

April 18, 2024

20243846.0001

# 4300 MILLERSPORT HIGHWAY

TOWN OF AMHERST, NY

**PREPARED FOR:**  
Cimato Brothers Construction Inc.  
9220 Transit Road  
East Amherst, NY, 14

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## 1.0 EXECUTIVE SUMMARY

The purpose of this updated report is to evaluate the potential traffic impacts related to the currently proposed mixed-use project at 4300 Millersport Highway. This study is an update to the original traffic impact study prepared by SRF Associates (now a Passero Associates company) in August 2022. On April 4, 2024, Christopher Schregel issued a Memorandum on behalf of the Town of Amherst Traffic Safety Board (“ATSB”) requesting an updated traffic impact study. It is important to mention that Comment No. 3 contained in the Memorandum issued on behalf of ATSB requested the installation of a roundabout at the internal intersection of Local Roads "A" and "B". The installation of a roundabout is not feasible at this location since it would result in an increase of impacts to jurisdictional federal wetlands subject to the jurisdiction of the United States Army Corps of Engineers.

Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated. Mitigating measures, if needed, are identified to minimize operational concerns. To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project. All figures and supporting calculations are included at the end and within the Appendices of this report.

### **Project Location and Description**

The proposed project will be located at 4300 Millersport Highway in the Town of Amherst, Erie County, NY. The project site is bounded by undeveloped lands to the north; portions of existing development, New Road, and Millersport Highway to the east; portions of residential development and Smith Road to the south; and undeveloped lands to the west. Land uses in the vicinity of the proposed project include residential, recreational, and service. The project site is currently undeveloped.

The first phase of the mixed-use project will consist of the patio home and townhome units and the second phase will consist of the two mixed-use buildings along the Millersport Highway frontage. The residential mix will consist of 38 units of patio homes and 40 units of townhomes. There will be an additional  $\pm 22,080$  SF of commercial space. This study analyzes the project as a single development phase. Access to the site will be provided via a proposed public roadway with new driveways along Smith Road, Millersport Highway, and New Road as shown on the Site Plan prepared by WM Schutt Associates included at the end of this report.

### **Existing Conditions**

To ensure a comprehensive analysis of potential traffic impacts, a geographically broad study area was selected consisting of the following intersections. **Figure 1** illustrates the project site location and study area.

- Millersport Highway at New Road (signalized)
- New Road at Smith Road (unsignalized)
- Millersport Highway at Smith Road (signalized)
- Millersport Highway at I-990 SB Ramp (unsignalized)
- Millersport Highway at I-990 NB Ramp (signalized)

SRF Associates, now Passero Associates, collected turning movement traffic counts on Wednesday, February 9, 2022. Traffic counts were conducted from 7:00 to 9:00 AM and 4:00 to 6:00 PM to determine peak hour traffic volumes at the study intersections. The peak hour traffic periods generally occurred from 7:00-8:00 AM and 4:15-5:15 PM. All traffic counts were collected on a typical weekday while local schools were in session. No significant adverse weather conditions impacted data collection. The traffic volumes were reviewed to confirm accuracy, seasonality, and relative balance between intersections. The 2022 turning movement data was grown for two years using a 1.5% growth rate.

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This exceeds the calculated background growth rate discussed in Section 5 to account for potential impacts from COVID-19 occurring at the time of data collection.

### **Background Conditions**

Background traffic volumes represent the traffic conditions during the proposed build year without development of the project. Construction of the proposed project is anticipated to reach full build-out within three years. Local municipal personnel were contacted to discuss any other specific projects that are currently approved or under construction that would generate additional traffic in the study area. Two projects were identified. Traffic generated by both projects was included as part of the background growth rate.

- Residential project at 50 CrossPoint Parkway.
- Residential project at 3325 & 3275 Millersport Highway.

To account for normal increases in background traffic growth, including any unforeseen developments in the study area aside from the identified projects, a growth rate of 1.0% per year was applied to the existing traffic volumes.

### **Conclusions and Recommendations**

This report identified and evaluated the potential traffic impacts that can be expected from the proposed mixed-use project at 4300 Millersport Highway. The results of this comprehensive study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the study's conclusions and recommendations:

1. The proposed project is expected to generate approximately 36 entering/55 exiting vehicle trips during the AM peak hour and 108 entering/96 exiting vehicle trips during the PM peak hour. When considering ITE published pass-by trip rates and professional judgement, the resulting new trips added to the highway system is approximately 36 entering/55 exiting during the AM peak hour and 90 entering/78 exiting during the PM peak hour.
2. A southbound right-turn lane is warranted per NYSDOT feedback and guidelines at the proposed Millersport Highway/Proposed Access intersection. The right-turn lane should be up to 325 feet in length, including the taper.
3. The proposed access intersections are projected to operate at LOS B or better during the AM and PM peak hours. No capacity improvements are warranted nor recommended under full build conditions.
4. With the recommended improvement in place, there are no potentially significant adverse traffic impacts projected due to the development of the proposed project.

## 2.0 INTRODUCTION

### 2.1 Study Purpose and Objectives

The purpose of this report is to evaluate the potential traffic impacts related to the proposed mixed-use project at 4300 Millersport Highway. Within this report, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are evaluated. Mitigating measures, if needed, are identified to minimize operational concerns. To define traffic impact, this analysis establishes existing baseline traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project. All figures and supporting calculations are included at the end and within the Appendices of this report.

This study is an update to the original traffic impact study prepared by SRF Associates (now a Passero Associates company) in August 2022.

### 2.2 Project Location

The proposed project will be located at 4300 Millersport Highway in the Town of Amherst, Erie County, NY. The project site is bounded by undeveloped lands to the north; portions of existing development, New Road, and Millersport Highway to the east; portions of residential development and Smith Road to the south; and undeveloped lands to the west. Land uses in the vicinity of the proposed project include residential, recreational, and service. The project site is currently undeveloped.

### 2.3 Study Area

To ensure a comprehensive analysis of potential traffic impacts, a geographically broad study area was selected consisting of the following intersections. **Figure 1** illustrates the project site location and study area.

- Millersport Highway at New Road (signalized)
- New Road at Smith Road (unsignalized)
- Millersport Highway at Smith Road (signalized)
- Millersport Highway at I-990 SB Ramp (unsignalized)
- Millersport Highway at I-990 NB Ramp (signalized)

## 3.0 TRANSPORTATION SETTING

### 3.1 Description of Study Area Roadways

**Table 1** provides a description of the existing roadway network within the study area. **Figure 2** illustrates the lane geometry and traffic controls at each of the study intersections and the Annual Average Daily Traffic (AADT) volumes on the study roadways. The AADTs, in vehicles per day (vpd), reflect the most recently collected data obtained from the New York State Department of Transportation (NYSDOT).

Functional classification of roadways is determined by the NYSDOT and the Federal Highway Administration (FHWA). Both the NYSDOT and FHWA group roads, streets, and highways into different classes based on how they are used. Roads and streets do not work alone to move traffic. Instead, they form a network. Functional classification defines how each road or street fits into this network, how it provides access to nearby properties, and whether it is in an urban or rural area. The primary functional classifications within the study area:

- Urban Principal Arterial – Interstate (Class 11)
- Urban Principal Arterial - Other (Class 14)

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- Urban Major Collector (Class 17)
- Urban Local (Class 19)

**Table 1: Existing Highway System**

Roadway	Class <sup>1</sup>	Agency <sup>2</sup>	Speed	Typical Cross Section <sup>3</sup>	AADT
New Road (CH-186)	17	ECDPW	40 mph	2-lane undivided	4,066 (NYSDOT 2017)
Millersport Highway (NY-263)	14	NYSDOT	55 mph	4-lane w/ TWLTL	22,592 (NYSDOT 2019)
Smith Road (CH-297)	19	ECDPW	35 mph	2-lane undivided	637 (NYSDOT 2015)
I-990	11	NYSDOT	65 mph	4-lane divided	24,086 (NYSDOT 2018)

1. Functional Classification.
2. Roadway ownership. ECDPW = Erie County Department of Public Works.
3. Excludes turning lanes at intersections. TWLTL = Two-way left-turn lane.

### 3.2 Pedestrian and Bicycle Facilities

There are no sidewalk facilities within the study area. However, the signalized intersection of Millersport Highway at New Road features pedestrian countdown signals and crosswalk striping. There are no dedicated bicycle lanes or trails, although cyclists are permitted to share the road with motorists on all roadways within the study area.

### 3.3 Transit Facilities

The Niagara Frontier Transportation Authority (NFTA) provides regional bus and metro rail service. The nearest bus stops are at the intersections of Millersport Highway/New Road and Millersport Highway/Smith Road and are serviced via Route 44 (Lockport) and Route 64 (Lockport Express).

### 3.4 Planned/Programmed Highway Improvements

There are no planned/programmed highway improvement projects in the study area.

## 4.0 EXISTING CONDITIONS ANALYSIS

### 4.1 Peak Intervals for Analysis

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

### 4.2 Existing Traffic Volume Data

SRF Associates, now Passero Associates, collected turning movement traffic counts on Wednesday, February 9, 2022. Traffic counts were conducted from 7:00 to 9:00 AM and 4:00 to 6:00 PM to determine peak hour traffic volumes at the study intersections. The peak hour traffic periods generally occurred from 7:00-8:00 AM and 4:15-5:15 PM. All traffic counts were collected on a typical weekday while local schools were in session. No significant adverse weather conditions impacted data collection. The traffic volumes were reviewed to confirm accuracy, seasonality, and relative balance between intersections. The 2022 turning movement data was grown for two years using a 1.5% growth rate. This exceeds the calculated background growth rate discussed in Section 5 to account for potential impacts from COVID-19 occurring at the time of data collection. **Figure 3** illustrates the existing base peak hour traffic conditions.



### 4.3 Field Observations

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

### 4.4 Existing Crash Investigation

The purpose of this crash analysis is to identify inherent safety issues by studying and quantifying historical crashes at the study intersections and identifying potential crash patterns and clusters. A crash cluster is defined as an abnormal occurrence of similar crash types occurring at approximately the same location or involving the same geometric features. The severity of the crashes should also be considered. A history of crashes is an indication that further analysis is required to determine the cause(s) of the crash(es) and to identify what actions, if any, could be taken to mitigate the crashes.

Crash history data was obtained from MV-104A Police Accident Reports provided by the NYSDOT. Intersection rates are listed as accidents (crashes) per million entering vehicle (Acc/MEV). This study conducted the evaluation from January 1, 2017, through December 31, 2019. Given that the COVID-19 pandemic influenced daily travel in 2020, any reported crashes in 2020 were dismissed from the study. **Table 2** summarizes the crashes that occurred at the study intersections.

**Table 2: Intersection Crash Rate Analysis**

Intersection	Total Crashes	ADT	Actual Crash Rate	Statewide Average Crash Rate
Millersport Highway at New Road	6	25,147	0.22	0.26
New Road at Smith Road	3	6,778	0.40	0.31
Millersport Highway at Smith Road	7	26,757	0.24	0.26
Millersport Highway at I-990 SB	3	26,178	0.10	0.07
Millersport Highway at I-990 NB	14	20,231	0.63	0.17

#### Millersport Highway/New Road

The study intersection has a crash rate that is lower than the statewide average crash rate for similar intersections. Four of the six (67%) reported crashes were attributed to rear end collisions; three of which occurred in the southbound direction. This is characteristic of moderate to heavily trafficked signalized intersections. The causes of the rear end crashes were generally due to driver error. No geometric improvements are recommended.

#### New Road/Smith Road

The study intersection has a crash rate that is approximately 1.3 times higher than the statewide average crash rate for similar intersections. No discernible crash patterns exist; thus, no geometric improvements are recommended.

#### Millersport Highway/Smith Road

The study intersection has a crash rate that is lower than the statewide average crash rate for similar intersections. Five of the seven (71%) of the reported crashes were attributed to rear end collisions; four of which occurred in the southbound direction. The causes of the rear end crashes were generally due to driver error. No geometric improvements are recommended.



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#### Millersport Highway/I-990 On-ramp

The study intersection has a crash rate that is approximately 1.4 times higher than the statewide average crash rate for similar intersections. No discernible crash patterns exist; thus, no geometric improvements are recommended.

#### Millersport Highway/I-990 Off-ramp

The study intersection has a crash rate that is approximately 3.7 times higher than the statewide average crash rate for similar intersections. 10 of the 14 (71%) of the reported crashes were attributed to rear end collisions. Five rear end crashes occurred in the northbound direction and three occurred in the southbound direction. The remaining two occurred in the eastbound direction. The causes of the rear end crashes were generally due to driver error. No geometric improvements are recommended.

## 5.0 BACKGROUND (NO BUILD) CONDITIONS

Background traffic volumes represent the traffic conditions during the proposed build year without development of the project. Construction of the proposed project is anticipated to reach full build-out within three years depending on market conditions. The widely accepted methodology for preparing traffic impact studies requires that any projects in the study area that are currently approved and/or under construction must be considered in the traffic analysis. Projects that are contemplated but not yet approved are not included in a traffic analysis. Local municipal personnel were contacted to discuss any other specific projects that are currently approved or under construction that would generate additional traffic in the study area. Two projects were identified. Traffic generated by both projects was included as part of the background growth rate.

- Residential project at 50 CrossPoint Parkway.
- Residential project at 3325 & 3275 Millersport Highway.

A review of available historical NYSDOT traffic volume data in the vicinity of the site indicates that traffic has grown between 2011 and 2017. To account for normal increases in background traffic growth, including any unforeseen developments in the study area aside from the identified projects, a growth rate of 1.0% per year was applied to the existing traffic volumes. **Figure 4** illustrates the background traffic conditions.

## 6.0 PROPOSED DEVELOPMENT CONDITIONS

### 6.1 Project Description

The first phase of the mixed-use project will consist of the patio home and townhome units and the second phase will consist of the two mixed-use buildings along the Millersport Highway frontage. The residential mix will consist of 38 units of patio homes and 40 units of townhomes. There will be an additional  $\pm 22,080$  SF of commercial space. This study analyzes the project as a single development phase. Access to the site will be provided via a proposed public roadway with new driveways along Smith Road, Millersport Highway, and New Road as shown on the Site Plan prepared by WM Schutt Associates included at the end of this report.

### 6.2 Proposed Traffic Generation

The volume of traffic generated by a site is dependent on the intended land use and size of the development. Trip generation is an estimate of the number of trips generated by a specific building or land use. These trips represent the volume of traffic entering and exiting the development. *Trip Generation Manual (11<sup>th</sup> Edition)* published by the Institute of Transportation Engineers (ITE) is used as a reference for this information. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of the adjacent street traffic and proposed land use, in this case, the weekday



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commuter AM and PM peak hours, represent a more critical volume when analyzing the capacity of the system; those intervals will provide the basis of this analysis.

Additionally, for certain types of developments, the total number of trips generated is different from the amount of new traffic added to the adjacent highway network by the generator. Service-oriented developments (i.e., shopping centers, restaurants, car washes, gas stations, and coffee shops) often locate adjacent to busy streets to attract the motorists already passing the site on the adjacent street(s). These sites attract a portion of their trips from traffic passing the site. The “pass-by” traffic refers to the amount of existing traffic already on the roadway adjacent to the site that, as it “passes by” the site, will enter the site driveways to patronize the project site. The quantifying of “pass-by” trips has the net result of reducing the volume of new traffic that is added to the site driveways and/or adjacent roadways.

For retail storefronts (shopping centers), the ITE data reports a range of rates during the PM peak period from 12% to 74% with an average pass-by rate of 34%.%. This study used a 25% pass-by rate during the PM peak hour. The ITE does not have data during the AM peak hour. Given the volume of projected trips, no adjustments were made for pass-by-rates for the AM peak hour.

**Table 3** shows the total site generated trips, pass-by trips, and resulting primary (new) trips that are added to the existing highway system.

**Table 3: Site Generated Trips**

Description	Size	AM Peak Hour		PM Peak Hour	
		Enter	Exit	Enter	Exit
Patio Homes (ITE 210)	38 units	7	20	23	13
Townhomes (ITE 215)	40 units	5	14	13	10
Retail (ITE 822)	±22,080 SF	31	21	72	73
<b>Total Trip Generation</b>		<b>36</b>	<b>55</b>	<b>108</b>	<b>96</b>
<i>Pass-by Trips</i>		<i>-0</i>	<i>-0</i>	<i>-18</i>	<i>-18</i>
<b>Total New Trips</b>		<b>36</b>	<b>55</b>	<b>90</b>	<b>78</b>

The proposed project is expected to generate approximately 36 entering/55 exiting vehicle trips during the AM peak hour and 108 entering/96 exiting vehicle trips during the PM peak hour. When considering ITE published pass-by trip rates and professional judgement, the resulting new trips added to the highway system is approximately 36 entering/55 exiting during the AM peak hour and 90 entering/78 exiting during the PM peak hour.

### 6.3 Trip Distribution

The cumulative effect of site-generated traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site. The proposed arrival/departure distribution of traffic generated by the proposed project is considered a function of several parameters, including:

- Employment and residential centers using the U.S. Census Data *OnTheMap* application.
- Nearby commercial centers.
- Site access locations.
- Existing traffic patterns.
- Existing traffic conditions and controls.



Figures 5A and 5B show the anticipated trip distribution pattern percentage for the residential and commercial components, respectively. Figure 6 shows the total site generated trips based on the distribution patterns.

### 6.4 Full Development Volumes

The proposed design hour traffic volumes were developed for the peak hours by combining the background traffic conditions (Figure 4) and the new site generated traffic volumes (Figure 6) to yield the traffic volumes under full development conditions. Figure 7 illustrates the full build traffic conditions.

## 7.0 TRAFFIC OPERATIONS AND ANALYSIS

### 7.1 Description of Capacity Analysis

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

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the *Highway Capacity Manual (HCM) 7<sup>th</sup> Edition* published by the TRB. Traffic analysis software, Synchro 12, which is based on procedures and methodologies contained in the HCM, was used to analyze operating conditions at study area intersections. The procedure yields a level of service based on the HCM as an indicator of how well intersections operate.

Six levels of service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the conditions with little to no delay, and LOS "F" conditions with very long delays. LOS "C" or better is desirable, but LOS "D" for signalized locations and LOS "E" for unsignalized locations are generally thresholds of acceptable operation during peak periods so long as the volume to capacity ratio (v/c) is below 1.0. Table 4 depicts level of service criteria for both signalized and unsignalized intersections.

**Table 4: Level of Service Criteria**

Level of Service	Signalized Control Delay per Vehicle (seconds)	Stop Control Delay per Vehicle (seconds)
A	< 10	< 10
B	10 – 20	10 – 15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	> 80	> 50

LOS for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15-minute analysis period. LOS for unsignalized intersections, however, are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals.

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The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available, and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur.

## 7.2 Capacity Analysis Results

Existing and background operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. Future traffic conditions generated by the project are analyzed to assess the operation of the study area intersections. **Table 5** describes the capacity results for existing, background, and full development conditions. The discussion following the table summarizes capacity conditions.

**Table 5: Capacity Analysis Results**

Intersection	2024 Existing Base Conditions		2027 Background Conditions		2027 Full Build Conditions							
	AM	PM	AM	PM	AM	PM						
<b>1. New Road at Proposed Access (U)</b>												
EB - Proposed Access	N/A	N/A	N/A	N/A	B	10.7	A	9.9				
NB - New Road					A	7.9	A	7.5				
<b>2. Millersport Highway at New Road (S)</b>												
NB - New Road	B	15.5	C	25.9	B	15.3	C	26.1	B	14.9	C	26.4
SB - New Road	C	22.4	B	14.4	C	24.3	B	14.3	C	25.7	B	16.1
NE Left - Millersport Highway	A	7.6	A	7.4	A	8.0	A	7.8	A	8.3	A	8.1
NE Thru/Right - Millersport Highway	B	12.1	B	14.5	B	13.4	B	15.0	B	13.9	B	15.3
SW Left - Millersport Highway	A	6.1	A	5.5	A	6.2	A	5.7	A	6.6	A	5.7
SW Thru/Right - Millersport Highway	B	19.3	B	13.9	C	22.8	B	14.2	C	24.3	B	14.4
<b>Overall LOS</b>	<b>B</b>	<b>17.2</b>	<b>B</b>	<b>14.3</b>	<b>B</b>	<b>19.7</b>	<b>B</b>	<b>14.7</b>	<b>C</b>	<b>20.9</b>	<b>B</b>	<b>15.0</b>
<b>v/c Ratio</b>	<b>0.75</b>		<b>0.66</b>		<b>0.82</b>		<b>0.68</b>		<b>0.84</b>		<b>0.69</b>	
<b>3. New Road at Smith Road (U)</b>												
EB - Smith Road	A	9.2	B	10.1	A	9.3	B	10.3	A	9.4	B	10.1
WB - Smith Road	B	11.1	A	9.5	B	11.3	A	9.6	B	11.4	B	10.4
NB - New Road	B	10.6	A	9.9	B	10.9	B	10.0	B	10.9	A	9.7
SB - New Road	A	10.0	A	9.2	B	10.1	A	9.3	B	10.2	A	9.3
<b>4. Millersport Highway at Smith Road (S)</b>												
EB Left/Thru - Smith Road	B	19.4	C	21.9	B	19.5	C	22.1	B	19.5	C	22.2
EB Right - Smith Road	A	3.2	A	1.7	A	3.4	A	1.7	A	5.5	A	3.5
WB Left/Thru - Smith Road	D	40.1	C	28.6	D	42.3	C	30.6	D	42.8	C	31.1
WB Right - Smith Road	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.1
NB Left - Millersport Highway	A	0.0	A	5.8	A	0.0	A	6.0	A	9.0	A	6.2
NB Thru/Right - Millersport Highway	A	9.9	A	10.0	B	10.0	B	12.1	B	10.1	B	12.5
SB Left - Millersport Highway	A	8.2	A	6.6	A	8.2	A	7.0	A	8.3	A	7.7
SB Thru/Right - Millersport Highway	B	18.2	A	6.0	B	19.3	A	6.6	B	19.8	A	6.7
<b>Overall LOS</b>	<b>B</b>	<b>18.7</b>	<b>A</b>	<b>9.9</b>	<b>B</b>	<b>19.7</b>	<b>B</b>	<b>11.5</b>	<b>B</b>	<b>19.9</b>	<b>B</b>	<b>11.7</b>
<b>v/c Ratio</b>	<b>0.82</b>		<b>0.69</b>		<b>0.84</b>		<b>0.77</b>		<b>0.85</b>		<b>0.78</b>	
<b>5. Millersport Highway at Proposed Access (U)</b>												
EB Left - Proposed Access	N/A	N/A	N/A	N/A	E	38.5	D	27.0				
EB Right - Proposed Access					C	16.9	B	11.6				
NB Left - Millersport Highway					B	14.2	A	9.9				
<b>6. Smith Road at Proposed Access (U)</b>												
EB Left - Smith Road	N/A	N/A	N/A	N/A	A	0.0	A	7.3				
SB - Proposed Access					A	9.0	A	9.1				
<b>7. Millersport Highway at I-990 SB (U)</b>												
NB Left - Millersport Highway	C	18.3	B	10.2	C	19.1	B	10.3	C	19.6	B	10.5
<b>8. Millersport Highway at I-990 NB (S)</b>												
EB Left - I-990 Off-Ramp	D	36.3	C	26.4	D	36.1	C	25.8	D	35.6	C	25.8
EB Right - I-990 Off-Ramp	C	30.6	C	23.8	C	30.5	C	23.3	C	30.0	C	23.2
NB - Millersport Highway	A	8.7	C	22.8	A	8.9	C	23.7	A	9.2	C	24.3
SB - Millersport Highway	A	9.1	C	21.4	A	9.4	C	22.2	A	9.7	C	22.6
<b>Overall LOS</b>	<b>C</b>	<b>21.4</b>	<b>C</b>	<b>24.2</b>	<b>C</b>	<b>21.5</b>	<b>C</b>	<b>24.2</b>	<b>C</b>	<b>21.4</b>	<b>C</b>	<b>24.3</b>
<b>v/c Ratio</b>	<b>0.68</b>		<b>0.82</b>		<b>0.68</b>		<b>0.82</b>		<b>0.69</b>		<b>0.83</b>	

A(2.8) = Level of Service (Delay in seconds per vehicle)

(S) = Signalized; (U) = Unsignalized

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

N/A = Approach does not exist and/or was not analyzed during this condition

Green shaded cells indicate low delays, yellow shaded cells indicate moderate delays, red shaded cells indicate long delays.

April 18, 2024

### 1. New Road at Proposed Access

All movements operate at LOS B or better under projected full build conditions during both peak hours studied. No capacity improvements are warranted nor recommended.

### 2. Millersport Highway at New Road

All movements operate at LOS C or better under existing, projected background, and full build conditions during both peak hours studied. No changes in LOS are projected between background and full build conditions. The intersection can accommodate the projected new traffic volumes resulting from the project; thus, no capacity improvements are warranted nor recommended.

### 3. New Road at Smith Road

All movements operate at LOS B or better under existing, projected background, and full build conditions during both peak hours studied. The intersection can accommodate the projected new traffic volumes resulting from the project; thus, no capacity improvements are warranted nor recommended.

### 4. Millersport Highway at Smith Road

All movements generally operate at LOS C or better under existing, projected background, and full build conditions during both peak hours studied. The exception is the westbound left/thru movement during the AM peak hour, which operates at LOS D. However, the condition is on the low end of the LOS D spectrum as the threshold between LOS C and D occurs at 35.0 seconds of delay per vehicle. The intersection can accommodate the projected new traffic volumes resulting from the project; thus, no capacity improvements are warranted nor recommended.

### 5. Millersport Highway at Proposed Access

The eastbound left movement is projected to operate at LOS E during the AM peak hour and LOS D during the PM peak hour. The LOS E is on the low end of the delay spectrum, as the threshold occurs at 35.0 seconds of delay per vehicle. Additionally, there are multiple access driveways enabling traffic to disperse throughout the site via the internal roadway. Based upon feedback received by the NYSDOT regarding the March 2022 TIS submitted for the project, a southbound right-turn lane is required under full build-out of the project and has been modeled as part of the full development analysis. The right-turn lane should be up to 325 feet in length, including the taper. No further capacity improvements are recommended.

### 6. Smith Road at Proposed Access

All movements are projected to operate at LOS A during both peak hours under full build conditions. No capacity improvements are warranted nor recommended.

### 7. Millersport Highway at I-990 On-Ramp

All movements generally operate at LOS C or better under existing, projected background, and full build conditions during both peak hours studied. The intersection can accommodate the projected new traffic volumes resulting from the project; thus, no capacity improvements are warranted nor recommended.

### 8. Millersport Highway at I-990 Off-Ramp

All movements generally operate at LOS C or better under existing, projected background, and full build conditions during both peak hours studied. The exception is the eastbound left movement during the AM peak hour, which operates at LOS D. However, the condition is on the low end of the LOS D spectrum. The intersection can accommodate the projected new traffic volumes resulting from the project; thus, no capacity improvements are warranted nor recommended.

April 18, 2024

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

This report identified and evaluated the potential traffic impacts that can be expected from the proposed mixed-use project at 4300 Millersport Highway. The results of this comprehensive study determined that the existing transportation network can adequately accommodate the projected traffic volumes and resulting minor impacts to study area intersections. The following sets forth the study's conclusions and recommendations:

1. The proposed project is expected to generate approximately 36 entering/55 exiting vehicle trips during the AM peak hour and 108 entering/96 exiting vehicle trips during the PM peak hour. When considering ITE published pass-by trip rates and professional judgement, the resulting new trips added to the highway system is approximately 36 entering/55 exiting during the AM peak hour and 90 entering/78 exiting during the PM peak hour.
2. A southbound right-turn lane is warranted per NYSDOT feedback and guidelines at the proposed Millersport Highway/Proposed Access intersection. The right-turn lane should be up to 325 feet in length, including the taper.
3. The proposed access intersections are projected to operate at LOS B or better during the AM and PM peak hours. No capacity improvements are warranted nor recommended under full build conditions.
4. With the recommended improvement in place, there are no potentially significant adverse traffic impacts projected due to the development of the proposed project.

April 18, 2024

## 9.0 REFERENCES

- Synchro 12 Software. Cubic ITS. 2023.
- Highway Capacity Manual (7<sup>th</sup> Edition). Transportation Research Board (TRB). Washington, DC. 2022.
- Trip Generation Manual (11<sup>th</sup> Edition). Institute of Transportation Engineers (ITE). Washington, DC. 2021.
- Trip Generation Handbook (3<sup>rd</sup> Edition). Institute of Transportation Engineers (ITE). Washington, DC. 2017.
- OnTheMap. United States Census Bureau. 2024.
- Traffic Data Viewer. New York State Department of Transportation (NYSDOT). 2024.
- Manual on Uniform Traffic Control Devices (11<sup>th</sup> Edition). Federal Highway Administration (FHWA). 2023.
- Highway Functional Classification Concepts, Criteria, and Procedures. Federal Highway Administration (FHWA). 2023.
- Accident Location Information System. New York State Department of Transportation. 2022.
- Niagara Frontier Transportation Authority (NFTA). 2024.

## 10.0 FIGURES

Figures 1 through 7 are included on the following pages.








FIGURE 1: SITE LOCATION AND STUDY AREA



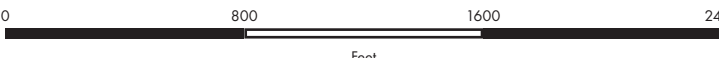
Key	
①	Study Intersection
①	Proposed Intersection
□	Study Area
▨	Site Location

**PROPOSED 4300 MILLERSPORT HIGHWAY  
MIXED-USE PROJECT**

TOWN OF AMHERST, ERIE COUNTY, NEW YORK



N



0                      800                      1600                      2400

Feet

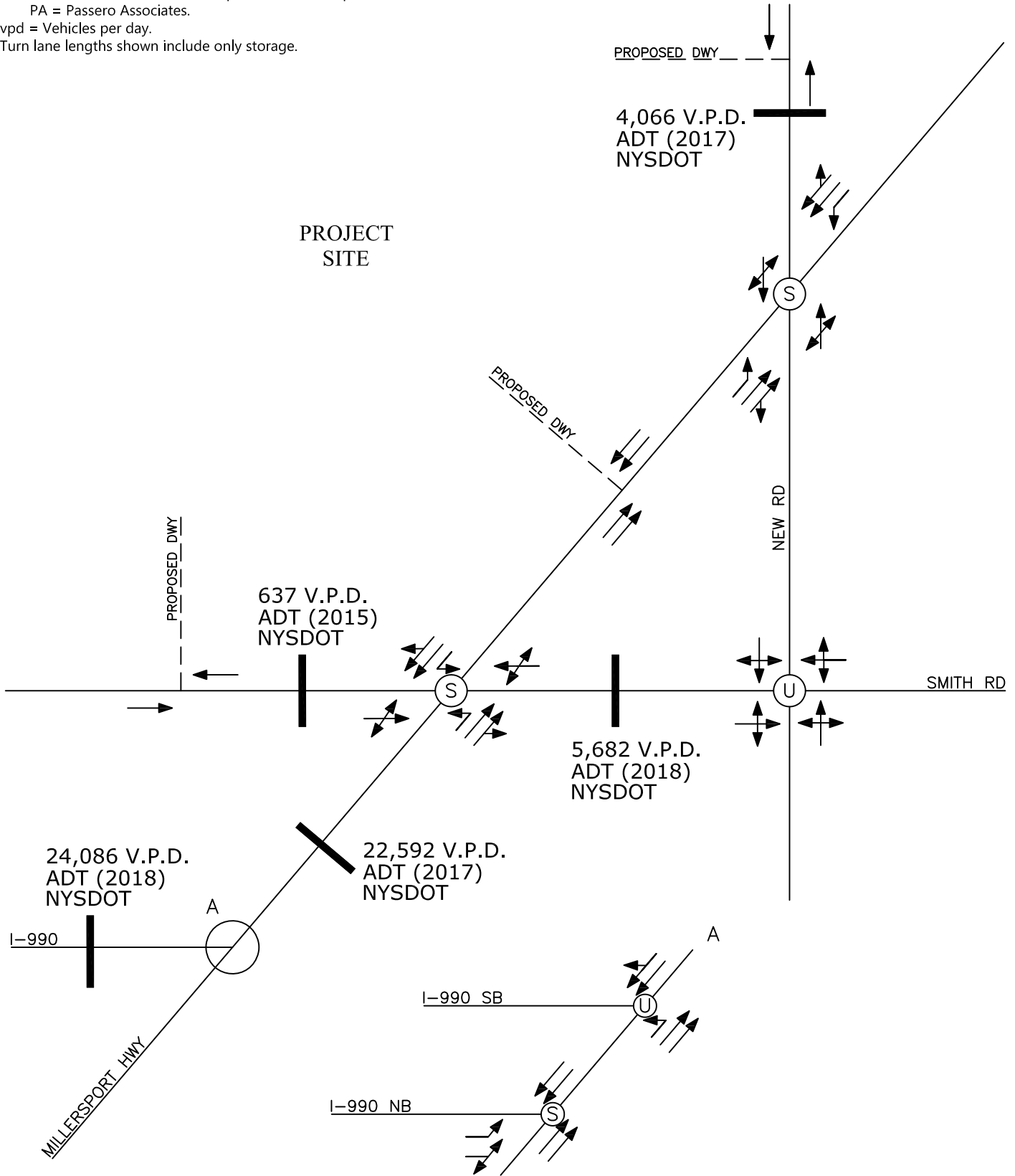


Project No: 20243846.0001

**Figure 2**

Notes:

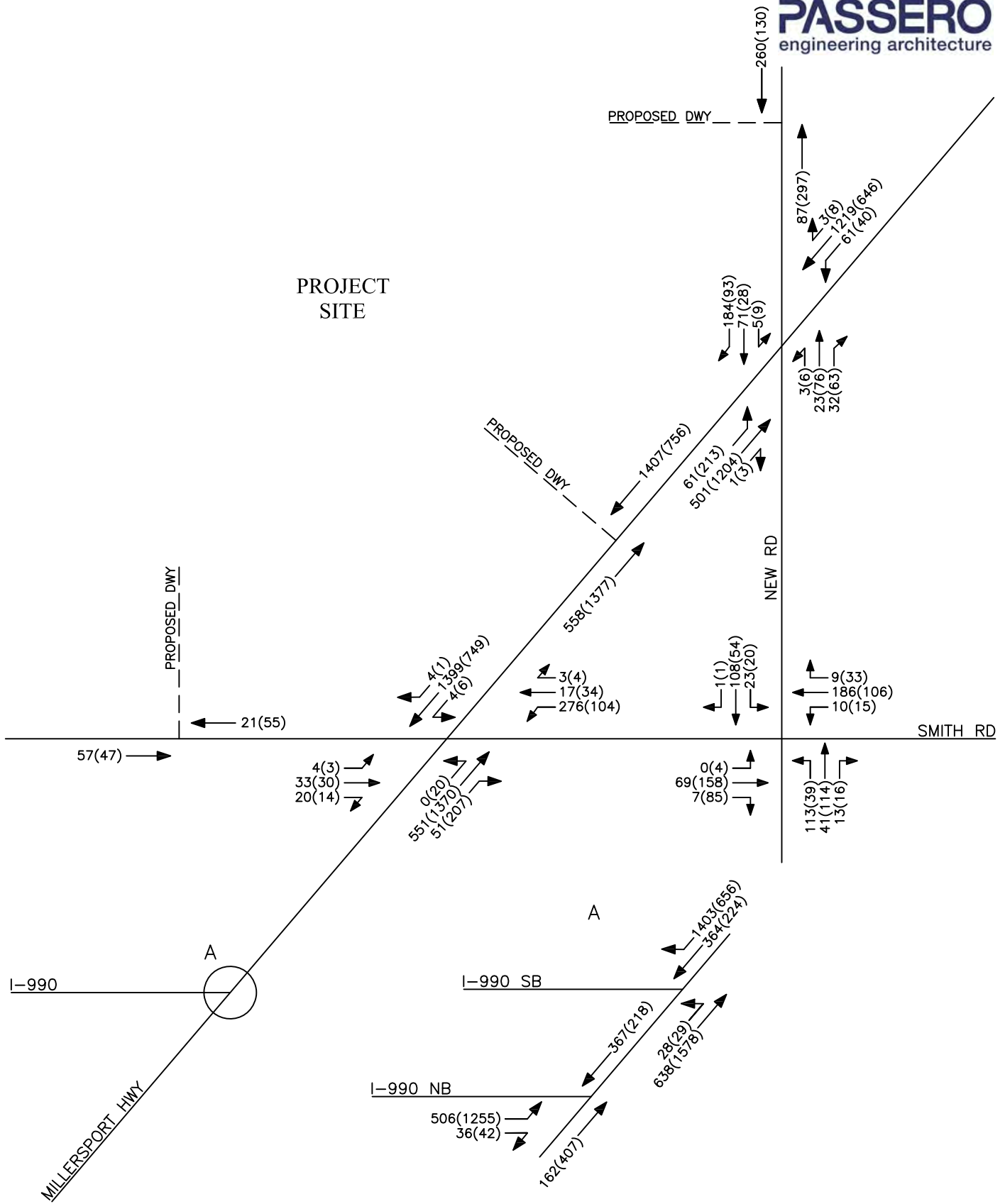
1. All AADT volumes by those noted:
  - 1.1. NYSDOT = New York State Department of Transportation.
  - 1.2. PA = Passero Associates.
2. vpd = Vehicles per day.
3. Turn lane lengths shown include only storage.



