

ATTACHMENT P.7



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Traffic Impact Study

Niagara Falls Redevelopment (NFR)
Niagara Digital Campus
Niagara Falls, New York

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Executive Summary

The purpose of this study is to analyze potential impacts to the surrounding street network by the construction of a data center located within an area generally bounded by John Daly Boulevard, Falls St., 15th Street, and Buffalo Ave. in the City of Niagara Falls (“Study Area”). It is requested that the Study Area be rezoned to create a Negotiated Planned Development District, more commonly referred to as a Planned Unit District (“PUD”), entitled Niagara Digital Campus PUD. This study is being conducted as a part of the City’s approval process of the proposed PUD.

The proposed Niagara Digital Campus is located on an estimated 53 acres of land. The project is anticipated to be built in five phases and will include eight 2-story building, one 1-story building for a total of 1,232,715 square feet of space, mechanical equipment yards and space dedicated for vehicle parking for each building. This Traffic Impact Study (TIS) includes all five phases to be analyzed.

Through an existing conditions inventory, collision analysis, and level of services analysis, the Study Area intersections were evaluated for potential improvements and mitigation. The analysis considered existing and build conditions during the morning weekday peak and the afternoon weekday peak. The selected peak hours were chosen for analysis based on the expected use of the site. The site generated trips were calculated using the Data Center (160) category as the assumed land use from the ITE Trip Generation Manual. Generated traffic volumes were distributed using existing traffic patterns and anticipated routes to the proposed site.

Traffic analysis evaluates intersections using Level of Service (LOS) ranked from A (no congestion) to F (congested). The existing LOS at the study intersections is acceptable for a roadway network with the worst level of service at a LOS B (acceptable is considered a LOS D or better). The Niagara Digital Campus minimally impacts the LOS at the study intersections with no changes anticipated to the LOS for any intersection within the Study Area. The estimated amount of vehicle traffic for the peak morning time (7:45 AM to 8:45 AM) on a typical weekday is projected to be 136 with 75 vehicles entering and 61 exiting the site. For the peak evening time (4:00 PM to 5:00 PM) on a typical weekday, the projected generated traffic is 111 vehicles with 33 vehicles entering and 78 vehicles exiting the site. As such, mitigation measures are not warranted at the proposed site or the surrounding area.

1.0 Introduction

Study Purpose

The purpose of this TIS is to analyze the effects for the development of a data center within the Niagara Digital Campus generally bounded by John Daly Boulevard, Falls St., 15th Street, and Buffalo Ave. in the City of Niagara Falls, referred to herein as the Study Area. This TIS was completed as part of the City's approval process for the Niagara Digital Campus PUD. This TIS determines the impacts to the local road network, focusing on the signalized intersections and the potential number of vehicles that may use the Study Area streets.

The Niagara Digital Campus data center will include eight 2-story building and one 1-story building for a total of 1,232,715 square feet of space. The Campus will also include mechanical equipment yards and space dedicated for vehicle parking for each building. Parking spaces are located throughout the Campus, with separate parking areas near each building.

Study Area

As set forth above, the Niagara Digital Campus is proposed on approximately 53 acres of land, generally bounded by John Daly Boulevard, Falls St., 15th Street, and Buffalo Ave. in the City of Niagara Falls. See **Figure 1** in **Appendix A** for the site plan. The Study Area consists of 5 signalized intersections and 7 unsignalized intersections listed below. **Figure 2** in **Appendix B** or on the following page is a Study Area map.

Study Area Intersections

1. John Daly Boulevard at Buffalo Avenue
2. John Daly Boulevard at Rainbow Boulevard
3. John Daly Boulevard at Falls Street
4. John Daly Boulevard at Niagara Street
5. Rainbow Boulevard at 10th Street at Buffalo Avenue
6. Buffalo Avenue at Portage Road
7. Falls Street at 10th Street
8. Falls Street at 9th Street
9. Portage Road at Falls Street
10. Niagara Street at 9th Street
11. Niagara Street at 10th Street
12. Ferry Avenue at 10th Street

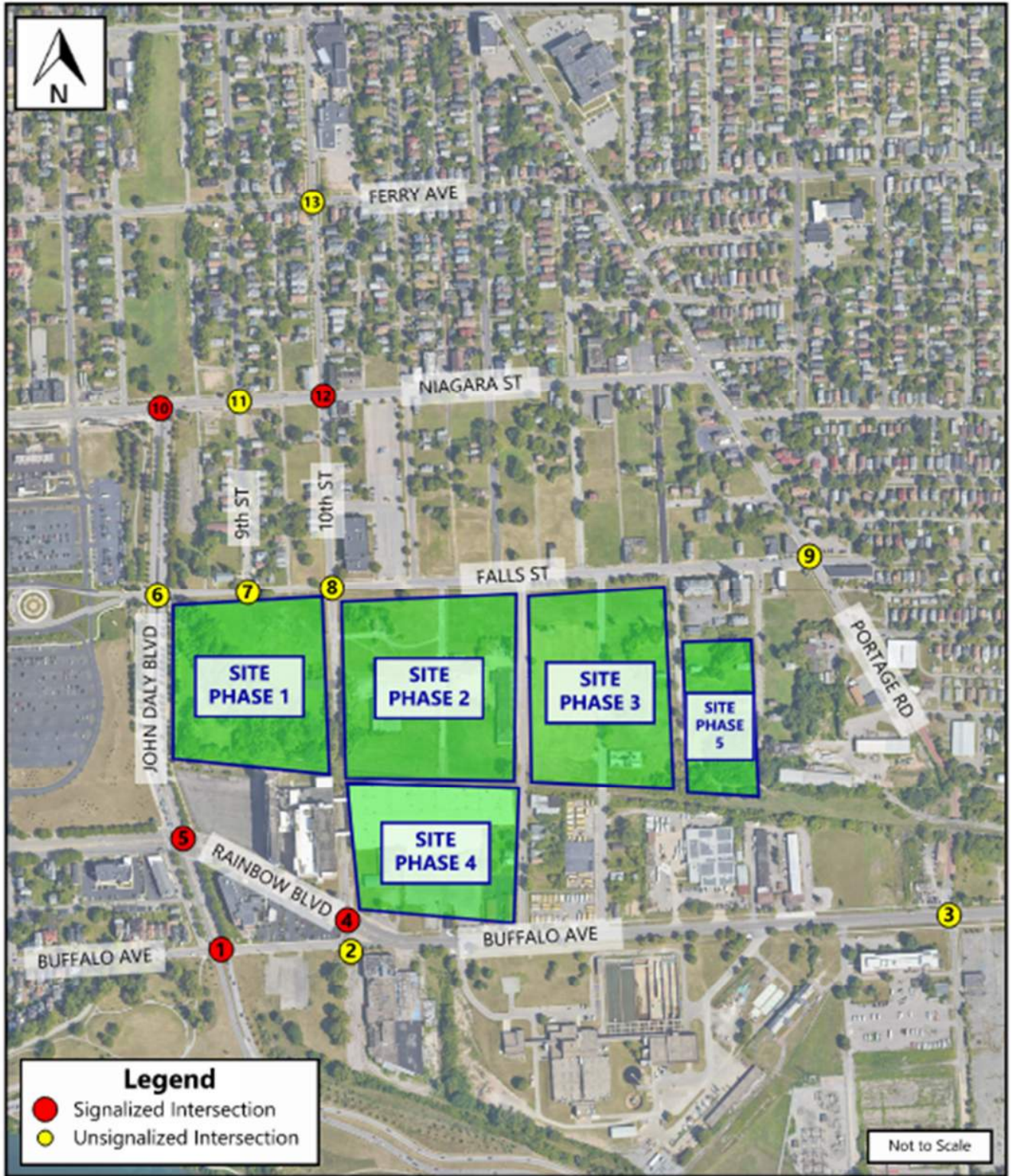


Figure 2: Study Area Map

Methodology

Intersections

The study intersections were analyzed using SYNCHRO 12¹, which is a computer program that implements the methods presented in the 6th Edition Highway Capacity Manual². SYNCHRO determines the **Level of Service (LOS)**, which is defined in terms of **Delay**.

Delay is a measure of driver discomfort, frustration, fuel consumption and lost travel time.

Level of Service criteria are stated in terms of the control delay per vehicle for a 15-minute analysis period and range from "A" to "F". Level of Service A is representative of a movement that is free flowing with minimal delay, while LOS F generally represents long delays. LOS D is generally considered acceptable in urban environments.

The ranges of delay for each level of service, as contained in the 6th Edition Highway Capacity Manual, are shown in **Table 1**.

Table 1: Intersection Level of Service Criteria

Level of Service (LOS)	Unsignalized Intersections	Signalized Intersections	
	Delay (sec)	Delay (sec)	v/c ratio*
A	0-10	0-10	<1.0
B	> 10-15	> 10-20	<1.0
C	> 15-25	> 20-35	<1.0
D	> 25-35	> 35-55	<1.0
E	> 35-50	> 55-80	<1.0
F	over 50	over 80	≥1.0

* If the volume to capacity ratio is 1.0 or greater, the LOS is an F

2.0 Existing Conditions

Roadway Network

The Study Area is bounded by Ferry Avenue (US Route 62 EB) to the north, Niagara Scenic Parkway to the south, Portage Road to the east, and John Daly Boulevard (NYS Route 384) to the west. **Table 3** shows the Study Area street network. There are values for the jurisdiction, functional classification, average annual daily traffic (AADT) and the speed limit.

¹ Synchro Studio 12, Traffic Signal Optimization and Simulation Modeling Software, Version 12, Trafficware Corporation, Albany, California, 2023.

² Highway Capacity Manual, Transportation Research Board, National Research Council, Washington D.C., 2016.

Table 3: Study Area Street Network Information

Street	Jurisdiction	Functional Classification	AADT (vehicles/day)	Posted Speed Limit
Buffalo Avenue (NYS Route 384)	City of Niagara Falls	Urban Principal Arterial	3,431	30 mph
Rainbow Boulevard (NYS Route 384)	NYSDOT	Urban Principal Arterial	5,489	30 mph
John Daly Boulevard (NYS Route 384)	NYSDOT	Urban Major Collector	11,712	30 mph
Falls Street	City of Niagara Falls	Urban Local	711	30 mph
Portage Road	City of Niagara Falls	Urban Minor Arterial	1,444	30 mph
Ferry Avenue (US Route 62 EB)	NYSDOT	Urban Principal Arterial	2,430	30 mph
9 th Street	City of Niagara Falls	Urban Local	-	30 mph
10 th Street	City of Niagara Falls	Urban Local	521	30 mph
Niagara Street (NYS Route 384)	City of Niagara Falls	Urban Minor Arterial	8,416	30 mph

Source: NYSDOT Traffic Data Viewer, <http://www.dot.ny.gov/tdv>

Capacity Analysis

Intersection Analysis

Turning movement counts (TMCs) were collected at the Study Area intersections by Tri-State Traffic Data. TMCs were collected on Tuesday the 12th and Thursday the 14th of July 2022 for three periods of time; morning (7 AM to 9 AM), afternoon (11 AM to 1 PM) and evening (4 PM to 6 PM). The morning and evening peaks were analyzed as the peak hours due to the use of the site having peaks that coincide with the morning and evening adjacent street peaks. The Study Area network's peak traffic for a typical weekday morning occurs from 7:45 AM to 8:45 AM, and for a weekday evening peak from 4:00 PM and 5:00 PM. Refer to **Figure 3** in **Appendix C** for the turning movement diagram. **Table 4** below highlights the results of the level of service analysis for existing conditions.

Table 4: Intersection LOS Analysis - Existing Conditions

Approach		Weekday AM			Weekday PM		
		LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue
John Daly Boulevard at Buffalo Avenue (Signalized)							
Eastbound	<i>Left/Thru/Right</i>	A (4.9)	0.09	14	A (6.9)	0.40	46
Westbound	<i>Left/Thru/Right</i>	A (7.4)	0.07	16	B (12.3)	0.21	39
Northbound	<i>Left/Thru/Right</i>	A (2.3)	0.22	53	A (7.8)	0.45	57
Southbound	<i>Left</i>	A (3.5)	0.00	2	A (5.0)	0.01	3
	<i>Thru/Right</i>	A (2.1)	0.11	27	A (8.1)	0.53	82
<i>Intersection</i>		A (2.6)	-	-	A (8.1)	-	-

Table 4 Continued: Intersection LOS Analysis - Existing Conditions

Approach		Weekday AM			Weekday PM		
		LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue
Rainbow Boulevard at 10th Street (Signalized)							
Eastbound	<i>Left</i>	A (3.3)	0.01	3	A (4.0)	0.00	1
	<i>Thru/Right</i>	A (2.6)	0.02	5	A (2.3)	0.06	11
Westbound	<i>Left</i>	A (3.1)	0.02	7	A (3.2)	0.04	9
	<i>Thru/Right</i>	A (2.3)	0.04	9	A (2.4)	0.05	10
Northbound	<i>Left/Thru/Right</i>	A (7.3)	0.03	7	A (5.7)	0.02	4
Southbound	<i>Left/Thru/Right</i>	A (6.9)	0.05	9	A (5.8)	0.11	12
<i>Intersection</i>		A (3.3)	-	-	A (3.1)	-	-
Buffalo Avenue at Portage Road (Unsignalized)							
Eastbound	<i>Left</i>	a (7.7)	0.01	0	a (7.7)	0.01	0
Westbound	<i>Left</i>	a (7.6)	0.02	0	a (7.6)	0.01	0
Northbound	<i>Left/Thru/Right</i>	a (9.9)	0.01	0	a (9.7)	0.05	0.2
Southbound	<i>Left/Thru/Right</i>	b (10.2)	0.05	0.2	b (12.7)	0.17	0.6
<i>Intersection</i>		n/a			n/a		
Rainbow Boulevard at 10th Street (Signalized)							
Eastbound	<i>Left</i>	A (3.3)	0.01	3	A (4.0)	0.00	1
	<i>Thru/Right</i>	A (2.6)	0.02	5	A (2.3)	0.06	11
Westbound	<i>Left</i>	A (3.1)	0.02	7	A (3.2)	0.04	9
	<i>Thru/Right</i>	A (2.3)	0.04	9	A (2.4)	0.05	10
Northbound	<i>Left/Thru/Right</i>	A (7.3)	0.03	7	A (5.7)	0.02	4
Southbound	<i>Left/Thru/Right</i>	A (6.9)	0.05	9	A (5.8)	0.11	12
<i>Intersection</i>		A (3.3)	-	-	A (3.1)	-	-
John Daly Boulevard at Rainbow Boulevard (Signalized)							
Eastbound	<i>Left</i>	C (29.5)	0.15	29	B (19.6)	0.16	36
	<i>Thru</i>	C (27.4)	0.09	20	B (18.0)	0.13	31
	<i>Right</i>	A (9.9)	0.45	37	A (7.1)	0.59	51
Westbound	<i>Left</i>	C (27.9)	0.07	17	B (18.2)	0.03	12
	<i>Thru/Right</i>	C (20.8)	0.13	19	B (13.8)	0.10	19
Northbound	<i>Left</i>	A (3.5)	0.15	23	A (96.5)	0.31	49
	<i>Thru/Right</i>	A (4.7)	0.17	55	A (8.7)	0.18	58
Southbound	<i>Left</i>	A (3.4)	0.02	5	A (6.1)	0.06	12
	<i>Thru/Right</i>	A (7.6)	0.10	28	B (18.5)	0.56	120
<i>Intersection</i>		A (9.0)	-	-	B (12.3)	-	-

Table 4 Continued: Intersection LOS Analysis - Existing Conditions

Approach		Weekday AM			Weekday PM		
		LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue
John Daly Boulevard at Falls Street (Unsignalized)							
Eastbound	<i>Left/Thru/Right</i>	b (11.2)	0.07	0.2	d (26.5)	0.41	1.9
Westbound	<i>Left/Thru/Right</i>	b (13.0)	0.05	0.2	c (23.0)	0.19	0.7
Northbound	<i>Left</i>	a (7.6)	0.01	0	a (8.8)	0.07	0.3
Southbound	<i>Left</i>	a (8.3)	0.00	0	a (7.9)	0.01	0
<i>Intersection</i>		n/a			n/a		
Falls Street at 9th Street (Unsignalized)							
Eastbound	<i>Left</i>	a (0.0)	0.00	0	a (0.3)	0.00	0
<i>Intersection</i>		n/a			n/a		
Falls Street at 10th Street (Unsignalized)							
Eastbound	<i>Left/Thru/Right</i>	a (7.5)	0.08	0.2	a (7.8)	0.10	0.3
Westbound	<i>Left/Thru/Right</i>	a (7.3)	0.05	0.2	a (8.0)	0.14	0.5
Northbound	<i>Left/Thru/Right</i>	a (7.3)	0.03	0.1	a (7.5)	0.06	0.2
Southbound	<i>Left/Thru/Right</i>	a (7.3)	0.03	0.1	a (7.8)	0.08	0.3
<i>Intersection</i>		n/a			n/a		
Falls Street at Portage Road (Unsignalized)							
Eastbound	<i>Left/Thru/Right</i>	a (7.8)	0.04	0.1	a (7.8)	0.09	0.3
Westbound	<i>Left/Thru/Right</i>	a (7.7)	0.08	0.2	a (7.9)	0.09	0.3
Northbound	<i>Left/Thru/Right</i>	a (7.9)	0.11	0.4	a (7.8)	0.08	0.3
Southbound	<i>Left/Thru/Right</i>	a (7.6)	0.07	0.2	a (8.0)	0.14	0.5
<i>Intersection</i>		n/a			n/a		
John Daly Boulevard at Niagara Street (Signalized)							
Eastbound	<i>Thru</i>	A (7.5)	0.09	18	A (8.6)	0.22	42
	<i>Right</i>	A (3.0)	0.20	16	A (3.6)	0.49	28
Westbound	<i>Left/Thru</i>	A (7.4)	0.12	15	A (8.5)	0.27	35
Northbound	<i>Left</i>	B (10.5)	0.39	46	B (12.3)	0.47	72
	<i>Right</i>	A (3.3)	0.28	17	A (3.6)	0.18	16
<i>Intersection</i>		A (6.5)	-	-	A (7.2)	-	-
Niagara Street at 9th Street (Unsignalized)							
Eastbound	<i>Left</i>	a (7.6)	0.04	0.1	a (8.1)	0.04	0.1
Northbound	<i>Left/Thru/Right</i>	b (11.2)	0.01	0	b (13.3)	0.03	0.1
<i>Intersection</i>		n/a			n/a		

Table 4 Continued: Intersection LOS Analysis - Existing Conditions

Approach		Weekday AM			Weekday PM		
		LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue
Niagara Street at 10th Street (Signalized)							
Eastbound	<i>Left/Thru/Right</i>	A (5.4)	0.19	38	A (5.3)	0.18	41
Westbound	<i>Left/Thru/Right</i>	A (4.8)	0.07	20	A (4.8)	0.14	33
Northbound	<i>Left/Thru/Right</i>	B (15.3)	0.09	24	B (15.2)	0.06	18
Southbound	<i>Left/Thru/Right</i>	B (11.5)	0.19	34	A (8.6)	0.38	50
<i>Intersection</i>		A (7.5)	-	-	A (6.7)	-	-
Ferry Avenue at 10th Street (Unsignalized)							
Eastbound	<i>Left/Thru</i>	a (8.4)	0.09	0.3	a (9.7)	0.23	0.9
	<i>Thru/Right</i>	a (8.0)	0.08	0.3	a (9.5)	0.23	0.9
Northbound	<i>Left/Thru/Right</i>	a (8.0)	0.15	0.5	a (8.4)	0.10	0.3
Southbound	<i>Left/Thru/Right</i>	a (8.1)	0.11	0.4	b (10.4)	0.35	1.6
<i>Intersection</i>		n/a			n/a		

*lowercase letters signify the HCM 7th edition Stop Control methodology was used

a: level-of-service

b: delay is measured in seconds

c: volume to capacity ratio

d: 95th queue length, measured in feet (queue length of stop-controlled intersections measured in number of vehicles)

Based on the level of service analysis, all intersections within the Study Area and movements are operating at an acceptable level of service (D or better). Most intersections and movements are operating at level of service A with minimal delay.

Collision Analysis

A collision analysis was completed for the Study Area intersections. There was a total of 80 collisions and 34 injuries over a five-year period from May 2019 through May 2024 excluding collisions with fixed objects. The most common type of collision was right angle, representing roughly 38% of all collisions. Detailed collision analyses are provided in **Appendix B. Table 5** contains a summary of the predominant collision types at each intersection.

Table 5: Collision Analysis

Type of Collision	Number	Percentage
Ferry Avenue at 10th Street (13 collisions)		
Total Injuries: 2		
Rear End	2	15%
Sideswipe	1	8%
Right Angle	7	54%
Other	3 (1 Head On, 2 Bicyclist Collisions)	23%
John Daly Boulevard at Niagara Street (3 collisions)		
Total Injuries: 1		
Rear End	1	33%
Other	2 (1 Overtaking, 1 Pedestrian Collision)	67%
Niagara Street at 9th Street (2 collisions)		
Total Injuries: 2		
Right Turn	1	50%
Other	1 (1 Bicyclist Collision)	50%
Niagara Street at 10th Street (9 collisions)		
Total Injuries: 7		
Rear End	3	33%
Right Angle	2	22%
Left Turn	1	11%
Other	3 (1 Overtaking, 1 Other, 1 Pedestrian)	33%
John Daly Boulevard at Falls Street (12 collisions)		
Total Injuries: 7		
Rear End	1	8%
Left Turn	3	25%
Right Angle	8	67%
Portage Road at Falls Street (4 collisions)		
Total Injuries: 4		
Right Angle	3	75%
Other	1 (1 other)	25%
Portage Road at Mackenna Avenue (1 collision)		
Total Injuries: 0		
Right Angle	1	100%
Buffalo Avenue at Portage Road (5 collisions)		
Total Injuries: 2		
Sideswipe	1	20%
Left Turn	1	20%
Right Turn	1	20%
Right Angle	1	20%
Other	1 (1 Other)	20%

Table 5 Continued: Collision Analysis

Type of Collision	Number	Percentage
Buffalo Avenue at 13th Street (2 collisions)		
Total Injuries: 2		
Rear End	1	50%
Right Turn	1	50%
Buffalo Avenue at Memorial Parkway (1 collision)		
Total Injuries: 1		
Left Turn	1	100%
John Daly Boulevard at Rainbow Boulevard (14 collisions)		
Total Injuries: 1		
Rear End	3	21%
Left Turn	3	21%
Right Turn	1	7%
Right Angle	3	21%
Other	4 (3 Overt., 1 Head On)	29%
John Daly Boulevard at Buffalo Avenue (7 collisions)		
Total Injuries: 1		
Rear End	1	14%
Left Turn	1	14%
Right Angle	2	29%
Other	3 (1 Head On, 1 Overtaking, 1 Other)	43%
Niagara Scenic Parkway at John Daly Boulevard (3 collisions)		
Total Injuries: 0		
Right Turn	1	33%
Right Angle	1	33%
Other	1 (1 Overtaking)	33%

The collisions at the intersections of John Daly Boulevard at Niagara Street and Niagara Street at 10th Street resulted in injuries to pedestrians. Both intersections are signalized with the latter lacking pedestrian signals.

Bicyclist collisions occurred at two intersections in the Study Area, Ferry Avenue at 10th Street and Niagara Street at 9th Street. At the first intersection, Ferry Avenue is a one-way street with two travel lanes and a parking lane.

A few intersections in particular had a high number of collisions (>10 for the time period): John Daly Boulevard at Rainbow Boulevard, Ferry Avenue at 10th Street, and John Daly Boulevard at Falls Street. A significant portion of these were right angle collisions. Common causes of these types of collisions are properly failing to yield the right of way or disregard for traffic signs or signals. Contributing factors could also be excessive speeds, inadequate signal timings, and a large number of crossing lanes.

3.0 No Build Condition

Historical traffic data was reviewed at two roadway segments within the Study Area, a segment of John Daly Blvd and Niagara Street. There was an approximate 2% overall decrease in traffic volumes from 2012 to 2019. Given the decreasing trend in traffic in the Study Area, no background growth rate is proposed to analyze the future no build condition. Therefore, it is assumed that the no build future condition is the same as existing conditions.

4.0 Build Condition

The proposed development is a data center. The full build out of this data center will include eight 2-story building and one 1-story building for to a total of 1,232,715 square feet of space. The development will also include mechanical equipment yards and space dedicated for vehicle parking for each building. Parking spaces are located throughout the site with separate parking areas near each building. See **Appendix A, Figure 1** for the concept site plan.

Trip Generation

The data center will be approximately 1,232,715 SF. The number of new trips generated for the proposed development were determined using the ITE Trip Generation Manual 11th Edition³. The Data Center (160) land use code was used for the trip generation. Trip generation for the weekday AM and PM peaks were calculated, and the results are outlined in **Table 6**. Trip generation calculations are in **Appendix C**. More detailed trip generation calculations for each intersection are included in **Appendix A, Figure 6**.

Table 6: Peak Hour Trip Generation Estimates

ITE Land Use Code	AM Peak Trips			PM Peak Trips		
	Entering	Exiting	Total	Entering	Exiting	Total
160 Data Center	75	61	136	33	78	111

Trip Distribution

Existing travel patterns were used for the trip distribution. The major Study Area entrances and exit locations for the Study Area are outlined in **Table 7**. The table provides a breakdown for the full build trip generation at each major entrance. There are 5 major entrances into the Study Area network, from Niagara Street and Rainbow Boulevard for traffic originating from the north and west, Niagara Scenic Parkway for traffic originating from the south, and Falls Street, Portage Road, and Buffalo Avenue from the south and east. The streets connecting to the proposed site are assumed to mostly serve Niagara Digital Campus, since there are minimal developments adjacent to the site. Therefore, for simplicity, it was assumed that each street would

³ **Trip Generation Manual, 11th Edition**. Institute of Transportation Engineers (ITE). September 2021.

be served with one site driveway for the purposes of the trip distribution. Appendix A, Figures 4 and 5 contains more detailed information on the trip distribution through the Study Area network.

Table 7: Trip Distribution

Location		AM Peak Trips				PM Peak Trips			
		Distribution		Number of vehicles		Distribution		Number of vehicles	
		Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting
John Daly Boulevard	Niagara Street	15%	35%	11	18	30%	20%	10	15
John Daly Boulevard	Rainbow Boulevard	15%	20%	11	12	25%	15%	8	12
John Daly Boulevard	Riverway/Niagara Scenic Parkway	50%	35%	38	22	30%	50%	10	39
Portage Rd	Falls Street	5%	5%	4	3	5%	5%	2	4
Portage Rd	Buffalo Avenue	15%	10%	11	6	10%	10%	3	8

Capacity Analysis Intersection Analysis

Refer to **Figure 7** in **Appendix A** for the turning movement diagram. Based on the trip distribution, **Table 8** summarizes the results of the intersection LOS analysis for the build condition.

Table 8: Intersection LOS Analysis Existing vs. Build Condition

Approach	Existing Condition						Build Condition						
	Weekday AM			Weekday PM			Weekday AM			Weekday PM			
	LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue	LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue	
John Daly Boulevard at Buffalo Avenue (Signalized)													
Eastbound	Left/Thru/Right	A (4.9)	0.09	14	A (6.9)	0.40	46	A (5.7)	0.09	14	A (7.4)	0.40	50
Westbound	Left/Thru/Right	A (7.4)	0.07	16	B (12.3)	0.21	39	A (9.1)	0.12	21	B (13.7)	0.28	50
Northbound	Left/Thru/Right	A (2.3)	0.22	53	A (7.8)	0.45	57	A (4.0)	0.27	56	A (7.9)	0.45	65
Southbound	Left	A (3.5)	0.00	2	A (5.0)	0.01	3	A (5.0)	0.00	2	A (5.3)	0.01	3
	Thru/Right	A (2.1)	0.11	27	A (8.1)	0.53	82	A (3.5)	0.12	28	A (8.3)	0.53	95
	Intersection	A (2.6)	-	-	A (8.1)	-	-	A (4.2)	-	-	A (8.4)	-	-
Rainbow Boulevard at 10th Street (Signalized)													
Eastbound	Left	A (3.3)	0.01	3	A (4.0)	0.00	1	A (3.4)	0.01	5	A (5.6)	0.00	2
	Thru/Right	A (2.6)	0.02	5	A (2.3)	0.06	11	A (2.7)	0.01	6	A (4.6)	0.07	11
Westbound	Left	A (3.1)	0.02	7	A (3.2)	0.04	9	A (3.2)	0.03	9	A (5.9)	0.08	12
	Thru/Right	A (2.3)	0.04	9	A (2.4)	0.05	10	A (2.3)	0.04	10	A (4.7)	0.06	10
Northbound	Left/Thru/Right	A (7.3)	0.03	7	A (5.7)	0.02	4	A (6.2)	0.04	8	A (6.8)	0.02	4
Southbound	Left/Thru/Right	A (6.9)	0.05	9	A (5.8)	0.11	12	A (5.5)	0.06	9	A (7.5)	0.16	14
	Intersection	A (3.3)	-	-	A (3.1)	-	-	A (3.3)	-	-	A (5.4)	-	-

Table 8 Continued: Intersection LOS Analysis Existing vs. Build Condition

Approach	Existing Condition						Build Condition					
	Weekday AM			Weekday PM			Weekday AM			Weekday PM		
	LOS ^a (Delay) ^b	V/C	Queue ^d	LOS (Delay)	V/C	Queue	LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue
Buffalo Avenue at Portage Road (Unsignalized)												
Eastbound	Left	a (7.7)	0.01	0	a (7.7)	0	a (7.6)	0.01	0	a (7.7)	0.01	0
Westbound	Left	a (7.6)	0.02	0	a (7.6)	0	a (7.4)	0.01	0	a (7.6)	0.00	0
Northbound	Left/Thru/Right	a (9.9)	0.01	0	a (9.7)	0.2	b (10.0)	0.01	0	a (9.7)	0.05	0.2
Southbound	Left/Thru/Right	b (10.2)	0.05	0.2	b (12.7)	0.6	b (10.4)	0.06	0.2	b (12.8)	0.17	0.6
Intersection												
n/a												
John Daly Boulevard at Rainbow Boulevard (Signalized)												
Eastbound	Left	C (29.5)	0.15	29	B (19.6)	0.16	C (29.9)	0.17	32	C (20.1)	0.17	39
	Thru	C (27.4)	0.09	20	B (18.0)	0.13	C (27.5)	0.10	23	B (18.3)	0.13	33
	Right	A (9.9)	0.45	37	A (7.1)	0.59	A (9.9)	0.45	37	A (7.1)	0.58	51
Westbound	Left	C (27.9)	0.07	17	B (18.2)	0.03	C (27.7)	0.05	15	B (18.6)	0.03	13
	Thru/Right	C (20.8)	0.13	19	B (13.8)	0.10	C (21.3)	0.14	21	B (14.3)	0.10	21
Northbound	Left	A (3.5)	0.15	23	A 96.5)	0.31	A (3.4)	0.15	23	A (6.5)	0.31	51
	Thru/Right	A (4.7)	0.17	55	A (8.7)	0.18	A (4.7)	0.17	59	A (8.7)	0.17	61
Southbound	Left	A (3.4)	0.02	5	A (6.1)	0.06	A (3.3)	0.02	5	A (6.2)	0.06	13
	Thru/Right	A (7.6)	0.10	28	B (18.5)	0.56	A (7.5)	0.10	30	B (18.7)	0.57	131
Intersection												
A (9.0)												
John Daly Boulevard at Falls Street (Unsignalized)												
Eastbound	Left/Thru/Right	b (11.2)	0.07	0.2	d (26.5)	0.41	b (11.5)	0.08	0.2	d (28.1)	0.43	2.1
Westbound	Left/Thru/Right	b (13.0)	0.05	0.2	c (23.0)	0.19	b (13.7)	0.12	0.4	c (20.2)	0.19	0.7
Northbound	Left	a (7.6)	0.01	0	a (8.8)	0.07	a (7.6)	0.01	0	a (8.8)	0.08	0.3
Southbound	Left	a (8.3)	0.00	0	a (7.9)	0.01	a (8.4)	0.01	0	a (7.9)	0.02	0.1
Intersection												
n/a												

Table 8 Continued: Intersection LOS Analysis Existing vs. Build Condition

Approach	Existing Condition				Build Condition								
	Weekday AM		Weekday PM		Weekday AM		Weekday PM						
	LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue	LOS (Delay)	V/C	Queue				
Falls Street at 9th Street (Unsignalized)													
Eastbound	a (0.0)	0.00	0	a (0.3)	0.00	0	a (0.0)	0.04	0	a (0.1)	0.07	0	
Intersection	n/a			n/a			n/a			n/a			
Falls Street at 10th Street (Unsignalized)													
Eastbound	a (7.5)	0.08	0.2	a (7.8)	0.10	0.3	a (7.8)	0.13	0.4	a (8.0)	0.13	0.4	
Westbound	a (7.3)	0.05	0.2	a (8.0)	0.14	0.5	a (7.6)	0.10	0.3	a (8.4)	0.20	0.8	
Northbound	a (7.3)	0.03	0.1	a (7.5)	0.06	0.2	a (7.6)	0.04	0.1	a (7.9)	0.05	0.2	
Southbound	a (7.3)	0.03	0.1	a (7.8)	0.08	0.3	a (7.5)	0.03	0.1	a (8.1)	0.09	0.3	
Intersection	n/a			n/a			n/a			n/a			
Falls Street at Portage Road (Unsignalized)													
Eastbound	a (7.8)	0.04	0.1	a (7.8)	0.09	0.3	a (7.9)	0.05	0.2	a (7.9)	0.10	0.3	
Westbound	a (7.7)	0.08	0.2	a (7.9)	0.09	0.3	a (7.8)	0.08	0.2	a (7.9)	0.09	0.3	
Northbound	a (7.9)	0.11	0.4	a (7.8)	0.08	0.3	a (8.0)	0.12	0.4	a (7.8)	0.08	0.3	
Southbound	a (7.6)	0.07	0.2	a (8.0)	0.14	0.5	a (7.6)	0.08	0.2	a (8.0)	0.15	0.5	
Intersection	n/a			n/a			n/a			n/a			
John Daly Boulevard at Niagara Street (Signalized)													
Eastbound	Thru	A (7.5)	0.09	18	A (8.6)	0.22	42	A (7.6)	0.09	19	A (8.8)	0.22	44
	Right	A (3.0)	0.20	16	A (3.6)	0.49	28	A (3.0)	0.21	17	A (3.6)	0.50	29
Westbound	Left/Thru	A (7.4)	0.12	15	A (8.5)	0.27	35	A (7.5)	0.12	16	A (8.6)	0.28	36
	Left	B (10.5)	0.39	46	B (12.3)	0.47	72	B (10.5)	0.41	48	B (12.4)	0.48	76
Northbound	Right	A (3.3)	0.28	17	A (3.6)	0.18	16	A (3.2)	0.27	17	A (3.5)	0.17	16
	Intersection	A (6.5)	-	-	A (7.2)	-	-	A (6.6)	-	-	A (7.4)	-	-

Table 8 Continued: Intersection LOS Analysis Existing vs. Build Condition

Approach	Existing Condition						Build Condition						
	Weekday AM			Weekday PM			Weekday AM			Weekday PM			
	LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue	LOS ^a (Delay) ^b	V/C ^c	Queue ^d	LOS (Delay)	V/C	Queue	
Niagara Street at 9th Street (Unsignalized)													
Eastbound	Left	a (7.6)	0.04	0.1	a (8.1)	0.04	0.1	a (7.6)	0.04	0.1	a (8.1)	0.04	0.1
Northbound	Left/Thru/Right	b (11.2)	0.01	0	b (13.3)	0.03	0.1	b (11.3)	0.01	0	b (13.4)	0.03	0.1
	Intersection	n/a	n/a		n/a			n/a	n/a		n/a		
Niagara Street at 10th Street (Signalized)													
Eastbound	Left/Thru/Right	A (5.4)	0.19	38	A (5.3)	0.18	41	A (5.3)	0.19	38	A (5.2)	0.18	42
Westbound	Left/Thru/Right	A (4.8)	0.07	20	A (4.8)	0.14	33	A (4.8)	0.07	20	A (4.8)	0.13	33
Northbound	Left/Thru/Right	B (15.3)	0.09	24	B (15.2)	0.06	18	B (15.8)	0.11	27	B (15.4)	0.07	21
Southbound	Left/Thru/Right	B (11.5)	0.19	34	A (8.6)	0.38	50	B (11.5)	0.19	34	A (8.6)	0.38	50
	Intersection	A (7.5)	-	-	A (6.7)	-	-	A (7.7)	-	-	A (6.7)	-	-
Ferry Avenue at 10th Street (Unsignalized)													
Eastbound	Left/Thru	a (8.4)	0.09	0.3	a (9.7)	0.23	0.9	a (8.4)	0.09	0.3	a (9.7)	0.23	0.9
	Thru/Right	a (8.0)	0.08	0.3	a (9.5)	0.23	0.9	a (8.0)	0.08	0.3	a (9.5)	0.23	0.9
Northbound	Left/Thru/Right	a (8.0)	0.15	0.5	a (8.4)	0.10	0.3	a (8.0)	0.15	0.5	a (8.4)	0.10	0.3
Southbound	Left/Thru/Right	a (8.1)	0.11	0.4	b (10.4)	0.35	1.6	a (8.1)	0.11	0.4	b (10.4)	0.35	1.6
	Intersection	n/a	n/a		n/a			n/a	n/a		n/a		

*lowercase letters signify the HCM 7th edition Stop Control methodology was used

a: level-of-service

b: delay is measured in seconds

c: volume to capacity ratio

d: 95th queue length

Based on the capacity analysis for the build condition, there are no anticipated changes to the LOS for any intersection or movement within the Study Area as a part of the proposed project. The Niagara Digital Campus has minimal impact on the surrounding roadway network and does not negatively affect the anticipated LOS. All intersections within the Study Area are expected to remain operating at an acceptable level of service (D or better).

