	62	0	0	92
Hourly Total	115	0	115	268	0	268	0	0	383
4:00 PM	18	0	18	60	0	60	0	0	78
4:15 PM	20	0	20	57	0	57	0	0	77
4:30 PM	26	0	26	48	0	48	0	0	74
4:45 PM	29	0	29	70	0	70	0	0	99
Hourly Total	93	0	93	235	0	235	0	0	328
5:00 PM	19	0	19	77	0	77	0	0	96
5:15 PM	25	0	25	70	0	70	0	0	95
5:30 PM	19	0	19	83	0	83	0	0	102
5:45 PM	26	0	26	76	0	76	0	0	102
Hourly Total	89	0	89	306	0	306	0	0	395
6:00 PM	21	0	21	83	0	83	0	0	104
6:15 PM	27	0	27	66	0	66	0	0	93
6:30 PM	24	0	24	82	0	82	0	0	106
6:45 PM	21	0	21	87	0	87	0	0	108
Hourly Total	93	0	93	318	0	318	0	0	411
Grand Total	785	8	785	2035	0	2035	0	0	2820
Approach %	100.0	-	-	100.0	-	-	-	-	-
Total %	27.8	-	27.8	72.2	-	72.2	-	0.0	-
Lights	748	-	748	1934	-	1934	-	0	2682
% Lights	95.3	-	95.3	95.0	-	95.0	-	-	95.1
Buses	2	-	2	15	-	15	-	0	17
% Buses	0.3	-	0.3	0.7	-	0.7	-	-	0.6
Trucks	35	-	35	86	-	86	-	0	121
% Trucks	4.5	-	4.5	4.2	-	4.2	-	-	4.3
Bicycles on Crosswalk	-	0	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	8	-	-	0	-	0	-	-
% Pedestrians	-	100.0	-	-	-	-	-	-	-

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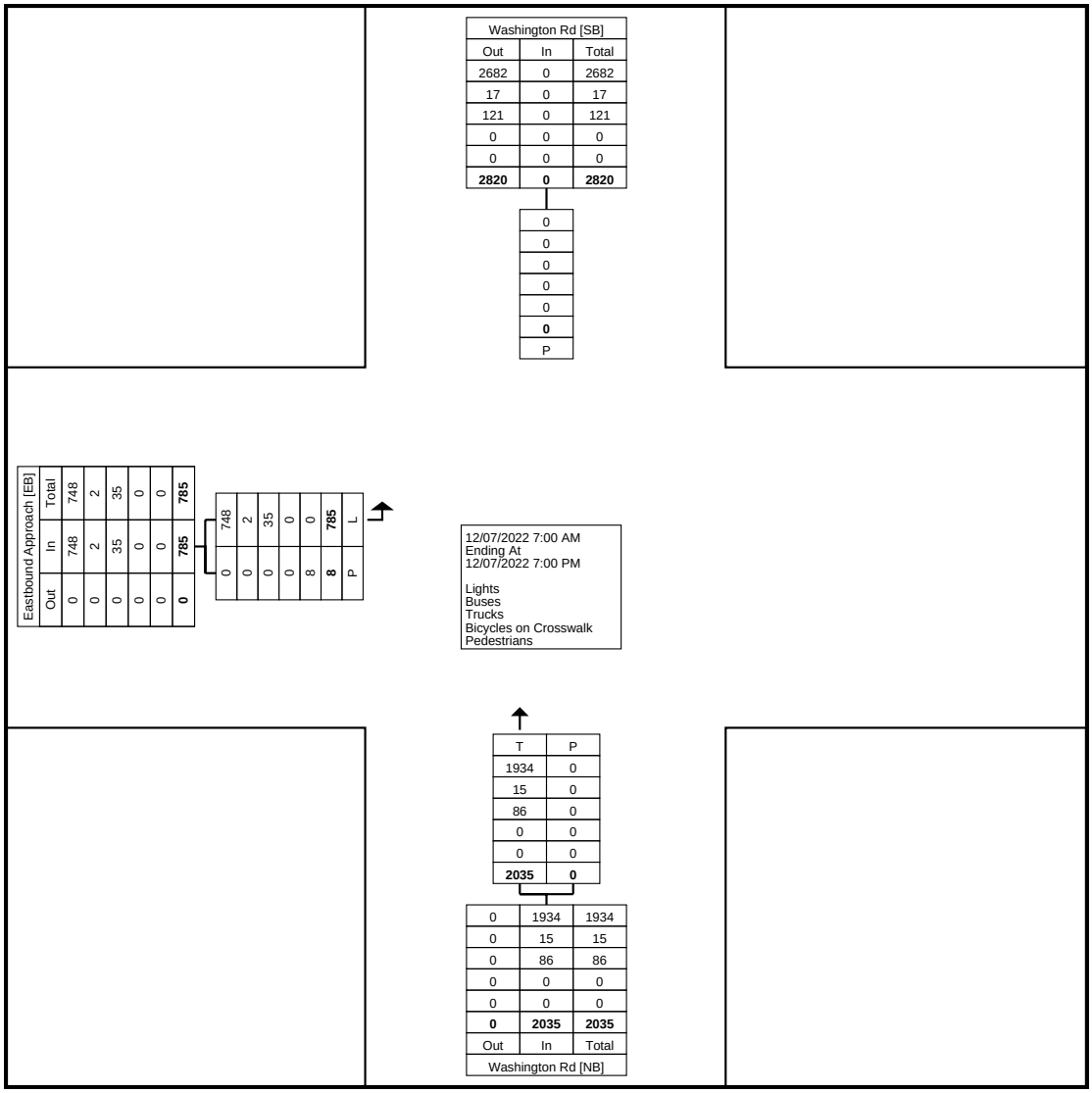
West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Data Plot

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West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

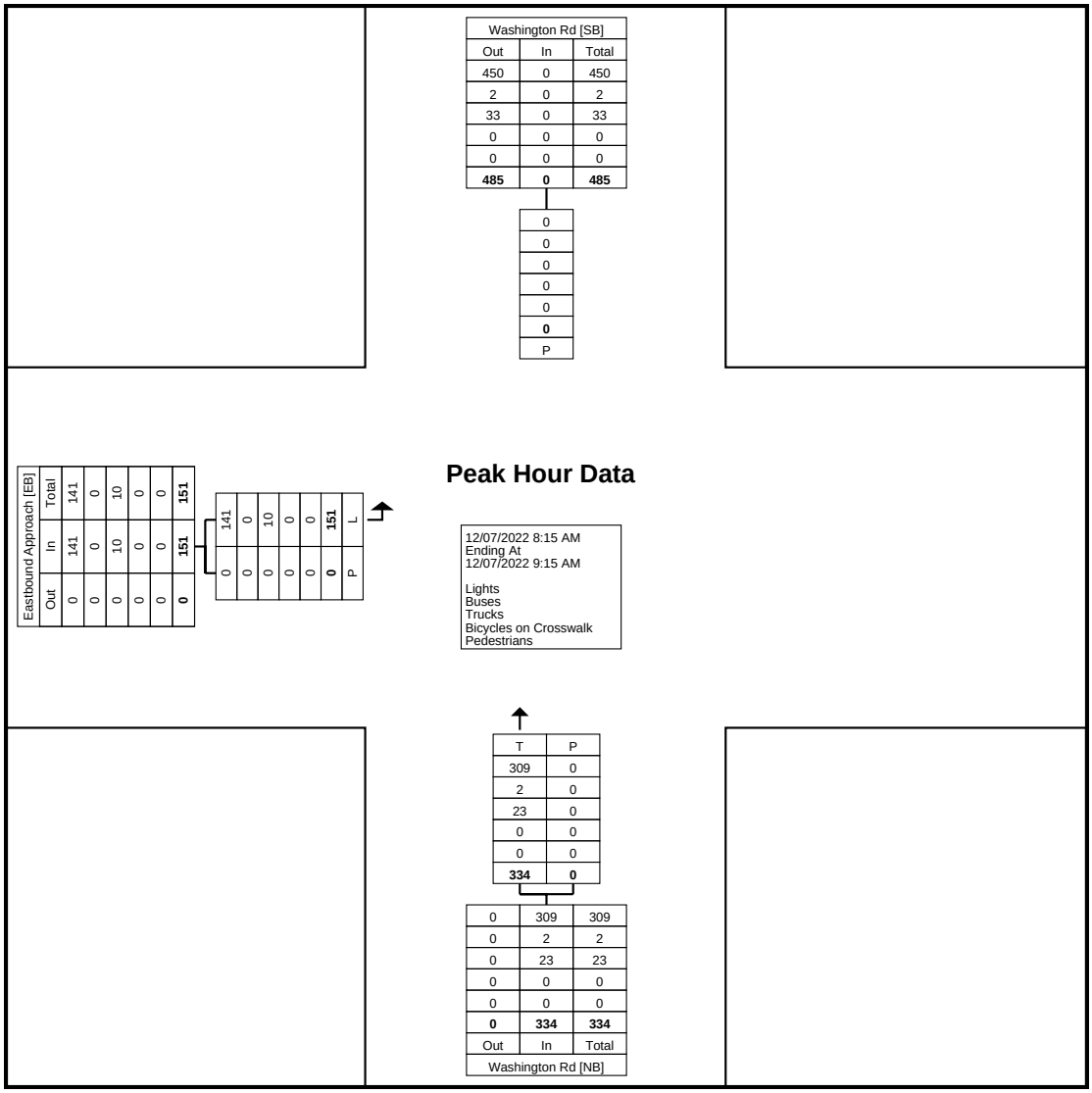
Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (8:15 AM)

Start Time	Eastbound Approach Eastbound			Washington Rd Northbound			Washington Rd Southbound		
	Left	Peds	App. Total	Thru	Peds	App. Total	Peds	App. Total	Int. Total
8:15 AM	25	0	25	89	0	89	0	0	114
8:30 AM	32	0	32	82	0	82	0	0	114
8:45 AM	40	0	40	85	0	85	0	0	125
9:00 AM	54	0	54	78	0	78	0	0	132
Total	151	0	151	334	0	334	0	0	485
Approach %	100.0	-	-	100.0	-	-	-	-	-
Total %	31.1	-	31.1	68.9	-	68.9	-	0.0	-
PHF	0.699	-	0.699	0.938	-	0.938	-	0.000	0.919
Lights	141	-	141	309	-	309	-	0	450
% Lights	93.4	-	93.4	92.5	-	92.5	-	-	92.8
Buses	0	-	0	2	-	2	-	0	2
% Buses	0.0	-	0.0	0.6	-	0.6	-	-	0.4
Trucks	10	-	10	23	-	23	-	0	33
% Trucks	6.6	-	6.6	6.9	-	6.9	-	-	6.8
Bicycles on Crosswalk	-	0	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Peak Hour Data Plot (8:15 AM)

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West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

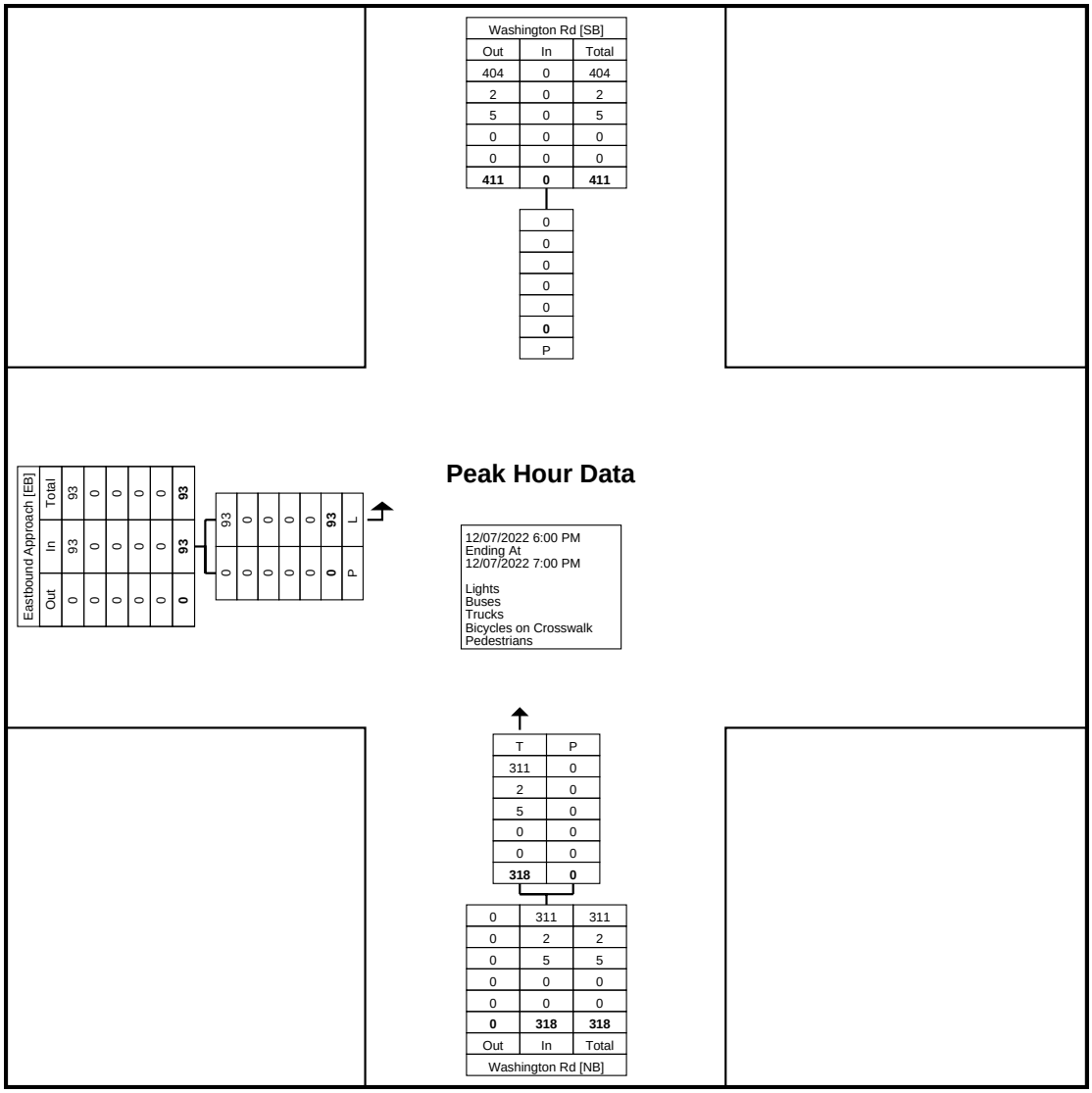
Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Eastbound Approach Eastbound			Washington Rd Northbound			Washington Rd Southbound		
	Left	Peds	App. Total	Thru	Peds	App. Total	Peds	App. Total	Int. Total
6:00 PM	21	0	21	83	0	83	0	0	104
6:15 PM	27	0	27	66	0	66	0	0	93
6:30 PM	24	0	24	82	0	82	0	0	106
6:45 PM	21	0	21	87	0	87	0	0	108
Total	93	0	93	318	0	318	0	0	411
Approach %	100.0	-	-	100.0	-	-	-	-	-
Total %	22.6	-	22.6	77.4	-	77.4	-	0.0	-
PHF	0.861	-	0.861	0.914	-	0.914	-	0.000	0.951
Lights	93	-	93	311	-	311	-	0	404
% Lights	100.0	-	100.0	97.8	-	97.8	-	-	98.3
Buses	0	-	0	2	-	2	-	0	2
% Buses	0.0	-	0.0	0.6	-	0.6	-	-	0.5
Trucks	0	-	0	5	-	5	-	0	5
% Trucks	0.0	-	0.0	1.6	-	1.6	-	-	1.2
Bicycles on Crosswalk	-	0	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Washington Rd & Route 1 East
Wednesday, December 7, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Peak Hour Data Plot (6:00 PM)

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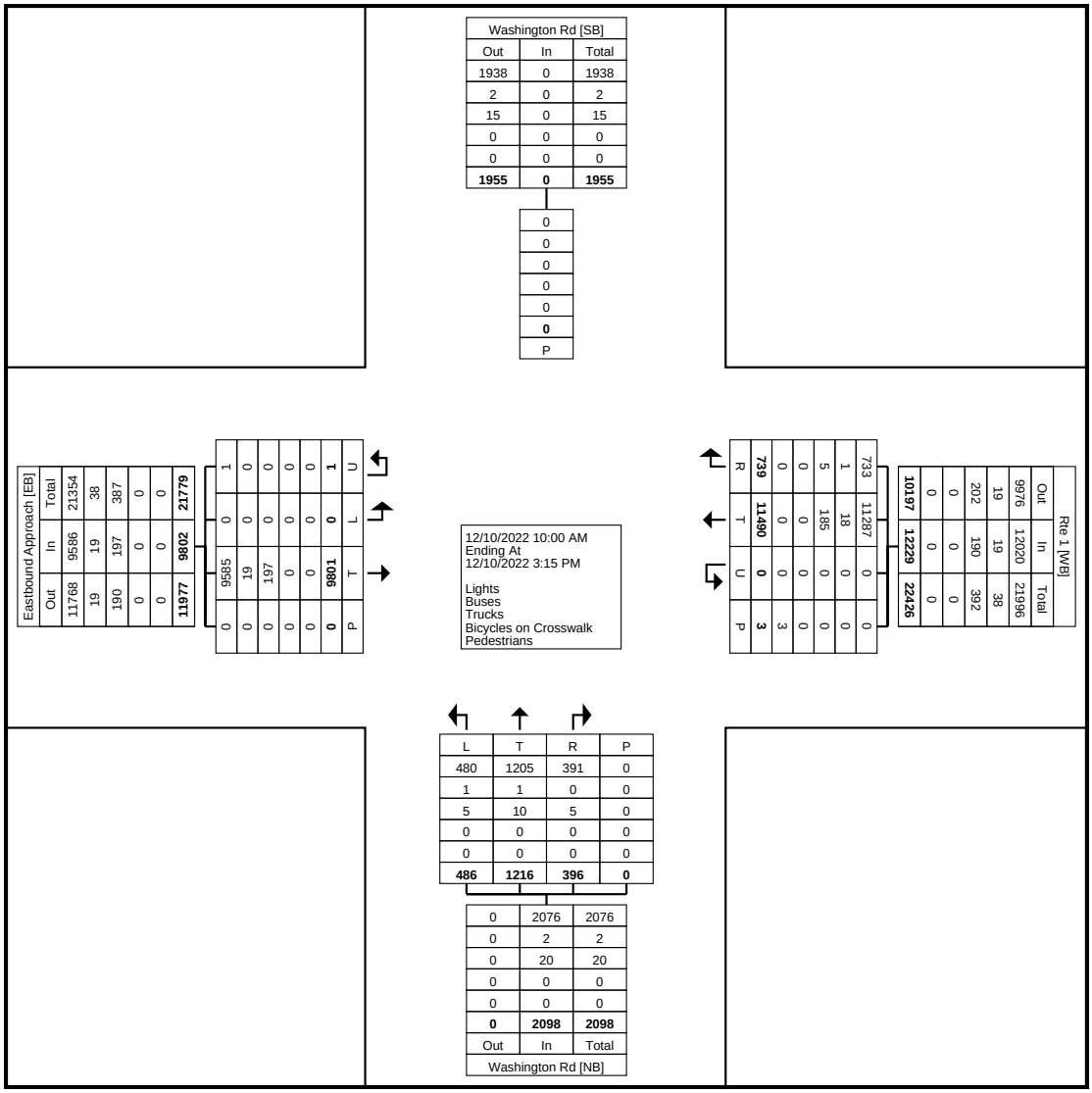
West Windsor, NJ
Washington Rd & Route 1 East
Saturday December 10, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Data

Start Time	Eastbound Approach Eastbound					Rte 1 Westbound					Washington Rd Northbound					Washington Rd Southbound		
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
10:00 AM	0	393	0	0	393	544	33	0	0	577	11	41	17	0	69	0	0	1039
10:15 AM	0	425	0	0	425	548	22	0	0	570	22	47	24	0	93	0	0	1088
10:30 AM	0	457	0	0	457	564	32	0	0	596	14	67	21	0	102	0	0	1155
10:45 AM	0	439	0	0	439	587	37	0	0	624	18	65	23	0	106	0	0	1169
Hourly Total	0	1714	0	0	1714	2243	124	0	0	2367	65	220	85	0	370	0	0	4451
11:00 AM	0	529	0	0	529	517	49	0	0	566	23	54	13	0	90	0	0	1185
11:15 AM	0	421	0	0	421	487	37	0	0	524	15	53	14	0	82	0	0	1027
11:30 AM	0	435	0	0	435	514	41	0	0	555	27	65	8	0	100	0	0	1090
11:45 AM	0	361	0	0	361	620	39	0	0	659	18	57	7	0	82	0	0	1102
Hourly Total	0	1746	0	0	1746	2138	166	0	0	2304	83	229	42	0	354	0	0	4404
12:00 PM	0	419	0	0	419	541	37	0	0	578	25	79	25	0	129	0	0	1126
12:15 PM	0	496	1	0	497	652	35	0	0	687	28	47	18	0	93	0	0	1277
12:30 PM	0	437	0	0	437	567	33	0	0	600	32	96	22	0	150	0	0	1187
12:45 PM	0	483	0	0	483	629	35	0	0	664	24	80	23	0	127	0	0	1274
Hourly Total	0	1835	1	0	1836	2389	140	0	0	2529	109	302	88	0	499	0	0	4864
1:00 PM	0	469	0	0	469	607	35	0	0	642	43	68	23	0	134	0	0	1245
1:15 PM	0	540	0	0	540	653	50	0	0	703	20	55	21	0	96	0	0	1339
1:30 PM	0	487	0	0	487	557	41	0	0	598	35	70	25	0	130	0	0	1215
1:45 PM	0	613	0	0	613	686	28	0	0	714	21	52	26	0	99	0	0	1426
Hourly Total	0	2109	0	0	2109	2503	154	0	0	2657	119	245	95	0	459	0	0	5225
2:00 PM	0	508	0	0	508	536	30	0	2	566	29	63	24	0	116	0	0	1190
2:15 PM	0	646	0	0	646	587	44	0	1	631	25	61	13	0	99	0	0	1376
2:30 PM	0	558	0	0	558	522	42	0	0	564	35	59	32	0	126	0	0	1248
2:45 PM	0	684	0	0	684	572	39	0	0	611	21	37	17	0	75	0	0	1370
Hourly Total	0	2396	0	0	2396	2217	155	0	3	2372	110	220	86	0	416	0	0	5184
3:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	9801	1	0	9802	11490	739	0	3	12229	486	1216	396	0	2098	0	0	24129
Approach %	0.0	100.0	0.0	-	-	94.0	6.0	0.0	-	-	23.2	58.0	18.9	-	-	-	-	-
Total %	0.0	40.6	0.0	-	40.6	47.6	3.1	0.0	-	50.7	2.0	5.0	1.6	-	8.7	-	0.0	-
Lights	0	9585	1	-	9586	11287	733	0	-	12020	480	1205	391	-	2076	-	0	23682
% Lights	-	97.8	100.0	-	97.8	98.2	99.2	-	-	98.3	98.8	99.1	98.7	-	99.0	-	-	98.1
Buses	0	19	0	-	19	18	1	0	-	19	1	1	0	-	2	-	0	40
% Buses	-	0.2	0.0	-	0.2	0.2	0.1	-	-	0.2	0.2	0.1	0.0	-	0.1	-	-	0.2
Trucks	0	197	0	-	197	185	5	0	-	190	5	10	5	-	20	-	0	407
% Trucks	-	2.0	0.0	-	2.0	1.6	0.7	-	-	1.6	1.0	0.8	1.3	-	1.0	-	-	1.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	3	-	-	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-



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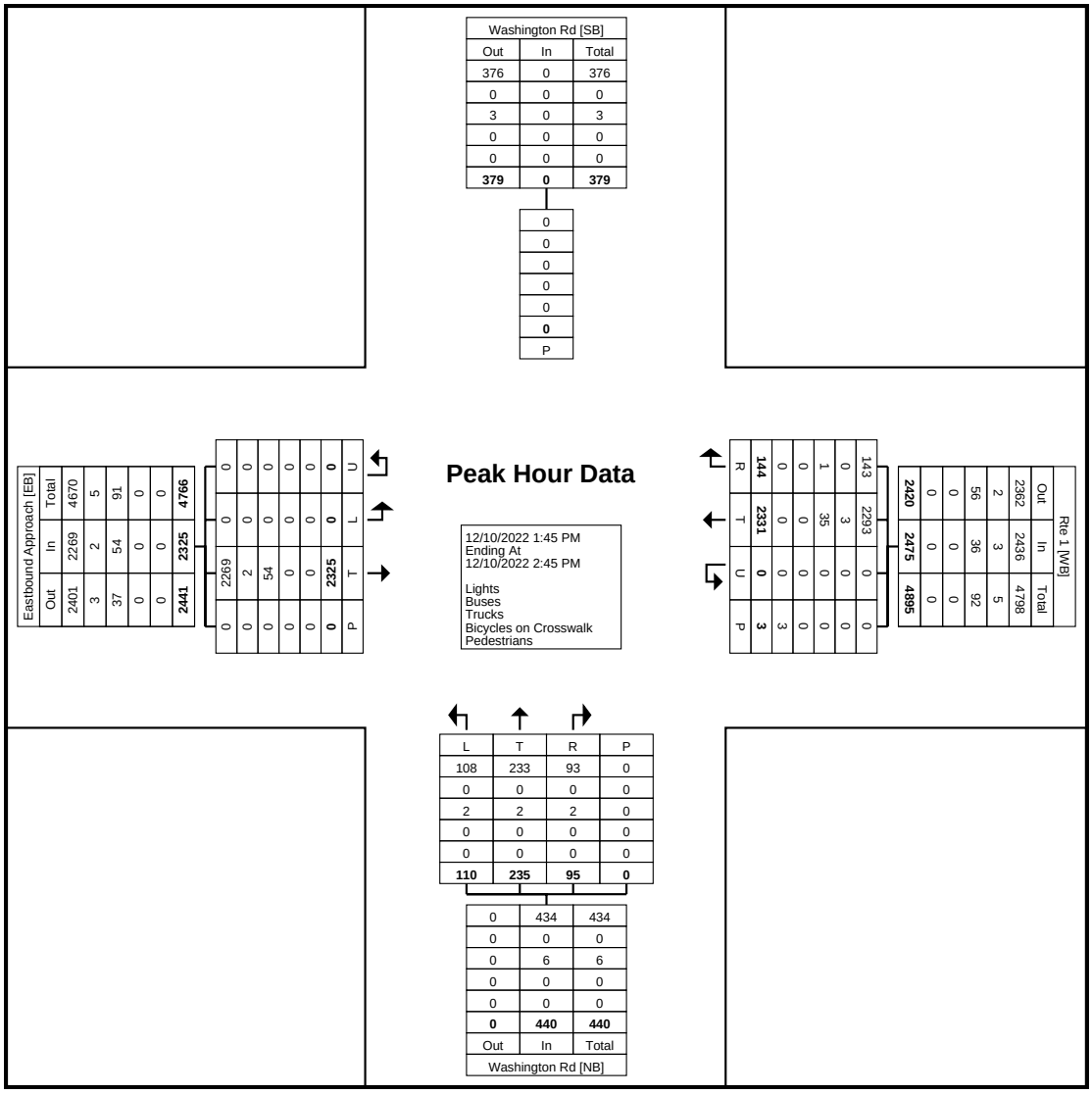
West Windsor, NJ
Washington Rd & Route 1 East
Saturday December 10, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Peak Hour Data (1:45 PM)

Start Time	Eastbound Approach Eastbound					Rte 1 Westbound					Washington Rd Northbound					Washington Rd Southbound		
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
1:45 PM	0	613	0	0	613	686	28	0	0	714	21	52	26	0	99	0	0	1426
2:00 PM	0	508	0	0	508	536	30	0	2	566	29	63	24	0	116	0	0	1190
2:15 PM	0	646	0	0	646	587	44	0	1	631	25	61	13	0	99	0	0	1376
2:30 PM	0	558	0	0	558	522	42	0	0	564	35	59	32	0	126	0	0	1248
Total	0	2325	0	0	2325	2331	144	0	3	2475	110	235	95	0	440	0	0	5240
Approach %	0.0	100.0	0.0	-	-	94.2	5.8	0.0	-	-	25.0	53.4	21.6	-	-	-	-	-
Total %	0.0	44.4	0.0	-	44.4	44.5	2.7	0.0	-	47.2	2.1	4.5	1.8	-	8.4	-	0.0	-
PHF	0.000	0.900	0.000	-	0.900	0.849	0.818	0.000	-	0.867	0.786	0.933	0.742	-	0.873	-	0.000	0.919
Lights	0	2269	0	-	2269	2293	143	0	-	2436	108	233	93	-	434	-	0	5139
% Lights	-	97.6	-	-	97.6	98.4	99.3	-	-	98.4	98.2	99.1	97.9	-	98.6	-	-	98.1
Buses	0	2	0	-	2	3	0	0	-	3	0	0	0	-	0	-	0	5
% Buses	-	0.1	-	-	0.1	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	0.0	-	-	0.1
Trucks	0	54	0	-	54	35	1	0	-	36	2	2	2	-	6	-	0	96
% Trucks	-	2.3	-	-	2.3	1.5	0.7	-	-	1.5	1.8	0.9	2.1	-	1.4	-	-	1.8
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	3	-	-	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (1:45 PM)

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West Windsor, NJ
Washington Rd & Route 1 East
Saturday, December 10, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Data