**4300 Millersport Highway | Town of Amherst, NY**

**Lane Geometry and Average Daily Traffic**

Figure 3A



**4300 Millersport Highway | Town of Amherst, NY**

**Peak Hour Volumes  
2022 Existing Conditions**

KEY:  
00(00) = AM(PM)  
--- Proposed Roadway

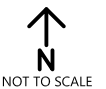
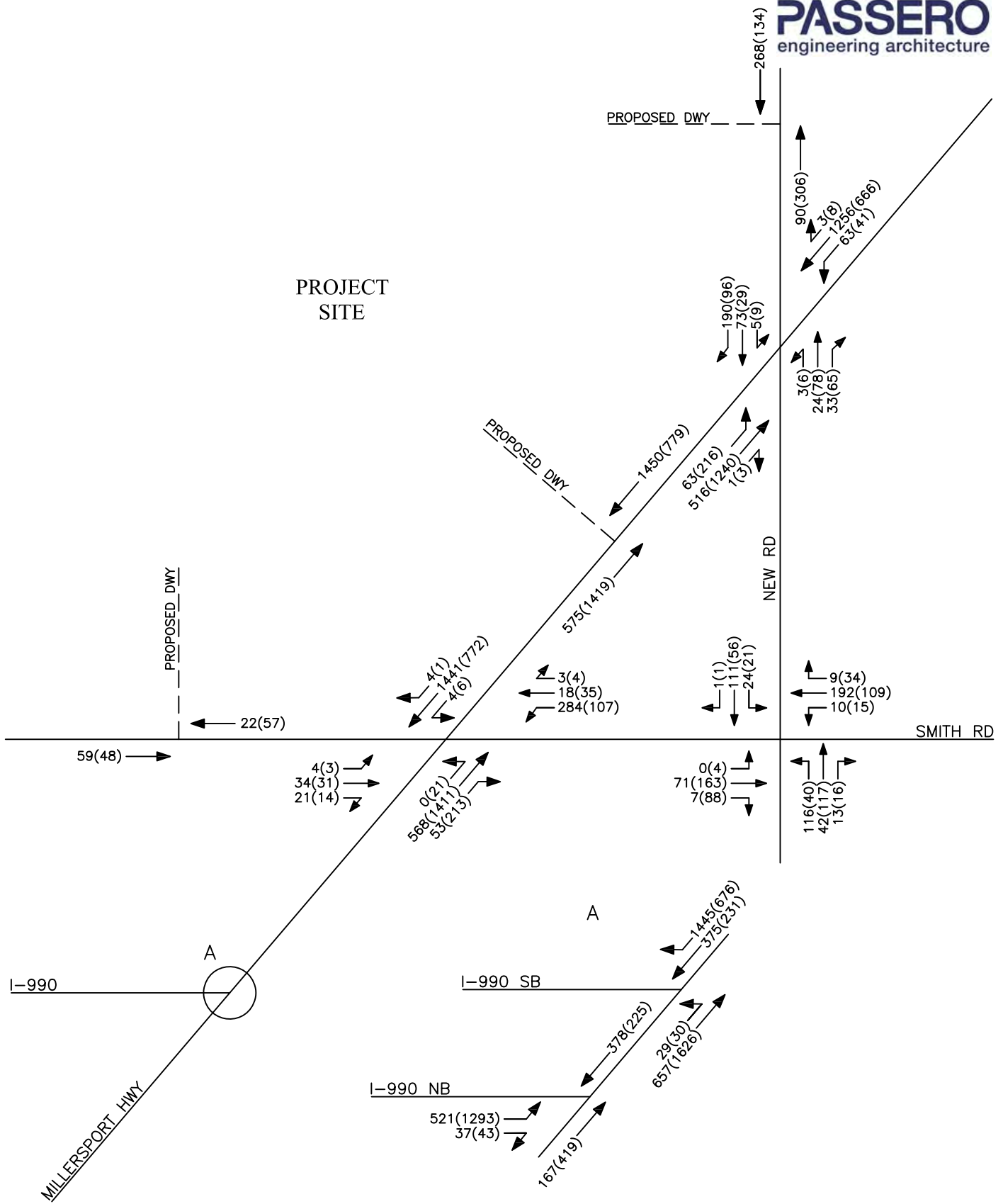




Figure 3B



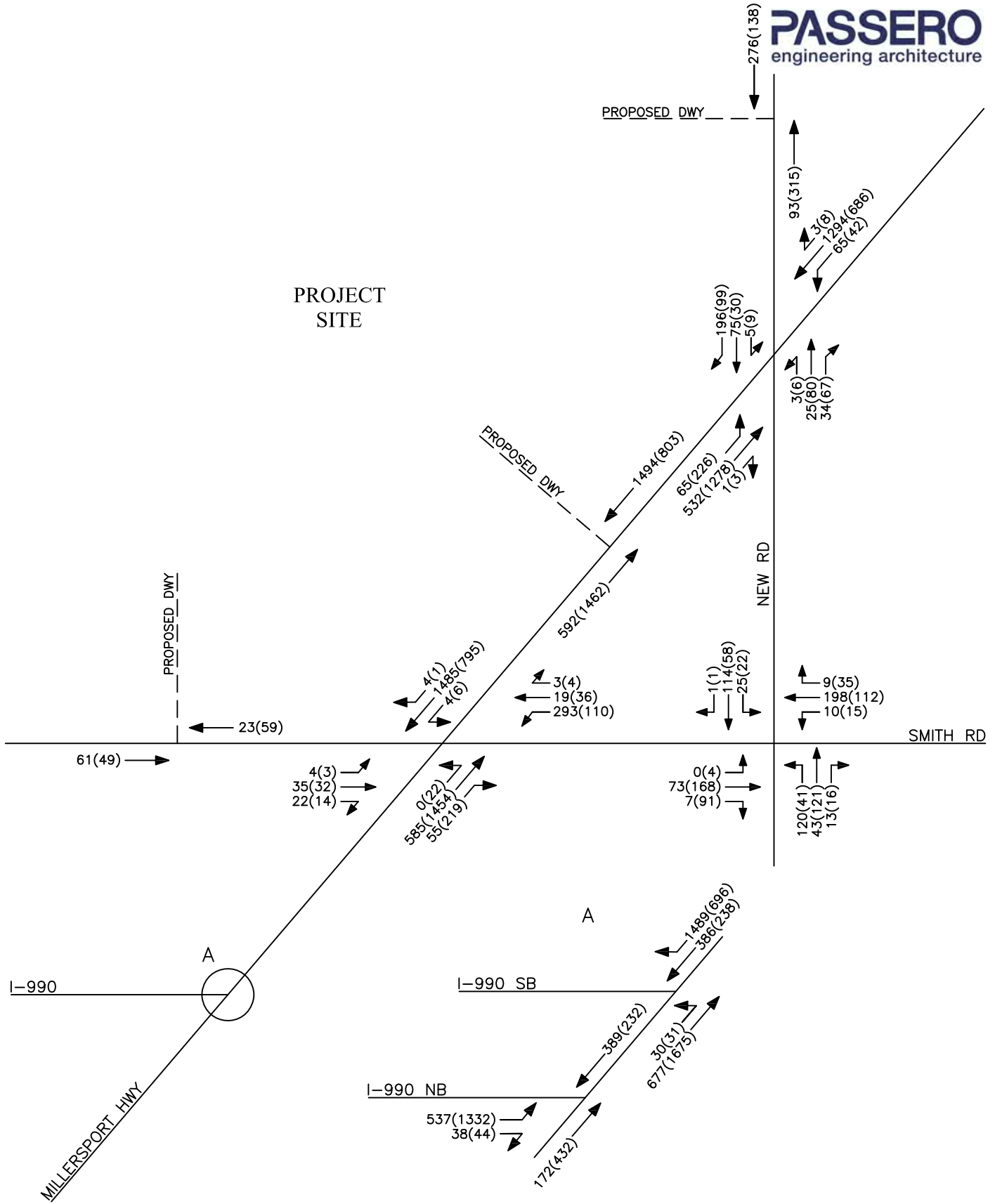
**4300 Millersport Highway | Town of Amherst, NY**

**Peak Hour Volumes  
2024 Existing Conditions**

KEY:  
00(00) = AM(PM)  
--- Proposed Roadway



Figure 4



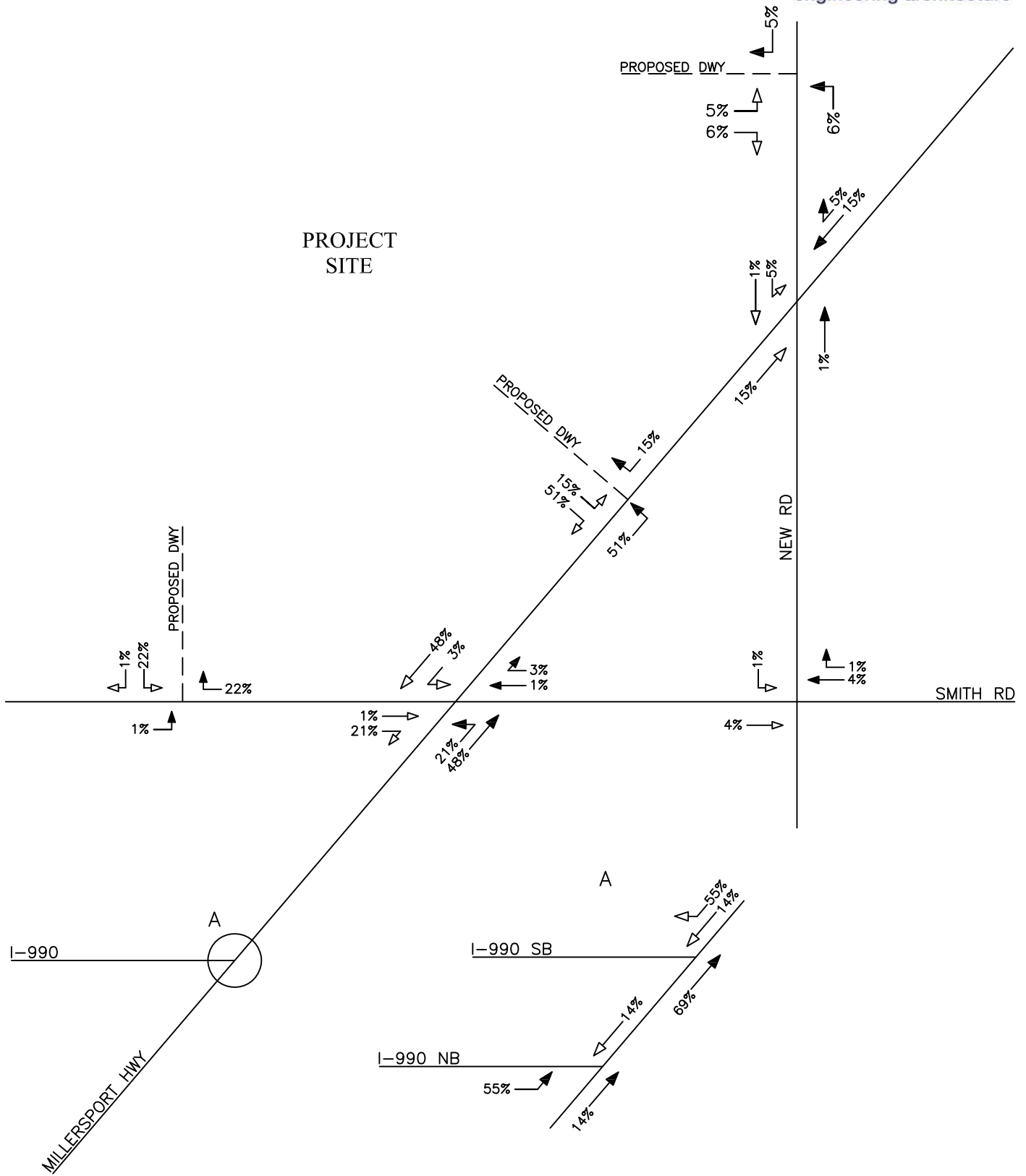
**4300 Millersport Highway | Town of Amherst, NY**

**Peak Hour Volumes  
2027 Background Conditions**

KEY:  
00(00) = AM(PM)  
--- Proposed Roadway

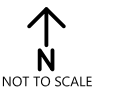


Figure 5A



**4300 Millersport Highway | Town of Amherst, NY**

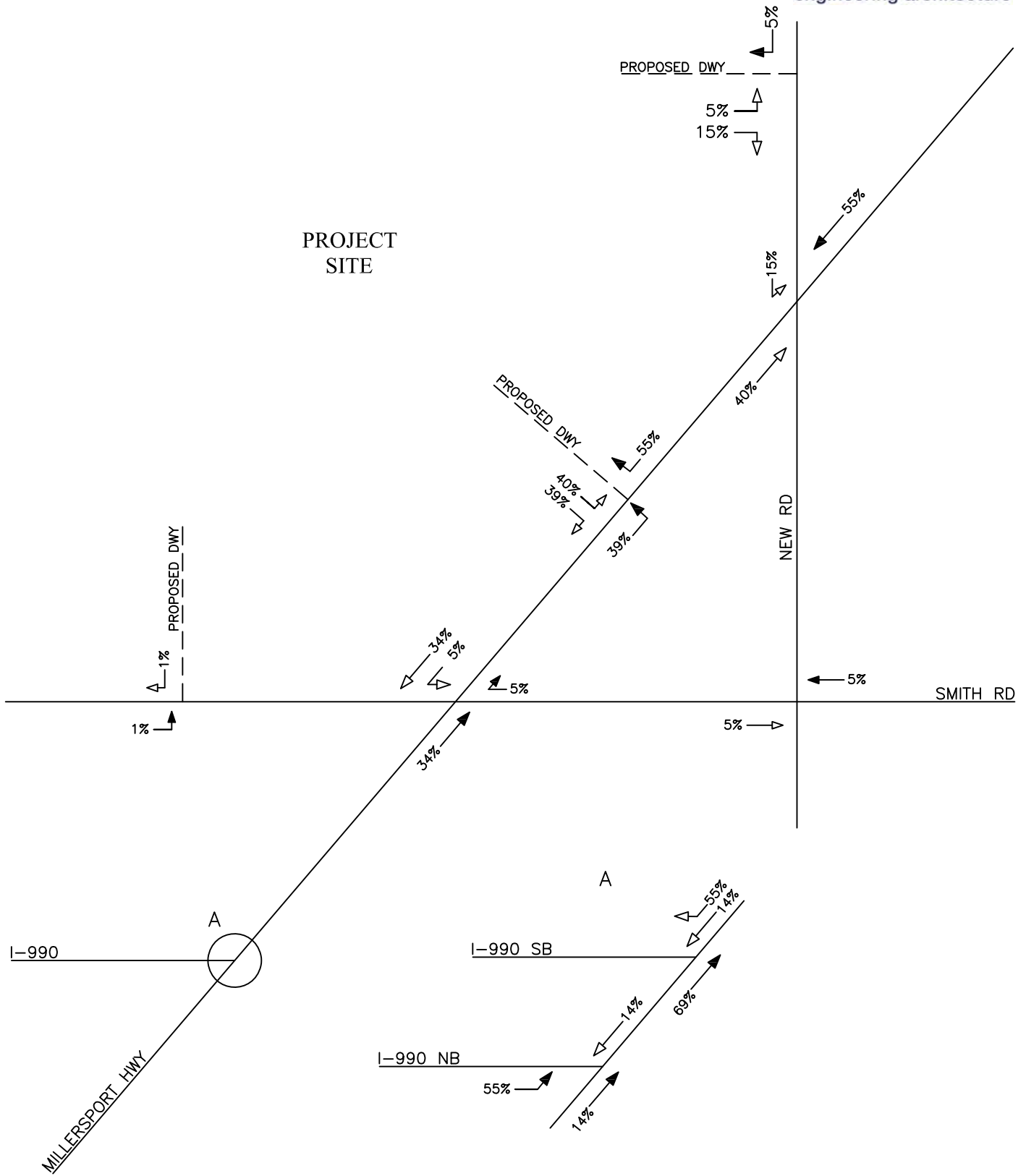
**Trip Distribution Residential**



- KEY:
- 00(00) = AM(PM)
  - Entering Trip
  - ← Exiting Trip
  - - - Proposed Roadway



Figure 5B



**4300 Millersport Highway | Town of Amherst, NY**

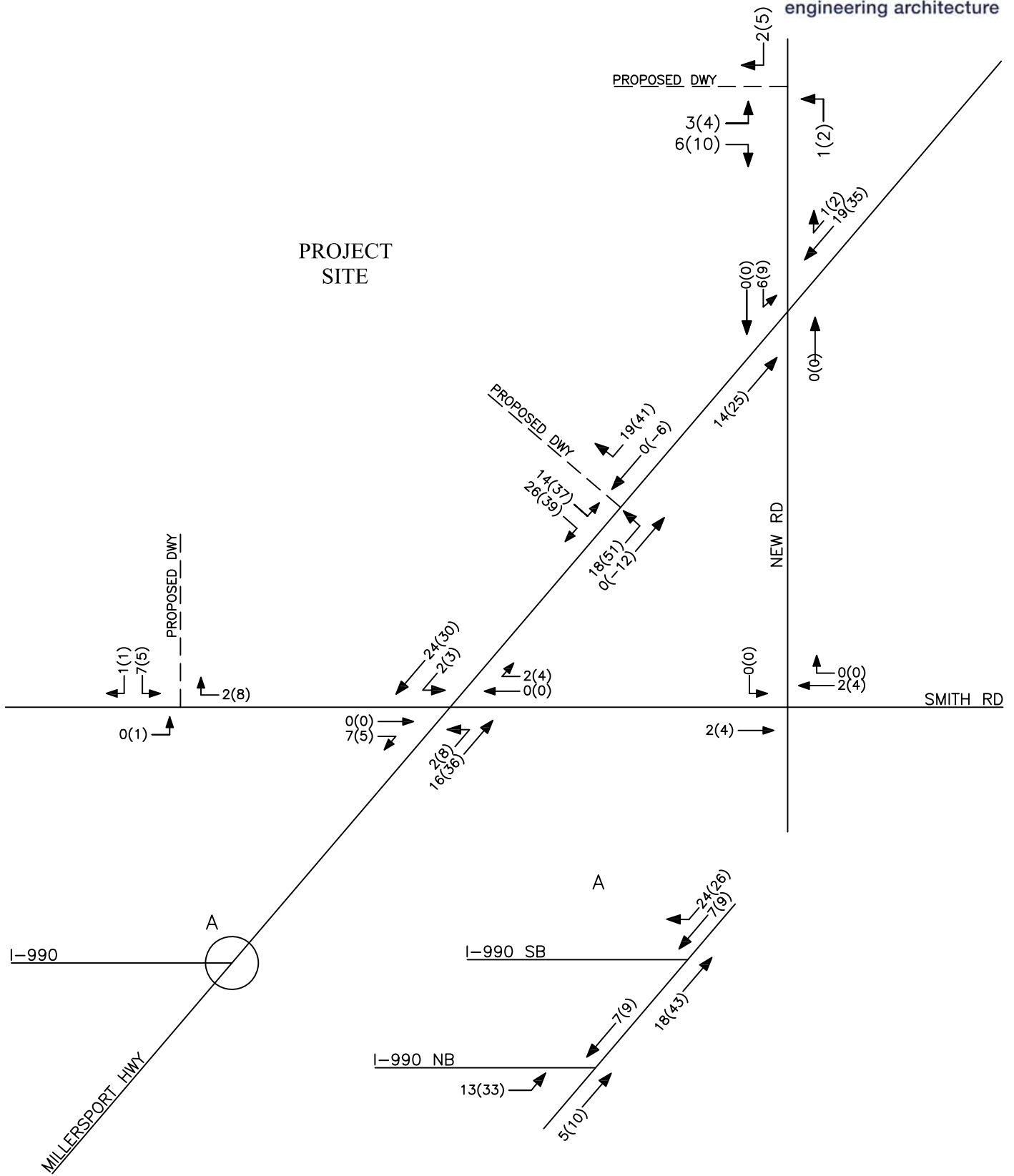
**Trip Distribution  
Commercial**

Project Number: 20243846.0001



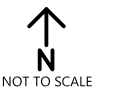
- KEY:
- 00(00) = AM(PM)
  - Entering Trip
  - ← Exiting Trip
  - Proposed Roadway

Figure 6



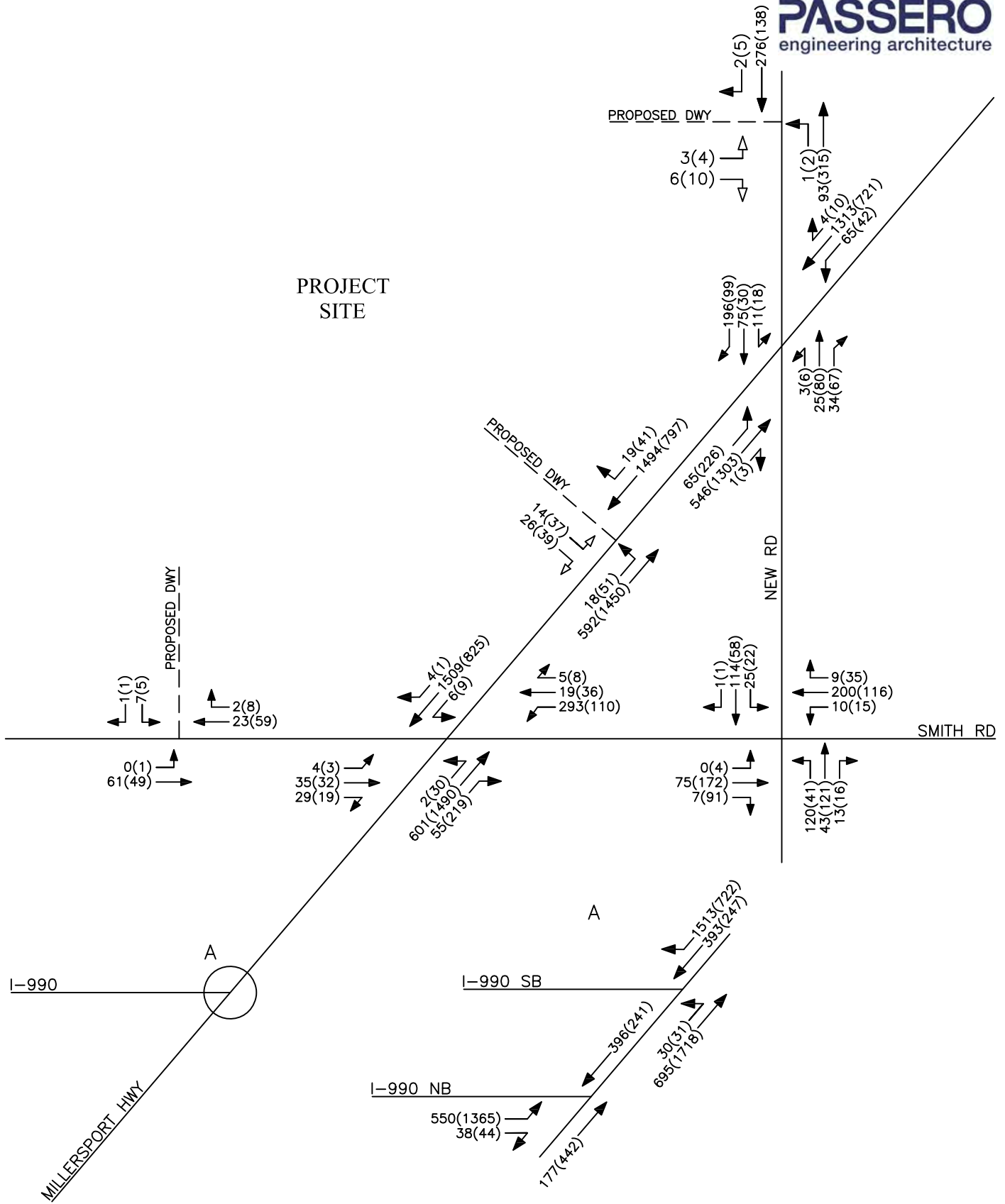
**4300 Millersport Highway | Town of Amherst, NY**

**Total Site Trips**



- KEY:  
 00(00) = AM(PM)  
 → Entering Trip  
 ← Exiting Trip  
 --- Proposed Roadway

Figure 7



**4300 Millersport Highway | Town of Amherst, NY**

**Full Build Volumes**



KEY:  
00(00) = AM(PM)  
--- Proposed Roadway

# APPENDICES

## **APPENDIX A: EXISTING TRAFFIC COUNT DATA**

**New Rd/Smith Rd - TMC**

Wed Feb 9, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	Smith Rd Eastbound				Smith Rd Westbound				New Rd Northbound				New Rd Southbound			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
2022-02-09 7:00AM	0	12	1	0	13	0	44	1	46	0	25	5	31	0	14	0
7:15AM	0	21	3	0	24	0	35	2	39	0	24	8	34	0	27	0
7:30AM	0	16	1	0	17	0	54	5	64	0	36	11	55	0	38	1
7:45AM	0	20	2	0	22	0	53	1	56	0	27	17	47	0	29	0
Hourly Total	0	69	7	0	76	0	186	9	205	0	112	41	167	0	108	1
8:00AM	1	13	1	0	15	0	34	5	41	0	14	21	37	0	31	0
8:15AM	0	10	3	0	13	0	31	2	35	0	20	11	37	0	35	0
8:30AM	0	14	3	0	17	0	45	3	58	0	24	12	39	0	18	0
8:45AM	0	14	2	0	16	0	21	4	30	0	19	11	32	0	15	0
Hourly Total	1	51	9	0	61	0	131	14	164	0	77	55	145	0	99	0
9:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00PM	1	36	14	0	51	0	21	11	33	0	6	29	41	0	15	0
4:15PM	2	48	19	0	69	0	15	9	28	0	11	35	48	0	12	0
4:30PM	0	30	26	0	56	0	30	10	43	0	8	24	37	0	14	0
4:45PM	0	37	18	0	55	0	30	6	40	0	11	25	41	0	12	1
Hourly Total	3	151	77	0	231	0	96	36	144	0	36	113	167	0	53	1
5:00PM	2	43	22	0	67	0	31	8	43	0	9	30	43	0	16	0
5:15PM	0	39	18	0	57	0	15	8	26	0	8	32	41	0	20	1
5:30PM	1	37	22	1	61	0	18	6	27	0	11	27	41	0	23	0
5:45PM	8	24	21	0	53	0	12	4	17	0	2	27	29	0	30	2
Hourly Total	11	143	83	1	238	0	76	26	113	0	30	116	154	0	89	3
<b>Total</b>	15	414	176	1	606	0	489	85	626	0	255	325	633	0	349	5
<b>% Approach</b>	2.5%	68.3%	29.0%	0.2%	-	-	8.3%	78.1%	13.6%	0%	40.3%	51.3%	8.2%	0.2%	19.2%	79.7%
<b>% Total</b>	0.7%	18.0%	7.6%	0%	26.3%	-	2.3%	21.2%	3.7%	0%	11.1%	14.1%	2.3%	0%	3.6%	15.2%
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Lights</b>	15	405	174	1	595	-	50	483	84	0	252	316	49	1	82	343
<b>% Lights</b>	100%	97.8%	98.9%	100%	98.2%	-	96.2%	98.8%	98.8%	0%	98.8%	97.2%	94.2%	100%	97.6%	98.3%
<b>Heavy</b>	0	9	2	0	11	-	2	6	1	0	3	9	3	0	2	6
<b>% Heavy</b>	0%	2.2%	1.1%	0%	1.8%	-	3.8%	1.2%	1.2%	0%	1.2%	2.8%	5.8%	0%	2.4%	1.7%
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

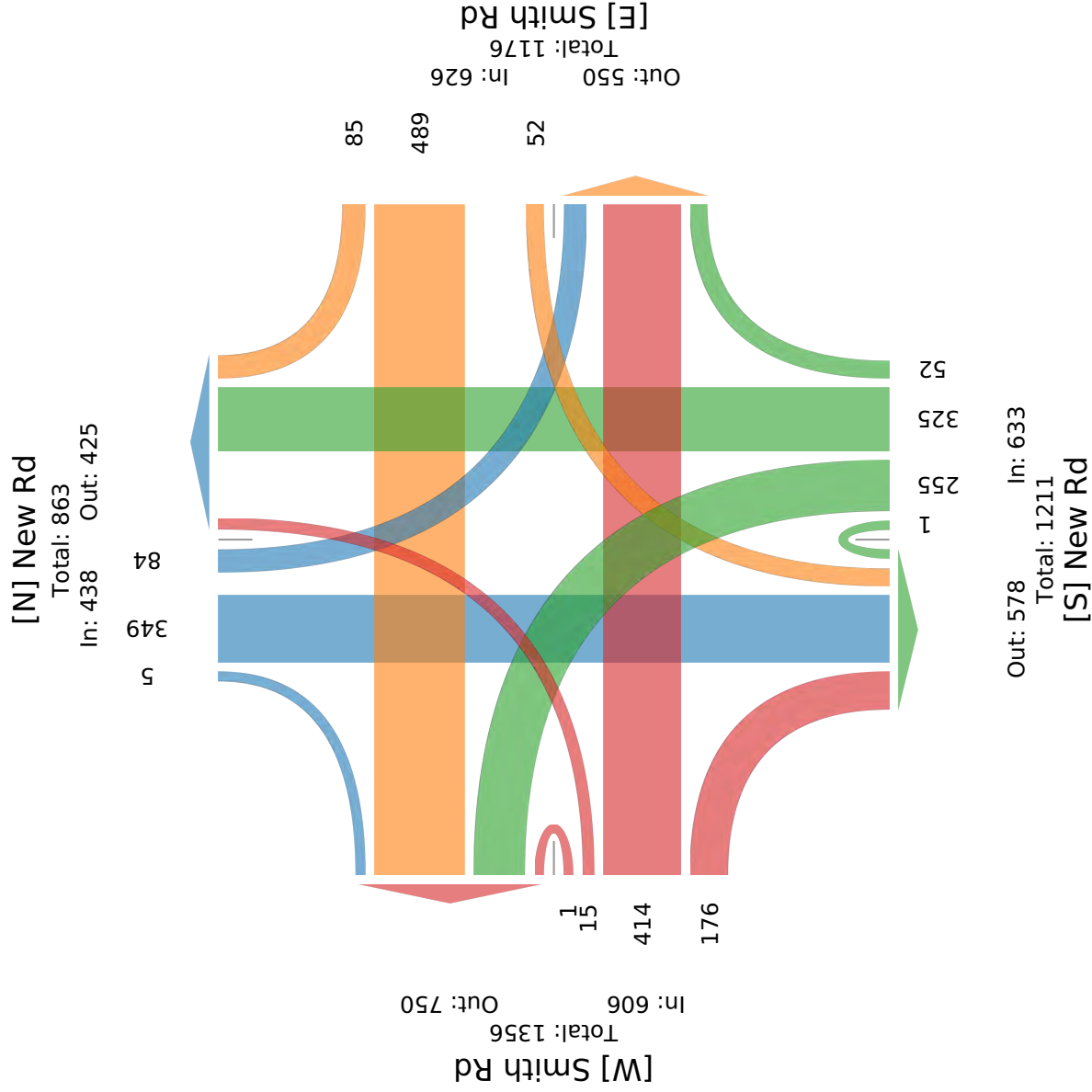
\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

**New Rd/Smith Rd - TMC**

Wed Feb 9, 2022  
 Full Length (7 AM-9 AM, 4 PM-6 PM)  
 All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)  
 All Movements  
 ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
 1016 Hoosick Rd, Troy, NY, 12180, US





**New Rd/Smith Rd - TMC**

Wed Feb 9, 2022

Forced Peak (7 AM - 8 AM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	Smith Rd Eastbound				Smith Rd Westbound				New Rd Northbound				New Rd Southbound							
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U				
2022-02-09 7:00AM	0	12	1	0	13	0	1	0	46	0	25	5	1	0	31	0	9	14	0	0
7:15AM	0	21	3	0	24	0	2	0	39	0	24	8	1	1	34	0	3	27	0	0
7:30AM	0	16	1	0	17	0	5	0	64	0	36	11	8	0	55	0	7	38	1	0
7:45AM	0	20	2	0	22	0	2	0	56	0	27	17	3	0	47	0	4	29	0	0
<b>Total</b>	0	69	7	0	76	0	10	0	205	0	112	41	13	1	167	0	23	108	1	0
<b>% Approach</b>	0%	90.8%	9.2%	0%	-	-	4.9%	90.7%	4.4%	0%	67.1%	24.6%	7.8%	0.6%	-	-	17.4%	81.8%	0.8%	0%
<b>% Total</b>	0%	11.9%	1.2%	0%	13.1%	-	1.7%	32.1%	1.6%	0%	19.3%	7.1%	2.2%	0.2%	28.8%	-	4.0%	18.6%	0.2%	0%
<b>PHF</b>	-	0.821	0.583	-	0.792	-	0.500	0.861	0.450	-	0.778	0.603	0.406	0.250	0.759	-	0.639	0.711	0.250	-
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Lights</b>	0	69	7	0	76	-	10	185	9	0	110	39	11	1	161	-	23	107	1	0
<b>% Lights</b>	0%	100%	100%	0%	100%	-	100%	99.5%	100%	0%	98.2%	95.1%	84.6%	100%	96.4%	-	100%	99.1%	100%	0%
<b>Heavy</b>	0	0	0	0	0	0	0	1	1	0	2	2	2	0	6	-	0	1	0	0
<b>% Heavy</b>	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	1.8%	4.9%	15.4%	0%	3.6%	-	0%	0.9%	0%	0%
<b>Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

# New Rd/Smith Rd - TMC

Wed Feb 9, 2022

Forced Peak (7 AM - 8 AM)

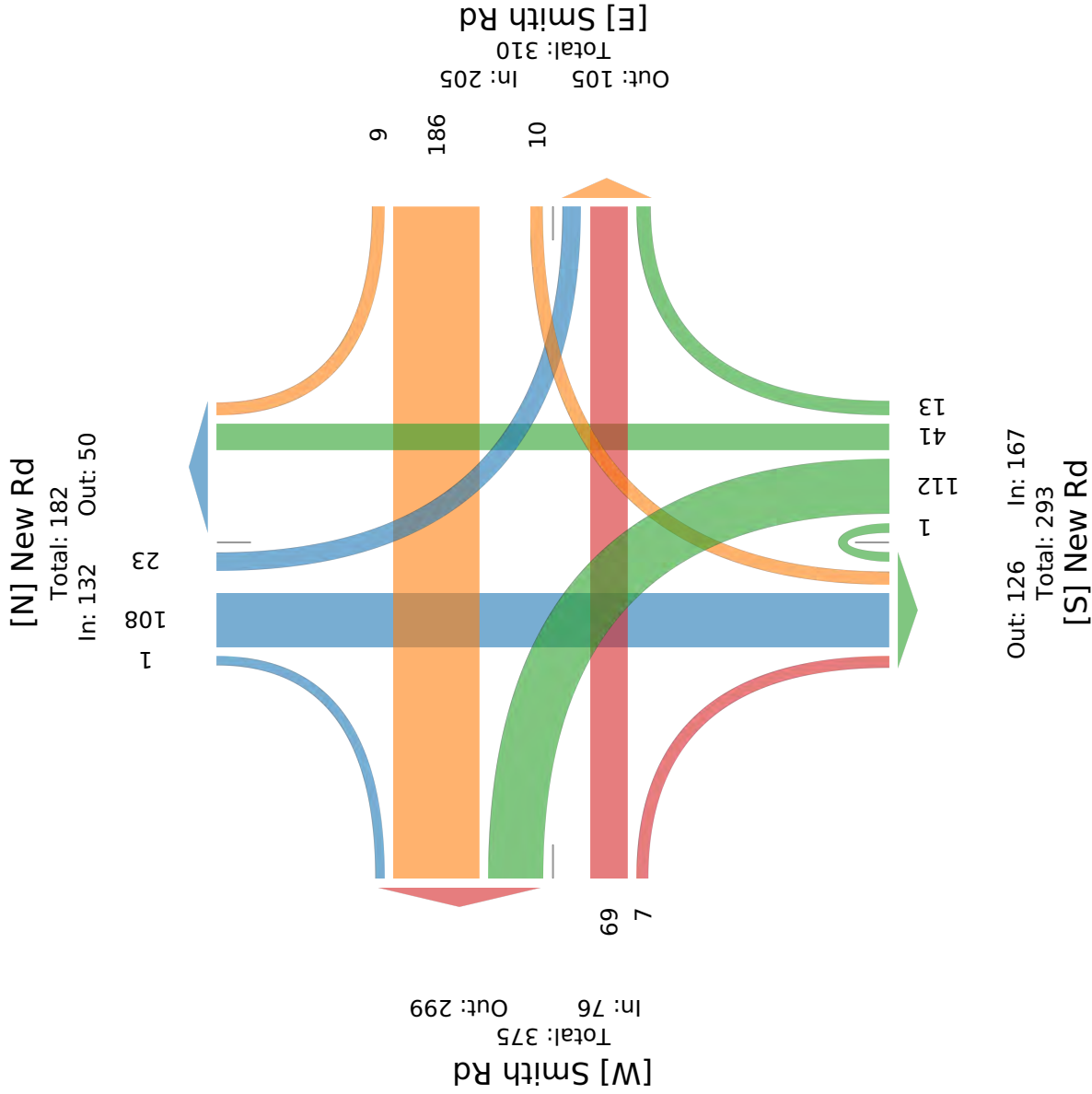
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US



**New Rd/Smith Rd - TMC**

Wed Feb 9, 2022

AM Peak (7:15 AM - 8:15 AM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	Smith Rd Eastbound				Smith Rd Westbound				New Rd Northbound				New Rd Southbound			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
2022-02-09 7:15AM	0	21	3	0	24	0	39	0	24	8	1	1	34	0	30	0
7:30AM	0	16	1	0	17	0	64	0	36	11	8	0	55	0	46	0
7:45AM	0	20	2	0	22	0	56	0	27	17	3	0	47	0	33	0
8:00AM	1	13	1	0	15	0	41	0	14	21	2	0	37	0	36	0
<b>Total</b>	1	70	7	0	78	0	200	0	101	57	14	1	173	0	145	0
<b>% Approach</b>	1.3%	89.7%	9.0%	0%	-	-	5.5%	88.0%	6.5%	0%	58.4%	32.9%	8.1%	0.6%	13.1%	86.2%
<b>% Total</b>	0.2%	11.7%	1.2%	0%	13.1%	-	1.8%	29.5%	2.2%	0%	33.6%	9.6%	2.3%	0.2%	29.0%	21.0%
<b>PHF</b>	0.250	0.833	0.583	-	0.813	-	0.550	0.815	0.650	-	0.781	0.679	0.438	0.250	0.786	0.679
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Lights</b>	1	70	7	0	78	-	11	176	12	0	199	-	99	54	12	1
<b>% Lights</b>	100%	100%	100%	0%	100%	-	100%	100%	92.3%	0%	99.5%	-	98.0%	94.7%	85.7%	100%
<b>Heavy</b>	0	0	0	0	0	0	1	0	1	0	1	0	7	0	1	0
<b>% Heavy</b>	0%	0%	0%	0%	0%	0%	7.7%	0%	0.5%	-	4.0%	-	2.0%	5.3%	14.3%	0%
<b>Pedestrians</b>	-	-	-	-	0	-	0	-	0	-	0	-	0	-	0	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	0	-	0	-	0	-	0	-	0	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

# New Rd/Smith Rd - TMC

Wed Feb 9, 2022

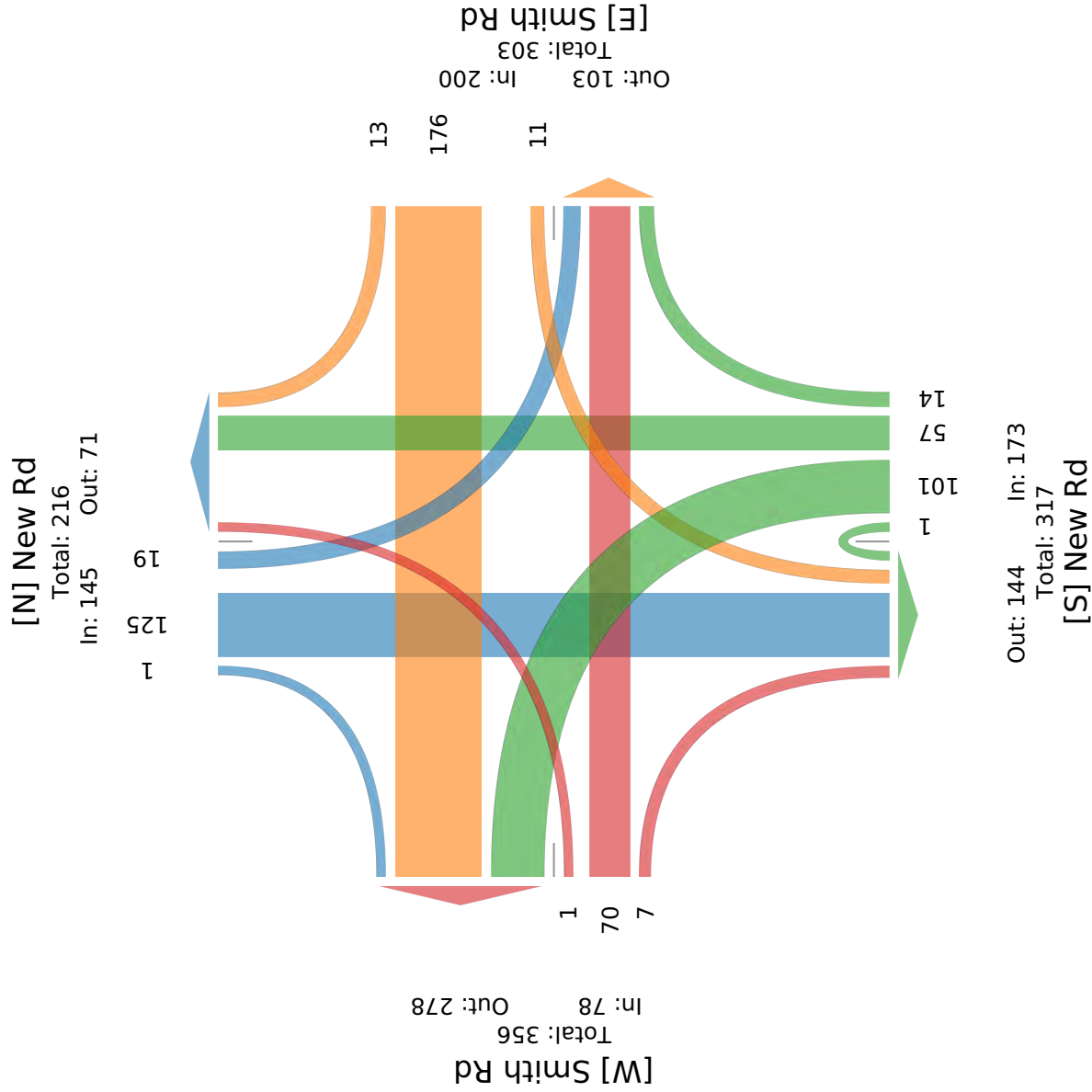
AM Peak (7:15 AM - 8:15 AM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)  
All Movements

ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US



**New Rd/Smith Rd - TMC**

Wed Feb 9, 2022

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	Smith Rd Eastbound				Smith Rd Westbound				New Rd Northbound				New Rd Southbound			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Time																
2022-02-09 4:15PM	2	48	19	0	4	15	9	0	11	35	2	0	6	12	0	0
4:30PM	0	30	26	0	3	30	10	0	8	24	5	0	6	14	0	0
4:45PM	0	37	18	0	4	30	6	0	11	25	5	0	5	12	1	0
5:00PM	2	43	22	0	4	31	8	0	9	30	4	0	3	16	0	0
<b>Total</b>	4	158	85	0	15	106	33	0	39	114	16	0	20	54	1	0
<b>% Approach</b>	1.6%	64.0%	34.4%	0%	9.7%	68.8%	21.4%	0%	23.1%	67.5%	9.5%	0%	26.7%	72.0%	1.3%	0%
<b>% Total</b>	0.6%	24.5%	13.2%	0%	2.3%	16.4%	5.1%	0%	6.0%	17.7%	2.5%	0%	3.1%	8.4%	0.2%	0%
<b>PHF</b>	0.500	0.823	0.817	-	0.938	0.855	0.825	-	0.886	0.814	0.800	-	0.833	0.844	0.250	-
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Lights</b>	4	157	85	0	14	105	33	0	39	113	16	0	19	54	1	0
<b>% Lights</b>	100%	99.4%	100%	0%	93.3%	99.1%	100%	0%	100%	99.1%	100%	0%	95.0%	100%	100%	0%
<b>Heavy</b>	0	1	0	0	1	1	0	0	0	1	0	0	1	0	0	0
<b>% Heavy</b>	0%	0.6%	0%	0%	6.7%	0.9%	0%	0%	0%	0.9%	0%	0%	5.0%	0%	0%	0%
Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**New Rd/Smith Rd - TMC**

Wed Feb 9, 2022

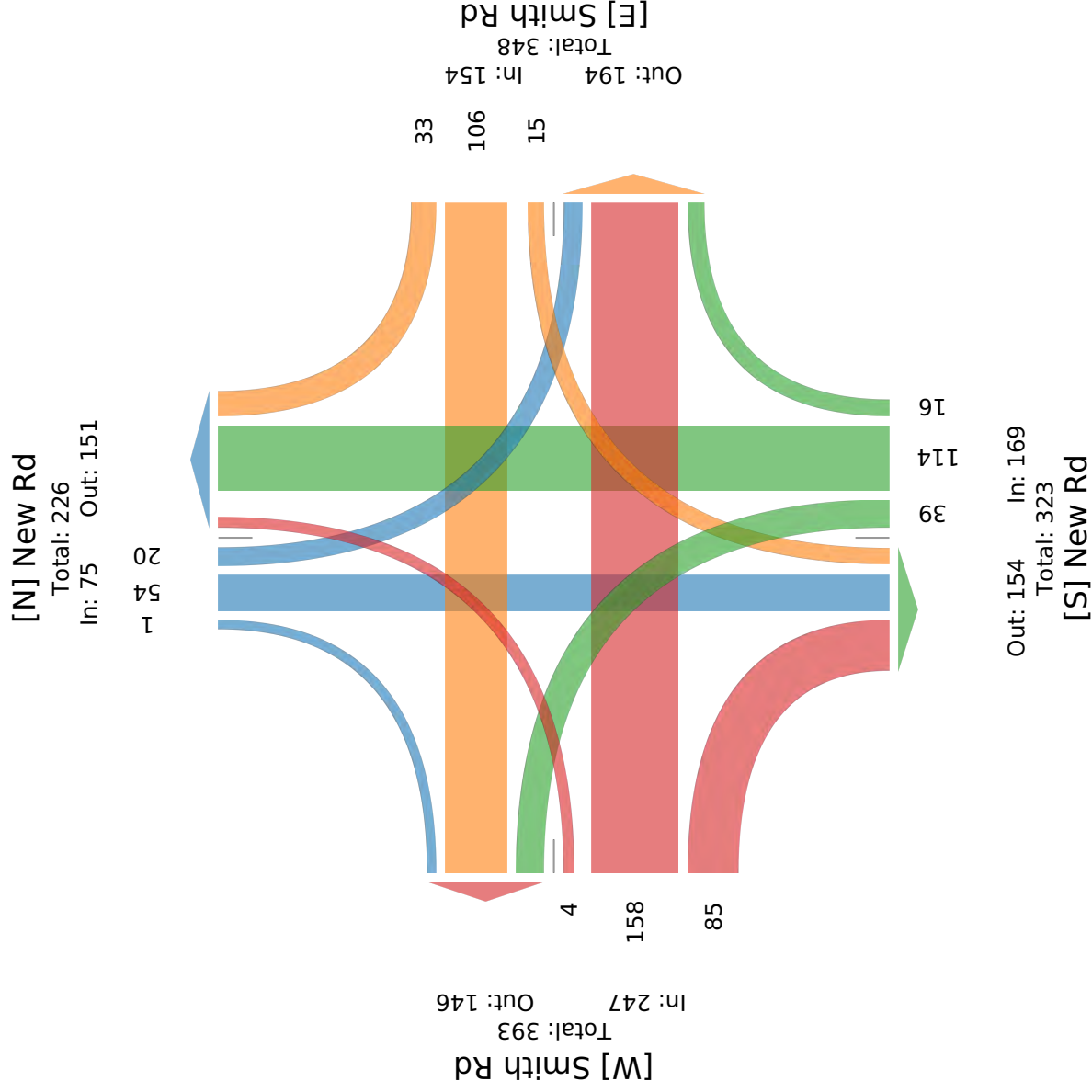
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)  
All Movements

ID: 921941, Location: 43.053465, -78.724563



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US







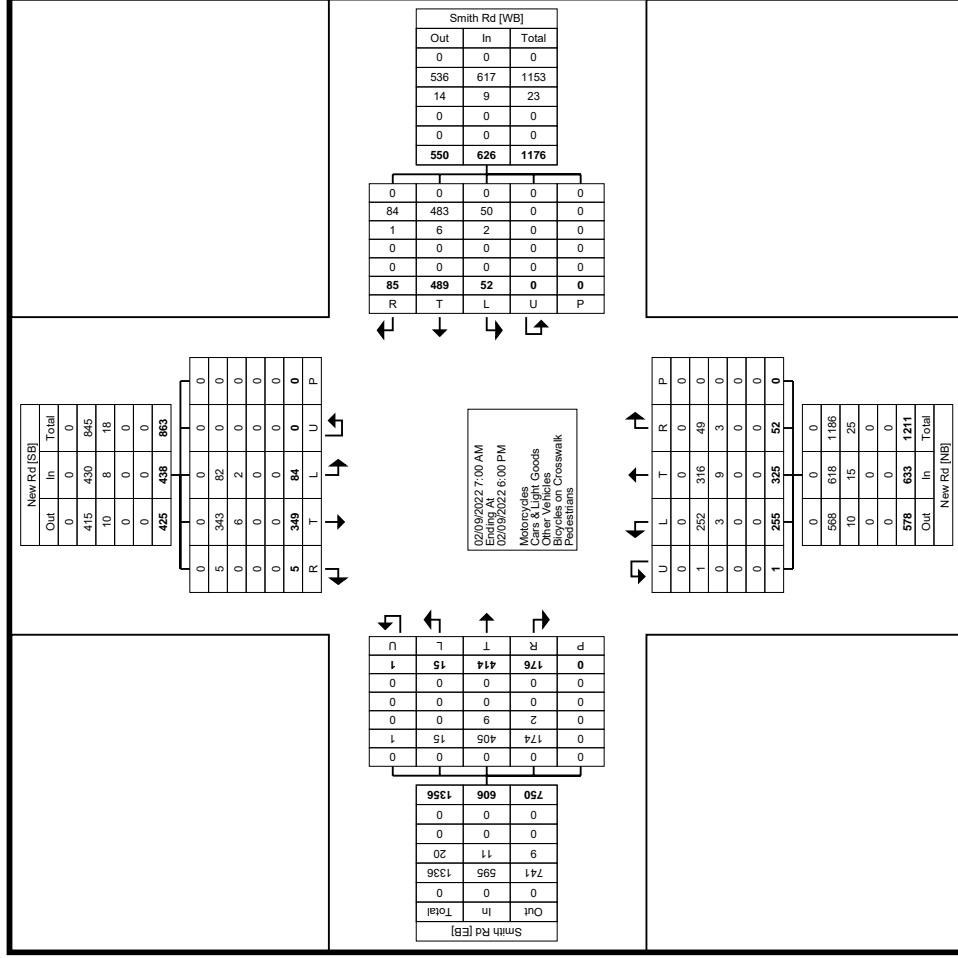




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkartz@tstdata.com

Count Name: New Rd/Smith Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 3



Turning Movement Data Plot

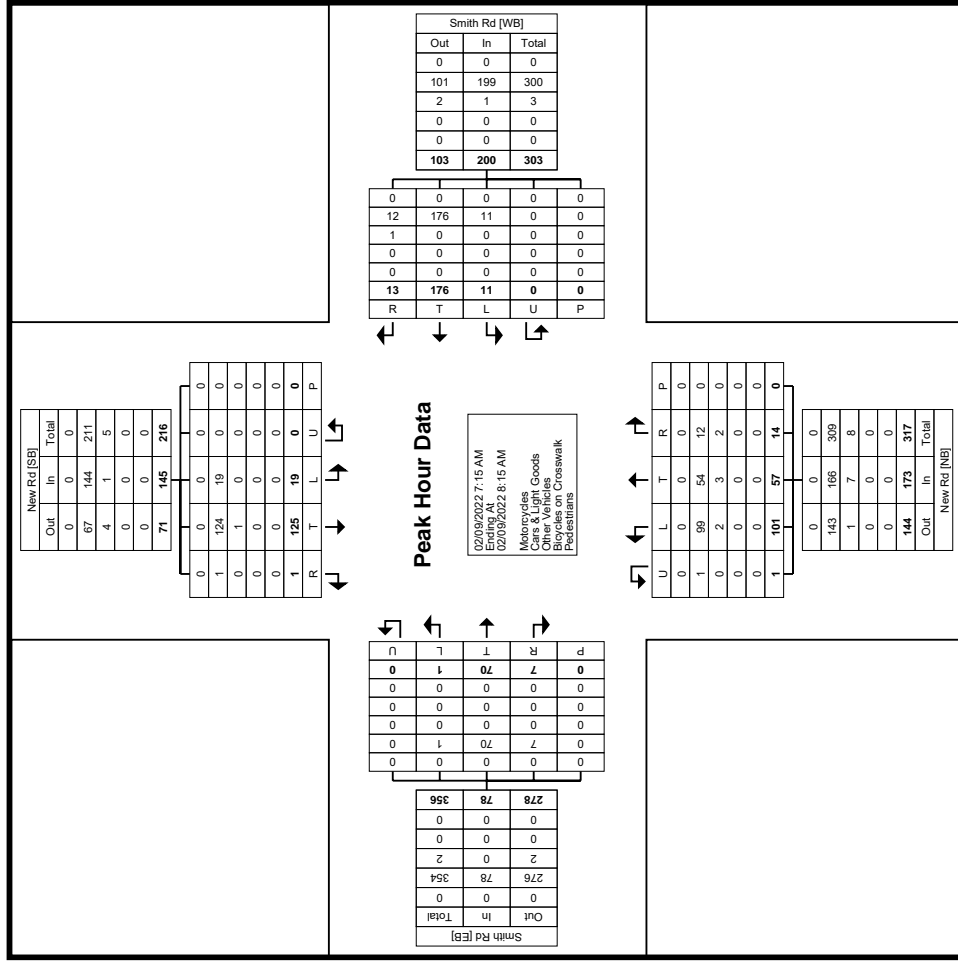




Tri-State Traffic Data: New York Division  
184 Baker Rd

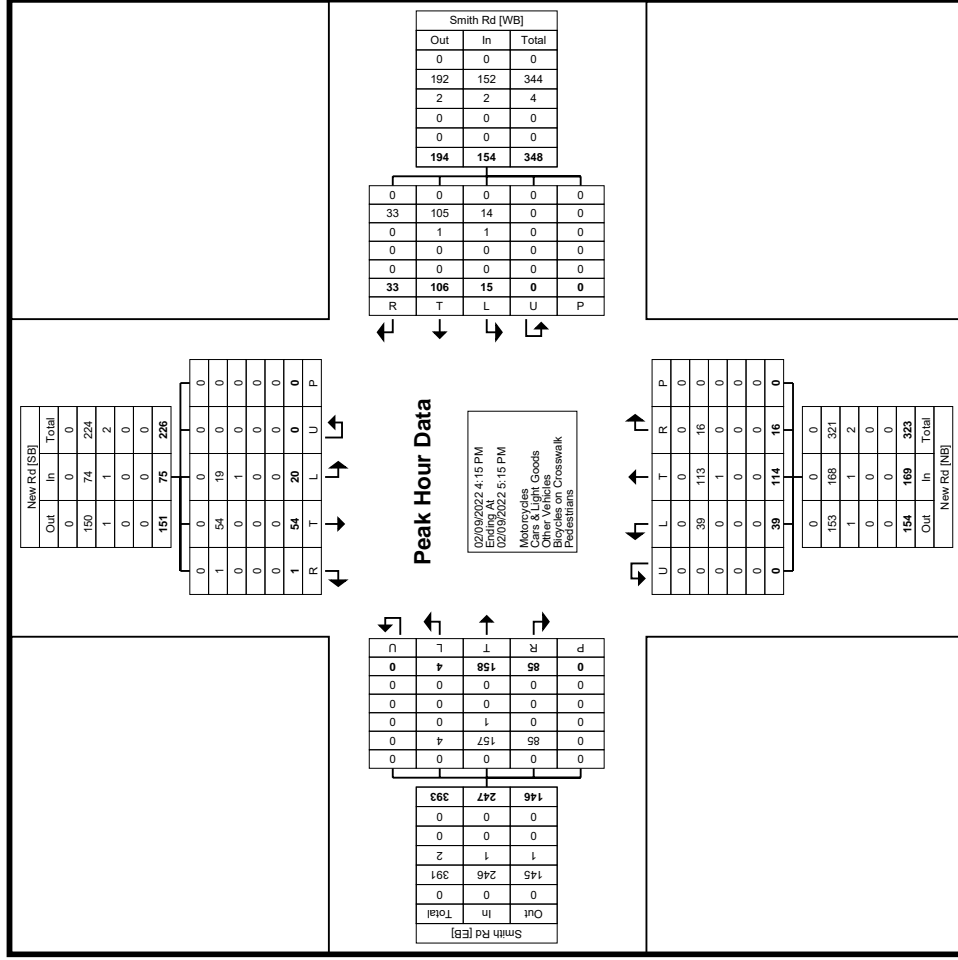
Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: New Rd/Smith Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 5



Turning Movement Peak Hour Data Plot (7:15 AM)





Turning Movement Peak Hour Data Plot (4:15 PM)

**NY 263/I-990 EB Off Ramp - TMC**

Wed Feb 9, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction Time	I-990 EB Off Ramp Eastbound					NY 263 Northbound					NY 263 Southbound					
	L	R	U	App	Ped*	L	T	U	App	Ped*	L	T	U	App	Ped*	Int
2022-02-09 7:00AM	108	2	0	110	0	0	28	0	28	0	0	74	0	74	0	212
7:15AM	144	8	0	152	0	0	37	0	37	0	0	88	0	88	0	277
7:30AM	133	8	0	141	0	0	47	0	47	0	0	98	0	98	0	286
7:45AM	113	14	0	127	0	0	38	0	38	0	0	106	0	106	0	271
Hourly Total	498	32	0	530	0	0	150	0	150	0	0	366	0	366	0	1046
8:00AM	116	6	0	122	0	0	40	0	40	0	0	75	0	75	0	237
8:15AM	114	5	0	119	0	0	42	0	42	0	0	78	0	78	0	239
8:30AM	120	4	0	124	0	0	33	0	33	0	0	79	0	79	0	236
8:45AM	116	6	0	122	0	0	41	0	41	0	0	58	0	58	0	221
Hourly Total	466	21	0	487	0	0	156	0	156	0	0	290	0	290	0	933
4:00PM	278	8	0	286	0	0	82	0	82	0	0	43	0	43	0	411
4:15PM	333	12	0	345	0	0	97	0	97	0	0	41	0	41	0	483
4:30PM	324	11	0	335	0	0	112	0	112	0	0	55	0	55	0	502
4:45PM	304	11	0	315	0	0	92	0	92	0	0	59	0	59	0	466
Hourly Total	1239	42	0	1281	0	0	383	0	383	0	0	198	0	198	0	1862
5:00PM	294	8	0	302	0	0	106	0	106	0	0	63	0	63	0	471
5:15PM	302	11	0	313	0	0	85	0	85	0	0	41	0	41	0	439
5:30PM	279	9	0	288	0	0	55	0	55	0	0	32	0	32	0	375
5:45PM	205	4	0	209	0	0	59	0	59	0	0	40	0	40	0	308
Hourly Total	1080	32	0	1112	0	0	305	0	305	0	0	176	0	176	0	1593
6:00PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	3283	127	0	3410	0	0	994	0	994	0	0	1030	0	1030	0	5434
<b>% Approach</b>	96.3%	3.7%	0%	-	-	0%	100%	0%	-	-	100%	0%	0%	-	-	-
<b>% Total</b>	60.4%	2.3%	0%	62.8%	-	0%	18.3%	0%	18.3%	-	0%	19.0%	0%	19.0%	-	-
<b>Motorcycles</b>	0	0	0	0	-	0	0	0	0	-	0	1	0	1	-	1
<b>% Motorcycles</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0.1%	0%	0.1%	-	0%
<b>Lights</b>	3181	122	0	3303	-	0	965	0	965	-	0	996	0	996	-	5264
<b>% Lights</b>	96.9%	96.1%	0%	96.9%	-	0%	97.1%	0%	97.1%	-	0%	96.7%	0%	96.7%	-	96.9%
<b>Heavy</b>	102	5	0	107	-	0	29	0	29	-	0	33	0	33	-	169
<b>% Heavy</b>	3.1%	3.9%	0%	3.1%	-	0%	2.9%	0%	2.9%	-	0%	3.2%	0%	3.2%	-	3.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

# NY 263/I-990 EB Off Ramp - TMC

Wed Feb 9, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

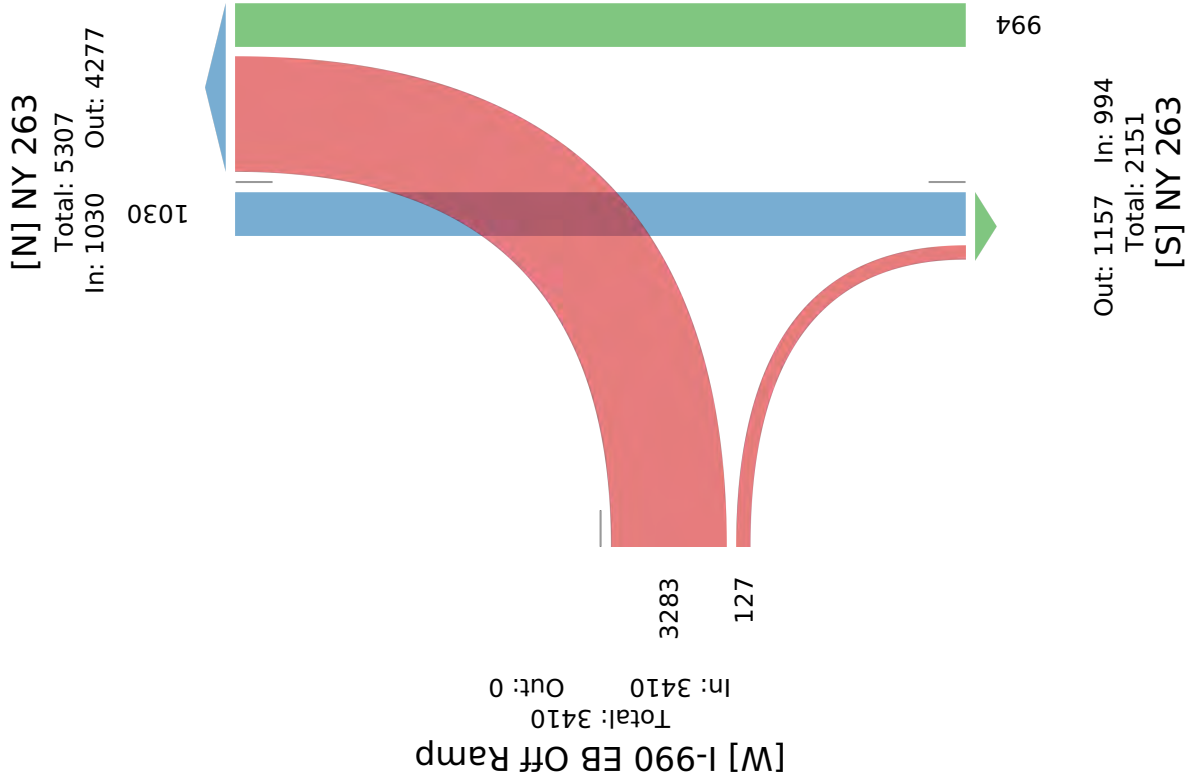
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US





**NY 263/I-990 EB Off Ramp - TMC**

Wed Feb 9, 2022

Forced Peak (7 AM - 8 AM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction Time	I-990 EB Off Ramp Eastbound					NY 263 Northbound					NY 263 Southbound					
	L	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2022-02-09 7:00AM	108	2	0	110	0	0	28	0	28	0	0	0	0	74	0	212
7:15AM	144	8	0	152	0	0	37	0	37	0	0	0	0	88	0	277
7:30AM	133	8	0	141	0	0	47	0	47	0	0	0	0	98	0	286
7:45AM	113	14	0	127	0	0	38	0	38	0	0	0	0	106	0	271
<b>Total</b>	498	32	0	530	0	0	150	0	150	0	0	0	0	366	0	1046
<b>% Approach</b>	94.0%	6.0%	0%	-	-	0%	100%	0%	-	-	0%	0%	0%	-	-	-
<b>% Total</b>	47.6%	3.1%	0%	50.7%	-	0%	14.3%	0%	14.3%	-	0%	0%	0%	35.0%	-	-
<b>PHF</b>	0.865	0.571	-	0.872	-	-	0.798	-	0.798	-	0.863	-	-	0.863	-	0.914
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
<b>Lights</b>	468	32	0	500	-	0	143	0	143	-	0	0	0	349	-	992
<b>% Lights</b>	94.0%	100%	0%	94.3%	-	0%	95.3%	0%	95.3%	-	0%	0%	0%	95.4%	-	94.8%
<b>Heavy</b>	30	0	0	30	-	0	7	0	7	-	0	0	0	17	-	54
<b>% Heavy</b>	6.0%	0%	0%	5.7%	-	0%	4.7%	0%	4.7%	-	0%	0%	0%	4.6%	-	5.2%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**NY 263/I-990 EB Off Ramp - TMC**

Wed Feb 9, 2022

Forced Peak (7 AM - 8 AM)

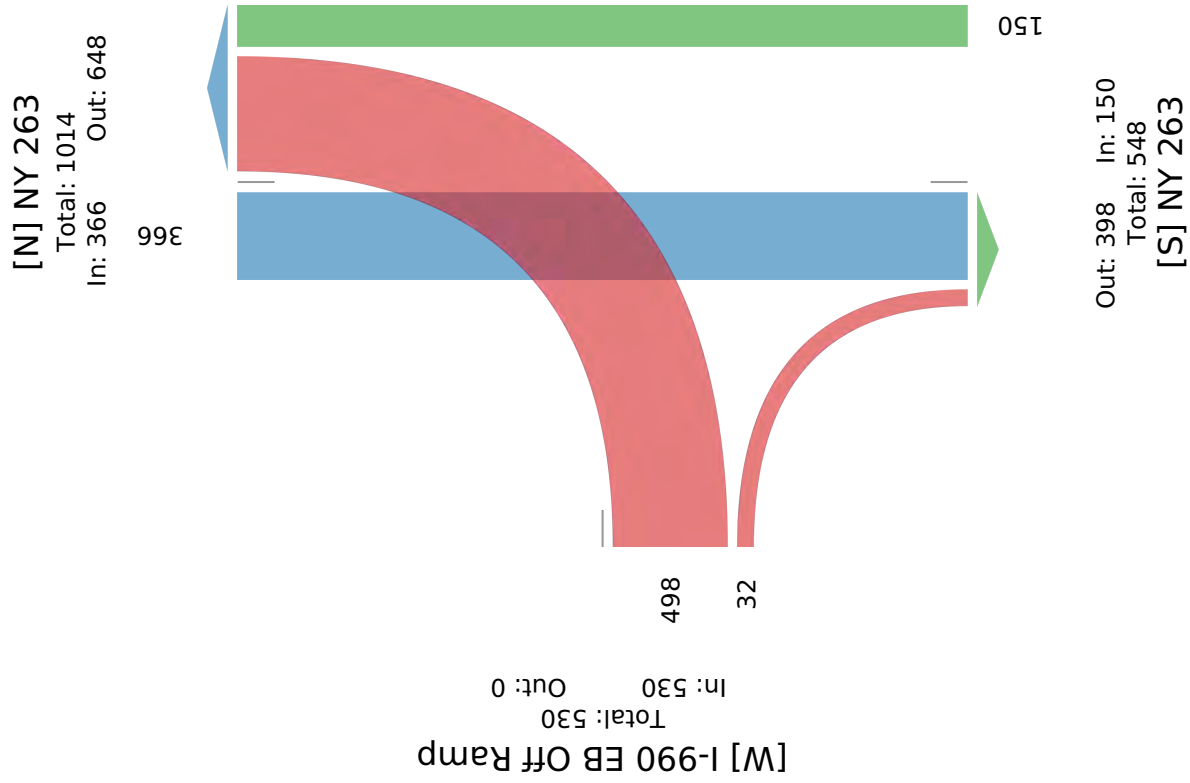
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US



**NY 263/I-990 EB Off Ramp - TMC**

Wed Feb 9, 2022

AM Peak (7:15 AM - 8:15 AM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction Time	I-990 EB Off Ramp Eastbound					NY 263 Northbound					NY 263 Southbound					
	L	R	U	App	Ped*	L	T	U	App	Ped*	T	R	U	App	Ped*	Int
2022-02-09 7:15AM	144	8	0	152	0	0	37	0	37	0	88	0	0	88	0	277
7:30AM	133	8	0	141	0	0	47	0	47	0	98	0	0	98	0	286
7:45AM	113	14	0	127	0	0	38	0	38	0	106	0	0	106	0	271
8:00AM	116	6	0	122	0	0	40	0	40	0	75	0	0	75	0	237
<b>Total</b>	506	36	0	542	0	0	162	0	162	0	367	0	0	367	0	1071
<b>% Approach</b>	93.4%	6.6%	0%	-	-	0%	100%	0%	-	-	100%	0%	0%	-	-	-
<b>% Total</b>	47.2%	3.4%	0%	50.6%	-	0%	15.1%	0%	15.1%	-	34.3%	0%	0%	34.3%	-	-
<b>PHF</b>	0.878	0.643	-	0.891	-	-	0.862	-	0.862	-	0.866	-	-	0.866	-	0.936
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
<b>Lights</b>	480	34	0	514	-	0	153	0	153	-	349	0	0	349	-	1016
<b>% Lights</b>	94.9%	94.4%	0%	94.8%	-	0%	94.4%	0%	94.4%	-	95.1%	0%	0%	95.1%	-	94.9%
<b>Heavy</b>	26	2	0	28	-	0	9	0	9	-	18	0	0	18	-	55
<b>% Heavy</b>	5.1%	5.6%	0%	5.2%	-	0%	5.6%	0%	5.6%	-	4.9%	0%	0%	4.9%	-	5.1%
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**NY 263/I-990 EB Off Ramp - TMC**

Wed Feb 9, 2022

AM Peak (7:15 AM - 8:15 AM)

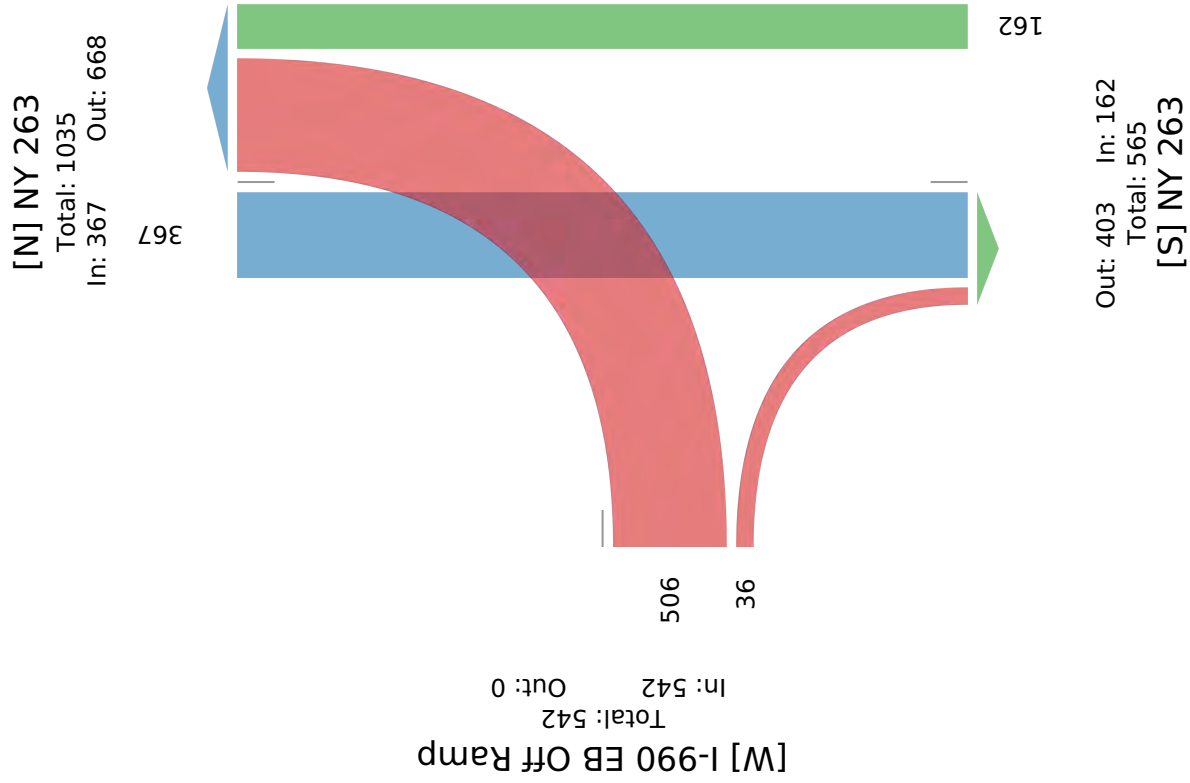
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US



**NY 263/I-990 EB Off Ramp - TMC**

Wed Feb 9, 2022

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction Time	I-990 EB Off Ramp Eastbound					NY 263 Northbound					NY 263 Southbound						
	L	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int	
2022-02-09 4:15PM	333	12	0	345	0	0	97	0	97	0	0	0	0	41	0	0	483
4:30PM	324	11	0	335	0	0	112	0	112	0	55	0	0	55	0	0	502
4:45PM	304	11	0	315	0	0	92	0	92	0	59	0	0	59	0	0	466
5:00PM	294	8	0	302	0	0	106	0	106	0	63	0	0	63	0	0	471
<b>Total</b>	1255	42	0	1297	0	0	407	0	407	0	218	0	0	218	0	0	1922
<b>% Approach</b>	96.8%	3.2%	0%	-	-	0%	100%	0%	-	-	100%	0%	0%	-	-	-	-
<b>% Total</b>	65.3%	2.2%	0%	67.5%	-	0%	21.2%	0%	21.2%	-	11.3%	0%	0%	11.3%	-	-	-
<b>PHF</b>	0.942	0.875	-	0.940	-	-	0.908	-	0.908	-	0.865	-	-	0.865	-	-	0.957
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-	0%
<b>Lights</b>	1236	42	0	1278	-	0	405	0	405	-	216	0	0	216	-	-	1899
<b>% Lights</b>	98.5%	100%	0%	98.5%	-	0%	99.5%	0%	99.5%	-	99.1%	0%	0%	99.1%	-	-	98.8%
<b>Heavy</b>	19	0	0	19	-	0	2	0	2	-	2	0	0	2	-	-	23
<b>% Heavy</b>	1.5%	0%	0%	1.5%	-	0%	0.5%	0%	0.5%	-	0.9%	0%	0%	0.9%	-	-	1.2%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**NY 263/I-990 EB Off Ramp - TMC**

Wed Feb 9, 2022

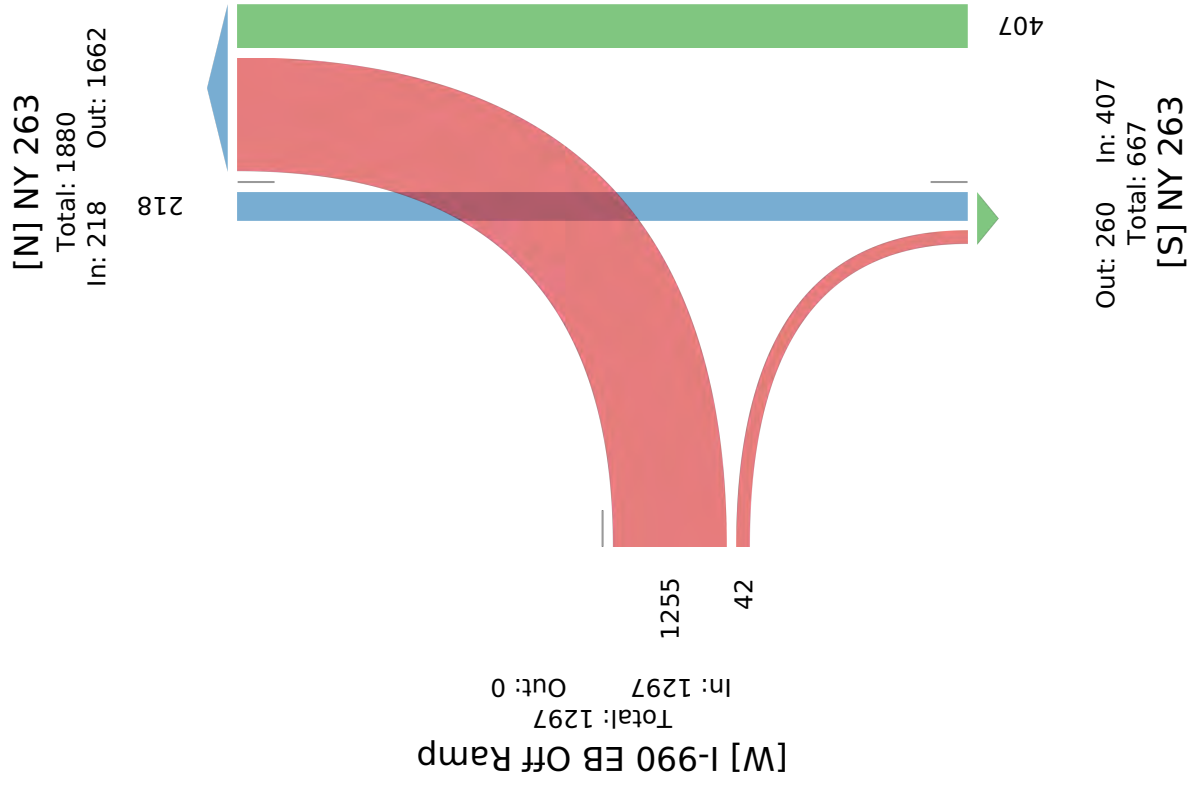
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)  
All Movements

ID: 921942, Location: 43.047104, -78.734154



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US



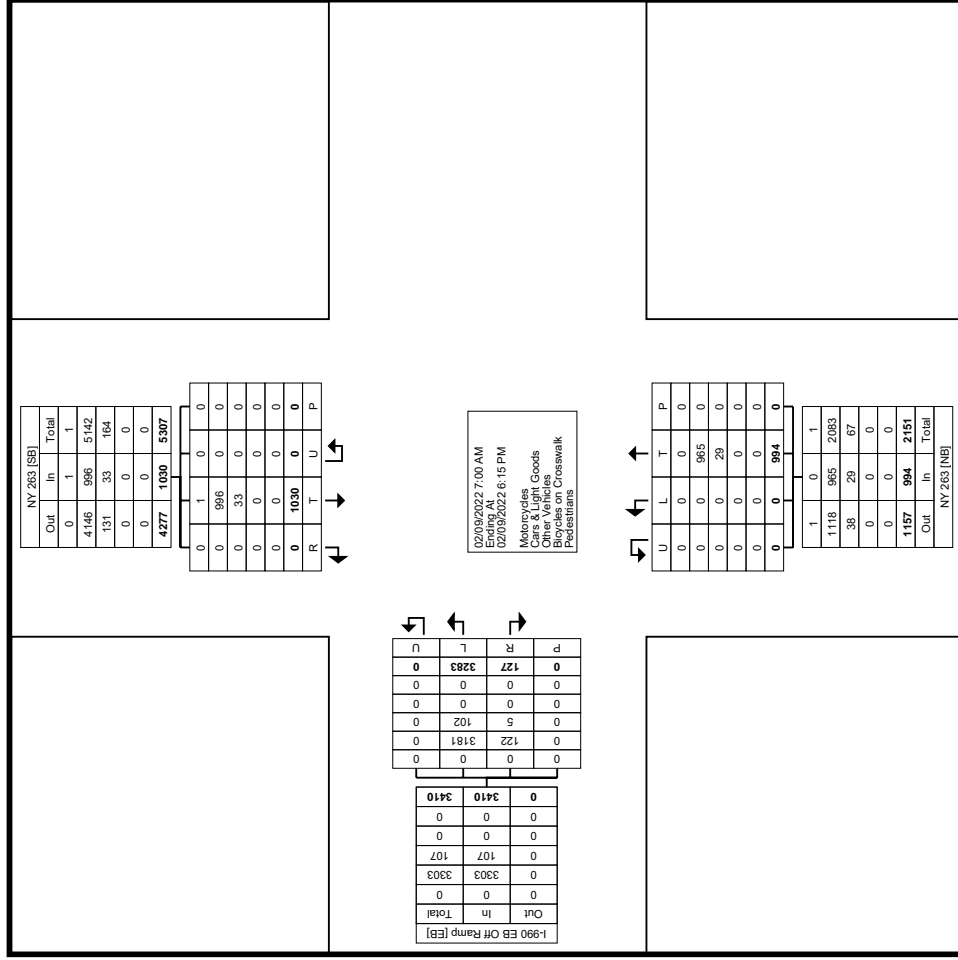




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkartz@tstdata.com

Count Name: NY 263/I-990 EB Off Ramp  
Site Code:  
Start Date: 02/09/2022  
Page No: 2



Turning Movement Data Plot











**NY 263/I-990 WB On Ramp - TMC**

Wed Feb 9, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921943, Location: 43.047829, -78.733454