5.0 Mitigation

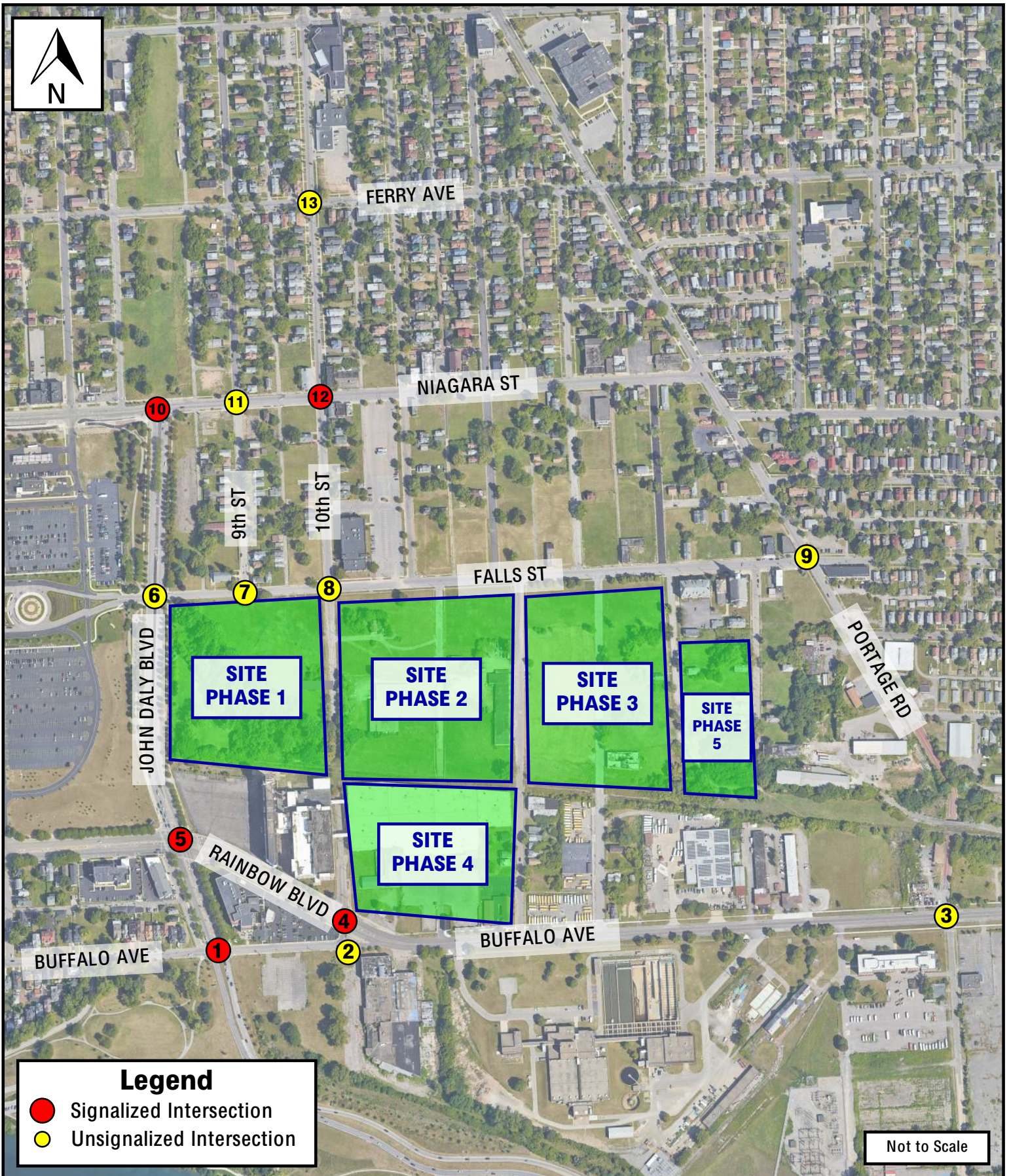
The existing level of service at all intersections is currently operating a LOS D or better. Most intersections are operating at a LOS A. No mitigation measures are recommended for this Niagara Digital Campus as there are no anticipated adverse impacts to traffic.

6.0 Conclusion

The following items are findings from this traffic impact study:

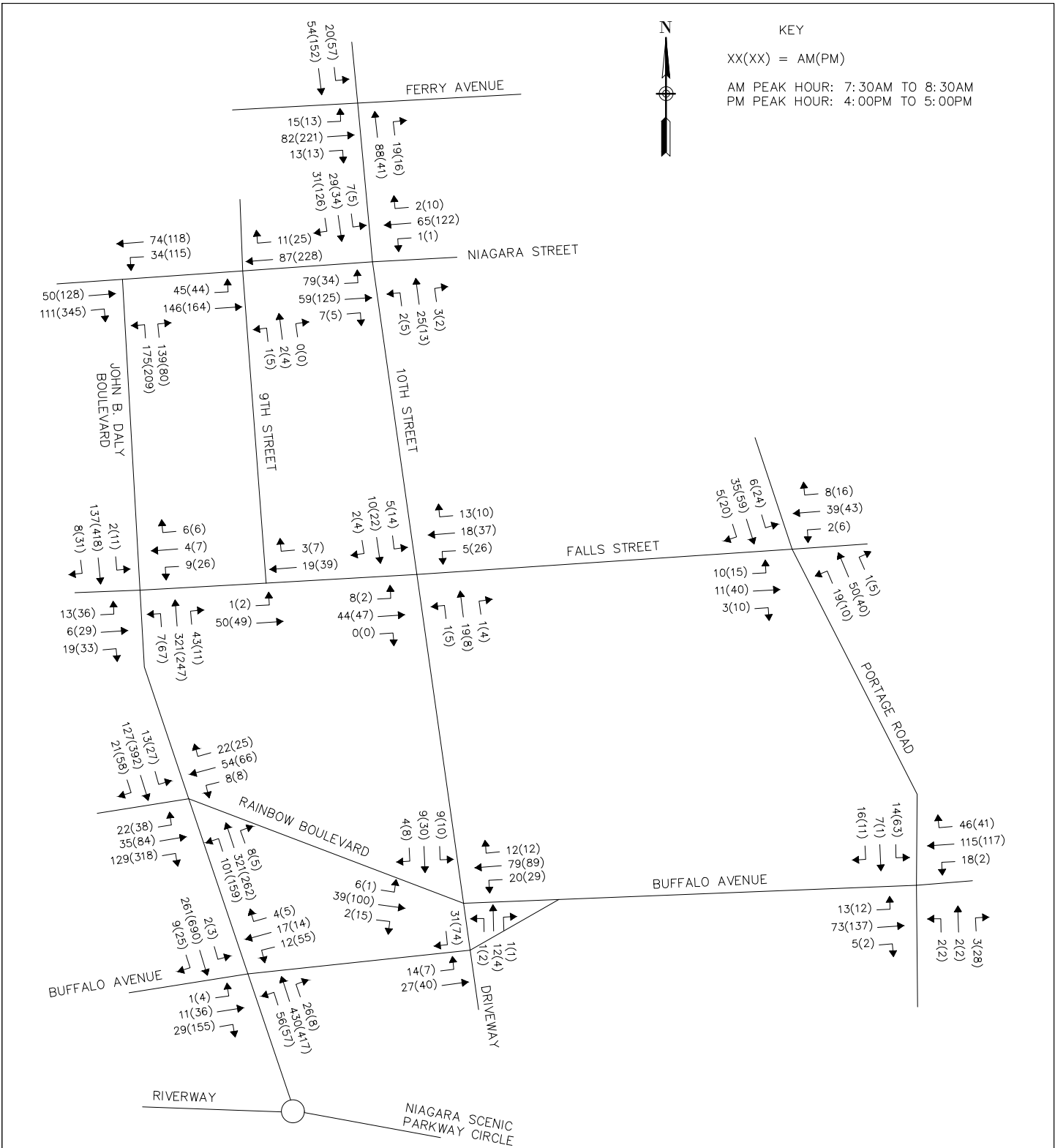
1. Existing Conditions: Study Area intersections are operating with acceptable levels of service (D or better) for all movements and approaches.
2. Trip Generation: Based on the ITE Trip Generation Manual, the data center is expected to generate 75 trips inbound and 61 trips outbound during the morning peak and 33 trips inbound and 78 trips outbound during the evening peak.
3. Proposed Conditions: The proposed data center is expected to have a minimal impact at all of the intersections in the Study Area.
4. Mitigation: No mitigation is recommended to the Study Area since the data center does not have adverse impacts.

APPENDIX A – FIGURES



Study Location Map
 Niagara Falls Redevelopment (NFR) Data Center
 Traffic Impact Study
 Niagara Falls, New York

Figure 2



Jun 19, 2024 - 3:44pm
 F:\Project\298 - TRM Design Planning\298007002 - NFR Data Center TIS\Planning-Study\Technical Information\TMD_Existing Traffic Volumes.dwg

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 DESIGNED BY: K. WESSEL
 CHECKED BY: K. WESSEL

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2022 EXISTING TRAFFIC VOLUMES
 WEEKDAY AM (PM) PEAK HOUR
 TURNING MOVEMENT DIAGRAM

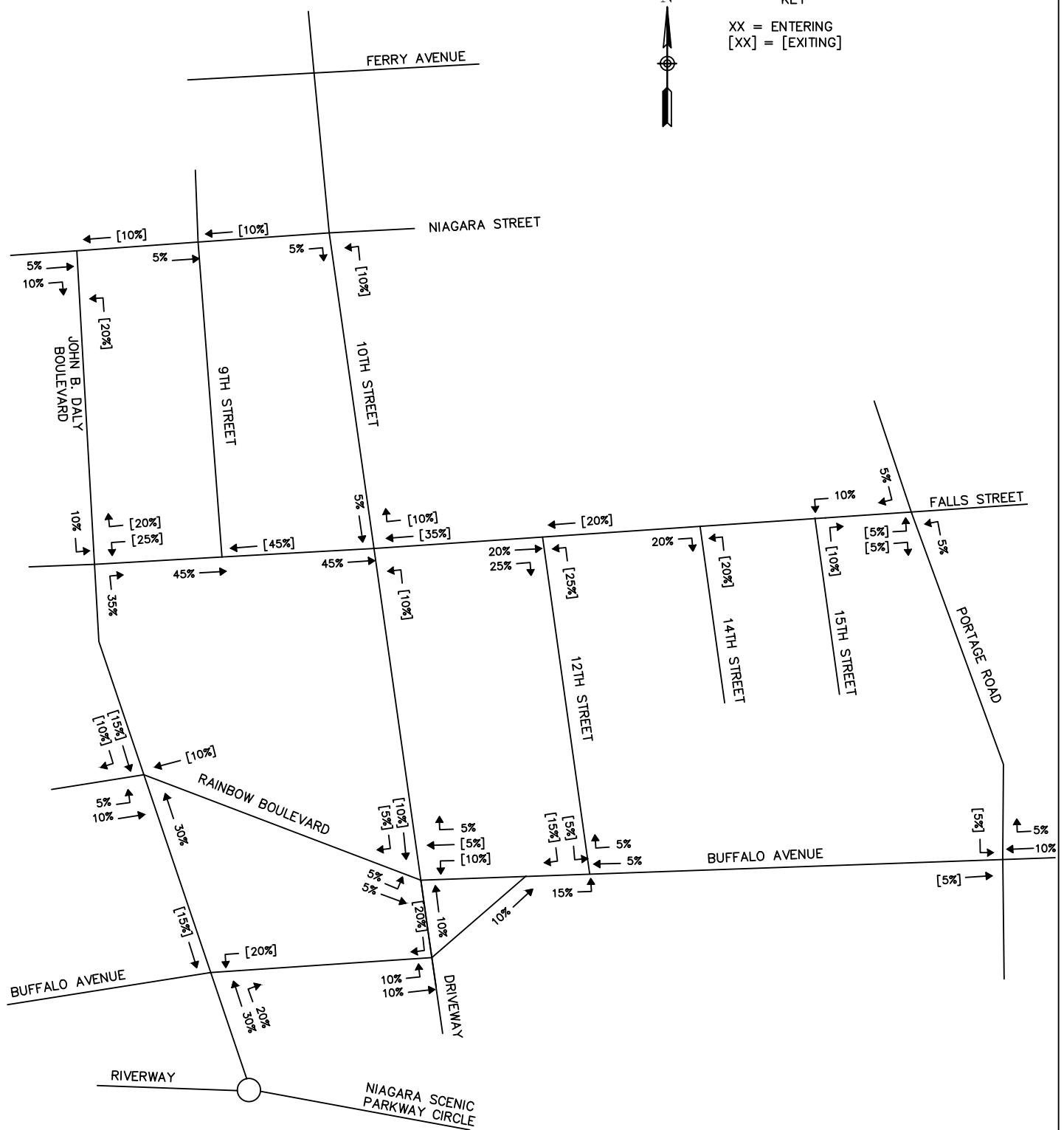
DATA CENTER
 TRAFFIC IMPACT STUDY

NIAGARA FALLS,
 NIAGARA COUNTY

FIGURE 3



KEY
 XX = ENTERING
 [XX] = [EXITING]



Sep 23, 2024 - 1:47pm
 \\cscos.com\cscfile\Eng\Project\298 - TRM Design Planning\298007002 - NFR Data Center TIS\Planning-Study\Technical Information\Turning Movement Diagrams\Trip Distributions AM -REVISED.dwg

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PROPOSED TRIP DISTRIBUTION
 WEEKDAY AM PEAK HOUR
 TURNING MOVEMENT DIAGRAM

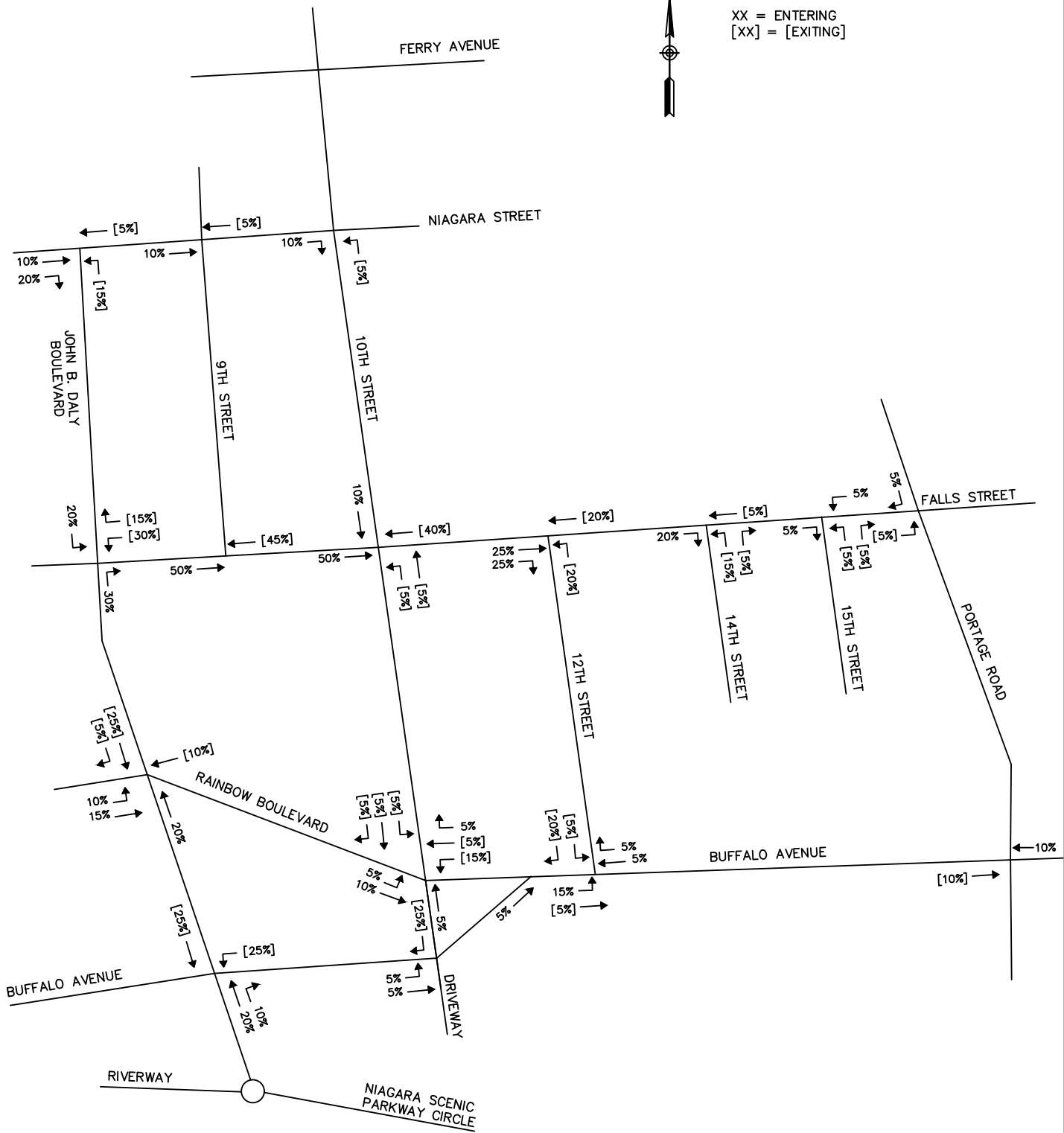
DATA CENTER
 TRAFFIC IMPACT STUDY

NIAGARA FALLS,
 NIAGARA COUNTY

FIGURE 4



KEY
 XX = ENTERING
 [XX] = [EXITING]



Sep 23, 2024 - 1:53pm
 \\cscos.com\cfile\Eng\Project\298 - TRM Design Planning\298007002 - NFR Data Center TIS\Planning-Study\Technical Information\Turning Movement Diagrams\Trip Distributions PM - REVISED.dwg

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PROPOSED TRIP DISTRIBUTION
 WEEKDAY PM PEAK HOUR
 TURNING MOVEMENT DIAGRAM

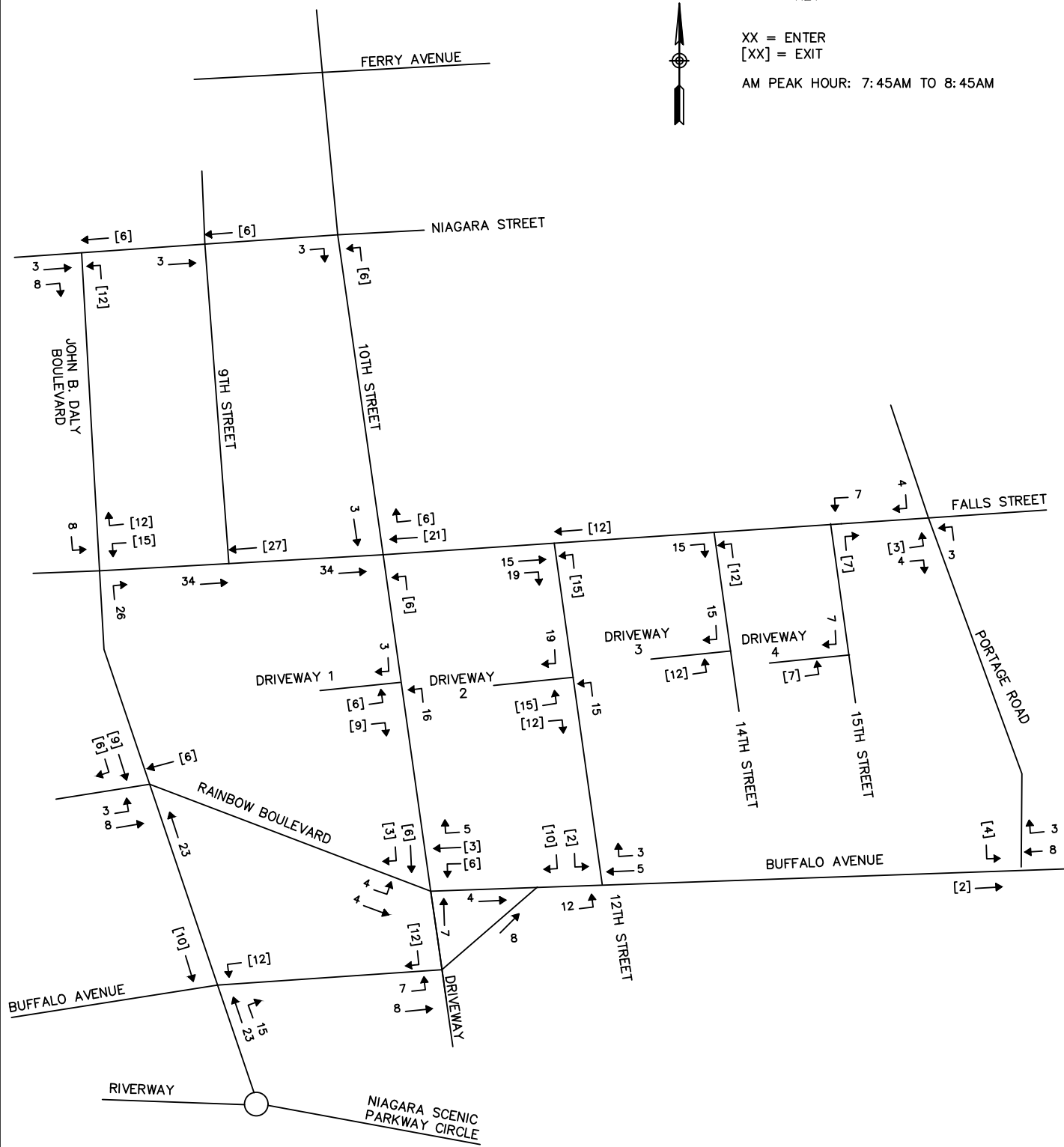
DATA CENTER
 TRAFFIC IMPACT STUDY

NIAGARA FALLS,
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FIGURE 5



KEY
 XX = ENTER
 [XX] = EXIT
 AM PEAK HOUR: 7:45AM TO 8:45AM



Sep 24, 2024 - 10:42am
 \\cscos.com\cscos\file\Eng\Project\298 - TRM Design Planning\298007002 - NFR Data Center TIS\Planning-Study\Technical Information\Turning Movement Diagrams\Trip Generation.dwg

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PROPOSED TRIP GENERATION
 WEEKDAY AM PEAK HOUR
 TURNING MOVEMENT DIAGRAM

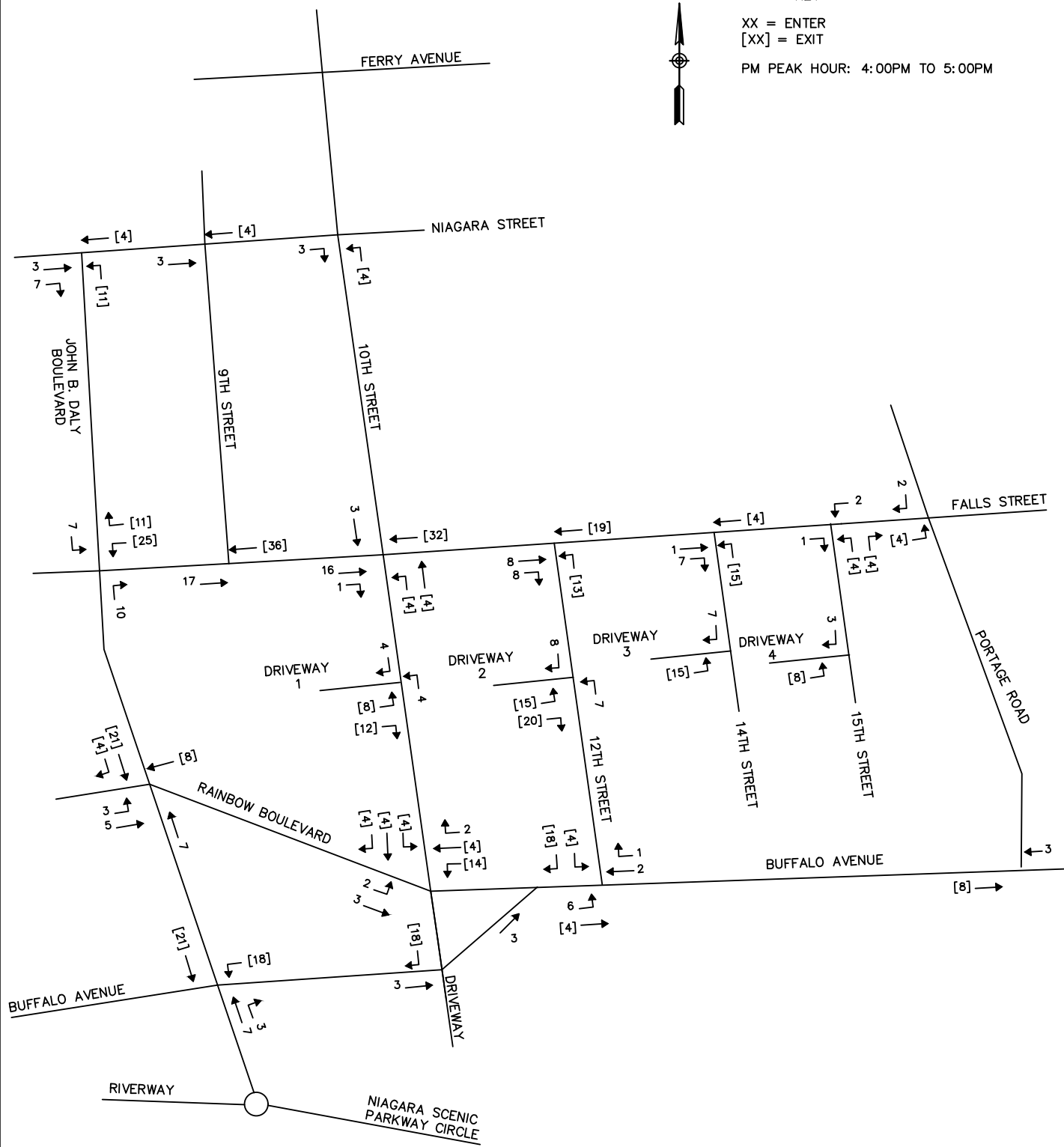
DATA CENTER
 TRAFFIC IMPACT STUDY

NIAGARA FALLS,
 NIAGARA COUNTY

FIGURE 6



KEY
 XX = ENTER
 [XX] = EXIT
 PM PEAK HOUR: 4:00PM TO 5:00PM



Sep 24, 2024 - 10:14am
 \\cscos.com\cfile\Eng\Project\298 - TRM Design Planning\298007002 - NFR Data Center TIS\Planning-Study\Technical Information\Turning Movement Diagrams\Trip Generation.dwg

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CHECKED BY:	K. WESSEL

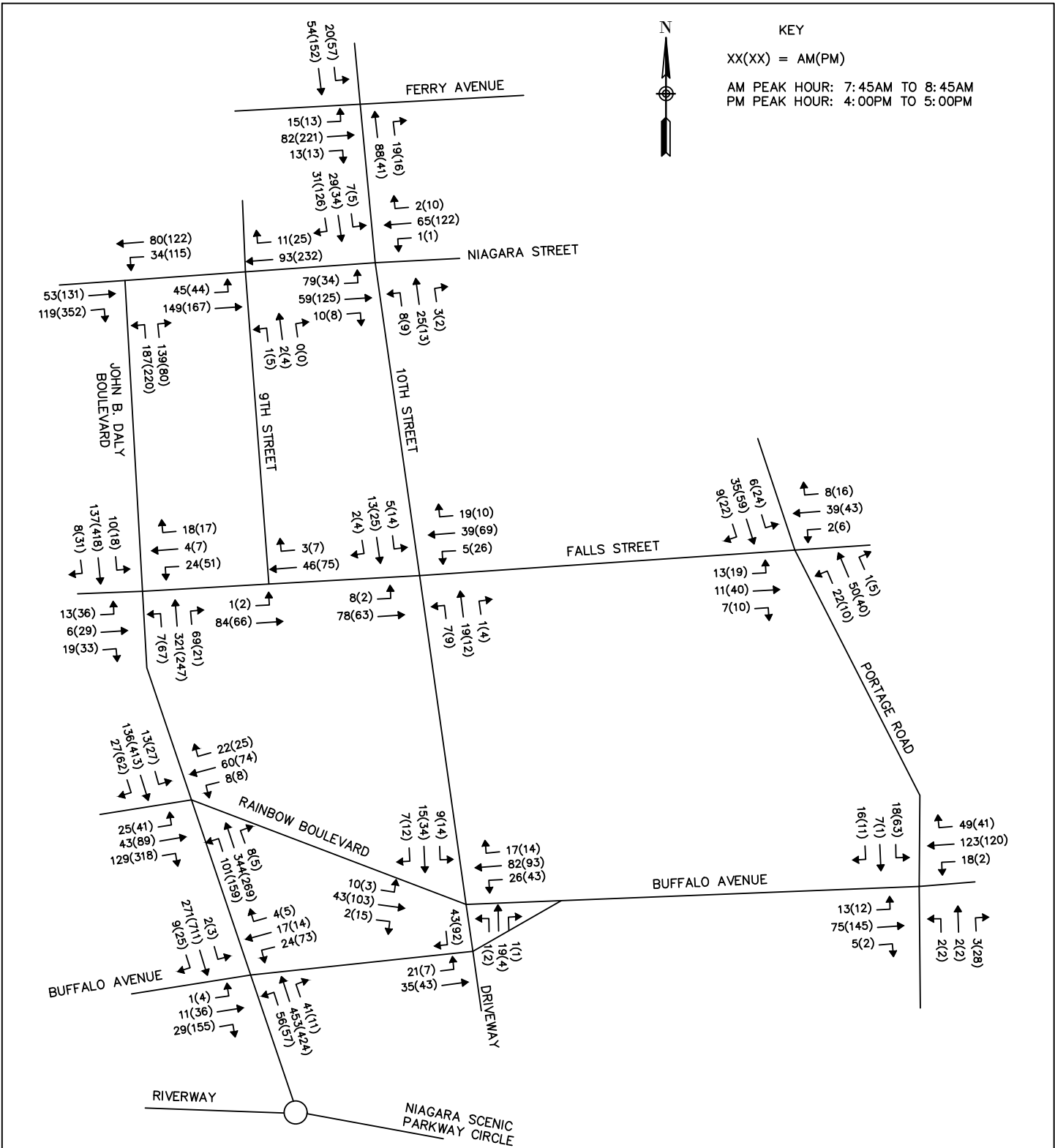
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PROPOSED TRIP GENERATION
 WEEKDAY AM (PM) PEAK HOUR
 TURNING MOVEMENT DIAGRAM

DATA CENTER
 TRAFFIC IMPACT STUDY

NIAGARA FALLS,
 NIAGARA COUNTY

FIGURE 7



Sep 24, 2024 - 1:44pm
 \\cscos.com\cscfile\Eng\Project\298 - TRM Design Planning\298007002 - NFR Data Center TIS\Planning-Study\Technical Information\Turning Movement Diagrams\TMD_Proposed Traffic Volumes.dwg

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DESIGNED BY:	J. ANASTASIA
CHECKED BY:	K. WESSEL

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PROPOSED TRAFFIC VOLUMES
 WEEKDAY AM (PM) PEAK HOUR
 TURNING MOVEMENT DIAGRAM

DATA CENTER
 TRAFFIC IMPACT STUDY

NIAGARA FALLS,
 NIAGARA COUNTY

FIGURE 8

APPENDIX B – COLLISION DATA

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
38592190	INJURY	RIGHT ANGLE	14-10-20	6:05 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	1	2	B - INJURY	
3872847	PROPERTY DAMAGE	REAR END	20-03-21	1:00 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2		
3889723	PROPERTY DAMAGE	HEAD ON	11-05-21	10:30 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2		"FOOT SLIPPED OFF BREAK PEDAL"
3892427	INJURY	REAR END	27-05-21	11:55 PM	COLLISION WITH MOTOR VEHICLE	NONE	1	1		
39039147	INJURY	RIGHT ANGLE	24-09-21	10:15 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	1	2	C - POSSIBLE INJURY	
39118308	INJURY	RIGHT ANGLE	30-09-21	8:25 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	1	2	B - INJURY	
39318801	INJURY	RIGHT ANGLE	18-11-21	4:35 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	2	2	A - POSSIBLE INJURY	
39689250	PROPERTY DAMAGE	SIDESWIPe	20-04-22	7:35 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2	U - UNKNOWN	
3972942	INJURY	RIGHT ANGLE	20-01-23	8:26 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2	U - UNKNOWN	
3991802	PROPERTY DAMAGE	OTHER	27-03-23	4:30 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	1	U - UNKNOWN	
40168171	PROPERTY DAMAGE	RIGHT ANGLE	18-01-24	5:18 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2	U - UNKNOWN	
40210259	PROPERTY DAMAGE	RIGHT ANGLE	06-12-24	4:04 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2	U - UNKNOWN	
38165520	PROPERTY DAMAGE	REAR END	10-01-19	20:45 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL
3828930	PROPERTY DAMAGE	OTHER	10-01-19	6:00 PM	COLLISION WITH CURBING	NONE	0	1		NO TRAFFIC CONTROL & COLLISION WITH OBJECT
3839780	PROPERTY DAMAGE	OVERTAKING	24-02-20	12:30 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL - PARKED VEHICLE
3839788	PROPERTY DAMAGE	OTHER	04-03-20	2:13 PM	COLLISION WITH FENCE	NONE	0	1		NO TRAFFIC CONTROL & COLLISION WITH OBJECT
3839797	PROPERTY DAMAGE	REAR END	10-03-20	4:18 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL (WHILE BACKING UP)
3873502	PROPERTY DAMAGE	REAR END	07-02-21	11:55 AM	COLLISION WITH FENCE	NONE	0	2		NO TRAFFIC CONTROL & COLLISION WITH OBJECT
3921031	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	06-01-22	1:00 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL & PARKED VEHICLE
3921031	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	23-01-22	12:00 PM	COLLISION WITH MOTOR VEHICLE	NONE	1	2	B - INJURY	NO TRAFFIC CONTROL & COLLISION WITH OBJECT
4015873	PROPERTY DAMAGE	OTHER	13-01-24	12:34 AM	COLLISION WITH SIGN POST	STOP SIGN	0	1	U - UNKNOWN	COLLISION WITH OBJECT & DMV

TOTAL INJURIES	SUMMARY OF COLLISIONS	PERCENTAGES
6	RIGHT ANGLE 2	33%
1	REAR END 1	17%
1	HEAD ON 1	17%
1	SIDESWIPe 1	17%
1	OTHER 1	17%
13	TOTAL COLLISIONS	

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3862803	PROPERTY DAMAGE	REAR END	10-11-20	9:30 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2		
3961333	PROPERTY DAMAGE	OVERTAKING	29-12-22	3:42 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U - UNKNOWN	APPROACHING
3988886	INJURY	OTHER	28-06-23	4:15 PM	COLLISION WITH PEDESTRIAN	TRAFFIC SIGNAL	1	1	B - INJURY	
3878426	PROPERTY DAMAGE	OTHER	14-03-21	1:54 AM	RAN OFF ROAD ONLY	TRAFFIC SIGNAL	0	1	A - SERIOUS INJURY	"RAN OFF ROAD ONLY"
3972389	INJURY	OTHER	09-02-23	3:18 PM	COLLISION WITH SIGN POST	TRAFFIC SIGNAL	2	2	U - UNKNOWN	COLLISION WITH OBJECT
3972620	PROPERTY DAMAGE	RIGHT ANGLE	17-02-23	5:50 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL

TOTAL INJURIES	SUMMARY OF COLLISIONS	PERCENTAGES
1	REAR END 1	33%
1	OVERTAKING 1	33%
1	OTHER 1	33%
3	TOTAL COLLISIONS	

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
38072202	INJURY	OTHER	09-09-19	3:30 PM	COLLISION WITH BICYCLIST	NONE	1	1	B - INJURY	
3837854	INJURY	RIGHT TURN (WITH OTHER CAR)	16-02-20	10:35 PM	COLLISION WITH MOTOR VEHICLE	NONE	1	2	C - POSSIBLE INJURY	
3929763	PROPERTY DAMAGE	OTHER	01-04-22	7:30 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	3	U - UNKNOWN	NO TRAFFIC CONTROL - PARKED VEHICLES
3945491	PROPERTY DAMAGE	OTHER	30-07-22	2:36 AM	COLL W/IGHT SUPPORT/UTILITY POLE	NONE	0	1	U - UNKNOWN	NO TRAFFIC CONTROL & COLLISION WITH OBJECT

TOTAL INJURIES	SUMMARY OF COLLISIONS	PERCENTAGES
2	RIGHT TURN (WITH OTHER CAR) 1	50%
1	OTHER 1	50%
2	TOTAL COLLISIONS	

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3792579	INJURY	OTHER	11-06-19	4:52 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	3	3	C - POSSIBLE INJURY	
3815366	PROPERTY DAMAGE	REAR END	07-11-19	9:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2		
3934960	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	13-05-22	8:11 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2		
39351006	PROPERTY DAMAGE	OVERTAKING	16-05-22	11:56 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2		
3941045	PROPERTY DAMAGE	RIGHT ANGLE	30-06-22	6:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U - UNKNOWN	
3945831	PROPERTY DAMAGE	REAR END	22-11-22	3:39 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	2	2	U - UNKNOWN	
3961366	INJURY	REAR END	15-12-22	8:50 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	2	2	B - INJURY	
3963221	INJURY	RIGHT ANGLE	21-12-22	8:55 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	1	2	A - SERIOUS INJURY	
3964832	INJURY	OTHER	11-08-23	7:27 PM	COLLISION WITH PEDESTRIAN	TRAFFIC SIGNAL	0	1	B - INJURY	
37952028	PROPERTY DAMAGE	UNKNOWN	11-06-19	5:00 PM	COLLISION WITH MOTOR VEHICLE	UNKNOWN	0	2		"UNKNOWN" - NO INFORMATION FOUND
38379414	PROPERTY DAMAGE	OTHER	18-03-20	1:46 PM	COLLISION WITH OTHER FIXED OBJECT	NONE	1	1		NO TRAFFIC CONTROL & COLLISION WITH OBJECT
38598932	INJURY	OTHER	18-10-20	12:40 AM	COLL W/IGHT SUPPORT/UTILITY POLE	NONE	1	1	C - POSSIBLE INJURY	NO TRAFFIC CONTROL & COLLISION WITH OBJECT

TOTAL INJURIES	SUMMARY OF COLLISIONS	PERCENTAGES
7	REAR END 2	33%
1	SERIOUS INJURIES 1	14%
3	OVERTAKING 3	43%
1	RIGHT ANGLE 1	14%
2	LEFT TURN (AGAINST OTHER CAR) 2	29%
2	OTHER 2	29%
9	TOTAL COLLISIONS	

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3793207	PROPERTY DAMAGE	RIGHT ANGLE	08-06-19	5:45 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2		
3812862	PROPERTY DAMAGE	REAR END	16-10-19	6:36 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2		
3813513	PROPERTY DAMAGE	RIGHT ANGLE	18-10-19	10:41 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2		
3849284	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	17-07-20	1:00 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		
3850037	INJURY	RIGHT ANGLE	13-07-20	2:00 PM	COLLISION WITH MOTOR VEHICLE	NONE	1	2	C- POSSIBLE INJURY	
3849528	PROPERTY DAMAGE	RIGHT ANGLE	01-08-20	12:10 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		
3878422	INJURY	RIGHT ANGLE	13-03-21	3:01 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2	B- INJURY	
3927815	PROPERTY DAMAGE	RIGHT ANGLE	17-03-22	4:50 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2		
3946281	PROPERTY DAMAGE	RIGHT ANGLE	29-07-22	2:10 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2	U- UNKNOWN	
3946281	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	26-08-22	10:51 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	3	2	B- INJURY	
3958392	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	03-11-22	11:47 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	
3958756	INJURY	LEFT TURN (AGAINST OTHER CAR)	19-05-20	2:00 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	1	2	B- INJURY	
3893805	PROPERTY DAMAGE	OTHER	16-10-20	1:55 AM	COLLISION WITH SIGN POST	STOP SIGN	0	1		COLLISION WITH OBJECT

TOTAL INJURIES	SUMMARY OF COLLISIONS
7	REAR END 1
	RIGHT ANGLE 8
	LEFT TURN (AGAINST OTHER CAR) 8
	TOTAL COLLISIONS 12

PERCENTAGES
8%
67%
25%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3788793	INJURY	RIGHT ANGLE	15-05-19	5:00 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	3	2	A- SERIOUS INJURY	
3880789	PROPERTY DAMAGE	OTHER	14-04-21	8:30 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	3		
3912023	PROPERTY DAMAGE	RIGHT ANGLE	17-06-21	7:07 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2		
3928242	INJURY	RIGHT ANGLE	11-09-23	7:07 AM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	1	2	B- INJURY	
3844277	PROPERTY DAMAGE	OTHER	15-06-20	12:30 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL - PARKED VEHICLE (CUDABACK)