Start Time	Eastbound Approach Eastbound			Washington Rd Northbound			Washington Rd Southbound		
	Left	Peds	App. Total	Thru	Peds	App. Total	Peds	App. Total	Int. Total
10:00 AM	20	0	20	45	0	45	0	0	65
10:15 AM	30	0	30	63	0	63	0	0	93
10:30 AM	26	0	26	72	0	72	0	0	98
10:45 AM	36	0	36	63	0	63	0	0	99
Hourly Total	112	0	112	243	0	243	0	0	355
11:00 AM	27	0	27	75	0	75	0	0	102
11:15 AM	25	0	25	69	0	69	0	0	94
11:30 AM	25	0	25	79	0	79	0	0	104
11:45 AM	30	0	30	68	0	68	0	0	98
Hourly Total	107	0	107	291	0	291	0	0	398
12:00 PM	26	0	26	86	0	86	0	0	112
12:15 PM	24	0	24	77	0	77	0	0	101
12:30 PM	38	0	38	103	0	103	0	0	141
12:45 PM	27	0	27	105	0	105	0	0	132
Hourly Total	115	0	115	371	0	371	0	0	486
1:00 PM	30	0	30	106	0	106	0	0	136
1:15 PM	22	0	22	82	0	82	0	0	104
1:30 PM	31	0	31	98	0	98	0	0	129
1:45 PM	28	0	28	86	0	86	0	0	114
Hourly Total	111	0	111	372	0	372	0	0	483
2:00 PM	35	0	35	78	0	78	0	0	113
2:15 PM	27	0	27	76	0	76	0	0	103
2:30 PM	34	0	34	85	0	85	0	0	119
2:45 PM	17	0	17	67	0	67	0	0	84
Hourly Total	113	0	113	306	0	306	0	0	419
3:00 PM	0	0	0	0	0	0	0	0	0
Grand Total	558	0	558	1583	0	1583	0	0	2141
Approach %	100.0	-	-	100.0	-	-	-	-	-
Total %	26.1	-	26.1	73.9	-	73.9	-	0.0	-
Lights	547	-	547	1567	-	1567	-	0	2114
% Lights	98.0	-	98.0	99.0	-	99.0	-	-	98.7
Buses	1	-	1	0	-	0	-	0	1
% Buses	0.2	-	0.2	0.0	-	0.0	-	-	0.0
Trucks	10	-	10	16	-	16	-	0	26
% Trucks	1.8	-	1.8	1.0	-	1.0	-	-	1.2
Bicycles on Crosswalk	-	0	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-

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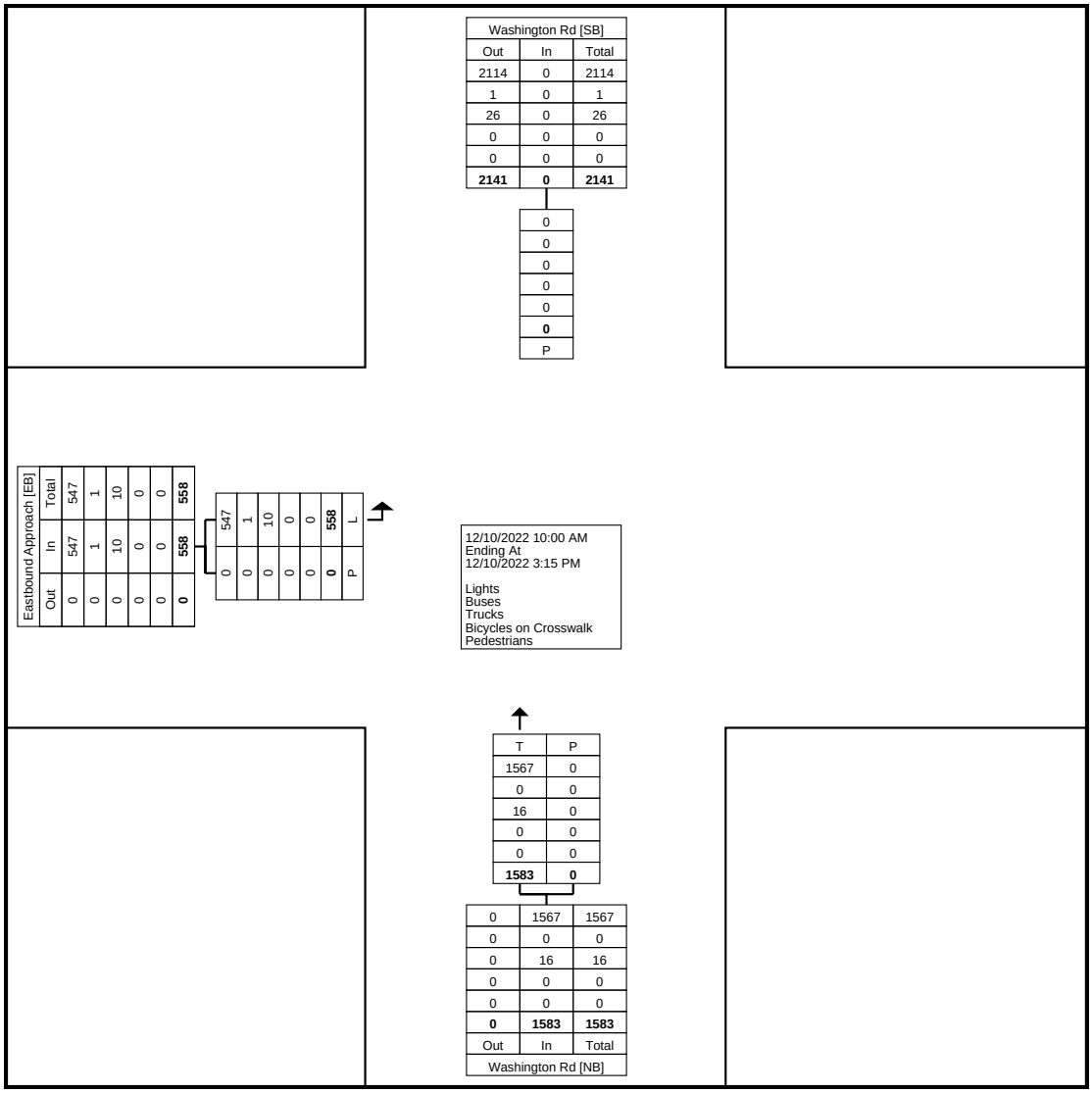
West Windsor, NJ
Washington Rd & Route 1 East
Saturday, December 10, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/10)
Site Code:
Start Date: 12/10/2022



Turning Movement Data Plot

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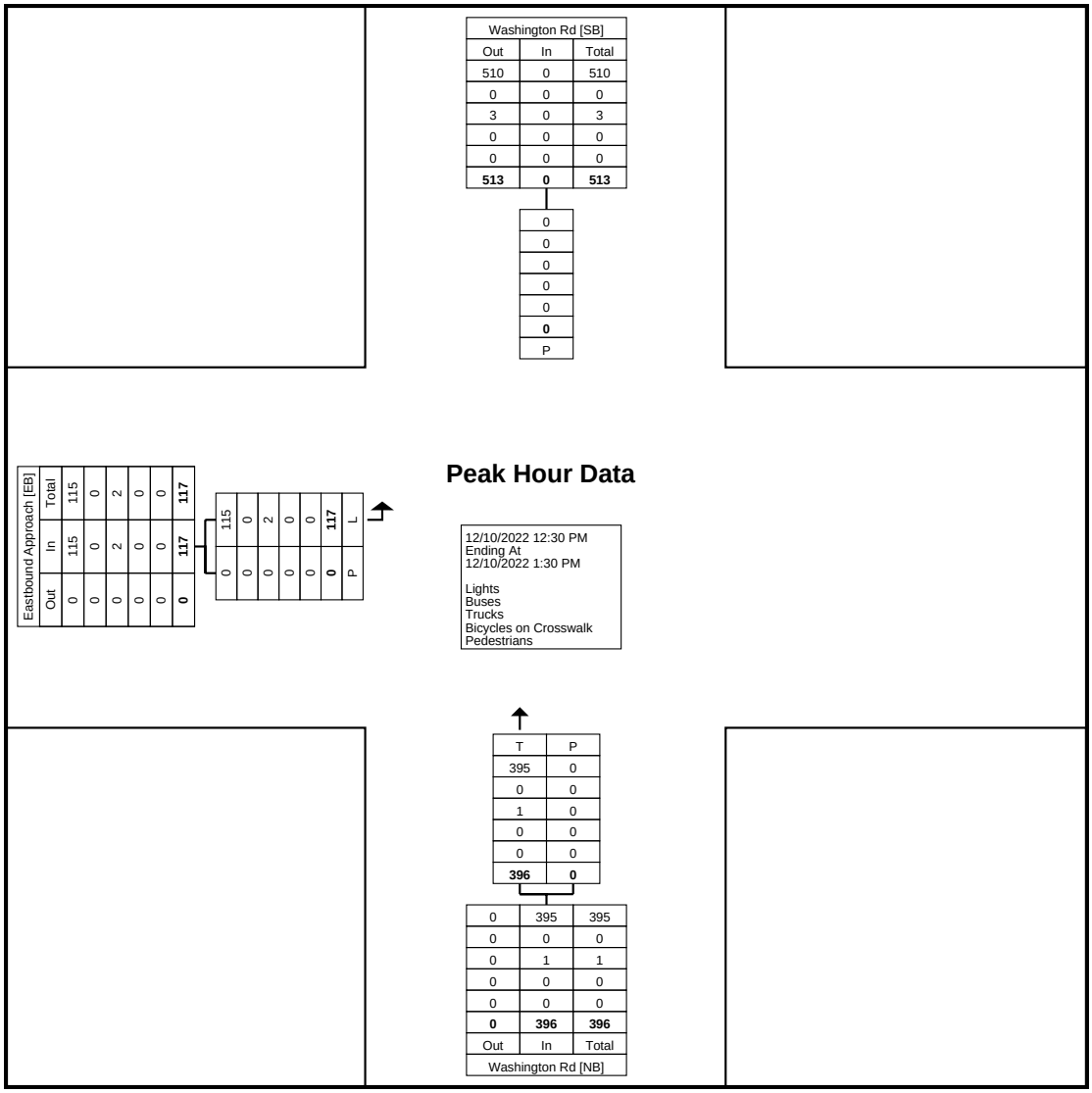
West Windsor, NJ
Washington Rd & Route 1 East
Saturday, December 10, 2022
Location: 40.331696, -74.637785

Count Name: Washington Rd & Route 1 east (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Peak Hour Data (12:30 PM)

Start Time	Eastbound Approach Eastbound			Washington Rd Northbound			Washington Rd Southbound		
	Left	Peds	App. Total	Thru	Peds	App. Total	Peds	App. Total	Int. Total
12:30 PM	38	0	38	103	0	103	0	0	141
12:45 PM	27	0	27	105	0	105	0	0	132
1:00 PM	30	0	30	106	0	106	0	0	136
1:15 PM	22	0	22	82	0	82	0	0	104
Total	117	0	117	396	0	396	0	0	513
Approach %	100.0	-	-	100.0	-	-	-	-	-
Total %	22.8	-	22.8	77.2	-	77.2	-	0.0	-
PHF	0.770	-	0.770	0.934	-	0.934	-	0.000	0.910
Lights	115	-	115	395	-	395	-	0	510
% Lights	98.3	-	98.3	99.7	-	99.7	-	-	99.4
Buses	0	-	0	0	-	0	-	0	0
% Buses	0.0	-	0.0	0.0	-	0.0	-	-	0.0
Trucks	2	-	2	1	-	1	-	0	3
% Trucks	1.7	-	1.7	0.3	-	0.3	-	-	0.6
Bicycles on Crosswalk	-	0	-	-	0	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	-	0	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (12:30 PM)

TRI-STATE TRAFFIC DATA
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West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Data

Start Time	Rte 1 Eastbound					Westbound Approach Westbound					Washington Rd Northbound		Washington Rd Southbound				Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	
7:00 AM	605	38	0	0	643	0	512	0	0	512	0	0	39	22	0	61	1216
7:15 AM	786	58	0	0	844	0	583	0	0	583	0	0	44	21	0	65	1492
7:30 AM	721	72	0	0	793	0	616	0	0	616	0	0	46	15	0	61	1470
7:45 AM	803	44	0	0	847	0	562	0	0	562	0	0	33	33	0	66	1475
Hourly Total	2915	212	0	0	3127	0	2273	0	0	2273	0	0	162	91	0	253	5653
8:00 AM	689	43	0	0	732	0	595	0	0	595	0	0	54	39	0	93	1420
8:15 AM	736	46	0	0	782	0	649	0	0	649	0	0	46	36	0	82	1513
8:30 AM	713	46	0	0	759	0	619	0	0	619	0	0	35	37	0	72	1450
8:45 AM	673	63	0	0	736	0	527	0	0	527	0	0	33	53	0	86	1349
Hourly Total	2811	198	0	0	3009	0	2390	0	0	2390	0	0	168	165	0	333	5732
9:00 AM	606	56	0	0	662	0	621	0	0	621	0	0	39	34	0	73	1356
9:15 AM	499	41	1	0	541	0	682	0	0	682	0	0	38	16	0	54	1277
9:30 AM	522	62	0	0	584	0	601	0	0	601	0	0	34	21	0	55	1240
9:45 AM	456	44	0	0	500	0	527	0	0	527	0	0	35	38	0	73	1100
Hourly Total	2083	203	1	0	2287	0	2431	0	0	2431	0	0	146	109	0	255	4973
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	533	39	0	0	572	0	659	0	0	659	0	0	43	84	0	127	1358
3:15 PM	670	56	0	0	726	0	761	0	0	761	0	0	50	64	0	114	1601
3:30 PM	624	39	0	0	663	0	744	0	0	744	0	0	43	105	0	148	1555
3:45 PM	711	53	0	0	764	0	874	0	0	874	0	0	62	50	0	112	1750
Hourly Total	2538	187	0	0	2725	0	3038	0	0	3038	0	0	198	303	0	501	6264
4:00 PM	678	42	0	0	720	0	745	0	0	745	0	0	65	64	0	129	1594
4:15 PM	751	38	0	0	789	0	803	0	0	803	0	0	49	52	0	101	1693
4:30 PM	737	48	0	0	785	0	725	0	0	725	0	0	51	50	0	101	1611
4:45 PM	687	48	1	0	736	0	643	0	0	643	0	0	64	52	0	116	1495
Hourly Total	2853	176	1	0	3030	0	2916	0	0	2916	0	0	229	218	0	447	6393
5:00 PM	635	54	0	1	689	0	642	0	0	642	0	0	87	50	0	137	1468
5:15 PM	757	52	0	0	809	0	698	0	0	698	0	0	62	52	0	114	1621
5:30 PM	655	52	0	0	707	0	679	0	0	679	0	0	61	44	0	105	1491
5:45 PM	739	44	0	0	783	0	692	0	0	692	0	0	55	43	0	98	1573
Hourly Total	2786	202	0	1	2988	0	2711	0	0	2711	0	0	265	189	0	454	6153
6:00 PM	518	44	0	0	562	0	621	0	0	621	0	0	66	43	0	109	1292
6:15 PM	507	49	0	0	556	0	567	0	0	567	0	0	57	58	0	115	1238
6:30 PM	417	30	0	0	447	0	511	0	0	511	0	0	75	64	0	139	1097
6:45 PM	485	47	0	0	532	0	554	0	0	554	0	0	26	40	0	66	1152
Hourly Total	1927	170	0	0	2097	0	2253	0	0	2253	0	0	224	205	0	429	4779
Grand Total	17913	1348	2	1	19263	0	18012	0	0	18012	0	0	1392	1280	0	2672	39947
Approach %	93.0	7.0	0.0	-	-	0.0	100.0	0.0	-	-	-	-	52.1	47.9	-	-	-
Total %	44.8	3.4	0.0	-	48.2	0.0	45.1	0.0	-	45.1	-	0.0	3.5	3.2	-	6.7	-
Lights	17196	1275	2	-	18473	0	17189	0	-	17189	-	0	1354	1215	-	2569	38231
% Lights	96.0	94.6	100.0	-	95.9	-	95.4	-	-	95.4	-	-	97.3	94.9	-	96.1	95.7
Buses	91	7	0	-	98	0	112	0	-	112	-	0	11	9	-	20	230
% Buses	0.5	0.5	0.0	-	0.5	-	0.6	-	-	0.6	-	-	0.8	0.7	-	0.7	0.6
Trucks	626	66	0	-	692	0	711	0	-	711	-	0	27	56	-	83	1486
% Trucks	3.5	4.9	0.0	-	3.6	-	3.9	-	-	3.9	-	-	1.9	4.4	-	3.1	3.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-

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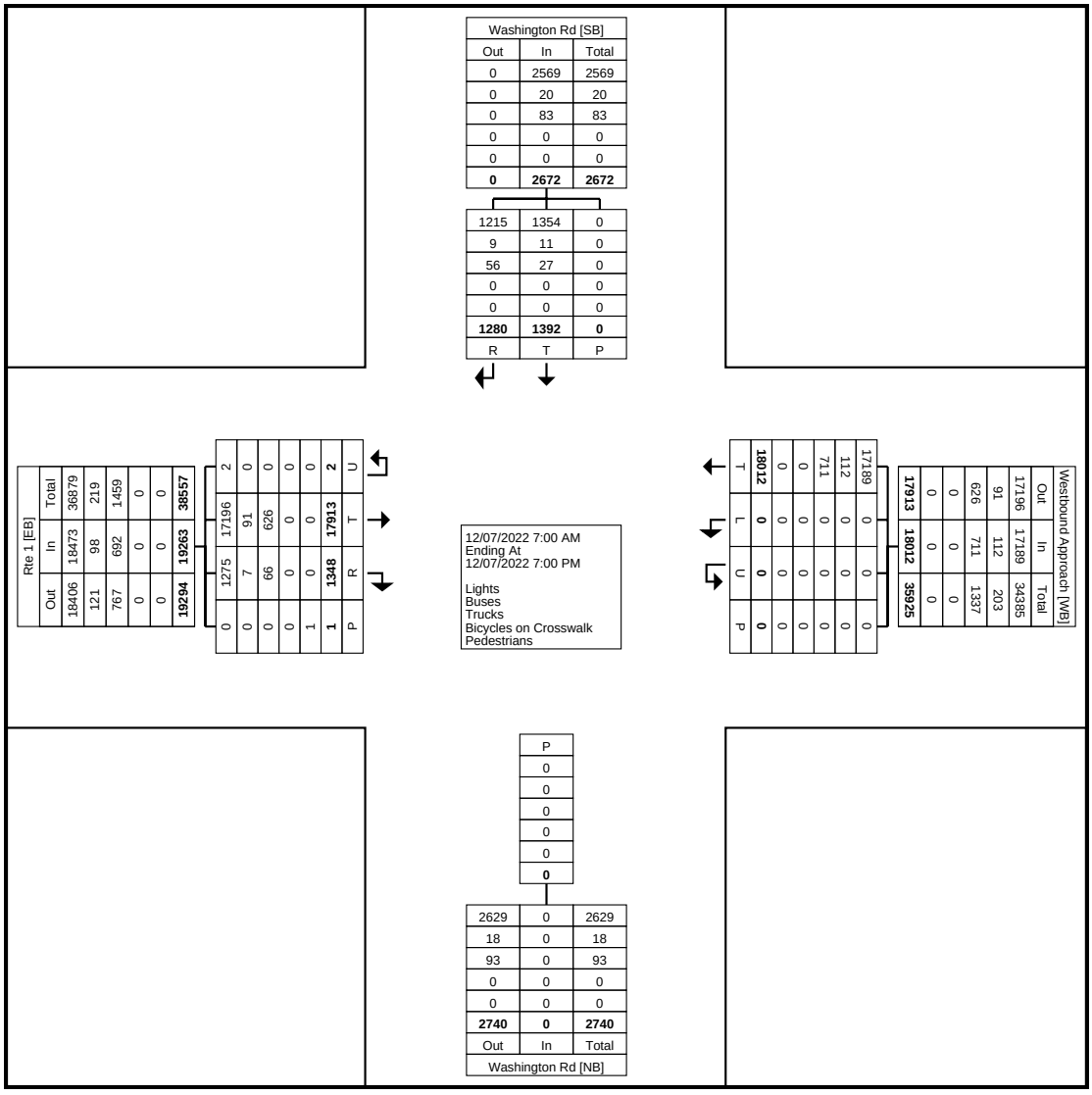
West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022



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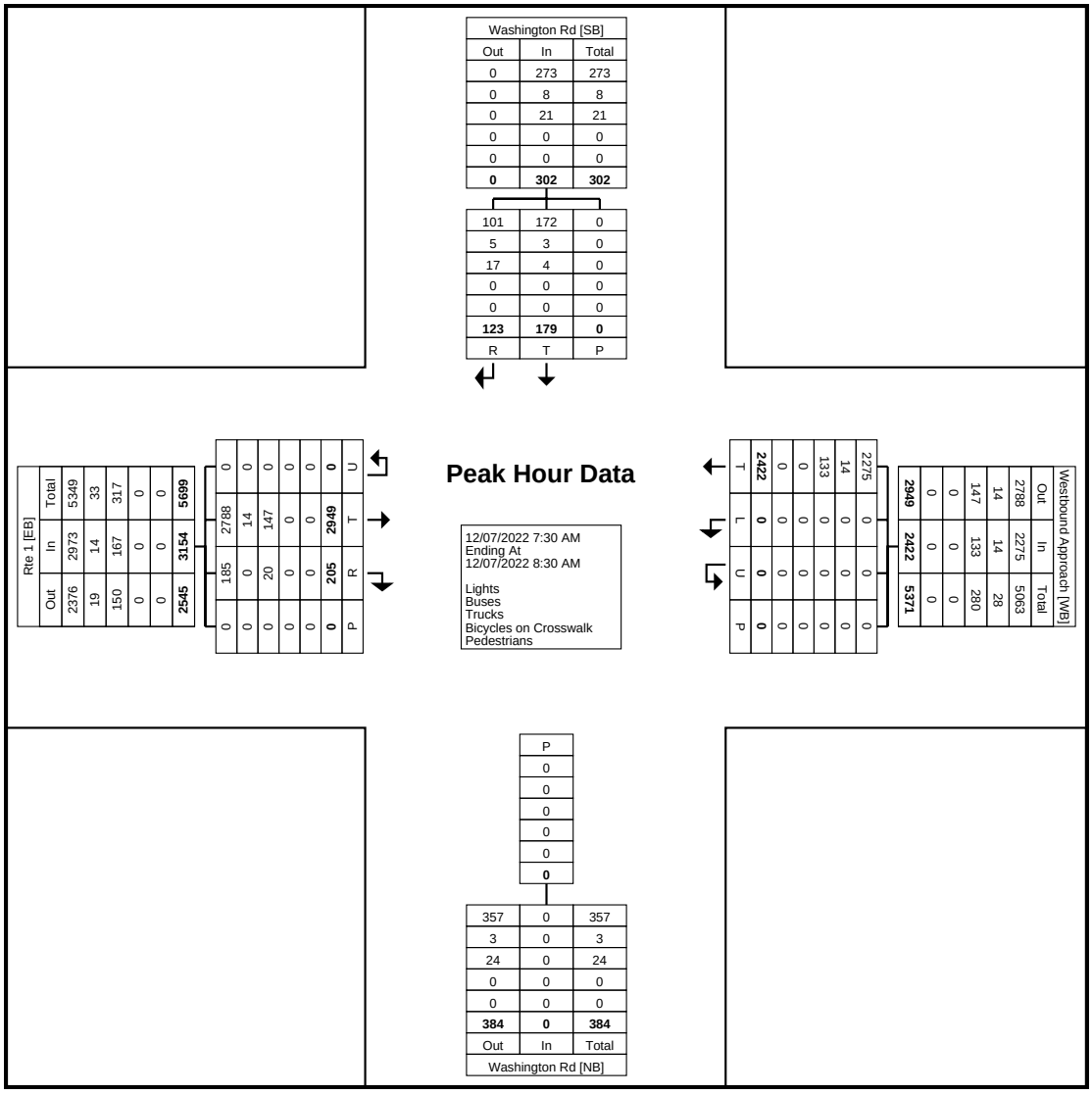
West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Rte 1 Eastbound					Westbound Approach Westbound					Washington Rd Northbound		Washington Rd Southbound				Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	
7:30 AM	721	72	0	0	793	0	616	0	0	616	0	0	46	15	0	61	1470
7:45 AM	803	44	0	0	847	0	562	0	0	562	0	0	33	33	0	66	1475
8:00 AM	689	43	0	0	732	0	595	0	0	595	0	0	54	39	0	93	1420
8:15 AM	736	46	0	0	782	0	649	0	0	649	0	0	46	36	0	82	1513
Total	2949	205	0	0	3154	0	2422	0	0	2422	0	0	179	123	0	302	5878
Approach %	93.5	6.5	0.0	-	-	0.0	100.0	0.0	-	-	-	-	59.3	40.7	-	-	-
Total %	50.2	3.5	0.0	-	53.7	0.0	41.2	0.0	-	41.2	-	0.0	3.0	2.1	-	5.1	-
PHF	0.918	0.712	0.000	-	0.931	0.000	0.933	0.000	-	0.933	-	0.000	0.829	0.788	-	0.812	0.971
Lights	2788	185	0	-	2973	0	2275	0	-	2275	-	0	172	101	-	273	5521
% Lights	94.5	90.2	-	-	94.3	-	93.9	-	-	93.9	-	-	96.1	82.1	-	90.4	93.9
Buses	14	0	0	-	14	0	14	0	-	14	-	0	3	5	-	8	36
% Buses	0.5	0.0	-	-	0.4	-	0.6	-	-	0.6	-	-	1.7	4.1	-	2.6	0.6
Trucks	147	20	0	-	167	0	133	0	-	133	-	0	4	17	-	21	321
% Trucks	5.0	9.8	-	-	5.3	-	5.5	-	-	5.5	-	-	2.2	13.8	-	7.0	5.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (7:30 AM)

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West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

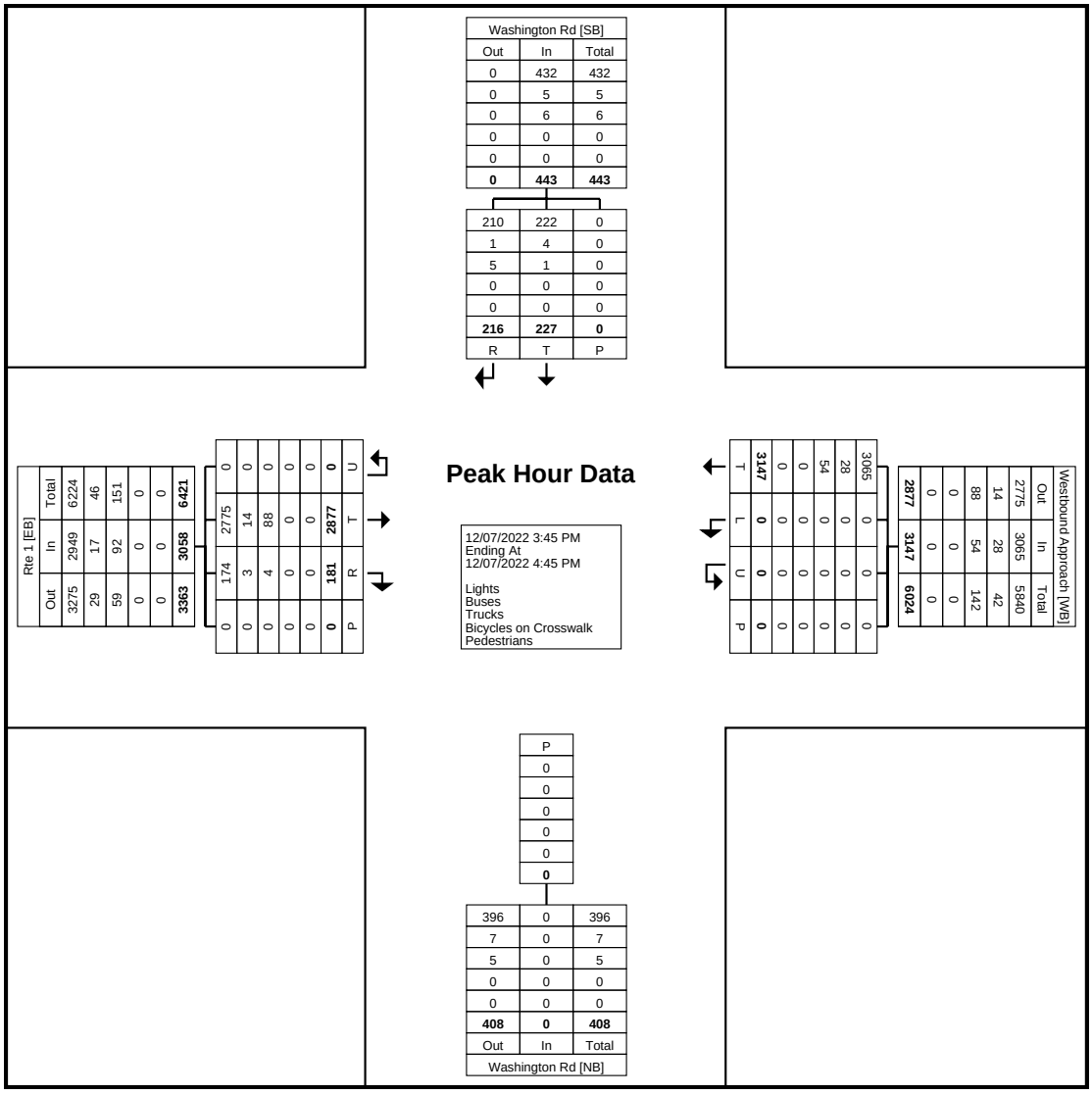
Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Rte 1 Eastbound					Westbound Approach Westbound					Washington Rd Northbound		Washington Rd Southbound				Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	
3:45 PM	711	53	0	0	764	0	874	0	0	874	0	0	62	50	0	112	1750
4:00 PM	678	42	0	0	720	0	745	0	0	745	0	0	65	64	0	129	1594
4:15 PM	751	38	0	0	789	0	803	0	0	803	0	0	49	52	0	101	1693
4:30 PM	737	48	0	0	785	0	725	0	0	725	0	0	51	50	0	101	1611
Total	2877	181	0	0	3058	0	3147	0	0	3147	0	0	227	216	0	443	6648
Approach %	94.1	5.9	0.0	-	-	0.0	100.0	0.0	-	-	-	-	51.2	48.8	-	-	-
Total %	43.3	2.7	0.0	-	46.0	0.0	47.3	0.0	-	47.3	-	0.0	3.4	3.2	-	6.7	-
PHF	0.958	0.854	0.000	-	0.969	0.000	0.900	0.000	-	0.900	-	0.000	0.873	0.844	-	0.859	0.950
Lights	2775	174	0	-	2949	0	3065	0	-	3065	-	0	222	210	-	432	6446
% Lights	96.5	96.1	-	-	96.4	-	97.4	-	-	97.4	-	-	97.8	97.2	-	97.5	97.0
Buses	14	3	0	-	17	0	28	0	-	28	-	0	4	1	-	5	50
% Buses	0.5	1.7	-	-	0.6	-	0.9	-	-	0.9	-	-	1.8	0.5	-	1.1	0.8
Trucks	88	4	0	-	92	0	54	0	-	54	-	0	1	5	-	6	152
% Trucks	3.1	2.2	-	-	3.0	-	1.7	-	-	1.7	-	-	0.4	2.3	-	1.4	2.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Peak Hour Data Plot (3:45 PM)

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West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Data