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	I-990 WB On Ramp						NY 263						NY 263					
	Eastbound			Southbound			Northbound			Southbound			Northbound			Southbound		
Time	L	R	U	App	Ped*		L	T	U	App	Ped*		L	T	U	App	Ped*	Int
2022-02-09 7:00AM	85	0	0	85	0		2	127	0	129	0		76	325	0	401	0	615
7:15AM	143	0	0	143	0		9	172	0	181	0		84	356	0	440	0	764
7:30AM	130	0	0	130	0		10	167	0	177	0		104	371	0	475	0	782
7:45AM	130	0	0	130	0		7	172	0	179	0		100	351	0	451	0	760
Hourly Total	488	0	0	488	0		28	638	0	666	0		364	1403	0	1767	0	2921
8:00AM	103	0	0	103	0		7	133	0	140	1		81	256	0	337	0	580
8:15AM	140	0	0	140	0		8	147	0	155	0		75	307	0	382	0	677
8:30AM	159	0	0	159	0		9	144	0	153	0		70	274	0	344	0	656
8:45AM	134	0	1	135	0		7	152	1	160	0		64	206	0	270	0	565
Hourly Total	536	0	1	537	0		31	576	1	608	1		290	1043	0	1333	0	2478
9:00AM	0	0	0	0	0		0	0	0	0	0		1	0	0	1	0	1
Hourly Total	0	0	0	0	0		0	0	0	0	0		1	0	0	1	0	1
4:00PM	0	0	0	0	0		11	350	0	361	0		39	151	0	190	0	551
4:15PM	0	0	0	0	0		5	383	0	388	0		42	156	0	198	0	586
4:30PM	0	0	0	0	0		11	426	0	437	0		54	163	0	217	0	654
4:45PM	0	0	0	0	0		8	381	0	389	0		60	167	0	227	0	616
Hourly Total	0	0	0	0	0		35	1540	0	1575	0		195	637	0	832	0	2407
5:00PM	0	0	0	0	0		5	388	0	393	0		68	170	0	238	0	631
5:15PM	0	0	0	0	0		3	396	0	399	0		41	174	0	215	0	614
5:30PM	0	0	0	0	0		6	341	0	347	0		24	168	0	192	0	539
5:45PM	0	0	0	0	0		3	259	0	262	0		40	136	0	176	0	438
Hourly Total	0	0	0	0	0		17	1384	0	1401	0		173	648	0	821	0	2222
6:00PM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0
Hourly Total	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0
<b>Total</b>	1024	0	1	1025	0		111	4138	1	4250	1		1023	3731	0	4754	0	10029
<b>% Approach</b>	99.9%	0%	0.1%	-	-		2.6%	97.4%	0%	-	-		21.5%	78.5%	0%	-	-	-
<b>% Total</b>	10.2%	0%	0%	10.2%	-		1.1%	41.3%	0%	42.4%	-		10.2%	37.2%	0%	47.4%	-	-
<b>Motorcycles</b>	4	0	0	4	-		0	0	0	0	-		1	0	0	1	-	5
<b>% Motorcycles</b>	0.4%	0%	0%	0.4%	-		0%	0%	0%	0%	-		0.1%	0%	0%	0%	-	0%
<b>Lights</b>	959	0	1	960	-		109	4024	1	4134	-		988	3621	0	4609	-	9703
<b>% Lights</b>	93.7%	0%	100%	93.7%	-		98.2%	97.2%	100%	97.3%	-		96.6%	97.1%	0%	96.9%	-	96.7%
<b>Heavy</b>	61	0	0	61	-		2	114	0	116	-		34	110	0	144	-	321
<b>% Heavy</b>	6.0%	0%	0%	6.0%	-		1.8%	2.8%	0%	2.7%	-		3.3%	2.9%	0%	3.0%	-	3.2%
Pedestrians	-	-	-	-	0		-	-	-	-	1		-	-	-	-	-	0
% Pedestrians	-	-	-	-	-		-	-	-	-	100%		-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0		-	-	-	-	0		-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-		-	-	-	-	0%		-	-	-	-	-	-

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



**NY 263/I-990 WB On Ramp - TMC**

Wed Feb 9, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

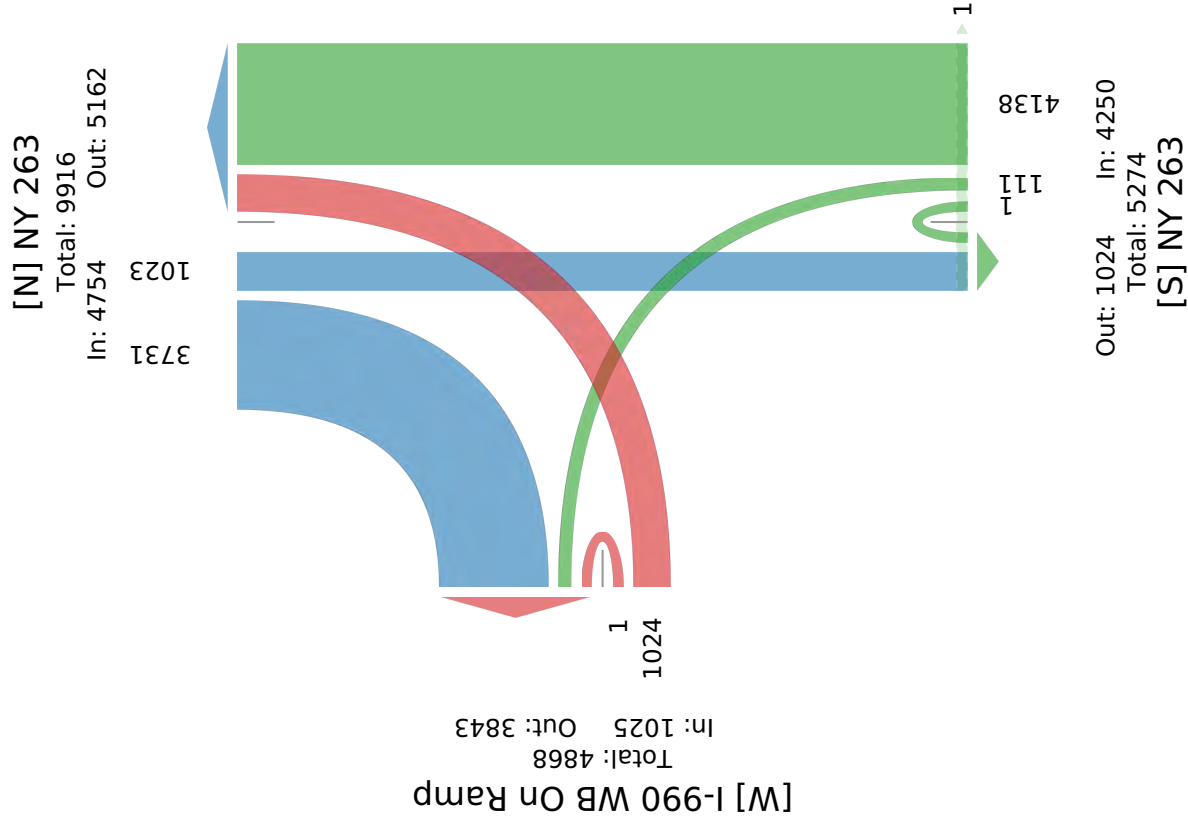
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921943, Location: 43.047829, -78.733454



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US



**NY 263/I-990 WB On Ramp - TMC**

Wed Feb 9, 2022

AM Peak (7 AM - 8 AM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921943, Location: 43.047829, -78.733454



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction Time	I-990 WB On Ramp Eastbound				NY 263 Northbound				NY 263 Southbound				Int			
	L	R	U	App	Ped*	L	T	U	App	Ped*	L	R		U	App	Ped*
2022-02-09 7:00AM	85	0	0	85	0	2	127	0	129	0	76	325	0	401	0	615
7:15AM	143	0	0	143	0	9	172	0	181	0	84	356	0	440	0	764
7:30AM	130	0	0	130	0	10	167	0	177	0	104	371	0	475	0	782
7:45AM	130	0	0	130	0	7	172	0	179	0	100	351	0	451	0	760
<b>Total</b>	488	0	0	488	0	28	638	0	666	0	364	1403	0	1767	0	2921
<b>% Approach</b>	100%	0%	0%	-	-	4.2%	95.8%	0%	-	-	20.6%	79.4%	0%	-	-	-
<b>% Total</b>	16.7%	0%	0%	16.7%	-	1.0%	21.8%	0%	22.8%	-	12.5%	48.0%	0%	60.5%	-	-
<b>PHF</b>	0.853	-	-	0.853	-	0.700	0.927	-	0.920	-	0.875	0.945	-	0.930	-	0.934
<b>Motorcycles</b>	2	0	0	2	-	0	0	0	0	-	0	0	0	0	-	2
<b>% Motorcycles</b>	0.4%	0%	0%	0.4%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0.1%
<b>Lights</b>	457	0	0	457	-	28	602	0	630	-	346	1364	0	1710	-	2797
<b>% Lights</b>	93.6%	0%	0%	93.6%	-	100%	94.4%	0%	94.6%	-	95.1%	97.2%	0%	96.8%	-	95.8%
<b>Heavy</b>	29	0	0	29	-	0	36	0	36	-	18	39	0	57	-	122
<b>% Heavy</b>	5.9%	0%	0%	5.9%	-	0%	5.6%	0%	5.4%	-	4.9%	2.8%	0%	3.2%	-	4.2%
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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



**NY 263/I-990 WB On Ramp - TMC**

Wed Feb 9, 2022

AM Peak (7 AM - 8 AM) - Overall Peak Hour

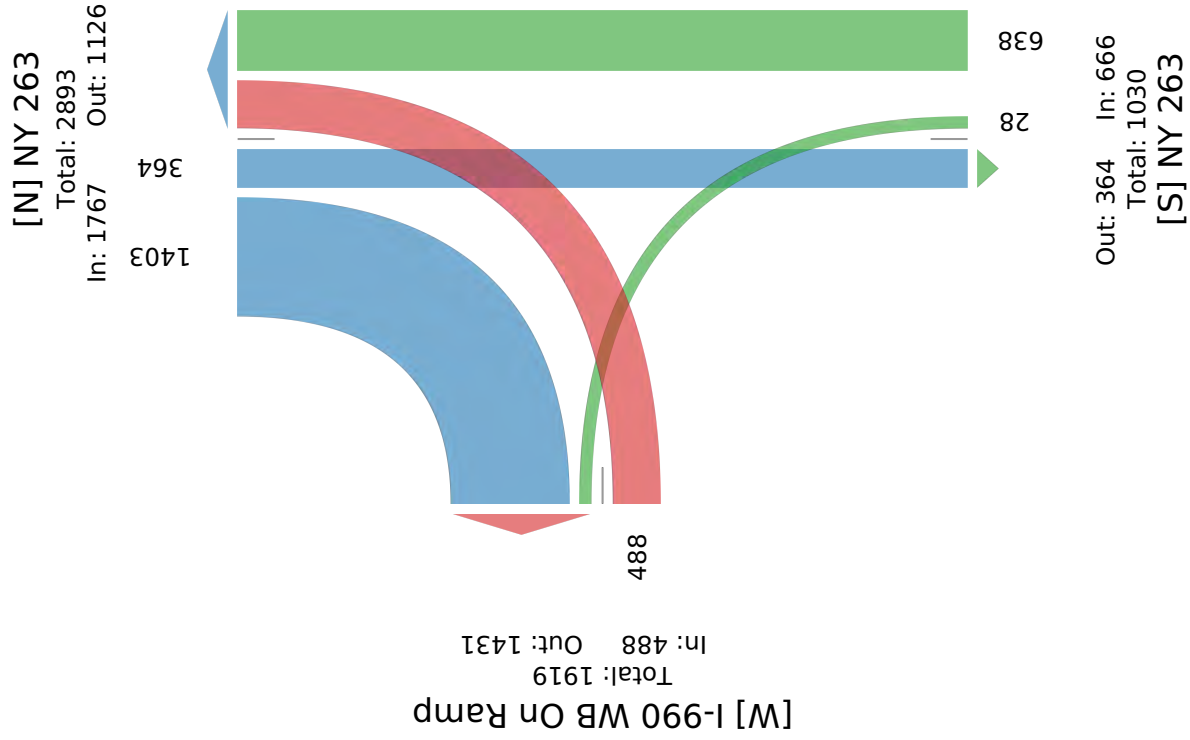
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921943, Location: 43.047829, -78.733454



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US



**NY 263/I-990 WB On Ramp - TMC**

Wed Feb 9, 2022

Forced Peak (4:15 PM - 5:15 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921943, Location: 43.047829, -78.733454

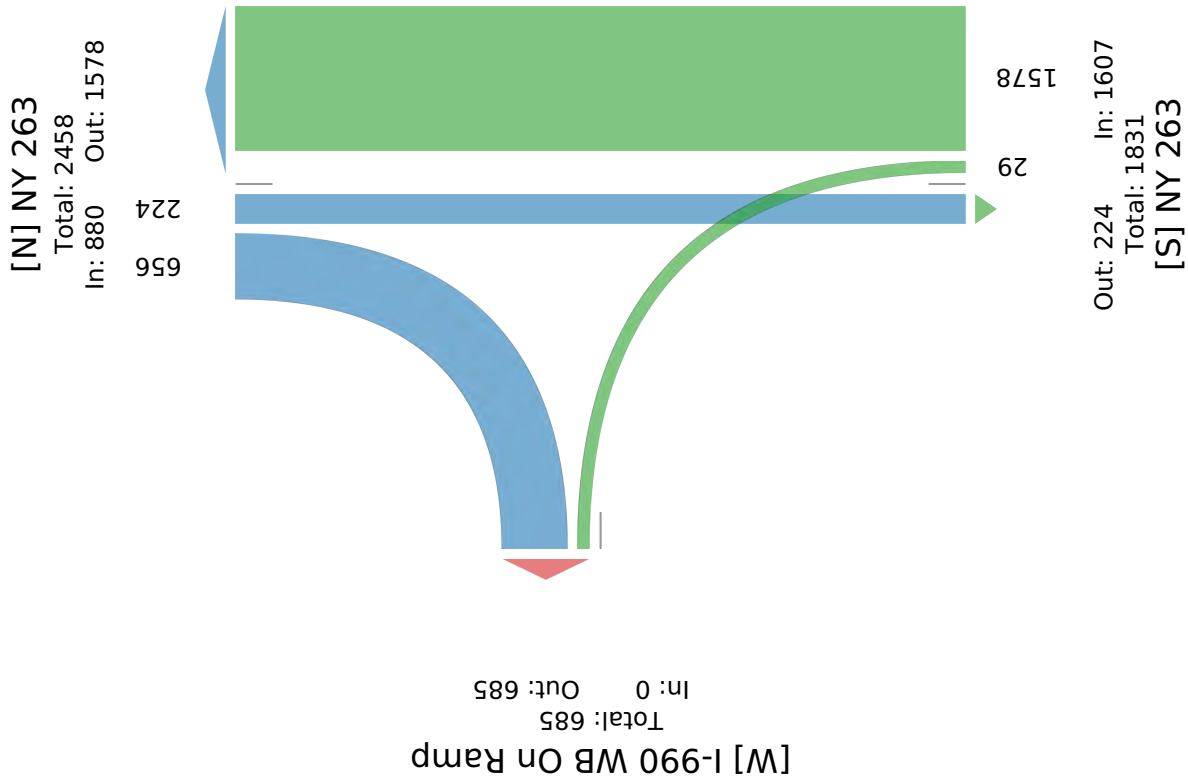


Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction Time	I-990 WB On Ramp Eastbound				NY 263 Northbound				NY 263 Southbound							
	L	R	U	App	Ped*	L	T	U	App	Ped*	T	R	U	App	Ped*	Int
2022-02-09 4:15PM	0	0	0	0	0	5	383	0	388	0	42	156	0	198	0	586
4:30PM	0	0	0	0	0	11	426	0	437	0	54	163	0	217	0	654
4:45PM	0	0	0	0	0	8	381	0	389	0	60	167	0	227	0	616
5:00PM	0	0	0	0	0	5	388	0	393	0	68	170	0	238	0	631
<b>Total</b>	0	0	0	0	0	29	1578	0	1607	0	224	656	0	880	0	2487
<b>% Approach</b>	0%	0%	0%	0%	-	1.8%	98.2%	0%	-	-	25.5%	74.5%	0%	-	-	-
<b>% Total</b>	0%	0%	0%	0%	-	1.2%	63.4%	0%	64.6%	-	9.0%	26.4%	0%	35.4%	-	-
<b>PHF</b>	-	-	-	-	-	0.659	0.926	-	0.919	-	0.824	0.965	-	0.924	-	0.951
<b>Motorcycles</b>	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
<b>% Motorcycles</b>	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
<b>Lights</b>	0	0	0	0	-	29	1557	0	1586	-	222	632	0	854	-	2440
<b>% Lights</b>	0%	0%	0%	0%	-	100%	98.7%	0%	98.7%	-	99.1%	96.3%	0%	97.0%	-	98.1%
<b>Heavy</b>	0	0	0	0	-	0	21	0	21	-	2	24	0	26	-	47
<b>% Heavy</b>	0%	0%	0%	0%	-	0%	1.3%	0%	1.3%	-	0.9%	3.7%	0%	3.0%	-	1.9%
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**NY 263/I-990 WB On Ramp - TMC**  
 Wed Feb 9, 2022  
 Forced Peak (4:15 PM - 5:15 PM)  
 All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)  
 All Movements  
 ID: 921943, Location: 43.047829, -78.733454



**NY 263/I-990 WB On Ramp - TMC**

Wed Feb 9, 2022

PM Peak (4:30 PM - 5:30 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 921943, Location: 43.047829, -78.733454



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction Time	I-990 WB On Ramp Eastbound				NY 263 Northbound				NY 263 Southbound							
	L	R	U	App	Ped*	L	T	U	App	Ped*	T	R	U	App	Ped*	Int
2022-02-09 4:30PM	0	0	0	0	0	11	426	0	437	0	54	163	0	217	0	654
4:45PM	0	0	0	0	0	8	381	0	389	0	60	167	0	227	0	616
5:00PM	0	0	0	0	0	5	388	0	393	0	68	170	0	238	0	631
5:15PM	0	0	0	0	0	3	396	0	399	0	41	174	0	215	0	614
<b>Total</b>	0	0	0	0	0	27	1591	0	1618	0	223	674	0	897	0	2515
<b>% Approach</b>	0%	0%	0%	-	-	1.7%	98.3%	0%	-	-	24.9%	75.1%	0%	-	-	-
<b>% Total</b>	0%	0%	0%	0%	0%	1.1%	63.3%	0%	64.3%	-	8.9%	26.8%	0%	35.7%	-	-
<b>PHF</b>	-	-	-	-	-	0.614	0.934	-	0.926	-	0.820	0.968	-	0.942	-	0.961
<b>Motorcycles</b>	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
<b>% Motorcycles</b>	0%	0%	0%	-	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
<b>Lights</b>	0	0	0	0	-	27	1575	0	1602	-	221	649	0	870	-	2472
<b>% Lights</b>	0%	0%	0%	-	-	100%	99.0%	0%	99.0%	-	99.1%	96.3%	0%	97.0%	-	98.3%
<b>Heavy</b>	0	0	0	0	-	0	16	0	16	-	2	25	0	27	-	43
<b>% Heavy</b>	0%	0%	0%	-	-	0%	1.0%	0%	1.0%	-	0.9%	3.7%	0%	3.0%	-	1.7%
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**NY 263/I-990 WB On Ramp - TMC**

Wed Feb 9, 2022

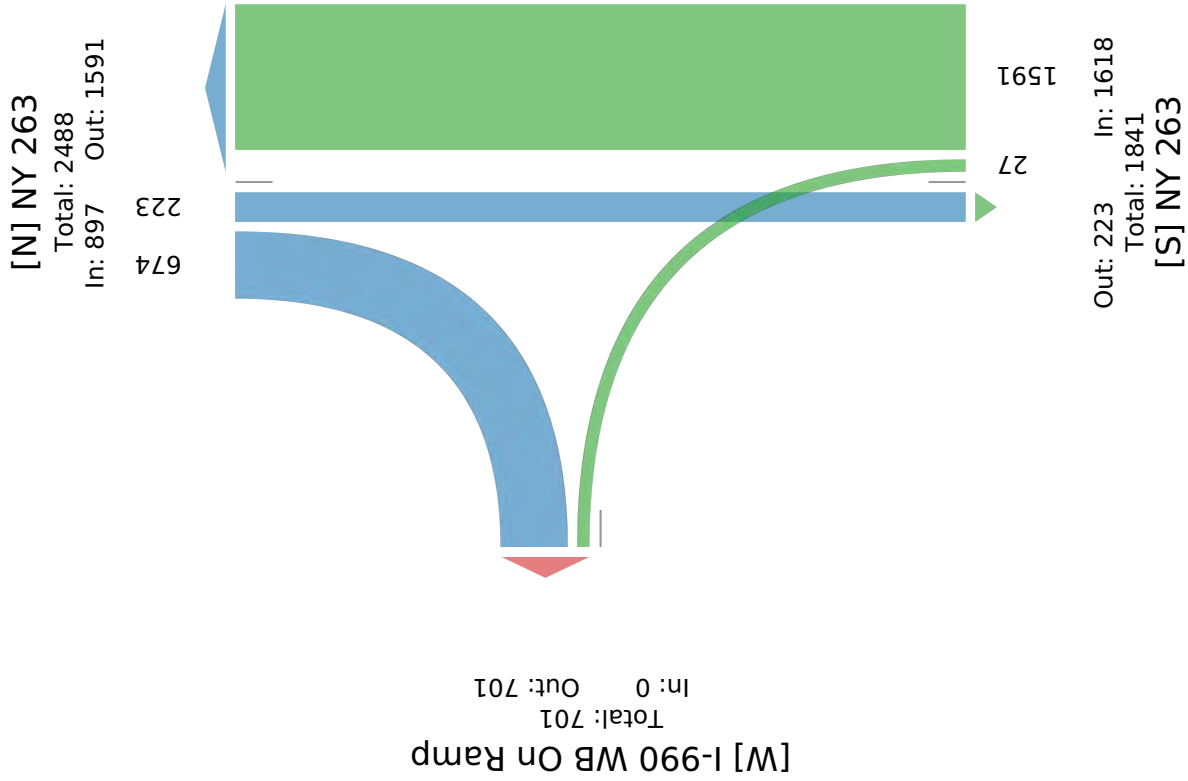
PM Peak (4:30 PM - 5:30 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)  
All Movements

ID: 921943, Location: 43.047829, -78.733454



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US





Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/I-990 WB On Ramp  
Site Code:  
Start Date: 02/09/2022  
Page No: 1

### Turning Movement Data

Start Time	NY 263 Southbound						NY 263 Northbound						I-990 WB On Ramp Eastbound					
	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Int. Total		
7:00 AM	325	76	0	0	401	127	2	0	0	129	0	85	0	0	85	615		
7:15 AM	356	84	0	0	440	172	9	0	0	181	0	143	0	0	143	764		
7:30 AM	371	104	0	0	475	167	10	0	0	177	0	130	0	0	130	782		
7:45 AM	351	100	0	0	451	172	7	0	0	179	0	130	0	0	130	760		
Hourly Total	1403	364	0	0	1767	638	28	0	0	666	0	488	0	0	488	2921		
8:00 AM	256	81	0	0	337	133	7	0	1	140	0	103	0	0	103	580		
8:15 AM	307	75	0	0	382	147	8	0	0	155	0	140	0	0	140	677		
8:30 AM	274	70	0	0	344	144	9	0	0	153	0	159	0	0	159	656		
8:45 AM	206	64	0	0	270	152	7	1	0	160	0	134	1	0	135	565		
Hourly Total	1043	290	0	0	1333	576	31	1	1	608	0	536	1	0	537	2478		
9:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
*** BREAK ***																		
Hourly Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
4:00 PM	151	39	0	0	190	350	11	0	0	361	0	0	0	0	0	551		
4:15 PM	156	42	0	0	198	383	5	0	0	388	0	0	0	0	0	586		
4:30 PM	163	54	0	0	217	426	11	0	0	437	0	0	0	0	0	654		
4:45 PM	167	60	0	0	227	381	8	0	0	389	0	0	0	0	0	616		
Hourly Total	637	195	0	0	832	1540	35	0	0	1575	0	0	0	0	0	2407		
5:00 PM	170	68	0	0	238	388	5	0	0	393	0	0	0	0	0	631		
5:15 PM	174	41	0	0	215	396	3	0	0	399	0	0	0	0	0	614		
5:30 PM	168	24	0	0	192	341	6	0	0	347	0	0	0	0	0	539		
5:45 PM	136	40	0	0	176	259	3	0	0	262	0	0	0	0	0	438		
Hourly Total	648	173	0	0	821	1384	17	0	0	1401	0	0	0	0	0	2222		
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grand Total	3731	1023	0	0	4754	4138	111	1	1	4250	0	1024	1	0	1025	10029		
Approach %	78.5	21.5	0.0	-	-	97.4	2.6	0.0	-	-	0.0	99.9	0.1	-	-	-		
Total %	37.2	10.2	0.0	-	47.4	41.3	1.1	0.0	-	42.4	0.0	10.2	0.0	-	10.2	-		
Motorcycles	0	1	0	-	1	0	0	0	-	0	0	4	0	-	4	5		
% Motorcycles	0.0	0.1	-	-	0.0	0.0	0.0	-	-	0.0	-	0.4	0.0	-	0.4	0.0		
Cars & Light Goods	3621	988	0	-	4609	4024	109	1	-	4134	0	959	1	-	960	9703		
% Cars & Light Goods	97.1	96.6	-	-	96.9	97.2	98.2	100.0	-	97.3	-	93.7	100.0	-	93.7	96.7		
Other Vehicles	110	34	0	-	144	114	2	0	-	116	0	61	0	-	61	321		
% Other Vehicles	2.9	3.3	-	-	3.0	2.8	1.8	0.0	-	2.7	-	6.0	0.0	-	6.0	3.2		
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-		
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-		
Pedestrians	-	-	-	0	-	-	-	1	-	-	-	-	-	0	-	-		

%	Pedestrians																
---	-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

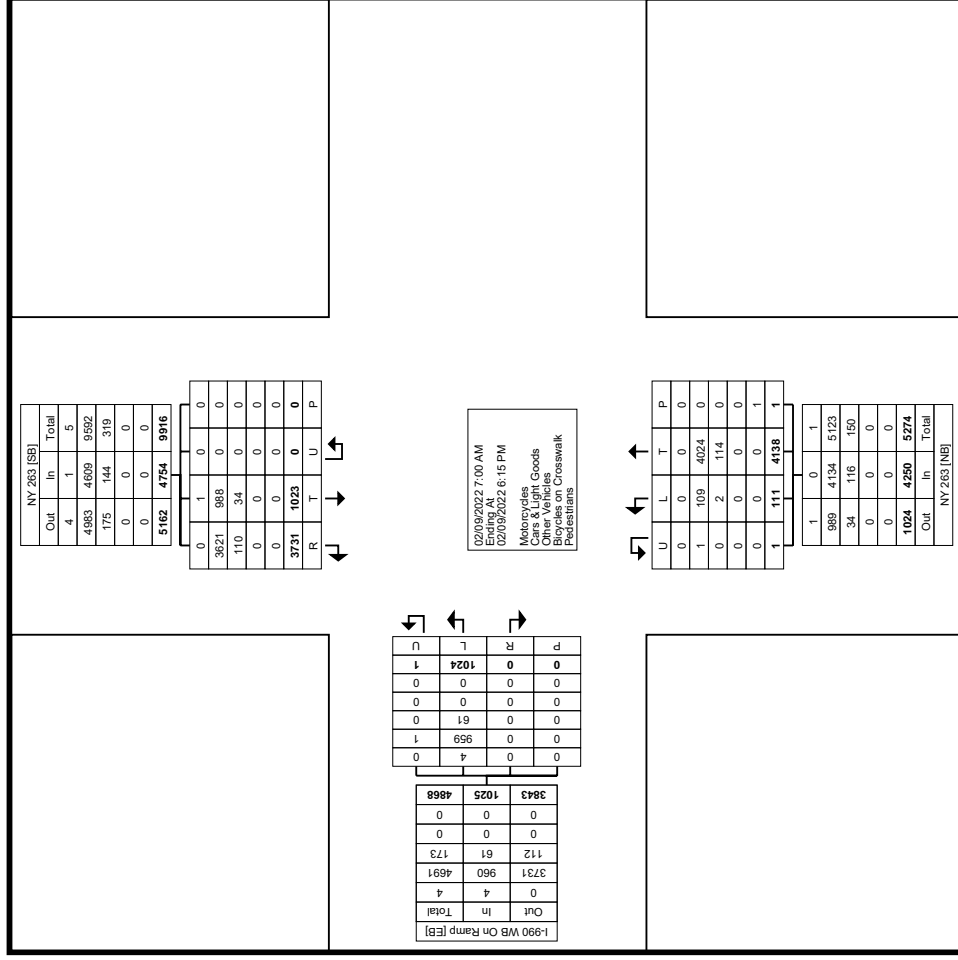
100.0



Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/I-990 WB On Ramp  
Site Code:  
Start Date: 02/09/2022  
Page No: 3



Turning Movement Data Plot



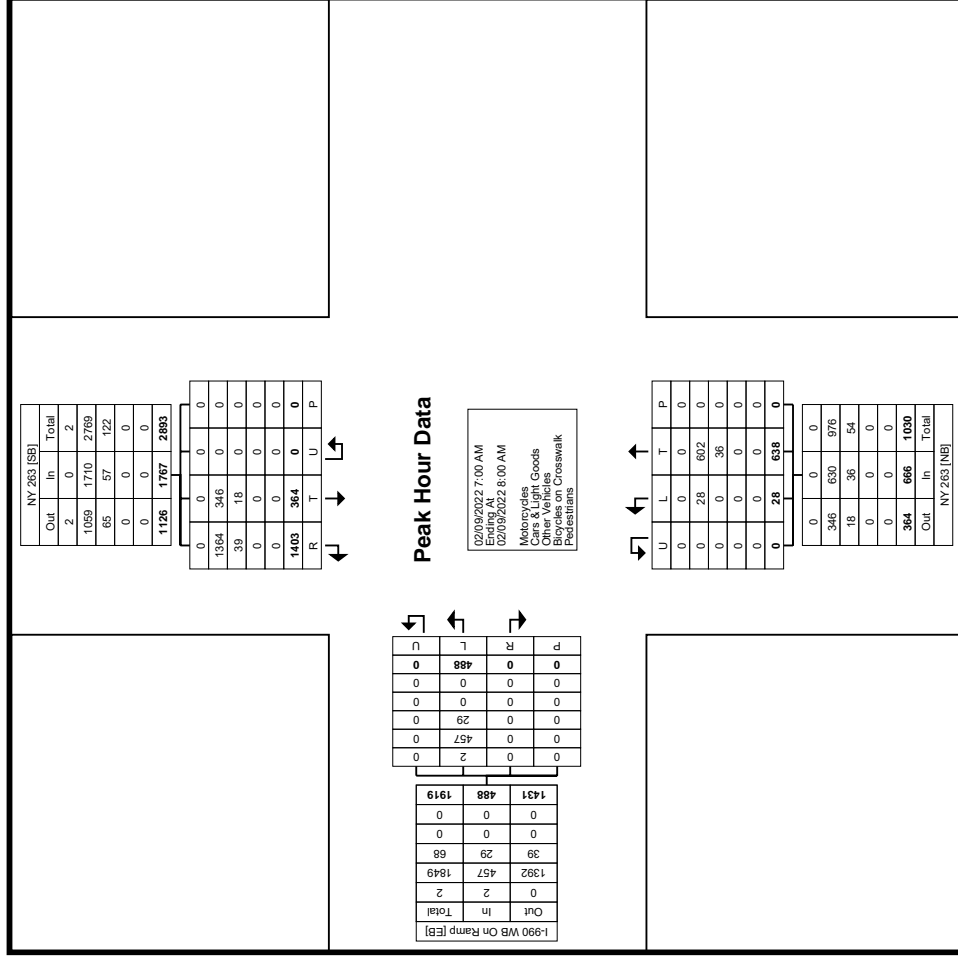




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/I-990 WB On Ramp  
Site Code:  
Start Date: 02/09/2022  
Page No: 5



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

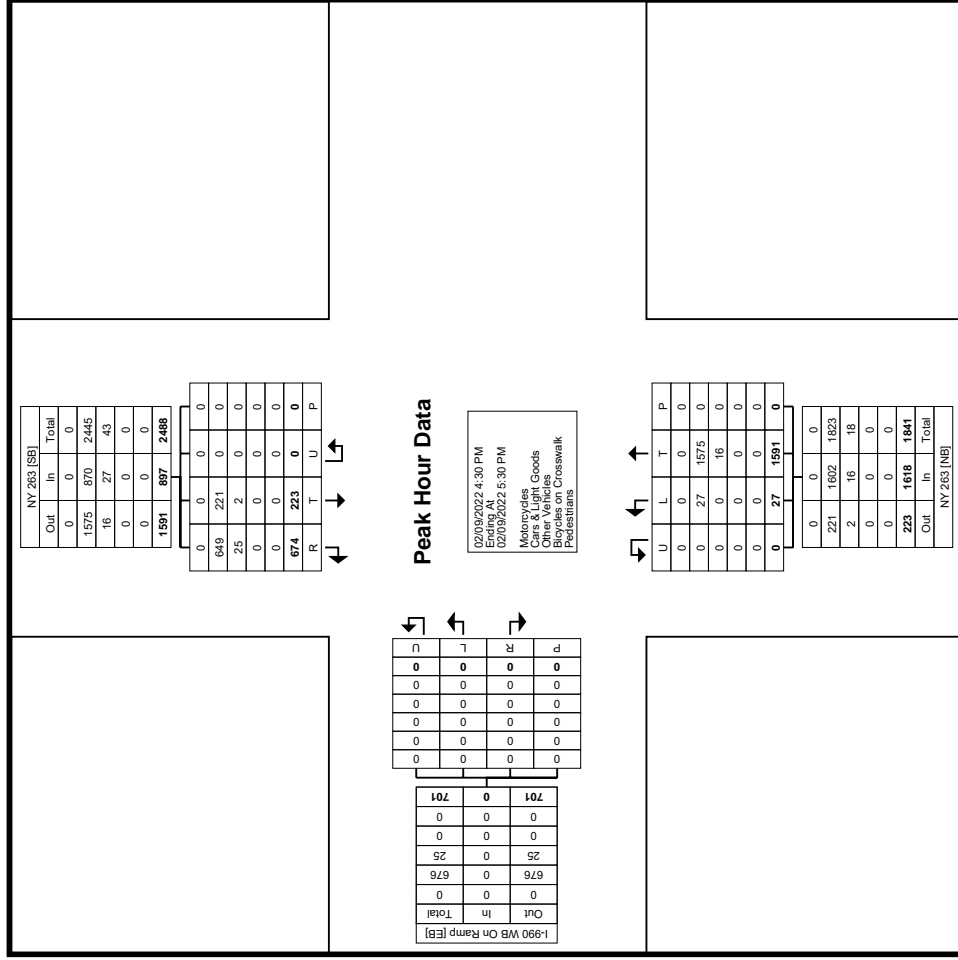




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/I-990 WB On Ramp  
Site Code:  
Start Date: 02/09/2022  
Page No: 7



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

**NY 263/New Rd - TMC**

Wed Feb 9, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 922045, Location: 43.056307, -78.724502



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	NY 263 Eastbound						NY 263 Westbound						New Rd Northbound						New Rd Southbound														
	L	T	R	U	RR	App	L	T	R	U	RR	App	L	T	R	U	RR	App	L	T	R	U	RR	App	L	T	R	U	RR	App			
2022-02-09 7:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:00PM	40	272	0	0	2	314	4	138	1	0	0	143	0	22	19	0	1	42	0	1	14	13	0	5	33	0	14	13	0	5	33		
4:15PM	55	283	1	0	2	341	6	162	1	0	1	170	1	22	15	0	4	42	0	1	6	9	0	8	24	0	1	6	9	0	8		
4:30PM	53	321	0	0	0	374	13	169	2	0	0	184	0	16	17	0	1	34	0	3	7	16	0	4	30	0	3	7	16	0	4		
4:45PM	46	304	0	0	0	350	11	154	1	0	0	166	2	16	11	0	2	31	0	4	4	18	0	13	39	0	4	4	18	0	13		
Hourly Total	194	1180	1	0	4	1379	34	623	5	0	1	663	3	76	62	0	8	149	0	9	31	56	0	30	126	0	9	31	56	0	30		
5:00PM	59	296	0	0	0	355	10	161	3	0	0	174	3	22	12	0	1	38	0	1	11	16	0	9	37	0	1	11	16	0	9		
5:15PM	43	281	0	0	0	324	14	183	2	0	0	199	0	26	12	0	1	39	0	0	10	17	0	4	31	0	0	10	17	0	4		
5:30PM	36	218	3	0	0	257	11	134	1	0	1	147	0	15	9	0	4	28	0	1	16	7	0	4	28	0	1	16	7	0	4		
5:45PM	31	218	4	0	0	253	14	142	2	0	0	158	2	11	8	0	5	26	0	1	11	7	0	4	23	0	1	11	7	0	4		
Hourly Total	169	1013	7	0	0	1189	49	620	8	0	1	678	5	74	41	0	11	131	0	3	48	47	0	21	119	0	3	48	47	0	21		
<b>Total</b>	363	2193	8	0	4	2568	83	1243	13	0	2	1341	8	150	103	0	19	280	0	12	79	103	0	51	245	0	12	79	103	0	51		
<b>% Approach</b>	14.1%	85.4%	0.3%	0%	0.2%	-	6.2%	92.7%	1.0%	0%	0.1%	-	2.9%	53.6%	36.8%	0%	6.8%	-	4.9%	32.2%	42.0%	0%	20.8%	-	4.9%	32.2%	42.0%	0%	20.8%				
<b>% Total</b>	8.2%	49.5%	0.2%	0%	0.1%	57.9%	-	1.9%	28.0%	0.3%	0%	30.2%	-	0.2%	3.4%	2.3%	0%	0.4%	-	0.3%	1.8%	2.3%	0%	1.2%	-	0.3%	1.8%	2.3%	0%	1.2%			
<b>Motorcycles</b>	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>% Motorcycles</b>	0%	0%	0%	0%	0%	0%	0%	0.1%	0%	0%	0%	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
<b>Lights</b>	360	2157	8	0	4	2529	83	1206	13	0	2	1304	8	149	102	0	19	278	-	12	78	102	0	51	243	-	12	78	102	0	51		
<b>% Lights</b>	99.2%	98.4%	100%	0%	100%	98.5%	-	100%	97.0%	100%	0%	100%	97.2%	-	100%	99.3%	99.0%	0%	100%	99.3%	-	100%	98.7%	99.0%	0%	100%	99.2%	-	100%	98.7%	99.0%	0%	100%
<b>Heavy</b>	3	36	0	0	0	39	0	36	0	0	0	36	0	1	1	0	0	2	-	0	1	1	0	0	2	-	0	1	1	0	0		
<b>% Heavy</b>	0.8%	1.6%	0%	0%	0%	1.5%	0%	2.9%	0%	0%	0%	2.7%	0%	0.7%	1.0%	0%	0%	0.7%	-	0%	1.3%	1.0%	0%	0%	0.8%	-	0%	1.3%	1.0%	0%	0.8%		
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0			
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0			
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

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

**NY 263/New Rd - TMC**

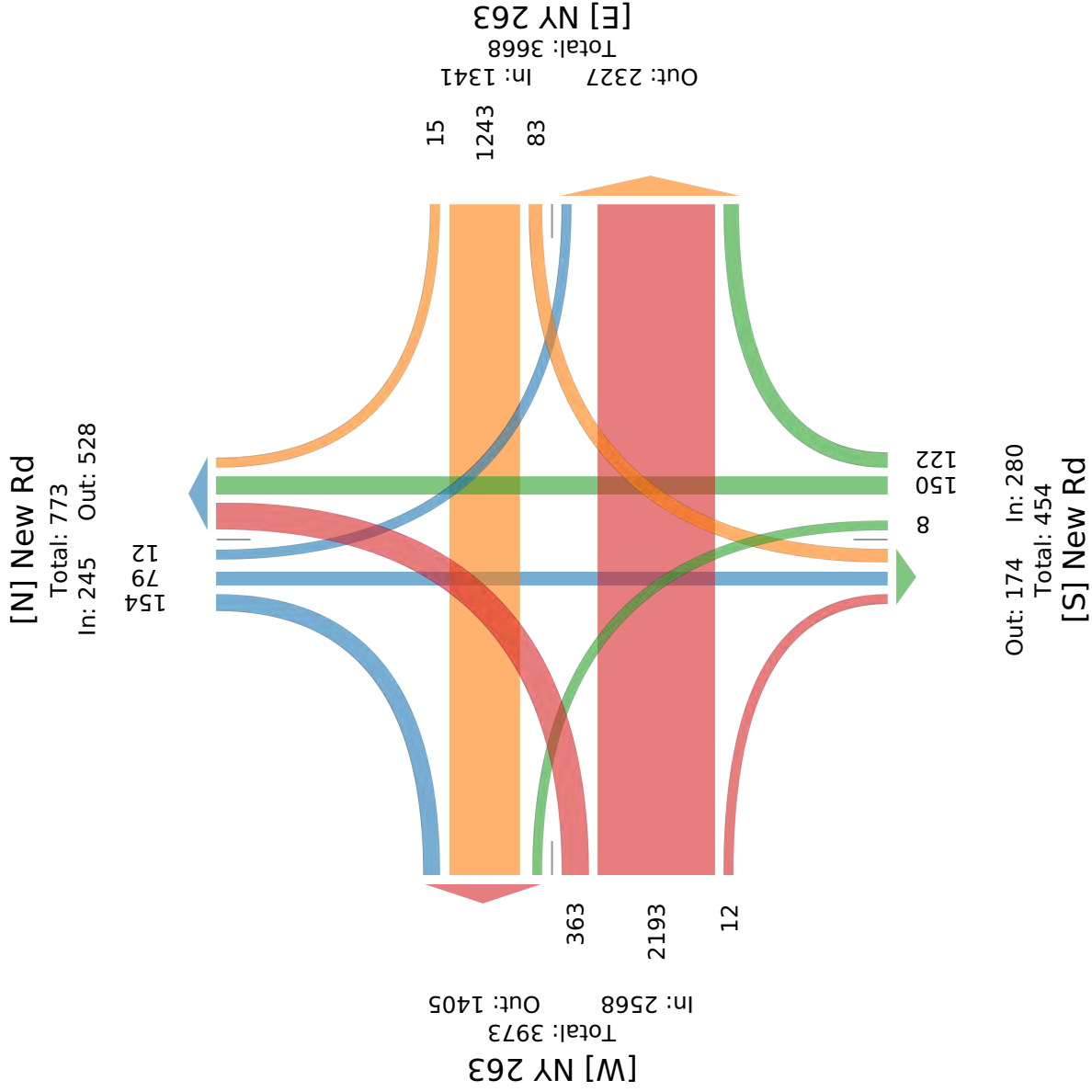
Wed Feb 9, 2022  
 Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)  
 All Movements