TOTAL INJURIES	SERIOUS INJURIES	SUMMARY OF COLLISIONS	OTHER	TOTAL COLLISIONS
4	1	RIGHT ANGLE 3	1	4
		OTHER 3	1	4

PERCENTAGES
75%
25%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3793867	PROPERTY DAMAGE	RIGHT ANGLE	04-03-23	2:10 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL
3793867	PROPERTY DAMAGE	RIGHT ANGLE	05-06-19	7:18 AM	COLL W/IGHT SIGN/POST/UTILITY POLE	NONE	0	1		NO TRAFFIC CONTROL & COLLISION WITH OBJECT

TOTAL INJURIES	SUMMARY OF COLLISIONS	OTHER	TOTAL COLLISIONS
0	RIGHT ANGLE 1	1	1

PERCENTAGES
100%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3792315	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	24-07-19	7:22 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	2	2		
3954273	INJURY	RIGHT ANGLE	13-10-22	6:27 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	2	2	B- INJURY	
3926716	PROPERTY DAMAGE	RIGHT TURN (AGAINST OTHER CAR)	11-03-23	10:00 PM	COLLISION WITH MOTOR VEHICLE	STOP SIGN	0	2	U- UNKNOWN	
3891312	PROPERTY DAMAGE	OTHER	27-04-23	10:48 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	3		
4021020	PROPERTY DAMAGE	OTHER	16-02-24	7:00 AM	COLLISION WITH MOTOR VEHICLE	OTHER	0	2	U- UNKNOWN	
3802967	PROPERTY DAMAGE	OTHER	15-08-19	12:05 PM	COLLISION WITH BRIDGE STRUCTURE	OTHER	0	1		COLLISION WITH OBJECT
3950509	INJURY	OTHER	10-09-22	5:51 AM	COLLISION WITH BICYCLIST	OTHER	1	1	B- INJURY	
3984515	INJURY	RIGHT ANGLE	06-06-23	11:47 AM	COLLISION WITH MOTOR VEHICLE	NONE	2	2		NO TRAFFIC CONTROL

TOTAL INJURIES	SUMMARY OF COLLISIONS	RIGHT ANGLE	LEFT TURN (AGAINST OTHER CAR)	RIGHT TURN (AGAINST OTHER CAR)	SIDE SWIPE	OTHER	TOTAL COLLISIONS
2	RIGHT ANGLE 2	1	1	1	1	1	5

PERCENTAGES
20%
20%
20%
20%
20%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3802591	INJURY	REAR END	16-08-19	6:23 PM	COLLISION WITH MOTOR VEHICLE	NONE	2	2		
3832301	PROPERTY DAMAGE	RIGHT TURN (AGAINST OTHER CAR)	29-03-20	12:07 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		C- POSSIBLE INJURY
3885060	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	24-05-21	6:10 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL

TOTAL INJURIES	SUMMARY OF COLLISIONS	REAR END	RIGHT TURN (AGAINST OTHER CAR)	TOTAL COLLISIONS
2	REAR END 1	1	1	2

PERCENTAGES
50%
50%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3813270	PROPERTY DAMAGE	RIGHT ANGLE	28-10-19	4:15 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		
3818504	PROPERTY DAMAGE	RIGHT TURN (WITH OTHER CAR)	20-11-19	12:07 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		
3883548	INJURY	RIGHT TURN (WITH OTHER CAR)	29-04-21	2:30 PM	COLLISION WITH MOTOR VEHICLE	NONE	1	2	C- POSSIBLE INJURY	
4023219	INJURY	OTHER	08-03-24	7:00 AM	COLLISION WITH MOTOR VEHICLE	NONE	1	2	B- INJURY	
3823426	PROPERTY DAMAGE	OTHER	17-12-19	1:00 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NOTE: TRUCK HIT VEHICLE WHEN TURNING INTO VEH
3901290	PROPERTY DAMAGE	REAR END	02-10-21	2:08 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NOTE: TRUCK BACKED INTO INTERSECTION INTO VEH

TOTAL INJURIES	SUMMARY OF COLLISIONS	RIGHT TURN (WITH OTHER CAR)	RIGHT ANGLE	OTHER	TOTAL COLLISIONS
2	RIGHT TURN (WITH OTHER CAR) 2	1	1	1	4

PERCENTAGES
50%
25%
25%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3953383	PROPERTY DAMAGE	RIGHT ANGLE	21-10-22	7:58 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2		U- UNKNOWN

TOTAL INJURIES	SUMMARY OF COLLISIONS	RIGHT ANGLE	TOTAL COLLISIONS
0	RIGHT ANGLE 1	1	1

PERCENTAGES
100%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3956194	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	26-01-23	4:26 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	NO TRAFFIC CONTROL & COLLISION WITH OBJECT
3854093	PROPERTY DAMAGE	OTHER	07-10-20	7:24 PM	COLLISION WITH SIGN POST	NONE	0	1	U- UNKNOWN	NO TRAFFIC CONTROL
4029083	PROPERTY DAMAGE	REAR END	12-04-24	2:37 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NO TRAFFIC CONTROL

TOTAL INJURIES	SUMMARY OF COLLISIONS	TOTAL COLLISIONS
0	LEFT TURN (AGAINST OTHER CAR) 1	1
	OTHER 1	1
	REAR END 1	1

PERCENTAGES

100%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3793237	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	17-06-19	12:00 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3794521	PROPERTY DAMAGE	OVERTAKING	23-06-19	9:11 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3797015	PROPERTY DAMAGE	RIGHT ANGLE	06-07-19	9:18 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3813824	PROPERTY DAMAGE	REAR END	21-10-19	5:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3883853	PROPERTY DAMAGE	RIGHT ANGLE	10-04-21	7:45 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3898873	INJURY	RIGHT ANGLE	30-07-21	11:54 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	1	2	C- POSSIBLE INJURY	IGNORE BECAUSE
3939746	PROPERTY DAMAGE	OVERTAKING	21-05-22	5:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3939727	PROPERTY DAMAGE	LEFT TURN (AGAINST OTHER CAR)	01-06-22	4:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3951899	PROPERTY DAMAGE	HEAD ON	26-09-22	2:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3991810	PROPERTY DAMAGE	REAR END	08-07-23	4:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3991850	PROPERTY DAMAGE	REAR END	28-08-23	7:55 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
40057017	PROPERTY DAMAGE	REAR END	02-11-23	9:15 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
4015458	PROPERTY DAMAGE	OVERTAKING	31-12-23	11:53 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
4015468	PROPERTY DAMAGE	RIGHT TURN (AGAINST OTHER CAR)	13-01-24	6:00 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3795688	PROPERTY DAMAGE	REAR END	02-07-19	9:58 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	COLLISION WITH OBJECT
4015283	PROPERTY DAMAGE	REAR END	25-12-23	9:12 PM	COLLISION WITH COMBING	TRAFFIC SIGNAL	0	1	U- UNKNOWN	COLLISION WITH OBJECT
4015493	PROPERTY DAMAGE	OTHER	25-12-23	1:51 AM	COLLISION WITH COMBING	TRAFFIC SIGNAL	0	1	U- UNKNOWN	COLLISION WITH OBJECT

TOTAL INJURIES	SUMMARY OF COLLISIONS	TOTAL COLLISIONS
1	REAR END 3	3
	OVERTAKING 1	1
	RIGHT ANGLE 2	2
	LEFT TURN (AGAINST OTHER CAR) 3	3
	HEAD ON 1	1
	RIGHT TURN (AGAINST OTHER CAR) 1	1
	OTHER 1	1
	TOTAL COLLISIONS 18	18

PERCENTAGES

21%
21%
21%
21%
7%
7%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3895898	INJURY	REAR END	04-09-19	8:27 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	C- POSSIBLE INJURY	IGNORE BECAUSE
3895402	PROPERTY DAMAGE	HEAD ON	26-07-21	4:14 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3898078	PROPERTY DAMAGE	OVERTAKING	14-08-21	2:44 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3910702	PROPERTY DAMAGE	OTHER	16-11-21	8:00 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	3	U- UNKNOWN	IGNORE BECAUSE
3925865	PROPERTY DAMAGE	RIGHT ANGLE	01-03-22	7:37 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3939907	PROPERTY DAMAGE	LEFT TURN (WITH OTHER CAR)	06-06-22	8:42 AM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
4015412	PROPERTY DAMAGE	RIGHT ANGLE	13-12-23	6:33 PM	COLLISION WITH MOTOR VEHICLE	TRAFFIC SIGNAL	0	2	U- UNKNOWN	IGNORE BECAUSE
3953208	PROPERTY DAMAGE	OTHER	29-09-22	5:26 PM	COLLISION WITH BRIDGE STRUCTURE	OTHER	0	1	U- UNKNOWN	COLLISION WITH OBJECT
4008574	PROPERTY DAMAGE	SIDESWIPE	18-11-23	2:00 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NONE - TRAFFIC CONTROL

TOTAL INJURIES	SUMMARY OF COLLISIONS	TOTAL COLLISIONS
1	REAR END 1	1
	OVERTAKING 1	1
	RIGHT ANGLE 2	2
	LEFT TURN (WITH OTHER CAR) 1	1
	HEAD ON 1	1
	OTHER 1	1
	TOTAL COLLISIONS 7	7

PERCENTAGES

14%
14%
29%
14%
14%
14%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	IGNORE BECAUSE
3895820	PROPERTY DAMAGE	RIGHT TURN (WITH OTHER CAR)	25-09-20	8:20 PM	COLLISION WITH MOTOR VEHICLE	YIELD SIGN	0	2	U- UNKNOWN	IGNORE BECAUSE
3891992	PROPERTY DAMAGE	RIGHT ANGLE	17-04-21	12:03 AM	COLLISION WITH MOTOR VEHICLE	YIELD SIGN	0	2	U- UNKNOWN	IGNORE BECAUSE
3941038	PROPERTY DAMAGE	OVERTAKING	30-06-22	9:36 AM	COLLISION WITH MOTOR VEHICLE	YIELD SIGN	0	2	U- UNKNOWN	IGNORE BECAUSE
3821209	PROPERTY DAMAGE	OVERTAKING	04-12-19	12:10 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NO TRAFFIC CONTROL
3822824	PROPERTY DAMAGE	OVERTAKING	20-12-19	9:58 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NO TRAFFIC CONTROL
3848790	PROPERTY DAMAGE	OTHER	10-06-20	11:30 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NO TRAFFIC CONTROL
3878827	INJURY	OTHER	20-03-21	10:17 PM	COLLISION WITH MOTOR VEHICLE	NO PASSING ZONE	1	2	C- POSSIBLE INJURY	NO TRAFFIC CONTROL
3902781	PROPERTY DAMAGE	OVERTAKING	19-09-21	11:08 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NO TRAFFIC CONTROL
3978153	PROPERTY DAMAGE	RIGHT TURN (AGAINST OTHER CAR)	27-02-23	8:19 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NO TRAFFIC CONTROL
3993801	PROPERTY DAMAGE	OTHER	03-08-23	2:32 PM	COLLISION WITH SIGN POST	NONE	1	1	U- UNKNOWN	NO TRAFFIC CONTROL
3994168	PROPERTY DAMAGE	OTHER	05-08-23	3:03 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U- UNKNOWN	NO TRAFFIC CONTROL & COLLISION WITH OBJECT

TOTAL INJURIES	SUMMARY OF COLLISIONS	TOTAL COLLISIONS
0	RIGHT TURN (WITH OTHER CAR) 1	1
	OVERTAKING 1	1
	RIGHT ANGLE 1	1
	OTHER 1	1
	TOTAL COLLISIONS 3	3

PERCENTAGES

33%
33%
33%

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	
37938523	PROPERTY DAMAGE	OTHER	17-06-19	2:30 AM	COLLISION WITH SIGN POST	STOP SIGN	0	1		COLLISION WITH OBJECT
38039460	INJURY	OTHER	21-08-19	2:44 PM	COLLISION WITH MOTOR VEHICLE	NONE	1	2	C - POSSIBLE INJURY	NO TRAFFIC CONTROL
38050688	PROPERTY DAMAGE	OTHER	26-08-19	3:20 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL
39077023	PROPERTY DAMAGE	REAR END	25-10-21	10:15 AM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U - UNKNOWN	NO TRAFFIC CONTROL
39897526	PROPERTY DAMAGE	RIGHT ANGLE	26-04-23	3:36 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		NO TRAFFIC CONTROL

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	
39272803	PROPERTY DAMAGE	SIDESWIP	27-02-22	4:10 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2		IGNORE BECAUSE NO TRAFFIC CONTROL (12TH)
38833704	INJURY	OTHER	26-04-21	5:22 PM	COLL. W/LIGHT SUPPORT/UTILITY POLE	NONE	1	1	B - INJURY	IGNORE BECAUSE NO TRAFFIC CONTROL & COLLIS. WITH OBJECT (14TH)

Case Number	Crash Severity	Collision Type	Crash Date	Crash Time	Crash Type	Traffic Control	# of Injuries	# of Vehicles	Max Injury in Crash	
38992603	INJURY	HEAD ON	23-06-21	8:26 AM	COLLISION WITH MOTOR VEHICLE	NONE	2	2	C - POSSIBLE INJURY	IGNORE BECAUSE NONE - TRAFFIC CONTROL
40208860	PROPERTY DAMAGE	REAR END	13-11-23	12:00 PM	COLLISION WITH MOTOR VEHICLE	NONE	0	2	U - UNKNOWN	IGNORE BECAUSE NONE - TRAFFIC CONTROL

APPENDIX C – TRAFFIC DATA



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

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

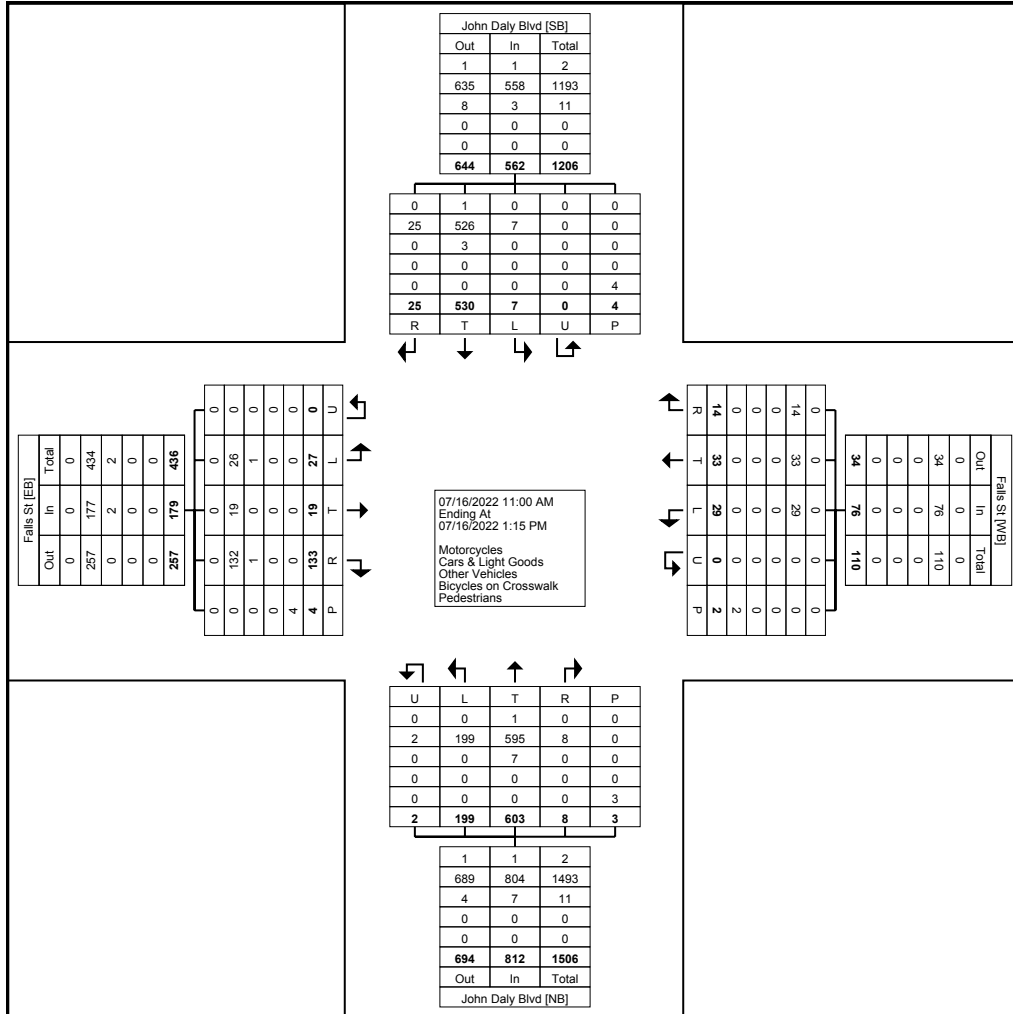
Count Name: John Daly Blvd &
Falls St
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	John Daly Blvd Southbound						Falls St Westbound						John Daly Blvd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	43	0	0	0	44	2	6	8	0	0	16	0	89	20	0	0	109	13	3	3	0	0	19	188
11:15 AM	3	53	0	0	1	56	3	3	6	0	2	12	1	68	15	0	2	84	14	4	7	0	0	25	177
11:30 AM	6	72	0	0	2	78	2	4	3	0	0	9	1	83	29	1	0	114	20	1	2	0	1	23	224
11:45 AM	3	59	0	0	1	62	1	6	0	0	0	7	2	94	30	0	0	126	8	1	2	0	0	11	206
Hourly Total	13	227	0	0	4	240	8	19	17	0	2	44	4	334	94	1	2	433	55	9	14	0	1	78	795
12:00 PM	1	79	0	0	0	80	2	6	2	0	0	10	3	53	26	0	0	82	16	4	4	0	2	24	196
12:15 PM	4	70	3	0	0	77	2	2	1	0	0	5	0	77	29	0	0	106	17	3	3	0	0	23	211
12:30 PM	3	78	1	0	0	82	2	2	6	0	0	10	0	60	22	0	0	82	19	2	3	0	1	24	198
12:45 PM	4	76	3	0	0	83	0	4	3	0	0	7	1	79	28	1	1	109	26	1	3	0	0	30	229
Hourly Total	12	303	7	0	0	322	6	14	12	0	0	32	4	269	105	1	1	379	78	10	13	0	3	101	834
1:00 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
Grand Total	25	530	7	0	4	562	14	33	29	0	2	76	8	603	199	2	3	812	133	19	27	0	4	179	1629
Approach %	4.4	94.3	1.2	0.0	-	-	18.4	43.4	38.2	0.0	-	-	1.0	74.3	24.5	0.2	-	-	74.3	10.6	15.1	0.0	-	-	-
Total %	1.5	32.5	0.4	0.0	-	34.5	0.9	2.0	1.8	0.0	-	4.7	0.5	37.0	12.2	0.1	-	49.8	8.2	1.2	1.7	0.0	-	11.0	-
Motorcycles	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	2
% Motorcycles	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	25	526	7	0	-	558	14	33	29	0	-	76	8	595	199	2	-	804	132	19	26	0	-	177	1615
% Cars & Light Goods	100.0	99.2	100.0	-	-	99.3	100.0	100.0	100.0	-	-	100.0	100.0	98.7	100.0	100.0	-	99.0	99.2	100.0	96.3	-	-	98.9	99.1
Other Vehicles	0	3	0	0	-	3	0	0	0	0	-	0	0	7	0	0	-	7	1	0	1	0	-	2	12
% Other Vehicles	0.0	0.6	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.0	1.2	0.0	0.0	-	0.9	0.8	0.0	3.7	-	-	1.1	0.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 16, 2022



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

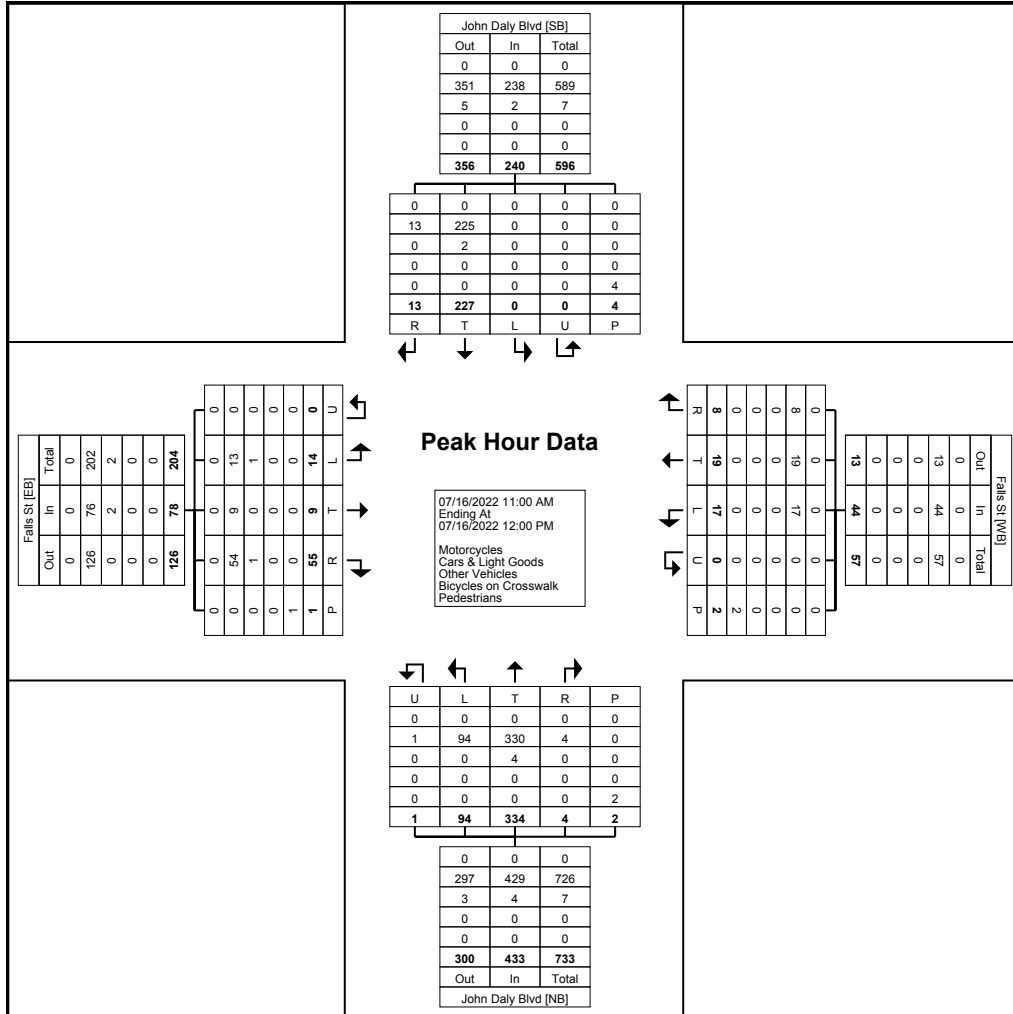
Count Name: John Daly Blvd &
Falls St
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	John Daly Blvd Southbound						Falls St Westbound						John Daly Blvd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	43	0	0	0	44	2	6	8	0	0	16	0	89	20	0	0	109	13	3	3	0	0	19	188
11:15 AM	3	53	0	0	1	56	3	3	6	0	2	12	1	68	15	0	2	84	14	4	7	0	0	25	177
11:30 AM	6	72	0	0	2	78	2	4	3	0	0	9	1	83	29	1	0	114	20	1	2	0	1	23	224
11:45 AM	3	59	0	0	1	62	1	6	0	0	0	7	2	94	30	0	0	126	8	1	2	0	0	11	206
Total	13	227	0	0	4	240	8	19	17	0	2	44	4	334	94	1	2	433	55	9	14	0	1	78	795
Approach %	5.4	94.6	0.0	0.0	-	-	18.2	43.2	38.6	0.0	-	-	0.9	77.1	21.7	0.2	-	-	70.5	11.5	17.9	0.0	-	-	-
Total %	1.6	28.6	0.0	0.0	-	30.2	1.0	2.4	2.1	0.0	-	5.5	0.5	42.0	11.8	0.1	-	54.5	6.9	1.1	1.8	0.0	-	9.8	-
PHF	0.542	0.788	0.000	0.000	-	0.769	0.667	0.792	0.531	0.000	-	0.688	0.500	0.888	0.783	0.250	-	0.859	0.688	0.563	0.500	0.000	-	0.780	0.887
Motorcycles	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
Cars & Light Goods	13	225	0	0	-	238	8	19	17	0	-	44	4	330	94	1	-	429	54	9	13	0	-	76	787
% Cars & Light Goods	100.0	99.1	-	-	-	99.2	100.0	100.0	100.0	-	-	100.0	100.0	98.8	100.0	100.0	-	99.1	98.2	100.0	92.9	-	-	97.4	99.0
Other Vehicles	0	2	0	0	-	2	0	0	0	0	-	0	0	4	0	0	-	4	1	0	1	0	-	2	8
% Other Vehicles	0.0	0.9	-	-	-	0.8	0.0	0.0	0.0	-	-	0.0	0.0	1.2	0.0	0.0	-	0.9	1.8	0.0	7.1	-	-	2.6	1.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (11:00 AM)



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

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

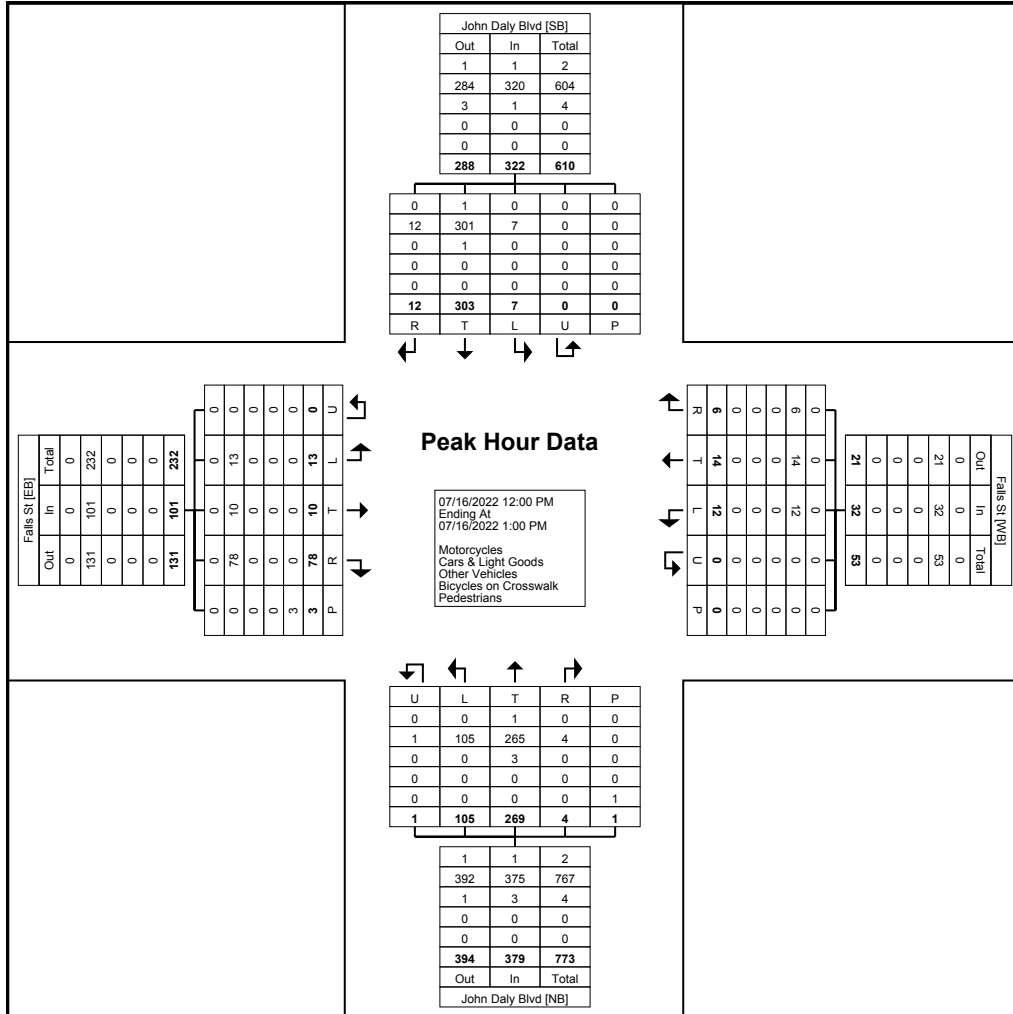
Count Name: John Daly Blvd &
Falls St
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

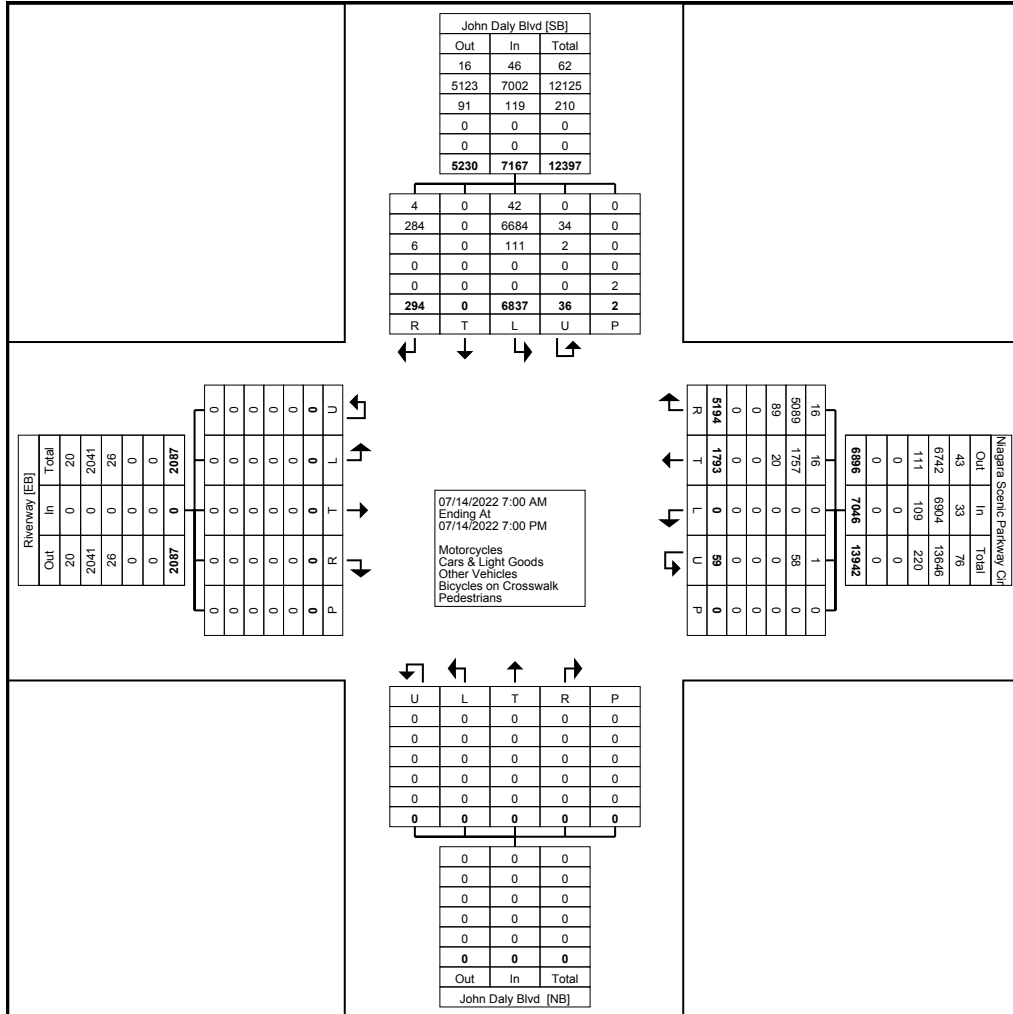
Turning Movement Peak Hour Data (12:00 PM)

Start Time	John Daly Blvd Southbound						Falls St Westbound						John Daly Blvd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	1	79	0	0	0	80	2	6	2	0	0	10	3	53	26	0	0	82	16	4	4	0	2	24	196
12:15 PM	4	70	3	0	0	77	2	2	1	0	0	5	0	77	29	0	0	106	17	3	3	0	0	23	211
12:30 PM	3	78	1	0	0	82	2	2	6	0	0	10	0	60	22	0	0	82	19	2	3	0	1	24	198
12:45 PM	4	76	3	0	0	83	0	4	3	0	0	7	1	79	28	1	1	109	26	1	3	0	0	30	229
Total	12	303	7	0	0	322	6	14	12	0	0	32	4	269	105	1	1	379	78	10	13	0	3	101	834
Approach %	3.7	94.1	2.2	0.0	-	-	18.8	43.8	37.5	0.0	-	-	1.1	71.0	27.7	0.3	-	-	77.2	9.9	12.9	0.0	-	-	-
Total %	1.4	36.3	0.8	0.0	-	38.6	0.7	1.7	1.4	0.0	-	3.8	0.5	32.3	12.6	0.1	-	45.4	9.4	1.2	1.6	0.0	-	12.1	-
PHF	0.750	0.959	0.583	0.000	-	0.970	0.750	0.583	0.500	0.000	-	0.800	0.333	0.851	0.905	0.250	-	0.869	0.750	0.625	0.813	0.000	-	0.842	0.910
Motorcycles	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	2
% Motorcycles	0.0	0.3	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	0.4	0.0	0.0	-	0.3	0.0	0.0	0.0	-	-	0.0	0.2
Cars & Light Goods	12	301	7	0	-	320	6	14	12	0	-	32	4	265	105	1	-	375	78	10	13	0	-	101	828
% Cars & Light Goods	100.0	99.3	100.0	-	-	99.4	100.0	100.0	100.0	-	-	100.0	100.0	98.5	100.0	100.0	-	98.9	100.0	100.0	100.0	-	-	100.0	99.3
Other Vehicles	0	1	0	0	-	1	0	0	0	0	-	0	0	3	0	0	-	3	0	0	0	0	-	0	4
% Other Vehicles	0.0	0.3	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	1.1	0.0	0.0	-	0.8	0.0	0.0	0.0	-	-	0.0	0.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



Turning Movement Data Plot



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

Count Name: John Daly Blvd &
Niagara Scenic Parkway Circle
Site Code:
Start Date: 07/14/2022
Page No: 4