Start Time	Westbound Approach Westbound			Washington Rd Northbound		Washington Rd Southbound			
	Left	Peds	App. Total	Peds	App. Total	Thru	Peds	App. Total	Int. Total
7:00 AM	22	0	22	0	0	48	0	48	70
7:15 AM	14	0	14	0	0	47	0	47	61
7:30 AM	20	0	20	0	0	53	0	53	73
7:45 AM	9	0	9	0	0	66	0	66	75
Hourly Total	65	0	65	0	0	214	0	214	279
8:00 AM	7	0	7	0	0	94	0	94	101
8:15 AM	10	0	10	0	0	83	0	83	93
8:30 AM	6	0	6	0	0	71	0	71	77
8:45 AM	10	0	10	0	0	101	0	101	111
Hourly Total	33	0	33	0	0	349	0	349	382
9:00 AM	10	0	10	0	0	67	0	67	77
9:15 AM	6	0	6	0	0	47	0	47	53
9:30 AM	10	0	10	0	0	55	0	55	65
9:45 AM	9	0	9	0	0	74	0	74	83
Hourly Total	35	0	35	0	0	243	0	243	278
*** BREAK ***	-	-	-	-	-	-	-	-	-
3:00 PM	13	0	13	0	0	147	0	147	160
3:15 PM	15	0	15	0	0	117	0	117	132
3:30 PM	17	0	17	0	0	182	0	182	199
3:45 PM	15	0	15	0	0	107	0	107	122
Hourly Total	60	0	60	0	0	553	0	553	613
4:00 PM	11	0	11	0	0	126	0	126	137
4:15 PM	8	0	8	0	0	107	0	107	115
4:30 PM	12	0	12	0	0	106	0	106	118
4:45 PM	16	0	16	0	0	123	0	123	139
Hourly Total	47	0	47	0	0	462	0	462	509
5:00 PM	10	0	10	0	0	131	0	131	141
5:15 PM	9	0	9	0	0	121	0	121	130
5:30 PM	15	0	15	0	0	101	0	101	116
5:45 PM	16	0	16	0	0	94	0	94	110
Hourly Total	50	0	50	0	0	447	0	447	497
6:00 PM	15	0	15	0	0	111	0	111	126
6:15 PM	13	0	13	0	0	117	0	117	130
6:30 PM	20	0	20	0	0	141	0	141	161
6:45 PM	9	0	9	0	0	67	0	67	76
Hourly Total	57	0	57	0	0	436	0	436	493
Grand Total	347	0	347	0	0	2704	0	2704	3051
Approach %	100.0	-	-	-	-	100.0	-	-	-
Total %	11.4	-	11.4	-	0.0	88.6	-	88.6	-
Lights	323	-	323	-	0	2592	-	2592	2915
% Lights	93.1	-	93.1	-	-	95.9	-	95.9	95.5
Buses	11	-	11	-	0	27	-	27	38
% Buses	3.2	-	3.2	-	-	1.0	-	1.0	1.2
Trucks	13	-	13	-	0	85	-	85	98
% Trucks	3.7	-	3.7	-	-	3.1	-	3.1	3.2
Bicycles on Crosswalk	-	0	-	0	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	0	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-

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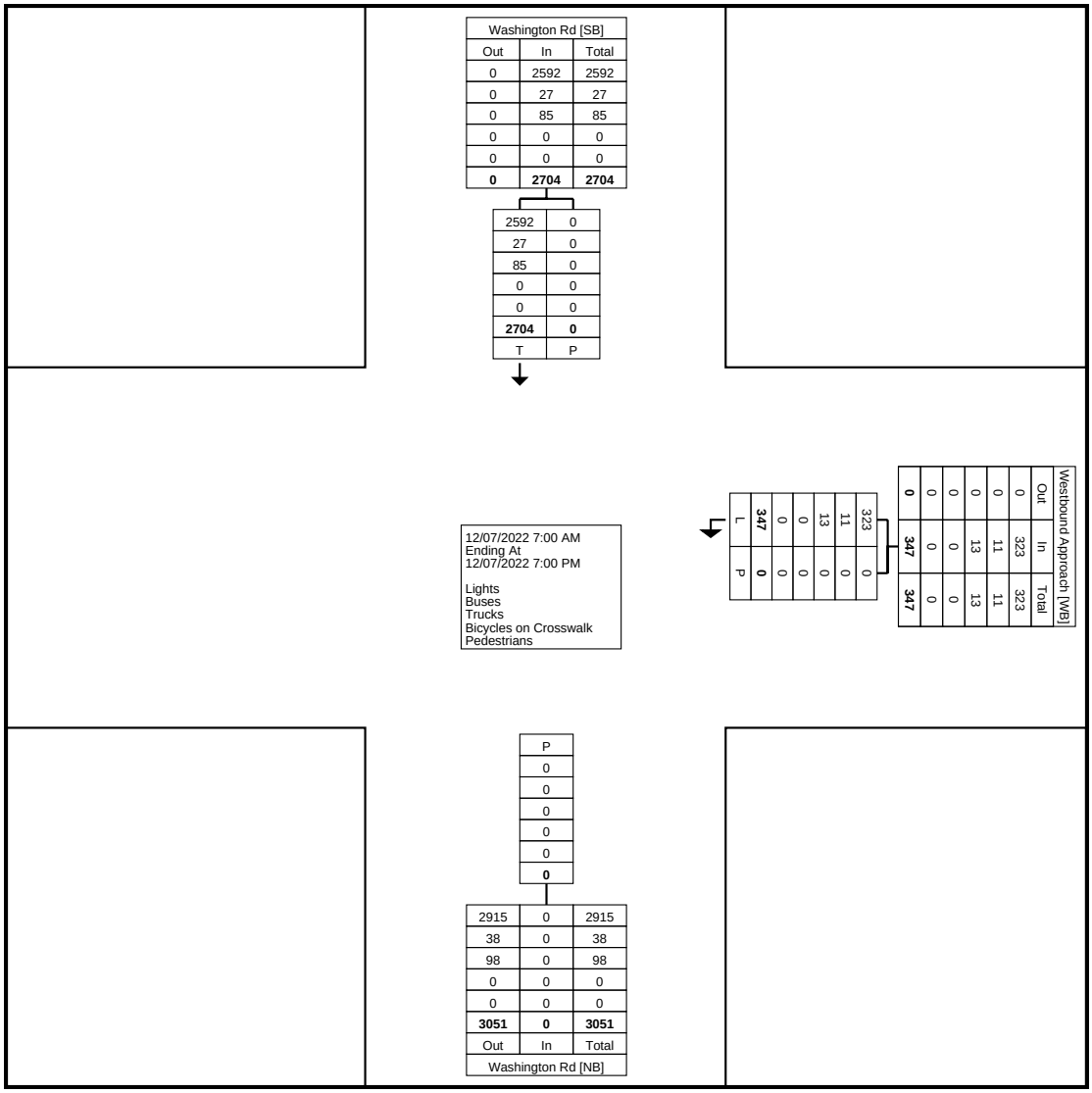
West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Data Plot

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West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Westbound Approach Westbound			Washington Rd Northbound		Washington Rd Southbound			
	Left	Peds	App. Total	Peds	App. Total	Thru	Peds	App. Total	Int. Total
8:00 AM	7	0	7	0	0	94	0	94	101
8:15 AM	10	0	10	0	0	83	0	83	93
8:30 AM	6	0	6	0	0	71	0	71	77
8:45 AM	10	0	10	0	0	101	0	101	111
Total	33	0	33	0	0	349	0	349	382
Approach %	100.0	-	-	-	-	100.0	-	-	-
Total %	8.6	-	8.6	-	0.0	91.4	-	91.4	-
PHF	0.825	-	0.825	-	0.000	0.864	-	0.864	0.860
Lights	30	-	30	-	0	327	-	327	357
% Lights	90.9	-	90.9	-	-	93.7	-	93.7	93.5
Buses	3	-	3	-	0	8	-	8	11
% Buses	9.1	-	9.1	-	-	2.3	-	2.3	2.9
Trucks	0	-	0	-	0	14	-	14	14
% Trucks	0.0	-	0.0	-	-	4.0	-	4.0	3.7
Bicycles on Crosswalk	-	0	-	0	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	0	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-

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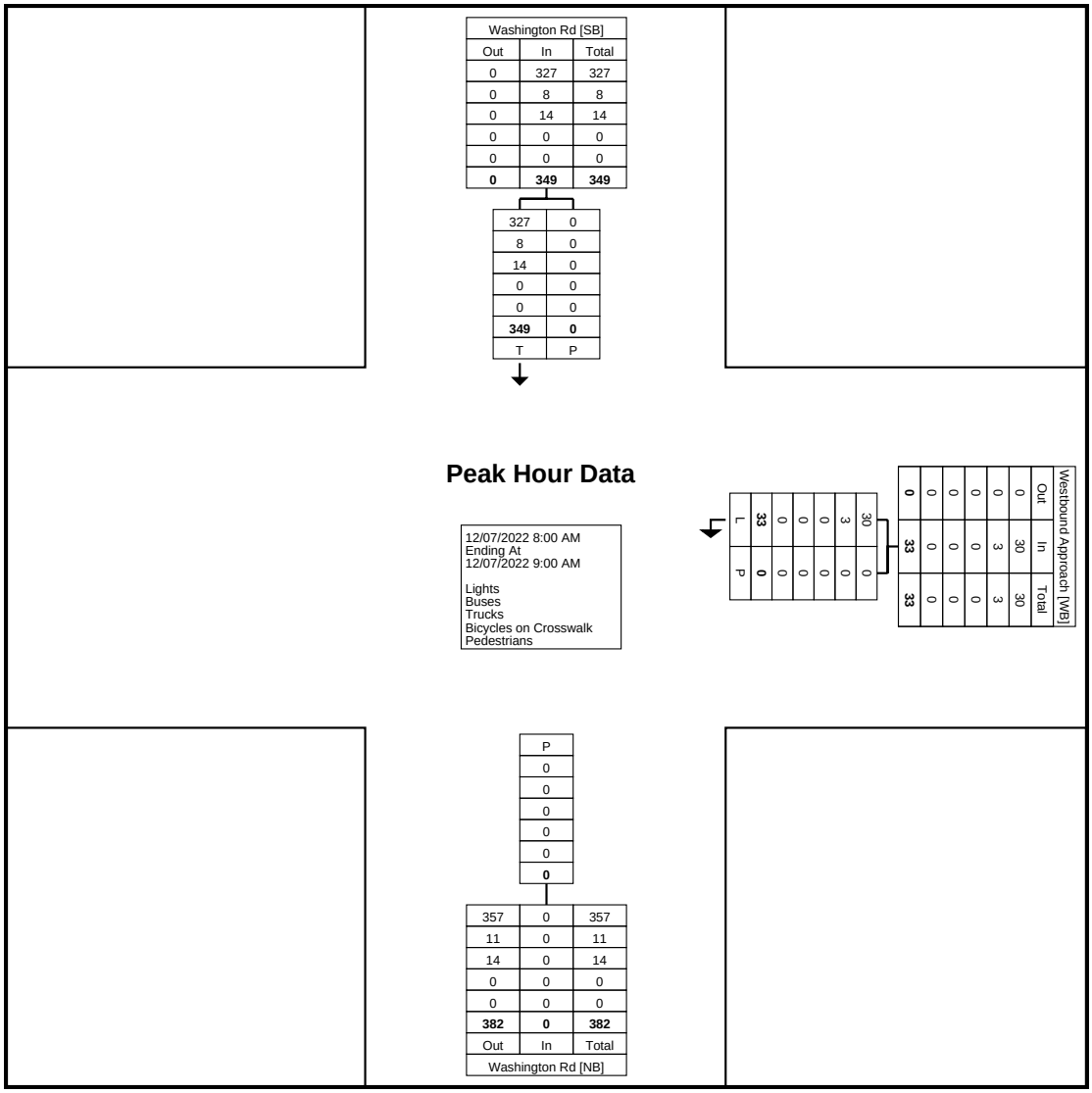
West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Peak Hour Data Plot (8:00 AM)

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West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Westbound Approach Westbound			Washington Rd Northbound		Washington Rd Southbound			
	Left	Peds	App. Total	Peds	App. Total	Thru	Peds	App. Total	Int. Total
3:00 PM	13	0	13	0	0	147	0	147	160
3:15 PM	15	0	15	0	0	117	0	117	132
3:30 PM	17	0	17	0	0	182	0	182	199
3:45 PM	15	0	15	0	0	107	0	107	122
Total	60	0	60	0	0	553	0	553	613
Approach %	100.0	-	-	-	-	100.0	-	-	-
Total %	9.8	-	9.8	-	0.0	90.2	-	90.2	-
PHF	0.882	-	0.882	-	0.000	0.760	-	0.760	0.770
Lights	54	-	54	-	0	532	-	532	586
% Lights	90.0	-	90.0	-	-	96.2	-	96.2	95.6
Buses	5	-	5	-	0	5	-	5	10
% Buses	8.3	-	8.3	-	-	0.9	-	0.9	1.6
Trucks	1	-	1	-	0	16	-	16	17
% Trucks	1.7	-	1.7	-	-	2.9	-	2.9	2.8
Bicycles on Crosswalk	-	0	-	0	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	0	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-

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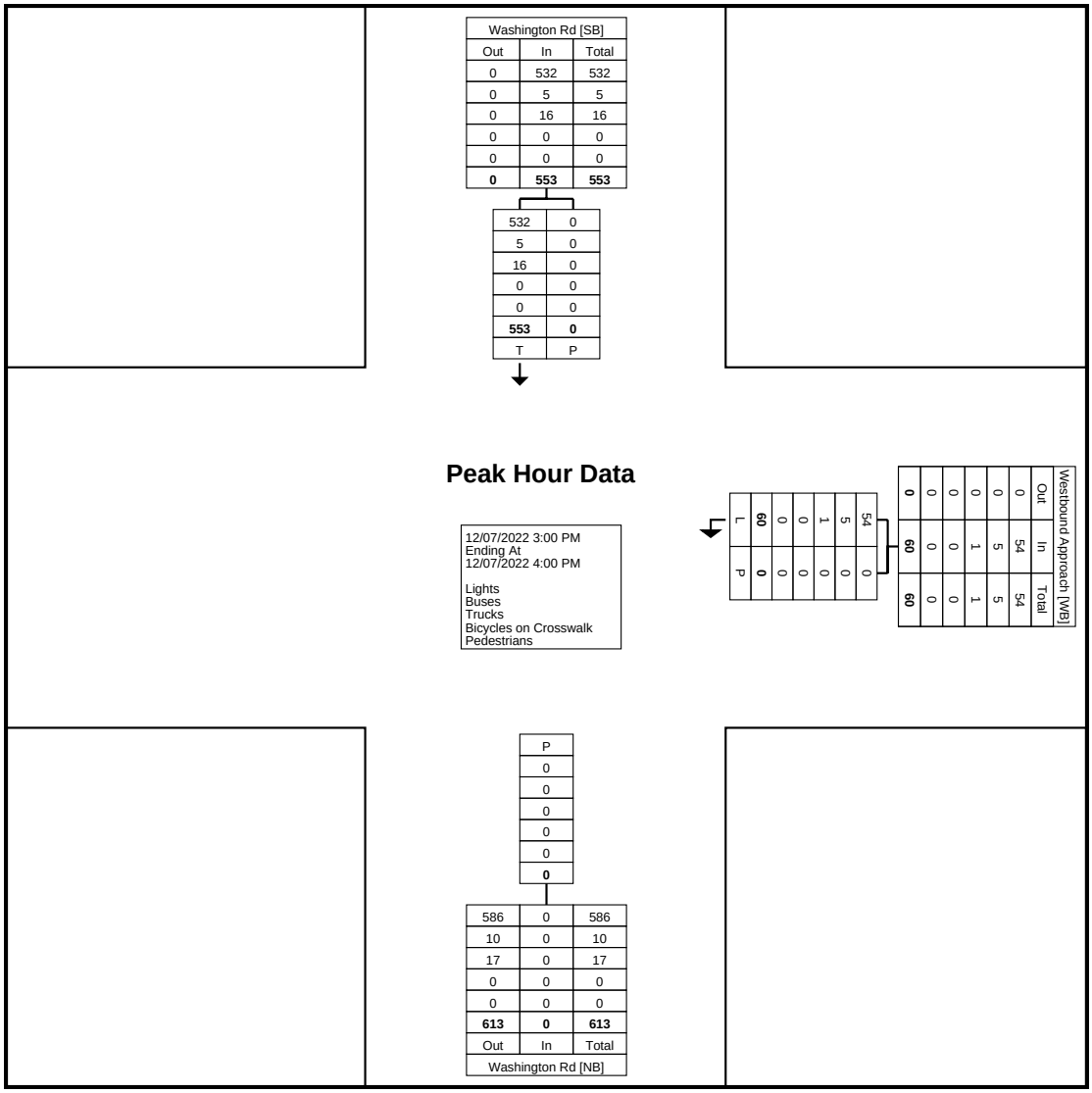
West Windsor, NJ
Washington Rd & Route 1 West
Wednesday, December 7, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Peak Hour Data Plot (3:00 PM)

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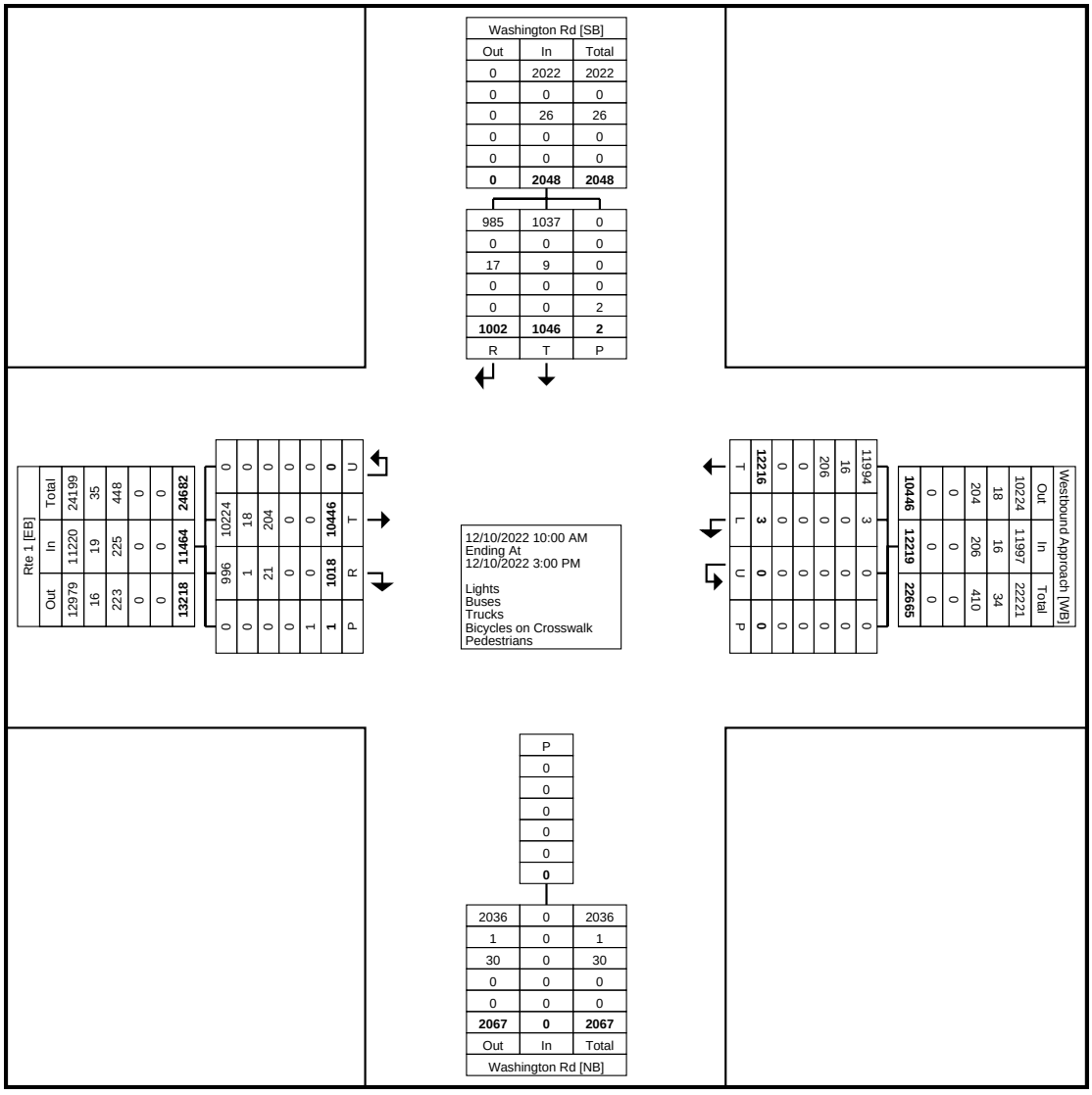
West Windsor, NJ
Washington Rd & Route 1 West
Saturday, December 10, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Data

Start Time	Rte 1 Eastbound					Westbound Approach Westbound					Washington Rd Northbound		Washington Rd Southbound				Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	
10:00 AM	368	47	0	0	415	0	527	0	0	527	0	0	47	46	0	93	1035
10:15 AM	427	43	0	0	470	0	552	0	0	552	0	0	42	34	0	76	1098
10:30 AM	485	44	0	1	529	0	543	0	0	543	0	0	36	38	2	74	1146
10:45 AM	450	60	0	0	510	0	563	0	0	563	0	0	40	49	0	89	1162
Hourly Total	1730	194	0	1	1924	0	2185	0	0	2185	0	0	165	167	2	332	4441
11:00 AM	489	44	0	0	533	0	561	0	0	561	0	0	87	35	0	122	1216
11:15 AM	499	39	0	0	538	0	501	0	0	501	0	0	56	34	0	90	1129
11:30 AM	547	44	0	0	591	0	564	0	0	564	0	0	57	47	0	104	1259
11:45 AM	593	58	0	0	651	0	665	0	0	665	0	0	40	42	0	82	1398
Hourly Total	2128	185	0	0	2313	0	2291	0	0	2291	0	0	240	158	0	398	5002
12:00 PM	526	48	0	0	574	0	558	0	0	558	0	0	48	44	0	92	1224
12:15 PM	575	61	0	0	636	2	661	0	0	663	0	0	53	51	0	104	1403
12:30 PM	533	55	0	0	588	0	662	0	0	662	0	0	55	52	0	107	1357
12:45 PM	564	59	0	0	623	0	672	0	0	672	0	0	62	52	0	114	1409
Hourly Total	2198	223	0	0	2421	2	2553	0	0	2555	0	0	218	199	0	417	5393
1:00 PM	512	53	0	0	565	0	681	0	0	681	0	0	58	50	0	108	1354
1:15 PM	567	57	0	0	624	0	683	0	0	683	0	0	60	56	0	116	1423
1:30 PM	518	45	0	0	563	0	613	0	0	613	0	0	45	53	0	98	1274
1:45 PM	616	50	0	0	666	0	724	0	0	724	0	0	43	61	0	104	1494
Hourly Total	2213	205	0	0	2418	0	2701	0	0	2701	0	0	206	220	0	426	5545
2:00 PM	504	59	0	0	563	1	609	0	0	610	0	0	65	78	0	143	1316
2:15 PM	556	52	0	0	608	0	652	0	0	652	0	0	48	63	0	111	1371
2:30 PM	536	41	0	0	577	0	593	0	0	593	0	0	46	59	0	105	1275
2:45 PM	581	59	0	0	640	0	632	0	0	632	0	0	58	58	0	116	1388
Hourly Total	2177	211	0	0	2388	1	2486	0	0	2487	0	0	217	258	0	475	5350
Grand Total	10446	1018	0	1	11464	3	12216	0	0	12219	0	0	1046	1002	2	2048	25731
Approach %	91.1	8.9	0.0	-	-	0.0	100.0	0.0	-	-	-	-	51.1	48.9	-	-	-
Total %	40.6	4.0	0.0	-	44.6	0.0	47.5	0.0	-	47.5	-	0.0	4.1	3.9	-	8.0	-
Lights	10224	996	0	-	11220	3	11994	0	-	11997	-	0	1037	985	-	2022	25239
% Lights	97.9	97.8	-	-	97.9	100.0	98.2	-	-	98.2	-	-	99.1	98.3	-	98.7	98.1
Buses	18	1	0	-	19	0	16	0	-	16	-	0	0	0	-	0	35
% Buses	0.2	0.1	-	-	0.2	0.0	0.1	-	-	0.1	-	-	0.0	0.0	-	0.0	0.1
Trucks	204	21	0	-	225	0	206	0	-	206	-	0	9	17	-	26	457
% Trucks	2.0	2.1	-	-	2.0	0.0	1.7	-	-	1.7	-	-	0.9	1.7	-	1.3	1.8
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	0	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Turning Movement Data Plot

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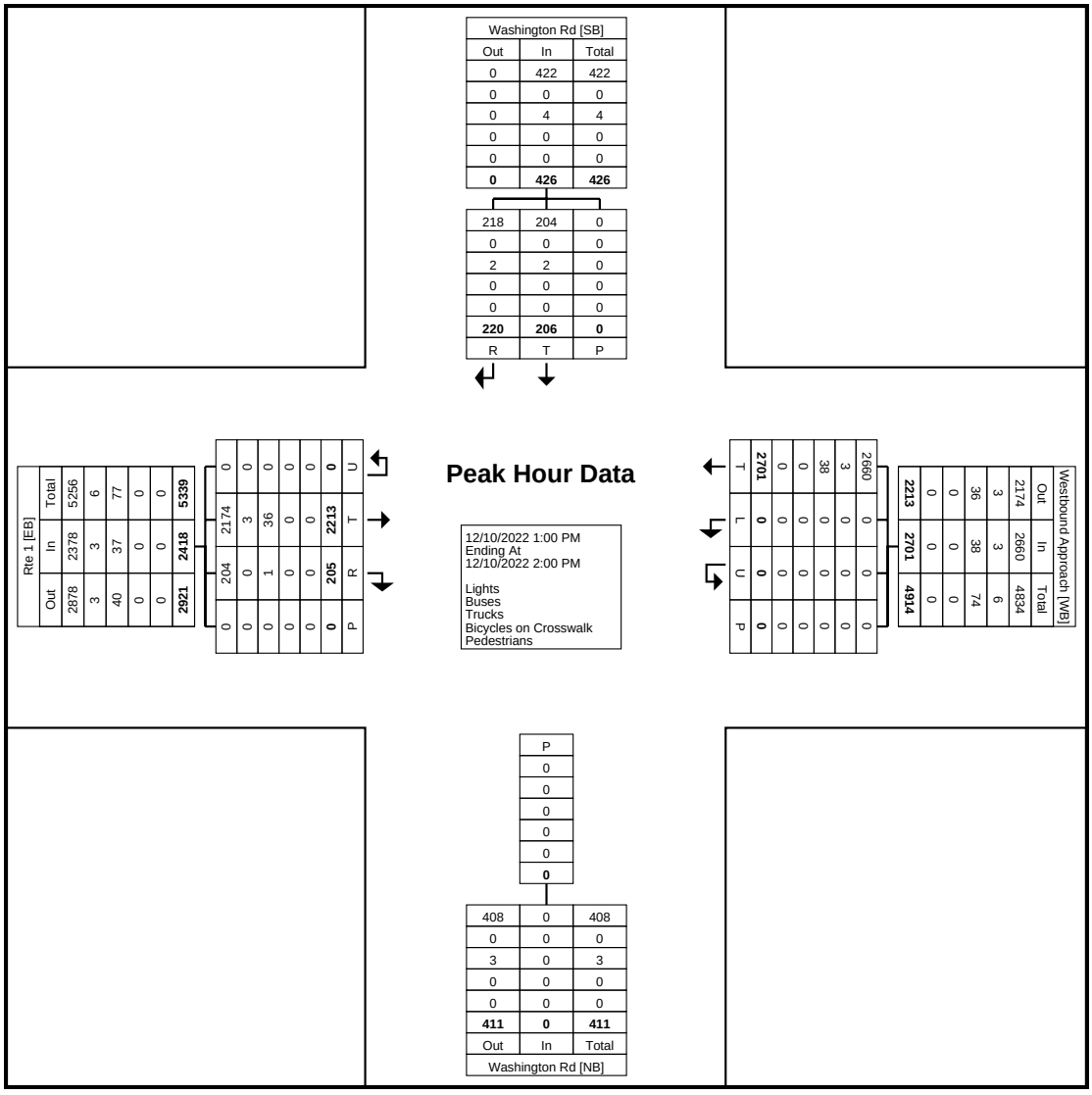
West Windsor, NJ
Washington Rd & Route 1 West
Saturday, December 10, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Rte 1 Eastbound					Westbound Approach Westbound					Washington Rd Northbound		Washington Rd Southbound				Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	
1:00 PM	512	53	0	0	565	0	681	0	0	681	0	0	58	50	0	108	1354
1:15 PM	567	57	0	0	624	0	683	0	0	683	0	0	60	56	0	116	1423
1:30 PM	518	45	0	0	563	0	613	0	0	613	0	0	45	53	0	98	1274
1:45 PM	616	50	0	0	666	0	724	0	0	724	0	0	43	61	0	104	1494
Total	2213	205	0	0	2418	0	2701	0	0	2701	0	0	206	220	0	426	5545
Approach %	91.5	8.5	0.0	-	-	0.0	100.0	0.0	-	-	-	-	48.4	51.6	-	-	-
Total %	39.9	3.7	0.0	-	43.6	0.0	48.7	0.0	-	48.7	-	0.0	3.7	4.0	-	7.7	-
PHF	0.898	0.899	0.000	-	0.908	0.000	0.933	0.000	-	0.933	-	0.000	0.858	0.902	-	0.918	0.928
Lights	2174	204	0	-	2378	0	2660	0	-	2660	-	0	204	218	-	422	5460
% Lights	98.2	99.5	-	-	98.3	-	98.5	-	-	98.5	-	-	99.0	99.1	-	99.1	98.5
Buses	3	0	0	-	3	0	3	0	-	3	-	0	0	0	-	0	6
% Buses	0.1	0.0	-	-	0.1	-	0.1	-	-	0.1	-	-	0.0	0.0	-	0.0	0.1
Trucks	36	1	0	-	37	0	38	0	-	38	-	0	2	2	-	4	79
% Trucks	1.6	0.5	-	-	1.5	-	1.4	-	-	1.4	-	-	1.0	0.9	-	0.9	1.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (1:00 PM)

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West Windsor, NJ
Washington Rd & Route 1 West
Saturday, December 10, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Data