ID: 922045, Location: 43.056307, -78.724502



Provided by: Tri-State Traffic Data: New York Division  
 1016 Hoosick Rd, Troy, NY, 12180, US



**NY 263/New Rd - TMC**

Wed Feb 9, 2022

Forced Peak (4:15 PM - 5:15 PM)

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 922045, Location: 43.056307, -78.724502



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	NY 263 Eastbound				NY 263 Westbound				New Rd Northbound				New Rd Southbound																			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U																
2022-02-09 4:15PM	55	283	1	0	2	341	0	0	6	162	1	0	1	22	15	0	4	42	0	0	1	6	9	0	8	24	0	0				
4:30PM	53	321	0	0	0	374	0	0	13	169	2	0	0	16	17	0	1	34	0	0	3	7	16	0	4	30	0	0				
4:45PM	46	304	0	0	0	350	0	0	11	154	1	0	2	16	11	0	2	31	0	0	4	4	18	0	13	39	0	0				
5:00PM	59	296	0	0	0	355	0	0	10	161	3	0	3	22	12	0	1	38	0	0	1	11	16	0	9	37	0	0				
<b>Total</b>	213	1204	1	0	2	1420	0	0	40	646	7	0	6	76	55	0	8	145	0	0	9	28	59	0	34	130	0	0				
<b>% Approach</b>	15.0%	84.8%	0.1%	0%	0.1%	-	-	-	5.8%	93.1%	1.0%	0%	0.1%	-	-	-	4.1%	52.4%	37.9%	0%	5.5%	-	-	-	6.9%	21.5%	45.4%	0%	26.2%	-	-	-
<b>% Total</b>	8.9%	50.4%	0%	0%	0.1%	<b>59.4%</b>	-	-	1.7%	27.0%	0.3%	0%	0%	<b>29.0%</b>	-	-	0.3%	3.2%	2.3%	0%	0.3%	<b>6.1%</b>	-	-	0.4%	1.2%	2.5%	0%	1.4%	<b>5.4%</b>	-	-
<b>PHF</b>	0.903	0.938	0.250	-	0.250	<b>0.949</b>	-	-	0.769	0.956	0.583	-	0.250	<b>0.943</b>	-	-	0.500	0.864	0.809	-	0.500	<b>0.863</b>	-	-	0.563	0.636	0.819	-	0.654	<b>0.833</b>	-	-
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Lights</b>	212	1181	1	0	2	1396	-	-	40	624	7	0	1	672	-	-	6	76	54	0	8	144	-	-	9	27	58	0	34	128	-	-
<b>% Lights</b>	99.5%	98.1%	100%	0%	100%	<b>98.3%</b>	-	-	100%	96.6%	100%	0%	100%	<b>96.8%</b>	-	-	100%	100%	98.2%	0%	100%	<b>99.3%</b>	-	-	100%	96.4%	98.3%	0%	100%	<b>98.5%</b>	-	-
<b>Heavy</b>	1	23	0	0	0	24	-	-	0	22	0	0	0	22	-	-	0	0	1	0	0	1	1	0	0	1	1	0	0	2	-	-
<b>% Heavy</b>	0.5%	1.9%	0%	0%	0%	<b>1.7%</b>	-	-	0%	3.4%	0%	0%	0%	<b>3.2%</b>	-	-	0%	0%	1.8%	0%	0%	<b>0.7%</b>	-	-	0%	3.6%	1.7%	0%	0%	<b>1.5%</b>	-	-
Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>% Bicycles on Crosswalk</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**NY 263/New Rd - TMC**

Wed Feb 9, 2022

Forced Peak (4:15 PM - 5:15 PM)

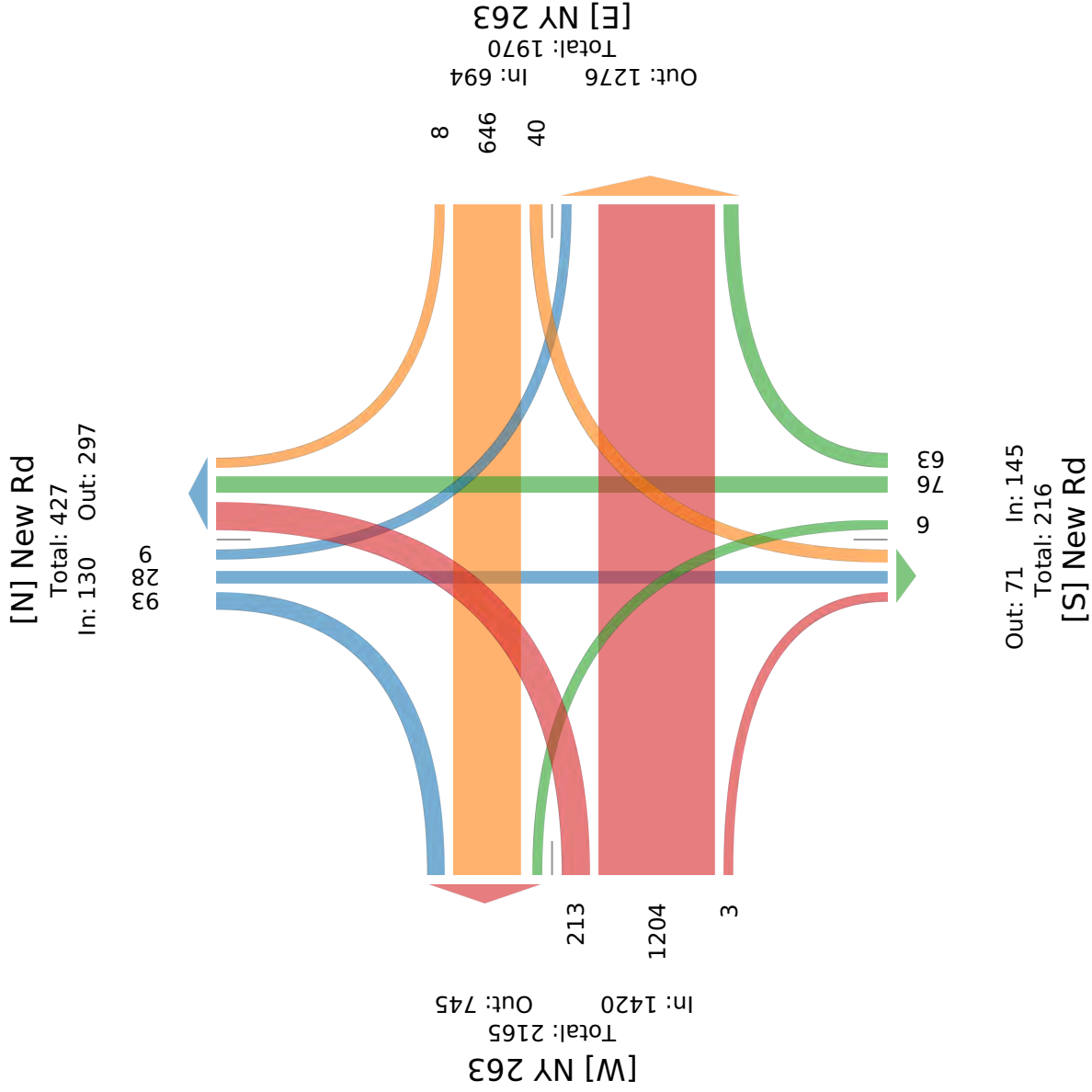
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 922045, Location: 43.056307, -78.724502



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US





**NY 263/New Rd - TMC**

Wed Feb 9, 2022

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 922045, Location: 43.056307, -78.724502



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US

Leg Direction	NY 263 Eastbound						NY 263 Westbound						New Rd Northbound						New Rd Southbound											
	L	T	R	U	RR	App	L	T	R	U	RR	App	L	T	R	U	RR	App	L	T	R	U	RR	App	L	T	R	U	RR	App
2022-02-09 4:30PM	53	321	0	0	0	374	13	169	2	0	0	184	0	16	17	0	1	34	3	7	16	0	4	30	0	0	0	0	0	0
4:45PM	46	304	0	0	0	350	11	154	1	0	0	166	2	16	11	0	2	31	4	4	18	0	13	39	0	0	0	0	0	0
5:00PM	59	296	0	0	0	355	10	161	3	0	0	174	3	22	12	0	1	38	1	11	16	0	9	37	0	0	0	0	0	0
5:15PM	43	281	0	0	0	324	14	183	2	0	0	199	0	26	12	0	1	39	0	10	17	0	4	31	0	0	0	0	0	0
<b>Total</b>	201	1202	0	0	0	1403	48	667	8	0	0	723	5	80	52	0	5	142	8	32	67	0	30	137	0	0	0	0	0	0
<b>% Approach</b>	14.3%	85.7%	0%	0%	0%	0%	6.6%	92.3%	1.1%	0%	0%	0%	3.5%	56.3%	36.6%	0%	3.5%	0%	5.8%	23.4%	48.9%	0%	21.9%	0%	-	-	-	-	-	-
<b>% Total</b>	8.4%	50.0%	0%	0%	0%	58.3%	2.0%	27.7%	0.3%	0%	0%	30.1%	0.2%	3.3%	2.2%	0%	0.2%	5.9%	0.3%	1.3%	2.8%	0%	1.2%	5.7%	-	-	-	-	-	-
<b>PHF</b>	0.852	0.936	-	-	-	0.938	0.857	0.911	0.667	-	-	0.908	0.417	0.769	0.765	-	0.625	0.910	0.500	0.727	0.931	-	0.577	0.878	-	-	-	-	-	0.967
<b>Motorcycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Motorcycles</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Lights</b>	200	1182	0	0	0	1382	48	643	8	0	0	699	5	80	52	0	5	142	8	31	66	0	30	135	-	-	-	-	-	-
<b>% Lights</b>	99.5%	98.3%	0%	0%	0%	98.5%	100%	96.4%	100%	0%	0%	96.7%	100%	100%	100%	0%	100%	100%	100%	96.9%	98.5%	0%	100%	98.5%	-	-	-	-	-	98.0%
<b>Heavy</b>	1	20	0	0	0	21	0	24	0	0	0	24	0	0	0	0	0	0	0	1	1	0	0	2	-	-	-	-	-	47
<b>% Heavy</b>	0.5%	1.7%	0%	0%	0%	1.5%	0%	3.6%	0%	0%	0%	3.3%	0%	0%	0%	0%	0%	0%	0%	3.1%	1.5%	0%	0%	1.5%	-	-	-	-	-	2.0%
Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**NY 263/New Rd - TMC**

Wed Feb 9, 2022

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

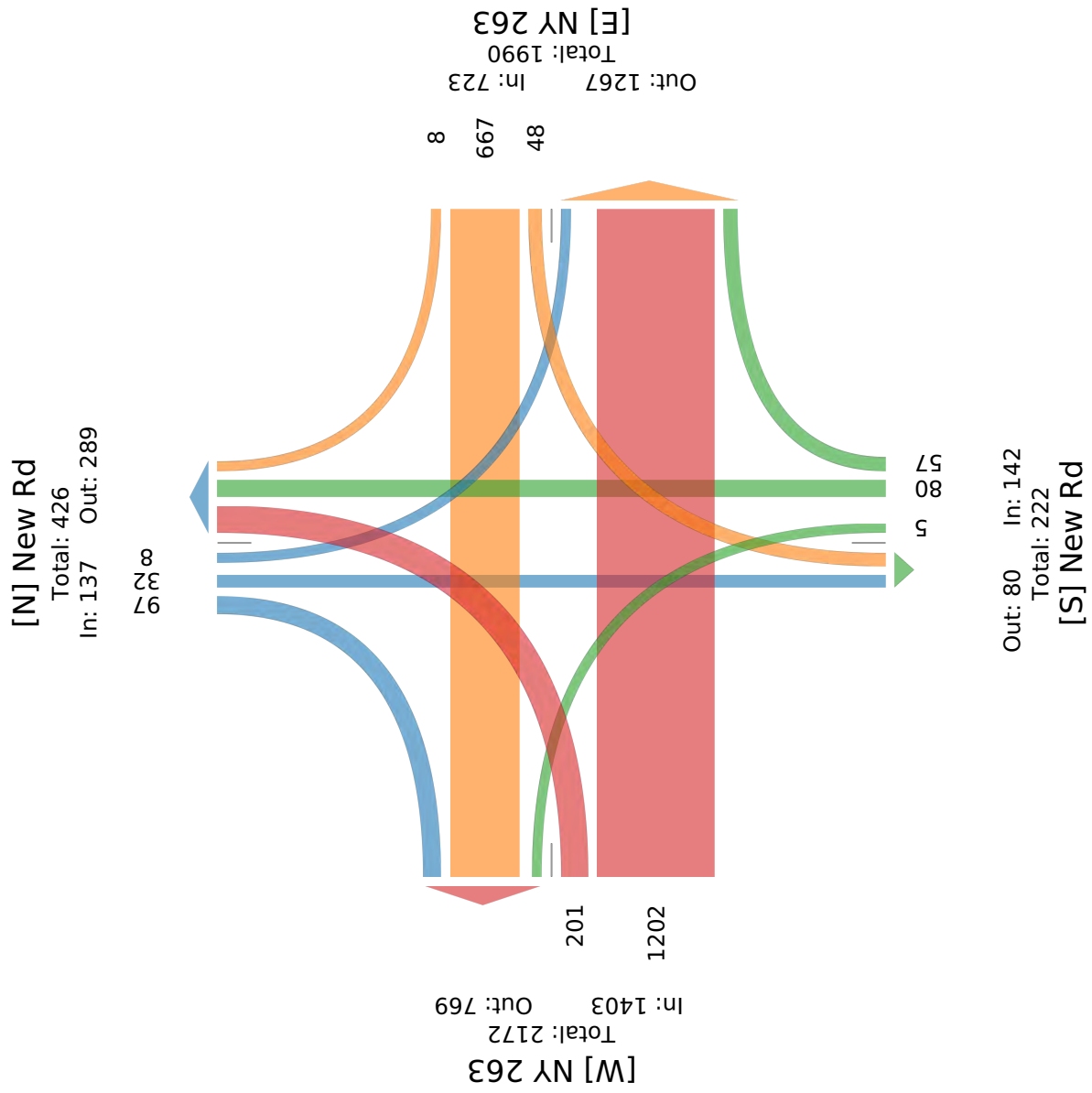
All Classes (Motorcycles, Lights, Heavy, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 922045, Location: 43.056307, -78.724502



Provided by: Tri-State Traffic Data: New York Division  
1016 Hoosick Rd, Troy, NY, 12180, US





Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/New Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 1

### Turning Movement Data

Start Time	New Rd Southbound						NY 263 Westbound						New Rd Northbound						NY 263 Eastbound											
	Right	Right on Red	Thru	Left	U-Turn	Peds	Right	Right on Red	Thru	Left	U-Turn	Peds	Right	Right on Red	Thru	Left	U-Turn	Peds	Right	Right on Red	Thru	Left	U-Turn	Peds						
	App. Total						App. Total						App. Total						App. Total											
7:00 AM	40	2	13	1	0	0	56	0	0	0	0	0	272	0	1	4	1	0	6	0	0	0	0	0	111	0	0	104	7	0
7:15 AM	48	5	17	2	0	0	72	0	0	316	15	0	331	1	7	5	1	0	14	0	0	133	11	0	144	0	0	133	11	0
7:30 AM	52	3	22	1	0	0	78	0	0	306	23	0	329	4	5	9	1	0	19	0	0	140	21	0	161	0	0	140	21	0
7:45 AM	29	5	19	1	0	0	54	1	0	336	14	0	351	7	7	5	0	0	19	1	0	124	22	0	147	1	0	124	22	0
Hourly Total	169	15	71	5	0	0	260	2	1	1219	61	0	1283	12	20	23	3	0	58	1	0	501	61	0	563	1	0	501	61	0
8:00 AM	35	2	18	2	0	0	57	1	0	223	13	0	237	12	5	8	0	0	25	0	0	100	15	0	115	0	0	100	15	0
8:15 AM	37	3	18	1	0	0	59	2	0	277	18	0	297	2	1	6	2	0	11	1	0	122	9	0	132	1	0	122	9	0
8:30 AM	13	7	11	2	0	0	33	1	0	234	12	0	247	5	5	5	0	0	15	1	0	118	13	0	132	1	0	118	13	0
8:45 AM	18	7	12	2	0	0	39	1	1	182	6	0	190	5	4	5	1	0	15	1	0	111	7	0	119	1	0	111	7	0
Hourly Total	103	19	59	7	0	0	188	5	1	916	49	0	971	24	15	24	3	0	66	3	0	451	44	0	498	3	0	451	44	0
***BREAK***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	272	34	130	12	0	0	448	7	2	2135	110	0	2254	36	35	47	6	0	124	4	0	952	105	0	1061	4	0	952	105	0
Approach %	60.7	7.6	29.0	2.7	0.0	-	-	0.3	0.1	94.7	4.9	0.0	-	29.0	28.2	37.9	4.8	0.0	-	0.4	0.0	89.7	9.9	0.0	-	0.4	0.0	89.7	9.9	0.0
Total %	7.0	0.9	3.3	0.3	0.0	-	11.5	0.2	0.1	54.9	2.8	0.0	58.0	0.9	0.9	1.2	0.2	0.0	3.2	0.1	0.0	24.5	2.7	0.0	27.3	0.1	0.0	24.5	2.7	0.0
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-
% Motorcycles	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-
Cars & Light Goods	268	34	125	12	0	-	439	6	2	2052	108	0	2168	34	35	39	6	0	114	3	0	878	100	0	981	3	0	878	100	0
% Cars & Light Goods	98.5	100.0	96.2	100.0	-	-	98.0	85.7	100.0	96.1	98.2	-	96.2	94.4	100.0	83.0	100.0	-	91.9	75.0	-	92.2	95.2	-	92.5	75.0	-	92.2	95.2	-
Other Vehicles	4	0	5	0	0	-	9	1	0	83	2	0	86	2	0	8	0	0	10	1	0	74	5	0	80	1	0	74	5	0
% Other Vehicles	1.5	0.0	3.8	0.0	-	-	2.0	14.3	0.0	3.9	1.8	-	3.8	5.6	0.0	17.0	0.0	-	8.1	25.0	-	7.8	4.8	-	7.5	25.0	-	7.8	4.8	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

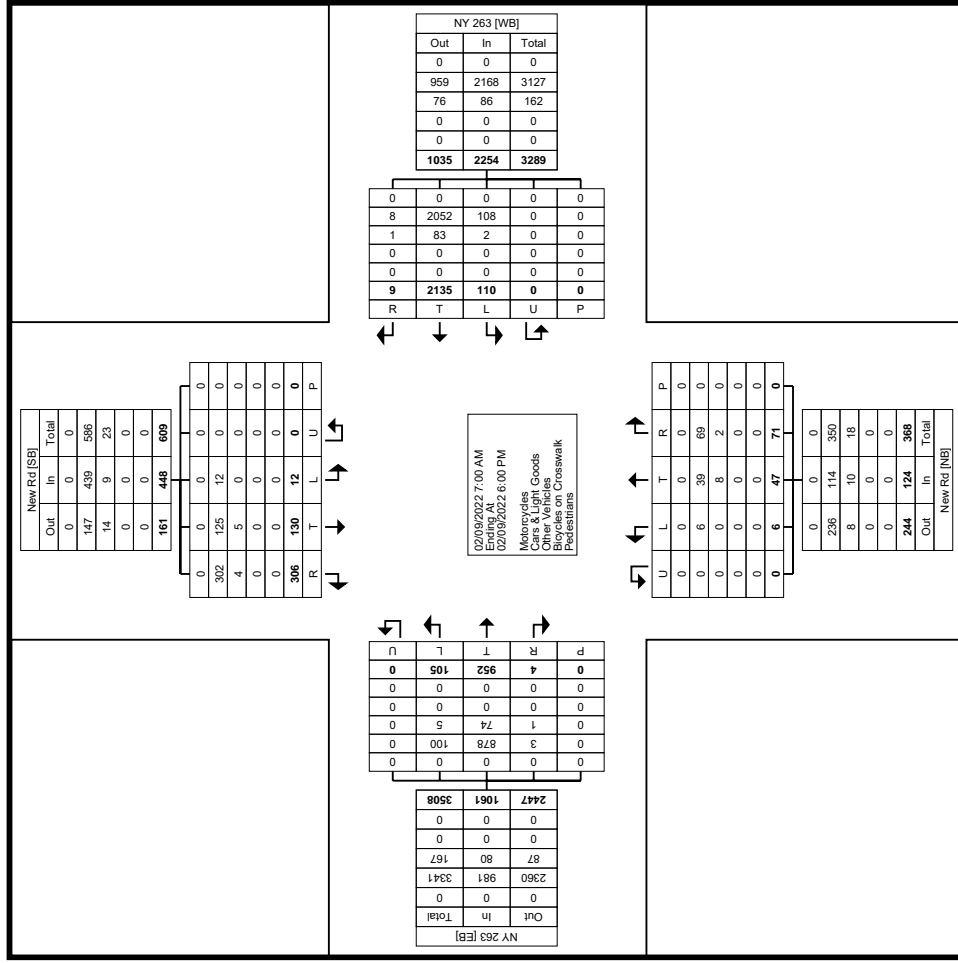




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@ttsdata.com

Count Name: NY 263/New Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 3



Turning Movement Data Plot

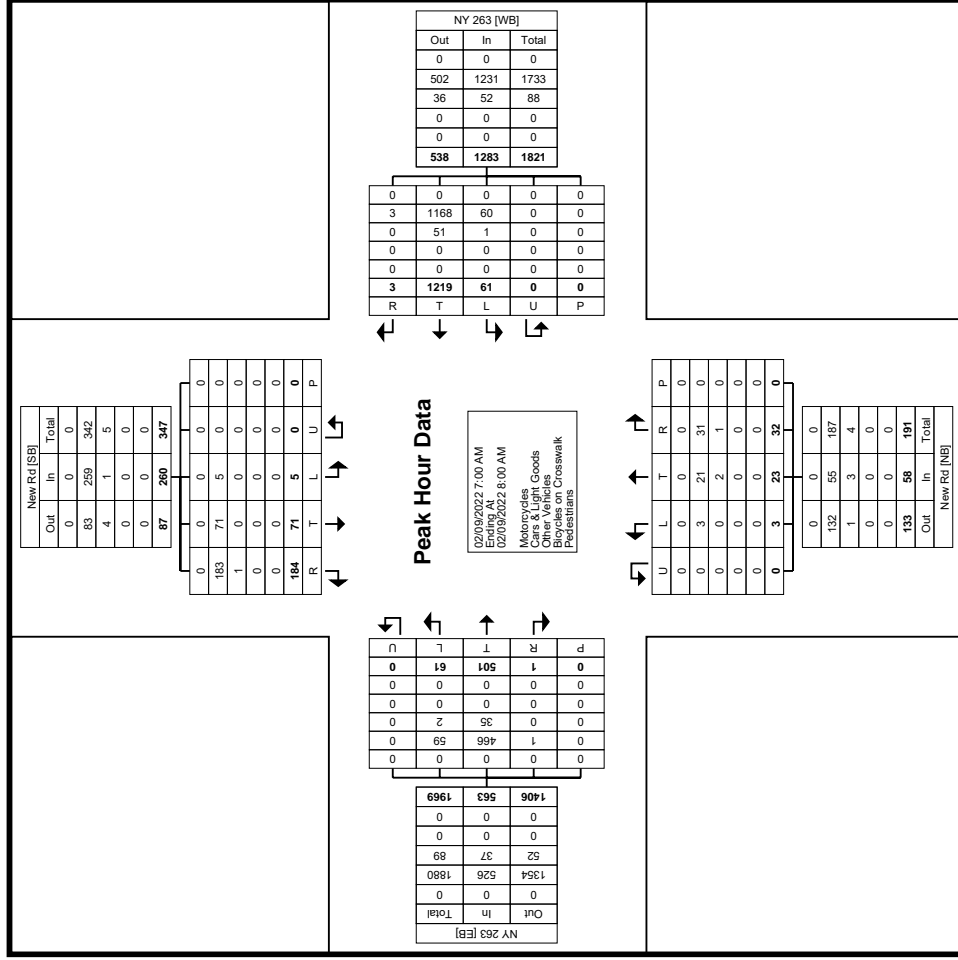




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/New Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 5



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



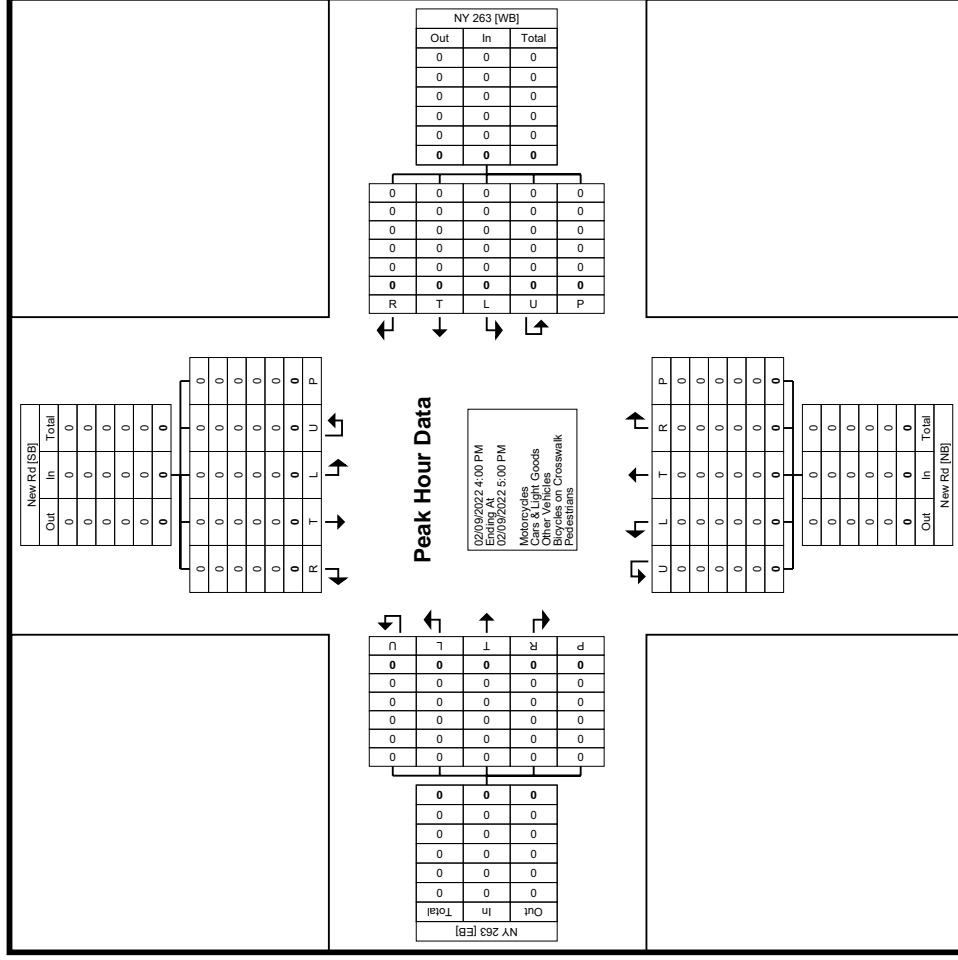




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkartz@tstdata.com

Count Name: NY 263/New Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 7



Turning Movement Peak Hour Data Plot (4:00 PM)



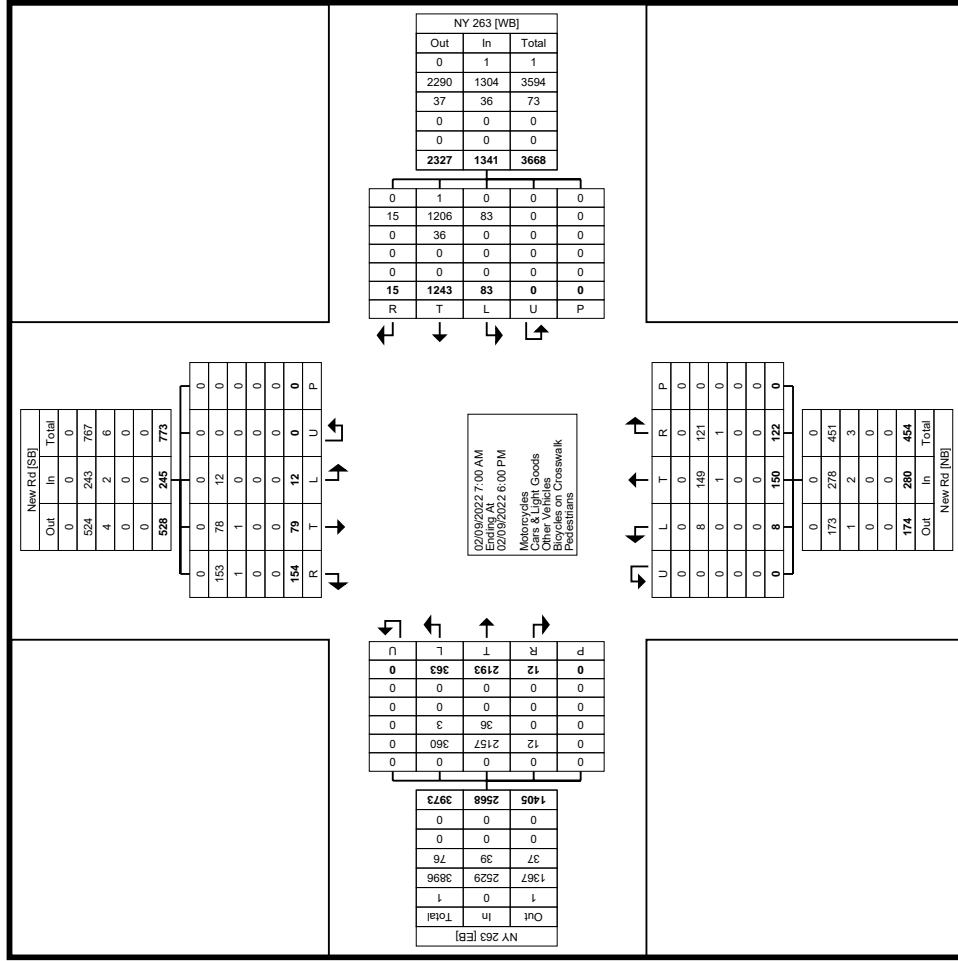




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/New Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 3



Turning Movement Data Plot

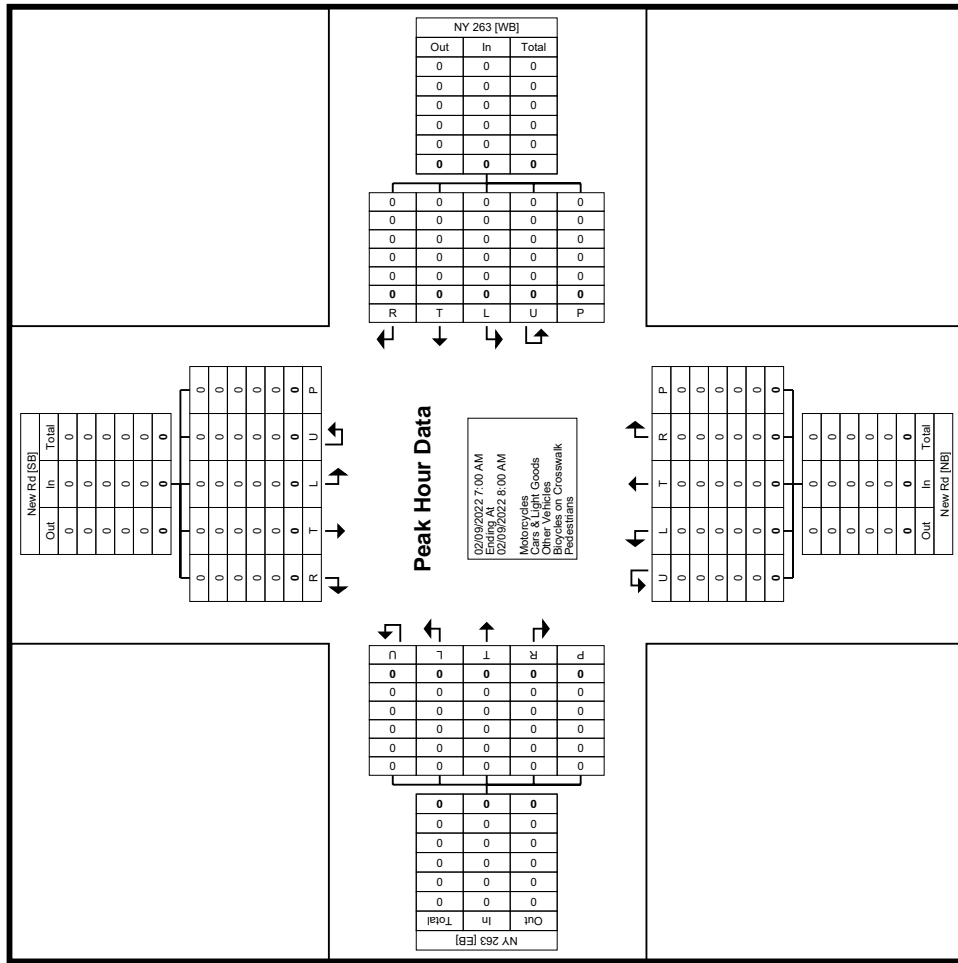




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkartz@tstdata.com

Count Name: NY 263/New Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 5



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

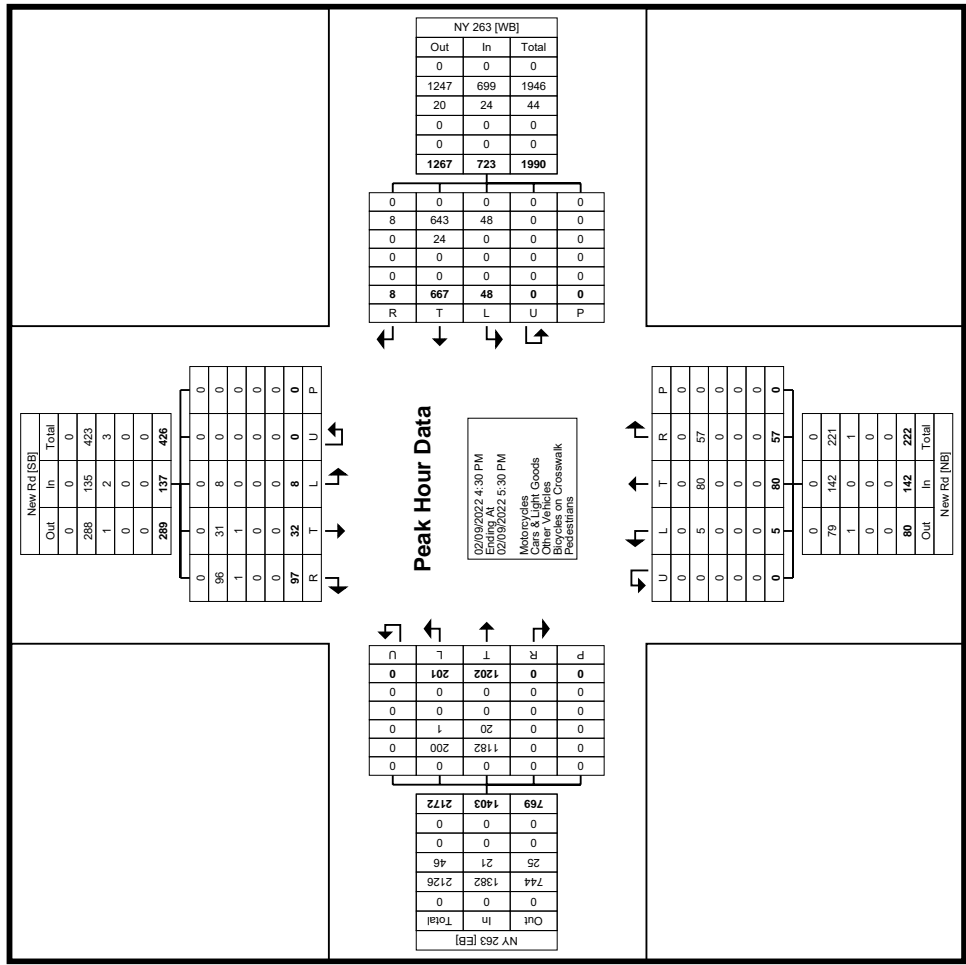




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkartz@tstdata.com

Count Name: NY 263/New Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 7



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





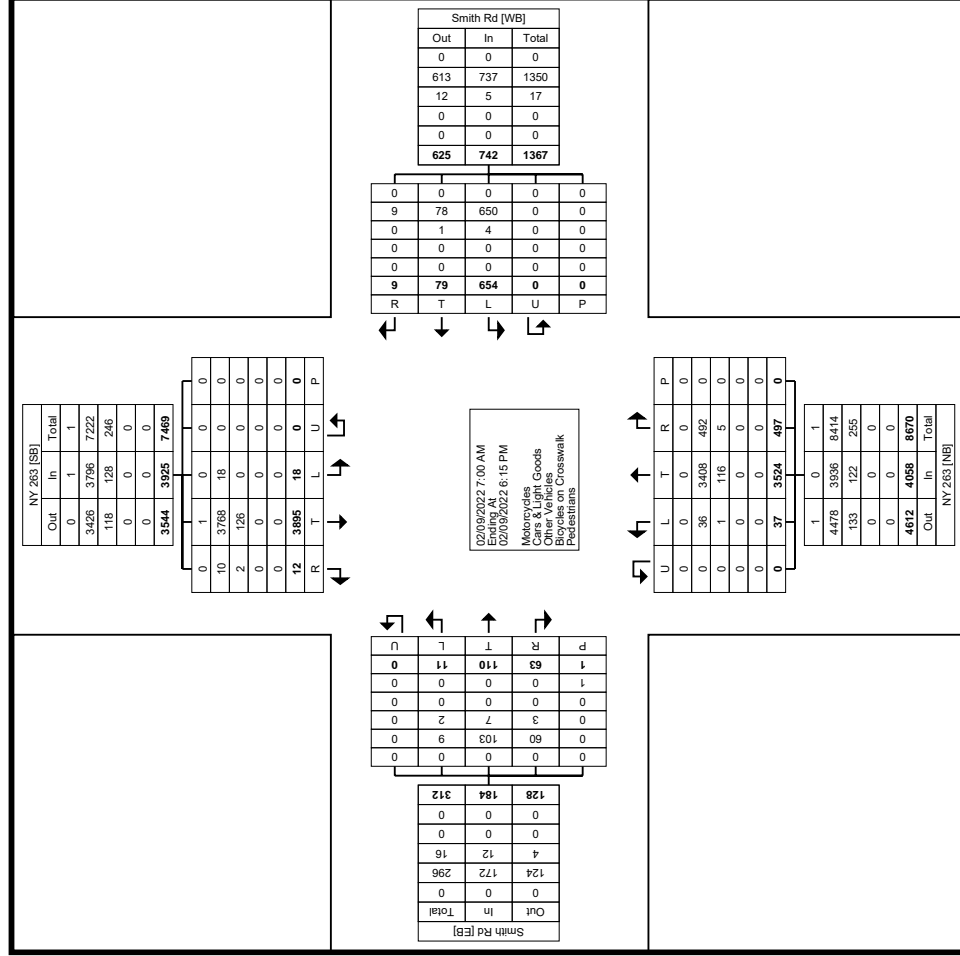




Tri-State Traffic Data: New York Division  
184 Baker Rd

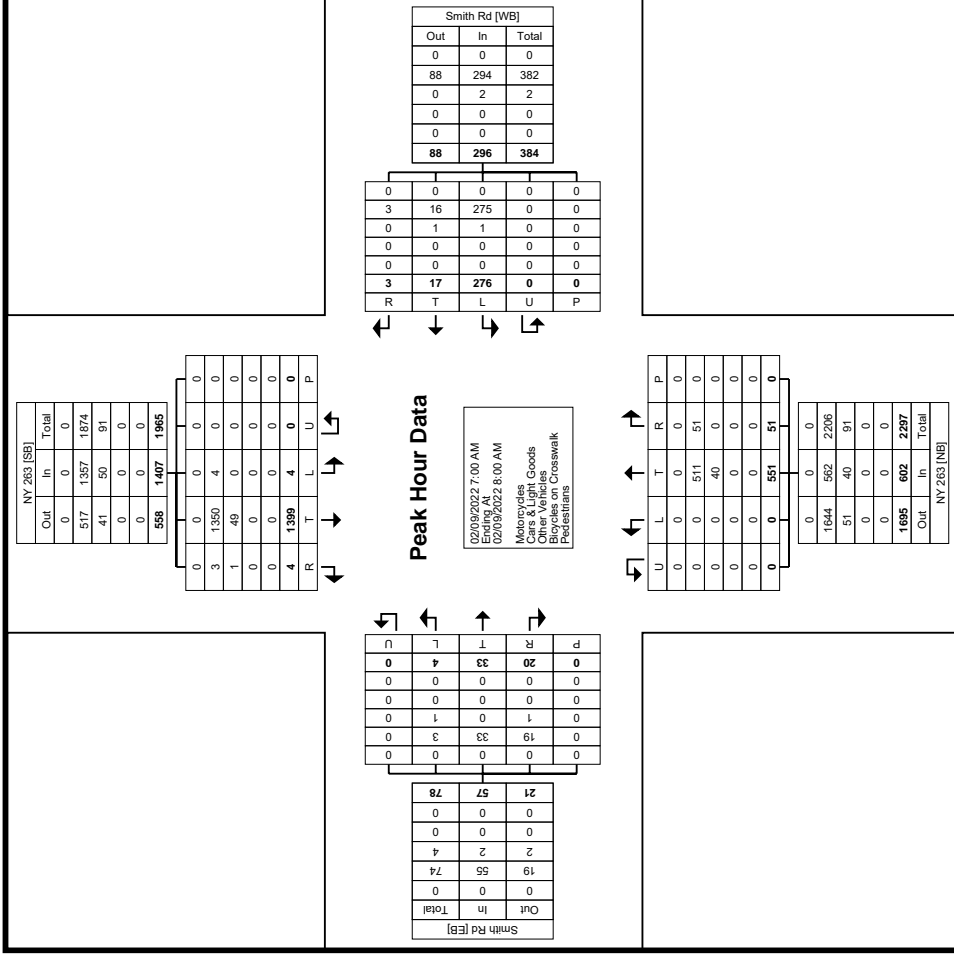
Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@ttsdata.com