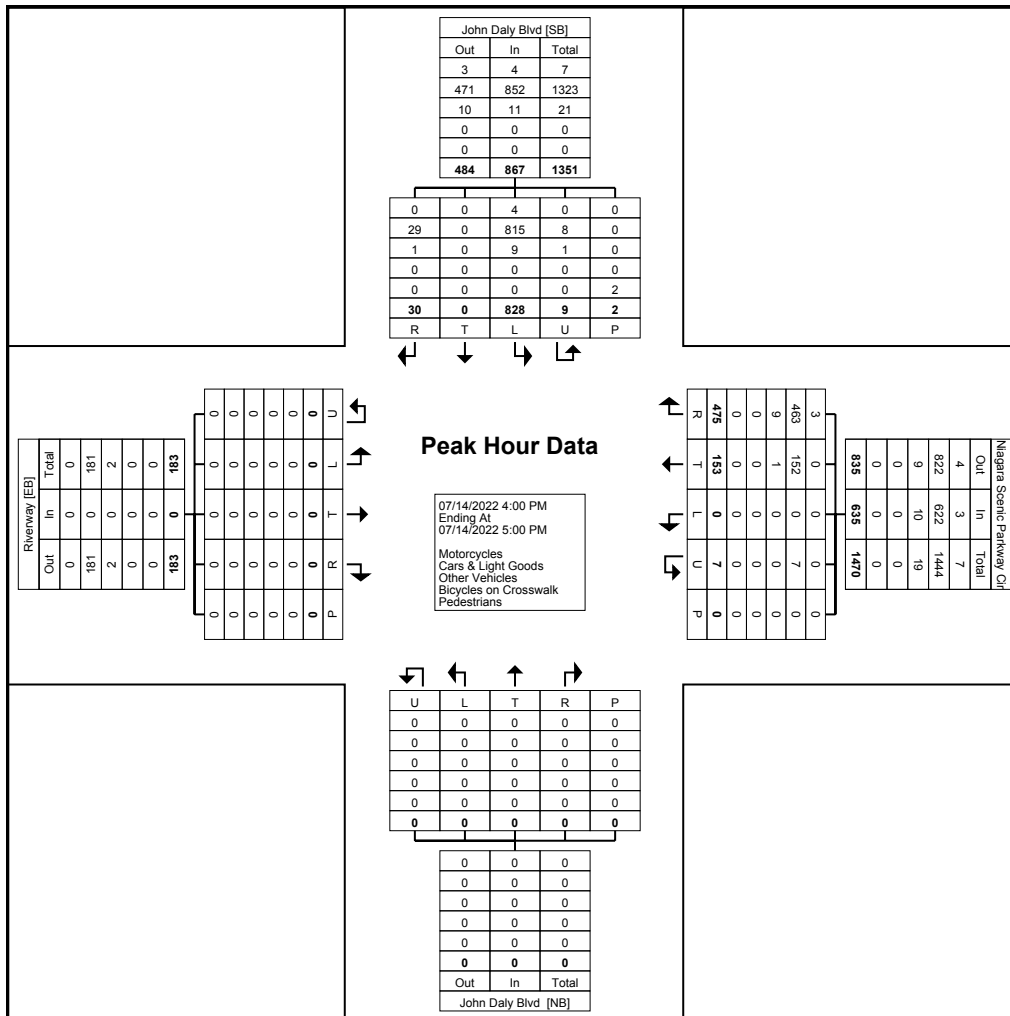
Niagara, New York
July 14, 2022

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

Approach Data

Start Time	Sb Street Southbound						Wb Street Westbound						Nb Street Northbound						Eb Street Eastbound					
	Peds CCW	Peds CW	Circul ating	Out	In	Next	Peds CCW	Peds CW	Circul ating	Out	In	Next	Peds CCW	Peds CW	Circul ating	Out	In	Next	Peds CCW	Peds CW	Circul ating	Out	In	Next
7:00 AM	0	0	10	45	54	3	0	0	0	48	55	0	0	0	48	0	0	0	0	0	51	12	0	0
7:15 AM	0	0	12	81	55	1	0	0	1	58	92	0	0	0	59	0	0	0	0	0	54	12	0	0
7:30 AM	0	0	16	123	85	3	0	0	0	75	139	0	0	0	75	0	0	0	0	0	82	20	0	0
7:45 AM	0	0	19	185	64	1	0	0	0	69	204	0	0	0	70	0	0	0	0	0	64	20	0	0
Hourly Total	0	0	57	434	258	8	0	0	1	250	490	0	0	0	252	0	0	0	0	0	251	64	0	0
8:00 AM	0	0	19	112	94	1	0	0	0	89	131	0	0	0	89	0	0	0	0	0	94	19	0	0
8:15 AM	0	0	23	107	65	4	0	0	1	69	129	0	0	0	70	0	0	0	0	0	61	27	0	0
8:30 AM	0	0	22	110	80	6	0	0	0	68	132	0	0	0	68	0	0	0	0	0	74	28	0	0
8:45 AM	0	0	29	131	90	1	0	0	0	92	160	0	0	0	92	0	0	0	0	0	89	30	0	0
Hourly Total	0	0	93	460	329	12	0	0	1	318	552	0	0	0	319	0	0	0	0	0	318	104	0	0
9:00 AM	0	0	27	83	108	8	0	0	2	95	107	0	0	0	97	0	0	0	0	0	101	34	0	0
9:15 AM	0	0	21	73	104	3	0	0	1	105	93	0	0	0	104	0	0	0	0	0	101	25	0	0
9:30 AM	0	0	35	69	115	7	0	0	0	101	104	0	0	0	101	0	0	0	0	0	108	41	0	0
9:45 AM	0	0	42	96	89	4	0	0	0	94	138	0	0	0	94	0	0	0	0	0	85	45	0	0
Hourly Total	0	0	125	321	416	22	0	0	3	395	442	0	0	0	396	0	0	0	0	0	395	145	0	0
10:00 AM	0	0	50	83	139	3	0	0	1	123	132	0	0	0	125	0	0	0	0	0	138	50	0	0
10:15 AM	0	0	44	83	133	7	0	0	1	133	125	0	0	0	134	0	0	0	0	0	126	50	0	0
10:30 AM	0	0	61	102	121	11	0	0	0	102	163	0	0	0	102	0	0	0	0	0	110	72	0	0
10:45 AM	0	0	71	97	137	10	0	0	1	127	167	0	0	0	131	0	0	0	0	0	130	77	0	0
Hourly Total	0	0	226	365	530	31	0	0	3	485	587	0	0	0	492	0	0	0	0	0	504	249	0	0
11:00 AM	0	0	57	101	151	8	0	0	1	139	157	0	0	0	144	0	0	0	0	0	144	64	0	0
11:15 AM	0	0	63	117	125	14	0	0	0	122	180	0	0	0	119	0	0	0	0	0	111	77	0	0
11:30 AM	0	0	65	114	147	13	0	0	0	124	179	0	0	0	124	0	0	0	0	0	134	77	0	0
11:45 AM	0	0	37	132	134	4	0	0	1	137	168	0	0	0	140	0	0	0	0	0	130	42	0	0
Hourly Total	0	0	222	464	557	39	0	0	2	522	684	0	0	0	527	0	0	0	0	0	519	260	0	0
12:00 PM	0	0	59	125	184	9	0	0	0	163	184	0	0	0	163	0	0	0	0	0	177	66	0	0
12:15 PM	0	0	59	117	119	10	0	0	3	120	173	0	0	0	121	0	0	0	0	0	114	63	0	0
12:30 PM	0	0	59	130	151	9	0	0	1	128	188	0	0	0	130	0	0	0	0	0	143	64	0	0
12:45 PM	0	0	51	111	146	6	0	0	0	151	162	0	0	0	153	0	0	0	0	0	141	58	0	0
Hourly Total	0	0	228	483	600	34	0	0	4	562	707	0	0	0	567	0	0	0	0	0	575	251	0	0
1:00 PM	0	0	39	104	134	2	0	0	3	124	141	0	0	0	127	0	0	0	0	0	134	38	0	0
1:15 PM	0	0	52	120	141	8	0	0	2	138	171	0	0	0	144	0	0	0	0	0	136	57	0	0
1:30 PM	0	0	39	115	170	7	0	0	0	165	154	0	0	0	162	0	0	0	0	0	164	45	0	0
1:45 PM	0	0	42	104	186	7	0	0	0	183	146	0	0	0	188	0	0	0	0	0	179	49	0	0
Hourly Total	0	0	172	443	631	24	0	0	5	610	612	0	0	0	621	0	0	0	0	0	613	189	0	0
2:00 PM	0	0	44	117	171	10	0	0	0	155	161	0	0	0	151	0	0	0	0	0	162	54	0	0
2:15 PM	0	0	38	117	175	8	0	0	0	166	155	0	0	0	164	0	0	0	0	0	167	46	0	0
2:30 PM	0	0	37	114	189	6	0	0	0	180	151	0	0	0	170	0	0	0	0	0	183	43	0	0
2:45 PM	0	0	40	120	168	4	0	0	0	168	159	0	0	0	170	0	0	0	0	0	164	44	0	0
Hourly Total	0	0	159	468	703	28	0	0	0	669	626	0	0	0	655	0	0	0	0	0	676	187	0	0
3:00 PM	0	0	53	100	254	7	0	0	0	238	153	0	0	0	244	0	0	0	0	0	247	59	0	0
3:15 PM	0	0	38	125	215	11	0	0	1	215	162	0	0	0	215	0	0	0	0	0	205	49	0	0
3:30 PM	0	0	30	117	228	10	0	0	0	208	147	0	0	0	207	0	0	0	0	0	218	40	0	0
3:45 PM	0	0	38	150	251	5	0	0	0	259	188	0	0	0	257	0	0	0	0	0	248	41	0	0
Hourly Total	0	0	159	492	948	33	0	0	1	920	650	0	0	0	923	0	0	0	0	0	918	189	0	0
4:00 PM	0	0	43	132	282	8	0	0	1	253	175	0	0	0	254	0	0	0	0	0	274	51	0	0
4:15 PM	0	0	31	114	205	6	0	0	2	212	145	0	0	0	219	0	0	0	0	0	200	35	0	0
4:30 PM	0	0	37	107	198	10	0	0	0	175	144	0	0	0	177	0	0	0	0	0	189	47	0	0
4:45 PM	2	0	48	122	194	6	0	0	2	184	170	0	0	0	194	0	0	0	0	0	190	51	0	0
Hourly Total	2	0	159	475	879	30	0	0	5	824	634	0	0	0	844	0	0	0	0	0	853	184	0	0
5:00 PM	0	0	21	105	228	4	0	0	0	218	126	0	0	0	217	0	0	0	0	0	224	26	0	0
5:15 PM	0	0	29	84	181	8	0	0	0	185	113	0	0	0	185	0	0	0	0	0	173	37	0	0
5:30 PM	0	0	33	86	187	4	0	0	0	178	119	0	0	0	178	0	0	0	0	0	183	37	0	0
5:45 PM	0	0	37	106	163	4	0	0	0	163	143	0	0	0	165	0	0	0	0	0	159	41	0	0
Hourly Total	0	0	120	381	759	20	0	0	0	744	501	0	0	0	745	0	0	0	0	0	739	141	0	0
6:00 PM	0	0	35	94	163	2	0	0	1	160	128	0	0	0	162	0	0	0	0	0	161	38	0	0
6:15 PM	0	0	32	99	140	3	0	0	0	134	131	0	0	0	134	0	0	0	0	0	137	35	0	0
6:30 PM	0	0	38	120	153	1	0	0	0	157	158	0	0	0	154	0	0	0	0	0	153	38	0	0
6:45 PM	0	0	26	109	134	7	0	0	0	132	135	0	0	0	132	0	0	0	0	0	127	33	0	0
Hourly Total	0	0	131	422	590	13	0	0	1	583	552	0	0	0	582	0	0	0	0	0	578	144	0	0

Niagara, New York
July 14, 2022





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

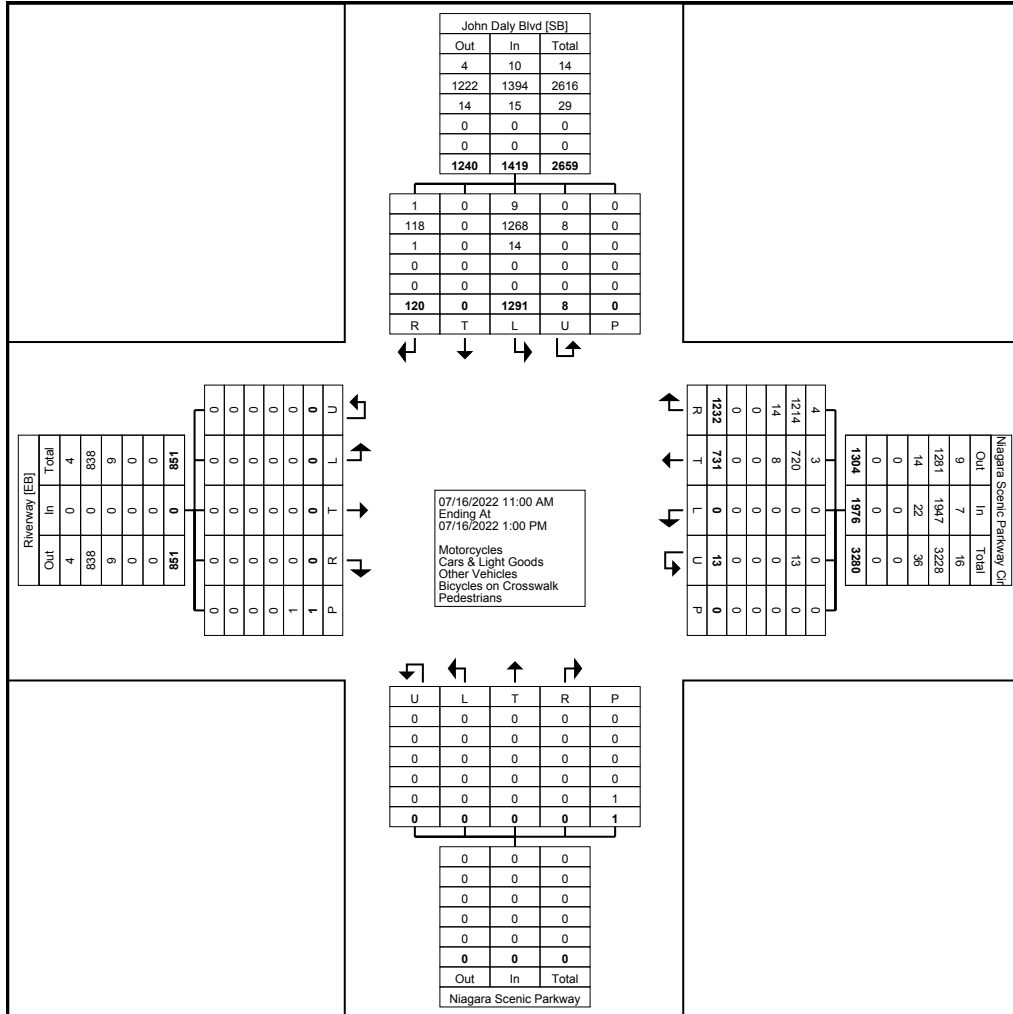
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: John Daly Blvd &
Niagara Scenic Parkway Circle
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	John Daly Blvd Southbound						Niagara Scenic Parkway Circle Westbound						Niagara Scenic Parkway Circle Northbound						Riverway Eastbound						Int. Total	
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total		
11:00 AM	7	0	132	0	0	139	155	89	0	0	0	244	0	0	0	0	0	0	0	0	0	0	0	0	0	383
11:15 AM	19	0	141	2	0	162	155	110	0	2	0	267	0	0	0	0	0	0	0	0	0	0	0	0	0	429
11:30 AM	16	0	167	2	0	185	182	102	0	2	0	286	0	0	0	0	0	0	0	0	0	0	0	0	0	471
11:45 AM	13	0	148	1	0	162	173	98	0	0	0	271	0	0	0	0	0	0	0	0	0	0	0	0	0	433
Hourly Total	55	0	588	5	0	648	665	399	0	4	0	1068	0	0	0	0	0	0	0	0	0	0	0	0	0	1716
12:00 PM	14	0	205	0	0	219	142	76	0	3	0	221	0	0	0	0	0	0	0	0	0	0	0	0	0	440
12:15 PM	16	0	153	1	0	170	144	82	0	0	0	226	0	0	0	0	1	0	0	0	0	0	0	1	0	396
12:30 PM	20	0	162	0	0	182	133	96	0	4	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0	415
12:45 PM	15	0	183	2	0	200	148	78	0	2	0	228	0	0	0	0	0	0	0	0	0	0	0	0	0	428
Hourly Total	65	0	703	3	0	771	567	332	0	9	0	908	0	0	0	0	1	0	0	0	0	0	0	1	0	1679
Grand Total	120	0	1291	8	0	1419	1232	731	0	13	0	1976	0	0	0	0	1	0	0	0	0	0	0	1	0	3395
Approach %	8.5	0.0	91.0	0.6	-	-	62.3	37.0	0.0	0.7	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	-	-
Total %	3.5	0.0	38.0	0.2	-	41.8	36.3	21.5	0.0	0.4	-	58.2	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-
Motorcycles	1	0	9	0	-	10	4	3	0	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	-	17
% Motorcycles	0.8	-	0.7	0.0	-	0.7	0.3	0.4	-	0.0	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Cars & Light Goods	118	0	1268	8	-	1394	1214	720	0	13	-	1947	0	0	0	0	-	0	0	0	0	0	-	0	-	3341
% Cars & Light Goods	98.3	-	98.2	100.0	-	98.2	98.5	98.5	-	100.0	-	98.5	-	-	-	-	-	-	-	-	-	-	-	-	-	98.4
Other Vehicles	1	0	14	0	-	15	14	8	0	0	-	22	0	0	0	0	-	0	0	0	0	0	-	0	-	37
% Other Vehicles	0.8	-	1.1	0.0	-	1.1	1.1	1.1	-	0.0	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-



Turning Movement Data Plot



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

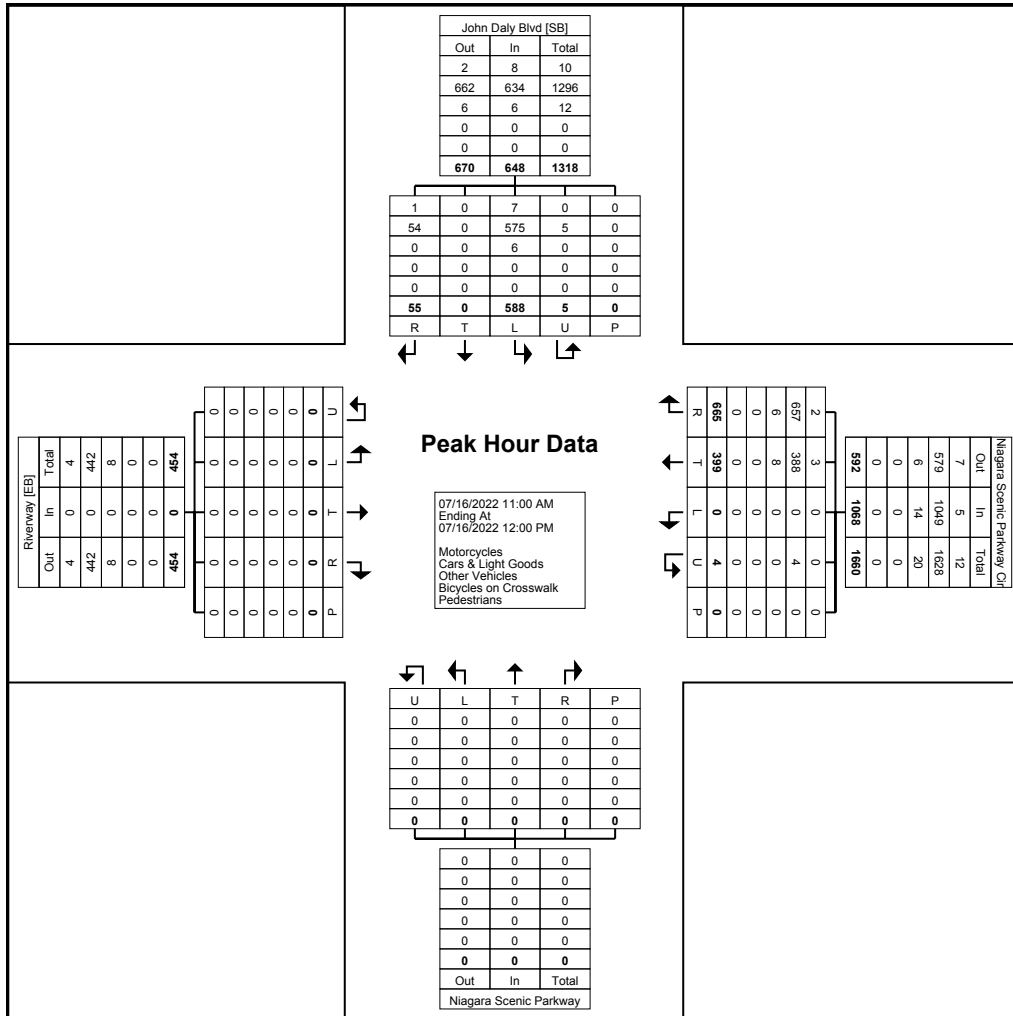
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: John Daly Blvd &
Niagara Scenic Parkway Circle
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Approach Data

Start Time	Sb Street Southbound						Wb Street Westbound						Nb Street Northbound						Eb Street Eastbound					
	Peds CCW	Peds CW	Circulating	Out	In	Next	Peds CCW	Peds CW	Circulating	Out	In	Next	Peds CCW	Peds CW	Circulating	Out	In	Next	Peds CCW	Peds CW	Circulating	Out	In	Next
11:00 AM	0	0	89	155	140	132	0	0	0	132	244	89	0	0	133	0	0	0	0	0	133	96	0	0
11:15 AM	0	0	112	157	162	141	0	0	2	144	267	110	0	0	144	0	0	0	0	0	146	128	0	0
11:30 AM	0	0	104	184	185	167	0	0	2	169	286	102	0	0	173	0	0	0	0	0	172	118	0	0
11:45 AM	0	0	98	174	163	148	0	0	1	148	271	98	0	0	149	0	0	0	0	0	150	110	0	0
Hourly Total	0	0	403	670	650	588	0	0	5	593	1068	399	0	0	599	0	0	0	0	0	601	452	0	0
12:00 PM	0	0	78	142	217	205	0	0	0	208	220	76	0	0	209	0	0	0	0	0	205	91	0	0
12:15 PM	0	0	84	144	178	153	0	0	0	150	228	82	1	0	149	0	0	0	1	0	163	97	0	0
12:30 PM	0	0	98	134	177	162	0	0	1	168	231	96	0	0	170	0	0	0	0	0	158	118	0	0
12:45 PM	0	0	79	150	198	183	0	0	2	185	227	78	0	0	189	0	0	0	0	0	184	94	0	0
Hourly Total	0	0	339	570	770	703	0	0	3	711	906	332	1	0	717	0	0	0	1	0	710	400	0	0
Grand Total	0	0	742	1240	1420	1291	0	0	8	1304	1974	731	1	0	1316	0	0	0	1	0	1311	852	0	0
Approach %	-	-	15.8	26.4	30.3	27.5	-	-	0.2	32.5	49.1	18.2	-	-	100.0	0.0	0.0	0.0	-	-	60.6	39.4	0.0	0.0
Total %	-	-	6.1	10.2	11.6	10.6	-	-	0.1	10.7	16.2	6.0	-	-	10.8	0.0	0.0	0.0	-	-	10.8	7.0	0.0	0.0
Motorcycles	-	-	3	4	10	9	-	-	0	9	7	3	-	-	9	0	0	0	-	-	9	4	0	0
% Motorcycles	-	-	0.4	0.3	0.7	0.7	-	-	0.0	0.7	0.4	0.4	-	-	0.7	-	-	-	-	-	0.7	0.5	-	-
Cars & Light Goods	-	-	731	1222	1395	1268	-	-	8	1280	1945	720	-	-	1292	0	0	0	-	-	1288	839	0	0
% Cars & Light Goods	-	-	98.5	98.5	98.2	98.2	-	-	100.0	98.2	98.5	98.5	-	-	98.2	-	-	-	-	-	98.2	98.5	-	-
Other Vehicles	-	-	8	14	15	14	-	-	0	15	22	8	-	-	15	0	0	0	-	-	14	9	0	0
% Other Vehicles	-	-	1.1	1.1	1.1	1.1	-	-	0.0	1.2	1.1	1.1	-	-	1.1	-	-	-	-	-	1.1	1.1	-	-
Bicycles on Crosswalk	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-
Pedestrians	0	0	-	-	-	-	0	0	-	-	-	-	1	0	-	-	-	-	1	0	-	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-



Turning Movement Peak Hour Data Plot (11:00 AM)



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

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

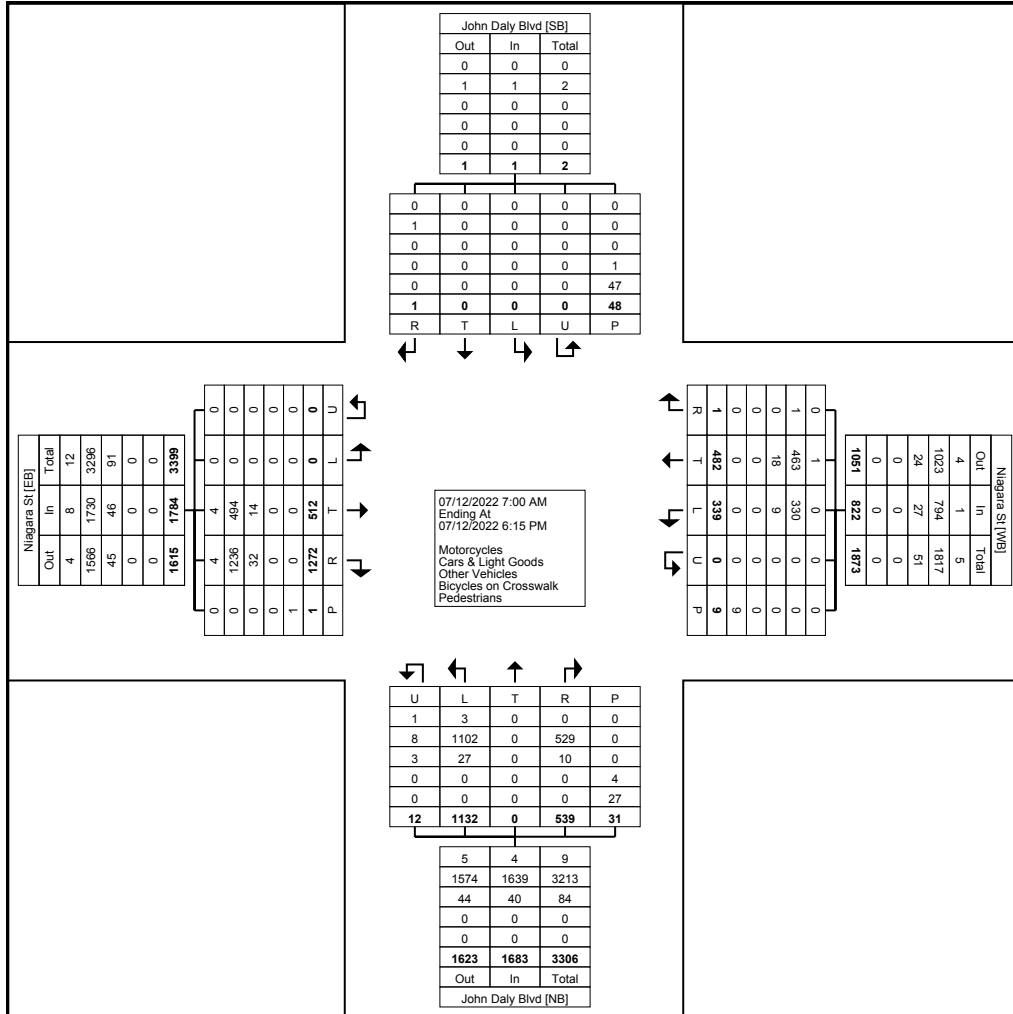
Count Name: John Daly Blvd &
Niagara Scenic Parkway Circle
Site Code:
Start Date: 07/16/2022
Page No: 6

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	John Daly Blvd Southbound						Niagara Scenic Parkway Circle Westbound						Niagara Scenic Parkway Circle Northbound						Riverway Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	14	0	205	0	0	219	142	76	0	3	0	221	0	0	0	0	0	0	0	0	0	0	0	0	440
12:15 PM	16	0	153	1	0	170	144	82	0	0	0	226	0	0	0	0	1	0	0	0	0	0	1	0	396
12:30 PM	20	0	162	0	0	182	133	96	0	4	0	233	0	0	0	0	0	0	0	0	0	0	0	0	415
12:45 PM	15	0	183	2	0	200	148	78	0	2	0	228	0	0	0	0	0	0	0	0	0	0	0	0	428
Total	65	0	703	3	0	771	567	332	0	9	0	908	0	0	0	0	1	0	0	0	0	1	0	1679	
Approach %	8.4	0.0	91.2	0.4	-	-	62.4	36.6	0.0	1.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	3.9	0.0	41.9	0.2	-	45.9	33.8	19.8	0.0	0.5	-	54.1	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.813	0.000	0.857	0.375	-	0.880	0.958	0.865	0.000	0.563	-	0.974	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.954
Motorcycles	0	0	2	0	-	2	2	0	0	0	-	2	0	0	0	0	-	2	0	0	0	0	-	0	4
% Motorcycles	0.0	-	0.3	0.0	-	0.3	0.4	0.0	-	0.0	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Cars & Light Goods	64	0	693	3	-	760	557	332	0	9	-	898	0	0	0	0	-	0	0	0	0	0	-	0	1658
% Cars & Light Goods	98.5	-	98.6	100.0	-	98.6	98.2	100.0	-	100.0	-	98.9	-	-	-	-	-	-	-	-	-	-	-	-	98.7
Other Vehicles	1	0	8	0	-	9	8	0	0	0	-	8	0	0	0	0	-	0	0	0	0	0	-	0	17
% Other Vehicles	1.5	-	1.1	0.0	-	1.2	1.4	0.0	-	0.0	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-

Niagara, New York
July 12, 2022



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

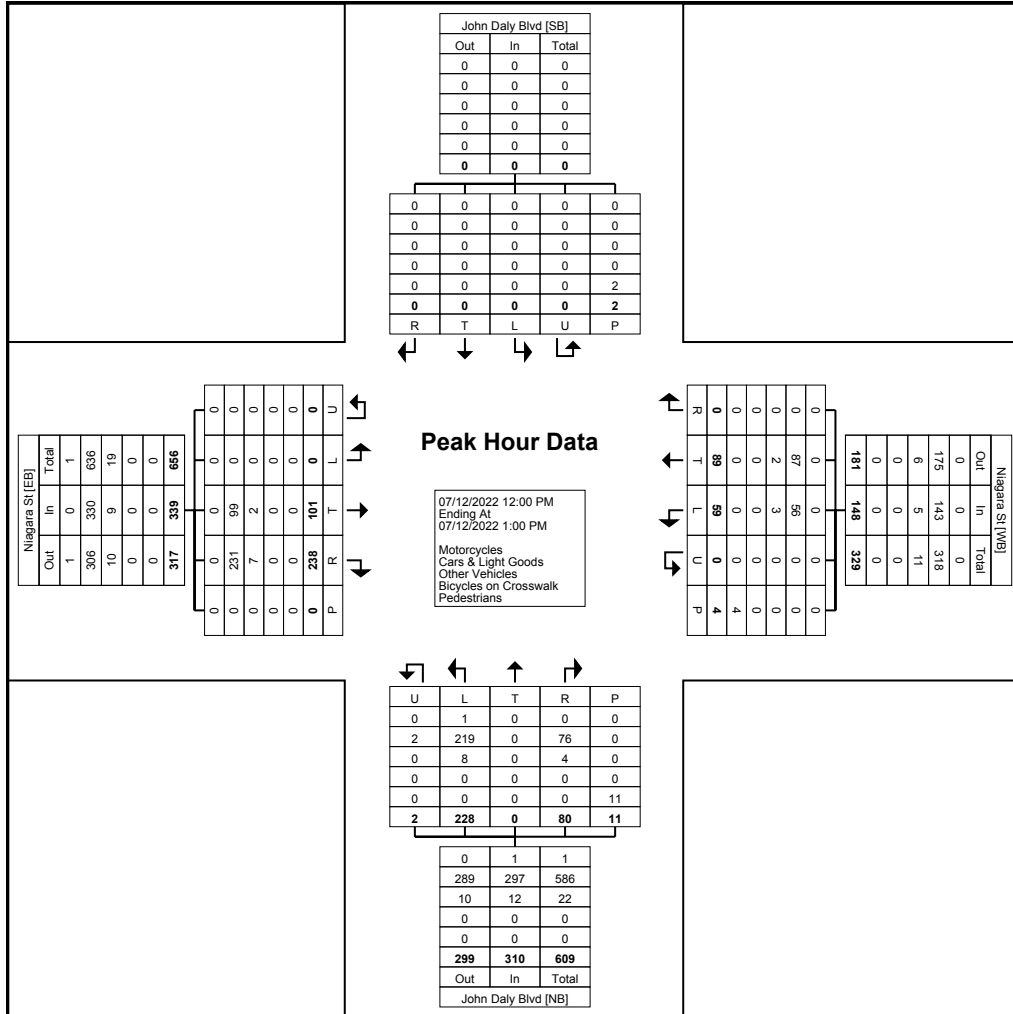
Count Name: John Daly Blvd &
Niagara St
Site Code:
Start Date: 07/12/2022
Page No: 3

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (8:00 AM)

Start Time	John Daly Blvd Southbound						Niagara St Westbound						John Daly Blvd Northbound						Niagara St Eastbound						Int. Total			
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn		Peds	App. Total	
8:00 AM	0	0	0	0	4	0	0	24	7	0	1	31	23	12	0	38	1	0	74	19	3	11	0	0	1	33	138	
8:15 AM	0	0	0	0	0	0	0	14	10	0	0	24	11	14	0	40	3	1	68	27	8	17	0	0	0	52	144	
8:30 AM	0	0	0	0	3	0	0	20	11	0	0	31	14	14	0	44	2	0	74	17	9	9	0	0	0	35	140	
8:45 AM	0	0	0	0	12	0	0	28	11	0	0	39	12	14	0	73	2	0	101	29	11	24	0	0	0	64	204	
Total	0	0	0	0	19	0	0	86	39	0	1	125	60	54	0	195	8	1	317	92	31	61	0	0	1	184	626	
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	68.8	31.2	0.0	-	-	18.9	17.0	0.0	61.5	2.5	-	-	50.0	16.8	33.2	0.0	0.0	-	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	13.7	6.2	0.0	-	20.0	9.6	8.6	0.0	31.2	1.3	-	50.6	14.7	5.0	9.7	0.0	0.0	-	29.4	-	
PHF	0.00 0	0.000	0.000	0.000	-	0.000	0.000	0.768	0.886	0.000	-	0.801	0.652	0.964	0.000	0.668	0.667	-	0.785	0.793	0.705	0.635	0.000	0.000	-	0.719	0.767	
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	1	-	1	0	0	1	0	0	-	1	2	
% Motorcycles	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	0.0	-	0.0	12.5	-	0.3	0.0	0.0	1.6	-	-	-	0.5	0.3	
Cars & Light Goods	0	0	0	0	-	0	0	82	37	0	-	119	60	54	0	193	4	-	311	88	31	58	0	0	-	177	607	
% Cars & Light Goods	-	-	-	-	-	-	-	95.3	94.9	-	-	95.2	100.0	100.0	-	99.0	50.0	-	98.1	95.7	100.0	95.1	-	-	-	96.2	97.0	
Other Vehicles	0	0	0	0	-	0	0	4	2	0	-	6	0	0	0	2	3	-	5	4	0	2	0	0	-	6	17	
% Other Vehicles	-	-	-	-	-	-	-	4.7	5.1	-	-	4.8	0.0	0.0	-	1.0	37.5	-	1.6	4.3	0.0	3.3	-	-	-	3.3	2.7	
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	5.3	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	
Pedestrians	-	-	-	-	18	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
% Pedestrians	-	-	-	-	94.7	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	

Niagara, New York
July 12, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

Count Name: John Daly Blvd &
Niagara St
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	John Daly Blvd Southbound						Niagara St Westbound						John Daly Blvd Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	0	0	0	0	2	0	0	18	10	0	0	28	14	0	77	0	0	91	33	26	0	0	0	59	178
11:15 AM	0	0	0	0	1	0	0	18	8	0	1	26	13	0	72	0	1	85	48	24	0	0	0	72	183
11:30 AM	0	0	0	0	2	0	0	15	12	0	1	27	13	0	72	0	1	85	65	21	0	0	0	86	198
11:45 AM	0	0	0	0	0	0	0	21	7	0	0	28	20	0	77	1	0	98	56	20	0	0	0	76	202
Hourly Total	0	0	0	0	5	0	0	72	37	0	2	109	60	0	298	1	2	359	202	91	0	0	0	293	761
12:00 PM	0	0	0	0	0	0	0	21	9	0	0	30	17	0	40	0	5	57	73	22	0	0	0	95	182
12:15 PM	0	0	0	0	0	0	0	21	8	0	0	29	16	0	64	0	3	80	67	31	0	0	0	98	207
12:30 PM	0	0	0	0	0	0	0	17	15	0	0	32	10	0	52	0	0	62	67	27	0	0	0	94	188
12:45 PM	0	0	0	0	0	0	0	31	9	0	1	40	21	0	66	1	3	88	78	34	0	0	0	112	240
Hourly Total	0	0	0	0	0	0	0	90	41	0	1	131	64	0	222	1	11	287	285	114	0	0	0	399	817
1:00 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
Grand Total	0	0	0	0	5	0	0	162	78	0	3	240	124	0	520	2	13	646	487	205	0	0	0	692	1578
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	67.5	32.5	0.0	-	-	19.2	0.0	80.5	0.3	-	-	70.4	29.6	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	10.3	4.9	0.0	-	15.2	7.9	0.0	33.0	0.1	-	40.9	30.9	13.0	0.0	0.0	-	43.9	-
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	1	-	2	0	2	0	0	-	2	4
% Motorcycles	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	-	0.2	50.0	-	0.3	0.0	1.0	-	-	-	0.3	0.3
Cars & Light Goods	0	0	0	0	-	0	0	157	77	0	-	234	122	0	514	1	-	637	485	200	0	0	-	685	1556
% Cars & Light Goods	-	-	-	-	-	-	-	96.9	98.7	-	-	97.5	98.4	-	98.8	50.0	-	98.6	99.6	97.6	-	-	-	99.0	98.6
Other Vehicles	0	0	0	0	-	0	0	5	1	0	-	6	2	0	5	0	-	7	2	3	0	0	-	5	18
% Other Vehicles	-	-	-	-	-	-	-	3.1	1.3	-	-	2.5	1.6	-	1.0	0.0	-	1.1	0.4	1.5	-	-	-	0.7	1.1
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	20.0	-	-	-	-	-	66.7	-	-	-	-	-	23.1	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	10	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	80.0	-	-	-	-	-	33.3	-	-	-	-	-	76.9	-	-	-	-	-	-	-	-



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

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

Count Name: John Daly Blvd &
Niagara St
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	John Daly Blvd Southbound						Niagara St Westbound						John Daly Blvd Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	0	0	0	0	2	0	0	18	10	0	0	28	14	0	77	0	0	91	33	26	0	0	0	59	178
11:15 AM	0	0	0	0	1	0	0	18	8	0	1	26	13	0	72	0	1	85	48	24	0	0	0	72	183
11:30 AM	0	0	0	0	2	0	0	15	12	0	1	27	13	0	72	0	1	85	65	21	0	0	0	86	198
11:45 AM	0	0	0	0	0	0	0	21	7	0	0	28	20	0	77	1	0	98	56	20	0	0	0	76	202
Total	0	0	0	0	5	0	0	72	37	0	2	109	60	0	298	1	2	359	202	91	0	0	0	293	761
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	66.1	33.9	0.0	-	-	16.7	0.0	83.0	0.3	-	-	68.9	31.1	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	9.5	4.9	0.0	-	14.3	7.9	0.0	39.2	0.1	-	47.2	26.5	12.0	0.0	0.0	-	38.5	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.857	0.771	0.000	-	0.973	0.750	0.000	0.968	0.250	-	0.916	0.777	0.875	0.000	0.000	-	0.852	0.942
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	1	0	0	-	1	2
% Motorcycles	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	-	0.3	0.0	-	0.3	0.0	1.1	-	-	-	0.3	0.3
Cars & Light Goods	0	0	0	0	-	0	0	69	37	0	-	106	60	0	293	1	-	354	200	88	0	0	-	288	748
% Cars & Light Goods	-	-	-	-	-	-	-	95.8	100.0	-	-	97.2	100.0	-	98.3	100.0	-	98.6	99.0	96.7	-	-	-	98.3	98.3
Other Vehicles	0	0	0	0	-	0	0	3	0	0	-	3	0	0	4	0	-	4	2	2	0	0	-	4	11
% Other Vehicles	-	-	-	-	-	-	-	4.2	0.0	-	-	2.8	0.0	-	1.3	0.0	-	1.1	1.0	2.2	-	-	-	1.4	1.4
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	20.0	-	-	-	-	-	50.0	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	80.0	-	-	-	-	-	50.0	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-

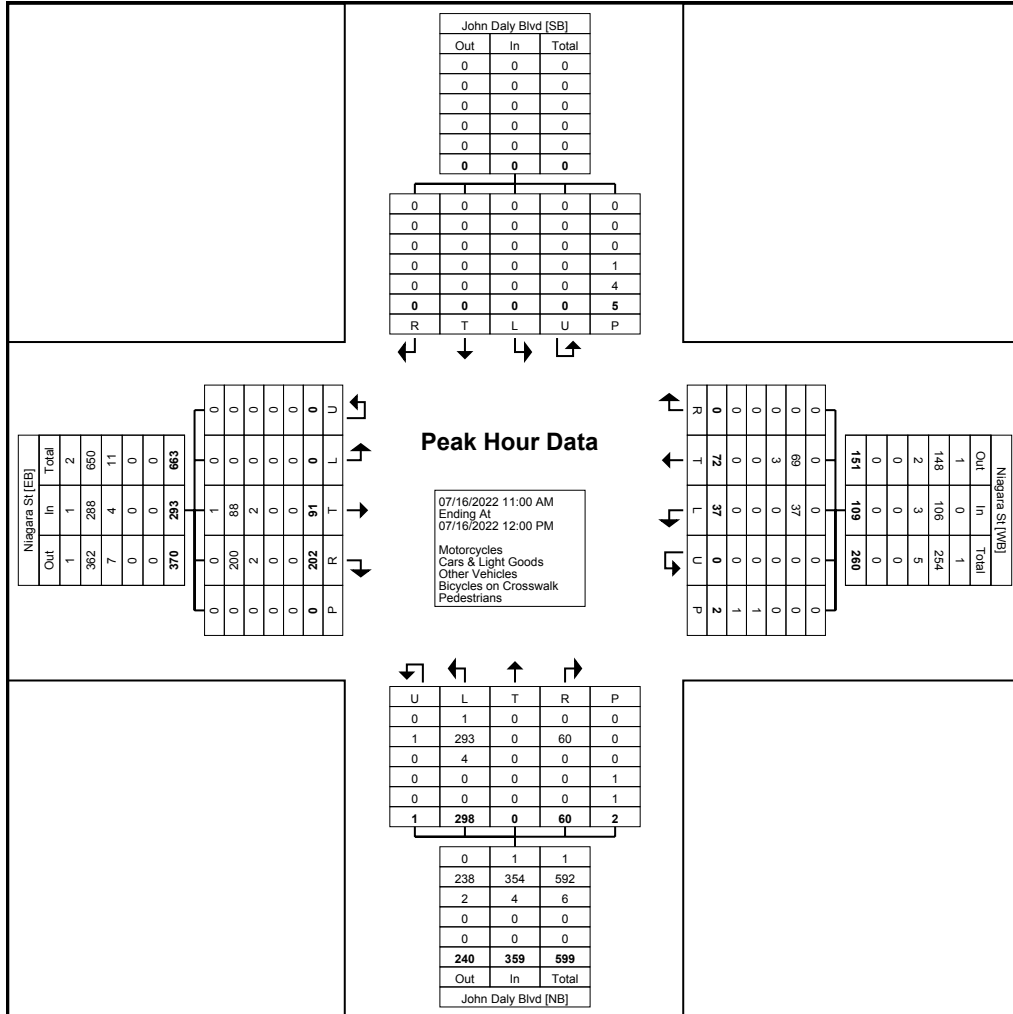


Tri-State Traffic Data: New York Division
184 Baker Rd

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

Count Name: John Daly Blvd &
Niagara St
Site Code:
Start Date: 07/16/2022
Page No: 4