Start Time	Westbound Approach Westbound			Washington Rd Northbound		Washington Rd Southbound			
	Left	Peds	App. Total	Peds	App. Total	Thru	Peds	App. Total	Int. Total
10:00 AM	18	0	18	0	0	84	0	84	102
10:15 AM	7	0	7	0	0	71	0	71	78
10:30 AM	16	0	16	2	0	70	0	70	86
10:45 AM	14	0	14	0	0	90	0	90	104
Hourly Total	55	0	55	2	0	315	0	315	370
11:00 AM	18	0	18	0	0	88	0	88	106
11:15 AM	10	0	10	0	0	77	0	77	87
11:30 AM	16	0	16	0	0	96	0	96	112
11:45 AM	11	0	11	0	0	79	0	79	90
Hourly Total	55	0	55	0	0	340	0	340	395
12:00 PM	16	0	16	0	0	92	0	92	108
12:15 PM	11	0	11	0	0	110	0	110	121
12:30 PM	23	0	23	0	0	112	0	112	135
12:45 PM	18	0	18	0	0	104	0	104	122
Hourly Total	68	0	68	0	0	418	0	418	486
1:00 PM	17	0	17	0	0	95	0	95	112
1:15 PM	15	0	15	0	0	109	0	109	124
1:30 PM	18	0	18	0	0	98	0	98	116
1:45 PM	15	0	15	0	0	105	0	105	120
Hourly Total	65	0	65	0	0	407	0	407	472
2:00 PM	20	0	20	0	0	138	0	138	158
2:15 PM	23	0	23	0	0	96	0	96	119
2:30 PM	13	0	13	0	0	114	0	114	127
2:45 PM	15	0	15	0	0	104	0	104	119
Hourly Total	71	0	71	0	0	452	0	452	523
Grand Total	314	0	314	2	0	1932	0	1932	2246
Approach %	100.0	-	-	-	-	100.0	-	-	-
Total %	14.0	-	14.0	-	0.0	86.0	-	86.0	-
Lights	313	-	313	-	0	1905	-	1905	2218
% Lights	99.7	-	99.7	-	-	98.6	-	98.6	98.8
Buses	0	-	0	-	0	1	-	1	1
% Buses	0.0	-	0.0	-	-	0.1	-	0.1	0.0
Trucks	1	-	1	-	0	26	-	26	27
% Trucks	0.3	-	0.3	-	-	1.3	-	1.3	1.2
Bicycles on Crosswalk	-	0	-	0	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-
Pedestrians	-	0	-	2	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-

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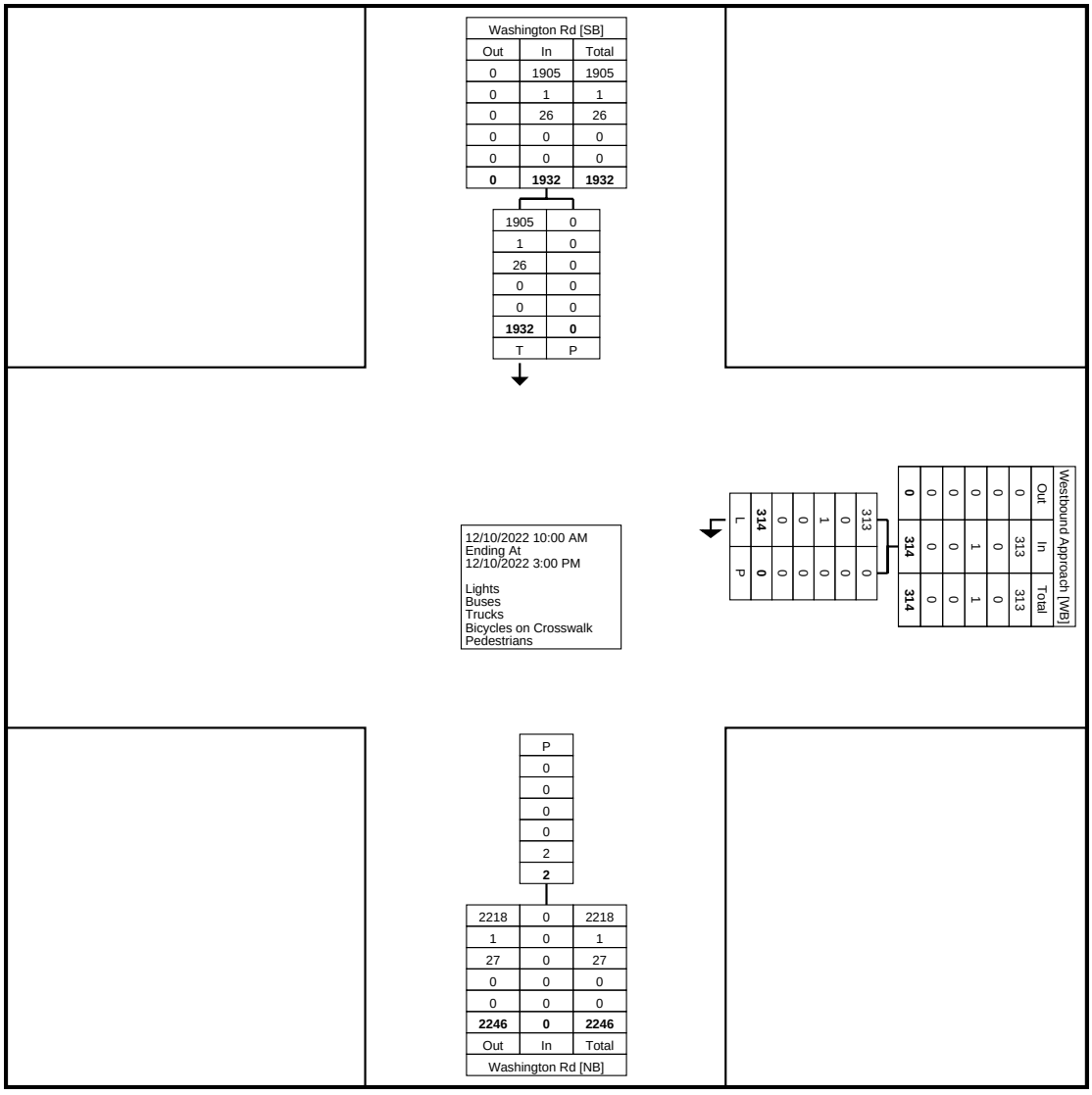
West Windsor, NJ
Washington Rd & Route 1 West
Saturday, December 10, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/10)
Site Code:
Start Date: 12/10/2022



Turning Movement Data Plot

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West Windsor, NJ
Washington Rd & Route 1 West
Saturday, December 10, 2022
Location: 40.331286, -74.638251

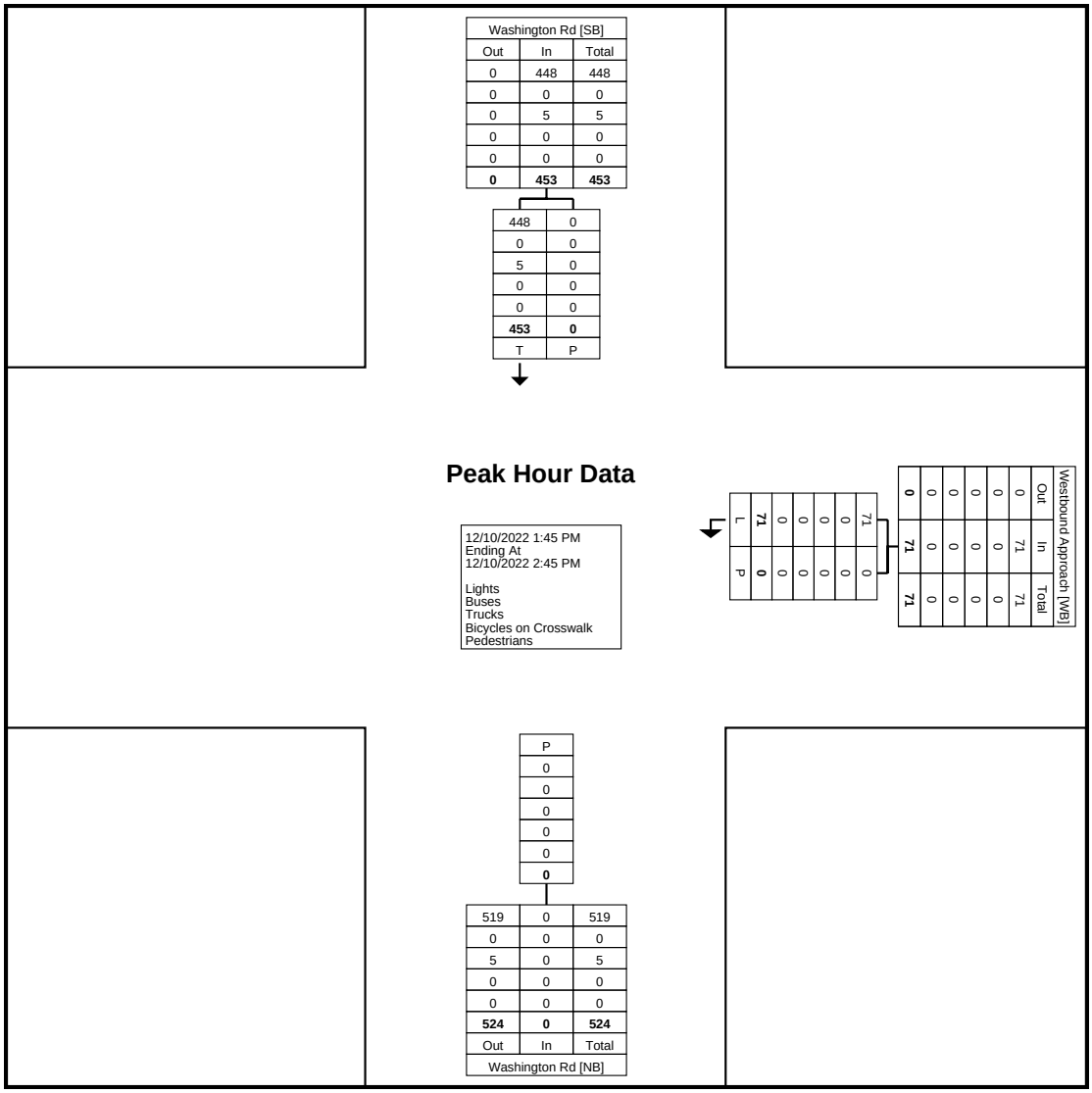
Count Name: Washington Rd & Route 1 west (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Peak Hour Data (1:45 PM)

Start Time	Westbound Approach Westbound			Washington Rd Northbound		Washington Rd Southbound			
	Left	Peds	App. Total	Peds	App. Total	Thru	Peds	App. Total	Int. Total
1:45 PM	15	0	15	0	0	105	0	105	120
2:00 PM	20	0	20	0	0	138	0	138	158
2:15 PM	23	0	23	0	0	96	0	96	119
2:30 PM	13	0	13	0	0	114	0	114	127
Total	71	0	71	0	0	453	0	453	524
Approach %	100.0	-	-	-	-	100.0	-	-	-
Total %	13.5	-	13.5	-	0.0	86.5	-	86.5	-
PHF	0.772	-	0.772	-	0.000	0.821	-	0.821	0.829
Lights	71	-	71	-	0	448	-	448	519
% Lights	100.0	-	100.0	-	-	98.9	-	98.9	99.0
Buses	0	-	0	-	0	0	-	0	0
% Buses	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Trucks	0	-	0	-	0	5	-	5	5
% Trucks	0.0	-	0.0	-	-	1.1	-	1.1	1.0
Bicycles on Crosswalk	-	0	-	0	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-
Pedestrians	-	0	-	0	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Washington Rd & Route 1 West
Saturday, December 10, 2022
Location: 40.331286, -74.638251

Count Name: Washington Rd & Route 1 west (12/10)
Site Code:
Start Date: 12/10/2022



Turning Movement Peak Hour Data Plot (1:45 PM)

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West Windsor, NJ
Route 1 & Varsity Ave
Wednesday, December 7, 2022
Location: 40.330527, -74.639088

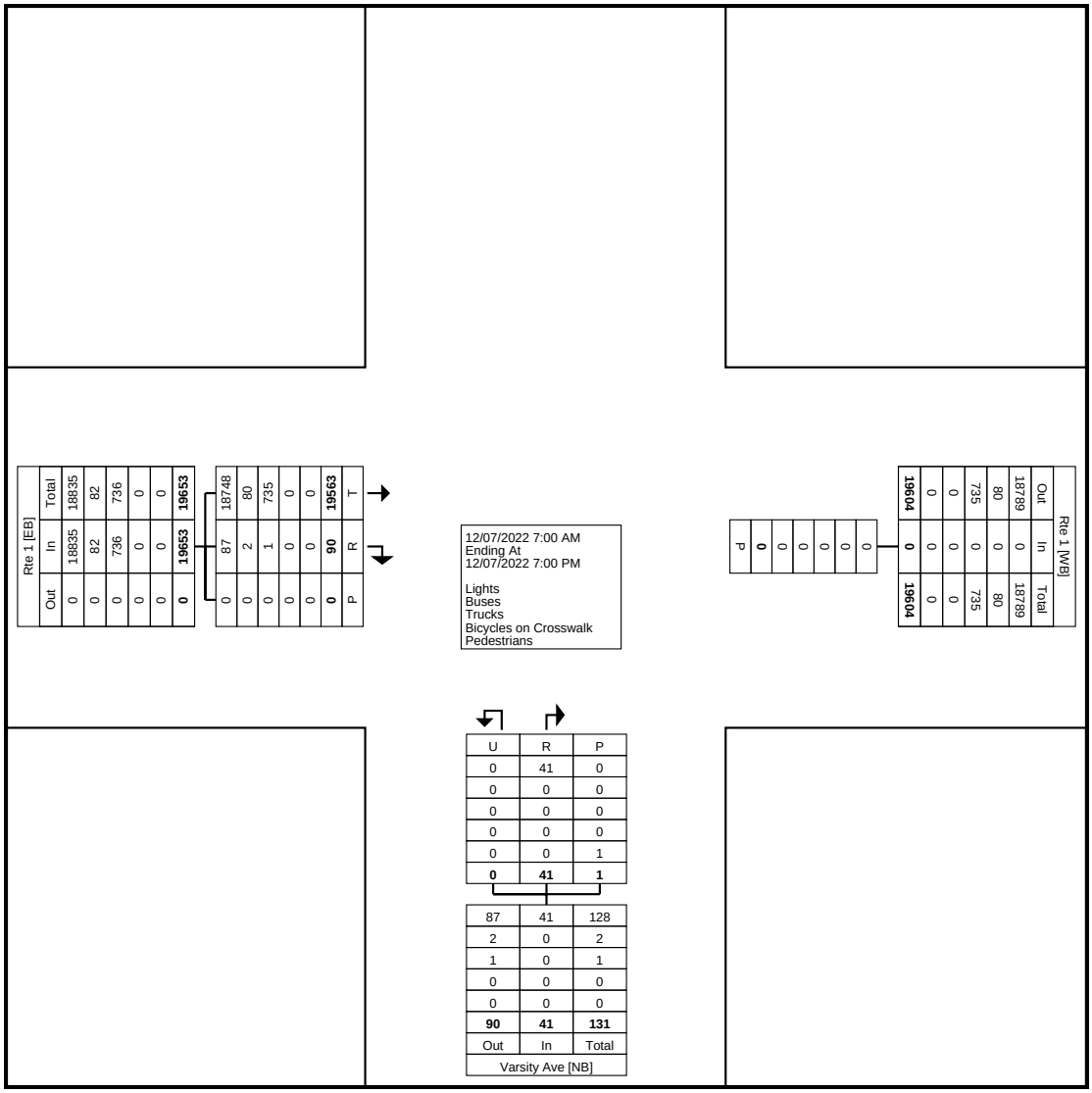
Count Name: Route 1 & Varsity Ave (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Data

Start Time	Rte 1 Eastbound				Rte 1 Westbound		Varsity Ave Northbound				
	Thru	Right	Peds	App. Total	Peds	App. Total	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	758	2	0	760	0	0	1	0	0	1	761
7:15 AM	871	2	0	873	0	0	1	0	0	1	874
7:30 AM	797	2	0	799	0	0	1	0	0	1	800
7:45 AM	792	7	0	799	0	0	3	0	0	3	802
Hourly Total	3218	13	0	3231	0	0	6	0	0	6	3237
8:00 AM	743	2	0	745	0	0	0	0	0	0	745
8:15 AM	783	3	0	786	0	0	4	0	0	4	790
8:30 AM	791	3	0	794	0	0	1	0	0	1	795
8:45 AM	736	7	0	743	0	0	4	0	0	4	747
Hourly Total	3053	15	0	3068	0	0	9	0	0	9	3077
9:00 AM	653	1	0	654	0	0	2	0	0	2	656
9:15 AM	538	2	0	540	0	0	0	0	0	0	540
9:30 AM	556	1	0	557	0	0	3	0	0	3	560
9:45 AM	518	3	0	521	0	0	2	0	0	2	523
Hourly Total	2265	7	0	2272	0	0	7	0	0	7	2279
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	633	4	0	637	0	0	1	0	0	1	638
3:15 PM	706	3	0	709	0	0	5	0	0	5	714
3:30 PM	720	2	0	722	0	0	3	0	0	3	725
3:45 PM	750	2	0	752	0	0	0	0	0	0	752
Hourly Total	2809	11	0	2820	0	0	9	0	0	9	2829
4:00 PM	709	2	0	711	0	0	1	0	0	1	712
4:15 PM	749	3	0	752	0	0	4	0	0	4	756
4:30 PM	741	6	0	747	0	0	0	0	0	0	747
4:45 PM	671	6	0	677	0	0	0	0	0	0	677
Hourly Total	2870	17	0	2887	0	0	5	0	0	5	2892
5:00 PM	836	7	0	843	0	0	0	0	0	0	843
5:15 PM	772	0	0	772	0	0	0	0	0	0	772
5:30 PM	791	5	0	796	0	0	0	0	0	0	796
5:45 PM	673	4	0	677	0	0	0	0	1	0	677
Hourly Total	3072	16	0	3088	0	0	0	0	1	0	3088
6:00 PM	608	2	0	610	0	0	1	0	0	1	611
6:15 PM	603	3	0	606	0	0	3	0	0	3	609
6:30 PM	536	2	0	538	0	0	0	0	0	0	538
6:45 PM	529	4	0	533	0	0	1	0	0	1	534
Hourly Total	2276	11	0	2287	0	0	5	0	0	5	2292
Grand Total	19563	90	0	19653	0	0	41	0	1	41	19694
Approach %	99.5	0.5	-	-	-	-	100.0	0.0	-	-	-
Total %	99.3	0.5	-	99.8	-	0.0	0.2	0.0	-	0.2	-
Lights	18748	87	-	18835	-	0	41	0	-	41	18876
% Lights	95.8	96.7	-	95.8	-	-	100.0	-	-	100.0	95.8
Buses	80	2	-	82	-	0	0	0	-	0	82
% Buses	0.4	2.2	-	0.4	-	-	0.0	-	-	0.0	0.4
Trucks	735	1	-	736	-	0	0	0	-	0	736
% Trucks	3.8	1.1	-	3.7	-	-	0.0	-	-	0.0	3.7
Bicycles on Crosswalk	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	0	-	0	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-

West Windsor, NJ
Route 1 & Varsity Ave
Wednesday, December 7, 2022
Location: 40.330527, -74.639088

Count Name: Route 1 & Varsity Ave (12/7)
Site Code:
Start Date: 12/07/2022
Page No: 2



Turning Movement Data Plot

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West Windsor, NJ
Route 1 & Varsity Ave
Wednesday, December 7, 2022
Location: 40.330527, -74.639088

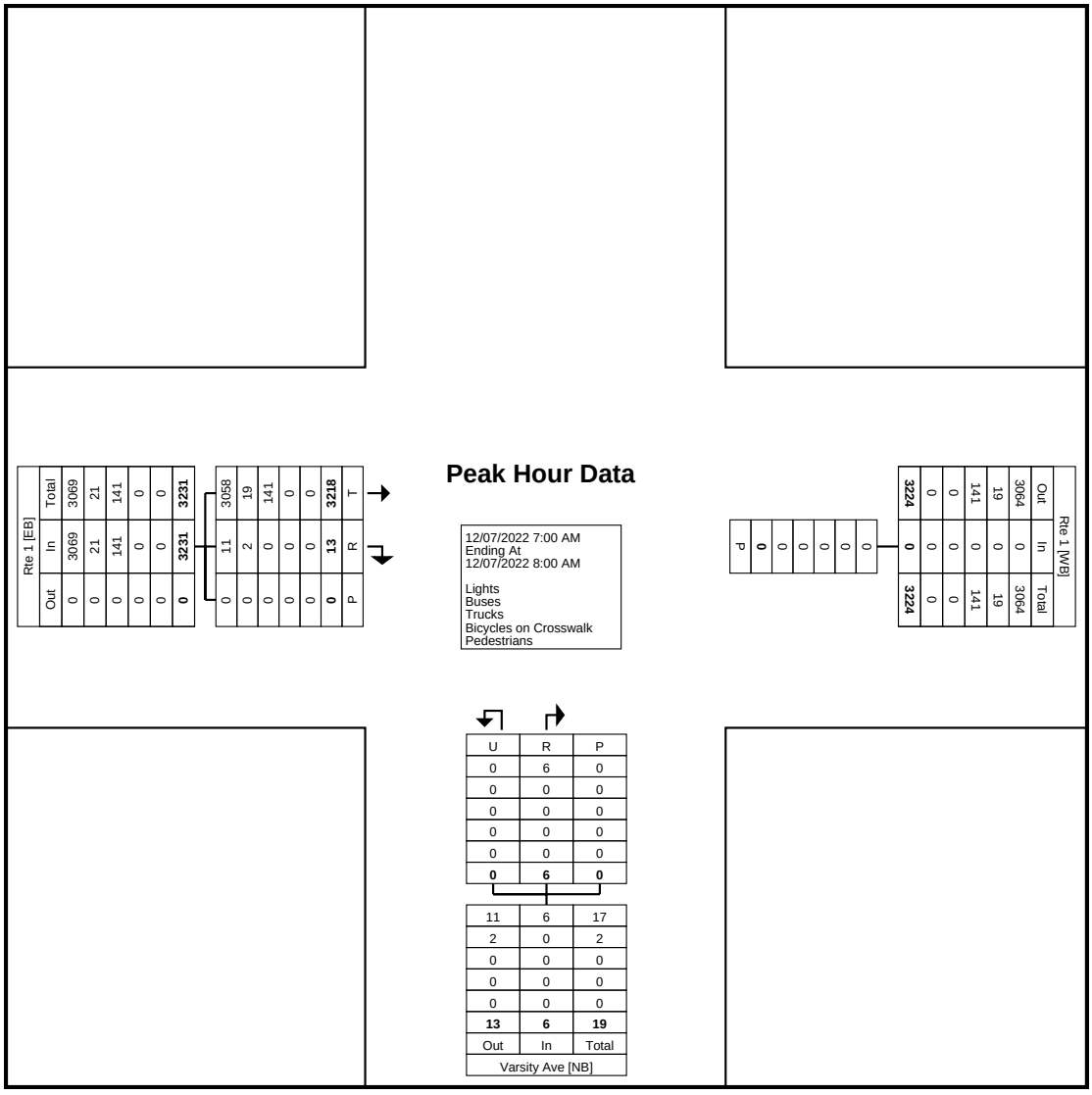
Count Name: Route 1 & Varsity Ave (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Rte 1 Eastbound				Rte 1 Westbound		Varsity Ave Northbound				
	Thru	Right	Peds	App. Total	Peds	App. Total	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	758	2	0	760	0	0	1	0	0	1	761
7:15 AM	871	2	0	873	0	0	1	0	0	1	874
7:30 AM	797	2	0	799	0	0	1	0	0	1	800
7:45 AM	792	7	0	799	0	0	3	0	0	3	802
Total	3218	13	0	3231	0	0	6	0	0	6	3237
Approach %	99.6	0.4	-	-	-	-	100.0	0.0	-	-	-
Total %	99.4	0.4	-	99.8	-	0.0	0.2	0.0	-	0.2	-
PHF	0.924	0.464	-	0.925	-	0.000	0.500	0.000	-	0.500	0.926
Lights	3058	11	-	3069	-	0	6	0	-	6	3075
% Lights	95.0	84.6	-	95.0	-	-	100.0	-	-	100.0	95.0
Buses	19	2	-	21	-	0	0	0	-	0	21
% Buses	0.6	15.4	-	0.6	-	-	0.0	-	-	0.0	0.6
Trucks	141	0	-	141	-	0	0	0	-	0	141
% Trucks	4.4	0.0	-	4.4	-	-	0.0	-	-	0.0	4.4
Bicycles on Crosswalk	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Route 1 & Varsity Ave
Wednesday, December 7, 2022
Location: 40.330527, -74.639088

Count Name: Route 1 & Varsity Ave (12/7)
Site Code:
Start Date: 12/07/2022



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

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Serving Transportation Professionals Since 1995

West Windsor, NJ
Route 1 & Varsity Ave
Wednesday, December 7, 2022
Location: 40.330527, -74.639088

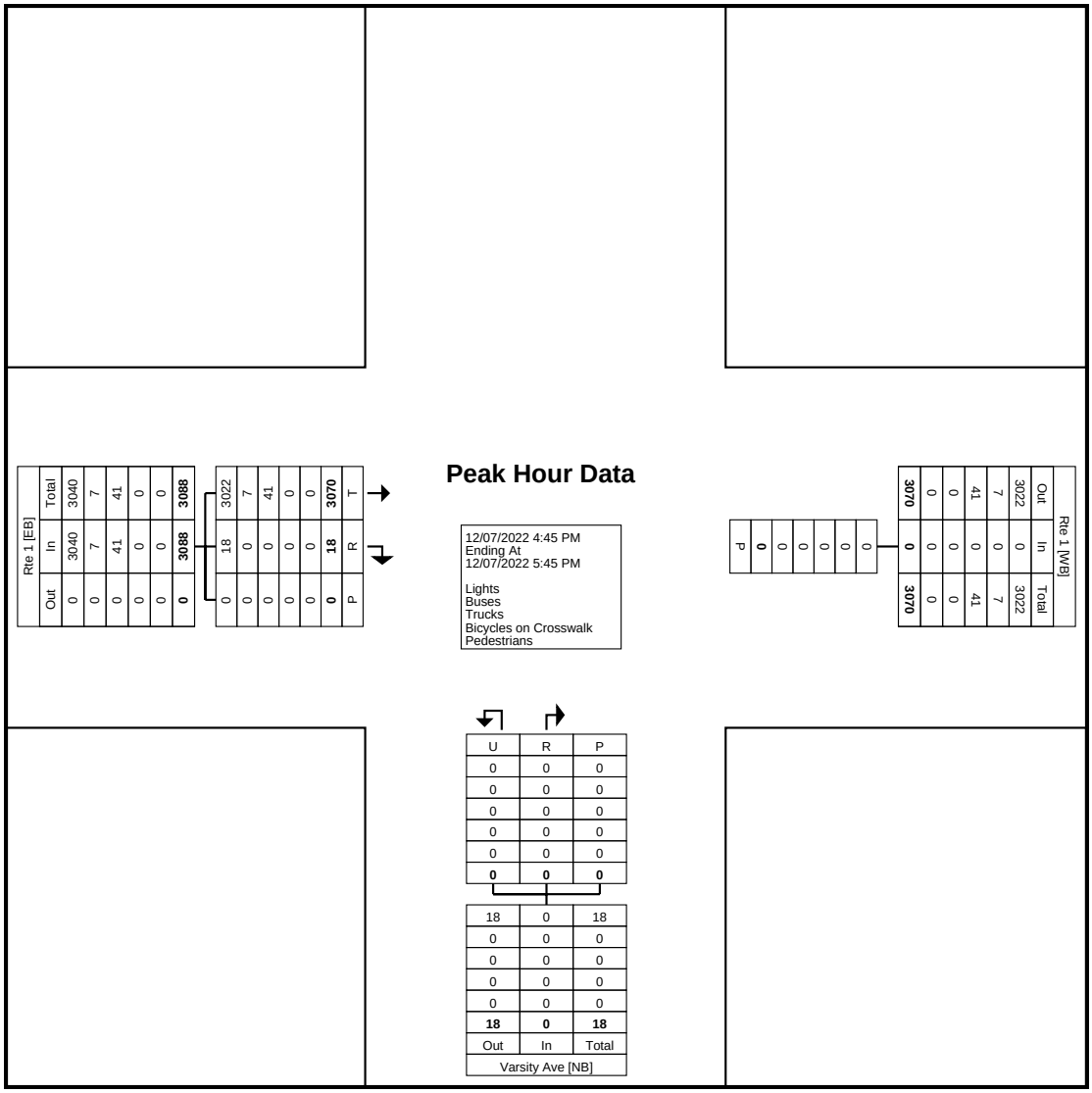
Count Name: Route 1 & Varsity Ave (12/7)
Site Code:
Start Date: 12/07/2022

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Rte 1 Eastbound				Rte 1 Westbound		Varsity Ave Northbound				
	Thru	Right	Peds	App. Total	Peds	App. Total	Right	U-Turn	Peds	App. Total	Int. Total
4:45 PM	671	6	0	677	0	0	0	0	0	0	677
5:00 PM	836	7	0	843	0	0	0	0	0	0	843
5:15 PM	772	0	0	772	0	0	0	0	0	0	772
5:30 PM	791	5	0	796	0	0	0	0	0	0	796
Total	3070	18	0	3088	0	0	0	0	0	0	3088
Approach %	99.4	0.6	-	-	-	-	0.0	0.0	-	-	-
Total %	99.4	0.6	-	100.0	-	0.0	0.0	0.0	-	0.0	-
PHF	0.918	0.643	-	0.916	-	0.000	0.000	0.000	-	0.000	0.916
Lights	3022	18	-	3040	-	0	0	0	-	0	3040
% Lights	98.4	100.0	-	98.4	-	-	-	-	-	-	98.4
Buses	7	0	-	7	-	0	0	0	-	0	7
% Buses	0.2	0.0	-	0.2	-	-	-	-	-	-	0.2
Trucks	41	0	-	41	-	0	0	0	-	0	41
% Trucks	1.3	0.0	-	1.3	-	-	-	-	-	-	1.3
Bicycles on Crosswalk	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Route 1 & Varsity Ave
Wednesday, December 7, 2022
Location: 40.330527, -74.639088

Count Name: Route 1 & Varsity Ave (12/7)
Site Code:
Start Date: 12/07/2022



Turning Movement Peak Hour Data Plot (4:45 PM)

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West Windsor, NJ
Route 1 & Varsity Ave
Saturday, December 10, 2022
Location: 40.330527, -74.639088