Count Name: NY 263/Smith Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 3



Turning Movement Data Plot





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

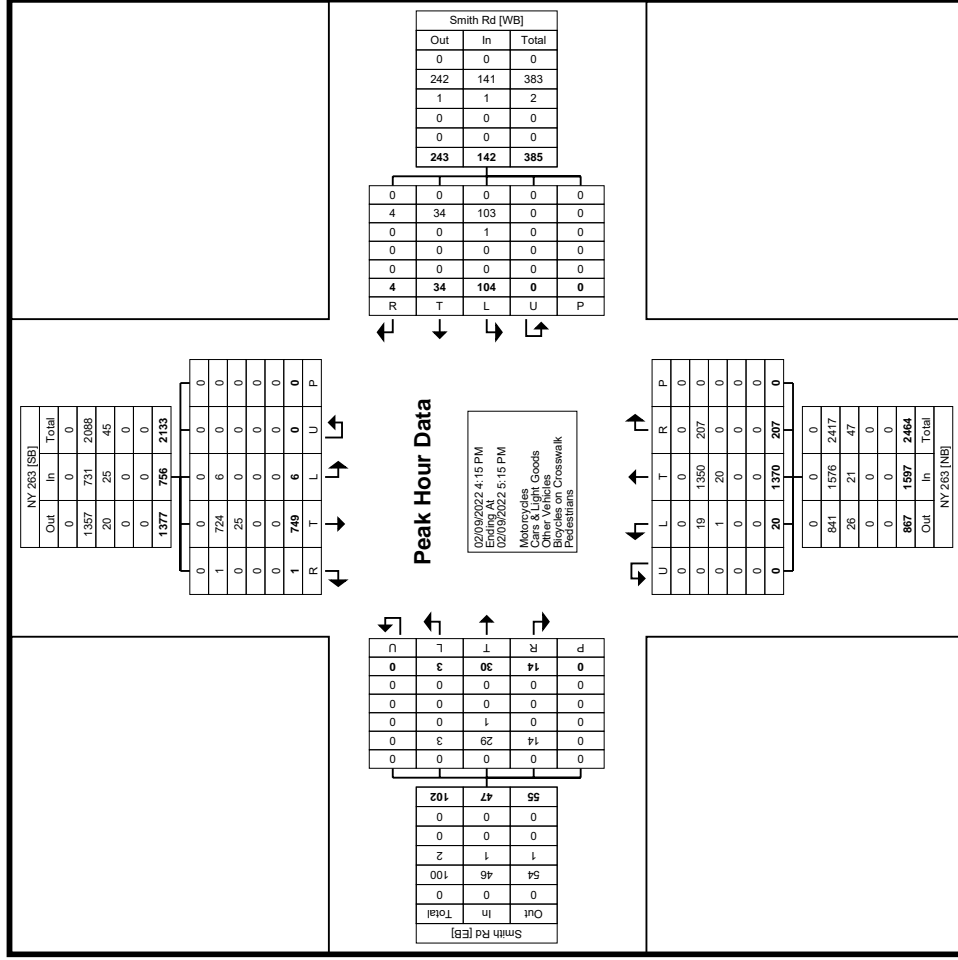




Tri-State Traffic Data: New York Division  
184 Baker Rd

Coatesville, Pennsylvania, United States 19320  
610-517-2338 bkarz@tstdata.com

Count Name: NY 263/Smith Rd  
Site Code:  
Start Date: 02/09/2022  
Page No: 7



Turning Movement Peak Hour Data Plot (4:15 PM)

## **APPENDIX B: MISCELLANEOUS CALCULATIONS**



# Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 192

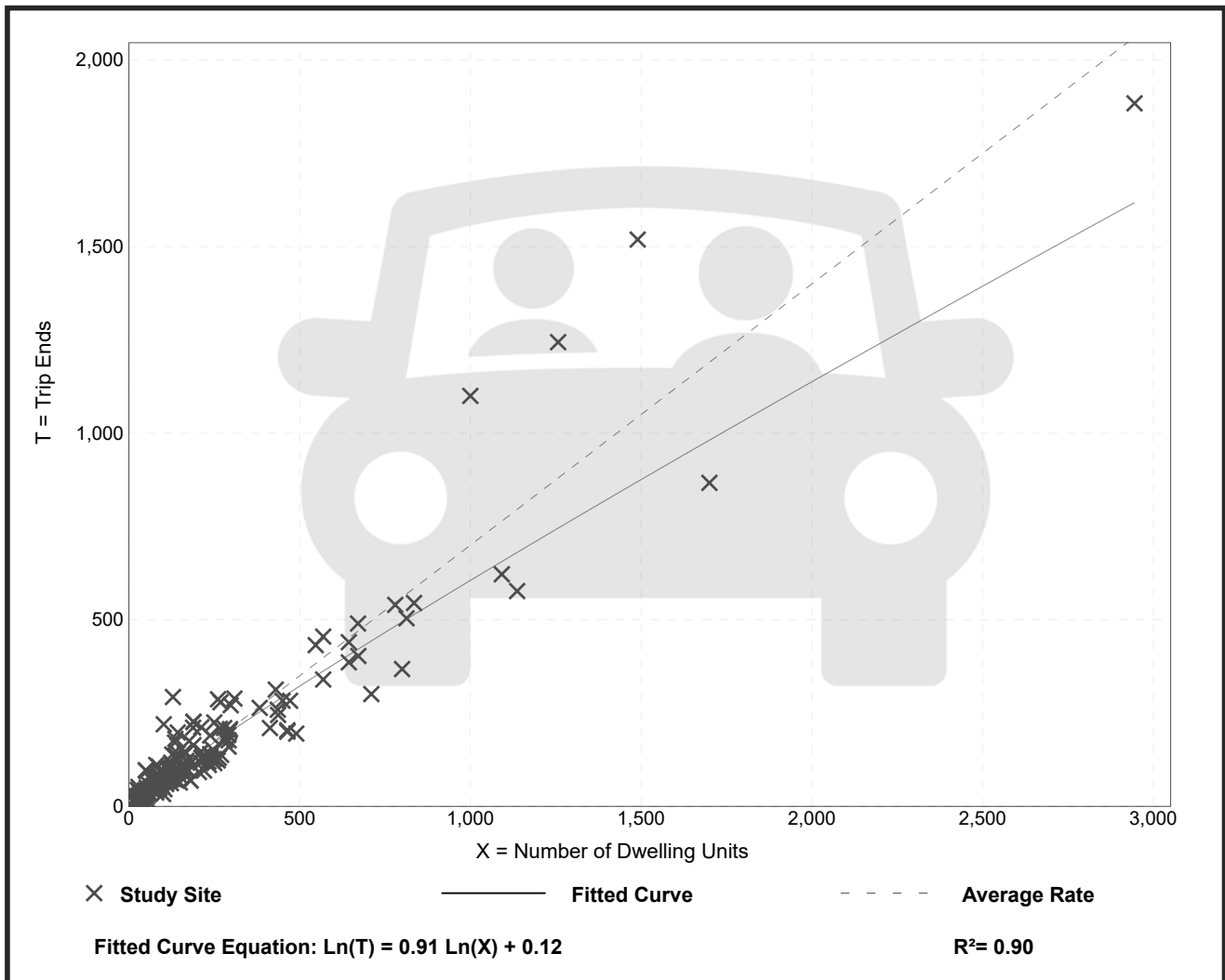
Avg. Num. of Dwelling Units: 226

Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

## Data Plot and Equation



# Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 208

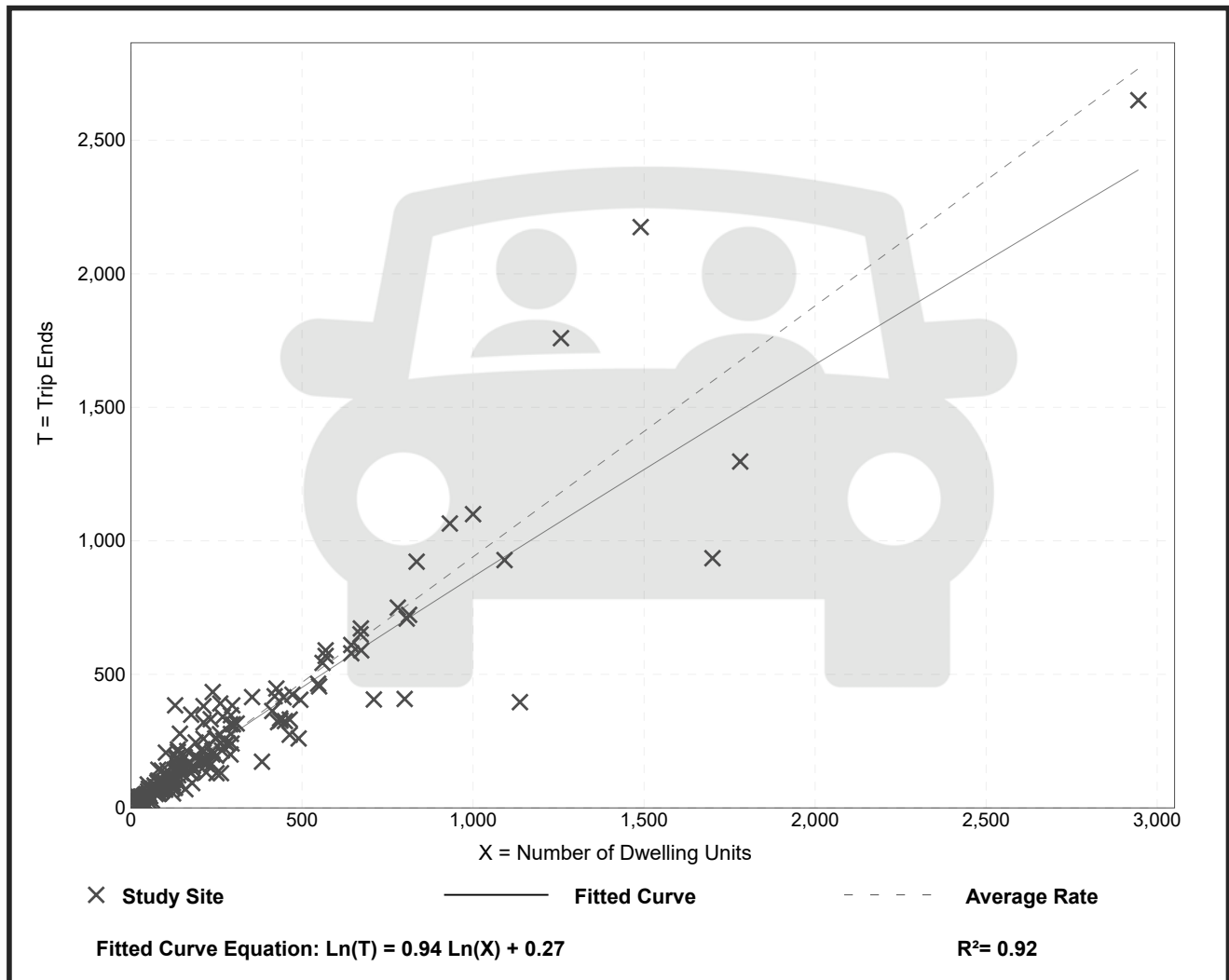
Avg. Num. of Dwelling Units: 248

Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

## Data Plot and Equation



# Single-Family Attached Housing (215)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,  
Peak Hour of Adjacent Street Traffic,  
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 46

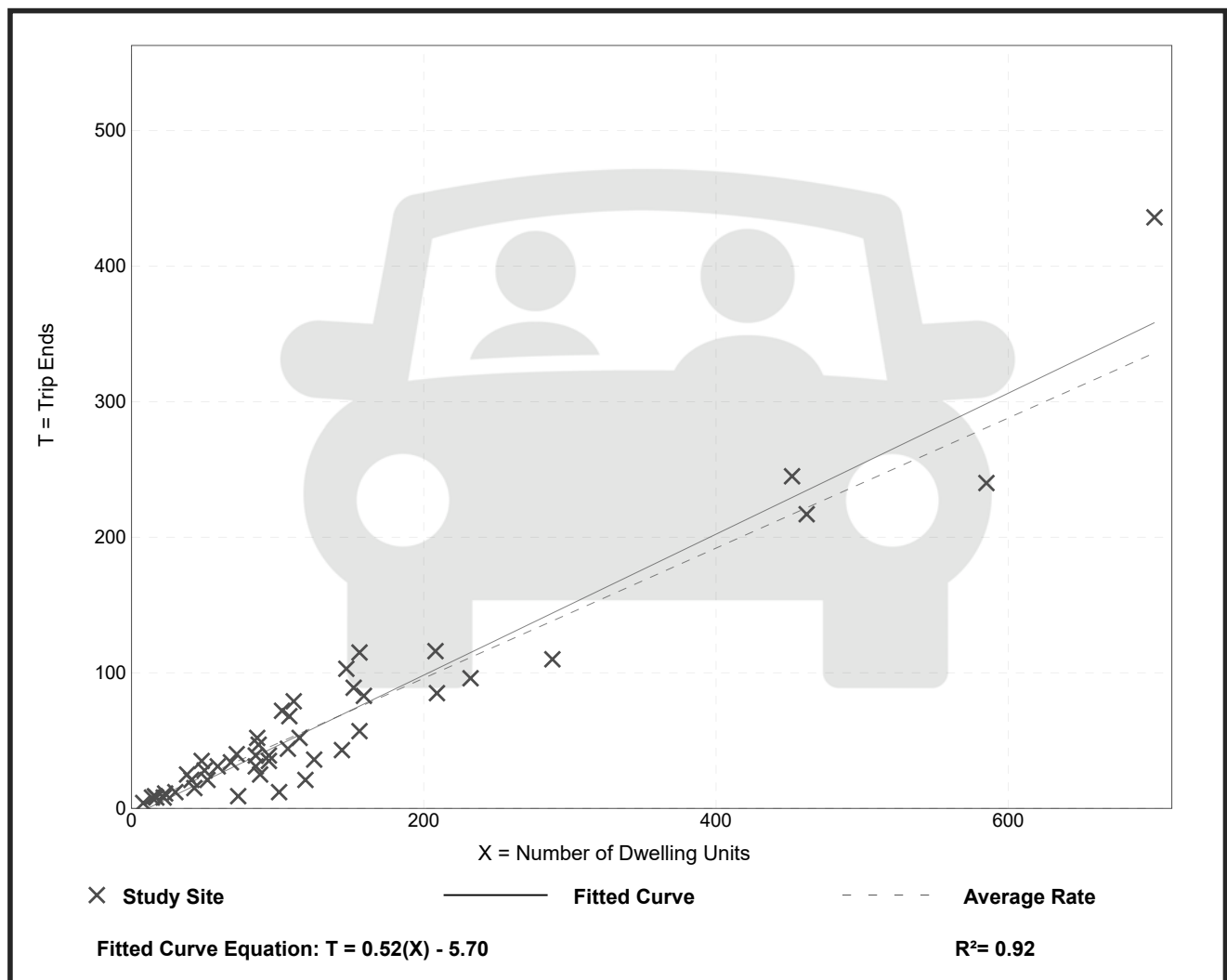
Avg. Num. of Dwelling Units: 135

Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

## Data Plot and Equation



# Single-Family Attached Housing (215)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

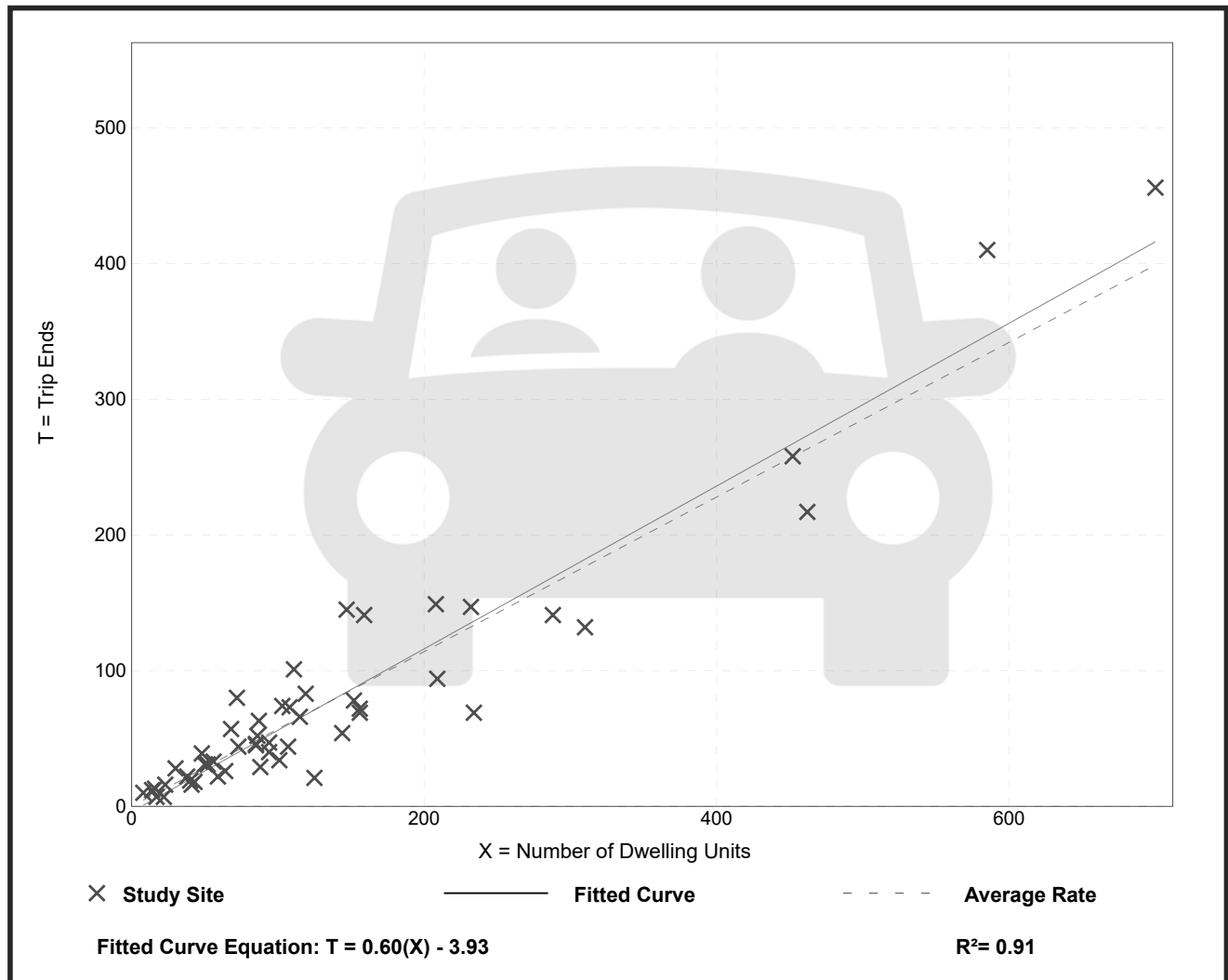
**Setting/Location: General Urban/Suburban**

Number of Studies: 51  
 Avg. Num. of Dwelling Units: 136  
 Directional Distribution: 59% entering, 41% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

## Data Plot and Equation



# Strip Retail Plaza (<40k) (822)

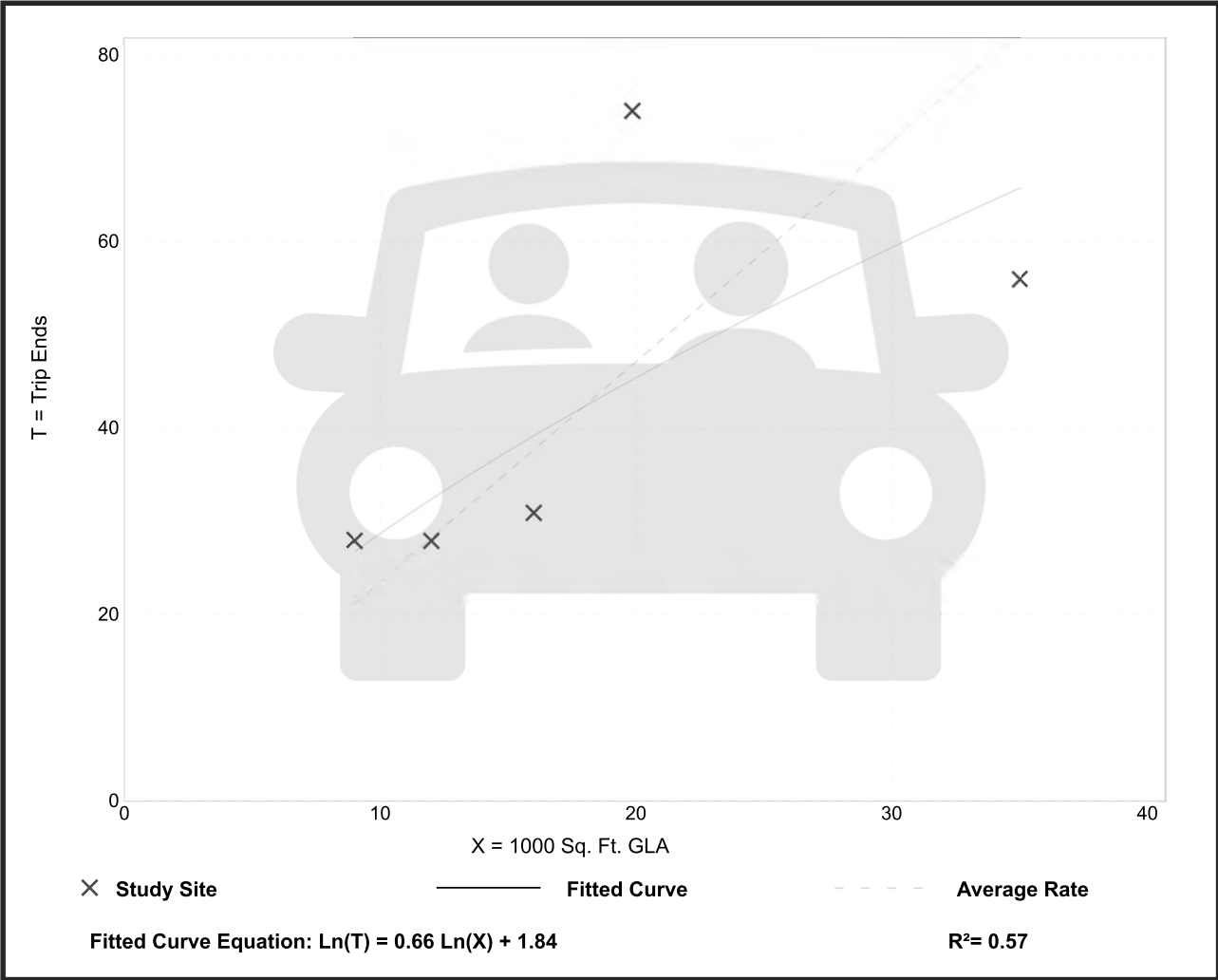
**Vehicle Trip Ends vs: 1000 Sq. Ft. GLA**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 5  
 Avg. 1000 Sq. Ft. GLA: 18  
 Directional Distribution: 60% entering, 40% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

### Data Plot and Equation

*Caution – Small Sample Size*



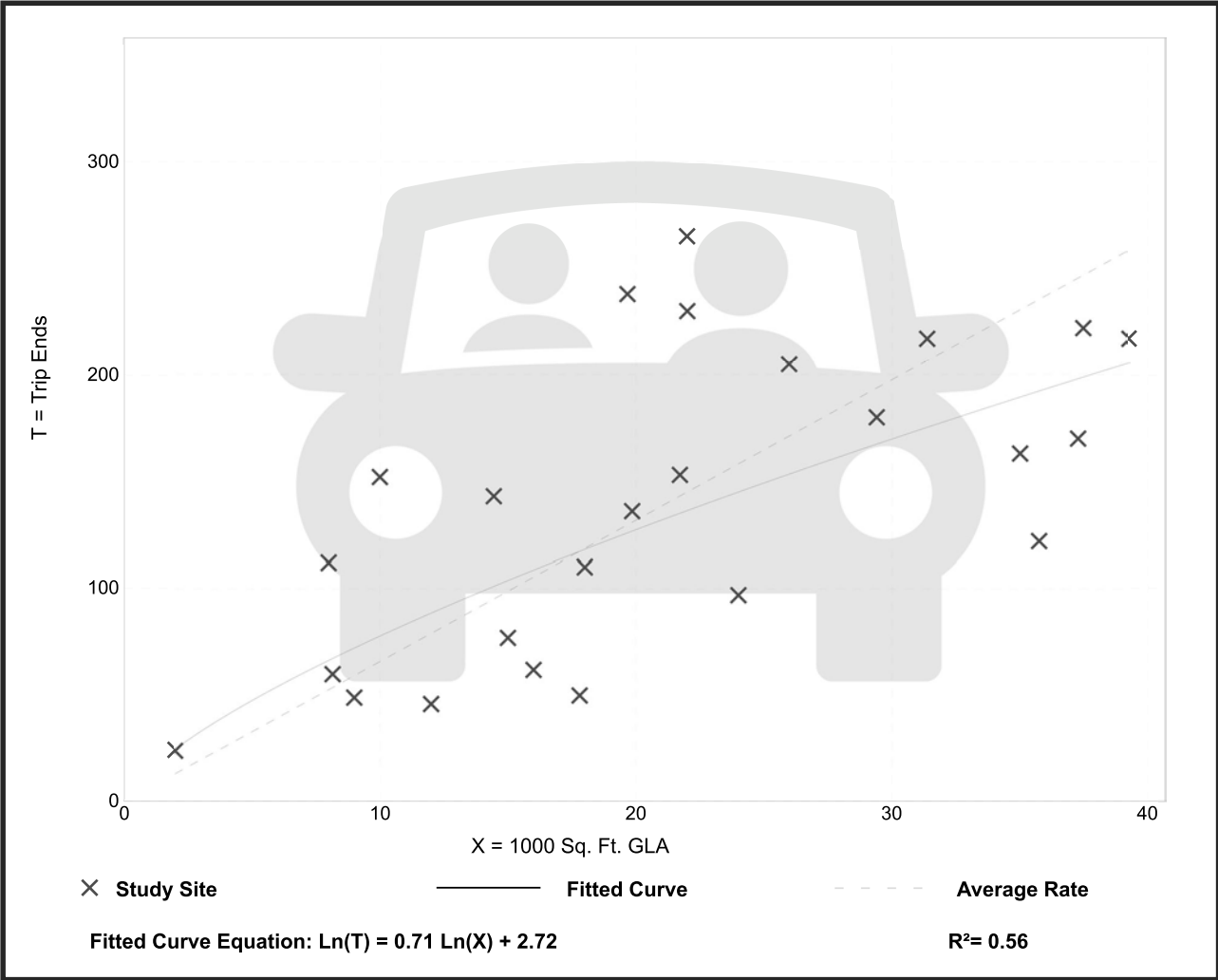
# Strip Retail Plaza (<40k) (822)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GLA**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 25  
 Avg. 1000 Sq. Ft. GLA: 21  
 Directional Distribution: 50% entering, 50% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

### Data Plot and Equation



Int # 1 Millersport Highway/New Road

	Left turn	Rear-end	Overtaking	Right Angle	Right Turn	Head On	Side-swipe	Fixed Object	Backing	Other	Animal	Bike/Ped	Total	Injury	Non Injury	Non-Repo	Sum
	1	4	1	0	0	0	0	0	0	0	0	0	6	1	5	0	6
<b>TOTALS</b>	1	4	1	0	0	0	0	0	0	0	0	0	6	1	5	0	6

	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn	1					1
Rear-end	1	3				4
Overtaking	1					1
Right Angle						0
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
<b>Totals</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>

ADT = Peak hour entering volume / k factor  
ADT =  $\frac{2389}{1} = 2389$

Rate =  $\frac{6 \text{ Acc.}}{25147.3684 \text{ VPD}} \times \frac{1,000,000}{365 \text{ Days}} \times 0.10 = 0.22$

Crash / MEV =  $\frac{0.22 \text{ Crash / MEV}}{25147.3684 \text{ VPD}} \times 3,000 \text{ Yrs.} = 0.026$

Int #  New Road/Smith Road

Left turn	Rear-end	Overtaking	Right Angle	Right Turn	Head On	Side-swipe	Fixed Object	Backing	Other	Animal	Bike/Ped	Total	Injury	Non Injury	Non-Repo	Sum
0	1	0	2	0	0	0	0	0	0	0	0	3	2	1	0	3

TOTALS      0      1      0      2      0      0      0      0      0      0      0      0      3      2      1      0      3

	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn						0
Rear-end		1				1
Overtaking						0
Right Angle	1					2
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>

ADT = Peak hour entering volume / k factor  
 ADT =  $\frac{644}{1,000,000}$  VPH / 0.10 = 6778.94737 VPD

Rate =  $\frac{3}{6778.94737}$  Acc. / VPD x  $\frac{1,000,000}{365 \text{ Days}}$  x 3,000 Yrs. = 0.40 Crash / MEV



Int # 1 **Millersport Highway/Smith Road**

Left turn	Rear-end	Overtaking	Right Angle	Right Turn	Head On	Side-swipe	Fixed Object	Backing	Other	Animal	Bike/Ped	<b>Total</b>	Injury	Non Injury	Non-Repo	<b>Sum</b>
0	5	1	1	0	0	0	0	0	0	0	0	7	2	4	1	7

**TOTALS**    0    5    1    1    0    0    0    0    0    0    0    7    2    4    1

	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn						0
Rear-end		4				5
Overtaking		1				1
Right Angle		1				1
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal						0
<b>Totals</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>

ADT = Peak hour entering volume / k factor  
 ADT =  $\frac{2542}{1} = 2542$

Rate =  $\frac{7}{26757.8947} \times \frac{1,000,000}{365 \text{ Days}} \times 3,000 \text{ Yrs.} = 0.24$  Crash / MEV

VPD =  $26757.8947 \times 0.10 = 2675.78947$  VPD

Int # 1 **Millersport Highway/I-990 On-ramp**

Left turn	Rear-end	Overtaking	Right Angle	Right Turn	Head On	Side-swipe	Fixed Object	Backing	Other	Animal	Bike/Ped	<b>Total</b>
0	0	1	0	1	0	0	0	0	0	1	0	3
<b>TOTALS</b>	0	1	0	1	0	0	0	0	0	1	0	3

Injury	Non Injury	Non-Repo	<b>Sum</b>
1	2	0	3

	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn						0
Rear-end						0
Overtaking		1				1
Right Angle						0
Right Turn		1				1
Head On						0
Side-swipe						0
Fixed Object						0
Backing						0
Other						0
Bike/Ped						0
Animal		1				1
<b>Totals</b>	0	3	0	0	0	3

ADT = Peak hour entering volume / k factor  
 ADT =  $\frac{2487}{1} = 2487$

Rate =  $\frac{3 \text{ Acc.}}{26178.9474 \text{ VPD}} \times \frac{1,000,000}{365 \text{ Days}} \times 3,000 \text{ Yrs.} = 0.10$

$0.10 = \frac{26178.9474 \text{ VPD}}{26178.9474} = 0.10$

$0.10 = \frac{26178.9474 \text{ VPD}}{26178.9474} = 0.10$

$0.10 = \frac{26178.9474 \text{ VPD}}{26178.9474} = 0.10$

Int #  **Millersport Highway/I-990 Off-ramp**

	Left turn	Rear-end	Overtaking	Right Angle	Right Turn	Head On	Side-swipe	Fixed Object	Backing	Other	Animal	Bike/Ped	Total	Injury	Non Injury	Non-Repo	Sum
	1	10	1	0	0	0	0	2	0	0	0	0	14	5	7	2	14
<b>TOTALS</b>	1	10	1	0	0	0	0	2	0	0	0	0	14	5	7	2	14

	Northbound	Southbound	Eastbound	Westbound	Unknown	Totals
Left turn	1					1
Rear-end	5	3	2			10
Overtaking		1				1
Right Angle						0
Right Turn						0
Head On						0
Side-swipe						0
Fixed Object	1					2
Backing						0
Other						0
Bike/Ped						0
Animal						0
<b>Totals</b>	7	5	2	0	0	14

ADT = Peak hour entering volume / k factor  
ADT =  $\frac{1922}{0.10} = 20231.5789$  VPD

Rate =  $\frac{14 \text{ Acc.}}{20231.5789 \text{ VPD}} \times \frac{1,000,000}{365 \text{ Days}} \times 3,000 \text{ Yrs.} = 0.63 \text{ Crash / MEV}$



**Proposed 4300 Millersport Highway Development, Town of Amherst, Erie County, NY**

Documentation of Ambient Traffic Volume Growth

Roadway	Segment starts at	Segment end at	2011	2014	2017	2020	Annual Growth (2011-2017)
Millersport Hwy	Dodge Rd	French Rd	21,085	21,812	22,592	17,931	1.16%

Figure Number: 3A 3B 4 5A 5B 6 7  
 Num of yrs 2 3

Location Number	Intersection	2022 Volumes	2024 Base Volumes		No Build Volumes		Residential				Commercial				Total Site Trips	Full Build Volumes
			1.50%	1.00%	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT				
1	New Road at Proposed Driveway															
	SR ST SL	260	268	276	5%		1		5%		2		2	2	276	
	WR WT WL															
	NR NT NL	87	90	93	6%		1						1	1	93	
	ER ET EL					6%		2	15%		4		6	6		
2	Millersport Highway at New Road															
	SR ST - New Road SL	184	190	196		1%		0		15%		4	0	6	196	
	WR WT - Millersport Highway WL	3	3	3	5%		1	2	55%		17		1	4	1313	
	NR NT - New Road NL	32	33	34	1%		0						0	3	65	
	ER ET - Millersport Highway EL	1	1	1		15%		5	40%		8		14	1	546	
	SR ST SL	61	63	65										6	65	
	WR WT WL	1219	1256	1294	15%		2						19	4	65	
	NR NT - New Road NL	3	3	3									0	3	34	
	ER ET - Millersport Highway EL	501	516	532		15%		5	40%		8		14	1	546	
	WR WT WL	61	63	65										6	65	
3	New Road at Smith Road															
	SR ST SL	1	1	1									0	1	114	
	WR WT WL	9	9	9	1%		0	0	5%		2		0	9	200	
	NR NT NL	13	13	13										13	43	
	ER ET EL	7	7	7		4%		1	5%		1		2	7	120	
	SR ST SL	108	111	114										2	114	
	WR WT WL	186	192	198	4%		0						0	9	200	
	NR NT NL	41	42	43										13	43	
	ER ET EL	69	71	73		4%		1	5%		1		2	7	75	
	WR WT WL	10	10	10										10	10	
4	Millersport Highway at Smith Road															
	SR ST - Millersport Highway SL	4	4	4		48%		17	34%		7		24	6	1509	
	WR WT - Smith Road WL	3	3	3	3%		0	0	5%		2		2	5	19	
	NR NT - Millersport Highway NL	51	53	55	48%	21%	6	2	34%		10		16	2	601	
	ER ET - Smith Road EL	20	21	22		1%		7					7	29	29	
	SR ST SL	1399	1441	1485										2	6	
	WR WT WL	17	18	19	1%		0	0					0	19	293	
	NR NT - Millersport Highway NL	551	568	585	48%	21%	6	2	34%		10		16	2	601	
	ER ET - Smith Road EL	33	34	35		1%		0					0	35	35	
	WR WT WL	4	4	4										4	4	
5	Millersport Highway at Proposed Access															
	SR ST - Millersport Highway SL	1407	1450	1494	15%		2		55%		17		19	19	1494	
	WR WT WL															
	NR NT - Millersport Highway NL	558	575	592	51%		6		39%		12		18	18	592	
	ER ET - Proposed Driveway EL					51%		18	39%		8		26	26	26	
6	Smith Road at Proposed Access															
	SR ST SL					1%		0	1%		0		1	1	1	
	WR WT WL	21	22	23	22%		2	7					2	2	23	
	NR NT NL															
	ER ET EL	57	59	61	1%		0		1%		0		0	61	61	
	WR WT WL															
7	Millersport Highway at I-990 On-Ramp															
	SR ST SL	1403	1445	1489		55%	19	5	24%		5		24	7	1513	
	WR WT WL	364	375	386		14%			10%		2		7	393	393	
	NR NT NL	638	657	677	69%		8		34%		10		18	695	695	
	ER ET EL	28	29	30										30	30	
8	Millersport Highway at I-990 Off-Ramp															
	SR ST SL	367	378	389		14%		5	10%		2		7	396	396	
	WR WT WL															
	NR NT NL	162	167	172	14%		2		10%		3		5	177	177	
	ER ET EL	36	37	38										38	38	
WR WT WL	506	521	537	55%		6		24%		7		13	550	550		



















Figure Number:                      3A                      3B                      4                      5A                      5B                      6                      7