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (11:00 AM)



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

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

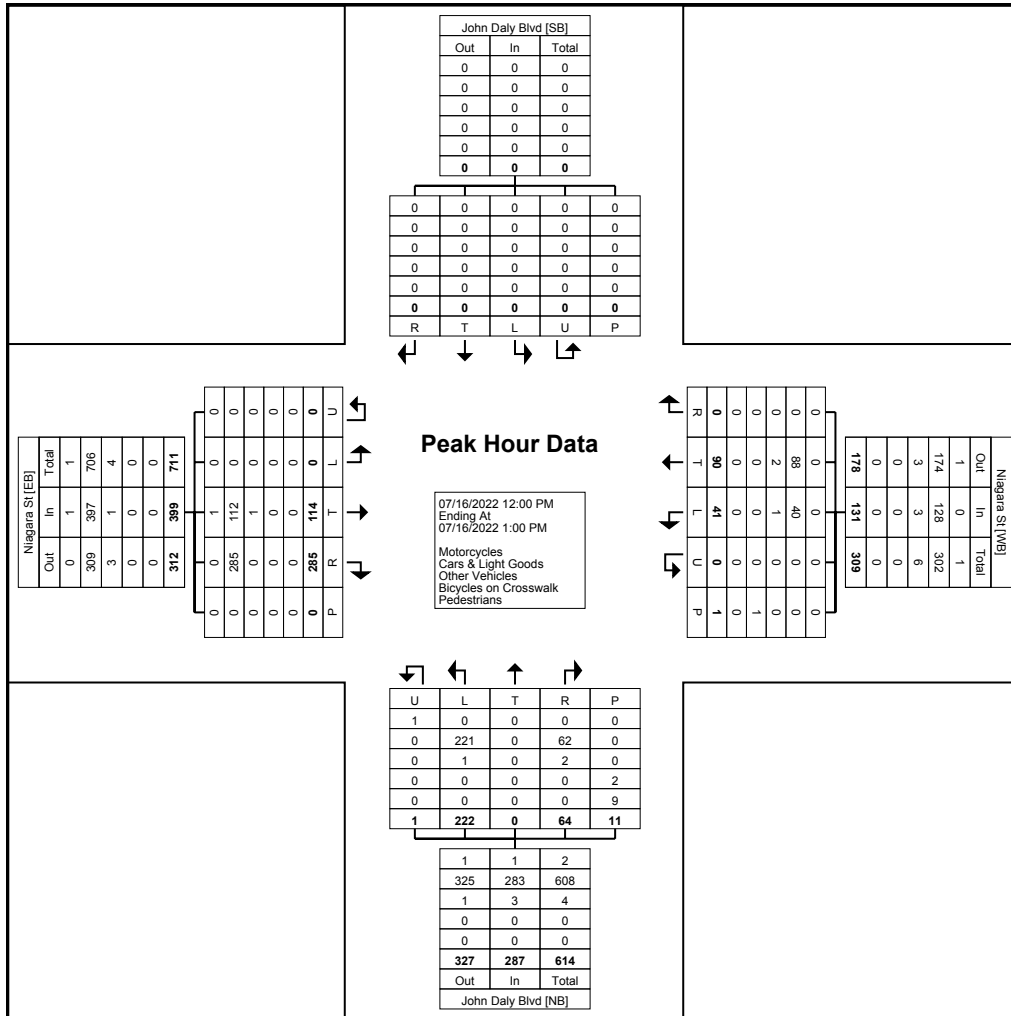
Count Name: John Daly Blvd &
Niagara St
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	John Daly Blvd Southbound						Niagara St Westbound						John Daly Blvd Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	0	0	0	0	0	0	0	21	9	0	0	30	17	0	40	0	5	57	73	22	0	0	0	95	182
12:15 PM	0	0	0	0	0	0	0	21	8	0	0	29	16	0	64	0	3	80	67	31	0	0	0	98	207
12:30 PM	0	0	0	0	0	0	0	17	15	0	0	32	10	0	52	0	0	62	67	27	0	0	0	94	188
12:45 PM	0	0	0	0	0	0	0	31	9	0	1	40	21	0	66	1	3	88	78	34	0	0	0	112	240
Total	0	0	0	0	0	0	0	90	41	0	1	131	64	0	222	1	11	287	285	114	0	0	0	399	817
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	68.7	31.3	0.0	-	-	22.3	0.0	77.4	0.3	-	-	71.4	28.6	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	11.0	5.0	0.0	-	16.0	7.8	0.0	27.2	0.1	-	35.1	34.9	14.0	0.0	0.0	-	48.8	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.726	0.683	0.000	-	0.819	0.762	0.000	0.841	0.250	-	0.815	0.913	0.838	0.000	0.000	-	0.891	0.851
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	0	1	0	0	-	1	2
% Motorcycles	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	-	0.0	100.0	-	0.3	0.0	0.9	-	-	-	0.3	0.2
Cars & Light Goods	0	0	0	0	-	0	0	88	40	0	-	128	62	0	221	0	-	283	285	112	0	0	-	397	808
% Cars & Light Goods	-	-	-	-	-	-	-	97.8	97.6	-	-	97.7	96.9	-	99.5	0.0	-	98.6	100.0	98.2	-	-	-	99.5	98.9
Other Vehicles	0	0	0	0	-	0	0	2	1	0	-	3	2	0	1	0	-	3	0	1	0	0	-	1	7
% Other Vehicles	-	-	-	-	-	-	-	2.2	2.4	-	-	2.3	3.1	-	0.5	0.0	-	1.0	0.0	0.9	-	-	-	0.3	0.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	18.2	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	81.8	-	-	-	-	-	-	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

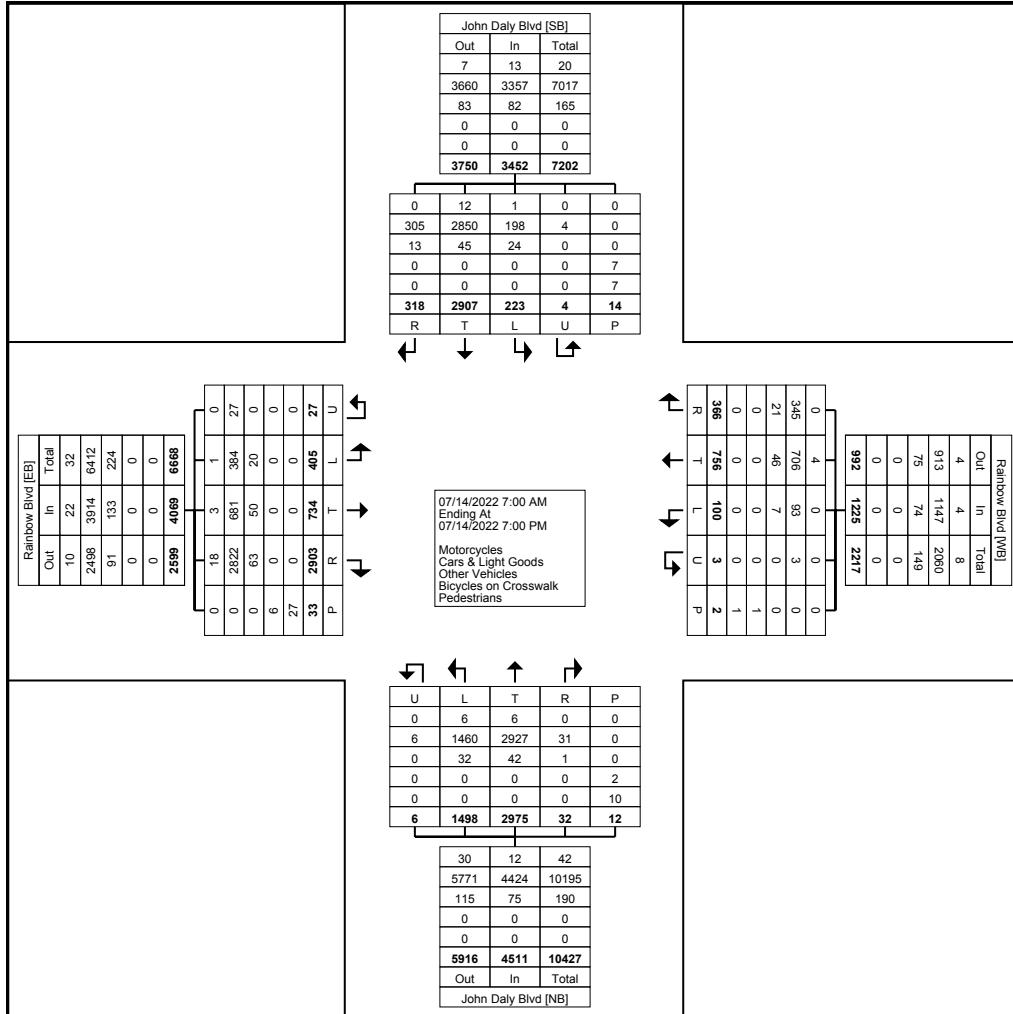
Count Name: John Daly Blvd &
Rainbow Blvd
Site Code:
Start Date: 07/14/2022
Page No: 1

Niagara, New York
July 14, 2022

Turning Movement Data

Start Time	John Daly Blvd Southbound						Rainbow Blvd Westbound						John Daly Blvd Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	3	23	2	0	0	28	2	4	0	0	0	6	0	31	14	0	0	45	22	8	6	0	0	36	115
7:15 AM	3	29	3	1	0	36	1	8	0	0	0	9	0	54	17	0	0	71	24	10	3	0	0	37	153
7:30 AM	4	32	2	0	1	38	5	12	1	0	0	18	0	83	33	0	1	116	30	6	5	0	0	41	213
7:45 AM	7	30	2	0	0	39	8	15	3	0	0	26	5	112	41	1	0	159	31	9	3	0	0	43	267
Hourly Total	17	114	9	1	1	141	16	39	4	0	0	59	5	280	105	1	1	391	107	33	17	0	0	157	748
8:00 AM	3	36	0	0	0	39	1	14	2	0	0	17	0	72	15	0	0	87	36	8	3	0	0	47	190
8:15 AM	9	23	5	0	0	37	8	13	2	0	0	23	2	71	17	1	0	91	33	8	9	1	0	51	202
8:30 AM	2	38	6	0	2	46	5	9	3	0	0	17	1	66	28	0	1	95	29	10	7	1	1	47	205
8:45 AM	5	43	2	0	0	50	6	16	1	0	0	23	0	60	42	0	0	102	45	9	5	1	0	60	235
Hourly Total	19	140	13	0	2	172	20	52	8	0	0	80	3	269	102	1	1	375	143	35	24	3	1	205	832
9:00 AM	5	34	2	0	0	41	7	9	4	0	0	20	1	58	18	0	0	77	40	12	7	0	0	59	197
9:15 AM	6	56	5	0	0	67	4	16	1	0	0	21	0	47	16	0	0	63	40	7	9	0	0	56	207
9:30 AM	9	47	2	1	0	59	4	21	3	0	0	28	0	43	14	0	0	57	32	12	5	1	0	50	194
9:45 AM	6	49	6	0	0	61	5	13	2	0	0	20	1	61	22	0	0	84	38	13	12	2	0	65	230
Hourly Total	26	186	15	1	0	228	20	59	10	0	0	89	2	209	70	0	0	281	150	44	33	3	0	230	828
10:00 AM	8	52	3	0	0	63	9	16	0	0	0	25	0	43	20	0	0	63	66	7	4	1	0	78	229
10:15 AM	5	39	7	1	0	52	8	12	0	0	0	20	0	56	21	1	0	78	53	10	7	0	0	70	220
10:30 AM	5	45	4	0	0	54	6	19	1	0	0	26	0	64	24	0	0	88	59	16	4	1	1	80	248
10:45 AM	8	50	3	1	0	62	3	20	2	0	0	25	0	56	24	0	1	80	62	29	5	1	0	97	264
Hourly Total	26	186	17	2	0	231	26	67	3	0	0	96	0	219	89	1	1	309	240	62	20	3	1	325	961
11:00 AM	8	48	7	0	0	63	9	20	0	0	0	29	0	55	32	0	0	87	66	19	11	2	0	98	277
11:15 AM	4	55	4	0	0	63	10	17	3	0	0	30	0	60	33	0	0	93	46	14	12	1	0	73	259
11:30 AM	8	56	5	0	0	69	11	22	1	0	0	34	1	54	53	0	0	108	65	16	10	0	0	91	302
11:45 AM	12	53	3	0	1	68	9	18	2	0	0	29	0	75	44	0	0	119	56	12	9	0	0	77	293
Hourly Total	32	212	19	0	1	263	39	77	6	0	0	122	1	244	162	0	0	407	233	61	42	3	0	339	1131
12:00 PM	7	64	7	0	1	78	8	13	6	1	0	28	0	59	51	1	0	111	72	19	8	0	0	99	316
12:15 PM	7	59	5	0	0	71	12	11	3	0	0	26	1	75	30	1	0	107	50	17	10	0	0	77	281
12:30 PM	9	71	5	0	0	85	9	15	6	0	0	30	1	75	33	0	0	109	55	21	14	2	2	92	316
12:45 PM	8	57	7	0	0	72	6	15	5	0	0	26	1	63	32	0	0	96	70	17	10	1	0	98	292
Hourly Total	31	251	24	0	1	306	35	54	20	1	0	110	3	272	146	2	0	423	247	74	42	3	2	366	1205
1:00 PM	5	52	4	0	1	61	11	20	1	0	0	32	1	42	36	0	0	79	64	13	5	0	0	82	254
1:15 PM	8	53	6	0	0	67	14	23	4	0	0	41	1	59	37	0	0	97	60	14	3	1	1	78	283
1:30 PM	5	67	3	0	0	75	16	22	1	0	0	39	3	57	36	0	0	96	81	19	12	1	0	113	323
1:45 PM	8	77	1	0	0	86	11	19	1	0	0	31	0	55	30	0	0	85	64	23	9	1	0	97	299
Hourly Total	26	249	14	0	1	289	52	84	7	0	0	143	5	213	139	0	0	357	269	69	29	3	1	370	1159
2:00 PM	5	75	7	0	1	87	5	17	3	0	0	25	1	75	24	0	0	100	68	27	14	1	1	110	322
2:15 PM	8	67	6	0	1	81	11	17	2	0	1	30	0	65	24	0	1	89	76	12	12	0	1	100	300
2:30 PM	4	75	8	0	1	87	10	25	3	1	1	39	0	51	39	0	0	90	48	20	7	0	2	75	291
2:45 PM	12	69	4	0	0	85	8	22	0	0	0	30	1	59	50	0	0	110	64	21	16	0	0	101	326
Hourly Total	29	286	25	0	3	340	34	81	8	1	2	124	2	250	137	0	1	389	256	80	49	1	4	386	1239
3:00 PM	6	111	9	0	0	126	16	15	0	0	0	31	1	53	28	0	0	82	85	23	9	1	3	118	357
3:15 PM	9	79	4	0	0	92	10	11	4	0	0	25	0	79	31	0	0	110	103	13	10	0	0	126	353
3:30 PM	6	86	5	0	1	97	6	10	5	0	0	21	1	69	33	0	2	103	91	21	11	0	0	123	344
3:45 PM	12	91	5	0	1	108	11	15	2	0	0	28	2	83	53	0	0	138	101	21	6	0	0	128	402
Hourly Total	33	367	23	0	2	423	43	51	11	0	0	105	4	284	145	0	2	433	380	78	36	1	3	495	1456
4:00 PM	10	124	7	0	1	141	7	19	1	0	0	27	1	72	41	0	0	114	79	37	5	1	0	122	404
4:15 PM	6	75	4	0	0	85	4	20	3	0	0	27	3	61	32	0	2	96	93	12	12	0	0	117	325
4:30 PM	8	84	6	0	0	98	7	16	2	0	0	25	1	62	41	0	2	104	69	16	11	0	2	96	323
4:45 PM	8	89	7	0	0	104	7	11	2	0	0	20	0	63	42	0	0	105	77	19	10	0	2	106	335
Hourly Total	32	372	24	0	1	428	25	66	8	0	0	99	5	258	156	0	4	419	318	84	38	1	4	441	1387
5:00 PM	6	85	7	0	0	98	5	17	2	0	0	24	0	69	29	0	0	98	95	11	11	0	2	117	337
5:15 PM	1	75	4	0	0	80	11	17	2	1	0	31	0	58	23	0	0	81	71	11	10	0	2	92	284
5:30 PM	11	80	5	0	2	96	3	17	0	0	0	20	1	45	28	0	0	74	84	21	4	1	2	110	300
5:45 PM	6	63	4	0	0	73	11	14	1	0	0	26	0	59	28	0	2	87	72	20	9	1	0	102	288
Hourly Total	24	303	20	0	2	347	30	65	5	1	0	101	1	231	108	0	2	340	322	63	34	2	6	421	1209
6:00 PM	5	59	7	0	0	71	8	15	0	0	0	23	0	58	26	0	0	84	59	15	14	2	8	90	268
6:15 PM	6	55	4	0	0	65	7	14	3	0	0	24	0	62	30	0	0	92	61	8	7	0	0	76	257
6:30 PM	8	63	3	0	0	74	3	17	3	0	0	23	1	68	40	0	0	109	70	16	9	1	0	96	302
6:45 PM	4	64	6	0	0	74	8	15	4	0	0	27	0	58	43	1	0	102	48	12	11	1	3	72	275
Hourly Total	23	241	20	0	0	284	26	61	10	0	0	97	1	246	139	1	0	387	238	51	41	4	11	334	1102

Grand Total	318	2907	223	4	14	3452	366	756	100	3	2	1225	32	2975	1498	6	12	4511	2903	734	405	27	33	4069	13257
Approach %	9.2	84.2	6.5	0.1	-	-	29.9	61.7	8.2	0.2	-	-	0.7	65.9	33.2	0.1	-	-	71.3	18.0	10.0	0.7	-	-	-
Total %	2.4	21.9	1.7	0.0	-	26.0	2.8	5.7	0.8	0.0	-	9.2	0.2	22.4	11.3	0.0	-	34.0	21.9	5.5	3.1	0.2	-	30.7	-
Motorcycles	0	12	1	0	-	13	0	4	0	0	-	4	0	6	6	0	-	12	18	3	1	0	-	22	51
% Motorcycles	0.0	0.4	0.4	0.0	-	0.4	0.0	0.5	0.0	0.0	-	0.3	0.0	0.2	0.4	0.0	-	0.3	0.6	0.4	0.2	0.0	-	0.5	0.4
Cars & Light Goods	305	2850	198	4	-	3357	345	706	93	3	-	1147	31	2927	1460	6	-	4424	2822	681	384	27	-	3914	12842
% Cars & Light Goods	95.9	98.0	88.8	100.0	-	97.2	94.3	93.4	93.0	100.0	-	93.6	96.9	98.4	97.5	100.0	-	98.1	97.2	92.8	94.8	100.0	-	96.2	96.9
Other Vehicles	13	45	24	0	-	82	21	46	7	0	-	74	1	42	32	0	-	75	63	50	20	0	-	133	364
% Other Vehicles	4.1	1.5	10.8	0.0	-	2.4	5.7	6.1	7.0	0.0	-	6.0	3.1	1.4	2.1	0.0	-	1.7	2.2	6.8	4.9	0.0	-	3.3	2.7
Bicycles on Crosswalk	-	-	-	-	7	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	6	-	-
% Bicycles on Crosswalk	-	-	-	-	50.0	-	-	-	-	-	50.0	-	-	-	-	-	16.7	-	-	-	-	-	18.2	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	1	-	-	-	-	-	10	-	-	-	-	-	27	-	-
% Pedestrians	-	-	-	-	50.0	-	-	-	-	-	50.0	-	-	-	-	-	83.3	-	-	-	-	-	81.8	-	-



Turning Movement Data Plot



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

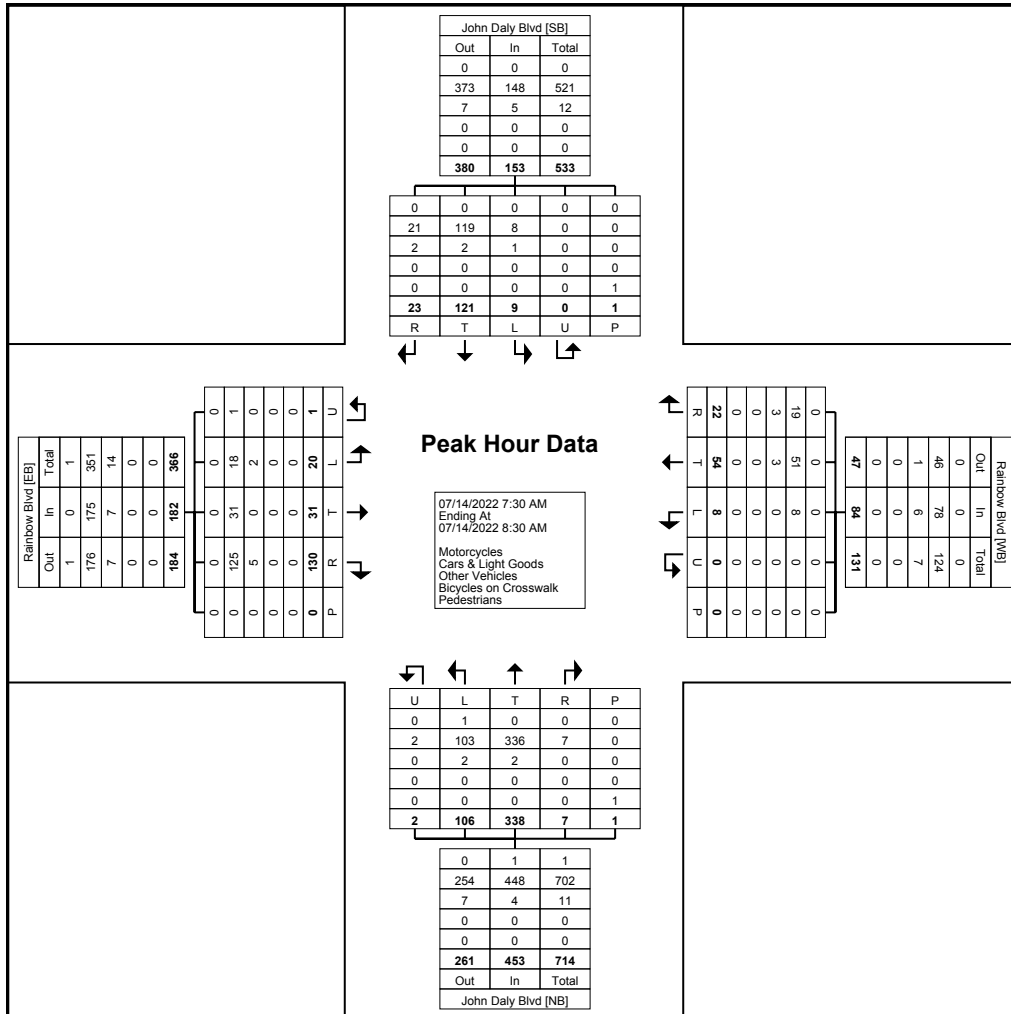
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: John Daly Blvd &
Rainbow Blvd
Site Code:
Start Date: 07/14/2022
Page No: 4

Niagara, New York
July 14, 2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	John Daly Blvd Southbound						Rainbow Blvd Westbound						John Daly Blvd Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	4	32	2	0	1	38	5	12	1	0	0	18	0	83	33	0	1	116	30	6	5	0	0	41	213
7:45 AM	7	30	2	0	0	39	8	15	3	0	0	26	5	112	41	1	0	159	31	9	3	0	0	43	267
8:00 AM	3	36	0	0	0	39	1	14	2	0	0	17	0	72	15	0	0	87	36	8	3	0	0	47	190
8:15 AM	9	23	5	0	0	37	8	13	2	0	0	23	2	71	17	1	0	91	33	8	9	1	0	51	202
Total	23	121	9	0	1	153	22	54	8	0	0	84	7	338	106	2	1	453	130	31	20	1	0	182	872
Approach %	15.0	79.1	5.9	0.0	-	-	26.2	64.3	9.5	0.0	-	-	1.5	74.6	23.4	0.4	-	-	71.4	17.0	11.0	0.5	-	-	-
Total %	2.6	13.9	1.0	0.0	-	17.5	2.5	6.2	0.9	0.0	-	9.6	0.8	38.8	12.2	0.2	-	51.9	14.9	3.6	2.3	0.1	-	20.9	-
PHF	0.639	0.840	0.450	0.000	-	0.981	0.688	0.900	0.667	0.000	-	0.808	0.350	0.754	0.646	0.500	-	0.712	0.903	0.861	0.556	0.250	-	0.892	0.816
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.9	0.0	-	0.2	0.0	0.0	0.0	0.0	-	0.0	0.1
Cars & Light Goods	21	119	8	0	-	148	19	51	8	0	-	78	7	336	103	2	-	448	125	31	18	1	-	175	849
% Cars & Light Goods	91.3	98.3	88.9	-	-	96.7	86.4	94.4	100.0	-	-	92.9	100.0	99.4	97.2	100.0	-	98.9	96.2	100.0	90.0	100.0	-	96.2	97.4
Other Vehicles	2	2	1	0	-	5	3	3	0	0	-	6	0	2	2	0	-	4	5	0	2	0	-	7	22
% Other Vehicles	8.7	1.7	11.1	-	-	3.3	13.6	5.6	0.0	-	-	7.1	0.0	0.6	1.9	0.0	-	0.9	3.8	0.0	10.0	0.0	-	3.8	2.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



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



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

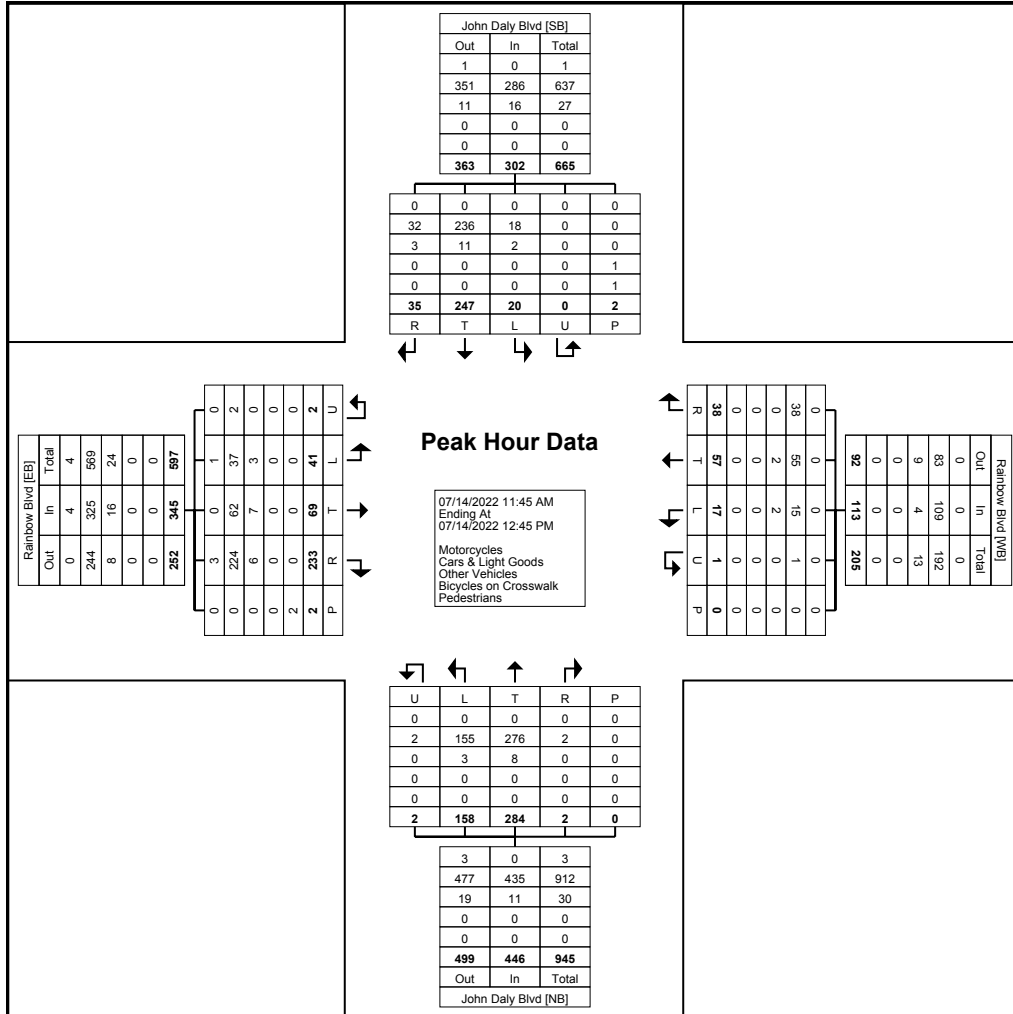
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: John Daly Blvd &
Rainbow Blvd
Site Code:
Start Date: 07/14/2022
Page No: 6

Niagara, New York
July 14, 2022

Turning Movement Peak Hour Data (11:45 AM)

Start Time	John Daly Blvd Southbound						Rainbow Blvd Westbound						John Daly Blvd Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:45 AM	12	53	3	0	1	68	9	18	2	0	0	29	0	75	44	0	0	119	56	12	9	0	0	77	293
12:00 PM	7	64	7	0	1	78	8	13	6	1	0	28	0	59	51	1	0	111	72	19	8	0	0	99	316
12:15 PM	7	59	5	0	0	71	12	11	3	0	0	26	1	75	30	1	0	107	50	17	10	0	0	77	281
12:30 PM	9	71	5	0	0	85	9	15	6	0	0	30	1	75	33	0	0	109	55	21	14	2	2	92	316
Total	35	247	20	0	2	302	38	57	17	1	0	113	2	284	158	2	0	446	233	69	41	2	2	345	1206
Approach %	11.6	81.8	6.6	0.0	-	-	33.6	50.4	15.0	0.9	-	-	0.4	63.7	35.4	0.4	-	-	67.5	20.0	11.9	0.6	-	-	-
Total %	2.9	20.5	1.7	0.0	-	25.0	3.2	4.7	1.4	0.1	-	9.4	0.2	23.5	13.1	0.2	-	37.0	19.3	5.7	3.4	0.2	-	28.6	-
PHF	0.729	0.870	0.714	0.000	-	0.888	0.792	0.792	0.708	0.250	-	0.942	0.500	0.947	0.775	0.500	-	0.937	0.809	0.821	0.732	0.250	-	0.871	0.954
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	3	0	1	0	-	4	4
% 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	1.3	0.0	2.4	0.0	-	1.2	0.3
Cars & Light Goods	32	236	18	0	-	286	38	55	15	1	-	109	2	276	155	2	-	435	224	62	37	2	-	325	1155
% Cars & Light Goods	91.4	95.5	90.0	-	-	94.7	100.0	96.5	88.2	100.0	-	96.5	100.0	97.2	98.1	100.0	-	97.5	96.1	89.9	90.2	100.0	-	94.2	95.8
Other Vehicles	3	11	2	0	-	16	0	2	2	0	-	4	0	8	3	0	-	11	6	7	3	0	-	16	47
% Other Vehicles	8.6	4.5	10.0	-	-	5.3	0.0	3.5	11.8	0.0	-	3.5	0.0	2.8	1.9	0.0	-	2.5	2.6	10.1	7.3	0.0	-	4.6	3.9
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Turning Movement Peak Hour Data Plot (11:45 AM)



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

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

Count Name: John Daly Blvd &
Rainbow Blvd
Site Code:
Start Date: 07/14/2022
Page No: 8

Niagara, New York
July 14, 2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	John Daly Blvd Southbound						Rainbow Blvd Westbound						John Daly Blvd Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	10	124	7	0	1	141	7	19	1	0	0	27	1	72	41	0	0	114	79	37	5	1	0	122	404
4:15 PM	6	75	4	0	0	85	4	20	3	0	0	27	3	61	32	0	2	96	93	12	12	0	0	117	325
4:30 PM	8	84	6	0	0	98	7	16	2	0	0	25	1	62	41	0	2	104	69	16	11	0	2	96	323
4:45 PM	8	89	7	0	0	104	7	11	2	0	0	20	0	63	42	0	0	105	77	19	10	0	2	106	335
Total	32	372	24	0	1	428	25	66	8	0	0	99	5	258	156	0	4	419	318	84	38	1	4	441	1387
Approach %	7.5	86.9	5.6	0.0	-	-	25.3	66.7	8.1	0.0	-	-	1.2	61.6	37.2	0.0	-	-	72.1	19.0	8.6	0.2	-	-	-
Total %	2.3	26.8	1.7	0.0	-	30.9	1.8	4.8	0.6	0.0	-	7.1	0.4	18.6	11.2	0.0	-	30.2	22.9	6.1	2.7	0.1	-	31.8	-
PHF	0.800	0.750	0.857	0.000	-	0.759	0.893	0.825	0.667	0.000	-	0.917	0.417	0.896	0.929	0.000	-	0.919	0.855	0.568	0.792	0.250	-	0.904	0.858
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1	0	0	0	-	1	2
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.6	-	-	0.2	0.3	0.0	0.0	0.0	-	0.2	0.1
Cars & Light Goods	32	370	22	0	-	424	25	65	8	0	-	98	4	256	150	0	-	410	312	80	37	1	-	430	1362
% Cars & Light Goods	100.0	99.5	91.7	-	-	99.1	100.0	98.5	100.0	-	-	99.0	80.0	99.2	96.2	-	-	97.9	98.1	95.2	97.4	100.0	-	97.5	98.2
Other Vehicles	0	2	2	0	-	4	0	1	0	0	-	1	1	2	5	0	-	8	5	4	1	0	-	10	23
% Other Vehicles	0.0	0.5	8.3	-	-	0.9	0.0	1.5	0.0	-	-	1.0	20.0	0.8	3.2	-	-	1.9	1.6	4.8	2.6	0.0	-	2.3	1.7
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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

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

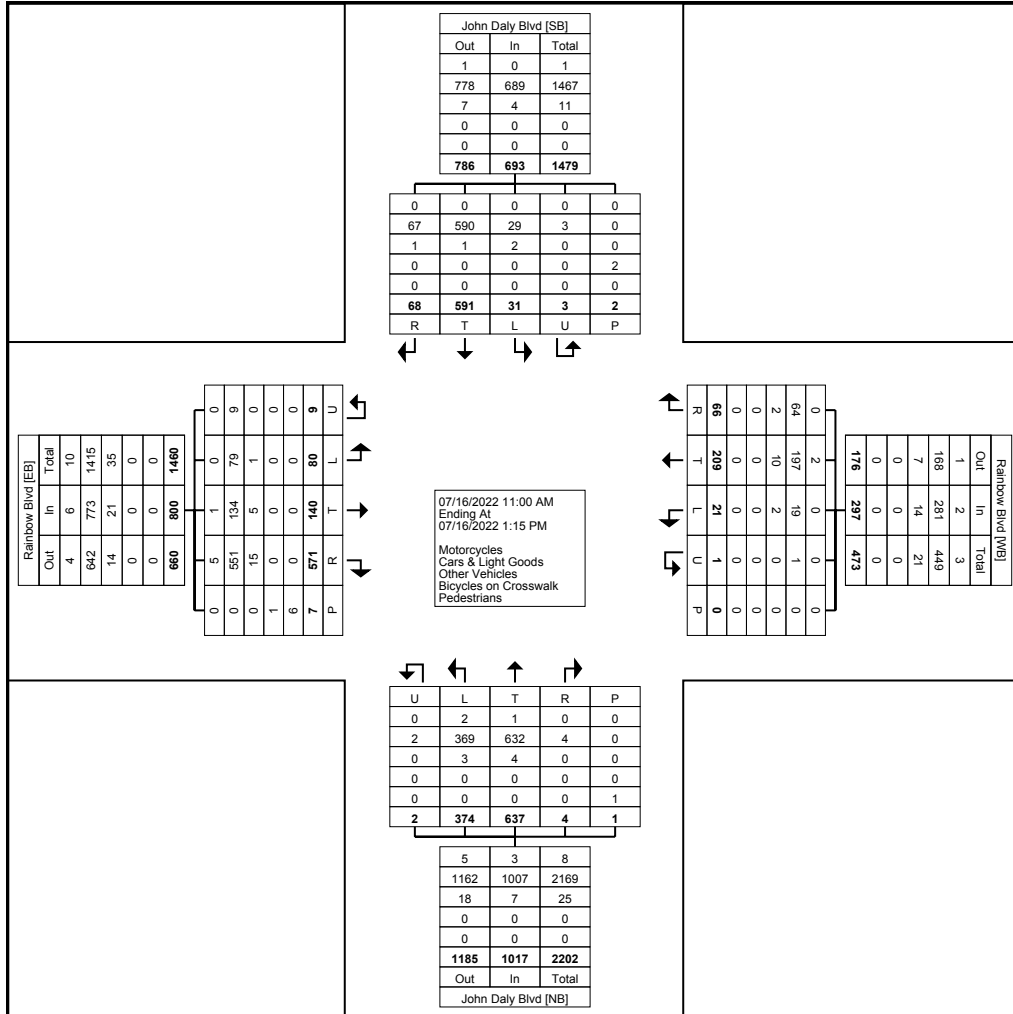
Count Name: John Daly Blvd &
Rainbow Blvd
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	John Daly Blvd Southbound							Rainbow Blvd Westbound							John Daly Blvd Northbound							Rainbow Blvd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	10	5	43	5	0	0	63	3	2	27	2	0	0	34	0	0	89	36	0	0	125	39	23	12	9	0	0	83	305
11:15 AM	3	3	59	7	0	0	72	2	3	33	3	0	0	41	0	1	78	52	1	0	132	39	25	20	13	1	0	98	343
11:30 AM	3	8	83	2	0	0	96	8	3	33	4	0	0	48	0	1	84	66	0	0	151	61	17	18	9	0	4	105	400
11:45 AM	1	2	62	3	0	1	68	2	9	17	3	0	0	31	0	0	87	71	0	0	158	50	25	13	14	1	0	103	360
Hourly Total	17	18	247	17	0	1	299	15	17	110	12	0	0	154	0	2	338	225	1	0	566	189	90	63	45	2	4	389	1408
12:00 PM	4	2	91	1	1	0	99	6	3	22	2	1	0	34	1	0	63	42	0	0	106	58	20	30	12	2	1	122	361
12:15 PM	3	5	74	3	1	1	86	5	4	31	1	0	0	41	0	0	77	34	1	0	112	60	21	21	10	1	2	113	352
12:30 PM	7	7	86	4	0	0	104	4	0	27	2	0	0	33	0	0	72	36	0	0	108	33	31	13	7	3	0	87	332
12:45 PM	4	1	93	6	0	0	104	7	5	19	4	0	0	35	1	0	87	37	0	1	125	46	23	13	6	1	0	89	353
Hourly Total	18	15	344	14	2	1	393	22	12	99	9	1	0	143	2	0	299	149	1	1	451	197	95	77	35	7	3	411	1398
1:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	35	33	591	31	3	2	693	37	29	209	21	1	0	297	2	2	637	374	2	1	1017	386	185	140	80	9	7	800	2807
Approach %	5.1	4.8	85.3	4.5	0.4	-	-	12.5	9.8	70.4	7.1	0.3	-	-	0.2	0.2	62.6	36.8	0.2	-	-	48.3	23.1	17.5	10.0	1.1	-	-	-
Total %	1.2	1.2	21.1	1.1	0.1	-	24.7	1.3	1.0	7.4	0.7	0.0	-	10.6	0.1	0.1	22.7	13.3	0.1	-	36.2	13.8	6.6	5.0	2.9	0.3	-	28.5	-
Motorcycles	0	0	0	0	0	-	0	0	0	2	0	0	-	2	0	0	1	2	0	-	3	0	5	1	0	0	-	6	11
% Motorcycles	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	1.0	0.0	0.0	-	0.7	0.0	0.0	0.2	0.5	0.0	-	0.3	0.0	2.7	0.7	0.0	0.0	-	0.8	0.4
Cars & Light Goods	35	32	590	29	3	-	689	35	29	197	19	1	-	281	2	2	632	369	2	-	1007	375	176	134	79	9	-	773	2750
% Cars & Light Goods	100.0	97.0	99.8	93.5	100.0	-	99.4	94.6	100.0	94.3	90.5	100.0	-	94.6	100.0	100.0	99.2	98.7	100.0	-	99.0	97.2	95.1	95.7	98.8	100.0	-	96.6	98.0
Other Vehicles	0	1	1	2	0	-	4	2	0	10	2	0	-	14	0	0	4	3	0	-	7	11	4	5	1	0	-	21	46
% Other Vehicles	0.0	3.0	0.2	6.5	0.0	-	0.6	5.4	0.0	4.8	9.5	0.0	-	4.7	0.0	0.0	0.6	0.8	0.0	-	0.7	2.8	2.2	3.6	1.3	0.0	-	2.6	1.6
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	14.3	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	85.7	-	-