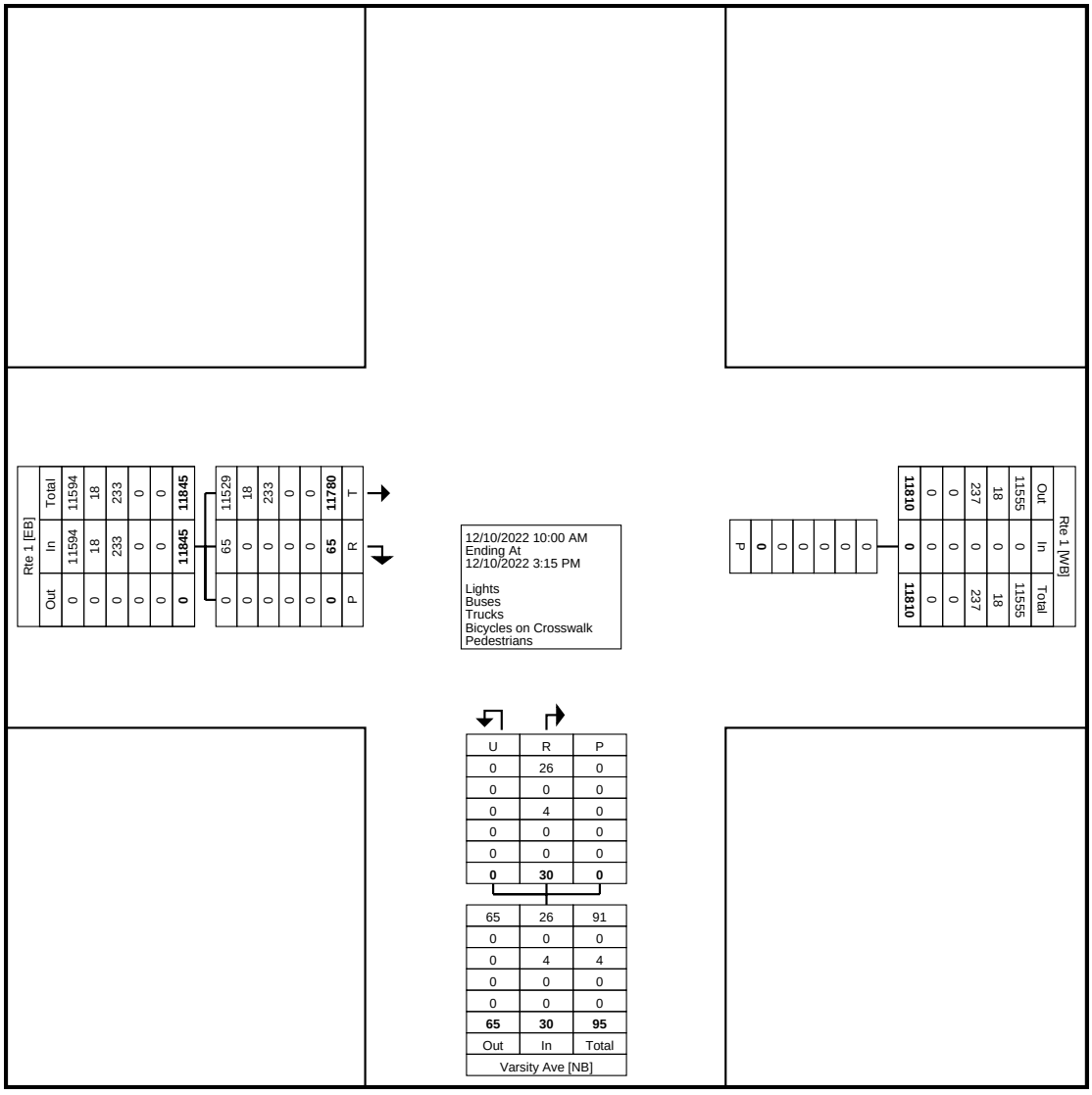
Count Name: Route 1 & Varsity Ave (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Data

Start Time	Rte 1 Eastbound				Rte 1 Westbound		Varsity Ave Northbound				
	Thru	Right	Peds	App. Total	Peds	App. Total	Right	U-Turn	Peds	App. Total	Int. Total
10:00 AM	416	2	0	418	0	0	4	0	0	4	422
10:15 AM	495	3	0	498	0	0	0	0	0	0	498
10:30 AM	530	5	0	535	0	0	1	0	0	1	536
10:45 AM	530	4	0	534	0	0	3	0	0	3	537
Hourly Total	1971	14	0	1985	0	0	8	0	0	8	1993
11:00 AM	565	3	0	568	0	0	0	0	0	0	568
11:15 AM	572	1	0	573	0	0	3	0	0	3	576
11:30 AM	601	0	0	601	0	0	2	0	0	2	603
11:45 AM	610	1	0	611	0	0	0	0	0	0	611
Hourly Total	2348	5	0	2353	0	0	5	0	0	5	2358
12:00 PM	612	4	0	616	0	0	0	0	0	0	616
12:15 PM	639	6	0	645	0	0	3	0	0	3	648
12:30 PM	661	2	0	663	0	0	0	0	0	0	663
12:45 PM	589	3	0	592	0	0	1	0	0	1	593
Hourly Total	2501	15	0	2516	0	0	4	0	0	4	2520
1:00 PM	605	3	0	608	0	0	1	0	0	1	609
1:15 PM	599	1	0	600	0	0	1	0	0	1	601
1:30 PM	617	3	0	620	0	0	0	0	0	0	620
1:45 PM	609	4	0	613	0	0	0	0	0	0	613
Hourly Total	2430	11	0	2441	0	0	2	0	0	2	2443
2:00 PM	592	5	0	597	0	0	2	0	0	2	599
2:15 PM	608	7	0	615	0	0	3	0	0	3	618
2:30 PM	665	6	0	671	0	0	2	0	0	2	673
2:45 PM	665	2	0	667	0	0	4	0	0	4	671
Hourly Total	2530	20	0	2550	0	0	11	0	0	11	2561
3:00 PM	0	0	0	0	0	0	0	0	0	0	0
Grand Total	11780	65	0	11845	0	0	30	0	0	30	11875
Approach %	99.5	0.5	-	-	-	-	100.0	0.0	-	-	-
Total %	99.2	0.5	-	99.7	-	0.0	0.3	0.0	-	0.3	-
Lights	11529	65	-	11594	-	0	26	0	-	26	11620
% Lights	97.9	100.0	-	97.9	-	-	86.7	-	-	86.7	97.9
Buses	18	0	-	18	-	0	0	0	-	0	18
% Buses	0.2	0.0	-	0.2	-	-	0.0	-	-	0.0	0.2
Trucks	233	0	-	233	-	0	4	0	-	4	237
% Trucks	2.0	0.0	-	2.0	-	-	13.3	-	-	13.3	2.0
Bicycles on Crosswalk	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Route 1 & Varsity Ave
Saturday, December 10, 2022
Location: 40.330527, -74.639088

Count Name: Route 1 & Varsity Ave (12/10)
Site Code:
Start Date: 12/10/2022



Turning Movement Data Plot

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West Windsor, NJ
Route 1 & Varsity Ave
Saturday, December 10, 2022
Location: 40.330527, -74.639088

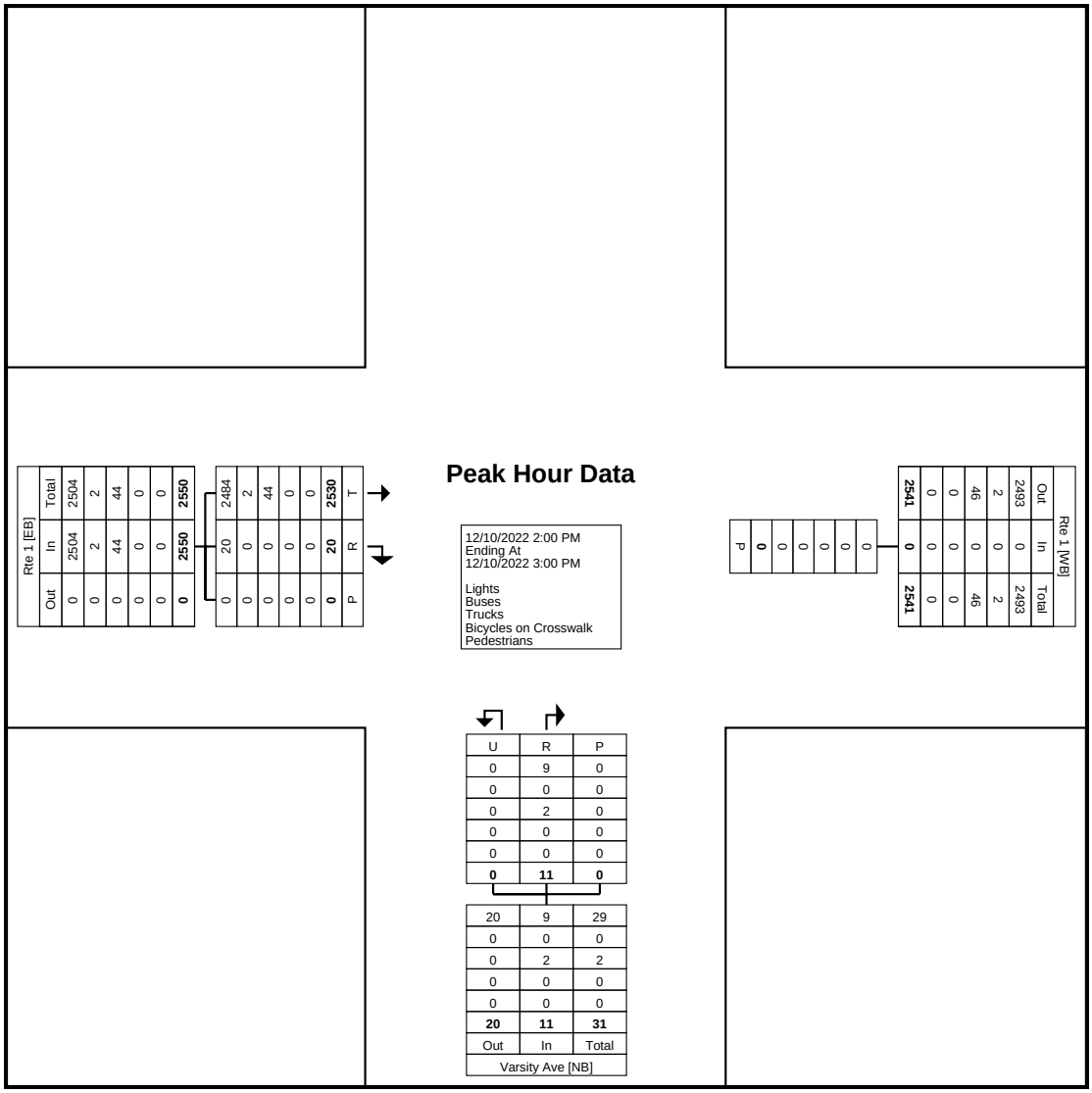
Count Name: Route 1 & Varsity Ave (12/10)
Site Code:
Start Date: 12/10/2022

Turning Movement Peak Hour Data (2:00 PM)

Start Time	Rte 1 Eastbound				Rte 1 Westbound		Varsity Ave Northbound				
	Thru	Right	Peds	App. Total	Peds	App. Total	Right	U-Turn	Peds	App. Total	Int. Total
2:00 PM	592	5	0	597	0	0	2	0	0	2	599
2:15 PM	608	7	0	615	0	0	3	0	0	3	618
2:30 PM	665	6	0	671	0	0	2	0	0	2	673
2:45 PM	665	2	0	667	0	0	4	0	0	4	671
Total	2530	20	0	2550	0	0	11	0	0	11	2561
Approach %	99.2	0.8	-	-	-	-	100.0	0.0	-	-	-
Total %	98.8	0.8	-	99.6	-	0.0	0.4	0.0	-	0.4	-
PHF	0.951	0.714	-	0.950	-	0.000	0.688	0.000	-	0.688	0.951
Lights	2484	20	-	2504	-	0	9	0	-	9	2513
% Lights	98.2	100.0	-	98.2	-	-	81.8	-	-	81.8	98.1
Buses	2	0	-	2	-	0	0	0	-	0	2
% Buses	0.1	0.0	-	0.1	-	-	0.0	-	-	0.0	0.1
Trucks	44	0	-	44	-	0	2	0	-	2	46
% Trucks	1.7	0.0	-	1.7	-	-	18.2	-	-	18.2	1.8
Bicycles on Crosswalk	-	-	0	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	0	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-

West Windsor, NJ
Route 1 & Varsity Ave
Saturday, December 10, 2022
Location: 40.330527, -74.639088

Count Name: Route 1 & Varsity Ave (12/10)
Site Code:
Start Date: 12/10/2022



Turning Movement Peak Hour Data Plot (2:00 PM)

Tri-State Traffic Data, Inc.

610-466-1469
TSTData.com

Road: Rt. 1
Location: 520 ft S of Washington Rd
Counter: 23920 & 35314

Site Code: 1
Station ID:

Latitude: 40' 33025.0000 North
Longitude: 74' 63953.0000 West

Start	Tuesday, December 6, 2022		Wednesday, December 7, 2022		Thursday, December 8, 2022		Friday, December 9, 2022		Saturday, December 10, 2022		Sunday, December 11, 2022		Monday, December 12, 2022		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	288	442	298	464	310	516	539	695	601	610	314	312	392	506
01:00	*	*	192	275	201	278	242	338	335	394	341	386	197	237	251	318
02:00	*	*	202	228	222	278	271	277	293	302	274	290	209	151	245	254
03:00	*	*	334	228	323	227	333	245	285	231	218	224	300	216	299	228
04:00	*	*	657	308	706	382	674	341	399	260	245	194	682	312	560	300
05:00	*	*	1339	685	1405	766	1311	728	590	441	343	302	1352	710	1057	605
06:00	*	*	2664	1693	2714	1687	2308	1487	1015	738	636	426	2617	1577	1992	1268
07:00	*	*	**3258**	2519	**3359**	2912	2674	2431	1175	1113	783	733	**3252**	2783	**2417**	2082
08:00	*	*	3134	**3085**	2959	**3095**	**2700**	**2619**	1538	1496	982	960	2941	**2936**	2376	2365
09:00	*	*	2456	2666	2520	2569	2302	2346	1775	1920	1514	1364	2363	2500	2155	2228
10:00	*	*	2275	2318	2301	2232	2107	2422	1996	2378	1668	1981	2297	2241	2107	2262
11:00	*	*	2182	2286	2242	2609	2255	2520	**2290**	**2478**	**1997**	**2390**	2124	2396	2182	**2446**
12:00 PM	*	*	2273	2374	2458	2715	2490	2588	2411	2751	2137	**2490**	2288	2439	2343	2560
01:00	2197	2410	2364	2379	2438	2522	2482	2660	2401	**2815**	2138	2490	2201	2481	2317	2537
02:00	2389	2639	2584	2806	2726	2903	2693	2929	2541	2710	2140	2391	2298	2867	2482	2749
03:00	2565	**3088**	2787	3241	2929	3211	2656	3163	2448	2753	2105	2326	2562	3158	2579	**2991**
04:00	**2972**	2986	**3137**	**3259**	**3166**	**3286**	**2758**	**3186**	**2620**	2621	**2274**	2240	**2930**	**3276**	**2837**	2979
05:00	2833	2905	3076	3050	2941	3155	2690	2901	2496	2519	2095	1973	2859	3006	2713	2787
06:00	2392	2552	2443	2649	2384	2590	2512	2721	2324	2206	1851	1828	2130	2416	2291	2423
07:00	1712	1796	1821	1959	1872	1973	1946	2252	1885	1878	1537	1560	1626	1791	1771	1887
08:00	1386	1502	1485	1526	1494	1606	1757	1741	1614	1542	1257	1433	1341	1391	1476	1534
09:00	1092	1221	1285	1288	1237	1408	1466	1413	1481	1490	1107	1118	1080	1095	1250	1290
10:00	758	852	902	1018	917	1066	1187	1352	1198	1364	779	832	750	895	927	1054
11:00	506	648	541	741	605	829	838	1089	878	1051	426	558	474	730	610	807
Total	20802	22599	43679	43023	44417	44763	42962	44265	36527	38146	29448	31099	41187	41916	39629	40460
Day	43401		86702		89180		87227		74673		60547		83103		80089	
AM Peak	-	-	07:00	08:00	07:00	08:00	08:00	08:00	11:00	11:00	11:00	11:00	07:00	08:00	07:00	11:00
Vol.	-	-	3258	3085	3359	3095	2700	2619	2290	2478	1997	2390	3252	2936	2417	2446
PM Peak	16:00	15:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	13:00	16:00	12:00	16:00	16:00	16:00	15:00
Vol.	2972	3088	3137	3259	3166	3286	2758	3186	2620	2815	2274	2490	2930	3276	2837	2991

Tri-State Traffic Data, Inc.

610-466-1469
TSTData.com

Road: Rt. 1
Location: 520 ft S of Washington Rd
Counter: 23920 & 35314

Site Code: 1
Station ID:

Latitude: 40' 33025.0000 North
Longitude: 74' 63953.0000 West

Start	Tuesday, December 13, 2022		Wednesday, December 14, 2022		Thursday, December 15, 2022		Friday, December 16, 2022		Saturday, December 17, 2022		Sunday, December 18, 2022		Monday, December 19, 2022		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	297	398	317	425	*	*	*	*	*	*	*	*	*	*	307	412
01:00	207	234	209	247	*	*	*	*	*	*	*	*	*	*	208	240
02:00	194	208	250	216	*	*	*	*	*	*	*	*	*	*	222	212
03:00	354	217	340	230	*	*	*	*	*	*	*	*	*	*	347	224
04:00	683	364	665	355	*	*	*	*	*	*	*	*	*	*	674	360
05:00	1428	697	1434	702	*	*	*	*	*	*	*	*	*	*	1431	700
06:00	2631	1693	2624	1750	*	*	*	*	*	*	*	*	*	*	2628	1722
07:00	**3238**	2941	**3132**	2963	*	*	*	*	*	*	*	*	*	*	**3185**	2952
08:00	3021	**3204**	2896	**3196**	*	*	*	*	*	*	*	*	*	*	2958	**3200**
09:00	2531	2659	2554	2716	*	*	*	*	*	*	*	*	*	*	2542	2688
10:00	2196	2351	*	*	*	*	*	*	*	*	*	*	*	*	2196	2351
11:00	2077	2512	*	*	*	*	*	*	*	*	*	*	*	*	2077	2512
12:00 PM	2336	2541	*	*	*	*	*	*	*	*	*	*	*	*	2336	2541
01:00	2361	2581	*	*	*	*	*	*	*	*	*	*	*	*	2361	2581
02:00	2632	2850	*	*	*	*	*	*	*	*	*	*	*	*	2632	2850
03:00	2556	3192	*	*	*	*	*	*	*	*	*	*	*	*	2556	3192
04:00	**3036**	**3236**	*	*	*	*	*	*	*	*	*	*	*	*	**3036**	**3236**
05:00	2945	2999	*	*	*	*	*	*	*	*	*	*	*	*	2945	2999
06:00	2406	2650	*	*	*	*	*	*	*	*	*	*	*	*	2406	2650
07:00	1823	1977	*	*	*	*	*	*	*	*	*	*	*	*	1823	1977
08:00	1472	1593	*	*	*	*	*	*	*	*	*	*	*	*	1472	1593
09:00	1129	1345	*	*	*	*	*	*	*	*	*	*	*	*	1129	1345
10:00	877	893	*	*	*	*	*	*	*	*	*	*	*	*	877	893
11:00	511	677	*	*	*	*	*	*	*	*	*	*	*	*	511	677
Total	42941	44012	14421	12800	0	0	0	0	0	0	0	0	0	0	42859	44107
Day	86953		27221		0		0		0		0		0		86966	
AM Peak	07:00	08:00	07:00	08:00	-	-	-	-	-	-	-	-	-	-	07:00	08:00
Vol.	3238	3204	3132	3196	-	-	-	-	-	-	-	-	-	-	3185	3200
PM Peak	16:00	16:00	-	-	-	-	-	-	-	-	-	-	-	-	16:00	16:00
Vol.	3036	3236	-	-	-	-	-	-	-	-	-	-	-	-	3036	3236

Comb. Total	130354	113923	89180	87227	74673	60547	83103	167055
ADT	ADT 81,615	AADT 81,615						

Tri-State Traffic Data, Inc.

610-466-1469
TSTData.com

Road: Washington Rd
Location: 1080 ft E of Rt. 1
Counter: 35389

Site Code: 2
Station ID:
A to B EB
Latitude: 40' 32916.0000 North
Longitude: 74' 63503.0000 West

Start	Tuesday, December 6, 2022		Wednesday, December 7, 2022		Thursday, December 8, 2022		Friday, December 9, 2022		Saturday, December 10, 2022		Sunday, December 11, 2022		Monday, December 12, 2022		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	18	28	15	14	25	36	51	38	57	49	20	18	31	30
01:00	*	*	10	18	16	7	17	21	33	31	13	36	16	11	18	21
02:00	*	*	12	11	9	13	21	13	16	11	15	19	1	8	12	12
03:00	*	*	7	10	10	6	11	7	11	11	9	3	13	9	10	8
04:00	*	*	18	17	19	16	18	24	15	10	15	13	23	16	18	16
05:00	*	*	69	74	59	64	63	54	17	27	20	13	59	62	48	49
06:00	*	*	172	155	141	158	104	172	49	74	33	48	162	180	110	131
07:00	*	*	**255**	301	**265**	249	193	276	87	105	72	83	248	288	187	217
08:00	*	*	215	**313**	262	**334**	**259**	305	165	216	103	158	**265**	**303**	212	272
09:00	*	*	227	271	234	285	224	**306**	211	257	180	256	219	276	216	**275**
10:00	*	*	180	259	214	260	210	246	272	260	236	305	220	272	222	267
11:00	*	*	214	234	238	272	219	267	**281**	**302**	**264**	**307**	228	252	**241**	272
12:00 PM	*	*	268	245	281	273	284	316	**371**	338	284	282	248	261	289	286
01:00	*	*	209	205	287	263	302	278	327	**354**	276	**297**	261	232	277	272
02:00	274	233	299	259	308	261	318	245	338	311	246	253	280	273	295	262
03:00	316	244	313	261	349	267	**382**	285	315	307	264	260	329	284	324	273
04:00	356	264	334	243	383	268	345	347	339	315	**288**	264	337	242	340	278
05:00	**400**	272	**378**	291	**390**	328	364	**354**	332	334	267	232	**391**	**286**	**360**	300
06:00	284	**312**	295	**328**	298	**351**	352	335	267	337	223	189	298	282	288	**305**
07:00	221	181	247	182	241	222	289	281	253	250	204	156	208	187	238	208
08:00	175	154	203	148	233	177	244	171	215	159	168	141	165	156	200	158
09:00	174	110	167	134	194	150	193	149	233	152	118	99	124	102	172	128
10:00	74	79	107	91	104	88	138	83	158	111	64	50	77	66	103	81
11:00	42	42	53	49	67	53	106	70	105	95	28	27	35	29	62	52
Total	2316	1891	4270	4127	4617	4379	4681	4641	4461	4405	3447	3540	4227	4095	4273	4173
Day	4207		8397		8996		9322		8866		6987		8322		8446	
AM Peak	-	-	07:00	08:00	07:00	08:00	08:00	09:00	11:00	11:00	11:00	11:00	08:00	08:00	11:00	09:00
Vol.	-	-	255	313	265	334	259	306	281	302	264	307	265	303	241	275
PM Peak	17:00	18:00	17:00	18:00	17:00	18:00	15:00	17:00	12:00	13:00	16:00	13:00	17:00	17:00	17:00	18:00
Vol.	400	312	378	328	390	351	382	354	371	354	288	297	391	286	360	305

Tri-State Traffic Data, Inc.

610-466-1469
TSTData.com

Road: Washington Rd
Location: 1080 ft E of Rt. 1
Counter: 35389

Site Code: 2
Station ID:
A to B EB
Latitude: 40' 32916.0000 North
Longitude: 74' 63503.0000 West

Start	Tuesday, December 13, 2022		Wednesday, December 14, 2022		Thursday, December 15, 2022		Friday, December 16, 2022		Saturday, December 17, 2022		Sunday, December 18, 2022		Monday, December 19, 2022		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	19	25	23	26	*	*	*	*	*	*	*	*	*	*	21	26
01:00	9	11	8	6	*	*	*	*	*	*	*	*	*	*	8	8
02:00	2	4	10	9	*	*	*	*	*	*	*	*	*	*	6	6
03:00	12	7	11	18	*	*	*	*	*	*	*	*	*	*	12	12
04:00	23	19	18	16	*	*	*	*	*	*	*	*	*	*	20	18
05:00	63	63	67	64	*	*	*	*	*	*	*	*	*	*	65	64
06:00	141	184	159	163	*	*	*	*	*	*	*	*	*	*	150	174
07:00	278	300	**264**	**294**	*	*	*	*	*	*	*	*	*	*	**271**	297
08:00	**296**	305	246	271	*	*	*	*	*	*	*	*	*	*	271	288
09:00	214	**313**	*	*	*	*	*	*	*	*	*	*	*	*	214	**313**
10:00	204	245	*	*	*	*	*	*	*	*	*	*	*	*	204	245
11:00	223	265	*	*	*	*	*	*	*	*	*	*	*	*	223	265
12:00 PM	277	256	*	*	*	*	*	*	*	*	*	*	*	*	277	256
01:00	258	276	*	*	*	*	*	*	*	*	*	*	*	*	258	276
02:00	318	272	*	*	*	*	*	*	*	*	*	*	*	*	318	272
03:00	333	278	*	*	*	*	*	*	*	*	*	*	*	*	333	278
04:00	357	292	*	*	*	*	*	*	*	*	*	*	*	*	357	292
05:00	**368**	**307**	*	*	*	*	*	*	*	*	*	*	*	*	**368**	**307**
06:00	295	303	*	*	*	*	*	*	*	*	*	*	*	*	295	303
07:00	246	198	*	*	*	*	*	*	*	*	*	*	*	*	246	198
08:00	187	154	*	*	*	*	*	*	*	*	*	*	*	*	187	154
09:00	170	118	*	*	*	*	*	*	*	*	*	*	*	*	170	118
10:00	107	74	*	*	*	*	*	*	*	*	*	*	*	*	107	74
11:00	67	42	*	*	*	*	*	*	*	*	*	*	*	*	67	42
Total	4467	4311	806	867	0	0	0	0	0	0	0	0	0	0	4448	4286
Day	8778		1673		0		0		0		0		0		8734	
AM Peak	08:00	09:00	07:00	07:00	-	-	-	-	-	-	-	-	-	-	07:00	09:00
Vol.	296	313	264	294	-	-	-	-	-	-	-	-	-	-	271	313
PM Peak	17:00	17:00	-	-	-	-	-	-	-	-	-	-	-	-	17:00	17:00
Vol.	368	307	-	-	-	-	-	-	-	-	-	-	-	-	368	307

Comb. Total	12985	10070	8996	9322	8866	6987	8322	17180

ADT ADT 8,522 AADT 8,522

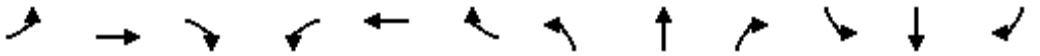
New Jersey Department of Transportation

Short-term Hourly Traffic Volume for 08/27/2018 to 08/31/2018

Site names:	11c159r,FR ALEXANDER RD to US 1 NB-11,00000001__	Seasonal Factor Grp:	rg3_3U
County:	MERCER	Daily Factor Grp:	rg3_3U
Funct Class:	Urban Principal Arterial - Other	Axle Factor Grp:	rg3_3U
Location:	FR ALEXANDER RD SB to US 1 NB	Growth Factor Grp:	rg3_3U

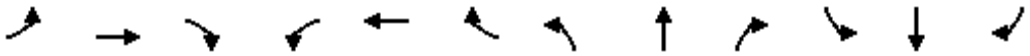
	Sun, Aug 26, 2018			Mon, Aug 27, 2018			Tue, Aug 28, 2018			Wed, Aug 29, 2018			Thu, Aug 30, 2018			Fri, Aug 31, 2018			Sat, Sep 1, 2018		
	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S
00:00							16	16		24	24		23	23		31	31				
01:00							11	11		7	7		14	14		17	17				
02:00							6	6		9	9		4	4		7	7				
03:00							4	4		6	6		5	5		7	7				
04:00							14	14		10	10		16	16		12	12				
05:00							41	41		37	37		35	35		33	33				
06:00							94	94		88	88		70	70		77	77				
07:00							232	232		219	219		206	206		163	163				
08:00							270	270		265	265		292	292							
09:00							259	259		249	249		249	249							
10:00							204	204		220	220		224	224							
11:00							222	222		229	229		267	267							
12:00							321	321		300	300		310	310							
13:00							282	282		262	262		246	246							
14:00				268	268		243	243		266	266		271	271							
15:00				289	289		313	313		323	323		325	325							
16:00				514	514		518	518		476	476		507	507							
17:00				612	612		648	648		641	641		666	666							
18:00				396	396		524	524		419	419		483	483							
19:00				249	249		289	289		272	272		285	285							
20:00				157	157		180	180		189	189		175	175							
21:00				107	107		142	142		133	133		150	150							
22:00				69	69		87	87		76	76		97	97							
23:00				23	23		37	37		39	39		42	42							
Total				2,684	2,684		4,957	4,957		4,759	4,759		4,962	4,962		347	347				
AM Peak Vol							279	279		283	283		292	292							
AM Peak Fct							.861	.861		.931	.931		.89	.89							
AM Peak Hr							7: 30	7: 30		8: 30	8: 30		8: 00	8: 00							
PM Peak Vol							655	655		648	648		692	692							
PM Peak Fct							.905	.905		.844	.844		.906	.906							
PM Peak Hr							16: 45	16: 45		16: 45	16: 45		16: 45	16: 45							
Seasonal Fct				.993	.993		.993	.993		.993	.993		.993	.993		.993	.993				
Daily Fct				1.020	1.020		.982	.982		.955	.955		.934	.934		.921	.921				
Axle Fct				.490	.490		.490	.490		.490	.490		.490	.490		.490	.490				
Pulse Fct				2.000	2.000		2.000	2.000		2.000	2.000		2.000	2.000		2.000	2.000				