Location Number	Intersection	2022 Volumes	Num of yrs		Residential				Commercial				Pass-by Trips	Total Site Trips	Full Build Volumes	
			2	3	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT				
			1.50%	1.00%												
1	New Road at Proposed Driveway															
	SR															
	ST	130	134	138	5%		2		5%		3			5	5	
	SL															138
	WR															
2	WT - New Road															
	WL															
	NR	297	306	315	6%		2							2	315	
	NL													2	2	
	ER					6%		2	1	15%		8		10	10	
3	ET - New Road													4	4	
	EL								5%		3			4	4	
	SR	93	96	99											99	
	ST - New Road	28	29	30		1%		0						0	30	
	SL	9	9	9		5%		1		15%		8		9	18	
4	WR	8	8	8	5%		2							2	10	
	WL	646	666	686	15%		6		55%		29			35	721	
	NL	40	41	42											42	
	NR	63	65	67											67	
	NT - New Road	76	78	80	1%		0							0	80	
5	NL	6	6	6										6	6	
	ER	3	3	3										3	3	
	ET - Millersport Highway	1204	1240	1278		15%		4		40%		21		25	1303	
	EL	213	219	226										4	226	
	SR	1	1	1											1	
6	ST	54	56	58										0	58	
	SL	20	21	22		1%		0						0	22	
	WR	33	34	35	1%		0				3			0	35	
	WT	106	109	112	4%		1		5%					4	116	
	WL	15	15	15											15	
7	NR	16	16	16											16	
	NT	114	117	121											121	
	NL	39	40	41											41	
	ER	85	88	91											91	
	ET - Smith Road	158	163	168		4%		1		5%		3		4	172	
8	EL	4	4	4										4	4	
	SR	1	1	1											1	
	ST - Millersport Highway	749	772	795		48%		11		34%		19		30	825	
	SL	6	6	6		3%		1		5%		3		4	8	
	WR	4	4	4		1%		0						0	36	
9	WT - Smith Road	34	35	36										0	36	
	WL	104	107	110											110	
	NR	207	213	219											219	
	NT - Millersport Highway	1370	1411	1454	48%		17		34%		18			36	1490	
	NL	20	21	22	21%		8							8	30	
10	ER	14	14	14		21%		5						5	19	
	ET - Smith Road	30	31	32		1%		0						0	32	
	EL	3	3	3										0	3	
	SR															
	ST - Millersport Highway	756	779	803		15%		6		55%		29		6	41	
11	SL													-6	797	
	WR															
	WT															
	WL															
	NR															
12	NT - Millersport Highway	1377	1419	1462										-12	1450	
	NL				51%		18		39%		21		12	51		
	ER					51%		12		39%		21	6	39		
	ET - Proposed Driveway					15%		4		40%		21	12	37		
	EL														37	
13	SR															
	ST					1%		0		1%		1		1	1	
	SL					22%		5						5	5	
	WR	55	57	59	22%		8							8	59	
	WT															
14	WL															
	NR															
	NT															
	NL															
	ER	47	48	49		1%		0		1%		1		1	49	
15	ET															
	EL															
	SR	656	676	696		55%		13		24%		13		26	722	
	ST	224	231	238		14%		3		10%		6		9	247	
	SL															
16	WR															
	WT															
	WL															
	NR															
	NT	1578	1626	1675	69%		25		34%		18			43	1718	
17	NL	29	30	31											31	
	ER															
	ET															
	EL															
	SR	218	225	232		14%		3		10%		6		9	241	
18	ST															
	SL															
	WR															
	WT															
	WL															
19	NR															
	NT	407	419	432	14%		5		10%		5			10	442	
	NL															
	ER	42	43	44											44	
	ET															
20	EL	1255	1293	1332	55%		20		24%		13			33	1365	

**APPENDIX C: LOS CALCULATIONS – EXISTING CONDITIONS**

Lanes, Volumes, Timings  
3: Millersport Highway & New Road

2024 Existing AM  
04/17/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	24	33	5	73	190	63	516	1	63	1256	3
Future Volume (vph)	3	24	33	5	73	190	63	516	1	63	1256	3
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925			0.904							
Flt Protected		0.998			0.999		0.950			0.950		
Satd. Flow (prot)	0	1666	0	0	1704	0	1752	3374	0	1770	3471	0
Flt Permitted		0.970			0.995		0.114			0.432		
Satd. Flow (perm)	0	1620	0	0	1697	0	210	3374	0	805	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			146							
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		1060			576			1323			1361	
Travel Time (s)		18.1			9.8			16.4			16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	9%	3%	0%	0%	1%	3%	7%	0%	2%	4%	0%
Adj. Flow (vph)	3	26	36	5	79	207	68	561	1	68	1365	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	0	291	0	68	562	0	68	1368	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	25.0		6.0	25.0	
Minimum Split (s)	48.9	48.9		48.9	48.9		11.9	31.0		11.9	31.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	40.0		15.0	40.0	
Total Split (%)	35.3%	35.3%		35.3%	35.3%		17.6%	47.1%		17.6%	47.1%	
Maximum Green (s)	24.1	24.1		24.1	24.1		9.1	34.0		9.1	34.0	
Yellow Time (s)	3.9	3.9		3.9	3.9		3.9	5.0		3.9	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.9	6.0		5.9	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Recall Mode	None	None		None	None		None	Min		None	Min	



Lanes, Volumes, Timings  
 3: Millersport Highway & New Road

2024 Existing AM  
 04/17/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	36.0	36.0		36.0	36.0			15.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		12.0			12.0		39.5	35.1		39.5	35.1	
Actuated g/C Ratio		0.18			0.18		0.59	0.53		0.59	0.53	
v/c Ratio		0.20			0.68		0.22	0.31		0.11	0.75	
Control Delay (s/veh)		15.5			22.4		7.6	12.1		6.1	19.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		15.5			22.4		7.6	12.1		6.1	19.3	
LOS		B			C		A	B		A	B	
Approach Delay (s/veh)		15.5			22.5			11.7			18.7	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		11			59		9	76		9	257	
Queue Length 95th (ft)		42			137		28	141		28	#486	
Internal Link Dist (ft)		980			496			1243			1281	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		625			723		342	1771		617	1822	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.10			0.40		0.20	0.32		0.11	0.75	

Intersection Summary























Area Type: Other  
 Cycle Length: 85  
 Actuated Cycle Length: 66.8  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay (s/veh): 17.2      Intersection LOS: B  
 Intersection Capacity Utilization 72.0%      ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Millersport Highway & New Road



Lanes, Volumes, Timings  
6: Millersport Highway & Smith Road

2024 Existing AM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	34	21	284	18	3	0	568	53	4	1441	4
Future Volume (vph)	4	34	21	284	18	3	0	568	53	4	1441	4
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		25	100		0	100		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			55			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850				0.850		0.987			
Flt Protected		0.995			0.955					0.950		
Satd. Flow (prot)	0	1844	1538	0	1791	1615	1900	3349	0	1805	3469	0
Flt Permitted		0.969			0.709					0.383		
Satd. Flow (perm)	0	1796	1538	0	1330	1615	1900	3349	0	728	3469	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			41			41		19				
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		1683			779			2581			1323	
Travel Time (s)		32.8			15.2			32.0			16.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	25%	0%	5%	1%	6%	0%	0%	7%	0%	0%	4%	25%
Adj. Flow (vph)	4	36	22	302	19	3	0	604	56	4	1533	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	22	0	321	3	0	660	0	4	1537	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	26.0	26.0		26.0	26.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	50.0	50.0		50.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%		62.5%	62.5%	
Maximum Green (s)	25.4	25.4	25.4	25.4	25.4	25.4	44.0	44.0		44.0	44.0	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6	4.6		4.6	4.6	6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	

Lanes, Volumes, Timings  
6: Millersport Highway & Smith Road

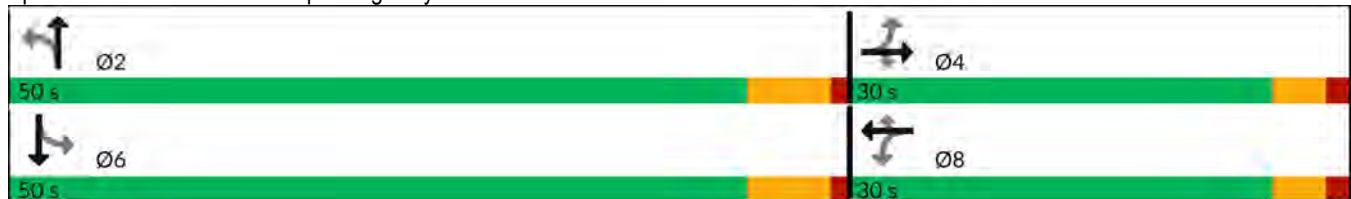
2024 Existing AM  
04/17/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		21.8	21.8		21.8	21.8		38.9		38.9	38.9	
Actuated g/C Ratio		0.30	0.30		0.30	0.30		0.54		0.54	0.54	
v/c Ratio		0.07	0.04		0.79	0.00		0.36		0.01	0.81	
Control Delay (s/veh)		19.4	3.2		40.1	0.0		9.9		8.2	18.2	
Queue Delay		0.0	0.0		0.0	0.0		0.0		0.0	0.0	
Total Delay (s/veh)		19.4	3.2		40.1	0.0		9.9		8.2	18.2	
LOS		B	A		D	A		A		A	B	
Approach Delay (s/veh)		13.7			39.7			9.9			18.2	
Approach LOS		B			D			A			B	
Queue Length 50th (ft)		14	0		143	0		86		1	303	
Queue Length 95th (ft)		35	9		#270	0		121		5	398	
Internal Link Dist (ft)		1603			699			2501			1243	
Turn Bay Length (ft)			25			25				100		
Base Capacity (vph)		655	587		485	615		2124		460	2193	
Starvation Cap Reductn		0	0		0	0		0		0	0	
Spillback Cap Reductn		0	0		0	0		0		0	0	
Storage Cap Reductn		0	0		0	0		0		0	0	
Reduced v/c Ratio		0.06	0.04		0.66	0.00		0.31		0.01	0.70	

Intersection Summary

















Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 71.7  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay (s/veh): 18.7      Intersection LOS: B  
 Intersection Capacity Utilization 77.6%      ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 6: Millersport Highway & Smith Road



Lanes, Volumes, Timings  
7: New Road & Smith Road

2024 Existing AM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	71	7	10	192	9	116	42	13	24	111	1
Future Volume (vph)	0	71	7	10	192	9	116	42	13	24	111	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.994			0.990			0.999	
Flt Protected					0.998			0.967			0.991	
Satd. Flow (prot)	0	1877	0	0	1868	0	0	1754	0	0	1866	0
Flt Permitted					0.998			0.967			0.991	
Satd. Flow (perm)	0	1877	0	0	1868	0	0	1754	0	0	1866	0
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		779			931			1347			1060	
Travel Time (s)		15.2			18.1			23.0			18.1	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	2%	5%	15%	0%	1%	0%
Adj. Flow (vph)	0	89	9	13	240	11	145	53	16	30	139	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	264	0	0	214	0	0	170	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
<b>Intersection Summary</b>												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	40.6%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	71	7	10	192	9	116	42	13	24	111	1
Future Vol, veh/h	0	71	7	10	192	9	116	42	13	24	111	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	0	0	1	0	2	5	15	0	1	0
Mvmt Flow	0	89	9	13	240	11	145	53	16	30	139	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.2	11.1	10.6	10
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	68%	0%	5%	18%
Vol Thru, %	25%	91%	91%	82%
Vol Right, %	8%	9%	4%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	171	78	211	136
LT Vol	116	0	10	24
Through Vol	42	71	192	111
RT Vol	13	7	9	1
Lane Flow Rate	214	98	264	170
Geometry Grp	1	1	1	1
Degree of Util (X)	0.312	0.143	0.372	0.247
Departure Headway (Hd)	5.258	5.286	5.079	5.223
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	686	679	712	689
Service Time	3.272	3.316	3.091	3.25
HCM Lane V/C Ratio	0.312	0.144	0.371	0.247
HCM Control Delay, s/veh	10.6	9.2	11.1	10
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.3	0.5	1.7	1

Lanes, Volumes, Timings  
 10: Millersport Highway & I-990 SB

2024 Existing AM  
 04/17/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	29	657	375	1445
Future Volume (vph)	0	0	29	657	375	1445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	95			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.881	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1805	3406	3075	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1805	3406	3075	0
Link Speed (mph)	65			55	55	
Link Distance (ft)	1332			352	2581	
Travel Time (s)	14.0			4.4	32.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	6%	5%	3%
Adj. Flow (vph)	0	0	31	706	403	1554
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	31	706	1957	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	93.3%			ICU Level of Service F		
Analysis Period (min)	15					

Lanes, Volumes, Timings  
12: Millersport Highway & I-990 NB

2024 Existing AM  
04/17/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	521	0	37	0	0	0	0	167	0	0	378	0
Future Volume (vph)	521	0	37	0	0	0	0	167	0	0	378	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr't		0.980										
Flt Protected	0.950	0.958										
Satd. Flow (prot)	1633	1612	0	0	0	0	0	3406	0	0	3438	0
Flt Permitted	0.950	0.958										
Satd. Flow (perm)	1633	1612	0	0	0	0	0	3406	0	0	3438	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36										
Link Speed (mph)		40			30			55			55	
Link Distance (ft)		1256			239			439			352	
Travel Time (s)		21.4			5.4			5.4			4.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	0%	6%	0%	0%	0%	0%	6%	0%	0%	5%	0%
Adj. Flow (vph)	554	0	39	0	0	0	0	178	0	0	402	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	299	294	0	0	0	0	0	178	0	0	402	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA						NA			NA	
Protected Phases	3	3						1			1	
Permitted Phases												
Detector Phase	3	3						1			1	
Switch Phase												
Minimum Initial (s)	6.0	6.0						10.0			10.0	
Minimum Split (s)	22.7	22.7						24.0			24.0	
Total Split (s)	50.0	50.0						40.0			40.0	
Total Split (%)	55.6%	55.6%						44.4%			44.4%	
Maximum Green (s)	45.3	45.3						34.0			34.0	
Yellow Time (s)	3.2	3.2						5.0			5.0	
All-Red Time (s)	1.5	1.5						1.0			1.0	
Lost Time Adjust (s)	0.0	0.0						0.0			0.0	
Total Lost Time (s)	4.7	4.7						6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0						4.0			4.0	
Recall Mode	None	None						Min			Min	
Act Effct Green (s)	24.3	24.3						55.0			55.0	
Actuated g/C Ratio	0.27	0.27						0.61			0.61	
v/c Ratio	0.67	0.63						0.08			0.19	

Lanes, Volumes, Timings  
 12: Millersport Highway & I-990 NB

2024 Existing AM  
 04/17/2024

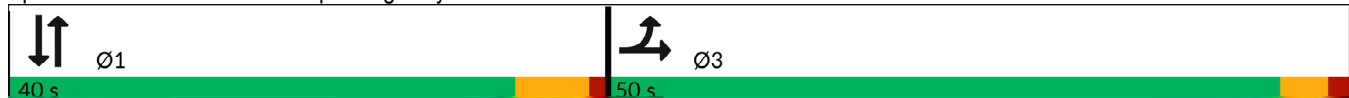


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	36.3	30.6						8.7			9.1	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay (s/veh)	36.3	30.6						8.7			9.1	
LOS	D	C						A			A	
Approach Delay (s/veh)		33.5						8.7			9.1	
Approach LOS		C						A			A	
Queue Length 50th (ft)	160	135						20			47	
Queue Length 95th (ft)	215	192						43			92	
Internal Link Dist (ft)		1176			159			359			272	
Turn Bay Length (ft)												
Base Capacity (vph)	821	829						2080			2100	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.36	0.35						0.09			0.19	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2: and 6:, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay (s/veh):	21.4
Intersection LOS:	C
Intersection Capacity Utilization:	93.3%
ICU Level of Service:	F
Analysis Period (min):	15



















Splits and Phases: 12: Millersport Highway & I-990 NB





Lanes, Volumes, Timings  
3: Millersport Highway & New Road

2024 Existing PM  
04/17/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	6	78	65	9	29	96	219	1240	3	41	666	8
Future Volume (vph)	6	78	65	9	29	96	219	1240	3	41	666	8
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.903							0.998
Flt Protected		0.998			0.997		0.950			0.950		
Satd. Flow (prot)	0	1769	0	0	1684	0	1787	3539	0	1805	3499	0
Flt Permitted		0.986			0.974		0.303			0.155		
Satd. Flow (perm)	0	1748	0	0	1645	0	570	3539	0	294	3499	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			100							2
Link Speed (mph)		40			40			55				55
Link Distance (ft)		1060			576			1323				1361
Travel Time (s)		18.1			9.8			16.4				16.9
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%	2%	0%	4%	1%	1%	2%	0%	0%	3%	0%
Adj. Flow (vph)	6	81	68	9	30	100	228	1292	3	43	694	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	0	139	0	228	1295	0	43	702	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt		NA
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	25.0		6.0	25.0	
Minimum Split (s)	48.9	48.9		48.9	48.9		11.9	31.0		11.9	31.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	40.0		15.0	40.0	
Total Split (%)	35.3%	35.3%		35.3%	35.3%		17.6%	47.1%		17.6%	47.1%	
Maximum Green (s)	24.1	24.1		24.1	24.1		9.1	34.0		9.1	34.0	
Yellow Time (s)	3.9	3.9		3.9	3.9		3.9	5.0		3.9	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.9	6.0		5.9	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Recall Mode	None	None		None	None		None	Min		None	Min	

Lanes, Volumes, Timings  
 3: Millersport Highway & New Road

2024 Existing PM  
 04/17/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	36.0	36.0		36.0	36.0			15.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		9.7			9.7		42.0	36.9		36.9	29.6	
Actuated g/C Ratio		0.15			0.15		0.64	0.56		0.56	0.45	
v/c Ratio		0.52			0.42		0.43	0.65		0.13	0.44	
Control Delay (s/veh)		25.9			14.4		7.4	14.5		5.5	13.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		25.9			14.4		7.4	14.5		5.5	13.9	
LOS		C			B		A	B		A	B	
Approach Delay (s/veh)		26.0			14.5			13.5			13.5	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		43			15		28	213		5	97	
Queue Length 95th (ft)		97			61		64	341		16	157	
Internal Link Dist (ft)		980			496			1243			1281	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		674			670		532	1974		383	1823	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.23			0.21		0.43	0.66		0.11	0.39	

Intersection Summary























Area Type: Other  
 Cycle Length: 85  
 Actuated Cycle Length: 66.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay (s/veh): 14.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 65.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 3: Millersport Highway & New Road



Lanes, Volumes, Timings  
6: Millersport Highway & Smith Road

2024 Existing PM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	31	14	107	35	4	21	1411	213	6	772	1
Future Volume (vph)	3	31	14	107	35	4	21	1411	213	6	772	1
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		25	100		0	100		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			55			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850				0.850		0.980			
Flt Protected		0.996			0.964		0.950			0.950		
Satd. Flow (prot)	0	1842	1615	0	1818	1615	1719	3477	0	1805	3505	0
Flt Permitted		0.972			0.756		0.347			0.098		
Satd. Flow (perm)	0	1797	1615	0	1426	1615	628	3477	0	186	3505	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			41			41		33				
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		1683			779			2581			1323	
Travel Time (s)		32.8			15.2			32.0			16.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	0%	1%	0%	0%	5%	2%	0%	0%	3%	0%
Adj. Flow (vph)	3	32	14	110	36	4	22	1455	220	6	796	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	14	0	146	4	22	1675	0	6	797	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	26.0	26.0		26.0	26.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	50.0	50.0		50.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%		62.5%	62.5%	
Maximum Green (s)	25.4	25.4	25.4	25.4	25.4	25.4	44.0	44.0		44.0	44.0	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6	4.6		4.6	4.6	6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	

Lanes, Volumes, Timings  
6: Millersport Highway & Smith Road

2024 Existing PM  
04/17/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		13.5	13.5		13.5	13.5	42.8	42.8		42.8	42.8	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.70	0.70		0.70	0.70	
v/c Ratio		0.08	0.03		0.46	0.01	0.05	0.68		0.04	0.32	
Control Delay (s/veh)		21.9	1.7		28.6	0.0	5.8	10.0		6.6	6.0	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		21.9	1.7		28.6	0.0	5.8	10.0		6.6	6.0	
LOS		C	A		C	A	A	B		A	A	
Approach Delay (s/veh)		16.2			27.9			10.0				6.1
Approach LOS		B			C			A				A
Queue Length 50th (ft)		12	0		53	0	3	203		1	66	
Queue Length 95th (ft)		33	3		106	0	12	360		6	120	
Internal Link Dist (ft)		1603			699			2501			1243	
Turn Bay Length (ft)			25			25	100			100		
Base Capacity (vph)		778	722		617	722	462	2567		136	2579	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.04	0.02		0.24	0.01	0.05	0.65		0.04	0.31	

Intersection Summary

















Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 61.2  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay (s/veh): 9.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 75.1%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 6: Millersport Highway & Smith Road



Lanes, Volumes, Timings  
7: New Road & Smith Road

2024 Existing PM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	163	88	15	109	34	40	117	16	21	56	1
Future Volume (vph)	4	163	88	15	109	34	40	117	16	21	56	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.953			0.971			0.988			0.998	
Fl <sub>t</sub> Protected		0.999			0.995			0.988			0.987	
Satd. Flow (prot)	0	1797	0	0	1811	0	0	1842	0	0	1847	0
Fl <sub>t</sub> Permitted		0.999			0.995			0.988			0.987	
Satd. Flow (perm)	0	1797	0	0	1811	0	0	1842	0	0	1847	0
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		779			931			1347			1060	
Travel Time (s)		15.2			18.1			23.0			18.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	1%	0%	5%	0%	0%
Adj. Flow (vph)	4	173	94	16	116	36	43	124	17	22	60	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	271	0	0	168	0	0	184	0	0	83	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.3%
	ICU Level of Service A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	163	88	15	109	34	40	117	16	21	56	1
Future Vol, veh/h	4	163	88	15	109	34	40	117	16	21	56	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	1	0	7	1	0	0	1	0	5	0	0
Mvmt Flow	4	173	94	16	116	36	43	124	17	22	60	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.1	9.5	9.9	9.2
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	2%	9%	27%
Vol Thru, %	68%	64%	69%	72%
Vol Right, %	9%	35%	22%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	255	158	78
LT Vol	40	4	15	21
Through Vol	117	163	109	56
RT Vol	16	88	34	1
Lane Flow Rate	184	271	168	83
Geometry Grp	1	1	1	1
Degree of Util (X)	0.257	0.346	0.229	0.123
Departure Headway (Hd)	5.028	4.589	4.914	5.315
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	709	779	724	667
Service Time	3.106	2.653	2.988	3.403
HCM Lane V/C Ratio	0.26	0.348	0.232	0.124
HCM Control Delay, s/veh	9.9	10.1	9.5	9.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	1	1.5	0.9	0.4

Lanes, Volumes, Timings  
 10: Millersport Highway & I-990 SB

2024 Existing PM  
 04/17/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	30	1626	231	676
Future Volume (vph)	0	0	30	1626	231	676
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	95			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.888	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1805	3574	3105	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1805	3574	3105	0
Link Speed (mph)	65			55	55	
Link Distance (ft)	1332			352	2581	
Travel Time (s)	14.0			4.4	32.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	1%	1%	4%
Adj. Flow (vph)	0	0	32	1712	243	712
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	32	1712	955	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	89.2%			ICU Level of Service E		
Analysis Period (min)	15					

Lanes, Volumes, Timings  
12: Millersport Highway & I-990 NB

2024 Existing PM  
04/17/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1293	0	43	0	0	0	0	419	0	0	225	0
Future Volume (vph)	1293	0	43	0	0	0	0	419	0	0	225	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr <sub>t</sub>		0.990										
Fl <sub>t</sub> Protected	0.950	0.955										
Satd. Flow (prot)	1681	1675	0	0	0	0	0	3574	0	0	3574	0
Fl <sub>t</sub> Permitted	0.950	0.955										
Satd. Flow (perm)	1681	1675	0	0	0	0	0	3574	0	0	3574	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36										
Link Speed (mph)		40			30			55				55
Link Distance (ft)		1256			239			439				352
Travel Time (s)		21.4			5.4			5.4				4.4
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 (%)	2%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	1347	0	45	0	0	0	0	436	0	0	234	0
Shared Lane Traffic (%)	48%											
Lane Group Flow (vph)	700	692	0	0	0	0	0	436	0	0	234	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)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA						NA				NA
Protected Phases	3	3						1				1
Permitted Phases												
Detector Phase	3	3						1				1
Switch Phase												
Minimum Initial (s)	6.0	6.0						10.0				10.0
Minimum Split (s)	22.7	22.7						24.0				24.0
Total Split (s)	50.0	50.0						40.0				40.0
Total Split (%)	55.6%	55.6%						44.4%				44.4%
Maximum Green (s)	45.3	45.3						34.0				34.0
Yellow Time (s)	3.2	3.2						5.0				5.0
All-Red Time (s)	1.5	1.5						1.0				1.0
Lost Time Adjust (s)	0.0	0.0						0.0				0.0
Total Lost Time (s)	4.7	4.7						6.0				6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0						4.0				4.0
Recall Mode	None	None						Min				Min
Act Effct Green (s)	45.9	45.9						33.4				33.4
Actuated g/C Ratio	0.51	0.51						0.37				0.37
v/c Ratio	0.81	0.79						0.32				0.17



Lanes, Volumes, Timings  
 12: Millersport Highway & I-990 NB

2024 Existing PM  
 04/17/2024

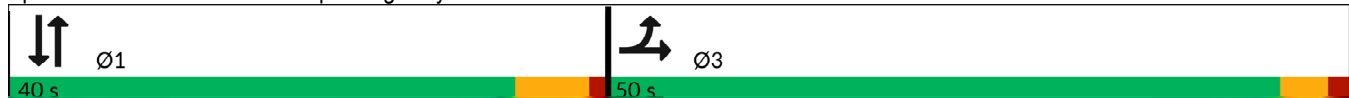


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	26.4	23.8						22.8			21.4	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay (s/veh)	26.4	23.8						22.8			21.4	
LOS	C	C						C			C	
Approach Delay (s/veh)		25.2						22.8			21.4	
Approach LOS		C						C			C	
Queue Length 50th (ft)	328	303						93			46	
Queue Length 95th (ft)	374	349						156			87	
Internal Link Dist (ft)		1176			159			359			272	
Turn Bay Length (ft)												
Base Capacity (vph)	898	912						1436			1436	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.78	0.76						0.30			0.16	

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2: and 6:, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay (s/veh): 24.2      Intersection LOS: C  
 Intersection Capacity Utilization 89.2%      ICU Level of Service E  
 Analysis Period (min) 15



















Splits and Phases: 12: Millersport Highway & I-990 NB



## **APPENDIX D: LOS CALCULATIONS – BACKGROUND CONDITIONS**

Lanes, Volumes, Timings  
3: Millersport Highway & New Road

2027 Background AM  
04/17/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	25	34	5	75	196	65	532	1	65	1294	3
Future Volume (vph)	3	25	34	5	75	196	65	532	1	65	1294	3
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925			0.904							
Flt Protected		0.998			0.999		0.950			0.950		
Satd. Flow (prot)	0	1666	0	0	1704	0	1752	3374	0	1770	3471	0
Flt Permitted		0.968			0.995		0.115			0.417		
Satd. Flow (perm)	0	1616	0	0	1697	0	212	3374	0	777	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			145							
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		1060			576			1323			1361	
Travel Time (s)		18.1			9.8			16.4			16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	9%	3%	0%	0%	1%	3%	7%	0%	2%	4%	0%
Adj. Flow (vph)	3	27	37	5	82	213	71	578	1	71	1407	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	300	0	71	579	0	71	1410	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	25.0		6.0	25.0	
Minimum Split (s)	48.9	48.9		48.9	48.9		11.9	31.0		11.9	31.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	40.0		15.0	40.0	
Total Split (%)	35.3%	35.3%		35.3%	35.3%		17.6%	47.1%		17.6%	47.1%	
Maximum Green (s)	24.1	24.1		24.1	24.1		9.1	34.0		9.1	34.0	
Yellow Time (s)	3.9	3.9		3.9	3.9		3.9	5.0		3.9	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.9	6.0		5.9	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Recall Mode	None	None		None	None		None	Min		None	Min	

Lanes, Volumes, Timings  
 3: Millersport Highway & New Road

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	36.0	36.0		36.0	36.0			15.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		12.4			12.4		40.8	34.8		40.8	34.8	
Actuated g/C Ratio		0.18			0.18		0.58	0.50		0.58	0.50	
v/c Ratio		0.21			0.71		0.24	0.34		0.12	0.81	
Control Delay (s/veh)		15.3			24.3		8.0	13.4		6.2	22.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		15.3			24.3		8.0	13.4		6.2	22.8	
LOS		B			C		A	B		A	C	
Approach Delay (s/veh)		15.3			24.4			12.9			22.0	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		11			63		9	81		9	276	
Queue Length 95th (ft)		42			144		30	148		30	#519	
Internal Link Dist (ft)		980			496			1243			1281	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		595			693		332	1682		597	1730	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.11			0.43		0.21	0.34		0.12	0.82	

Intersection Summary

Area Type: Other  
 Cycle Length: 85  
 Actuated Cycle Length: 69.8  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay (s/veh): 19.7      Intersection LOS: B  
 Intersection Capacity Utilization 73.5%      ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Millersport Highway & New Road



Lanes, Volumes, Timings  
6: Millersport Highway & Smith Road

2027 Background AM  
04/17/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↕↗		↖	↕↗	
Traffic Volume (vph)	4	35	22	293	19	3	0	585	55	4	1485	4
Future Volume (vph)	4	35	22	293	19	3	0	585	55	4	1485	4
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		25	100		0	100		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			55			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.987				
Flt Protected		0.995			0.955					0.950		
Satd. Flow (prot)	0	1845	1538	0	1791	1615	1900	3349	0	1805	3469	0
Flt Permitted		0.969			0.709					0.371		
Satd. Flow (perm)	0	1797	1538	0	1330	1615	1900	3349	0	705	3469	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			41			41		20				
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		1683			779			2581			1323	
Travel Time (s)		32.8			15.2			32.0			16.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	25%	0%	5%	1%	6%	0%	0%	7%	0%	0%	4%	25%
Adj. Flow (vph)	4	37	23	312	20	3	0	622	59	4	1580	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	23	0	332	3	0	681	0	4	1584	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	26.0	26.0		26.0	26.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	50.0	50.0		50.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%		62.5%	62.5%	
Maximum Green (s)	25.4	25.4	25.4	25.4	25.4	25.4	44.0	44.0		44.0	44.0	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6	4.6		4.6	4.6	6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	

Lanes, Volumes, Timings  
6: Millersport Highway & Smith Road

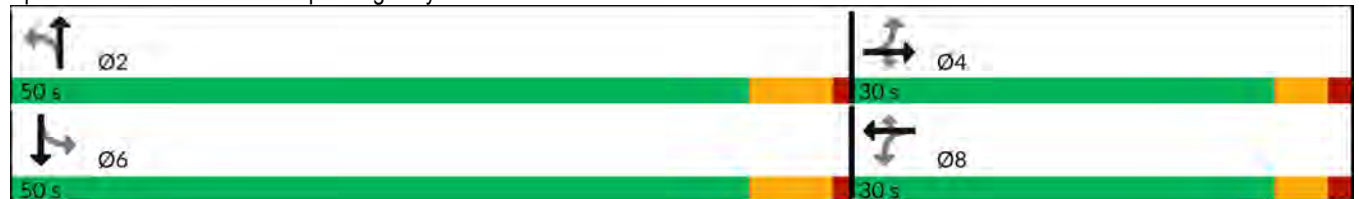
2027 Background AM  
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		22.3	22.3		22.3	22.3		39.7		39.7	39.7	
Actuated g/C Ratio		0.31	0.31		0.31	0.31		0.54		0.54	0.54	
v/c Ratio		0.07	0.04		0.81	0.00		0.37		0.01	0.83	
Control Delay (s/veh)		19.5	3.4		42.3	0.0		10.0		8.2	19.3	
Queue Delay		0.0	0.0		0.0	0.0		0.0		0.0	0.0	
Total Delay (s/veh)		19.5	3.4		42.3	0.0		10.0		8.2	19.3	
LOS		B	A		D	A		B		A	B	
Approach Delay (s/veh)		13.7			42.0			10.1			19.3	
Approach LOS		B			D			B			B	
Queue Length 50th (ft)		14	0		149	0		90		1	320	
Queue Length 95th (ft)		36	9		#284	0		125		5	420	
Internal Link Dist (ft)		1603			699			2501			1243	
Turn Bay Length (ft)			25			25				100		
Base Capacity (vph)		641	576		475	603		2079		436	2146	
Starvation Cap Reductn		0	0		0	0		0		0	0	
Spillback Cap Reductn		0	0		0	0		0		0	0	
Storage Cap Reductn		0	0		0	0		0		0	0	
Reduced v/c Ratio		0.06	0.04		0.70	0.00		0.33		0.01	0.74	

Intersection Summary

















Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 72.9  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay (s/veh): 19.7      Intersection LOS: B  
 Intersection Capacity Utilization 79.4%      ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 6: Millersport Highway & Smith Road



Lanes, Volumes, Timings  
7: New Road & Smith Road

2027 Background AM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	73	7	10	198	9	120	43	13	25	114	1
Future Volume (vph)	0	73	7	10	198	9	120	43	13	25	114	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.995			0.990			0.999	
Flt Protected					0.998			0.967			0.991	
Satd. Flow (prot)	0	1877	0	0	1870	0	0	1754	0	0	1866	0
Flt Permitted					0.998			0.967			0.991	
Satd. Flow (perm)	0	1877	0	0	1870	0	0	1754	0	0	1866	0
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		779			931			1347			1060	
Travel Time (s)		15.2			18.1			23.0			18.1	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	2%	5%	15%	0%	1%	0%
Adj. Flow (vph)	0	91	9	13	248	11	150	54	16	31	143	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	272	0	0	220	0	0	175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.2%
ICU Level of Service	A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	73	7	10	198	9	120	43	13	25	114	1
Future Vol, veh/h	0	73	7	10	198	9	120	43	13	25	114	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	0	0	1	0	2	5	15	0	1	0
Mvmt Flow	0	91	9	13	248	11	150	54	16	31	143	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.3	11.3	10.9	10.1
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	68%	0%	5%	18%
Vol Thru, %	24%	91%	91%	81%
Vol Right, %	7%	9%	4%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	176	80	217	140
LT Vol	120	0	10	25
Through Vol	43	73	198	114
RT Vol	13	7	9	1
Lane Flow Rate	220	100	271	175
Geometry Grp	1	1	1	1
Degree of Util (X)	0.324	0.148	0.387	0.256
Departure Headway (Hd)	5.294	5.342	5.136	5.272
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	680	671	705	681
Service Time	3.324	3.377	3.136	3.304
HCM Lane V/C Ratio	0.324	0.149	0.384	0.257
HCM Control Delay, s/veh	10.9	9.3	11.3	10.1
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.4	0.5	1.8	1



Lanes, Volumes, Timings  
 10: Millersport Highway & I-990 SB



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	30	677	386	1489
Future Volume (vph)	0	0	30	677	386	1489
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	95			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.881	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1805	3406	3075	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1805	3406	3075	0
Link Speed (mph)	65			55	55	
Link Distance (ft)	1332			352	2581	
Travel Time (s)	14.0			4.4	32.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	6%	5%	3%
Adj. Flow (vph)	0	0	32	728	415	1601
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	32	728	2016	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	95.5%			ICU Level of Service F		
Analysis Period (min)	15					

Lanes, Volumes, Timings  
12: Millersport Highway & I-990 NB

2027 Background AM  
04/17/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	537	0	38	0	0	0	0	172	0	0	389	0
Future Volume (vph)	537	0	38	0	0	0	0	172	0	0	389	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr <sub>t</sub>		0.980										
Fl <sub>t</sub> Protected	0.950	0.958										
Satd. Flow (prot)	1633	1612	0	0	0	0	0	3406	0	0	3438	0
Fl <sub>t</sub> Permitted	0.950	0.958										
Satd. Flow (perm)	1633	1612	0	0	0	0	0	3406	0	0	3438	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36										
Link Speed (mph)		40			30			55				55
Link Distance (ft)		1256			239			439				352
Travel Time (s)		21.4			5.4			5.4				4.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	0%	6%	0%	0%	0%	0%	6%	0%	0%	5%	0%
Adj. Flow (vph)	571	0	40	0	0	0	0	183	0	0	414	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	308	303	0	0	0	0	0	183	0	0	414	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)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA						NA				NA
Protected Phases	3	3						1				1
Permitted Phases												
Detector Phase	3	3						1				1
Switch Phase												
Minimum Initial (s)	6.0	6.0						10.0				10.0
Minimum Split (s)	22.7	22.7						24.0				24.0
Total Split (s)	50.0	50.0						40.0				40.0
Total Split (%)	55.6%	55.6%						44.4%				44.4%
Maximum Green (s)	45.3	45.3						34.0				34.0
Yellow Time (s)	3.2	3.2						5.0				5.0
All-Red Time (s)	1.5	1.5						1.0				1.0
Lost Time Adjust (s)	0.0	0.0						0.0				0.0
Total Lost Time (s)	4.7	4.7						6.0				6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0						4.0				4.0
Recall Mode	None	None						Min				Min
Act Effct Green (s)	24.8	24.8						54.5				54.5
Actuated g/C Ratio	0.28	0.28						0.61				0.61
v/c Ratio	0.68	0.64						0.08				0.19

Lanes, Volumes, Timings  
 12: Millersport Highway & I-990 NB

2027 Background AM  
 04/17/2024

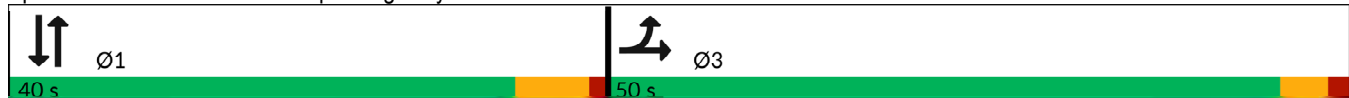


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	36.1	30.5						8.9			9.4	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay (s/veh)	36.1	30.5						8.9			9.4	
LOS	D	C						A			A	
Approach Delay (s/veh)		33.4						9.0			9.4	
Approach LOS		C						A			A	
Queue Length 50th (ft)	164	140						21			50	
Queue Length 95th (ft)	220	196						45			95	
Internal Link Dist (ft)		1176			159			359			272	
Turn Bay Length (ft)												
Base Capacity (vph)	821	829						2061			2080	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.38	0.37						0.09			0.20	

Intersection Summary



















Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2: and 6:, Start of Green  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay (s/veh): 21.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 95.5%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 12: Millersport Highway & I-990 NB



Lanes, Volumes, Timings  
3: Millersport Highway & New Road

2027 Background AM  
04/17/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	6	80	67	9	30	99	226	1278	3	42	686	8
Future Volume (vph)	6	80	67	9	30	99	226	1278	3	42	686	8
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.903							0.998
Flt Protected		0.998			0.997		0.950			0.950		
Satd. Flow (prot)	0	1769	0	0	1684	0	1787	3539	0	1805	3499	0
Flt Permitted		0.987			0.975		0.290			0.144		
Satd. Flow (perm)	0	1749	0	0	1647	0	546	3539	0	274	3499	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			103							2
Link Speed (mph)		40			40			55				55
Link Distance (ft)		1060			576			1323				1361
Travel Time (s)		18.1			9.8			16.4				16.9
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%	2%	0%	4%	1%	1%	2%	0%	0%	3%	0%
Adj. Flow (vph)	6	83	70	9	31	103	235	1331	3	44	715	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	143	0	235	1334	0	44	723	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt		NA
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	25.0		6.0	25.0	
Minimum Split (s)	48.9	48.9		48.9	48.9		11.9	31.0		11.9	31.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	40.0		15.0	40.0	
Total Split (%)	35.3%	35.3%		35.3%	35.3%		17.6%	47.1%		17.6%	47.1%	
Maximum Green (s)	24.1	24.1		24.1	24.1		9.1	34.0		9.1	34.0	
Yellow Time (s)	3.9	3.9		3.9	3.9		3.9	5.0		3.9	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.9	6.0		5.9	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Recall Mode	None	None		None	None		None	Min		None	Min	

Lanes, Volumes, Timings  
 3: Millersport Highway & New Road

2027 Background AM  
 04/17/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	36.0	36.0		36.0	36.0			15.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		9.9			9.9		42.1	36.9		36.9	29.6	
Actuated g/C Ratio		0.15			0.15		0.63	0.56		0.56	0.45	
v/c Ratio		0.53			0.42		0.46	0.67		0.13	0.46	
Control Delay (s/veh)		26.1			14.3		7.8	15.0		5.7	14.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		26.1			14.3		7.8	15.0		5.7	14.2	
LOS		C			B		A	B		A	B	
Approach Delay (s/veh)		26.2			14.4			14.0			13.7	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		44			15		30	225		5	102	
Queue Length 95th (ft)		100			62		66	358		16	163	
Internal Link Dist (ft)		980			496			1243			1281	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		672			671		518	1971		373	1818	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.24			0.21		0.45	0.68		0.12	0.40	

Intersection Summary























Area Type: Other  
 Cycle Length: 85  
 Actuated Cycle Length: 66.3  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay (s/veh): 14.7  
 Intersection Capacity Utilization 66.8%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 3: Millersport Highway & New Road