Niagara, New York
July 16, 2022



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

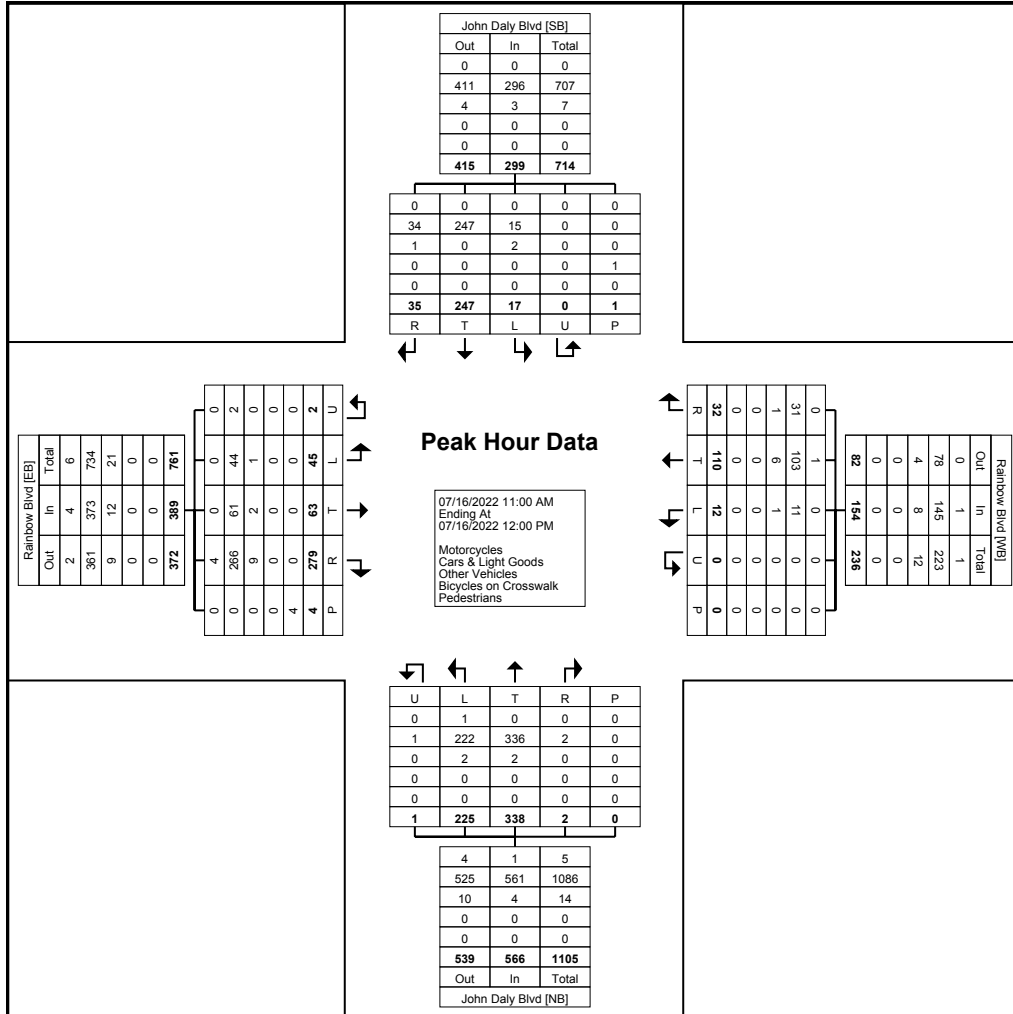
Count Name: John Daly Blvd &
Rainbow Blvd
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	John Daly Blvd Southbound							Rainbow Blvd Westbound							John Daly Blvd Northbound							Rainbow Blvd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	10	5	43	5	0	0	63	3	2	27	2	0	0	34	0	0	89	36	0	0	125	39	23	12	9	0	0	83	305
11:15 AM	3	3	59	7	0	0	72	2	3	33	3	0	0	41	0	1	78	52	1	0	132	39	25	20	13	1	0	98	343
11:30 AM	3	8	83	2	0	0	96	8	3	33	4	0	0	48	0	1	84	66	0	0	151	61	17	18	9	0	4	105	400
11:45 AM	1	2	62	3	0	1	68	2	9	17	3	0	0	31	0	0	87	71	0	0	158	50	25	13	14	1	0	103	360
Total	17	18	247	17	0	1	299	15	17	110	12	0	0	154	0	2	338	225	1	0	566	189	90	63	45	2	4	389	1408
Approach %	5.7	6.0	82.6	5.7	0.0	-	-	9.7	11.0	71.4	7.8	0.0	-	-	0.0	0.4	59.7	39.8	0.2	-	-	48.6	23.1	16.2	11.6	0.5	-	-	-
Total %	1.2	1.3	17.5	1.2	0.0	-	21.2	1.1	1.2	7.8	0.9	0.0	-	10.9	0.0	0.1	24.0	16.0	0.1	-	40.2	13.4	6.4	4.5	3.2	0.1	-	27.6	-
PHF	0.425	0.563	0.744	0.607	0.000	-	0.779	0.469	0.472	0.833	0.750	0.000	-	0.802	0.000	0.500	0.949	0.792	0.250	-	0.896	0.775	0.900	0.788	0.804	0.500	-	0.926	0.880
Motorcycles	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	0	1	0	-	1	0	4	0	0	0	-	4	6
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.9	0.0	-	-	0.6	-	0.0	0.0	0.4	0.0	-	0.2	0.0	4.4	0.0	0.0	0.0	-	1.0	0.4
Cars & Light Goods	17	17	247	15	0	-	296	14	17	103	11	0	-	145	0	2	336	222	1	-	561	182	84	61	44	2	-	373	1375
% Cars & Light Goods	100.0	94.4	100.0	88.2	-	-	99.0	93.3	100.0	93.6	91.7	-	-	94.2	-	100.0	99.4	98.7	100.0	-	99.1	96.3	93.3	96.8	97.8	100.0	-	95.9	97.7
Other Vehicles	0	1	0	2	0	-	3	1	0	6	1	0	-	8	0	0	2	2	0	-	4	7	2	2	1	0	-	12	27
% Other Vehicles	0.0	5.6	0.0	11.8	-	-	1.0	6.7	0.0	5.5	8.3	-	-	5.2	-	0.0	0.6	0.9	0.0	-	0.7	3.7	2.2	3.2	2.2	0.0	-	3.1	1.9
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (11:00 AM)



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

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

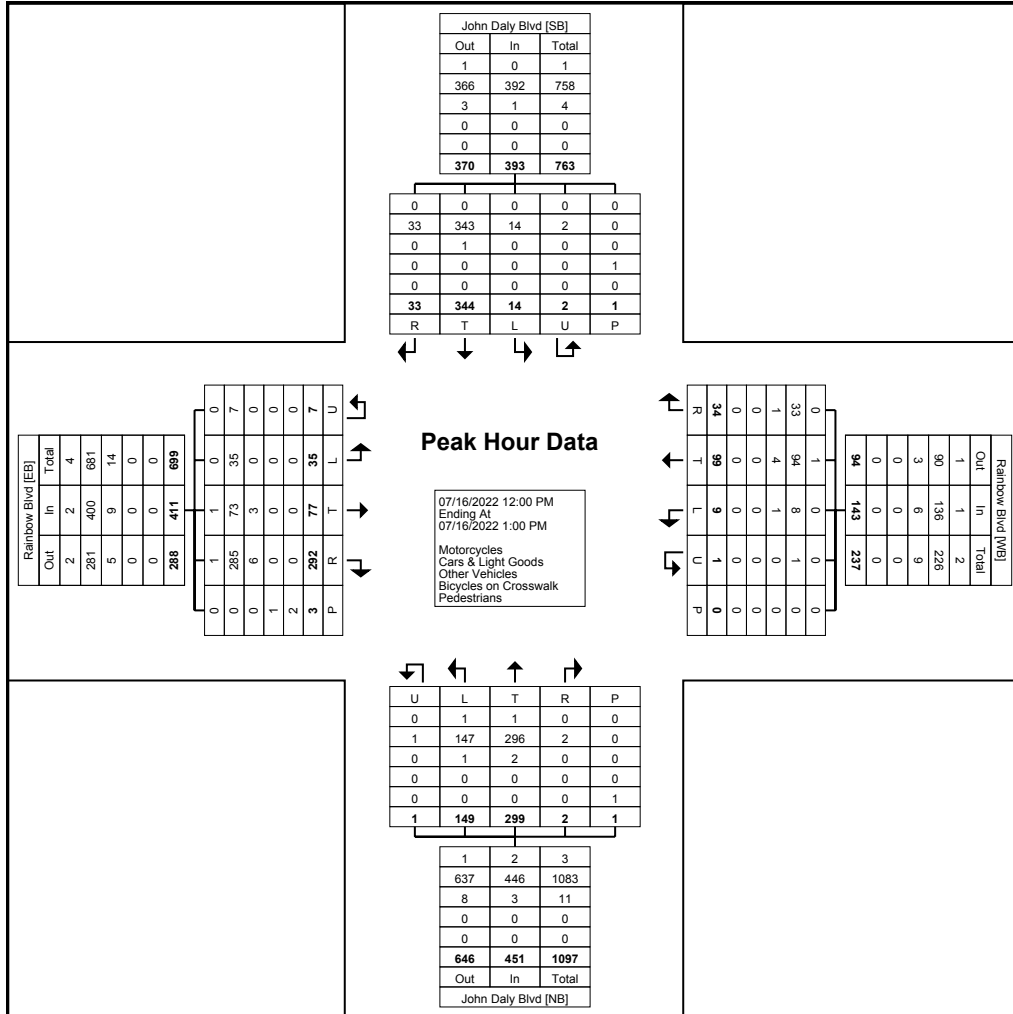
Count Name: John Daly Blvd &
Rainbow Blvd
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	John Daly Blvd Southbound							Rainbow Blvd Westbound							John Daly Blvd Northbound							Rainbow Blvd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	4	2	91	1	1	0	99	6	3	22	2	1	0	34	1	0	63	42	0	0	106	58	20	30	12	2	1	122	361
12:15 PM	3	5	74	3	1	1	86	5	4	31	1	0	0	41	0	0	77	34	1	0	112	60	21	21	10	1	2	113	352
12:30 PM	7	7	86	4	0	0	104	4	0	27	2	0	0	33	0	0	72	36	0	0	108	33	31	13	7	3	0	87	332
12:45 PM	4	1	93	6	0	0	104	7	5	19	4	0	0	35	1	0	87	37	0	1	125	46	23	13	6	1	0	89	353
Total	18	15	344	14	2	1	393	22	12	99	9	1	0	143	2	0	299	149	1	1	451	197	95	77	35	7	3	411	1398
Approach %	4.6	3.8	87.5	3.6	0.5	-	-	15.4	8.4	69.2	6.3	0.7	-	-	0.4	0.0	66.3	33.0	0.2	-	-	47.9	23.1	18.7	8.5	1.7	-	-	-
Total %	1.3	1.1	24.6	1.0	0.1	-	28.1	1.6	0.9	7.1	0.6	0.1	-	10.2	0.1	0.0	21.4	10.7	0.1	-	32.3	14.1	6.8	5.5	2.5	0.5	-	29.4	-
PHF	0.643	0.536	0.925	0.583	0.500	-	0.945	0.786	0.600	0.798	0.563	0.250	-	0.872	0.500	0.000	0.859	0.887	0.250	-	0.902	0.821	0.766	0.642	0.729	0.583	-	0.842	0.968
Motorcycles	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	1	1	0	-	2	0	1	1	0	0	-	2	5
% Motorcycles	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	1.0	0.0	0.0	-	0.7	0.0	-	0.3	0.7	0.0	-	0.4	0.0	1.1	1.3	0.0	0.0	-	0.5	0.4
Cars & Light Goods	18	15	343	14	2	-	392	21	12	94	8	1	-	136	2	0	296	147	1	-	446	193	92	73	35	7	-	400	1374
% Cars & Light Goods	100.0	100.0	99.7	100.0	100.0	-	99.7	95.5	100.0	94.9	88.9	100.0	-	95.1	100.0	-	99.0	98.7	100.0	-	98.9	98.0	96.8	94.8	100.0	100.0	-	97.3	98.3
Other Vehicles	0	0	1	0	0	-	1	1	0	4	1	0	-	6	0	0	2	1	0	-	3	4	2	3	0	0	-	9	19
% Other Vehicles	0.0	0.0	0.3	0.0	0.0	-	0.3	4.5	0.0	4.0	11.1	0.0	-	4.2	0.0	-	0.7	0.7	0.0	-	0.7	2.0	2.1	3.9	0.0	0.0	-	2.2	1.4
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	66.7	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

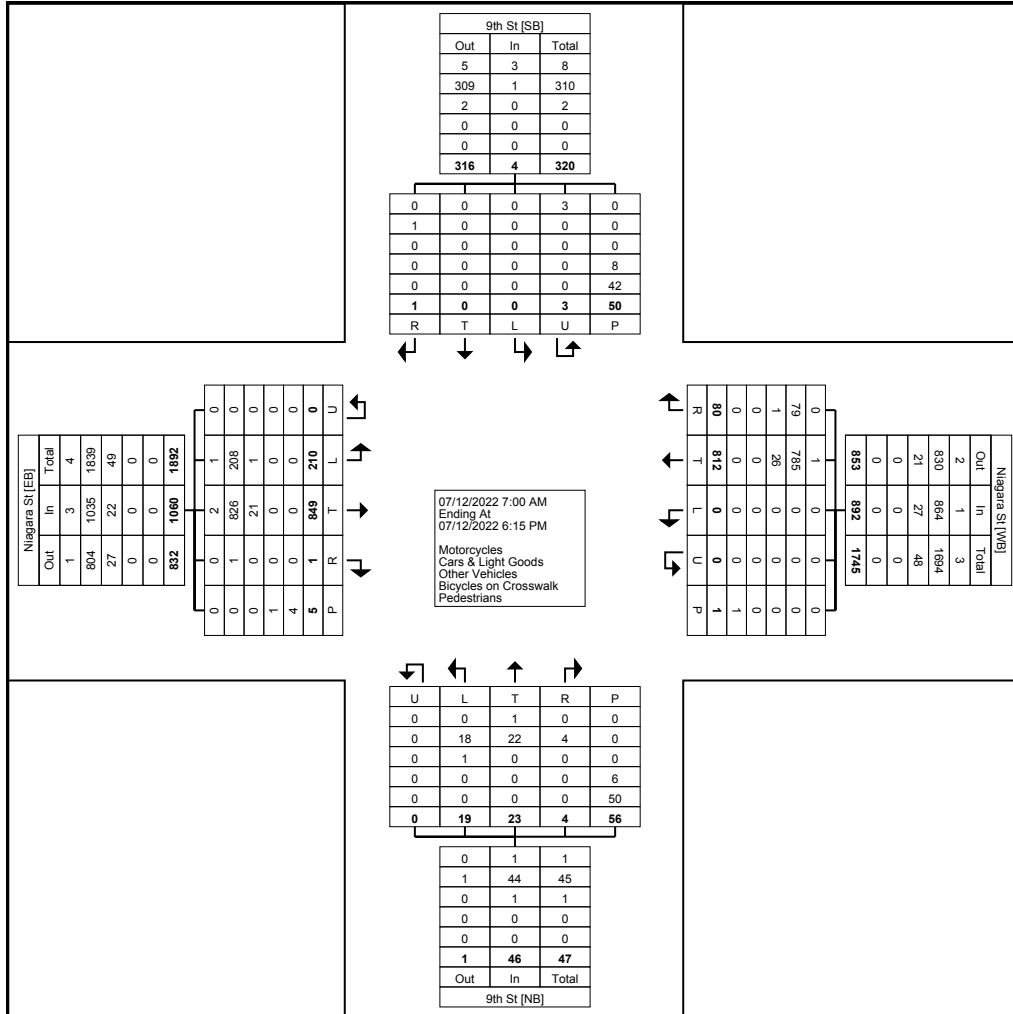
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: Niagara St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 1

Niagara, New York
July 12, 2022

Turning Movement Data

Start Time	9th St Southbound						Niagara St Westbound						9th St Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	20	0	0	0	20	0	1	0	0	0	1	0	31	5	0	1	36	57
7:15 AM	0	0	0	0	2	0	2	19	0	0	0	21	0	0	0	0	0	0	0	24	3	0	0	27	48
7:30 AM	0	0	0	0	1	0	1	19	0	0	0	20	0	1	1	0	3	2	0	37	3	0	0	40	62
7:45 AM	0	0	0	0	1	0	2	22	0	0	0	24	0	0	1	0	2	1	0	51	14	0	0	65	90
Hourly Total	0	0	0	0	4	0	5	80	0	0	0	85	0	2	2	0	5	4	0	143	25	0	1	168	257
8:00 AM	0	0	0	0	1	0	3	18	0	0	0	21	0	2	0	0	2	2	0	39	9	0	1	48	71
8:15 AM	0	0	0	0	1	0	1	23	0	0	0	24	0	0	0	0	1	0	0	33	10	0	0	43	67
8:30 AM	0	0	0	0	3	0	5	24	0	0	0	29	0	0	0	0	0	0	0	23	12	0	0	35	64
8:45 AM	0	0	0	0	9	0	8	36	0	0	1	44	0	3	2	0	4	5	0	47	7	0	0	54	103
Hourly Total	0	0	0	0	14	0	17	101	0	0	1	118	0	5	2	0	7	7	0	142	38	0	1	180	305
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	2	0	3	22	0	0	0	25	0	1	2	0	1	3	0	41	5	0	0	46	74
11:15 AM	0	0	0	0	1	0	2	33	0	0	0	35	1	3	0	0	4	4	0	22	6	0	1	28	67
11:30 AM	0	0	0	0	1	0	2	34	0	0	0	36	2	2	1	0	5	5	0	40	8	0	0	48	89
11:45 AM	1	0	0	0	5	1	2	23	0	0	0	25	0	0	0	0	4	0	0	28	12	0	0	40	66
Hourly Total	1	0	0	0	9	1	9	112	0	0	0	121	3	6	3	0	14	12	0	131	31	0	1	162	296
12:00 PM	0	0	0	0	0	0	3	27	0	0	0	30	0	0	0	0	1	0	0	41	9	0	0	50	80
12:15 PM	0	0	0	0	4	0	2	35	0	0	0	37	0	1	2	0	4	3	0	40	7	0	0	47	87
12:30 PM	0	0	0	0	1	0	2	41	0	0	0	43	1	0	2	0	3	3	1	32	5	0	0	38	84
12:45 PM	0	0	0	0	1	0	0	40	0	0	0	40	0	0	2	0	7	2	0	33	12	0	2	45	87
Hourly Total	0	0	0	0	6	0	7	143	0	0	0	150	1	1	6	0	15	8	1	146	33	0	2	180	338
1:00 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
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	1	2	1	7	57	0	0	0	64	0	3	1	0	1	4	0	33	10	0	0	43	112
4:15 PM	0	0	0	1	4	1	4	55	0	0	0	59	0	0	3	0	3	3	0	33	9	0	0	42	105
4:30 PM	0	0	0	0	2	0	10	70	0	0	0	80	0	1	0	0	2	1	0	65	11	0	0	76	157
4:45 PM	0	0	0	0	1	0	4	43	0	0	0	47	0	0	1	0	2	1	0	33	14	0	0	47	95
Hourly Total	0	0	0	2	9	2	25	225	0	0	0	250	0	4	5	0	8	9	0	164	44	0	0	208	469
5:00 PM	0	0	0	0	2	0	7	37	0	0	0	44	0	0	0	0	5	0	0	33	7	0	0	40	84
5:15 PM	0	0	0	1	4	1	5	35	0	0	0	40	0	3	1	0	1	4	0	30	8	0	0	38	83
5:30 PM	0	0	0	0	1	0	3	41	0	0	0	44	0	1	0	0	1	1	0	30	12	0	0	42	87
5:45 PM	0	0	0	0	1	0	2	38	0	0	0	40	0	1	0	0	0	1	0	30	12	0	0	42	83
Hourly Total	0	0	0	1	8	1	17	151	0	0	0	168	0	5	1	0	7	6	0	123	39	0	0	162	337
6:00 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
Grand Total	1	0	0	3	50	4	80	812	0	0	1	892	4	23	19	0	56	46	1	849	210	0	5	1060	2002
Approach %	25.0	0.0	0.0	75.0	-	-	9.0	91.0	0.0	0.0	-	-	8.7	50.0	41.3	0.0	-	-	0.1	80.1	19.8	0.0	-	-	-
Total %	0.0	0.0	0.0	0.1	-	0.2	4.0	40.6	0.0	0.0	-	44.6	0.2	1.1	0.9	0.0	-	2.3	0.0	42.4	10.5	0.0	-	52.9	-
Motorcycles	0	0	0	3	-	3	0	1	0	0	-	1	0	1	0	0	-	1	0	2	1	0	-	3	8
% Motorcycles	0.0	-	-	100.0	-	75.0	0.0	0.1	-	-	-	0.1	0.0	4.3	0.0	-	-	2.2	0.0	0.2	0.5	-	-	0.3	0.4
Cars & Light Goods	1	0	0	0	-	1	79	785	0	0	-	864	4	22	18	0	-	44	1	826	208	0	-	1035	1944
% Cars & Light Goods	100.0	-	-	0.0	-	25.0	98.8	96.7	-	-	-	96.9	100.0	95.7	94.7	-	-	95.7	100.0	97.3	99.0	-	-	97.6	97.1
Other Vehicles	0	0	0	0	-	0	1	26	0	0	-	27	0	0	1	0	-	1	0	21	1	0	-	22	50
% Other Vehicles	0.0	-	-	0.0	-	0.0	1.3	3.2	-	-	-	3.0	0.0	0.0	5.3	-	-	2.2	0.0	2.5	0.5	-	-	2.1	2.5
Bicycles on Crosswalk	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	16.0	-	-	-	-	-	0.0	-	-	-	-	-	10.7	-	-	-	-	-	20.0	-	-
Pedestrians	-	-	-	-	42	-	-	-	-	-	1	-	-	-	-	-	50	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	84.0	-	-	-	-	-	100.0	-	-	-	-	-	89.3	-	-	-	-	-	80.0	-	-



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

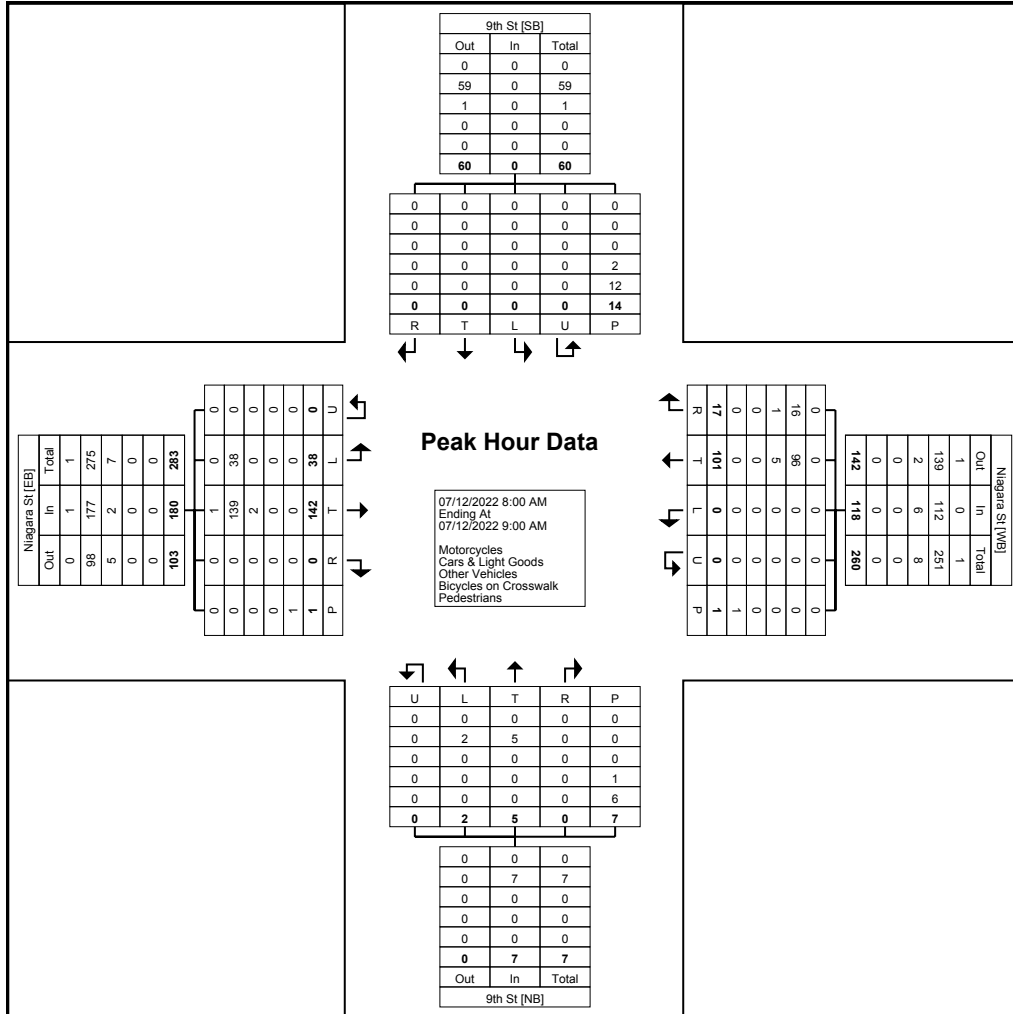
Count Name: Niagara St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 3

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (8:00 AM)

Start Time	9th St Southbound						Niagara St Westbound						9th St Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
8:00 AM	0	0	0	0	1	0	3	18	0	0	0	21	0	2	0	0	2	2	0	39	9	0	1	48	71
8:15 AM	0	0	0	0	1	0	1	23	0	0	0	24	0	0	0	0	1	0	0	33	10	0	0	43	67
8:30 AM	0	0	0	0	3	0	5	24	0	0	0	29	0	0	0	0	0	0	0	23	12	0	0	35	64
8:45 AM	0	0	0	0	9	0	8	36	0	0	1	44	0	3	2	0	4	5	0	47	7	0	0	54	103
Total	0	0	0	0	14	0	17	101	0	0	1	118	0	5	2	0	7	7	0	142	38	0	1	180	305
Approach %	0.0	0.0	0.0	0.0	-	-	14.4	85.6	0.0	0.0	-	-	0.0	71.4	28.6	0.0	-	-	0.0	78.9	21.1	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	5.6	33.1	0.0	0.0	-	38.7	0.0	1.6	0.7	0.0	-	2.3	0.0	46.6	12.5	0.0	-	59.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.531	0.701	0.000	0.000	-	0.670	0.000	0.417	0.250	0.000	-	0.350	0.000	0.755	0.792	0.000	-	0.833	0.740
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	-	0.7	0.0	-	-	0.6	0.3
Cars & Light Goods	0	0	0	0	-	0	16	96	0	0	-	112	0	5	2	0	-	7	0	139	38	0	-	177	296
% Cars & Light Goods	-	-	-	-	-	-	94.1	95.0	-	-	-	94.9	-	100.0	100.0	-	-	100.0	-	97.9	100.0	-	-	98.3	97.0
Other Vehicles	0	0	0	0	-	0	1	5	0	0	-	6	0	0	0	0	-	0	0	2	0	0	-	2	8
% Other Vehicles	-	-	-	-	-	-	5.9	5.0	-	-	-	5.1	-	0.0	0.0	-	-	0.0	-	1.4	0.0	-	-	1.1	2.6
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	14.3	-	-	-	-	-	0.0	-	-	-	-	-	14.3	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	85.7	-	-	-	-	-	100.0	-	-	-	-	-	85.7	-	-	-	-	-	100.0	-	-

Niagara, New York
July 12, 2022



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



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

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

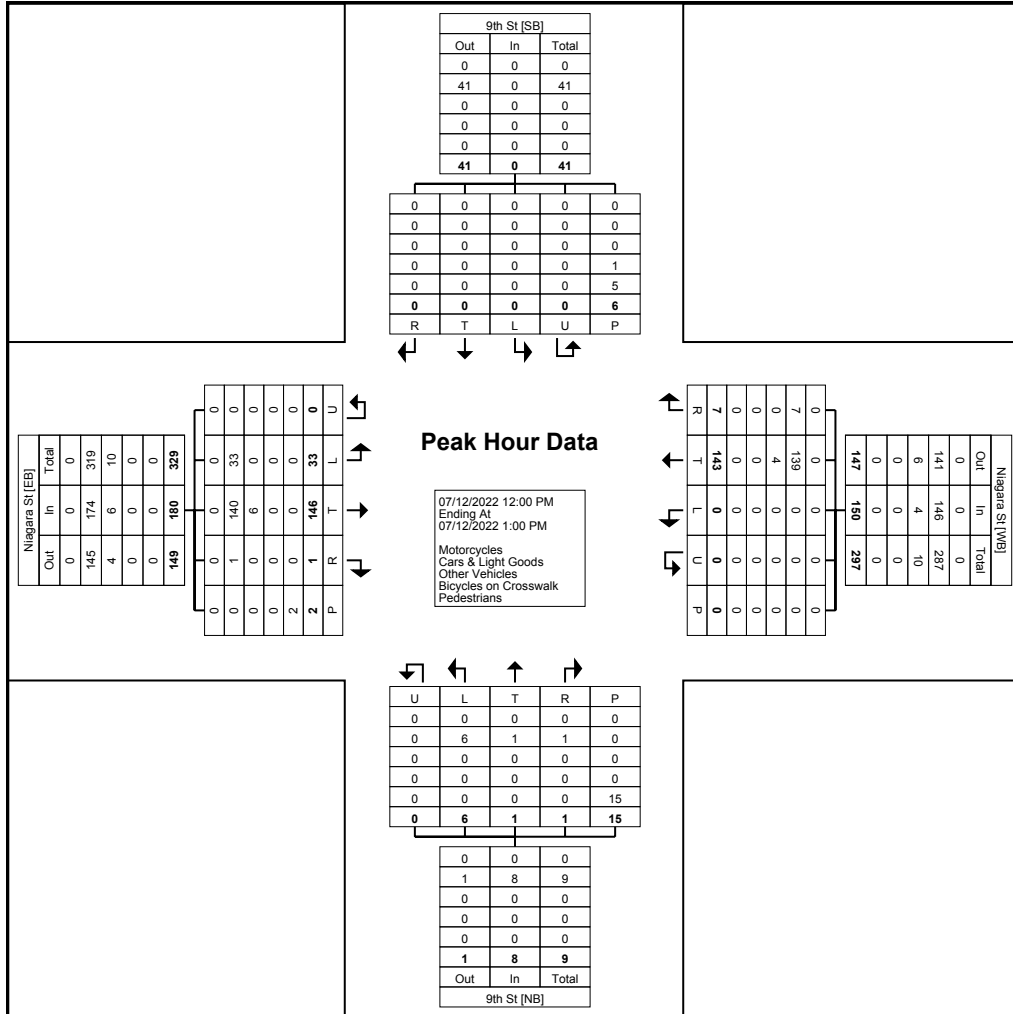
Count Name: Niagara St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 5

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	9th St Southbound						Niagara St Westbound						9th St Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	0	0	0	0	0	0	3	27	0	0	0	30	0	0	0	0	1	0	0	41	9	0	0	50	80
12:15 PM	0	0	0	0	4	0	2	35	0	0	0	37	0	1	2	0	4	3	0	40	7	0	0	47	87
12:30 PM	0	0	0	0	1	0	2	41	0	0	0	43	1	0	2	0	3	3	1	32	5	0	0	38	84
12:45 PM	0	0	0	0	1	0	0	40	0	0	0	40	0	0	2	0	7	2	0	33	12	0	2	45	87
Total	0	0	0	0	6	0	7	143	0	0	0	150	1	1	6	0	15	8	1	146	33	0	2	180	338
Approach %	0.0	0.0	0.0	0.0	-	-	4.7	95.3	0.0	0.0	-	-	12.5	12.5	75.0	0.0	-	-	0.6	81.1	18.3	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	2.1	42.3	0.0	0.0	-	44.4	0.3	0.3	1.8	0.0	-	2.4	0.3	43.2	9.8	0.0	-	53.3	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.583	0.872	0.000	0.000	-	0.872	0.250	0.250	0.750	0.000	-	0.667	0.250	0.890	0.688	0.000	-	0.900	0.971
Motorcycles	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
Cars & Light Goods	0	0	0	0	-	0	7	139	0	0	-	146	1	1	6	0	-	8	1	140	33	0	-	174	328
% Cars & Light Goods	-	-	-	-	-	-	100.0	97.2	-	-	-	97.3	100.0	100.0	100.0	-	-	100.0	100.0	95.9	100.0	-	-	96.7	97.0
Other Vehicles	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	0	6	0	0	-	6	10
% Other Vehicles	-	-	-	-	-	-	0.0	2.8	-	-	-	2.7	0.0	0.0	0.0	-	-	0.0	0.0	4.1	0.0	-	-	3.3	3.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	16.7	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	0	-	-	-	-	-	15	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	83.3	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 12, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

Count Name: Niagara St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 7

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	9th St Southbound						Niagara St Westbound						9th St Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	0	0	0	1	2	1	7	57	0	0	0	64	0	3	1	0	1	4	0	33	10	0	0	43	112
4:15 PM	0	0	0	1	4	1	4	55	0	0	0	59	0	0	3	0	3	3	0	33	9	0	0	42	105
4:30 PM	0	0	0	0	2	0	10	70	0	0	0	80	0	1	0	0	2	1	0	65	11	0	0	76	157
4:45 PM	0	0	0	0	1	0	4	43	0	0	0	47	0	0	1	0	2	1	0	33	14	0	0	47	95
Total	0	0	0	2	9	2	25	225	0	0	0	250	0	4	5	0	8	9	0	164	44	0	0	208	469
Approach %	0.0	0.0	0.0	100.0	-	-	10.0	90.0	0.0	0.0	-	-	0.0	44.4	55.6	0.0	-	-	0.0	78.8	21.2	0.0	-	-	-
Total %	0.0	0.0	0.0	0.4	-	0.4	5.3	48.0	0.0	0.0	-	53.3	0.0	0.9	1.1	0.0	-	1.9	0.0	35.0	9.4	0.0	-	44.3	-
PHF	0.000	0.000	0.000	0.500	-	0.500	0.625	0.804	0.000	0.000	-	0.781	0.000	0.333	0.417	0.000	-	0.563	0.000	0.631	0.786	0.000	-	0.684	0.747
Motorcycles	0	0	0	2	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	2
% Motorcycles	-	-	-	100.0	-	100.0	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.4
Cars & Light Goods	0	0	0	0	-	0	25	223	0	0	-	248	0	4	5	0	-	9	0	161	44	0	-	205	462
% Cars & Light Goods	-	-	-	0.0	-	0.0	100.0	99.1	-	-	-	99.2	-	100.0	100.0	-	-	100.0	-	98.2	100.0	-	-	98.6	98.5
Other Vehicles	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	3	0	0	-	3	5
% Other Vehicles	-	-	-	0.0	-	0.0	0.0	0.9	-	-	-	0.8	-	0.0	0.0	-	-	0.0	-	1.8	0.0	-	-	1.4	1.1
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	33.3	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	8	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	66.7	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



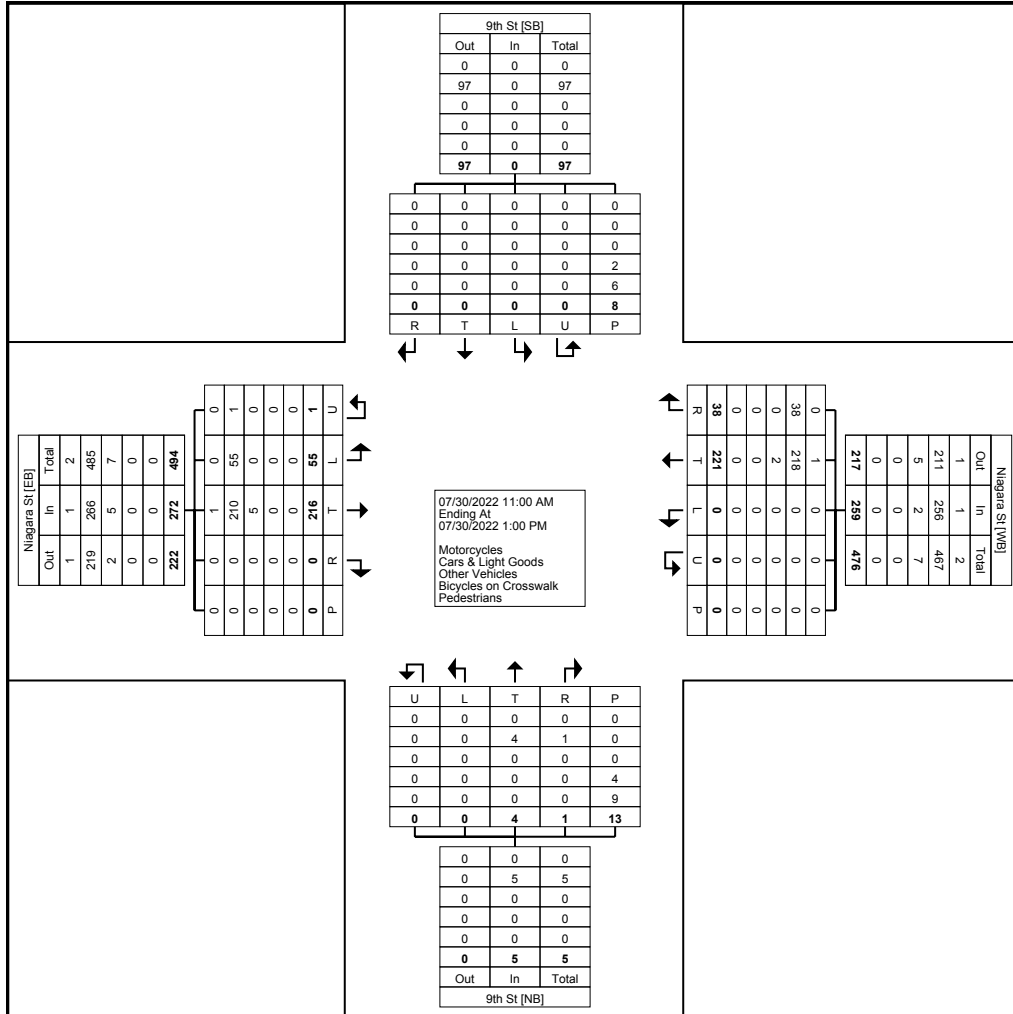
Tri-State Traffic Data: New York Division
184 Baker Rd