APPENDIX C
CAPACITY ANALYSES



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	107	528	69	0	3169	0	0	3108	229
Future Volume (vph)	0	0	0	107	528	69	0	3169	0	0	3108	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850					0.990	
Flt Protected					0.992							
Satd. Flow (prot)	0	0	0	0	3399	1615	0	5022	0	0	4982	0
Flt Permitted					0.992							
Satd. Flow (perm)	0	0	0	0	3399	1615	0	5022	0	0	4982	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)						48						
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		138			158			216			432	
Travel Time (s)		1.9			2.7			2.7			5.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	12%	4%	0%	0%	6%	0%	0%	6%	3%
Adj. Flow (vph)	0	0	0	111	550	72	0	3301	0	0	3238	239
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	661	72	0	3301	0	0	3477	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			6			6	
Link Offset(ft)		0			-15			0			0	
Crosswalk Width(ft)		16			5			25			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors				1	2	1		2			2	
Detector Template				Left	Thru	Right		Thru			Thru	
Leading Detector (ft)				20	100	20		100			100	
Trailing Detector (ft)				0	0	0		0			0	
Detector 1 Position(ft)				0	0	0		0			0	
Detector 1 Size(ft)				20	6	20		6			6	
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Queue (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Delay (s)				0.0	0.0	0.0		0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm		NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8		8						
Detector Phase				8	8	8		2			6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0		20.0			20.0	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				14.0	14.0	14.0		29.0			29.0	
Total Split (s)				28.0	28.0	28.0		107.0			107.0	
Total Split (%)				20.7%	20.7%	20.7%		79.3%			79.3%	
Maximum Green (s)				21.0	21.0	21.0		98.0			98.0	
Yellow Time (s)				4.0	4.0	4.0		6.0			6.0	
All-Red Time (s)				3.0	3.0	3.0		3.0			3.0	
Lost Time Adjust (s)					0.0	0.0		0.0			0.0	
Total Lost Time (s)					7.0	7.0		9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0		2.0			2.0	
Recall Mode				None	None	None		C-Min			C-Min	
Act Effct Green (s)					21.0	21.0		98.0			98.0	
Actuated g/C Ratio					0.16	0.16		0.73			0.73	
v/c Ratio					1.25	0.25		0.91			0.96	
Control Delay					170.8	19.3		2.2			25.6	
Queue Delay					0.7	0.0		11.4			2.5	
Total Delay					171.5	19.3		13.6			28.2	
LOS					F	B		B			C	
Approach Delay					156.5			13.6			28.2	
Approach LOS					F			B			C	
90th %ile Green (s)				21.0	21.0	21.0		98.0			98.0	
90th %ile Term Code				Max	Max	Max		Coord			Coord	
70th %ile Green (s)				21.0	21.0	21.0		98.0			98.0	
70th %ile Term Code				Max	Max	Max		Coord			Coord	
50th %ile Green (s)				21.0	21.0	21.0		98.0			98.0	
50th %ile Term Code				Max	Max	Max		Coord			Coord	
30th %ile Green (s)				21.0	21.0	21.0		98.0			98.0	
30th %ile Term Code				Max	Max	Max		Coord			Coord	
10th %ile Green (s)				21.0	21.0	21.0		98.0			98.0	
10th %ile Term Code				Max	Max	Max		Coord			Coord	
Stops (vph)					512	21		811			2722	
Fuel Used(gal)					28	1		21			77	
CO Emissions (g/hr)					1942	39		1456			5391	
NOx Emissions (g/hr)					378	8		283			1049	
VOC Emissions (g/hr)					450	9		337			1249	
Dilemma Vehicles (#)					16	0		133			122	
Queue Length 50th (ft)					~384	15		55			909	
Queue Length 95th (ft)					m#475	m47		m54			1004	
Internal Link Dist (ft)		58			78			136			352	
Turn Bay Length (ft)												
Base Capacity (vph)					528	291		3645			3616	
Starvation Cap Reductn					27	0		393			0	
Spillback Cap Reductn					43	0		0			90	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					1.36	0.25		1.02			0.99	

Intersection Summary	
Area Type:	Other

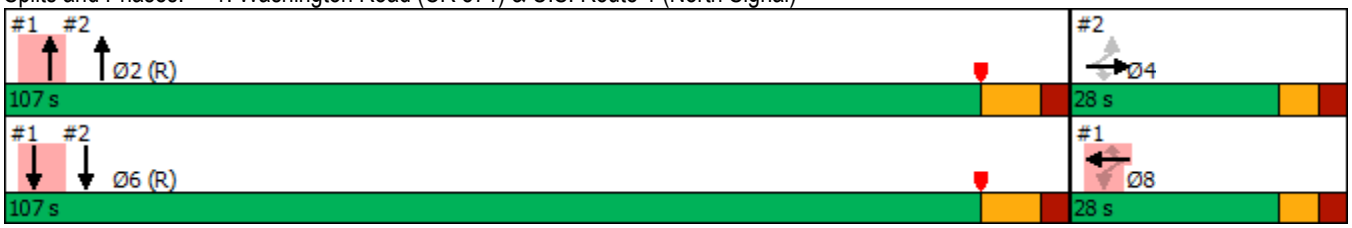
Lane Group	Ø4
Minimum Split (s)	14.0
Total Split (s)	28.0
Total Split (%)	21%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	21.0
90th %ile Term Code	Max
70th %ile Green (s)	21.0
70th %ile Term Code	Max
50th %ile Green (s)	21.0
50th %ile Term Code	Hold
30th %ile Green (s)	21.0
30th %ile Term Code	Hold
10th %ile Green (s)	21.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

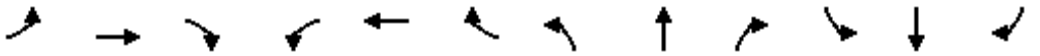
Intersection Summary

Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 34.3	Intersection LOS: C
Intersection Capacity Utilization 94.5%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

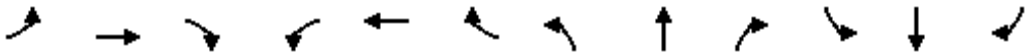
Splits and Phases: 1: Washington Road (CR 571) & U.S. Route 1 (North Signal)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	124	541	142	0	3111	0	0	3108	245
Future Volume (vph)	0	0	0	124	541	142	0	3111	0	0	3108	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850					0.989	
Flt Protected					0.991							
Satd. Flow (prot)	0	0	0	0	3403	1615	0	4975	0	0	4977	0
Flt Permitted					0.991							
Satd. Flow (perm)	0	0	0	0	3403	1615	0	4975	0	0	4977	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)						45						
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		138			158			216			432	
Travel Time (s)		1.9			2.7			2.7			5.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	10%	4%	0%	0%	7%	0%	0%	6%	3%
Adj. Flow (vph)	0	0	0	129	564	148	0	3241	0	0	3238	255
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	693	148	0	3241	0	0	3493	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			6			6	
Link Offset(ft)		0			-15			0			0	
Crosswalk Width(ft)		16			5			25			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors				1	2	1		2			2	
Detector Template				Left	Thru	Right		Thru			Thru	
Leading Detector (ft)				20	100	20		100			100	
Trailing Detector (ft)				0	0	0		0			0	
Detector 1 Position(ft)				0	0	0		0			0	
Detector 1 Size(ft)				20	6	20		6			6	
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Queue (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Delay (s)				0.0	0.0	0.0		0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm		NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8		8						
Detector Phase				8	8	8		2			6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0		20.0			20.0	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				14.0	14.0	14.0		29.0			29.0	
Total Split (s)				31.0	31.0	31.0		114.0			114.0	
Total Split (%)				21.4%	21.4%	21.4%		78.6%			78.6%	
Maximum Green (s)				24.0	24.0	24.0		105.0			105.0	
Yellow Time (s)				4.0	4.0	4.0		6.0			6.0	
All-Red Time (s)				3.0	3.0	3.0		3.0			3.0	
Lost Time Adjust (s)					0.0	0.0		0.0			0.0	
Total Lost Time (s)					7.0	7.0		9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0		2.0			2.0	
Recall Mode				None	None	None		C-Min			C-Min	
Act Effct Green (s)					24.0	24.0		105.0			105.0	
Actuated g/C Ratio					0.17	0.17		0.72			0.72	
v/c Ratio					1.23	0.49		0.90			0.97	
Control Delay					166.0	41.3		4.1			28.2	
Queue Delay					1.0	0.7		0.0			4.6	
Total Delay					167.0	42.1		4.1			32.8	
LOS					F	D		A			C	
Approach Delay					145.0			4.1			32.8	
Approach LOS					F			A			C	
90th %ile Green (s)				24.0	24.0	24.0		105.0			105.0	
90th %ile Term Code				Max	Max	Max		Coord			Coord	
70th %ile Green (s)				24.0	24.0	24.0		105.0			105.0	
70th %ile Term Code				Max	Max	Max		Coord			Coord	
50th %ile Green (s)				24.0	24.0	24.0		105.0			105.0	
50th %ile Term Code				Max	Max	Max		Coord			Coord	
30th %ile Green (s)				24.0	24.0	24.0		105.0			105.0	
30th %ile Term Code				Max	Max	Max		Coord			Coord	
10th %ile Green (s)				24.0	24.0	24.0		105.0			105.0	
10th %ile Term Code				Max	Max	Max		Coord			Coord	
Stops (vph)					544	81		1882			2775	
Fuel Used(gal)					29	2		42			80	
CO Emissions (g/hr)					1994	150		2922			5591	
NOx Emissions (g/hr)					388	29		569			1088	
VOC Emissions (g/hr)					462	35		677			1296	
Dilemma Vehicles (#)					16	0		98			113	
Queue Length 50th (ft)					~427	78		47			1015	
Queue Length 95th (ft)					#554	146		49			1104	
Internal Link Dist (ft)		58			78			136			352	
Turn Bay Length (ft)												
Base Capacity (vph)					563	304		3602			3604	
Starvation Cap Reductn					69	34		3			0	
Spillback Cap Reductn					40	0		0			111	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					1.40	0.55		0.90			1.00	

Intersection Summary	
Area Type:	Other

Lane Group	Ø4
Minimum Split (s)	14.0
Total Split (s)	31.0
Total Split (%)	21%
Maximum Green (s)	24.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	24.0
90th %ile Term Code	Max
70th %ile Green (s)	24.0
70th %ile Term Code	Max
50th %ile Green (s)	24.0
50th %ile Term Code	Hold
30th %ile Green (s)	24.0
30th %ile Term Code	Hold
10th %ile Green (s)	24.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

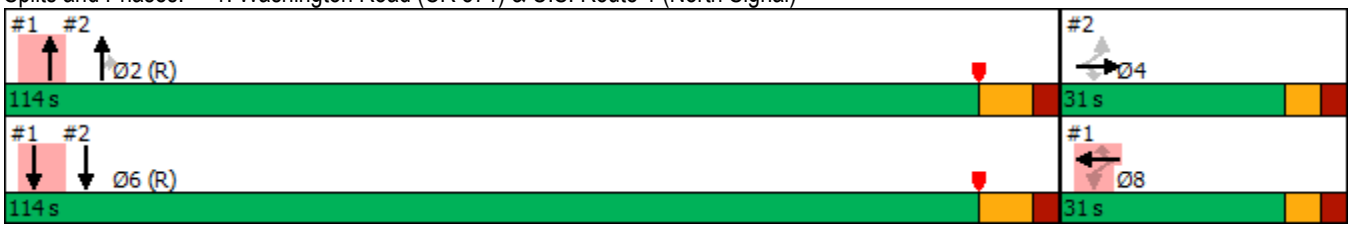
Intersection Summary

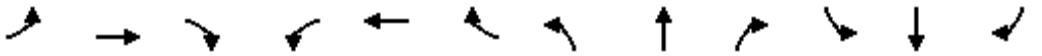
Cycle Length: 145	
Actuated Cycle Length: 145	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 33.0	Intersection LOS: C
Intersection Capacity Utilization 95.7%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

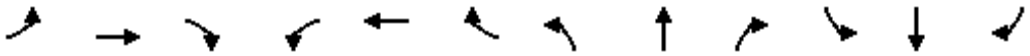
Splits and Phases: 1: Washington Road (CR 571) & U.S. Route 1 (North Signal)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	107	255	97	0	3481	0	0	3420	163
Future Volume (vph)	0	0	0	107	255	97	0	3481	0	0	3420	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850					0.993	
Flt Protected					0.985							
Satd. Flow (prot)	0	0	0	0	3476	1583	0	5119	0	0	5087	0
Flt Permitted					0.985							
Satd. Flow (perm)	0	0	0	0	3476	1583	0	5119	0	0	5087	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)						37						
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		138			158			216			432	
Travel Time (s)		1.9			2.7			2.7			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	3%	2%	2%	0%	4%	0%	0%	4%	2%
Adj. Flow (vph)	0	0	0	113	268	102	0	3664	0	0	3600	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	381	102	0	3664	0	0	3772	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			6			6	
Link Offset(ft)		0			-15			0			0	
Crosswalk Width(ft)		16			5			25			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors				1	2	1		2			2	
Detector Template				Left	Thru	Right		Thru			Thru	
Leading Detector (ft)				20	100	20		100			100	
Trailing Detector (ft)				0	0	0		0			0	
Detector 1 Position(ft)				0	0	0		0			0	
Detector 1 Size(ft)				20	6	20		6			6	
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Queue (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Delay (s)				0.0	0.0	0.0		0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm		NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8		8						
Detector Phase				8	8	8		2			6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0		20.0			20.0	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				14.0	14.0	14.0		29.0			29.0	
Total Split (s)				41.0	41.0	41.0		134.0			134.0	
Total Split (%)				23.4%	23.4%	23.4%		76.6%			76.6%	
Maximum Green (s)				34.0	34.0	34.0		125.0			125.0	
Yellow Time (s)				4.0	4.0	4.0		6.0			6.0	
All-Red Time (s)				3.0	3.0	3.0		3.0			3.0	
Lost Time Adjust (s)					0.0	0.0		0.0			0.0	
Total Lost Time (s)					7.0	7.0		9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0		2.0			2.0	
Recall Mode				None	None	None		C-Min			C-Min	
Act Effct Green (s)					34.0	34.0		125.0			125.0	
Actuated g/C Ratio					0.19	0.19		0.71			0.71	
v/c Ratio					0.56	0.30		1.00			1.04	
Control Delay					59.2	33.3		10.7			51.2	
Queue Delay					6.8	0.0		32.6			26.2	
Total Delay					66.0	33.3		43.4			77.4	
LOS					E	C		D			E	
Approach Delay					59.1			43.4			77.4	
Approach LOS					E			D			E	
90th %ile Green (s)				34.0	34.0	34.0		125.0			125.0	
90th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
70th %ile Green (s)				34.0	34.0	34.0		125.0			125.0	
70th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
50th %ile Green (s)				34.0	34.0	34.0		125.0			125.0	
50th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
30th %ile Green (s)				34.0	34.0	34.0		125.0			125.0	
30th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
10th %ile Green (s)				34.0	34.0	34.0		125.0			125.0	
10th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
Stops (vph)					296	42		2119			3151	
Fuel Used(gal)					8	1		52			106	
CO Emissions (g/hr)					535	82		3617			7388	
NOx Emissions (g/hr)					104	16		704			1437	
VOC Emissions (g/hr)					124	19		838			1712	
Dilemma Vehicles (#)					7	0		116			98	
Queue Length 50th (ft)					187	52		~107			~1701	
Queue Length 95th (ft)					m235	m93		m99			#1731	
Internal Link Dist (ft)		58			78			136			352	
Turn Bay Length (ft)												
Base Capacity (vph)					675	337		3656			3633	
Starvation Cap Reductn					241	0		287			0	
Spillback Cap Reductn					173	0		0			487	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					0.88	0.30		1.09			1.20	

Intersection Summary	
Area Type:	Other

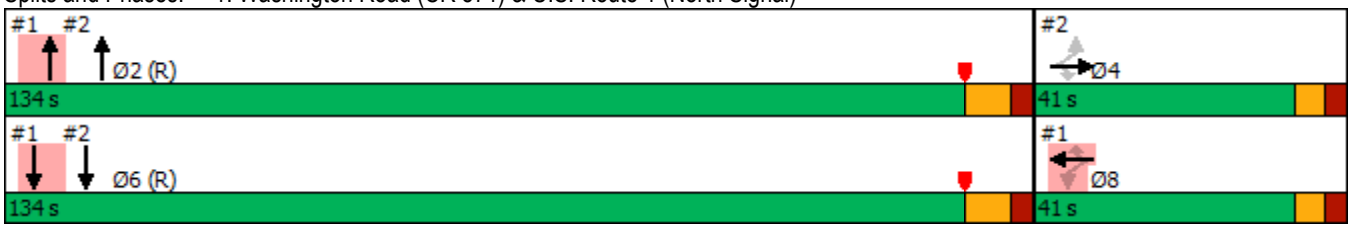
Lane Group	Ø4
Minimum Split (s)	14.0
Total Split (s)	41.0
Total Split (%)	23%
Maximum Green (s)	34.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	34.0
90th %ile Term Code	Max
70th %ile Green (s)	34.0
70th %ile Term Code	Max
50th %ile Green (s)	34.0
50th %ile Term Code	Max
30th %ile Green (s)	34.0
30th %ile Term Code	Max
10th %ile Green (s)	34.0
10th %ile Term Code	Max
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

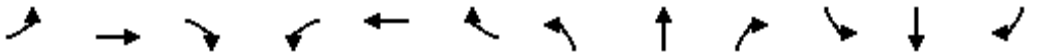
Intersection Summary

Cycle Length: 175	
Actuated Cycle Length: 175	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 60.6	Intersection LOS: E
Intersection Capacity Utilization 102.2%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

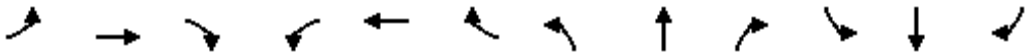
Splits and Phases: 1: Washington Road (CR 571) & U.S. Route 1 (North Signal)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	121	265	150	0	3439	0	0	3420	174
Future Volume (vph)	0	0	0	121	265	150	0	3439	0	0	3420	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850					0.993	
Flt Protected					0.985							
Satd. Flow (prot)	0	0	0	0	3486	1599	0	5119	0	0	5088	0
Flt Permitted					0.985							
Satd. Flow (perm)	0	0	0	0	3486	1599	0	5119	0	0	5088	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)						39						
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		138			158			216			432	
Travel Time (s)		1.9			2.7			2.7			5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	2%	2%	1%	0%	4%	0%	0%	4%	2%
Adj. Flow (vph)	0	0	0	127	279	158	0	3620	0	0	3600	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	406	158	0	3620	0	0	3783	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			6			6	
Link Offset(ft)		0			-15			0			0	
Crosswalk Width(ft)		16			5			25			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors				1	2	1		2			2	
Detector Template				Left	Thru	Right		Thru			Thru	
Leading Detector (ft)				20	100	20		100			100	
Trailing Detector (ft)				0	0	0		0			0	
Detector 1 Position(ft)				0	0	0		0			0	
Detector 1 Size(ft)				20	6	20		6			6	
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Queue (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Delay (s)				0.0	0.0	0.0		0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm		NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8		8						
Detector Phase				8	8	8		2			6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0		20.0			20.0	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				14.0	14.0	14.0		29.0			29.0	
Total Split (s)				39.0	39.0	39.0		131.0			131.0	
Total Split (%)				22.9%	22.9%	22.9%		77.1%			77.1%	
Maximum Green (s)				32.0	32.0	32.0		122.0			122.0	
Yellow Time (s)				4.0	4.0	4.0		6.0			6.0	
All-Red Time (s)				3.0	3.0	3.0		3.0			3.0	
Lost Time Adjust (s)					0.0	0.0		0.0			0.0	
Total Lost Time (s)					7.0	7.0		9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0		2.0			2.0	
Recall Mode				None	None	None		C-Min			C-Min	
Act Effct Green (s)					32.0	32.0		122.0			122.0	
Actuated g/C Ratio					0.19	0.19		0.72			0.72	
v/c Ratio					0.62	0.48		0.99			1.04	
Control Delay					63.1	46.7		12.3			49.5	
Queue Delay					9.8	2.6		0.1			27.0	
Total Delay					72.8	49.2		12.4			76.6	
LOS					E	D		B			E	
Approach Delay					66.2			12.4			76.6	
Approach LOS					E			B			E	
90th %ile Green (s)				32.0	32.0	32.0		122.0			122.0	
90th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
70th %ile Green (s)				32.0	32.0	32.0		122.0			122.0	
70th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
50th %ile Green (s)				32.0	32.0	32.0		122.0			122.0	
50th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
30th %ile Green (s)				32.0	32.0	32.0		122.0			122.0	
30th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
10th %ile Green (s)				32.0	32.0	32.0		122.0			122.0	
10th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
Stops (vph)					325	88		2708			3147	
Fuel Used(gal)					9	2		64			105	
CO Emissions (g/hr)					599	171		4447			7307	
NOx Emissions (g/hr)					116	33		865			1422	
VOC Emissions (g/hr)					139	40		1031			1693	
Dilemma Vehicles (#)					9	0		96			101	
Queue Length 50th (ft)					200	100		91			~1653	
Queue Length 95th (ft)					265	m176		102			#1688	
Internal Link Dist (ft)		58			78			136			352	
Turn Bay Length (ft)												
Base Capacity (vph)					656	332		3673			3651	
Starvation Cap Reductn					216	89		2			0	
Spillback Cap Reductn					179	0		0			463	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					0.92	0.65		0.99			1.19	

Intersection Summary	
Area Type:	Other

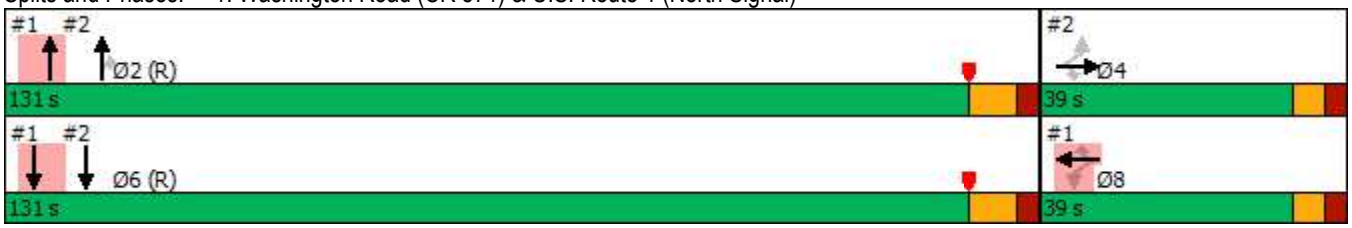
Lane Group	Ø4
Minimum Split (s)	14.0
Total Split (s)	39.0
Total Split (%)	23%
Maximum Green (s)	32.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	32.0
90th %ile Term Code	Max
70th %ile Green (s)	32.0
70th %ile Term Code	Max
50th %ile Green (s)	32.0
50th %ile Term Code	Max
30th %ile Green (s)	32.0
30th %ile Term Code	Max
10th %ile Green (s)	32.0
10th %ile Term Code	Max
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

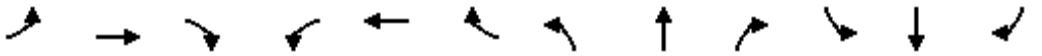
Intersection Summary

Cycle Length: 170	
Actuated Cycle Length: 170	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 46.7	Intersection LOS: D
Intersection Capacity Utilization 102.5%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

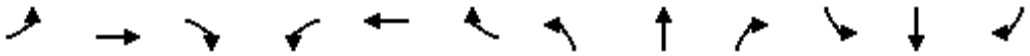
Splits and Phases: 1: Washington Road (CR 571) & U.S. Route 1 (North Signal)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	149	332	133	0	2641	0	0	2688	218
Future Volume (vph)	0	0	0	149	332	133	0	2641	0	0	2688	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850					0.989	
Flt Protected					0.985							
Satd. Flow (prot)	0	0	0	0	3521	1583	0	5219	0	0	5169	0
Flt Permitted					0.985							
Satd. Flow (perm)	0	0	0	0	3521	1583	0	5219	0	0	5169	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)						57						
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		138			158			216			432	
Travel Time (s)		1.9			2.7			2.7			5.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	164	365	146	0	2902	0	0	2954	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	529	146	0	2902	0	0	3194	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			6			6	
Link Offset(ft)		0			-15			0			0	
Crosswalk Width(ft)		16			5			25			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors				1	2	1		2			2	
Detector Template				Left	Thru	Right		Thru			Thru	
Leading Detector (ft)				20	100	20		100			100	
Trailing Detector (ft)				0	0	0		0			0	
Detector 1 Position(ft)				0	0	0		0			0	
Detector 1 Size(ft)				20	6	20		6			6	
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Queue (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Delay (s)				0.0	0.0	0.0		0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm		NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8		8						
Detector Phase				8	8	8		2			6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0		20.0			20.0	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				14.0	14.0	14.0		29.0			29.0	
Total Split (s)				34.0	34.0	34.0		81.0			81.0	
Total Split (%)				29.6%	29.6%	29.6%		70.4%			70.4%	
Maximum Green (s)				27.0	27.0	27.0		72.0			72.0	
Yellow Time (s)				4.0	4.0	4.0		6.0			6.0	
All-Red Time (s)				3.0	3.0	3.0		3.0			3.0	
Lost Time Adjust (s)					0.0	0.0		0.0			0.0	
Total Lost Time (s)					7.0	7.0		9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0		2.0			2.0	
Recall Mode				None	None	None		C-Min			C-Min	
Act Effct Green (s)					27.0	27.0		72.0			72.0	
Actuated g/C Ratio					0.23	0.23		0.63			0.63	
v/c Ratio					0.64	0.35		0.89			0.99	
Control Delay					39.8	21.3		5.2			34.5	
Queue Delay					2.9	0.0		5.8			16.4	
Total Delay					42.7	21.3		11.0			51.0	
LOS					D	C		B			D	
Approach Delay					38.1			11.0			51.0	
Approach LOS					D			B			D	
90th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
90th %ile Term Code				Max	Max	Max		Coord			Coord	
70th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
70th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
50th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
50th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
30th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
30th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
10th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
10th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
Stops (vph)					404	56		1088			2492	
Fuel Used(gal)					8	1		27			75	
CO Emissions (g/hr)					586	89		1862			5221	
NOx Emissions (g/hr)					114	17		362			1016	
VOC Emissions (g/hr)					136	21		431			1210	
Dilemma Vehicles (#)					15	0		126			123	
Queue Length 50th (ft)					170	46		71			787	
Queue Length 95th (ft)					m221	m89		86			#974	
Internal Link Dist (ft)		58			78			136			352	
Turn Bay Length (ft)												
Base Capacity (vph)					826	415		3267			3236	
Starvation Cap Reductn					191	0		335			0	
Spillback Cap Reductn					144	0		0			171	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					0.83	0.35		0.99			1.04	

Intersection Summary	
Area Type:	Other

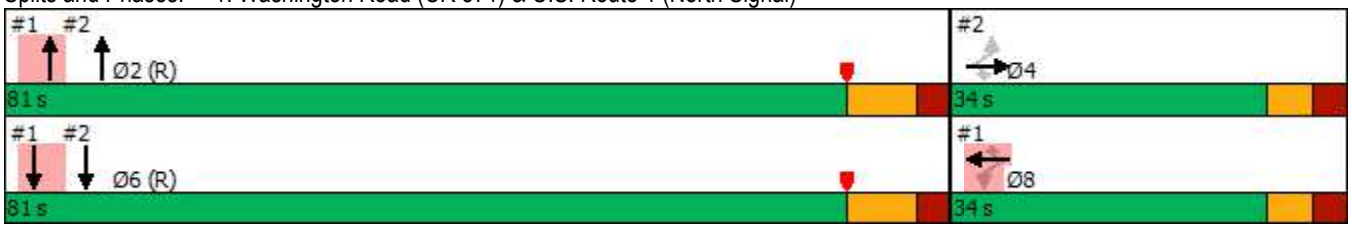
Lane Group	Ø4
Minimum Split (s)	14.0
Total Split (s)	34.0
Total Split (%)	30%
Maximum Green (s)	27.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	27.0
90th %ile Term Code	Max
70th %ile Green (s)	27.0
70th %ile Term Code	Max
50th %ile Green (s)	27.0
50th %ile Term Code	Max
30th %ile Green (s)	27.0
30th %ile Term Code	Max
10th %ile Green (s)	27.0
10th %ile Term Code	Max
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

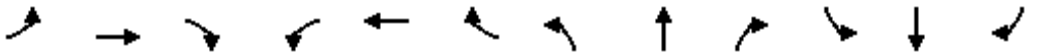
Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 32.5	Intersection LOS: C
Intersection Capacity Utilization 92.2%	ICU Level of Service F
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

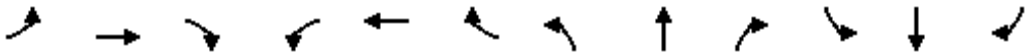
Splits and Phases: 1: Washington Road (CR 571) & U.S. Route 1 (North Signal)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	166	344	189	0	2601	0	0	2688	233
Future Volume (vph)	0	0	0	166	344	189	0	2601	0	0	2688	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850					0.988	
Flt Protected					0.984							
Satd. Flow (prot)	0	0	0	0	3517	1599	0	5219	0	0	5165	0
Flt Permitted					0.984							
Satd. Flow (perm)	0	0	0	0	3517	1599	0	5219	0	0	5165	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)						57						
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		138			158			216			432	
Travel Time (s)		1.9			2.7			2.7			5.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	182	378	208	0	2858	0	0	2954	256
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	560	208	0	2858	0	0	3210	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			6			6	
Link Offset(ft)		0			-15			0			0	
Crosswalk Width(ft)		16			5			25			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors				1	2	1		2			2	
Detector Template				Left	Thru	Right		Thru			Thru	
Leading Detector (ft)				20	100	20		100			100	
Trailing Detector (ft)				0	0	0		0			0	
Detector 1 Position(ft)				0	0	0		0			0	
Detector 1 Size(ft)				20	6	20		6			6	
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Queue (s)				0.0	0.0	0.0		0.0			0.0	
Detector 1 Delay (s)				0.0	0.0	0.0		0.0			0.0	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm		NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8		8						
Detector Phase				8	8	8		2			6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0		20.0			20.0	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				14.0	14.0	14.0		29.0			29.0	
Total Split (s)				34.0	34.0	34.0		81.0			81.0	
Total Split (%)				29.6%	29.6%	29.6%		70.4%			70.4%	
Maximum Green (s)				27.0	27.0	27.0		72.0			72.0	
Yellow Time (s)				4.0	4.0	4.0		6.0			6.0	
All-Red Time (s)				3.0	3.0	3.0		3.0			3.0	
Lost Time Adjust (s)					0.0	0.0		0.0			0.0	
Total Lost Time (s)					7.0	7.0		9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0		2.0			2.0	
Recall Mode				None	None	None		C-Min			C-Min	
Act Effct Green (s)					27.0	27.0		72.0			72.0	
Actuated g/C Ratio					0.23	0.23		0.63			0.63	
v/c Ratio					0.68	0.50		0.87			0.99	
Control Delay					42.6	29.8		6.5			35.9	
Queue Delay					4.5	1.0		0.1			17.5	
Total Delay					47.1	30.9		6.6			53.4	
LOS					D	C		A			D	
Approach Delay					42.7			6.6			53.4	
Approach LOS					D			A			D	
90th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
90th %ile Term Code				Max	Max	Max		Coord			Coord	
70th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
70th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
50th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
50th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
30th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
30th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
10th %ile Green (s)				27.0	27.0	27.0		72.0			72.0	
10th %ile Term Code				Hold	Hold	Hold		Coord			Coord	
Stops (vph)					436	105		1875			2512	
Fuel Used(gal)					9	2		42			76	
CO Emissions (g/hr)					647	167		2923			5313	
NOx Emissions (g/hr)					126	32		569			1034	
VOC Emissions (g/hr)					150	39		677			1231	
Dilemma Vehicles (#)					16	0		100			123	
Queue Length 50th (ft)					184	83		70			798	
Queue Length 95th (ft)					246	155		74			#983	
Internal Link Dist (ft)		58			78			136			352	
Turn Bay Length (ft)												
Base Capacity (vph)					825	419		3267			3233	
Starvation Cap Reductn					192	71		31			0	
Spillback Cap Reductn					144	0		0			168	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					0.88	0.60		0.88			1.05	