Lanes, Volumes, Timings  
6: Millersport Highway & Smith Road

2027 Background AM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	32	14	110	36	4	22	1454	219	6	795	1
Future Volume (vph)	3	32	14	110	36	4	22	1454	219	6	795	1
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		25	100		0	100		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			55			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.980				
Flt Protected		0.996			0.964		0.950			0.950		
Satd. Flow (prot)	0	1842	1615	0	1818	1615	1719	3477	0	1805	3505	0
Flt Permitted		0.977			0.756		0.329			0.094		
Satd. Flow (perm)	0	1807	1615	0	1426	1615	595	3477	0	179	3505	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			41			41		33				
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		1683			779			2581			1323	
Travel Time (s)		32.8			15.2			32.0			16.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	0%	1%	0%	0%	5%	2%	0%	0%	3%	0%
Adj. Flow (vph)	3	33	14	113	37	4	23	1499	226	6	820	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	14	0	150	4	23	1725	0	6	821	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	26.0	26.0		26.0	26.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	50.0	50.0		50.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%		62.5%	62.5%	
Maximum Green (s)	25.4	25.4	25.4	25.4	25.4	25.4	44.0	44.0		44.0	44.0	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6	4.6		4.6	4.6	6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	

Lanes, Volumes, Timings  
 6: Millersport Highway & Smith Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		13.6	13.6		13.6	13.6	42.7	42.7		42.7	42.7	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.64	0.64		0.64	0.64	
v/c Ratio		0.09	0.03		0.51	0.01	0.06	0.77		0.05	0.36	
Control Delay (s/veh)		22.1	1.7		30.6	0.0	6.0	12.1		7.0	6.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		22.1	1.7		30.6	0.0	6.0	12.1		7.0	6.6	
LOS		C	A		C	A	A	B		A	A	
Approach Delay (s/veh)		16.5			29.9			12.1				6.7
Approach LOS		B			C			B				A
Queue Length 50th (ft)		12	0		57	0	3	216		1	70	
Queue Length 95th (ft)		34	3		108	0	13	386		6	125	
Internal Link Dist (ft)		1603			699			2501			1243	
Turn Bay Length (ft)			25			25	100			100		
Base Capacity (vph)		689	641		544	641	394	2314		118	2322	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.05	0.02		0.28	0.01	0.06	0.75		0.05	0.35	

**Intersection Summary**

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 67

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay (s/veh): 11.5      Intersection LOS: B

Intersection Capacity Utilization 76.5%      ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Millersport Highway & Smith Road



Lanes, Volumes, Timings  
7: New Road & Smith Road

2027 Background AM  
04/17/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	168	91	15	112	35	41	121	16	22	58	1
Future Volume (vph)	4	168	91	15	112	35	41	121	16	22	58	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.971			0.988			0.998	
Flt Protected		0.999			0.995			0.989			0.987	
Satd. Flow (prot)	0	1797	0	0	1811	0	0	1844	0	0	1847	0
Flt Permitted		0.999			0.995			0.989			0.987	
Satd. Flow (perm)	0	1797	0	0	1811	0	0	1844	0	0	1847	0
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		779			931			1347			1060	
Travel Time (s)		15.2			18.1			23.0			18.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	1%	0%	5%	0%	0%
Adj. Flow (vph)	4	179	97	16	119	37	44	129	17	23	62	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	280	0	0	172	0	0	190	0	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.9%
ICU Level of Service	A
Analysis Period (min)	15



Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	168	91	15	112	35	41	121	16	22	58	1
Future Vol, veh/h	4	168	91	15	112	35	41	121	16	22	58	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	1	0	7	1	0	0	1	0	5	0	0
Mvmt Flow	4	179	97	16	119	37	44	129	17	23	62	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.3	9.6	10	9.3
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	2%	9%	27%
Vol Thru, %	68%	64%	69%	72%
Vol Right, %	9%	35%	22%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	263	162	81
LT Vol	41	4	15	22
Through Vol	121	168	112	58
RT Vol	16	91	35	1
Lane Flow Rate	189	280	172	86
Geometry Grp	1	1	1	1
Degree of Util (X)	0.267	0.359	0.237	0.128
Departure Headway (Hd)	5.067	4.62	4.951	5.358
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	772	719	661
Service Time	3.152	2.69	3.031	3.457
HCM Lane V/C Ratio	0.269	0.363	0.239	0.13
HCM Control Delay, s/veh	10	10.3	9.6	9.3
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	1.1	1.6	0.9	0.4

Lanes, Volumes, Timings  
 10: Millersport Highway & I-990 SB



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	31	1675	238	696
Future Volume (vph)	0	0	31	1675	238	696
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	95			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.888	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1805	3574	3105	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1805	3574	3105	0
Link Speed (mph)	65			55	55	
Link Distance (ft)	1332			352	2581	
Travel Time (s)	14.0			4.4	32.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	1%	1%	4%
Adj. Flow (vph)	0	0	33	1763	251	733
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	33	1763	984	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	91.5%			ICU Level of Service F		
Analysis Period (min)	15					

Lanes, Volumes, Timings  
12: Millersport Highway & I-990 NB

2027 Background AM  
04/17/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1332	0	44	0	0	0	0	432	0	0	232	0
Future Volume (vph)	1332	0	44	0	0	0	0	432	0	0	232	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr't		0.990										
Flt Protected	0.950	0.955										
Satd. Flow (prot)	1681	1675	0	0	0	0	0	3574	0	0	3574	0
Flt Permitted	0.950	0.955										
Satd. Flow (perm)	1681	1675	0	0	0	0	0	3574	0	0	3574	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36										
Link Speed (mph)		40			30			55			55	
Link Distance (ft)		1256			239			439			352	
Travel Time (s)		21.4			5.4			5.4			4.4	
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 (%)	2%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	1388	0	46	0	0	0	0	450	0	0	242	0
Shared Lane Traffic (%)	48%											
Lane Group Flow (vph)	722	712	0	0	0	0	0	450	0	0	242	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA						NA			NA	
Protected Phases	3	3						1			1	
Permitted Phases												
Detector Phase	3	3						1			1	
Switch Phase												
Minimum Initial (s)	6.0	6.0						10.0			10.0	
Minimum Split (s)	22.7	22.7						24.0			24.0	
Total Split (s)	50.0	50.0						40.0			40.0	
Total Split (%)	55.6%	55.6%						44.4%			44.4%	
Maximum Green (s)	45.3	45.3						34.0			34.0	
Yellow Time (s)	3.2	3.2						5.0			5.0	
All-Red Time (s)	1.5	1.5						1.0			1.0	
Lost Time Adjust (s)	0.0	0.0						0.0			0.0	
Total Lost Time (s)	4.7	4.7						6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0						4.0			4.0	
Recall Mode	None	None						Min			Min	
Act Effct Green (s)	47.2	47.2						32.1			32.1	
Actuated g/C Ratio	0.52	0.52						0.36			0.36	
v/c Ratio	0.82	0.79						0.35			0.18	

Lanes, Volumes, Timings  
 12: Millersport Highway & I-990 NB

2027 Background AM  
 04/17/2024

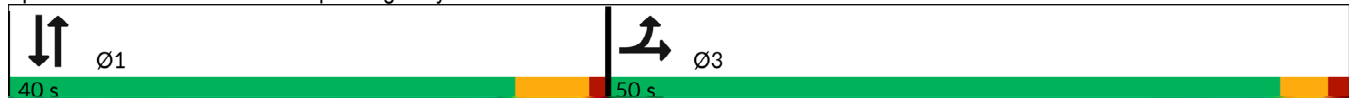


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	25.8	23.3						23.7			22.2	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay (s/veh)	25.8	23.3						23.7			22.2	
LOS	C	C						C			C	
Approach Delay (s/veh)		24.6						23.8			22.2	
Approach LOS		C						C			C	
Queue Length 50th (ft)	340	312						97			49	
Queue Length 95th (ft)	403	375						160			89	
Internal Link Dist (ft)		1176			159			359			272	
Turn Bay Length (ft)												
Base Capacity (vph)	911	924						1415			1415	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.79	0.77						0.32			0.17	

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2: and 6:, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay (s/veh): 24.2      Intersection LOS: C  
 Intersection Capacity Utilization 91.5%      ICU Level of Service F  
 Analysis Period (min) 15



















Splits and Phases: 12: Millersport Highway & I-990 NB



## **APPENDIX E: LOS CALCULATIONS – FULL BUILD CONDITIONS**

Lanes, Volumes, Timings  
1: Millersport Highway & New Road

2027 Full AM  
04/17/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	25	34	11	75	196	65	546	1	65	1313	4
Future Volume (vph)	3	25	34	11	75	196	65	546	1	65	1313	4
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925			0.906							
Flt Protected		0.998			0.998		0.950			0.950		
Satd. Flow (prot)	0	1666	0	0	1706	0	1752	3374	0	1770	3472	0
Flt Permitted		0.975			0.986		0.115			0.406		
Satd. Flow (perm)	0	1628	0	0	1686	0	212	3374	0	756	3472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			134							
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		1060			576			732			1361	
Travel Time (s)		18.1			9.8			9.1			16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	9%	3%	0%	0%	1%	3%	7%	0%	2%	4%	0%
Adj. Flow (vph)	3	27	37	12	82	213	71	593	1	71	1427	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	307	0	71	594	0	71	1431	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	25.0		6.0	25.0	
Minimum Split (s)	48.9	48.9		48.9	48.9		11.9	31.0		11.9	31.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	40.0		15.0	40.0	
Total Split (%)	35.3%	35.3%		35.3%	35.3%		17.6%	47.1%		17.6%	47.1%	
Maximum Green (s)	24.1	24.1		24.1	24.1		9.1	34.0		9.1	34.0	
Yellow Time (s)	3.9	3.9		3.9	3.9		3.9	5.0		3.9	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.9	6.0		5.9	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Recall Mode	None	None		None	None		None	Min		None	Min	

Lanes, Volumes, Timings  
 1: Millersport Highway & New Road

2027 Full AM  
 04/17/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	36.0	36.0		36.0	36.0			15.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		13.3			13.3		40.9	34.8		40.9	34.8	
Actuated g/C Ratio		0.19			0.19		0.58	0.49		0.58	0.49	
v/c Ratio		0.20			0.72		0.24	0.35		0.12	0.83	
Control Delay (s/veh)		14.9			25.7		8.3	13.9		6.6	24.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		14.9			25.7		8.3	13.9		6.6	24.3	
LOS		B			C		A	B		A	C	
Approach Delay (s/veh)		14.9			25.8			13.4			23.5	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		11			72		10	85		10	290	
Queue Length 95th (ft)		42			155		31	156		31	#544	
Internal Link Dist (ft)		980			496			652			1281	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		593			676		328	1662		580	1711	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.11			0.45		0.22	0.36		0.12	0.84	

Intersection Summary

Area Type: Other  
 Cycle Length: 85  
 Actuated Cycle Length: 70.7  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay (s/veh): 20.9      Intersection LOS: C  
 Intersection Capacity Utilization 76.3%      ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Millersport Highway & New Road



Lanes, Volumes, Timings  
2: New Road & Smith Road

2027 Full AM  
04/17/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	75	7	10	200	9	120	43	13	25	114	1
Future Volume (vph)	0	75	7	10	200	9	120	43	13	25	114	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.995			0.990			0.999	
Flt Protected					0.998			0.967			0.991	
Satd. Flow (prot)	0	1877	0	0	1870	0	0	1754	0	0	1866	0
Flt Permitted					0.998			0.967			0.991	
Satd. Flow (perm)	0	1877	0	0	1870	0	0	1754	0	0	1866	0
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		779			931			1347			1060	
Travel Time (s)		15.2			18.1			23.0			18.1	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	2%	5%	15%	0%	1%	0%
Adj. Flow (vph)	0	94	9	13	250	11	150	54	16	31	143	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	274	0	0	220	0	0	175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.3%
ICU Level of Service	A
Analysis Period (min)	15



Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	75	7	10	200	9	120	43	13	25	114	1
Future Vol, veh/h	0	75	7	10	200	9	120	43	13	25	114	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	0	0	1	0	2	5	15	0	1	0
Mvmt Flow	0	94	9	13	250	11	150	54	16	31	143	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.4	11.4	10.9	10.2
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	68%	0%	5%	18%
Vol Thru, %	24%	91%	91%	81%
Vol Right, %	7%	9%	4%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	176	82	219	140
LT Vol	120	0	10	25
Through Vol	43	75	200	114
RT Vol	13	7	9	1
Lane Flow Rate	220	103	274	175
Geometry Grp	1	1	1	1
Degree of Util (X)	0.325	0.152	0.391	0.257
Departure Headway (Hd)	5.311	5.352	5.145	5.289
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	678	669	704	679
Service Time	3.34	3.387	3.145	3.321
HCM Lane V/C Ratio	0.324	0.154	0.389	0.258
HCM Control Delay, s/veh	10.9	9.4	11.4	10.2
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.4	0.5	1.9	1

Lanes, Volumes, Timings  
3: Millersport Highway & Smith Road

2027 Full AM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	35	29	293	19	5	2	601	55	6	1509	4
Future Volume (vph)	4	35	29	293	19	5	2	601	55	6	1509	4
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		25	100		0	100		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			55			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.987				
Flt Protected		0.995			0.955		0.950			0.950		
Satd. Flow (prot)	0	1845	1538	0	1791	1615	1805	3348	0	1805	3469	0
Flt Permitted		0.969			0.709		0.100			0.363		
Satd. Flow (perm)	0	1797	1538	0	1330	1615	190	3348	0	690	3469	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			41			41		19				
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		938			779			2581			591	
Travel Time (s)		18.3			15.2			32.0			7.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	25%	0%	5%	1%	6%	0%	0%	7%	0%	0%	4%	25%
Adj. Flow (vph)	4	37	31	312	20	5	2	639	59	6	1605	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	31	0	332	5	2	698	0	6	1609	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	26.0	26.0		26.0	26.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	50.0	50.0		50.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%		62.5%	62.5%	
Maximum Green (s)	25.4	25.4	25.4	25.4	25.4	25.4	44.0	44.0		44.0	44.0	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6	4.6		4.6	4.6	6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	

Lanes, Volumes, Timings  
 3: Millersport Highway & Smith Road

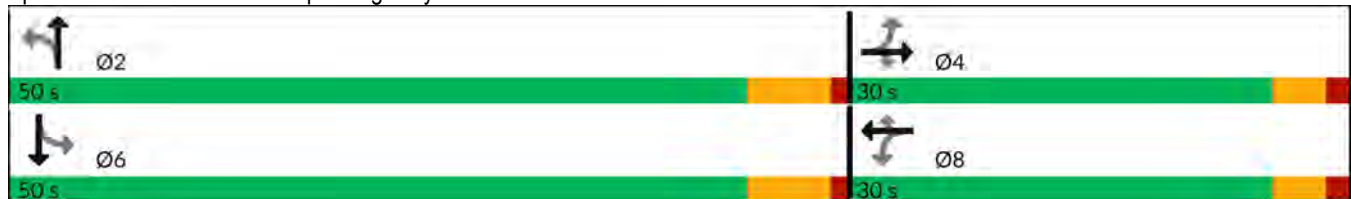
2027 Full AM  
 04/17/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		22.4	22.4		22.4	22.4	40.2	40.2		40.2	40.2	
Actuated g/C Ratio		0.30	0.30		0.30	0.30	0.55	0.55		0.55	0.55	
v/c Ratio		0.07	0.06		0.81	0.00	0.01	0.37		0.01	0.84	
Control Delay (s/veh)		19.5	5.5		42.8	0.0	9.0	10.1		8.3	19.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		19.5	5.5		42.8	0.0	9.0	10.1		8.3	19.8	
LOS		B	A		D	A	A	B		A	B	
Approach Delay (s/veh)		13.5			42.2			10.2			19.8	
Approach LOS		B			D			B			B	
Queue Length 50th (ft)		14	0		149	0	0	93		1	329	
Queue Length 95th (ft)		36	15		#284	0	4	130		7	433	
Internal Link Dist (ft)		858			699			2501			511	
Turn Bay Length (ft)			25			25	100			100		
Base Capacity (vph)		635	570		470	597	116	2056		422	2123	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.06	0.05		0.71	0.01	0.02	0.34		0.01	0.76	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 73.5  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay (s/veh): 19.9      Intersection LOS: B  
 Intersection Capacity Utilization 80.1%      ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Millersport Highway & Smith Road



Lanes, Volumes, Timings  
 4: Millersport Highway & Proposed Access

2027 Full AM  
 04/17/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	26	18	592	1494	19
Future Volume (vph)	14	26	18	592	1494	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150			250
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1805	3374	3471	1615
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1805	3374	3471	1615
Link Speed (mph)	30			55	55	
Link Distance (ft)	1189			591	732	
Travel Time (s)	15.0			7.3	9.1	
Peak Hour Factor	0.80	0.80	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	7%	4%	0%
Adj. Flow (vph)	18	33	19	630	1589	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	33	19	630	1589	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↕↕	↕↕	↗
Traffic Vol, veh/h	14	26	18	592	1494	19
Future Vol, veh/h	14	26	18	592	1494	19
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	0	150	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	94	94	94	94
Heavy Vehicles, %	0	0	0	7	4	0
Mvmt Flow	18	33	19	630	1589	20

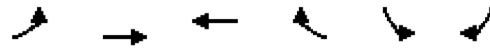
Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1943	795	1610	0	0
Stage 1	1589	-	-	-	-
Stage 2	353	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	58	335	411	-	-
Stage 1	156	-	-	-	-
Stage 2	688	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	56	335	411	-	-
Mov Cap-2 Maneuver	125	-	-	-	-
Stage 1	149	-	-	-	-
Stage 2	688	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	24.45	0.42	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	411	-	125	335	-	-
HCM Lane V/C Ratio	0.047	-	0.14	0.097	-	-
HCM Control Delay (s/veh)	14.2	-	38.5	16.9	-	-
HCM Lane LOS	B	-	E	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.3	-	-

Lanes, Volumes, Timings  
5: Smith Road & Proposed Access

2027 Full AM  
04/17/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	0	61	23	2	7	1
Future Volume (vph)	0	61	23	2	7	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.987		0.986	
Flt Protected					0.957	
Satd. Flow (prot)	0	1827	1810	0	1793	0
Flt Permitted					0.957	
Satd. Flow (perm)	0	1827	1810	0	1793	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		745	938		1373	
Travel Time (s)		14.5	18.3		16.5	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	4%	4%	0%	0%	0%
Adj. Flow (vph)	0	76	29	3	9	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	32	0	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

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

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	61	23	2	7	1
Future Vol, veh/h	0	61	23	2	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	4	4	0	0	0
Mvmt Flow	0	76	29	3	9	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	31	0	-	0	106 30
Stage 1	-	-	-	-	30 -
Stage 2	-	-	-	-	76 -
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	1594	-	-	-	896 1050
Stage 1	-	-	-	-	998 -
Stage 2	-	-	-	-	952 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1594	-	-	-	896 1050
Mov Cap-2 Maneuver	-	-	-	-	896 -
Stage 1	-	-	-	-	998 -
Stage 2	-	-	-	-	952 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.99
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1594	-	-	-	913
HCM Lane V/C Ratio	-	-	-	-	0.011
HCM Control Delay (s/veh)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lanes, Volumes, Timings  
 6: Millersport Highway & I-990 SB

2027 Full AM  
 04/17/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	30	695	393	1513
Future Volume (vph)	0	0	30	695	393	1513
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	95			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.881	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1805	3406	3075	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1805	3406	3075	0
Link Speed (mph)	65			55	55	
Link Distance (ft)	1332			352	2581	
Travel Time (s)	14.0			4.4	32.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	6%	5%	3%
Adj. Flow (vph)	0	0	32	747	423	1627
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	32	747	2050	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	96.8%			ICU Level of Service F		
Analysis Period (min)	15					



Lanes, Volumes, Timings  
7: Millersport Highway & I-990 NB

2027 Full AM  
04/17/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	550	0	38	0	0	0	0	177	0	0	396	0
Future Volume (vph)	550	0	38	0	0	0	0	177	0	0	396	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr't		0.981										
Flt Protected	0.950	0.958										
Satd. Flow (prot)	1633	1614	0	0	0	0	0	3406	0	0	3438	0
Flt Permitted	0.950	0.958										
Satd. Flow (perm)	1633	1614	0	0	0	0	0	3406	0	0	3438	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36										
Link Speed (mph)		40			30			55			55	
Link Distance (ft)		1256			239			439			352	
Travel Time (s)		21.4			5.4			5.4			4.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	0%	6%	0%	0%	0%	0%	6%	0%	0%	5%	0%
Adj. Flow (vph)	585	0	40	0	0	0	0	188	0	0	421	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	316	309	0	0	0	0	0	188	0	0	421	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA						NA			NA	
Protected Phases	3	3						1			1	
Permitted Phases												
Detector Phase	3	3						1			1	
Switch Phase												
Minimum Initial (s)	6.0	6.0						10.0			10.0	
Minimum Split (s)	22.7	22.7						24.0			24.0	
Total Split (s)	50.0	50.0						40.0			40.0	
Total Split (%)	55.6%	55.6%						44.4%			44.4%	
Maximum Green (s)	45.3	45.3						34.0			34.0	
Yellow Time (s)	3.2	3.2						5.0			5.0	
All-Red Time (s)	1.5	1.5						1.0			1.0	
Lost Time Adjust (s)	0.0	0.0						0.0			0.0	
Total Lost Time (s)	4.7	4.7						6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0						4.0			4.0	
Recall Mode	None	None						Min			Min	
Act Effct Green (s)	25.4	25.4						53.9			53.9	
Actuated g/C Ratio	0.28	0.28						0.60			0.60	
v/c Ratio	0.68	0.64						0.09			0.20	

Lanes, Volumes, Timings  
 7: Millersport Highway & I-990 NB

2027 Full AM  
 04/17/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	35.6	30.0						9.2			9.7	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay (s/veh)	35.6	30.0						9.2			9.7	
LOS	D	C						A			A	
Approach Delay (s/veh)		32.9						9.2			9.8	
Approach LOS		C						A			A	
Queue Length 50th (ft)	168	143						21			52	
Queue Length 95th (ft)	224	198						47			98	
Internal Link Dist (ft)		1176			159			359			272	
Turn Bay Length (ft)												
Base Capacity (vph)	821	830						2038			2057	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.38	0.37						0.09			0.20	

**Intersection Summary**

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2: and 6:, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

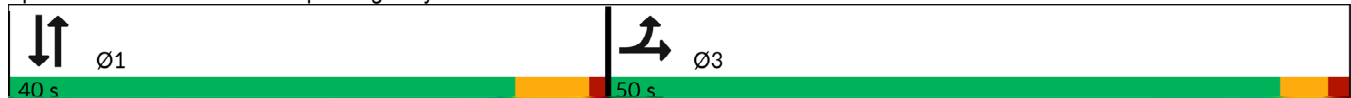
Maximum v/c Ratio: 0.69

Intersection Signal Delay (s/veh): 21.4      Intersection LOS: C

Intersection Capacity Utilization 96.8%      ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 7: Millersport Highway & I-990 NB



Lanes, Volumes, Timings  
 19: New Road & Proposed Access

2027 Full AM  
 04/17/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	6	1	93	276	2
Future Volume (vph)	3	6	1	93	276	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910			0.999		
Flt Protected	0.984					
Satd. Flow (prot)	1701	0	0	1828	1879	0
Flt Permitted	0.984					
Satd. Flow (perm)	1701	0	0	1828	1879	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1181			576	823	
Travel Time (s)	26.8			9.8	14.0	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	4%	1%	0%
Adj. Flow (vph)	4	8	1	116	345	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	0	117	348	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	3	6	1	93	276	2
Future Vol, veh/h	3	6	1	93	276	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	4	8	1	116	345	3



















Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	465	346	348	0	0
Stage 1	346	-	-	-	-
Stage 2	119	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	559	701	1223	-	-
Stage 1	721	-	-	-	-
Stage 2	911	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	559	701	1223	-	-
Mov Cap-2 Maneuver	559	-	-	-	-
Stage 1	720	-	-	-	-
Stage 2	911	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v10.67		0.08	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	19	-	646	-	-
HCM Lane V/C Ratio	0.001	-	0.017	-	-
HCM Control Delay (s/veh)	7.9	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lanes, Volumes, Timings  
 1: Millersport Highway & New Road

2027 Full PM  
 04/17/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	6	80	67	18	30	99	226	1303	3	42	721	10
Future Volume (vph)	6	80	67	18	30	99	226	1303	3	42	721	10
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.941			0.909							0.998
Flt Protected		0.998			0.994		0.950			0.950		
Satd. Flow (prot)	0	1769	0	0	1692	0	1787	3539	0	1805	3499	0
Flt Permitted		0.987			0.926		0.274			0.137		
Satd. Flow (perm)	0	1749	0	0	1576	0	515	3539	0	260	3499	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			103							2
Link Speed (mph)		40			40			55				55
Link Distance (ft)		1060			576			732				1361
Travel Time (s)		18.1			9.8			9.1				16.9
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%	2%	0%	4%	1%	1%	2%	0%	0%	3%	0%
Adj. Flow (vph)	6	83	70	19	31	103	235	1357	3	44	751	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	153	0	235	1360	0	44	761	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt		NA
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	25.0		6.0	25.0	
Minimum Split (s)	48.9	48.9		48.9	48.9		11.9	31.0		11.9	31.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	40.0		15.0	40.0	
Total Split (%)	35.3%	35.3%		35.3%	35.3%		17.6%	47.1%		17.6%	47.1%	
Maximum Green (s)	24.1	24.1		24.1	24.1		9.1	34.0		9.1	34.0	
Yellow Time (s)	3.9	3.9		3.9	3.9		3.9	5.0		3.9	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.9	6.0		5.9	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Recall Mode	None	None		None	None		None	Min		None	Min	

Lanes, Volumes, Timings  
 1: Millersport Highway & New Road

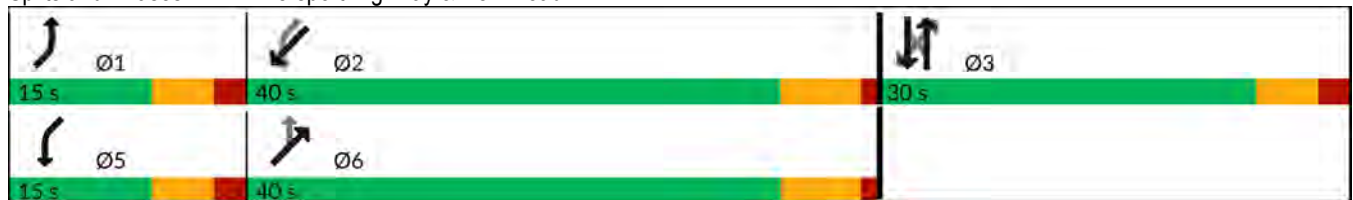
2027 Full PM  
 04/17/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	36.0	36.0		36.0	36.0			15.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		9.9			9.9		42.4	37.2		37.2	29.9	
Actuated g/C Ratio		0.15			0.15		0.64	0.56		0.56	0.45	
v/c Ratio		0.53			0.47		0.47	0.68		0.14	0.48	
Control Delay (s/veh)		26.4			16.1		8.1	15.3		5.7	14.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		26.4			16.1		8.1	15.3		5.7	14.4	
LOS		C			B		A	B		A	B	
Approach Delay (s/veh)		26.4			16.1			14.3			14.0	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		44			19		30	232		5	108	
Queue Length 95th (ft)		100			69		66	370		16	174	
Internal Link Dist (ft)		980			496			652			1281	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		669			642		503	1979		366	1809	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.24			0.24		0.47	0.69		0.12	0.42	

Intersection Summary

Area Type: Other  
 Cycle Length: 85  
 Actuated Cycle Length: 66.6  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay (s/veh): 15.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: Millersport Highway & New Road



Lanes, Volumes, Timings  
2: New Road & Smith Road

2027 Full PM  
04/17/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	172	91	15	116	35	41	121	16	22	58	1
Future Volume (vph)	4	172	91	15	116	35	41	121	16	22	58	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.954			0.972			0.988			0.998	
Flt Protected		0.999			0.995			0.989			0.987	
Satd. Flow (prot)	0	1799	0	0	1813	0	0	1844	0	0	1847	0
Flt Permitted		0.999			0.995			0.989			0.987	
Satd. Flow (perm)	0	1799	0	0	1813	0	0	1844	0	0	1847	0
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		779			931			1347			1060	
Travel Time (s)		15.2			18.1			23.0			18.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	1%	0%	5%	0%	0%
Adj. Flow (vph)	4	183	97	16	123	37	44	129	17	23	62	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	284	0	0	176	0	0	190	0	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.1%
ICU Level of Service	A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	172	91	15	116	35	41	121	16	22	58	1
Future Vol, veh/h	4	172	91	15	116	35	41	121	16	22	58	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	1	0	7	1	0	0	1	0	5	0	0
Mvmt Flow	4	183	97	16	123	37	44	129	17	23	62	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0























Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.4	9.7	10.1	9.3
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	1%	9%	27%
Vol Thru, %	68%	64%	70%	72%
Vol Right, %	9%	34%	21%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	267	166	81
LT Vol	41	4	15	22
Through Vol	121	172	116	58
RT Vol	16	91	35	1
Lane Flow Rate	189	284	177	86
Geometry Grp	1	1	1	1
Degree of Util (X)	0.268	0.365	0.243	0.129
Departure Headway (Hd)	5.089	4.631	4.962	5.382
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	699	770	717	658
Service Time	3.175	2.703	3.044	3.481
HCM Lane V/C Ratio	0.27	0.369	0.247	0.131
HCM Control Delay, s/veh	10.1	10.4	9.7	9.3
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.1	1.7	0.9	0.4



Lanes, Volumes, Timings  
3: Millersport Highway & Smith Road

2027 Full PM  
04/17/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	32	19	110	36	8	30	1490	219	9	825	1
Future Volume (vph)	3	32	19	110	36	8	30	1490	219	9	825	1
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		25	100		0	100		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			55			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.981				
Flt Protected		0.996			0.964		0.950			0.950		
Satd. Flow (prot)	0	1842	1615	0	1818	1615	1719	3481	0	1805	3505	0
Flt Permitted		0.977			0.756		0.316			0.092		
Satd. Flow (perm)	0	1807	1615	0	1426	1615	572	3481	0	175	3505	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			41			41		32				
Link Speed (mph)		35			35			55				55
Link Distance (ft)		938			779			2581				591
Travel Time (s)		18.3			15.2			32.0				7.3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	0%	1%	0%	0%	5%	2%	0%	0%	3%	0%
Adj. Flow (vph)	3	33	20	113	37	8	31	1536	226	9	851	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	20	0	150	8	31	1762	0	9	852	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	26.0	26.0		26.0	26.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	50.0	50.0		50.0	50.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%		62.5%	62.5%	
Maximum Green (s)	25.4	25.4	25.4	25.4	25.4	25.4	44.0	44.0		44.0	44.0	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6	4.6		4.6	4.6	6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	

Lanes, Volumes, Timings  
 3: Millersport Highway & Smith Road

2027 Full PM  
 04/17/2024

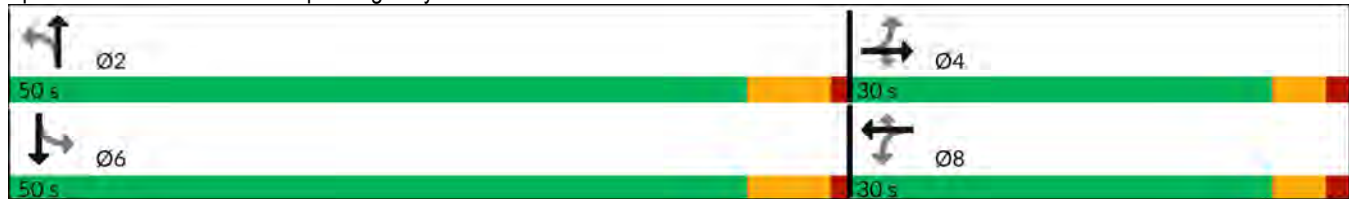


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)		13.6	13.6		13.6	13.6	43.6	43.6		43.6	43.6	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.64	0.64		0.64	0.64	
v/c Ratio		0.09	0.05		0.52	0.02	0.08	0.78		0.08	0.37	
Control Delay (s/veh)		22.2	3.5		31.1	0.1	6.2	12.5		7.7	6.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		22.2	3.5		31.1	0.1	6.2	12.5		7.7	6.7	
LOS		C	A		C	A	A	B		A	A	
Approach Delay (s/veh)		15.6			29.5			12.4				6.7
Approach LOS		B			C			B				A
Queue Length 50th (ft)		12	0		57	0	4	226		1	73	
Queue Length 95th (ft)		34	8		108	0	17	404		8	132	
Internal Link Dist (ft)		858			699			2501				511
Turn Bay Length (ft)			25			25	100			100		
Base Capacity (vph)		679	633		536	633	375	2298		114	2303	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.05	0.03		0.28	0.01	0.08	0.77		0.08	0.37	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 67.8  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay (s/veh): 11.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 77.5%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 3: Millersport Highway & Smith Road



Lanes, Volumes, Timings  
4: Millersport Highway & Proposed Access

2027 Full PM  
04/17/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	39	51	1450	797	41
Future Volume (vph)	37	39	51	1450	797	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150			250
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1805	3539	3505	1615
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1805	3539	3505	1615
Link Speed (mph)	30			30	30	
Link Distance (ft)	1068			591	732	
Travel Time (s)	15.0			13.4	16.6	
Peak Hour Factor	0.80	0.80	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	3%	0%
Adj. Flow (vph)	46	49	53	1495	822	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	49	53	1495	822	42
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	50.1%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↕↕	↕↕	↗
Traffic Vol, veh/h	37	39	51	1450	797	41
Future Vol, veh/h	37	39	51	1450	797	41
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	0	150	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	97	97	97	97
Heavy Vehicles, %	0	0	0	2	3	0
Mvmt Flow	46	49	53	1495	822	42

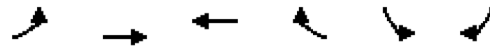
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1674	411	864	0	-	0
Stage 1	822	-	-	-	-	-
Stage 2	853	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	88	596	787	-	-	-
Stage 1	397	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	82	596	787	-	-	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v19.08		0.34	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	787	-	210	596	-	-
HCM Lane V/C Ratio	0.067	-	0.221	0.082	-	-
HCM Control Delay (s/veh)	9.9	-	27	11.6	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	0.3	-	-

Lanes, Volumes, Timings  
 5: Smith Road & Proposed Access

2027 Full PM  
 04/17/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	49	59	8	5	1
Future Volume (vph)	1	49	59	8	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.983		0.977	
Flt Protected		0.999			0.960	
Satd. Flow (prot)	0	1844	1836	0	1782	0
Flt Permitted		0.999			0.960	
Satd. Flow (perm)	0	1844	1836	0	1782	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		745	938		1120	
Travel Time (s)		16.9	21.3		16.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	1	53	64	9	5	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	73	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	49	59	8	5	1
Future Vol, veh/h	1	49	59	8	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	2	0	0	0
Mvmt Flow	1	53	64	9	5	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	73	0	-	0	124 68
Stage 1	-	-	-	-	68 -
Stage 2	-	-	-	-	55 -
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	1540	-	-	-	876 1000
Stage 1	-	-	-	-	959 -
Stage 2	-	-	-	-	972 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1540	-	-	-	875 1000
Mov Cap-2 Maneuver	-	-	-	-	875 -
Stage 1	-	-	-	-	959 -
Stage 2	-	-	-	-	972 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.15	0	9.06
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	36	-	-	-	894
HCM Lane V/C Ratio	0.001	-	-	-	0.007
HCM Control Delay (s/veh)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lanes, Volumes, Timings  
 6: Millersport Highway & I-990 SB

2027 Full PM  
 04/17/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	31	1718	247	722
Future Volume (vph)	0	0	31	1718	247	722
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	95			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.888	
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1805	3574	3105	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1805	3574	3105	0
Link Speed (mph)	65			55	55	
Link Distance (ft)	1332			352	2581	
Travel Time (s)	14.0			4.4	32.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	1%	1%	4%
Adj. Flow (vph)	0	0	33	1808	260	760
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	33	1808	1020	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	93.8%			ICU Level of Service F		
Analysis Period (min)	15					

Lanes, Volumes, Timings  
7: Millersport Highway & I-990 NB

2027 Full PM  
04/17/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1365	0	44	0	0	0	0	442	0	0	241	0
Future Volume (vph)	1365	0	44	0	0	0	0	442	0	0	241	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr't		0.991										
Flt Protected	0.950	0.955										
Satd. Flow (prot)	1681	1677	0	0	0	0	0	3574	0	0	3574	0
Flt Permitted	0.950	0.955										
Satd. Flow (perm)	1681	1677	0	0	0	0	0	3574	0	0	3574	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36										
Link Speed (mph)		40			30			55			55	
Link Distance (ft)		1256			239			439			352	
Travel Time (s)		21.4			5.4			5.4			4.4	
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 (%)	2%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	1422	0	46	0	0	0	0	460	0	0	251	0
Shared Lane Traffic (%)	48%											
Lane Group Flow (vph)	739	729	0	0	0	0	0	460	0	0	251	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA						NA			NA	
Protected Phases	3	3						1			1	
Permitted Phases												
Detector Phase	3	3						1			1	
Switch Phase												
Minimum Initial (s)	6.0	6.0						10.0			10.0	
Minimum Split (s)	22.7	22.7						24.0			24.0	
Total Split (s)	50.0	50.0						40.0			40.0	
Total Split (%)	55.6%	55.6%						44.4%			44.4%	
Maximum Green (s)	45.3	45.3						34.0			34.0	
Yellow Time (s)	3.2	3.2						5.0			5.0	
All-Red Time (s)	1.5	1.5						1.0			1.0	
Lost Time Adjust (s)	0.0	0.0						0.0			0.0	
Total Lost Time (s)	4.7	4.7						6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0						4.0			4.0	
Recall Mode	None	None						Min			Min	
Act Effct Green (s)	47.9	47.9						31.4			31.4	
Actuated g/C Ratio	0.53	0.53						0.35			0.35	
v/c Ratio	0.82	0.80						0.36			0.20	



Lanes, Volumes, Timings  
 7: Millersport Highway & I-990 NB

2027 Full PM  
 04/17/2024

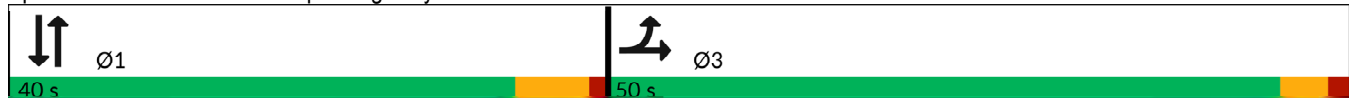


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)	25.8	23.2						24.3				22.6
Queue Delay	0.0	0.0						0.0				0.0
Total Delay (s/veh)	25.8	23.2						24.3				22.6
LOS	C	C						C				C
Approach Delay (s/veh)		24.6						24.4				22.7
Approach LOS		C						C				C
Queue Length 50th (ft)	351	323						101				51
Queue Length 95th (ft)	435	405						161				90
Internal Link Dist (ft)		1176			159			359				272
Turn Bay Length (ft)												
Base Capacity (vph)	918	932						1399				1399
Starvation Cap Reductn	0	0						0				0
Spillback Cap Reductn	0	0						0				0
Storage Cap Reductn	0	0						0				0
Reduced v/c Ratio	0.81	0.78						0.33				0.18

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2: and 6:, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay (s/veh): 24.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 93.8%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 7: Millersport Highway & I-990 NB



Lanes, Volumes, Timings  
 19: New Road & Proposed Access

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	10	2	315	138	5
Future Volume (vph)	4	10	2	315	138	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901			0.996		
Flt Protected	0.987					
Satd. Flow (prot)	1690	0	0	1881	1874	0
Flt Permitted	0.987					
Satd. Flow (perm)	1690	0	0	1881	1874	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	1370			576	823	
Travel Time (s)	31.1			9.8	14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Adj. Flow (vph)	4	11	2	342	150	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	344	155	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

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

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	10	2	315	138	5
Future Vol, veh/h	4	10	2	315	138	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	4	11	2	342	150	5

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	499	153	155	0	0
Stage 1	153	-	-	-	-
Stage 2	347	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	534	899	1437	-	-
Stage 1	880	-	-	-	-
Stage 2	720	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	533	899	1437	-	-
Mov Cap-2 Maneuver	533	-	-	-	-
Stage 1	879	-	-	-	-
Stage 2	720	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.89	0.05	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	11	-	752	-	-
HCM Lane V/C Ratio	0.002	-	0.02	-	-
HCM Control Delay (s/veh)	7.5	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-