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

Count Name: Niagara St & 9th St
Site Code:
Start Date: 07/30/2022
Page No: 1

Turning Movement Data

Start Time	9th St Southbound						Niagara St Westbound						9th St Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	0	0	0	0	1	0	4	22	0	0	0	26	0	0	0	0	2	0	0	23	13	0	0	36	62
11:15 AM	0	0	0	0	1	0	4	31	0	0	0	35	1	0	0	0	2	1	0	32	3	1	0	36	72
11:30 AM	0	0	0	0	0	0	4	24	0	0	0	28	0	0	0	0	0	0	0	18	9	0	0	27	55
11:45 AM	0	0	0	0	3	0	3	31	0	0	0	34	0	1	0	0	1	1	0	28	8	0	0	36	71
Hourly Total	0	0	0	0	5	0	15	108	0	0	0	123	1	1	0	0	5	2	0	101	33	1	0	135	260
12:00 PM	0	0	0	0	1	0	5	23	0	0	0	28	0	1	0	0	0	1	0	26	5	0	0	31	60
12:15 PM	0	0	0	0	0	0	8	28	0	0	0	36	0	1	0	0	2	1	0	30	9	0	0	39	76
12:30 PM	0	0	0	0	2	0	6	34	0	0	0	40	0	0	0	0	3	0	0	28	6	0	0	34	74
12:45 PM	0	0	0	0	0	0	4	28	0	0	0	32	0	1	0	0	3	1	0	31	2	0	0	33	66
Hourly Total	0	0	0	0	3	0	23	113	0	0	0	136	0	3	0	0	8	3	0	115	22	0	0	137	276
Grand Total	0	0	0	0	8	0	38	221	0	0	0	259	1	4	0	0	13	5	0	216	55	1	0	272	536
Approach %	0.0	0.0	0.0	0.0	-	-	14.7	85.3	0.0	0.0	-	-	20.0	80.0	0.0	0.0	-	-	0.0	79.4	20.2	0.4	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	7.1	41.2	0.0	0.0	-	48.3	0.2	0.7	0.0	0.0	-	0.9	0.0	40.3	10.3	0.2	-	50.7	-
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	2
% Motorcycles	-	-	-	-	-	-	0.0	0.5	-	-	-	0.4	0.0	0.0	-	-	-	0.0	-	0.5	0.0	0.0	-	0.4	0.4
Cars & Light Goods	0	0	0	0	-	0	38	218	0	0	-	256	1	4	0	0	-	5	0	210	55	1	-	266	527
% Cars & Light Goods	-	-	-	-	-	-	100.0	98.6	-	-	-	98.8	100.0	100.0	-	-	-	100.0	-	97.2	100.0	100.0	-	97.8	98.3
Other Vehicles	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	5	0	0	-	5	7
% Other Vehicles	-	-	-	-	-	-	0.0	0.9	-	-	-	0.8	0.0	0.0	-	-	-	0.0	-	2.3	0.0	0.0	-	1.8	1.3
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	25.0	-	-	-	-	-	-	-	-	-	-	-	30.8	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	75.0	-	-	-	-	-	-	-	-	-	-	-	69.2	-	-	-	-	-	-	-	-



Turning Movement Data Plot



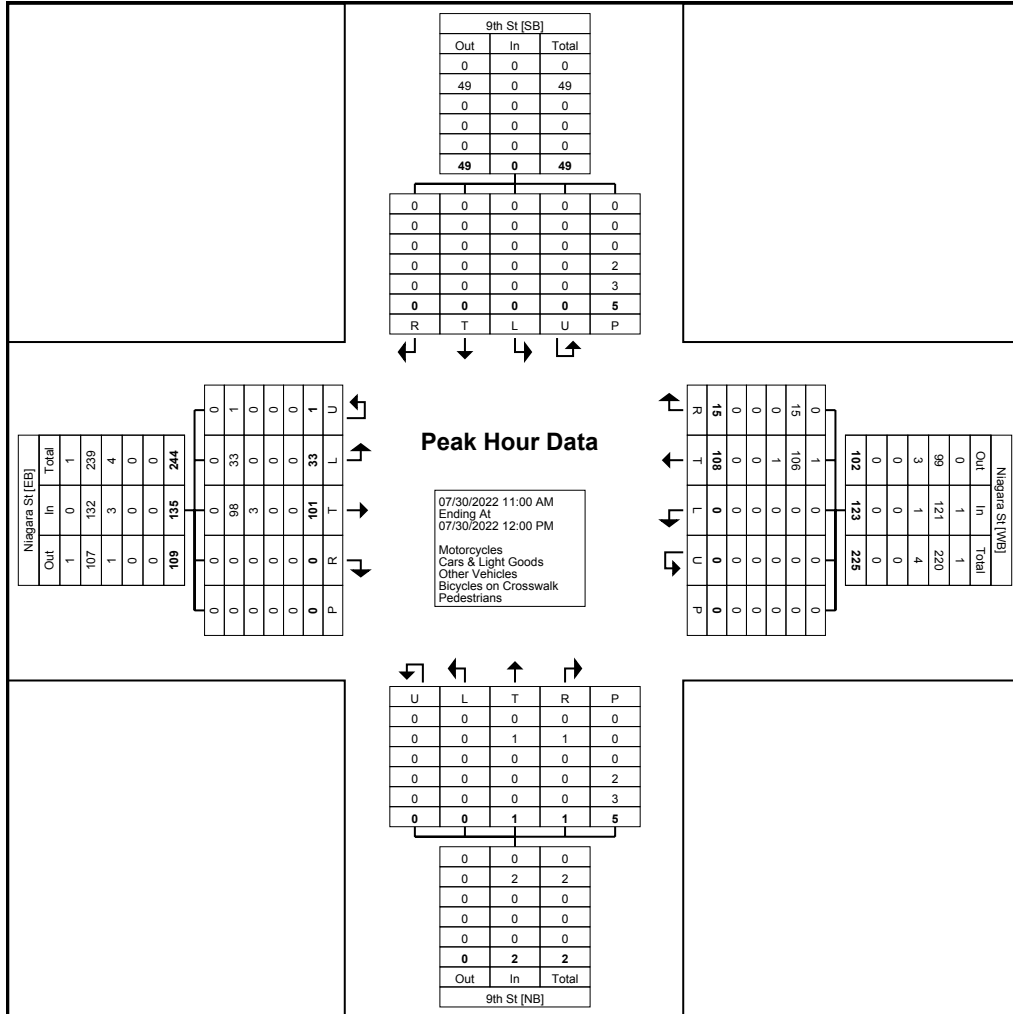
Tri-State Traffic Data: New York Division
184 Baker Rd

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

Count Name: Niagara St & 9th St
Site Code:
Start Date: 07/30/2022
Page No: 3

Turning Movement Peak Hour Data (11:00 AM)

Start Time	9th St Southbound						Niagara St Westbound						9th St Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	0	0	0	0	1	0	4	22	0	0	0	26	0	0	0	0	2	0	0	23	13	0	0	36	62
11:15 AM	0	0	0	0	1	0	4	31	0	0	0	35	1	0	0	0	2	1	0	32	3	1	0	36	72
11:30 AM	0	0	0	0	0	0	4	24	0	0	0	28	0	0	0	0	0	0	0	18	9	0	0	27	55
11:45 AM	0	0	0	0	3	0	3	31	0	0	0	34	0	1	0	0	1	1	0	28	8	0	0	36	71
Total	0	0	0	0	5	0	15	108	0	0	0	123	1	1	0	0	5	2	0	101	33	1	0	135	260
Approach %	0.0	0.0	0.0	0.0	-	-	12.2	87.8	0.0	0.0	-	-	50.0	50.0	0.0	0.0	-	-	0.0	74.8	24.4	0.7	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	5.8	41.5	0.0	0.0	-	47.3	0.4	0.4	0.0	0.0	-	0.8	0.0	38.8	12.7	0.4	-	51.9	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.938	0.871	0.000	0.000	-	0.879	0.250	0.250	0.000	0.000	-	0.500	0.000	0.789	0.635	0.250	-	0.938	0.903
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	-	-	-	-	-	-	0.0	0.9	-	-	-	0.8	0.0	0.0	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.4
Cars & Light Goods	0	0	0	0	-	0	15	106	0	0	-	121	1	1	0	0	-	2	0	98	33	1	-	132	255
% Cars & Light Goods	-	-	-	-	-	-	100.0	98.1	-	-	-	98.4	100.0	100.0	-	-	-	100.0	-	97.0	100.0	100.0	-	97.8	98.1
Other Vehicles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	3	0	0	-	3	4
% Other Vehicles	-	-	-	-	-	-	0.0	0.9	-	-	-	0.8	0.0	0.0	-	-	-	0.0	-	3.0	0.0	0.0	-	2.2	1.5
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	40.0	-	-	-	-	-	-	-	-	-	-	-	40.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	60.0	-	-	-	-	-	-	-	-	-	-	-	60.0	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (11:00 AM)



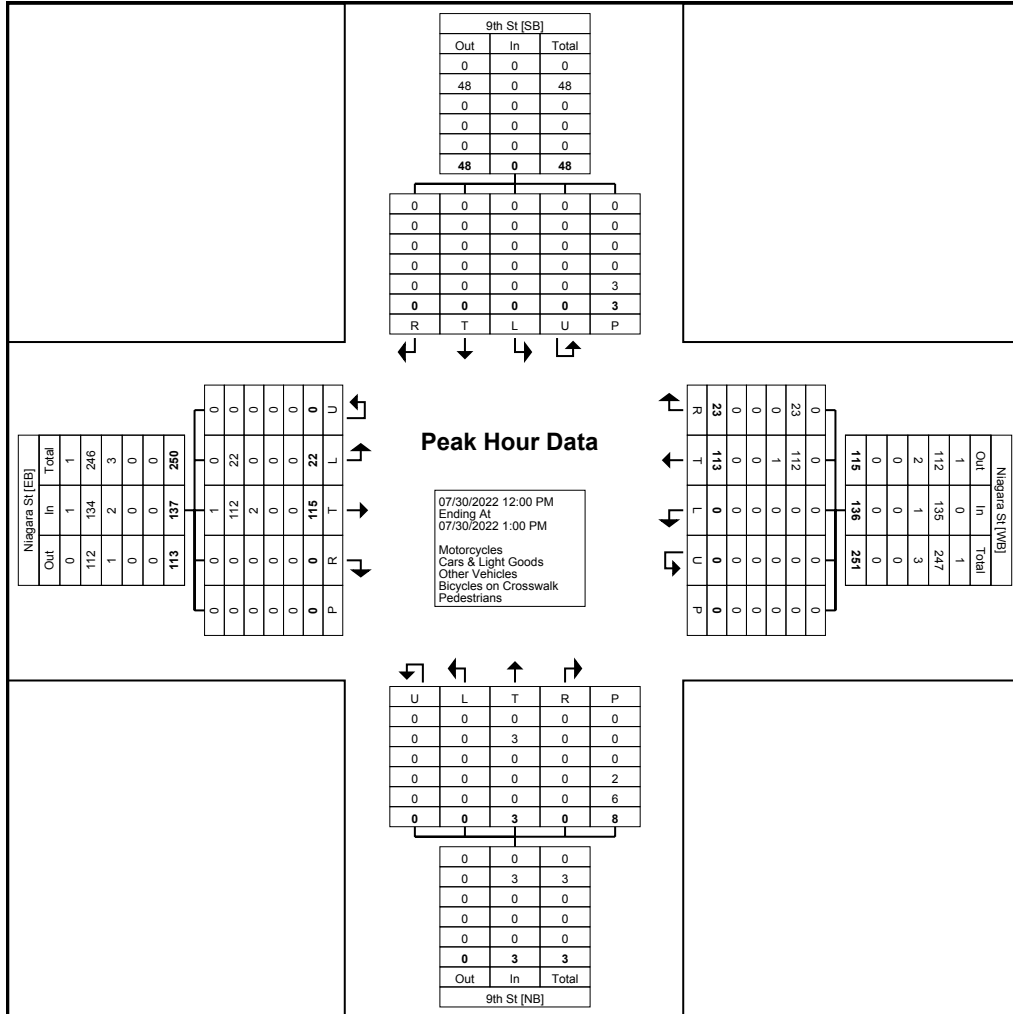
Tri-State Traffic Data: New York Division
184 Baker Rd

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

Count Name: Niagara St & 9th St
Site Code:
Start Date: 07/30/2022
Page No: 5

Turning Movement Peak Hour Data (12:00 PM)

Start Time	9th St Southbound						Niagara St Westbound						9th St Northbound						Niagara St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	0	0	0	0	1	0	5	23	0	0	0	28	0	1	0	0	0	1	0	26	5	0	0	31	60
12:15 PM	0	0	0	0	0	0	8	28	0	0	0	36	0	1	0	0	2	1	0	30	9	0	0	39	76
12:30 PM	0	0	0	0	2	0	6	34	0	0	0	40	0	0	0	0	3	0	0	28	6	0	0	34	74
12:45 PM	0	0	0	0	0	0	4	28	0	0	0	32	0	1	0	0	3	1	0	31	2	0	0	33	66
Total	0	0	0	0	3	0	23	113	0	0	0	136	0	3	0	0	8	3	0	115	22	0	0	137	276
Approach %	0.0	0.0	0.0	0.0	-	-	16.9	83.1	0.0	0.0	-	-	0.0	100.0	0.0	0.0	-	-	0.0	83.9	16.1	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	8.3	40.9	0.0	0.0	-	49.3	0.0	1.1	0.0	0.0	-	1.1	0.0	41.7	8.0	0.0	-	49.6	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.719	0.831	0.000	0.000	-	0.850	0.000	0.750	0.000	0.000	-	0.750	0.000	0.927	0.611	0.000	-	0.878	0.908
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.9	0.0	-	-	0.7	0.4
Cars & Light Goods	0	0	0	0	-	0	23	112	0	0	-	135	0	3	0	0	-	3	0	112	22	0	-	134	272
% Cars & Light Goods	-	-	-	-	-	-	100.0	99.1	-	-	-	99.3	-	100.0	-	-	-	100.0	-	97.4	100.0	-	-	97.8	98.6
Other Vehicles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	3
% Other Vehicles	-	-	-	-	-	-	0.0	0.9	-	-	-	0.7	-	0.0	-	-	-	0.0	-	1.7	0.0	-	-	1.5	1.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	25.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	75.0	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

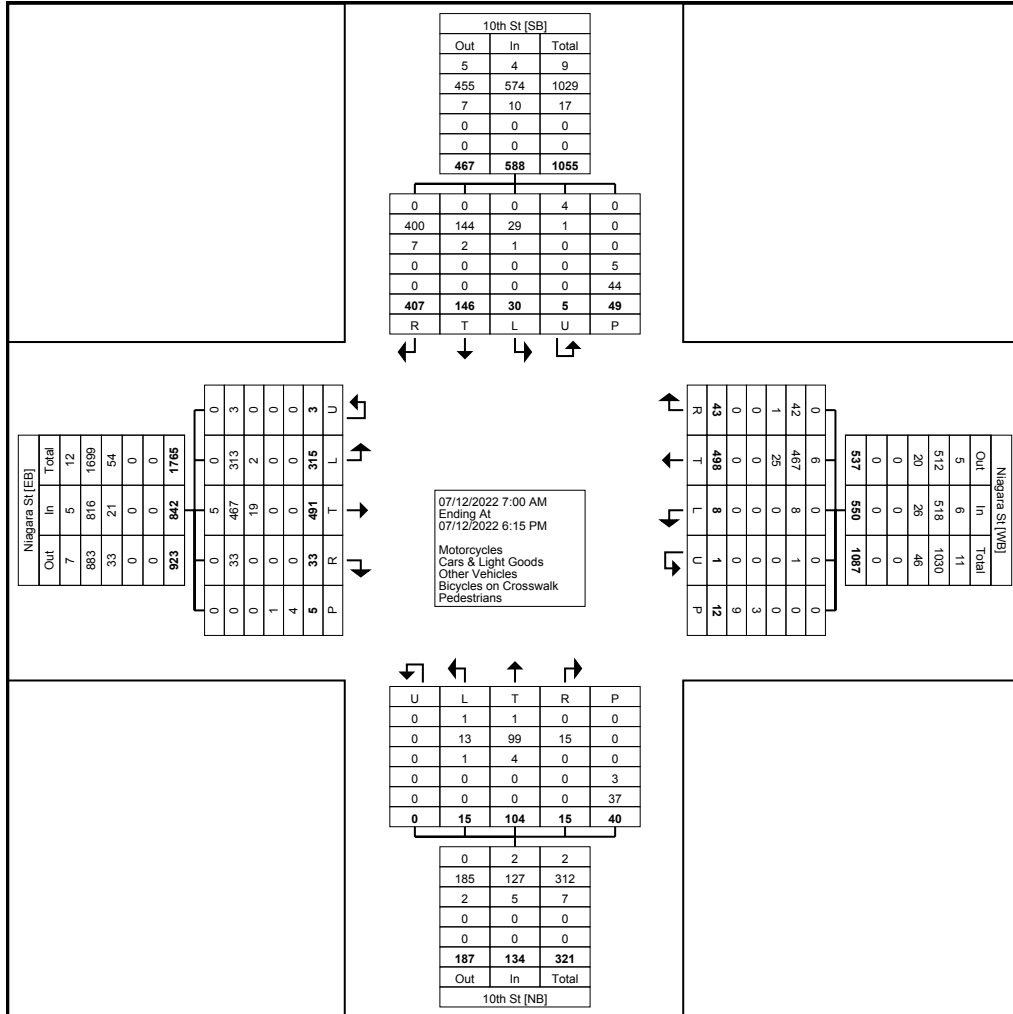
Niagara, New York
July 12, 2022

Count Name: Niagara St & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 1

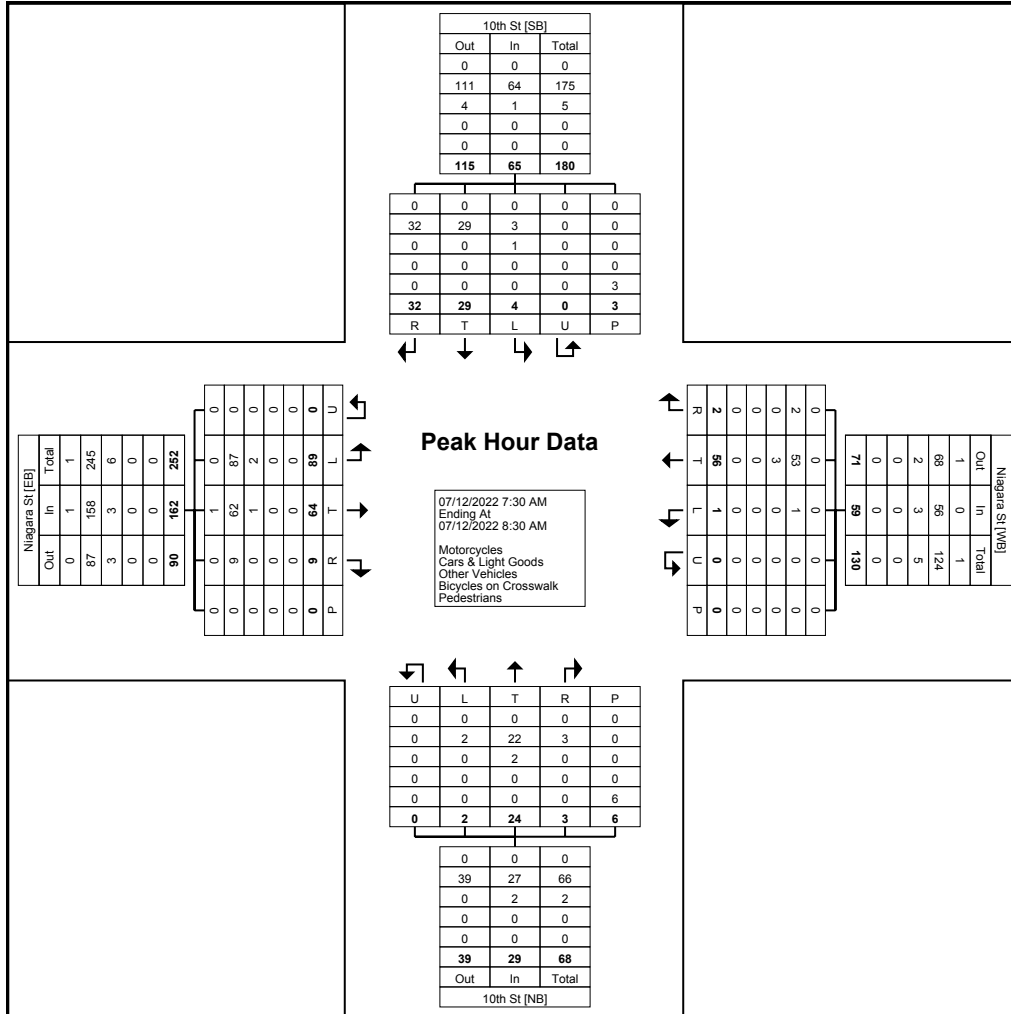
Turning Movement Data

Start Time	10th St Southbound							Niagara St Westbound							10th St Northbound							Niagara St Eastbound							Int. Total	
	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total		
7:00 AM	3	6	1	3	0	0	13	0	0	10	0	0	0	10	0	0	2	0	0	0	2	1	0	13	19	0	0	33	58	
7:15 AM	2	6	2	1	0	2	11	0	0	13	0	0	0	13	0	1	2	0	0	0	3	0	0	10	11	0	0	21	48	
7:30 AM	3	6	4	0	0	2	13	0	0	11	0	0	0	11	0	1	2	0	0	1	3	2	0	14	21	0	0	37	64	
7:45 AM	1	2	7	1	0	0	11	1	0	21	0	0	0	22	0	0	7	0	0	2	7	0	2	21	26	0	0	49	89	
Hourly Total	9	20	14	5	0	4	48	1	0	55	0	0	0	56	0	2	13	0	0	3	15	3	2	58	77	0	0	140	259	
8:00 AM	5	3	8	1	0	1	17	0	1	14	1	0	0	16	1	1	7	0	0	1	9	1	0	12	26	0	0	39	81	
8:15 AM	3	9	10	2	0	0	24	0	0	10	0	0	0	10	0	0	8	2	0	2	10	1	3	17	16	0	0	37	81	
8:30 AM	2	6	4	3	0	3	15	0	0	20	0	0	0	20	0	0	3	0	0	0	3	0	0	9	11	0	0	20	58	
8:45 AM	12	5	3	1	0	4	21	1	0	22	0	0	3	23	0	0	4	2	0	3	6	2	0	18	25	0	0	45	95	
Hourly Total	22	23	25	7	0	8	77	1	1	66	1	0	3	69	1	1	22	4	0	6	28	4	3	56	78	0	0	141	315	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11:00 AM	7	3	10	0	0	1	20	1	2	18	0	0	1	21	0	0	2	0	0	1	2	1	0	28	12	0	0	41	84	
11:15 AM	11	3	7	1	0	2	22	5	0	20	0	0	0	25	1	0	6	0	0	2	7	0	1	20	3	0	1	24	78	
11:30 AM	8	7	7	1	0	2	23	4	1	24	1	0	2	30	0	0	5	1	0	3	6	1	0	22	15	0	1	38	97	
11:45 AM	3	5	8	2	0	3	18	3	0	16	1	0	0	20	0	0	4	0	0	2	4	1	0	21	7	0	0	29	71	
Hourly Total	29	18	32	4	0	8	83	13	3	78	2	0	3	96	1	0	17	1	0	8	19	3	1	91	37	0	2	132	330	
12:00 PM	12	6	2	0	0	2	20	4	0	12	1	1	1	18	1	1	6	0	0	0	8	2	0	21	11	1	0	35	81	
12:15 PM	8	11	11	1	1	1	32	2	2	20	0	0	0	24	1	0	7	1	0	5	9	1	1	24	18	1	1	45	110	
12:30 PM	8	8	8	2	1	2	27	1	0	30	1	0	2	32	0	0	5	0	0	1	5	2	1	21	10	0	1	34	98	
12:45 PM	12	3	11	1	0	1	27	3	1	31	1	0	0	36	0	2	10	0	0	7	12	1	0	17	14	0	0	32	107	
Hourly Total	40	28	32	4	2	6	106	10	3	93	3	1	3	110	2	3	28	1	0	13	34	6	2	83	53	2	2	146	396	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	14	18	10	2	0	0	44	3	0	34	0	0	1	37	0	0	6	2	0	0	8	2	0	25	4	0	1	31	120	
4:15 PM	16	13	1	1	0	0	31	1	0	32	1	0	1	34	0	0	1	0	0	1	1	1	0	24	8	0	0	33	99	
4:30 PM	17	22	9	2	1	5	51	1	0	31	0	0	0	32	1	0	3	3	0	2	7	1	0	47	15	0	0	63	153	
4:45 PM	16	10	7	0	0	1	33	5	0	25	0	0	0	30	0	1	3	0	0	2	4	1	0	24	7	1	0	33	100	
Hourly Total	63	63	27	5	1	6	159	10	0	122	1	0	2	133	1	1	13	5	0	5	20	5	0	120	34	1	1	160	472	
5:00 PM	21	3	7	2	0	2	33	1	0	22	0	0	1	23	2	0	4	2	0	3	8	2	0	26	8	0	0	36	100	
5:15 PM	15	7	2	1	2	9	27	0	0	20	1	0	0	21	0	0	1	1	0	2	2	0	0	20	10	0	0	30	80	
5:30 PM	13	7	2	1	0	2	23	0	0	23	0	0	0	23	1	0	1	0	0	0	2	0	0	21	6	0	0	27	75	
5:45 PM	19	7	5	1	0	4	32	0	0	19	0	0	0	19	0	0	5	1	0	0	6	1	1	16	12	0	0	30	87	
Hourly Total	68	24	16	5	2	17	115	1	0	84	1	0	1	86	3	0	11	4	0	5	18	3	1	83	36	0	0	123	342	
6:00 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
Grand Total	231	176	146	30	5	49	588	36	7	498	8	1	12	550	8	7	104	15	0	40	134	24	9	491	315	3	5	842	2114	
Approach %	39.3	29.9	24.8	5.1	0.9	-	-	6.5	1.3	90.5	1.5	0.2	-	-	6.0	5.2	77.6	11.2	0.0	-	-	2.9	1.1	58.3	37.4	0.4	-	-	-	
Total %	10.9	8.3	6.9	1.4	0.2	-	27.8	1.7	0.3	23.6	0.4	0.0	-	26.0	0.4	0.3	4.9	0.7	0.0	-	6.3	1.1	0.4	23.2	14.9	0.1	-	39.8	-	
Motorcycles	0	0	0	0	4	-	4	0	0	6	0	0	-	6	0	0	1	1	0	-	2	0	0	5	0	0	-	5	17	
% Motorcycles	0.0	0.0	0.0	0.0	80.0	-	0.7	0.0	0.0	1.2	0.0	0.0	-	1.1	0.0	0.0	1.0	6.7	-	-	1.5	0.0	0.0	1.0	0.0	0.0	-	0.6	0.8	
Cars & Light Goods	227	173	144	29	1	-	574	35	7	467	8	1	-	518	8	7	99	13	0	-	127	24	9	467	313	3	-	816	2035	
% Cars & Light Goods	98.3	98.3	98.6	96.7	20.0	-	97.6	97.2	100.0	93.8	100.0	100.0	-	94.2	100.0	100.0	95.2	86.7	-	-	94.8	100.0	100.0	95.1	99.4	100.0	-	96.9	96.3	
Other Vehicles	4	3	2	1	0	-	10	1	0	25	0	0	-	26	0	0	4	1	0	-	5	0	0	19	2	0	-	21	62	
% Other Vehicles	1.7	1.7	1.4	3.3	0.0	-	1.7	2.8	0.0	5.0	0.0	0.0	-	4.7	0.0	0.0	3.8	6.7	-	-	3.7	0.0	0.0	3.9	0.6	0.0	-	2.5	2.9	
Bicycles on Crosswalk	-	-	-	-	-	5	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3	-	-	-	-	-	1	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	10.2	-	-	-	-	-	-	25.0	-	-	-	-	-	-	-	7.5	-	-	-	-	-	20.0	-	-	
Pedestrians	-	-	-	-	-	44	-	-	-	-	-	-	9	-	-	-	-	-	-	-	37	-	-	-	-	-	4	-	-	
% Pedestrians	-	-	-	-	-	89.8	-	-	-	-	-	-	75.0	-	-	-	-	-	-	-	92.5	-	-	-	-	-	80.0	-	-	

Niagara, New York
July 12, 2022



Turning Movement Data Plot



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



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

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

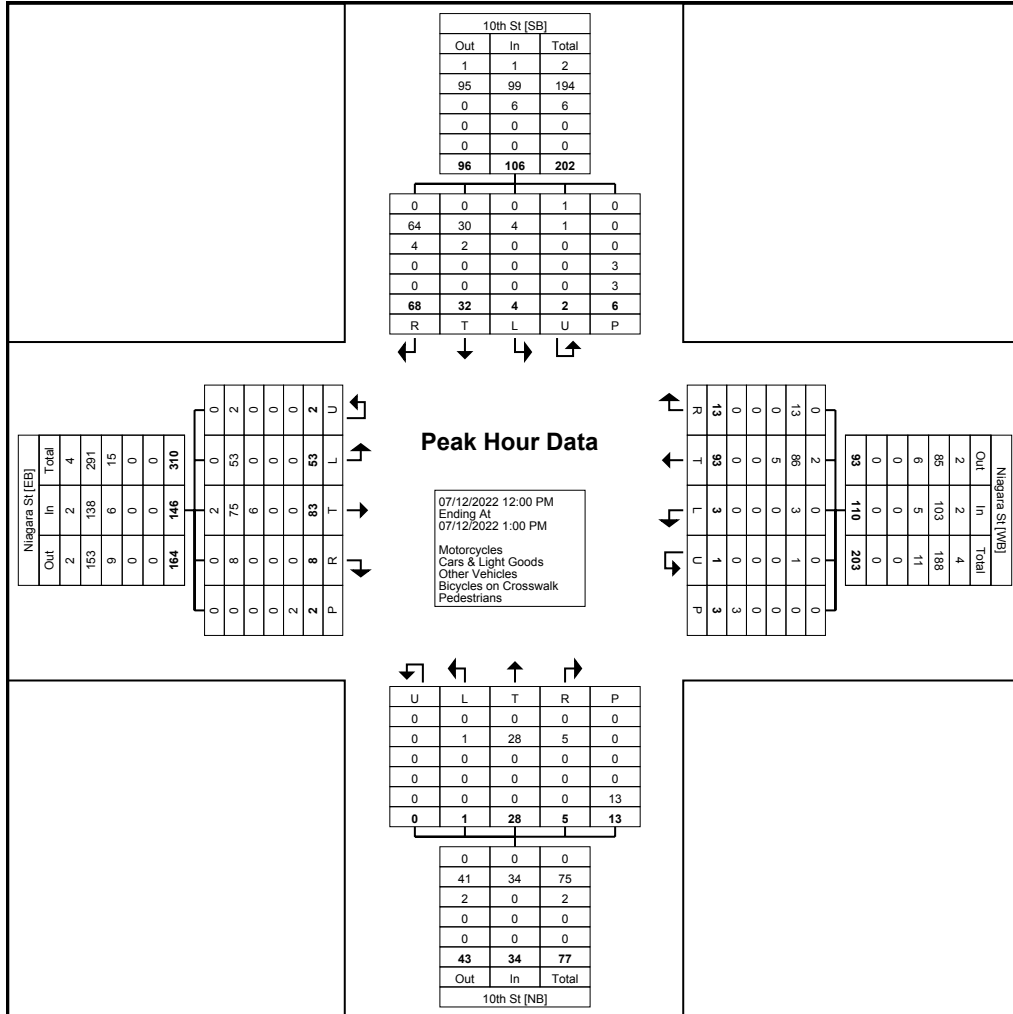
Count Name: Niagara St & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 5

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	10th St Southbound							Niagara St Westbound							10th St Northbound							Niagara St Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	12	6	2	0	0	2	20	4	0	12	1	1	1	18	1	1	6	0	0	0	8	2	0	21	11	1	0	35	81
12:15 PM	8	11	11	1	1	1	32	2	2	20	0	0	0	24	1	0	7	1	0	5	9	1	1	24	18	1	1	45	110
12:30 PM	8	8	8	2	1	2	27	1	0	30	1	0	2	32	0	0	5	0	0	1	5	2	1	21	10	0	1	34	98
12:45 PM	12	3	11	1	0	1	27	3	1	31	1	0	0	36	0	2	10	0	0	7	12	1	0	17	14	0	0	32	107
Total	40	28	32	4	2	6	106	10	3	93	3	1	3	110	2	3	28	1	0	13	34	6	2	83	53	2	2	146	396
Approach %	37.7	26.4	30.2	3.8	1.9	-	-	9.1	2.7	84.5	2.7	0.9	-	-	5.9	8.8	82.4	2.9	0.0	-	-	4.1	1.4	56.8	36.3	1.4	-	-	-
Total %	10.1	7.1	8.1	1.0	0.5	-	26.8	2.5	0.8	23.5	0.8	0.3	-	27.8	0.5	0.8	7.1	0.3	0.0	-	8.6	1.5	0.5	21.0	13.4	0.5	-	36.9	-
PHF	0.833	0.636	0.727	0.500	0.500	-	0.828	0.625	0.375	0.750	0.750	0.250	-	0.764	0.500	0.375	0.700	0.250	0.000	-	0.708	0.750	0.500	0.865	0.736	0.500	-	0.811	0.900
Motorcycles	0	0	0	0	1	-	1	0	0	2	0	0	-	2	0	0	0	0	0	-	0	0	0	2	0	0	-	2	5
% Motorcycles	0.0	0.0	0.0	0.0	50.0	-	0.9	0.0	0.0	2.2	0.0	0.0	-	1.8	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	2.4	0.0	0.0	-	1.4	1.3
Cars & Light Goods	38	26	30	4	1	-	99	10	3	86	3	1	-	103	2	3	28	1	0	-	34	6	2	75	53	2	-	138	374
% Cars & Light Goods	95.0	92.9	93.8	100.0	50.0	-	93.4	100.0	100.0	92.5	100.0	100.0	-	93.6	100.0	100.0	100.0	100.0	-	-	100.0	100.0	100.0	90.4	100.0	100.0	-	94.5	94.4
Other Vehicles	2	2	2	0	0	-	6	0	0	5	0	0	-	5	0	0	0	0	0	-	0	0	0	6	0	0	-	6	17
% Other Vehicles	5.0	7.1	6.3	0.0	0.0	-	5.7	0.0	0.0	5.4	0.0	0.0	-	4.5	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	7.2	0.0	0.0	-	4.1	4.3
Bicycles on Crosswalk	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	50.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	-	3	-	-	-	-	-	-	13	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	50.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

Niagara, New York
July 12, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

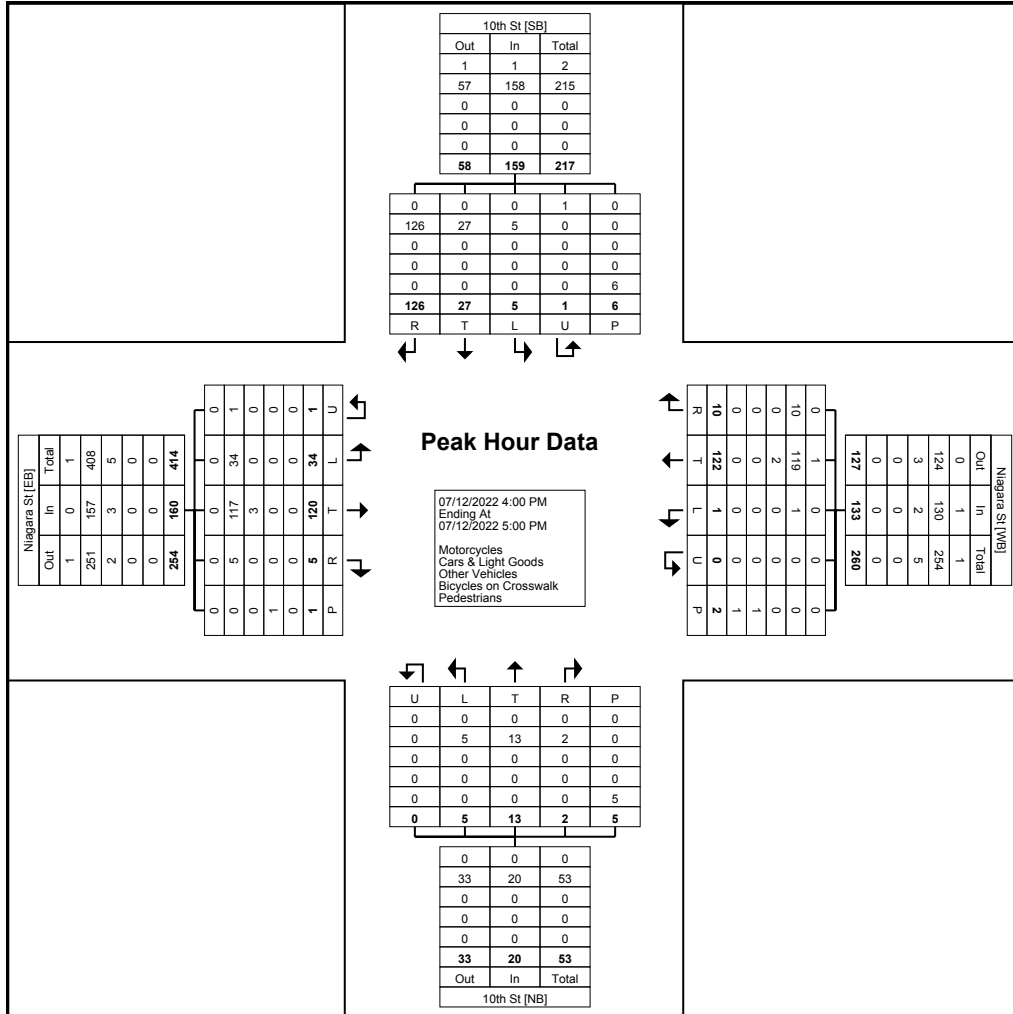
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: Niagara St & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 7