Intersection Summary	
Area Type:	Other

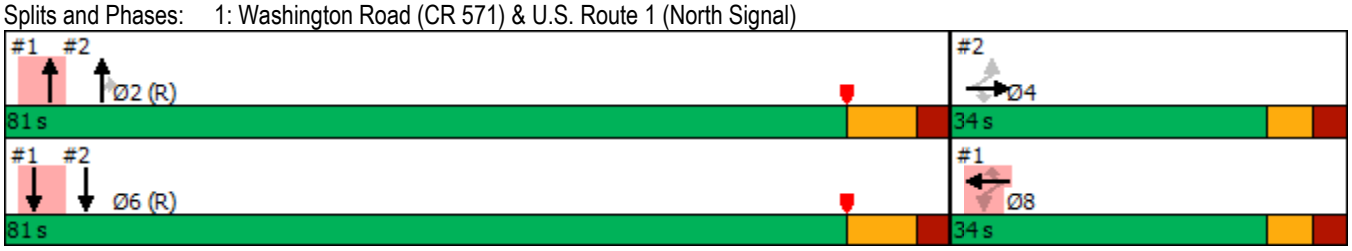
Lane Group	Ø4
Minimum Split (s)	14.0
Total Split (s)	34.0
Total Split (%)	30%
Maximum Green (s)	27.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	27.0
90th %ile Term Code	Max
70th %ile Green (s)	27.0
70th %ile Term Code	Max
50th %ile Green (s)	27.0
50th %ile Term Code	Max
30th %ile Green (s)	27.0
30th %ile Term Code	Max
10th %ile Green (s)	27.0
10th %ile Term Code	Max
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 32.6	Intersection LOS: C
Intersection Capacity Utilization 92.2%	ICU Level of Service F
Analysis Period (min) 15	

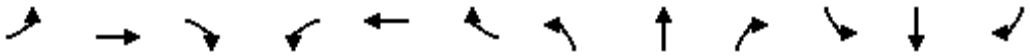
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Washington Road (CR 571) & U.S. Route 1 (North Signal)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	216	200	0	0	0	0	3101	349	0	3214	0
Future Volume (vph)	68	216	200	0	0	0	0	3101	349	0	3214	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850					0.985				
Flt Protected		0.988										
Satd. Flow (prot)	0	3463	1482	0	0	0	0	4952	0	0	5022	0
Flt Permitted		0.988										
Satd. Flow (perm)	0	3463	1482	0	0	0	0	4952	0	0	5022	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			48									
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		157			151			223			216	
Travel Time (s)		2.1			2.6			2.8			2.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	9%	0%	0%	0%	0%	6%	5%	0%	6%	0%
Adj. Flow (vph)	72	227	211	0	0	0	0	3264	367	0	3383	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	299	211	0	0	0	0	3631	0	0	3383	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	Left	Left	Left	Right
Median Width(ft)		0			0			6			6	
Link Offset(ft)		-5			0			0			0	
Crosswalk Width(ft)		10			16			30			30	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors	1	2	1					2			2	
Detector Template	Left	Thru	Right					Thru			Thru	
Leading Detector (ft)	20	100	20					100			100	
Trailing Detector (ft)	0	0	0					0			0	
Detector 1 Position(ft)	0	0	0					0			0	
Detector 1 Size(ft)	20	6	20					6			6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0			0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4		4									
Detector Phase	4	4	4					2			6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0					20.0			20.0	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	14.0	14.0	14.0					29.0			29.0	
Total Split (s)	28.0	28.0	28.0					107.0			107.0	
Total Split (%)	20.7%	20.7%	20.7%					79.3%			79.3%	
Maximum Green (s)	21.0	21.0	21.0					98.0			98.0	
Yellow Time (s)	4.0	4.0	4.0					6.0			6.0	
All-Red Time (s)	3.0	3.0	3.0					3.0			3.0	
Lost Time Adjust (s)		0.0	0.0					0.0			0.0	
Total Lost Time (s)		7.0	7.0					9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0					2.0			2.0	
Recall Mode	None	None	None					C-Min			C-Min	
Act Effct Green (s)		21.0	21.0					98.0			98.0	
Actuated g/C Ratio		0.16	0.16					0.73			0.73	
v/c Ratio		0.56	0.78					1.01			0.93	
Control Delay		54.9	59.8					36.4			4.4	
Queue Delay		35.9	2.1					13.9			4.3	
Total Delay		90.8	61.9					50.3			8.8	
LOS		F	E					D			A	
Approach Delay		78.9						50.3			8.8	
Approach LOS		E						D			A	
90th %ile Green (s)	21.0	21.0	21.0					98.0			98.0	
90th %ile Term Code	Max	Max	Max					Coord			Coord	
70th %ile Green (s)	21.0	21.0	21.0					98.0			98.0	
70th %ile Term Code	Max	Max	Max					Coord			Coord	
50th %ile Green (s)	21.0	21.0	21.0					98.0			98.0	
50th %ile Term Code	Hold	Hold	Hold					Coord			Coord	
30th %ile Green (s)	21.0	21.0	21.0					98.0			98.0	
30th %ile Term Code	Hold	Hold	Hold					Coord			Coord	
10th %ile Green (s)	21.0	21.0	21.0					98.0			98.0	
10th %ile Term Code	Hold	Hold	Hold					Coord			Coord	
Stops (vph)		246	138					2909			634	
Fuel Used(gal)		7	5					66			19	
CO Emissions (g/hr)		506	332					4642			1334	
NOx Emissions (g/hr)		98	65					903			259	
VOC Emissions (g/hr)		117	77					1076			309	
Dilemma Vehicles (#)		13	0					123			125	
Queue Length 50th (ft)		121	131					~1117			63	
Queue Length 95th (ft)		m163	m#239					#1287			m73	
Internal Link Dist (ft)		77			71			143			136	
Turn Bay Length (ft)												
Base Capacity (vph)		538	271					3594			3645	
Starvation Cap Reductn		98	14					0			222	
Spillback Cap Reductn		248	0					131			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		1.03	0.82					1.05			0.99	

Intersection Summary

Area Type: Other

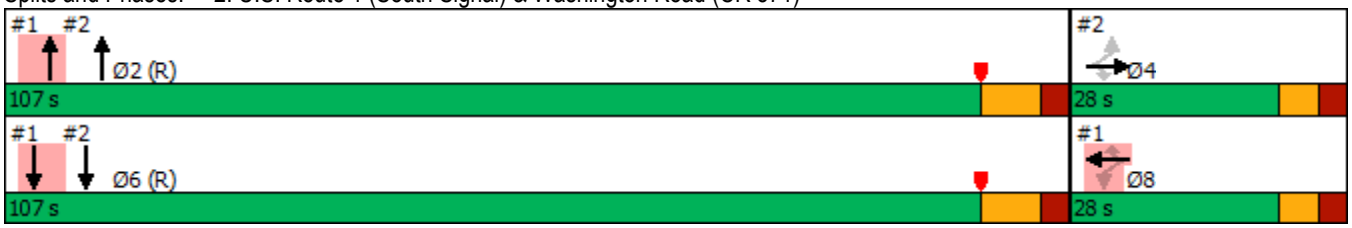
Lane Group	Ø8
Minimum Split (s)	14.0
Total Split (s)	28.0
Total Split (%)	21%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	21.0
90th %ile Term Code	Max
70th %ile Green (s)	21.0
70th %ile Term Code	Max
50th %ile Green (s)	21.0
50th %ile Term Code	Max
30th %ile Green (s)	21.0
30th %ile Term Code	Max
10th %ile Green (s)	21.0
10th %ile Term Code	Max
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Cycle Length: 135	
Actuated Cycle Length: 135	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 94.5%	ICU Level of Service F
Analysis Period (min) 15	

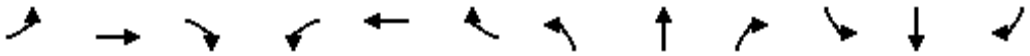
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: U.S. Route 1 (South Signal) & Washington Road (CR 571)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	245	200	0	0	0	0	3043	378	0	3231	0
Future Volume (vph)	68	245	200	0	0	0	0	3043	378	0	3231	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850						0.850			
Flt Protected		0.989										
Satd. Flow (prot)	0	3493	1482	0	0	0	0	5022	1579	0	5022	0
Flt Permitted		0.989										
Satd. Flow (perm)	0	3493	1482	0	0	0	0	5022	1579	0	5022	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			45									
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		156			151			223			216	
Travel Time (s)		2.1			2.6			2.8			2.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	9%	0%	0%	0%	0%	6%	5%	0%	6%	0%
Adj. Flow (vph)	72	258	211	0	0	0	0	3203	398	0	3401	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	330	211	0	0	0	0	3203	398	0	3401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	2 veh	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	Left	Left	Right
Median Width(ft)		0			0			6			6	
Link Offset(ft)		-5			0			0			0	
Crosswalk Width(ft)		10			16			30			30	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors	1	2	1					2	1		2	
Detector Template	Left	Thru	Right					Thru	Right		Thru	
Leading Detector (ft)	20	100	20					100	20		100	
Trailing Detector (ft)	0	0	0					0	0		0	
Detector 1 Position(ft)	0	0	0					0	0		0	
Detector 1 Size(ft)	20	6	20					6	20		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2		6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0					20.0	20.0		20.0	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	14.0	14.0	14.0					29.0	29.0		29.0	
Total Split (s)	31.0	31.0	31.0					114.0	114.0		114.0	
Total Split (%)	21.4%	21.4%	21.4%					78.6%	78.6%		78.6%	
Maximum Green (s)	24.0	24.0	24.0					105.0	105.0		105.0	
Yellow Time (s)	4.0	4.0	4.0					6.0	6.0		6.0	
All-Red Time (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lost Time Adjust (s)		0.0	0.0					0.0	0.0		0.0	
Total Lost Time (s)		7.0	7.0					9.0	9.0		9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0					2.0	2.0		2.0	
Recall Mode	None	None	None					C-Min	C-Min		C-Min	
Act Effct Green (s)		24.0	24.0					105.0	105.0		105.0	
Actuated g/C Ratio		0.17	0.17					0.72	0.72		0.72	
v/c Ratio		0.57	0.75					0.88	0.35		0.94	
Control Delay		57.1	59.0					19.1	8.4		5.0	
Queue Delay		15.8	6.1					0.1	0.1		6.8	
Total Delay		72.9	65.1					19.2	8.5		11.8	
LOS		E	E					B	A		B	
Approach Delay		69.9						18.1			11.8	
Approach LOS		E						B			B	
90th %ile Green (s)	24.0	24.0	24.0					105.0	105.0		105.0	
90th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
70th %ile Green (s)	24.0	24.0	24.0					105.0	105.0		105.0	
70th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
50th %ile Green (s)	24.0	24.0	24.0					105.0	105.0		105.0	
50th %ile Term Code	Hold	Hold	Hold					Coord	Coord		Coord	
30th %ile Green (s)	24.0	24.0	24.0					105.0	105.0		105.0	
30th %ile Term Code	Hold	Hold	Hold					Coord	Coord		Coord	
10th %ile Green (s)	24.0	24.0	24.0					105.0	105.0		105.0	
10th %ile Term Code	Hold	Hold	Hold					Coord	Coord		Coord	
Stops (vph)		269	141					2217	132		810	
Fuel Used(gal)		8	5					43	3		23	
CO Emissions (g/hr)		565	333					2984	209		1590	
NOx Emissions (g/hr)		110	65					580	41		309	
VOC Emissions (g/hr)		131	77					691	49		369	
Dilemma Vehicles (#)		14	0					105	0		116	
Queue Length 50th (ft)		142	141					766	126		73	
Queue Length 95th (ft)		m186	m224					834	176		m83	
Internal Link Dist (ft)		76			71			143			136	
Turn Bay Length (ft)												
Base Capacity (vph)		578	282					3636	1143		3636	
Starvation Cap Reductn		156	37					0	0		240	
Spillback Cap Reductn		231	0					41	173		0	
Storage Cap Reductn		0	0					0	0		0	
Reduced v/c Ratio		0.95	0.86					0.89	0.41		1.00	

Intersection Summary	
Area Type:	Other

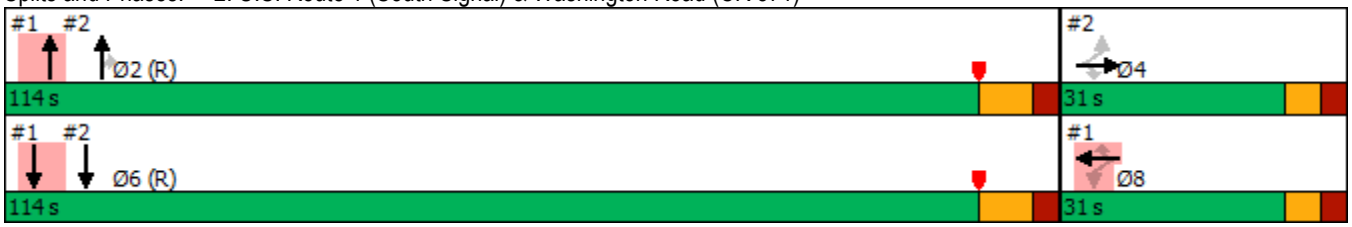
Lane Group	Ø8
Minimum Split (s)	14.0
Total Split (s)	31.0
Total Split (%)	21%
Maximum Green (s)	24.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	24.0
90th %ile Term Code	Max
70th %ile Green (s)	24.0
70th %ile Term Code	Max
50th %ile Green (s)	24.0
50th %ile Term Code	Max
30th %ile Green (s)	24.0
30th %ile Term Code	Max
10th %ile Green (s)	24.0
10th %ile Term Code	Max
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Cycle Length: 145	
Actuated Cycle Length: 145	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 95.7%	ICU Level of Service F
Analysis Period (min) 15	

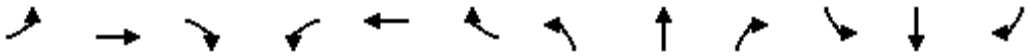
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: U.S. Route 1 (South Signal) & Washington Road (CR 571)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	305	363	0	0	0	0	3331	276	0	3527	0
Future Volume (vph)	150	305	363	0	0	0	0	3331	276	0	3527	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850					0.989				
Flt Protected		0.984										
Satd. Flow (prot)	0	3405	1583	0	0	0	0	5066	0	0	5168	0
Flt Permitted		0.984										
Satd. Flow (perm)	0	3405	1583	0	0	0	0	5066	0	0	5168	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			37									
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		157			151			223			216	
Travel Time (s)		2.1			2.6			2.8			2.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	9%	2%	2%	0%	0%	0%	0%	4%	3%	0%	3%	0%
Adj. Flow (vph)	158	321	382	0	0	0	0	3506	291	0	3713	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	479	382	0	0	0	0	3797	0	0	3713	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	Left	Left	Left	Right
Median Width(ft)		0			0			6			6	
Link Offset(ft)		-5			0			0			0	
Crosswalk Width(ft)		10			16			30			30	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors	1	2	1					2			2	
Detector Template	Left	Thru	Right					Thru			Thru	
Leading Detector (ft)	20	100	20					100			100	
Trailing Detector (ft)	0	0	0					0			0	
Detector 1 Position(ft)	0	0	0					0			0	
Detector 1 Size(ft)	20	6	20					6			6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0			0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4		4									
Detector Phase	4	4	4					2			6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0					20.0			20.0	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	14.0	14.0	14.0					29.0			29.0	
Total Split (s)	41.0	41.0	41.0					134.0			134.0	
Total Split (%)	23.4%	23.4%	23.4%					76.6%			76.6%	
Maximum Green (s)	34.0	34.0	34.0					125.0			125.0	
Yellow Time (s)	4.0	4.0	4.0					6.0			6.0	
All-Red Time (s)	3.0	3.0	3.0					3.0			3.0	
Lost Time Adjust (s)		0.0	0.0					0.0			0.0	
Total Lost Time (s)		7.0	7.0					9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0					2.0			2.0	
Recall Mode	None	None	None					C-Min			C-Min	
Act Effct Green (s)		34.0	34.0					125.0			125.0	
Actuated g/C Ratio		0.19	0.19					0.71			0.71	
v/c Ratio		0.72	1.13					1.05			1.01	
Control Delay		70.4	142.4					55.3			10.9	
Queue Delay		54.7	3.9					20.2			21.9	
Total Delay		125.1	146.3					75.5			32.9	
LOS		F	F					E			C	
Approach Delay		134.5						75.5			32.9	
Approach LOS		F						E			C	
90th %ile Green (s)	34.0	34.0	34.0					125.0			125.0	
90th %ile Term Code	Max	Max	Max					Coord			Coord	
70th %ile Green (s)	34.0	34.0	34.0					125.0			125.0	
70th %ile Term Code	Max	Max	Max					Coord			Coord	
50th %ile Green (s)	34.0	34.0	34.0					125.0			125.0	
50th %ile Term Code	Max	Max	Max					Coord			Coord	
30th %ile Green (s)	34.0	34.0	34.0					125.0			125.0	
30th %ile Term Code	Max	Max	Max					Coord			Coord	
10th %ile Green (s)	34.0	34.0	34.0					125.0			125.0	
10th %ile Term Code	Max	Max	Max					Coord			Coord	
Stops (vph)		420	277					3165			1982	
Fuel Used(gal)		13	15					107			49	
CO Emissions (g/hr)		938	1058					7496			3460	
NOx Emissions (g/hr)		183	206					1458			673	
VOC Emissions (g/hr)		217	245					1737			802	
Dilemma Vehicles (#)		13	0					97			117	
Queue Length 50th (ft)		271	~473					~1729			~94	
Queue Length 95th (ft)		m337	m#686					#1759			m82	
Internal Link Dist (ft)		77			71			143			136	
Turn Bay Length (ft)												
Base Capacity (vph)		661	337					3618			3691	
Starvation Cap Reductn		263	91					0			204	
Spillback Cap Reductn		51	0					156			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		1.20	1.55					1.10			1.06	

Intersection Summary

Area Type: Other

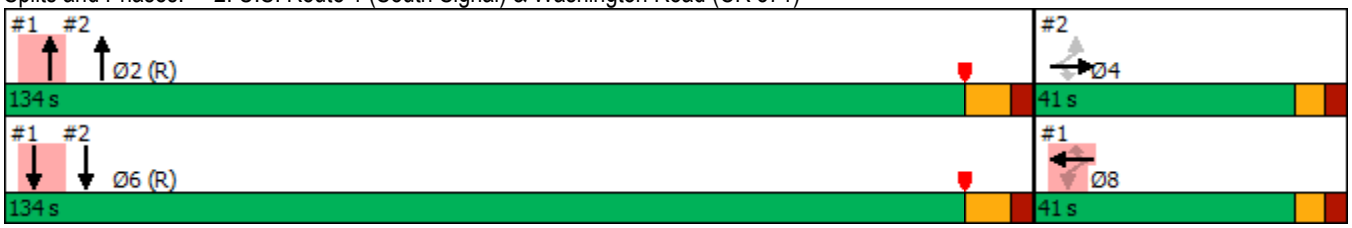
Lane Group	Ø8
Minimum Split (s)	14.0
Total Split (s)	41.0
Total Split (%)	23%
Maximum Green (s)	34.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	34.0
90th %ile Term Code	Hold
70th %ile Green (s)	34.0
70th %ile Term Code	Hold
50th %ile Green (s)	34.0
50th %ile Term Code	Hold
30th %ile Green (s)	34.0
30th %ile Term Code	Hold
10th %ile Green (s)	34.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Cycle Length: 175	
Actuated Cycle Length: 175	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 62.6	Intersection LOS: E
Intersection Capacity Utilization 102.2%	ICU Level of Service G
Analysis Period (min) 15	

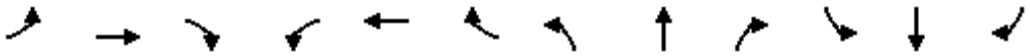
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: U.S. Route 1 (South Signal) & Washington Road (CR 571)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	324	363	0	0	0	0	3289	301	0	3541	0
Future Volume (vph)	150	324	363	0	0	0	0	3289	301	0	3541	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850						0.850			
Flt Protected		0.984										
Satd. Flow (prot)	0	3409	1583	0	0	0	0	5119	1625	0	5168	0
Flt Permitted		0.984										
Satd. Flow (perm)	0	3409	1583	0	0	0	0	5119	1625	0	5168	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			39									
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		156			151			223			216	
Travel Time (s)		2.1			2.6			2.8			2.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	9%	2%	2%	0%	0%	0%	0%	4%	2%	0%	3%	0%
Adj. Flow (vph)	158	341	382	0	0	0	0	3462	317	0	3727	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	499	382	0	0	0	0	3462	317	0	3727	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	2 veh	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	Left	Left	Right
Median Width(ft)		0			0			6			6	
Link Offset(ft)		-5			0			0			0	
Crosswalk Width(ft)		10			16			30			30	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors	1	2	1					2	1		2	
Detector Template	Left	Thru	Right					Thru	Right		Thru	
Leading Detector (ft)	20	100	20					100	20		100	
Trailing Detector (ft)	0	0	0					0	0		0	
Detector 1 Position(ft)	0	0	0					0	0		0	
Detector 1 Size(ft)	20	6	20					6	20		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2		6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0					20.0	20.0		20.0	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	14.0	14.0	14.0					29.0	29.0		29.0	
Total Split (s)	39.0	39.0	39.0					131.0	131.0		131.0	
Total Split (%)	22.9%	22.9%	22.9%					77.1%	77.1%		77.1%	
Maximum Green (s)	32.0	32.0	32.0					122.0	122.0		122.0	
Yellow Time (s)	4.0	4.0	4.0					6.0	6.0		6.0	
All-Red Time (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lost Time Adjust (s)		0.0	0.0					0.0	0.0		0.0	
Total Lost Time (s)		7.0	7.0					9.0	9.0		9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0					2.0	2.0		2.0	
Recall Mode	None	None	None					C-Min	C-Min		C-Min	
Act Effct Green (s)		32.0	32.0					122.0	122.0		122.0	
Actuated g/C Ratio		0.19	0.19					0.72	0.72		0.72	
v/c Ratio		0.78	1.16					0.94	0.27		1.01	
Control Delay		71.9	150.2					27.8	9.1		10.8	
Queue Delay		53.8	3.5					2.8	0.0		22.8	
Total Delay		125.6	153.7					30.6	9.1		33.6	
LOS		F	F					C	A		C	
Approach Delay		137.8						28.8			33.6	
Approach LOS		F						C			C	
90th %ile Green (s)	32.0	32.0	32.0					122.0	122.0		122.0	
90th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
70th %ile Green (s)	32.0	32.0	32.0					122.0	122.0		122.0	
70th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
50th %ile Green (s)	32.0	32.0	32.0					122.0	122.0		122.0	
50th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
30th %ile Green (s)	32.0	32.0	32.0					122.0	122.0		122.0	
30th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
10th %ile Green (s)	32.0	32.0	32.0					122.0	122.0		122.0	
10th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
Stops (vph)		444	271					2690	101		2027	
Fuel Used(gal)		14	16					55	2		50	
CO Emissions (g/hr)		994	1092					3841	167		3514	
NOx Emissions (g/hr)		193	212					747	32		684	
VOC Emissions (g/hr)		230	253					890	39		814	
Dilemma Vehicles (#)		13	0					96	0		117	
Queue Length 50th (ft)		277	~465					1144	115		~97	
Queue Length 95th (ft)		m344	m#678					1200	158		m86	
Internal Link Dist (ft)		76			71			143			136	
Turn Bay Length (ft)												
Base Capacity (vph)		641	329					3673	1166		3708	
Starvation Cap Reductn		236	82					0	0		213	
Spillback Cap Reductn		62	0					145	0		0	
Storage Cap Reductn		0	0					0	0		0	
Reduced v/c Ratio		1.23	1.55					0.98	0.27		1.07	

Intersection Summary	
Area Type:	Other

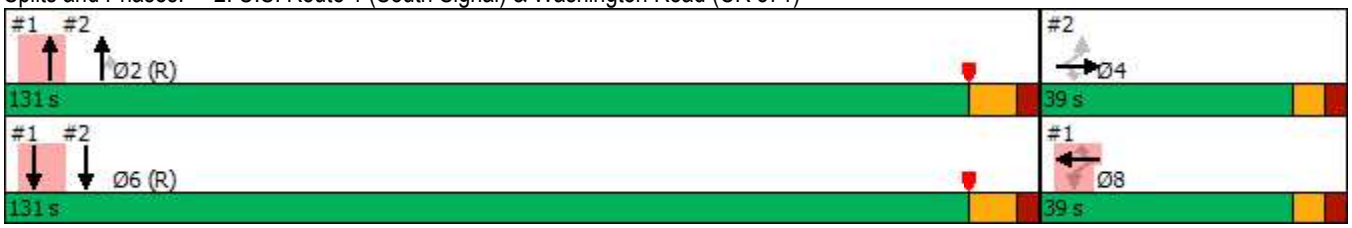
Lane Group	Ø8
Minimum Split (s)	14.0
Total Split (s)	39.0
Total Split (%)	23%
Maximum Green (s)	32.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	32.0
90th %ile Term Code	Hold
70th %ile Green (s)	32.0
70th %ile Term Code	Hold
50th %ile Green (s)	32.0
50th %ile Term Code	Hold
30th %ile Green (s)	32.0
30th %ile Term Code	Hold
10th %ile Green (s)	32.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

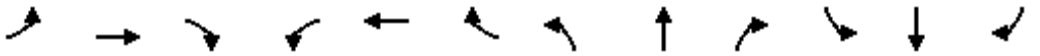
Intersection Summary

Cycle Length: 170	
Actuated Cycle Length: 170	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 42.4	Intersection LOS: D
Intersection Capacity Utilization 102.5%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

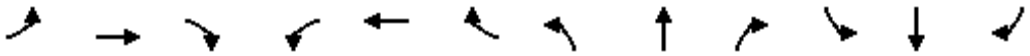
Splits and Phases: 2: U.S. Route 1 (South Signal) & Washington Road (CR 571)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	282	411	0	0	0	0	2478	298	0	2837	0
Future Volume (vph)	163	282	411	0	0	0	0	2478	298	0	2837	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850					0.984				
Flt Protected		0.982										
Satd. Flow (prot)	0	3545	1599	0	0	0	0	5141	0	0	5219	0
Flt Permitted		0.982										
Satd. Flow (perm)	0	3545	1599	0	0	0	0	5141	0	0	5219	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			57									
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		157			151			223			216	
Travel Time (s)		2.1			2.6			2.8			2.7	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	1%	0%	2%	0%
Adj. Flow (vph)	179	310	452	0	0	0	0	2723	327	0	3118	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	489	452	0	0	0	0	3050	0	0	3118	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	Left	Left	Left	Right
Median Width(ft)		0			0			6			6	
Link Offset(ft)		-5			0			0			0	
Crosswalk Width(ft)		10			16			30			30	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors	1	2	1					2			2	
Detector Template	Left	Thru	Right					Thru			Thru	
Leading Detector (ft)	20	100	20					100			100	
Trailing Detector (ft)	0	0	0					0			0	
Detector 1 Position(ft)	0	0	0					0			0	
Detector 1 Size(ft)	20	6	20					6			6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0			0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4		4									
Detector Phase	4	4	4					2			6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0					20.0			20.0	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	14.0	14.0	14.0					29.0			29.0	
Total Split (s)	34.0	34.0	34.0					81.0			81.0	
Total Split (%)	29.6%	29.6%	29.6%					70.4%			70.4%	
Maximum Green (s)	27.0	27.0	27.0					72.0			72.0	
Yellow Time (s)	4.0	4.0	4.0					6.0			6.0	
All-Red Time (s)	3.0	3.0	3.0					3.0			3.0	
Lost Time Adjust (s)		0.0	0.0					0.0			0.0	
Total Lost Time (s)		7.0	7.0					9.0			9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0					2.0			2.0	
Recall Mode	None	None	None					C-Min			C-Min	
Act Effct Green (s)		27.0	27.0					72.0			72.0	
Actuated g/C Ratio		0.23	0.23					0.63			0.63	
v/c Ratio		0.59	1.08					0.95			0.95	
Control Delay		40.3	102.1					27.9			7.3	
Queue Delay		4.6	9.9					3.1			14.3	
Total Delay		45.0	112.1					31.0			21.7	
LOS		D	F					C			C	
Approach Delay		77.2						31.0			21.7	
Approach LOS		E						C			C	
90th %ile Green (s)	27.0	27.0	27.0					72.0			72.0	
90th %ile Term Code	Max	Max	Max					Coord			Coord	
70th %ile Green (s)	27.0	27.0	27.0					72.0			72.0	
70th %ile Term Code	Max	Max	Max					Coord			Coord	
50th %ile Green (s)	27.0	27.0	27.0					72.0			72.0	
50th %ile Term Code	Max	Max	Max					Coord			Coord	
30th %ile Green (s)	27.0	27.0	27.0					72.0			72.0	
30th %ile Term Code	Max	Max	Max					Coord			Coord	
10th %ile Green (s)	27.0	27.0	27.0					72.0			72.0	
10th %ile Term Code	Max	Max	Max					Coord			Coord	
Stops (vph)		374	306					2340			1417	
Fuel Used(gal)		10	14					49			34	
CO Emissions (g/hr)		688	954					3399			2408	
NOx Emissions (g/hr)		134	186					661			469	
VOC Emissions (g/hr)		159	221					788			558	
Dilemma Vehicles (#)		19	0					119			141	
Queue Length 50th (ft)		162	~340					707			69	
Queue Length 95th (ft)		m215	m#535					800			m81	
Internal Link Dist (ft)		77			71			143			136	
Turn Bay Length (ft)												
Base Capacity (vph)		832	419					3218			3267	
Starvation Cap Reductn		266	74					0			234	
Spillback Cap Reductn		48	0					117			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		0.86	1.31					0.98			1.03	

Intersection Summary

Area Type: Other

Lane Group	Ø8
Minimum Split (s)	14.0
Total Split (s)	34.0
Total Split (%)	30%
Maximum Green (s)	27.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	27.0
90th %ile Term Code	Max
70th %ile Green (s)	27.0
70th %ile Term Code	Hold
50th %ile Green (s)	27.0
50th %ile Term Code	Hold
30th %ile Green (s)	27.0
30th %ile Term Code	Hold
10th %ile Green (s)	27.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

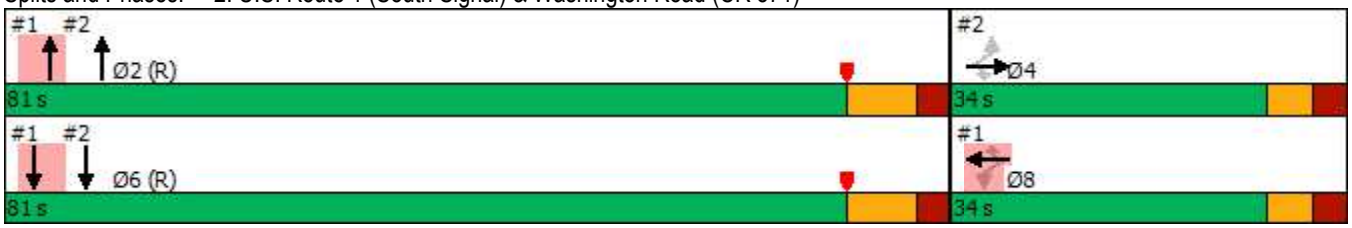
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 33.0 Intersection LOS: C
Intersection Capacity Utilization 92.2% ICU Level of Service F
Analysis Period (min) 15

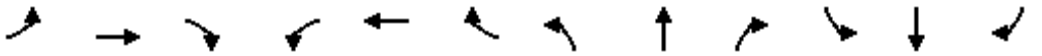
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

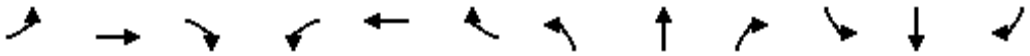
Splits and Phases: 2: U.S. Route 1 (South Signal) & Washington Road (CR 571)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	309	411	0	0	0	0	2438	334	0	2838	0
Future Volume (vph)	163	309	411	0	0	0	0	2438	334	0	2838	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1950	1950	1950	1950	1950	1950
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850						0.850			
Flt Protected		0.983										
Satd. Flow (prot)	0	3549	1599	0	0	0	0	5168	1641	0	5219	0
Flt Permitted		0.983										
Satd. Flow (perm)	0	3549	1599	0	0	0	0	5168	1641	0	5219	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			57									
Link Speed (mph)		50			40			55			55	
Link Distance (ft)		156			151			223			216	
Travel Time (s)		2.1			2.6			2.8			2.7	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	3%	1%	0%	2%	0%
Adj. Flow (vph)	179	340	452	0	0	0	0	2679	367	0	3119	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	519	452	0	0	0	0	2679	367	0	3119	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	2 veh	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	Left	Left	Right
Median Width(ft)		0			0			6			6	
Link Offset(ft)		-5			0			0			0	
Crosswalk Width(ft)		10			16			30			30	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Number of Detectors	1	2	1					2	1		2	
Detector Template	Left	Thru	Right					Thru	Right		Thru	
Leading Detector (ft)	20	100	20					100	20		100	
Trailing Detector (ft)	0	0	0					0	0		0	
Detector 1 Position(ft)	0	0	0					0	0		0	
Detector 1 Size(ft)	20	6	20					6	20		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0	0.0		0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Detector Phase	4	4	4					2	2		6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0					20.0	20.0		20.0	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	14.0	14.0	14.0					29.0	29.0		29.0	
Total Split (s)	34.0	34.0	34.0					81.0	81.0		81.0	
Total Split (%)	29.6%	29.6%	29.6%					70.4%	70.4%		70.4%	
Maximum Green (s)	27.0	27.0	27.0					72.0	72.0		72.0	
Yellow Time (s)	4.0	4.0	4.0					6.0	6.0		6.0	
All-Red Time (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lost Time Adjust (s)		0.0	0.0					0.0	0.0		0.0	
Total Lost Time (s)		7.0	7.0					9.0	9.0		9.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0					2.0	2.0		2.0	
Recall Mode	None	None	None					C-Min	C-Min		C-Min	
Act Effct Green (s)		27.0	27.0					72.0	72.0		72.0	
Actuated g/C Ratio		0.23	0.23					0.63	0.63		0.63	
v/c Ratio		0.62	1.08					0.83	0.36		0.95	
Control Delay		41.0	102.0					19.6	11.6		7.6	
Queue Delay		7.0	9.9					0.3	0.0		18.0	
Total Delay		47.9	111.9					19.9	11.6		25.6	
LOS		D	F					B	B		C	
Approach Delay		77.7						18.9			25.6	
Approach LOS		E						B			C	
90th %ile Green (s)	27.0	27.0	27.0					72.0	72.0		72.0	
90th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
70th %ile Green (s)	27.0	27.0	27.0					72.0	72.0		72.0	
70th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
50th %ile Green (s)	27.0	27.0	27.0					72.0	72.0		72.0	
50th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
30th %ile Green (s)	27.0	27.0	27.0					72.0	72.0		72.0	
30th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
10th %ile Green (s)	27.0	27.0	27.0					72.0	72.0		72.0	
10th %ile Term Code	Max	Max	Max					Coord	Coord		Coord	
Stops (vph)		401	306					1804	155		1477	
Fuel Used(gal)		11	14					49	4		36	
CO Emissions (g/hr)		738	953					3443	314		2496	
NOx Emissions (g/hr)		144	185					670	61		486	
VOC Emissions (g/hr)		171	221					798	73		578	
Dilemma Vehicles (#)		20	0					106	0		144	
Queue Length 50th (ft)		173	~341					523	121		79	
Queue Length 95th (ft)		m228	m#532					594	179		m86	
Internal Link Dist (ft)		76			71			143			136	
Turn Bay Length (ft)												
Base Capacity (vph)		833	419					3235	1027		3267	
Starvation Cap Reductn		263	74					0	0		262	
Spillback Cap Reductn		72	0					122	0		0	
Storage Cap Reductn		0	0					0	0		0	
Reduced v/c Ratio		0.91	1.31					0.86	0.36		1.04	

Intersection Summary

Area Type: Other

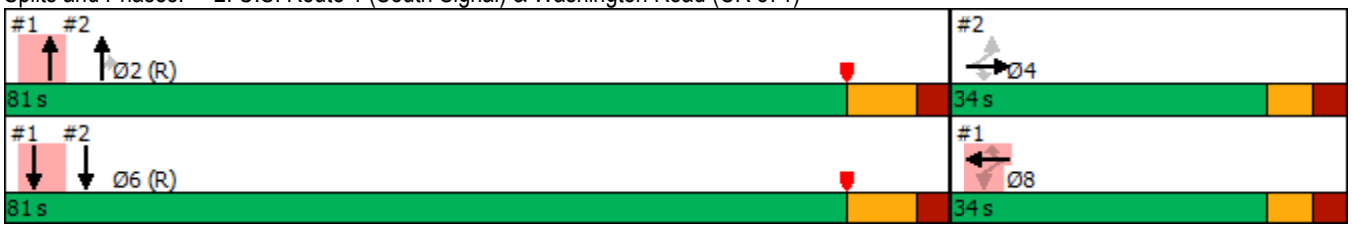
Lane Group	Ø8
Minimum Split (s)	14.0
Total Split (s)	34.0
Total Split (%)	30%
Maximum Green (s)	27.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	27.0
90th %ile Term Code	Max
70th %ile Green (s)	27.0
70th %ile Term Code	Hold
50th %ile Green (s)	27.0
50th %ile Term Code	Hold
30th %ile Green (s)	27.0
30th %ile Term Code	Hold
10th %ile Green (s)	27.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 92.2%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: U.S. Route 1 (South Signal) & Washington Road (CR 571)



Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	3440	16	0	0
Future Vol, veh/h	0	10	3440	16	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	6	0	0	0
Mvmt Flow	0	10	3546	16	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1781	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	62	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	62	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	74.3	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	62	-
HCM Lane V/C Ratio	-	-	0.166	-
HCM Control Delay (s)	-	-	74.3	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	3602	14	0	0
Future Vol, veh/h	0	5	3602	14	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	4	0	2	2
Mvmt Flow	0	5	3676	14	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1845	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	56	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	56	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	75.6	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	56	-
HCM Lane V/C Ratio	-	-	0.091	-
HCM Control Delay (s)	-	-	75.6	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	2769	23	0	0
Future Vol, veh/h	0	7	2769	23	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	29	2	0	0	0
Mvmt Flow	0	8	2977	25	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1501	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.68	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	4.19	-	-	-	-
Pot Cap-1 Maneuver	0	74	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	74	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	59.1	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	74	-
HCM Lane V/C Ratio	-	-	0.102	-
HCM Control Delay (s)	-	-	59.1	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	0.3	-

HCS Two-Way Stop-Control Report

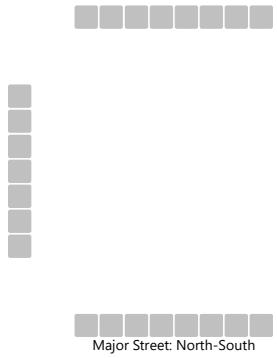
General Information

Analyst	EJV
Agency/Co.	Langan
Date Performed	1/27/2023
Analysis Year	2026
Time Analyzed	AM Build
Intersection Orientation	North-South
Project Description	Penns Neck

Site Information

Intersection	US Route 1 & Site Drwy
Jurisdiction	NJDOT
East/West Street	Site Driveway
North/South Street	US Route 1
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	1	0	0	0	0	0
Configuration								R				TR				
Volume (veh/h)								216			289	269				
Percent Heavy Vehicles (%)								0								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)								6.2								
Critical Headway (sec)								6.20								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.30								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								235								
Capacity, c (veh/h)								605								
v/c Ratio								0.39								
95% Queue Length, Q_{95} (veh)								1.8								
Control Delay (s/veh)								14.7								
Level of Service (LOS)								B								
Approach Delay (s/veh)						14.7										
Approach LOS						B										

HCS Two-Way Stop-Control Report

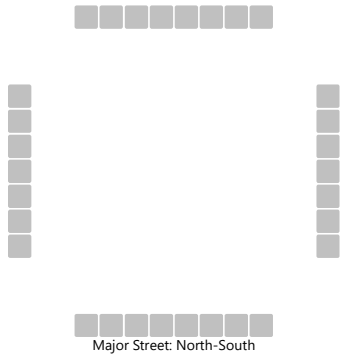
General Information

Analyst	EJV
Agency/Co.	Langan
Date Performed	1/27/2023
Analysis Year	2026
Time Analyzed	PM Build
Intersection Orientation	North-South
Project Description	Penns Neck

Site Information

Intersection	US Route 1 & Site Drwy
Jurisdiction	NJDOT
East/West Street	Site Driveway
North/South Street	US Route 1
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	1	0	0	0	0	0
Configuration								R				TR				
Volume (veh/h)								163			439	202				
Percent Heavy Vehicles (%)								0								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)								6.2								
Critical Headway (sec)								6.20								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.30								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								177								
Capacity, c (veh/h)								513								
v/c Ratio								0.35								
95% Queue Length, Q_{95} (veh)								1.5								
Control Delay (s/veh)								15.7								
Level of Service (LOS)								C								
Approach Delay (s/veh)						15.7										
Approach LOS						C										

HCS Two-Way Stop-Control Report

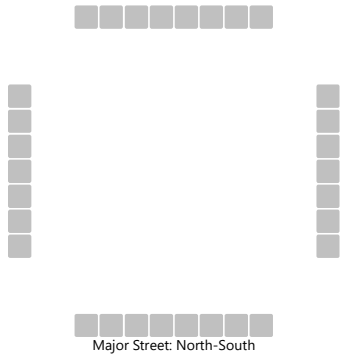
General Information

Analyst	EJV
Agency/Co.	Langan
Date Performed	1/27/2023
Analysis Year	2026
Time Analyzed	SAT MID Build
Intersection Orientation	North-South
Project Description	Penns Neck

Site Information

Intersection	US Route 1 & Site Drwy
Jurisdiction	NJDOT
East/West Street	Site Driveway
North/South Street	US Route 1
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	1	0	0	0	0	0
Configuration								R				TR				
Volume (veh/h)								177			271	215				
Percent Heavy Vehicles (%)								0								
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized							No									
Median Type | Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)								6.2								
Critical Headway (sec)								6.20								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.30								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								192								
Capacity, c (veh/h)								645								
v/c Ratio								0.30								
95% Queue Length, Q_{95} (veh)								1.2								
Control Delay (s/veh)								12.9								
Level of Service (LOS)								B								
Approach Delay (s/veh)							12.9									
Approach LOS							B									

Intersection	
Int Delay, s/veh	6.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	324	37	129	435	109	102
Future Vol, veh/h	324	37	129	435	109	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	80	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	0	0	6	0	0
Mvmt Flow	352	40	140	473	118	111

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	392	0	1125	372
Stage 1	-	-	-	-	372	-
Stage 2	-	-	-	-	753	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1178	-	229	678
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1178	-	202	678
Mov Cap-2 Maneuver	-	-	-	-	202	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	413	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	28.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	202	678	-	-	1178	-
HCM Lane V/C Ratio	0.587	0.164	-	-	0.119	-
HCM Control Delay (s)	45.4	11.3	-	-	8.5	-
HCM Lane LOS	E	B	-	-	A	-
HCM 95th %tile Q(veh)	3.2	0.6	-	-	0.4	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	434	25	94	288	83	77
Future Vol, veh/h	434	25	94	288	83	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	80	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	472	27	102	313	90	84

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	499	0	1003	486
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	517	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1075	-	271	585
Stage 1	-	-	-	-	623	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1075	-	245	585
Mov Cap-2 Maneuver	-	-	-	-	245	-
Stage 1	-	-	-	-	623	-
Stage 2	-	-	-	-	546	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	20.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	245	585	-	-	1075	-
HCM Lane V/C Ratio	0.368	0.143	-	-	0.095	-
HCM Control Delay (s)	28	12.2	-	-	8.7	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	1.6	0.5	-	-	0.3	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	34	122	410	89	101
Future Vol, veh/h	410	34	122	410	89	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	80	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	446	37	133	446	97	110

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	483	0	1177	465
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	712	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1090	-	213	602
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	490	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1090	-	187	602
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	430	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	26.8
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	187	602	-	-	1090	-
HCM Lane V/C Ratio	0.517	0.182	-	-	0.122	-
HCM Control Delay (s)	43.2	12.3	-	-	8.8	-
HCM Lane LOS	E	B	-	-	A	-
HCM 95th %tile Q(veh)	2.6	0.7	-	-	0.4	-

HCS Freeway Merge Report

Project Information			
Analyst	EJV	Date	2/2/2023
Agency	Langan	Analysis Year	2026 NO-BUILD
Jurisdiction	NJDOT	Time Analyzed	AM Peak Hour
Project Description	PENNS NECK	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Acceleration Length (LA), ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	3140	310
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	7.00	2.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.935	0.980
Flow Rate (v_i), pc/h	3535	333
Capacity (c_{md}), pc/h	6900	1900
Adjusted Capacity (c_{mda}), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	0.56	0.18

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	1435
Downstream Equilibrium Distance (L_{EQ}), ft	-	On-Ramp Influence Area Speed (S_R), mi/h	54.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	2100	Outer Lanes Freeway Speed (S_O), mi/h	56.6
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	2433	Ramp Junction Speed (S), mi/h	55.0
Number of Outer Lanes on Freeway (N_O), ln	1	Average Density (D), pc/mi/ln	23.4
Level of Service (LOS)	C	Density in Ramp Influence Area (D_R), pc/mi/ln	20.6

HCS Freeway Merge Report

Project Information			
Analyst	EJV	Date	2/2/2023
Agency	Langan	Analysis Year	2026 NO-BUILD
Jurisdiction	NJDOT	Time Analyzed	PM Peak Hour
Project Description	PENNS NECK	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Acceleration Length (LA), ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	3057	550
Peak Hour Factor (PHF)	0.95	0.95
Total Trucks, %	5.00	2.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.952	0.980
Flow Rate (v_i), pc/h	3380	591
Capacity (c_{md}), pc/h	6900	1900
Adjusted Capacity (c_{mda}), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	0.58	0.31

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	1372
Downstream Equilibrium Distance (L_{EQ}), ft	-	On-Ramp Influence Area Speed (S_R), mi/h	53.9
Flow in Lanes 1 and 2 (v_{12}), pc/h	2008	Outer Lanes Freeway Speed (S_O), mi/h	56.9
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	2599	Ramp Junction Speed (S), mi/h	54.9
Number of Outer Lanes on Freeway (N_O), ln	1	Average Density (D), pc/mi/ln	24.1
Level of Service (LOS)	C	Density in Ramp Influence Area (D_R), pc/mi/ln	21.8

HCS Freeway Merge Report

Project Information			
Analyst	EJV	Date	2/2/2023
Agency	Langan	Analysis Year	2026 NO-BUILD
Jurisdiction	NJDOT	Time Analyzed	SAT Peak Hour
Project Description	PENNS NECK	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Acceleration Length (LA), ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	2489	288
Peak Hour Factor (PHF)	0.91	0.91
Total Trucks, %	3.00	2.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	0.980
Flow Rate (v_i), pc/h	2817	323
Capacity (c_{md}), pc/h	6900	1900
Adjusted Capacity (c_{mda}), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	0.46	0.17

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	1144
Downstream Equilibrium Distance (L_{EQ}), ft	-	On-Ramp Influence Area Speed (S_R), mi/h	54.3
Flow in Lanes 1 and 2 (v_{12}), pc/h	1673	Outer Lanes Freeway Speed (S_O), mi/h	57.7
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	1996	Ramp Junction Speed (S), mi/h	55.5
Number of Outer Lanes on Freeway (N_O), ln	1	Average Density (D), pc/mi/ln	18.9
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	17.2

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	AM PEAK HOUR
Project Description	PENNS NECK - PRIMARY WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	930	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	2540	526	0	618
Peak Hour Factor (PHF)	0.95	0.95	0.95	0.95
Total Trucks, %	8.00	0.00	0.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	1.000	1.000	1.000
Flow Rate (v_i), pc/h	2887	554	0	651
Weaving Flow Rate (v_w), pc/h	1205	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	2887	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7389
Total Flow Rate (v), pc/h	4092	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		7737
Volume Ratio (VR)	0.294	Weaving Area Capacity (c_W), veh/h		7389
Minimum Lane Change Rate (LC_{MIN}), lc/h	1205	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7389
Maximum Weaving Length (L_{MAX}), ft	5520	Demand-to-Capacity Ratio (v/c)		0.52

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	89	Average Weaving Speed (S_W), mi/h	47.9
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	328	Average Non-Weaving Speed (S_{NW}), mi/h	46.4
Weaving Lane Change Rate (LC_W), lc/h	1402	Average Speed (S), mi/h	46.8
Weaving Lane Change Rate (LC_{All}), lc/h	1730	Density (D), pc/mi/ln	21.9
Weaving Intensity Factor (W)	0.369	Level of Service (LOS)	C

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	PM PEAK HOUR
Project Description	PENNS NECK - PRIMARY WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	965	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	2592	713	0	478
Peak Hour Factor (PHF)	0.95	0.95	0.95	0.95
Total Trucks, %	8.00	0.00	0.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	1.000	1.000	1.000
Flow Rate (v_i), pc/h	2946	751	0	503
Weaving Flow Rate (v_w), pc/h	1254	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	2946	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7384
Total Flow Rate (v), pc/h	4200	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		7610
Volume Ratio (VR)	0.299	Weaving Area Capacity (c_W), veh/h		7384
Minimum Lane Change Rate (LC_{MIN}), lc/h	1254	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7384
Maximum Weaving Length (L_{MAX}), ft	5573	Demand-to-Capacity Ratio (v/c)		0.54

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	95	Average Weaving Speed (S_W), mi/h	47.8
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	360	Average Non-Weaving Speed (S_{NW}), mi/h	45.9
Weaving Lane Change Rate (LC_W), lc/h	1457	Average Speed (S), mi/h	46.5
Weaving Lane Change Rate (LC_{All}), lc/h	1817	Density (D), pc/mi/ln	22.6
Weaving Intensity Factor (W)	0.372	Level of Service (LOS)	C

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	SAT PEAK HOUR
Project Description	PENNS NECK - PRIMARY WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	965	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	1993	465	0	513
Peak Hour Factor (PHF)	0.91	0.91	0.91	0.91
Total Trucks, %	3.00	0.00	0.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000	1.000	1.000
Flow Rate (v_i), pc/h	2256	511	0	564
Weaving Flow Rate (v_w), pc/h	1075	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	2256	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7561
Total Flow Rate (v), pc/h	3331	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		7284
Volume Ratio (VR)	0.323	Weaving Area Capacity (c_W), veh/h		7284
Minimum Lane Change Rate (LC_{MIN}), lc/h	1075	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7284
Maximum Weaving Length (L_{MAX}), ft	5832	Demand-to-Capacity Ratio (v/c)		0.45

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	73	Average Weaving Speed (S_W), mi/h	49.1
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	217	Average Non-Weaving Speed (S_{NW}), mi/h	48.3
Weaving Lane Change Rate (LC_W), lc/h	1278	Average Speed (S), mi/h	48.6
Weaving Lane Change Rate (LC_{All}), lc/h	1495	Density (D), pc/mi/ln	17.1
Weaving Intensity Factor (W)	0.319	Level of Service (LOS)	B

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	AM PEAK HOUR
Project Description	PENNS NECK - WEST WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	555	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	0
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	2889	310	0	269
Peak Hour Factor (PHF)	0.95	0.95	0.95	0.95
Total Trucks, %	7.00	0.00	0.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.935	1.000	1.000	1.000
Flow Rate (v_i), pc/h	3252	326	0	283
Weaving Flow Rate (v_W), pc/h	609	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	3252	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7668
Total Flow Rate (v), pc/h	3861	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		14358
Volume Ratio (VR)	0.158	Weaving Area Capacity (c_W), veh/h		7668
Minimum Lane Change Rate (LC_{MIN}), lc/h	283	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7668
Maximum Weaving Length (L_{MAX}), ft	4111	Demand-to-Capacity Ratio (v/c)		0.48

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	60	Average Weaving Speed (S_W), mi/h	51.2
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	200	Average Non-Weaving Speed (S_{NW}), mi/h	53.3
Weaving Lane Change Rate (LC_W), lc/h	408	Average Speed (S), mi/h	53.0
Weaving Lane Change Rate (LC_{All}), lc/h	608	Density (D), pc/mi/ln	18.2
Weaving Intensity Factor (W)	0.243	Level of Service (LOS)	B

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	PM PEAK HOUR
Project Description	PENNS NECK - WEST WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	555	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	0
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	2868	550	0	202
Peak Hour Factor (PHF)	0.95	0.95	0.95	0.95
Total Trucks, %	4.00	0.00	0.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.962	1.000	1.000	1.000
Flow Rate (v_i), pc/h	3138	579	0	213
Weaving Flow Rate (v_w), pc/h	792	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	3138	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7734
Total Flow Rate (v), pc/h	3930	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		11521
Volume Ratio (VR)	0.202	Weaving Area Capacity (c_W), veh/h		7734
Minimum Lane Change Rate (LC_{MIN}), lc/h	213	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7734
Maximum Weaving Length (L_{MAX}), ft	4557	Demand-to-Capacity Ratio (v/c)		0.49

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	58	Average Weaving Speed (S_W), mi/h	52.1
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	177	Average Non-Weaving Speed (S_{NW}), mi/h	53.8
Weaving Lane Change Rate (LC_W), lc/h	338	Average Speed (S), mi/h	53.4
Weaving Lane Change Rate (LC_{All}), lc/h	515	Density (D), pc/mi/ln	18.4
Weaving Intensity Factor (W)	0.213	Level of Service (LOS)	B

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	SAT PEAK HOUR
Project Description	PENNS NECK - WEST WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	555	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	0
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	2292	288	0	215
Peak Hour Factor (PHF)	0.91	0.91	0.91	0.91
Total Trucks, %	3.00	0.00	0.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000	1.000	1.000
Flow Rate (v_i), pc/h	2594	316	0	236
Weaving Flow Rate (v_w), pc/h	552	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	2594	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7867
Total Flow Rate (v), pc/h	3146	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		13386
Volume Ratio (VR)	0.175	Weaving Area Capacity (c_W), veh/h		7867
Minimum Lane Change Rate (LC_{MIN}), lc/h	236	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7867
Maximum Weaving Length (L_{MAX}), ft	4282	Demand-to-Capacity Ratio (v/c)		0.39

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	48	Average Weaving Speed (S_W), mi/h	53.0
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	65	Average Non-Weaving Speed (S_{NW}), mi/h	54.5
Weaving Lane Change Rate (LC_W), lc/h	361	Average Speed (S), mi/h	54.2
Weaving Lane Change Rate (LC_{All}), lc/h	426	Density (D), pc/mi/ln	14.5
Weaving Intensity Factor (W)	0.183	Level of Service (LOS)	B

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	AM PEAK HOUR
Project Description	PENNS NECK - EAST WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	345	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	0
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	3028	203	13	365
Peak Hour Factor (PHF)	0.95	0.95	0.95	0.95
Total Trucks, %	6.00	0.00	0.00	5.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	1.000	1.000	0.952
Flow Rate (v_i), pc/h	3380	214	14	404
Weaving Flow Rate (v_w), pc/h	618	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	3394	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7634
Total Flow Rate (v), pc/h	4012	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		14761
Volume Ratio (VR)	0.154	Weaving Area Capacity (c_W), veh/h		7634
Minimum Lane Change Rate (LC_{MIN}), lc/h	214	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7634
Maximum Weaving Length (L_{MAX}), ft	4071	Demand-to-Capacity Ratio (v/c)		0.50

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	39	Average Weaving Speed (S_W), mi/h	51.1
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	116	Average Non-Weaving Speed (S_{NW}), mi/h	53.6
Weaving Lane Change Rate (LC_W), lc/h	267	Average Speed (S), mi/h	53.2
Weaving Lane Change Rate (LC_{All}), lc/h	383	Density (D), pc/mi/ln	18.9
Weaving Intensity Factor (W)	0.245	Level of Service (LOS)	B

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	PM PEAK HOUR
Project Description	PENNS NECK - EAST WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	345	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	0
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	3278	152	11	290
Peak Hour Factor (PHF)	0.95	0.95	0.95	0.95
Total Trucks, %	3.00	0.00	0.00	2.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000	1.000	0.980
Flow Rate (v_i), pc/h	3554	160	12	311
Weaving Flow Rate (v_w), pc/h	471	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	3566	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7951
Total Flow Rate (v), pc/h	4037	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		19957
Volume Ratio (VR)	0.117	Weaving Area Capacity (c_W), veh/h		7951
Minimum Lane Change Rate (LC_{MIN}), lc/h	160	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7951
Maximum Weaving Length (L_{MAX}), ft	3705	Demand-to-Capacity Ratio (v/c)		0.49

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	41	Average Weaving Speed (S_W), mi/h	51.4
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	151	Average Non-Weaving Speed (S_{NW}), mi/h	54.0
Weaving Lane Change Rate (LC_W), lc/h	213	Average Speed (S), mi/h	53.7
Weaving Lane Change Rate (LC_{All}), lc/h	364	Density (D), pc/mi/ln	18.8
Weaving Intensity Factor (W)	0.236	Level of Service (LOS)	B

HCS Freeway Weaving Report

Project Information

Analyst	EJV	Date	2/1/2023
Agency	LANGAN	Analysis Year	2026 BUILD
Jurisdiction	NJDOT	Time Analyzed	SAT PEAK HOUR
Project Description	PENNS NECK - EAST WEAVE	Units	U.S. Customary

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Segment Length (L_S), ft	345	Number of Maneuver Lanes (N_{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC_{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC_{FR}), lc	0
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC_{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Demand Adjustment Factor (DAF)	1.000
Incident Type	No Incident	Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000
Proportion of CAVs in Traffic Stream	0	Final Capacity Adjustment Factor (CAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V_i), veh/h	2422	164	13	321
Peak Hour Factor (PHF)	0.91	0.91	0.91	0.91
Total Trucks, %	2.00	0.00	0.00	1.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.980	1.000	1.000	0.990
Flow Rate (v_i), pc/h	2716	180	14	356
Weaving Flow Rate (v_w), pc/h	536	Ideal Conditions Capacity (c_{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v_{NW}), pc/h	2730	Density-Based Capacity ($c_{IWL} \times N \times f_{HV}$), veh/h		7886
Total Flow Rate (v), pc/h	3266	Demand Flow-Based Capacity ($c_{IW} \times f_{HV}$), veh/h		14375
Volume Ratio (VR)	0.164	Weaving Area Capacity (c_W), veh/h		7886
Minimum Lane Change Rate (LC_{MIN}), lc/h	180	Adjusted Weaving Area Capacity (c_{WA}), veh/h		7886
Maximum Weaving Length (L_{MAX}), ft	4171	Demand-to-Capacity Ratio (v/c)		0.41

Speed and Density

Non-Weaving Vehicle Index (I_{NW})	31	Average Weaving Speed (S_W), mi/h	53.6
Non-Weaving Lane Change Rate (LC_{NW}), lc/h	0	Average Non-Weaving Speed (S_{NW}), mi/h	54.8
Weaving Lane Change Rate (LC_W), lc/h	233	Average Speed (S), mi/h	54.6
Weaving Lane Change Rate (LC_{All}), lc/h	233	Density (D), pc/mi/ln	15.0
Weaving Intensity Factor (W)	0.166	Level of Service (LOS)	B