Niagara, New York
July 12, 2022

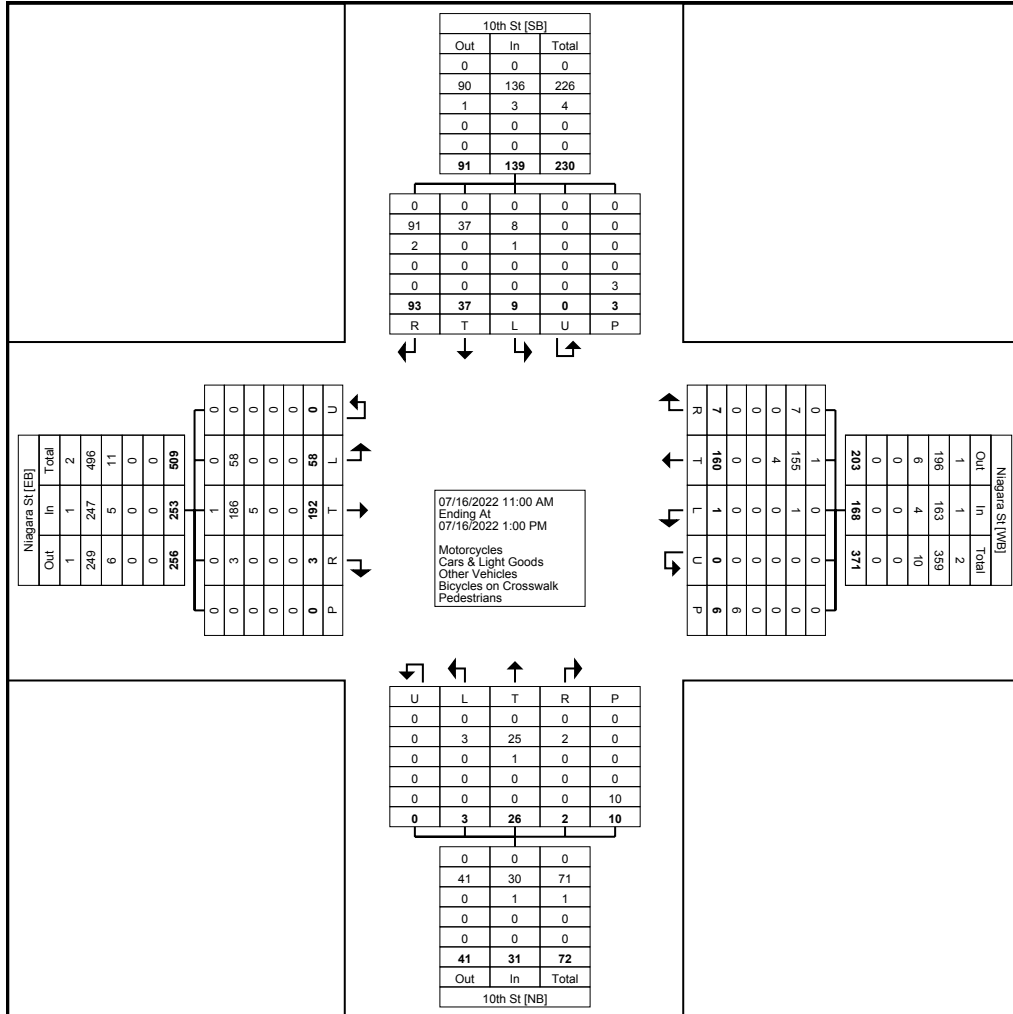
Turning Movement Peak Hour Data (4:00 PM)

Start Time	10th St Southbound							Niagara St Westbound							10th St Northbound							Niagara St Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	14	18	10	2	0	0	44	3	0	34	0	0	1	37	0	0	6	2	0	0	8	2	0	25	4	0	1	31	120
4:15 PM	16	13	1	1	0	0	31	1	0	32	1	0	1	34	0	0	1	0	0	1	1	1	0	24	8	0	0	33	99
4:30 PM	17	22	9	2	1	5	51	1	0	31	0	0	0	32	1	0	3	3	0	2	7	1	0	47	15	0	0	63	153
4:45 PM	16	10	7	0	0	1	33	5	0	25	0	0	0	30	0	1	3	0	0	2	4	1	0	24	7	1	0	33	100
Total	63	63	27	5	1	6	159	10	0	122	1	0	2	133	1	1	13	5	0	5	20	5	0	120	34	1	1	160	472
Approach %	39.6	39.6	17.0	3.1	0.6	-	-	7.5	0.0	91.7	0.8	0.0	-	-	5.0	5.0	65.0	25.0	0.0	-	-	3.1	0.0	75.0	21.3	0.6	-	-	-
Total %	13.3	13.3	5.7	1.1	0.2	-	33.7	2.1	0.0	25.8	0.2	0.0	-	28.2	0.2	0.2	2.8	1.1	0.0	-	4.2	1.1	0.0	25.4	7.2	0.2	-	33.9	-
PHF	0.926	0.716	0.675	0.625	0.250	-	0.779	0.500	0.000	0.897	0.250	0.000	-	0.899	0.250	0.250	0.542	0.417	0.000	-	0.625	0.625	0.000	0.638	0.567	0.250	-	0.635	0.771
Motorcycles	0	0	0	0	1	-	1	0	0	1	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	2
% Motorcycles	0.0	0.0	0.0	0.0	100.0	-	0.6	0.0	-	0.8	0.0	-	-	0.8	0.0	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.4
Cars & Light Goods	63	63	27	5	0	-	158	10	0	119	1	0	-	130	1	1	13	5	0	-	20	5	0	117	34	1	-	157	465
% Cars & Light Goods	100.0	100.0	100.0	100.0	0.0	-	99.4	100.0	-	97.5	100.0	-	-	97.7	100.0	100.0	100.0	100.0	-	-	100.0	100.0	-	97.5	100.0	100.0	-	98.1	98.5
Other Vehicles	0	0	0	0	0	-	0	0	0	2	0	0	-	2	0	0	0	0	0	-	0	0	0	3	0	0	-	3	5
% Other Vehicles	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	-	1.6	0.0	-	-	1.5	0.0	0.0	0.0	0.0	-	-	0.0	0.0	-	2.5	0.0	0.0	-	1.9	1.1
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	50.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	-	1	-	-	-	-	-	-	5	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	50.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	0.0	-	-



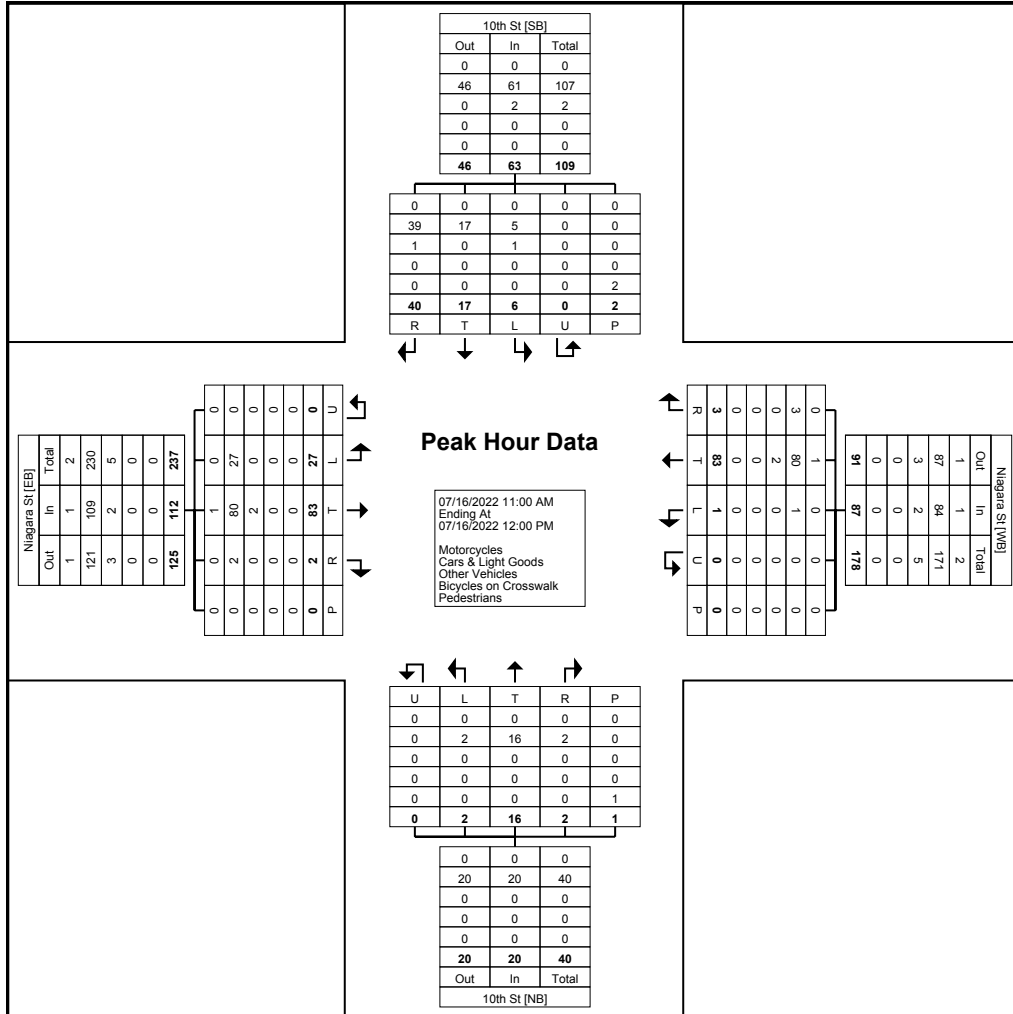
Turning Movement Peak Hour Data Plot (4:00 PM)

Niagara, New York
July 16, 2022



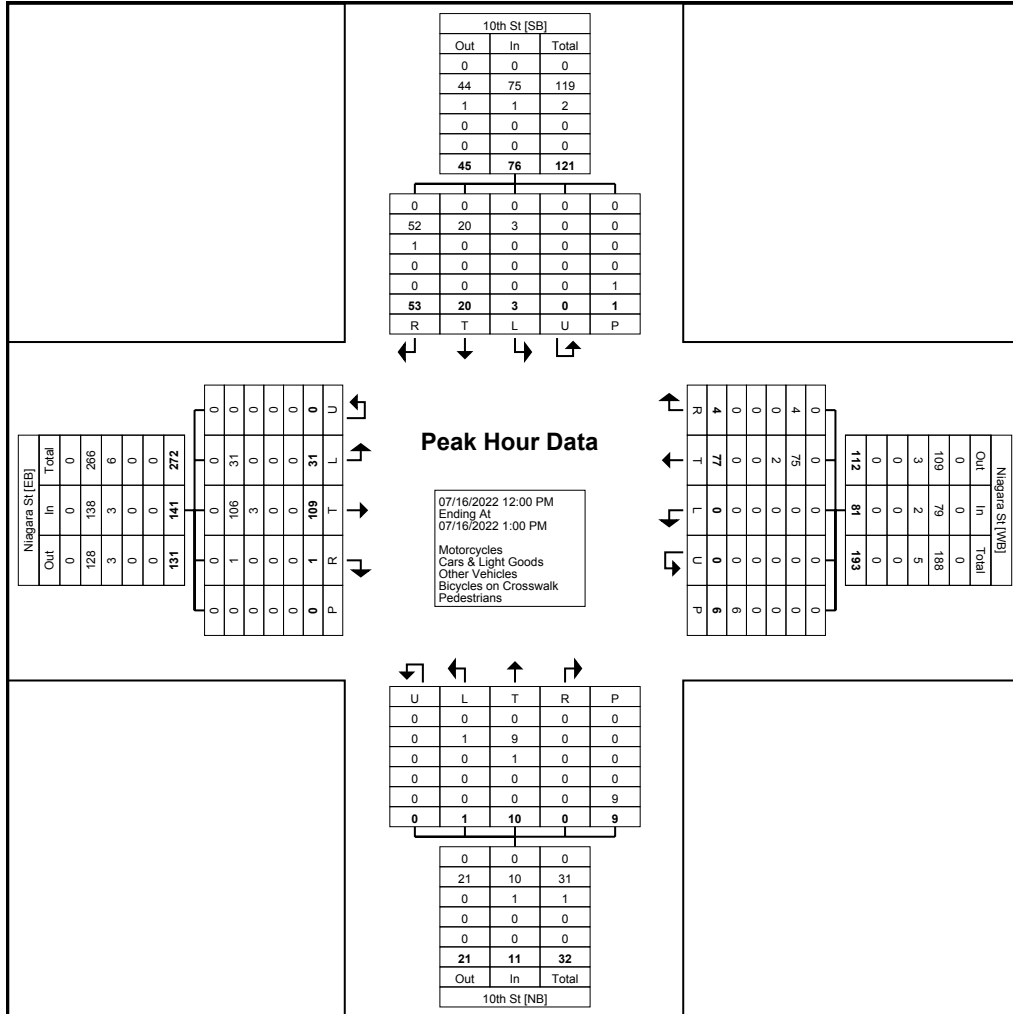
Turning Movement Data Plot

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (11:00 AM)

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

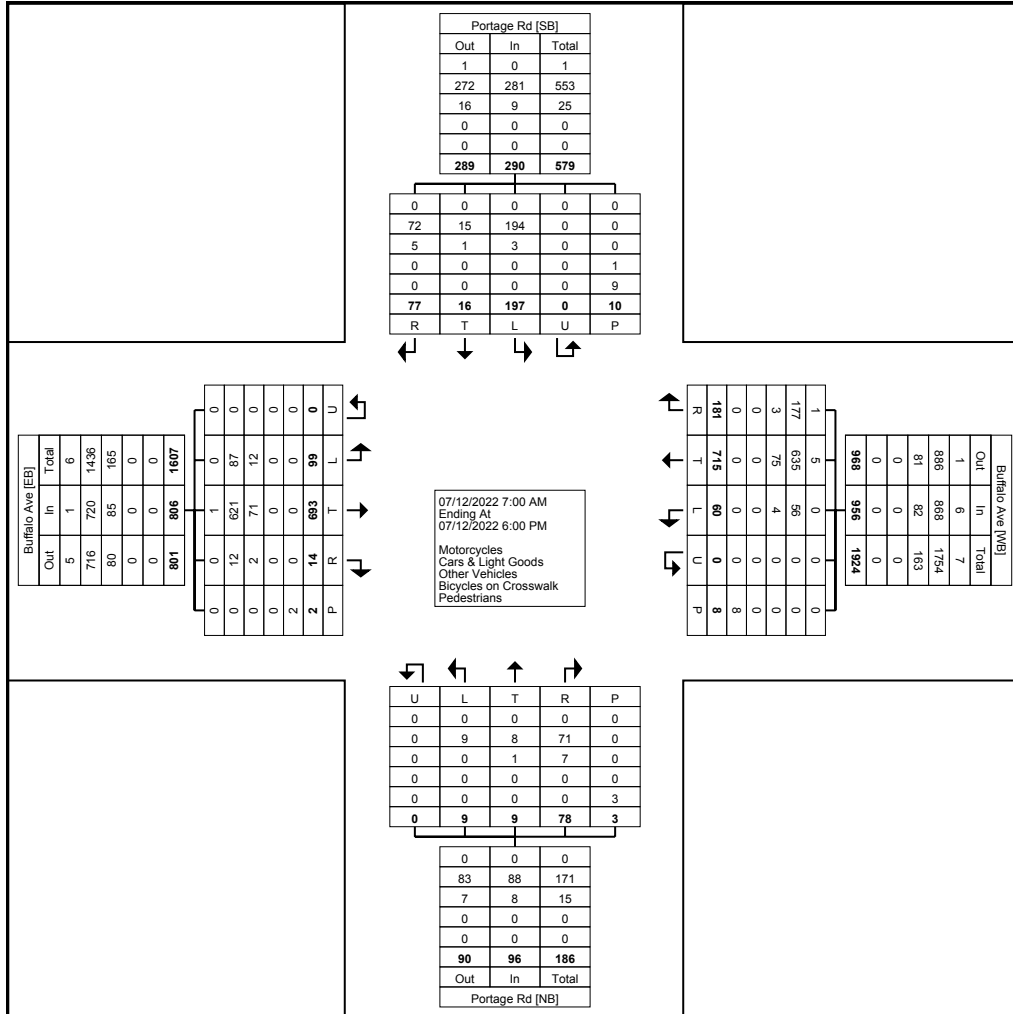
Count Name: Portage Rd & Buffalo Ave
Site Code:
Start Date: 07/12/2022
Page No: 1

Niagara, New York
July 12, 2022

Turning Movement Data

Start Time	Portage Rd Southbound							Buffalo Ave Westbound							Portage Rd Northbound							Buffalo Ave Eastbound							Int. Total
	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	6	0	0	6	3	1	24	6	0	0	34	1	4	0	1	0	0	6	1	0	17	0	0	0	18	64
7:15 AM	1	0	0	5	0	0	6	9	2	17	5	0	0	33	0	0	0	0	0	0	0	2	0	16	4	0	0	22	61
7:30 AM	1	0	1	4	0	0	6	12	0	20	1	0	0	33	0	0	0	0	0	0	0	0	0	17	4	0	0	21	60
7:45 AM	2	3	1	5	0	0	11	17	1	26	4	0	0	48	1	0	0	0	0	0	1	3	0	14	5	0	0	22	82
Hourly Total	4	3	2	20	0	0	29	41	4	87	16	0	0	148	2	4	0	1	0	0	7	6	0	64	13	0	0	83	267
8:00 AM	2	3	1	6	0	0	12	8	0	33	3	0	0	44	0	0	0	0	0	0	0	0	1	17	0	0	0	18	74
8:15 AM	1	2	0	4	0	0	7	9	0	27	7	0	0	43	1	1	2	2	0	0	6	1	0	20	3	0	0	24	80
8:30 AM	1	2	5	4	0	0	12	11	0	29	4	0	0	44	0	0	0	0	0	0	0	0	0	22	5	0	0	27	83
8:45 AM	1	0	1	6	0	0	8	9	0	32	3	0	2	44	1	1	0	0	0	0	2	0	0	22	0	0	0	22	76
Hourly Total	5	7	7	20	0	0	39	37	0	121	17	0	2	175	2	2	2	2	0	0	8	1	1	81	8	0	0	91	313
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	10	0	1	10	4	0	37	2	0	0	43	1	0	1	0	0	0	2	0	0	32	7	0	0	39	94
11:15 AM	2	2	1	6	0	0	11	10	0	46	2	0	0	58	1	5	0	0	0	0	6	0	0	30	5	0	0	35	110
11:30 AM	3	5	0	7	0	0	15	2	1	30	1	0	0	34	0	0	0	0	0	1	0	0	1	41	10	0	0	52	101
11:45 AM	3	3	1	10	0	1	17	5	2	28	6	0	0	41	2	3	3	0	0	0	8	0	0	25	4	0	0	29	95
Hourly Total	8	10	2	33	0	2	53	21	3	141	11	0	0	176	4	8	4	0	0	1	16	0	1	128	26	0	0	155	400
12:00 PM	5	3	0	16	0	1	24	9	0	32	0	0	3	41	2	6	1	0	0	1	9	0	0	42	7	0	1	49	123
12:15 PM	0	3	3	8	0	0	14	4	0	33	4	0	0	41	0	3	0	3	0	1	6	0	0	33	4	0	0	37	98
12:30 PM	3	4	0	6	0	3	13	10	0	41	5	0	1	56	0	0	0	0	0	0	0	1	0	34	7	0	1	42	111
12:45 PM	1	2	0	8	0	0	11	1	0	42	5	0	1	48	0	1	0	0	0	0	1	1	0	34	6	0	0	41	101
Hourly Total	9	12	3	38	0	4	62	24	0	148	14	0	5	186	2	10	1	3	0	2	16	2	0	143	24	0	2	169	433
1:00 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
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	16	0	1	16	4	1	34	0	0	0	39	1	8	0	1	0	0	10	1	0	59	2	0	0	62	127
4:15 PM	1	2	1	14	0	0	18	6	0	23	0	0	0	29	2	0	0	1	0	0	3	0	0	25	5	0	0	30	80
4:30 PM	1	2	0	11	0	1	14	6	0	31	0	0	0	37	4	8	0	0	0	0	12	1	0	43	3	0	0	47	110
4:45 PM	2	2	0	13	0	2	17	8	1	22	2	0	0	33	2	3	1	0	0	0	6	0	0	27	2	0	0	29	85
Hourly Total	4	6	1	54	0	4	65	24	2	110	2	0	0	138	9	19	1	2	0	0	31	2	0	154	12	0	0	168	402
5:00 PM	1	1	0	8	0	0	10	5	0	21	0	0	0	26	1	4	1	0	0	0	6	0	0	35	6	0	0	41	83
5:15 PM	2	0	0	11	0	0	13	7	0	22	0	0	0	29	2	4	0	1	0	0	7	0	0	31	5	0	0	36	85
5:30 PM	1	2	0	6	0	0	9	6	0	31	0	0	1	37	1	3	0	0	0	0	4	0	0	31	2	0	0	33	83
5:45 PM	2	0	1	7	0	0	10	7	0	34	0	0	0	41	0	1	0	0	0	0	1	1	0	26	3	0	0	30	82
Hourly Total	6	3	1	32	0	0	42	25	0	108	0	0	1	133	4	12	1	1	0	0	18	1	0	123	16	0	0	140	333
Grand Total	36	41	16	197	0	10	290	172	9	715	60	0	8	956	23	55	9	9	0	3	96	12	2	693	99	0	2	806	2148
Approach %	12.4	14.1	5.5	67.9	0.0	-	-	18.0	0.9	74.8	6.3	0.0	-	-	24.0	57.3	9.4	9.4	0.0	-	-	1.5	0.2	86.0	12.3	0.0	-	-	-
Total %	1.7	1.9	0.7	9.2	0.0	-	13.5	8.0	0.4	33.3	2.8	0.0	-	44.5	1.1	2.6	0.4	0.4	0.0	-	4.5	0.6	0.1	32.3	4.6	0.0	-	37.5	-
Motorcycles	0	0	0	0	0	-	0	1	0	5	0	0	-	6	0	0	0	0	0	-	0	0	0	1	0	0	-	1	7
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	0.6	0.0	0.7	0.0	-	-	0.6	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.1	0.0	-	-	0.1	0.3
Cars & Light Goods	34	38	15	194	0	-	281	168	9	635	56	0	-	868	21	50	8	9	0	-	88	11	1	621	87	0	-	720	1957
% Cars & Light Goods	94.4	92.7	93.8	98.5	-	-	96.9	97.7	100.0	88.8	93.3	-	-	90.8	91.3	90.9	88.9	100.0	-	-	91.7	91.7	50.0	89.6	87.9	-	-	89.3	91.1
Other Vehicles	2	3	1	3	0	-	9	3	0	75	4	0	-	82	2	5	1	0	0	-	8	1	1	71	12	0	-	85	184
% Other Vehicles	5.6	7.3	6.3	1.5	-	-	3.1	1.7	0.0	10.5	6.7	-	-	8.6	8.7	9.1	11.1	0.0	-	-	8.3	8.3	50.0	10.2	12.1	-	-	10.5	8.6
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	10.0	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	
Pedestrians	-	-	-	-	-	9	-	-	-	-	-	8	-	-	-	-	-	-	3	-	-	-	-	-	-	2	-	-	
% Pedestrians	-	-	-	-	-	90.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	

Niagara, New York
July 12, 2022



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

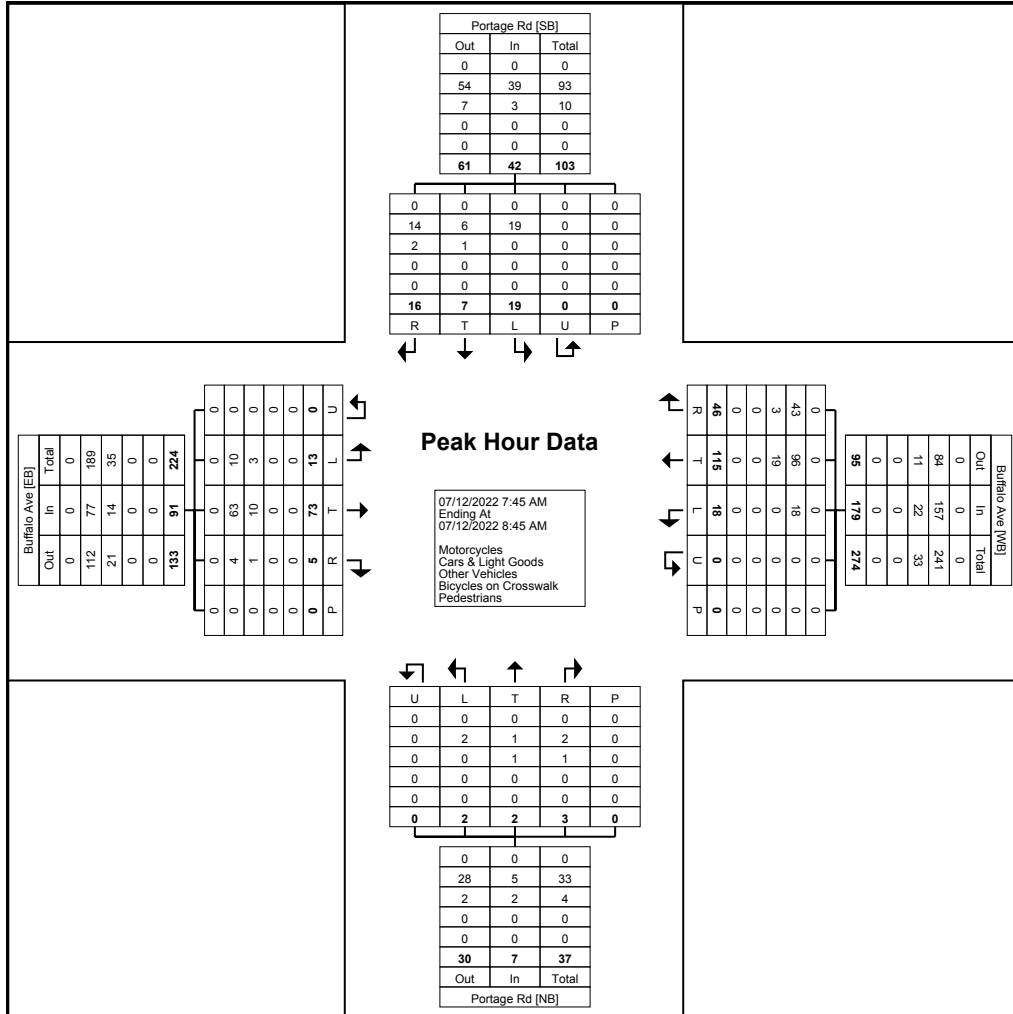
Count Name: Portage Rd &
Buffalo Ave
Site Code:
Start Date: 07/12/2022
Page No: 3

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Portage Rd Southbound							Buffalo Ave Westbound							Portage Rd Northbound							Buffalo Ave Eastbound							Int. Total	
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total		
7:45 AM	2	3	1	5	0	0	11	17	1	26	4	0	0	48	1	0	0	0	0	0	0	1	3	0	14	5	0	0	22	82
8:00 AM	2	3	1	6	0	0	12	8	0	33	3	0	0	44	0	0	0	0	0	0	0	0	0	1	17	0	0	0	18	74
8:15 AM	1	2	0	4	0	0	7	9	0	27	7	0	0	43	1	1	2	2	0	0	6	1	0	20	3	0	0	24	80	
8:30 AM	1	2	5	4	0	0	12	11	0	29	4	0	0	44	0	0	0	0	0	0	0	0	0	22	5	0	0	27	83	
Total	6	10	7	19	0	0	42	45	1	115	18	0	0	179	2	1	2	2	0	0	7	4	1	73	13	0	0	91	319	
Approach %	14.3	23.8	16.7	45.2	0.0	-	-	25.1	0.6	64.2	10.1	0.0	-	-	28.6	14.3	28.6	28.6	0.0	-	-	4.4	1.1	80.2	14.3	0.0	-	-	-	
Total %	1.9	3.1	2.2	6.0	0.0	-	13.2	14.1	0.3	36.1	5.6	0.0	-	56.1	0.6	0.3	0.6	0.6	0.0	-	2.2	1.3	0.3	22.9	4.1	0.0	-	28.5	-	
PHF	0.750	0.833	0.350	0.792	0.000	-	0.875	0.662	0.250	0.871	0.643	0.000	-	0.932	0.500	0.250	0.250	0.250	0.000	-	0.292	0.333	0.250	0.830	0.650	0.000	-	0.843	0.961	
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	
Cars & Light Goods	5	9	6	19	0	-	39	42	1	96	18	0	-	157	2	0	1	2	0	-	5	4	0	63	10	0	-	77	278	
% Cars & Light Goods	83.3	90.0	85.7	100.0	-	-	92.9	93.3	100.0	83.5	100.0	-	-	87.7	100.0	0.0	50.0	100.0	-	-	71.4	100.0	0.0	86.3	76.9	-	-	84.6	87.1	
Other Vehicles	1	1	1	0	0	-	3	3	0	19	0	0	-	22	0	1	1	0	0	-	2	0	1	10	3	0	-	14	41	
% Other Vehicles	16.7	10.0	14.3	0.0	-	-	7.1	6.7	0.0	16.5	0.0	-	-	12.3	0.0	100.0	50.0	0.0	-	-	28.6	0.0	100.0	13.7	23.1	-	-	15.4	12.9	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Niagara, New York
July 12, 2022



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



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

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

Count Name: Portage Rd &
Buffalo Ave
Site Code:
Start Date: 07/12/2022
Page No: 5

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Portage Rd Southbound							Buffalo Ave Westbound							Portage Rd Northbound							Buffalo Ave Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	5	3	0	16	0	1	24	9	0	32	0	0	3	41	2	6	1	0	0	1	9	0	0	42	7	0	1	49	123
12:15 PM	0	3	3	8	0	0	14	4	0	33	4	0	0	41	0	3	0	3	0	1	6	0	0	33	4	0	0	37	98
12:30 PM	3	4	0	6	0	3	13	10	0	41	5	0	1	56	0	0	0	0	0	0	0	1	0	34	7	0	1	42	111
12:45 PM	1	2	0	8	0	0	11	1	0	42	5	0	1	48	0	1	0	0	0	0	1	1	0	34	6	0	0	41	101
Total	9	12	3	38	0	4	62	24	0	148	14	0	5	186	2	10	1	3	0	2	16	2	0	143	24	0	2	169	433
Approach %	14.5	19.4	4.8	61.3	0.0	-	-	12.9	0.0	79.6	7.5	0.0	-	-	12.5	62.5	6.3	18.8	0.0	-	-	1.2	0.0	84.6	14.2	0.0	-	-	-
Total %	2.1	2.8	0.7	8.8	0.0	-	14.3	5.5	0.0	34.2	3.2	0.0	-	43.0	0.5	2.3	0.2	0.7	0.0	-	3.7	0.5	0.0	33.0	5.5	0.0	-	39.0	-
PHF	0.450	0.750	0.250	0.594	0.000	-	0.646	0.600	0.000	0.881	0.700	0.000	-	0.830	0.250	0.417	0.250	0.250	0.000	-	0.444	0.500	0.000	0.851	0.857	0.000	-	0.862	0.880
Motorcycles	0	0	0	0	0	-	0	1	0	1	0	0	-	2	0	0	0	0	0	-	0	0	0	0	0	0	-	0	2
% Motorcycles	0.0	0.0	0.0	0.0	-	-	0.0	4.2	-	0.7	0.0	-	-	1.1	0.0	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	-	0.0	0.5
Cars & Light Goods	9	10	3	36	0	-	58	23	0	122	14	0	-	159	1	9	1	3	0	-	14	2	0	132	23	0	-	157	388
% Cars & Light Goods	100.0	83.3	100.0	94.7	-	-	93.5	95.8	-	82.4	100.0	-	-	85.5	50.0	90.0	100.0	100.0	-	-	87.5	100.0	-	92.3	95.8	-	-	92.9	89.6
Other Vehicles	0	2	0	2	0	-	4	0	0	25	0	0	-	25	1	1	0	0	0	-	2	0	0	11	1	0	-	12	43
% Other Vehicles	0.0	16.7	0.0	5.3	-	-	6.5	0.0	-	16.9	0.0	-	-	13.4	50.0	10.0	0.0	0.0	-	-	12.5	0.0	-	7.7	4.2	-	-	7.1	9.9
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	25.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	-	5	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	75.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	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: Portage Rd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	Portage Rd Southbound						Buffalo Ave Westbound						Portage Rd Northbound						Buffalo Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	0	7	0	0	8	3	38	0	0	0	41	1	0	0	0	0	1	0	23	2	0	0	25	75
11:15 AM	0	0	7	0	0	7	4	51	0	0	0	55	0	0	0	0	0	0	0	35	1	0	0	36	98
11:30 AM	0	0	6	0	0	6	4	52	2	0	0	58	2	0	0	0	0	2	0	24	1	0	0	25	91
11:45 AM	3	0	5	0	2	8	5	35	0	0	0	40	0	0	0	0	0	0	0	21	1	0	0	22	70
Hourly Total	4	0	25	0	2	29	16	176	2	0	0	194	3	0	0	0	0	3	0	103	5	0	0	108	334
12:00 PM	5	0	8	0	0	13	5	43	1	0	0	49	4	2	0	0	0	6	0	34	2	0	0	36	104
12:15 PM	3	0	7	0	0	10	4	42	2	0	0	48	2	0	0	0	1	2	0	23	2	0	0	25	85
12:30 PM	0	0	1	0	0	1	6	38	0	0	0	44	0	0	0	0	0	0	0	23	2	0	0	25	70
12:45 PM	1	0	11	0	1	12	8	45	0	2	0	55	0	0	0	0	0	0	0	26	1	0	0	27	94
Hourly Total	9	0	27	0	1	36	23	168	3	2	0	196	6	2	0	0	1	8	0	106	7	0	0	113	353
1:00 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
Grand Total	13	0	52	0	3	65	39	344	5	2	0	390	9	2	0	0	1	11	0	209	12	0	0	221	687
Approach %	20.0	0.0	80.0	0.0	-	-	10.0	88.2	1.3	0.5	-	-	81.8	18.2	0.0	0.0	-	-	0.0	94.6	5.4	0.0	-	-	-
Total %	1.9	0.0	7.6	0.0	-	9.5	5.7	50.1	0.7	0.3	-	56.8	1.3	0.3	0.0	0.0	-	1.6	0.0	30.4	1.7	0.0	-	32.2	-
Motorcycles	0	0	0	0	-	0	1	1	0	0	-	2	0	0	0	0	-	0	0	1	0	0	-	1	3
% Motorcycles	0.0	-	0.0	-	-	0.0	2.6	0.3	0.0	0.0	-	0.5	0.0	0.0	-	-	-	0.0	-	0.5	0.0	-	-	0.5	0.4
Cars & Light Goods	13	0	52	0	-	65	38	327	3	2	-	370	8	2	0	0	-	10	0	193	12	0	-	205	650
% Cars & Light Goods	100.0	-	100.0	-	-	100.0	97.4	95.1	60.0	100.0	-	94.9	88.9	100.0	-	-	-	90.9	-	92.3	100.0	-	-	92.8	94.6
Other Vehicles	0	0	0	0	-	0	0	16	2	0	-	18	1	0	0	0	-	1	0	15	0	0	-	15	34
% Other Vehicles	0.0	-	0.0	-	-	0.0	0.0	4.7	40.0	0.0	-	4.6	11.1	0.0	-	-	-	9.1	-	7.2	0.0	-	-	6.8	4.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



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

Coatesville, Pennsylvania, United States 19320
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Count Name: Portage Rd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Portage Rd Southbound						Buffalo Ave Westbound						Portage Rd Northbound						Buffalo Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	0	7	0	0	8	3	38	0	0	0	41	1	0	0	0	0	1	0	23	2	0	0	25	75
11:15 AM	0	0	7	0	0	7	4	51	0	0	0	55	0	0	0	0	0	0	0	35	1	0	0	36	98
11:30 AM	0	0	6	0	0	6	4	52	2	0	0	58	2	0	0	0	0	2	0	24	1	0	0	25	91
11:45 AM	3	0	5	0	2	8	5	35	0	0	0	40	0	0	0	0	0	0	0	21	1	0	0	22	70
Total	4	0	25	0	2	29	16	176	2	0	0	194	3	0	0	0	0	3	0	103	5	0	0	108	334
Approach %	13.8	0.0	86.2	0.0	-	-	8.2	90.7	1.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	0.0	95.4	4.6	0.0	-	-	-
Total %	1.2	0.0	7.5	0.0	-	8.7	4.8	52.7	0.6	0.0	-	58.1	0.9	0.0	0.0	0.0	-	0.9	0.0	30.8	1.5	0.0	-	32.3	-
PHF	0.333	0.000	0.893	0.000	-	0.906	0.800	0.846	0.250	0.000	-	0.836	0.375	0.000	0.000	0.000	-	0.375	0.000	0.736	0.625	0.000	-	0.750	0.852
Motorcycles	0	0	0	0	-	0	1	1	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Motorcycles	0.0	-	0.0	-	-	0.0	6.3	0.6	0.0	-	-	1.0	0.0	-	-	-	-	0.0	-	0.0	0.0	-	-	0.0	0.6
Cars & Light Goods	4	0	25	0	-	29	15	163	2	0	-	180	3	0	0	0	-	3	0	96	5	0	-	101	313
% Cars & Light Goods	100.0	-	100.0	-	-	100.0	93.8	92.6	100.0	-	-	92.8	100.0	-	-	-	-	100.0	-	93.2	100.0	-	-	93.5	93.7
Other Vehicles	0	0	0	0	-	0	0	12	0	0	-	12	0	0	0	0	-	0	0	7	0	0	-	7	19
% Other Vehicles	0.0	-	0.0	-	-	0.0	0.0	6.8	0.0	-	-	6.2	0.0	-	-	-	-	0.0	-	6.8	0.0	-	-	6.5	5.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	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: Portage Rd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Portage Rd Southbound						Buffalo Ave Westbound						Portage Rd Northbound						Buffalo Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	5	0	8	0	0	13	5	43	1	0	0	49	4	2	0	0	0	6	0	34	2	0	0	36	104
12:15 PM	3	0	7	0	0	10	4	42	2	0	0	48	2	0	0	0	1	2	0	23	2	0	0	25	85
12:30 PM	0	0	1	0	0	1	6	38	0	0	0	44	0	0	0	0	0	0	0	23	2	0	0	25	70
12:45 PM	1	0	11	0	1	12	8	45	0	2	0	55	0	0	0	0	0	0	0	26	1	0	0	27	94
Total	9	0	27	0	1	36	23	168	3	2	0	196	6	2	0	0	1	8	0	106	7	0	0	113	353
Approach %	25.0	0.0	75.0	0.0	-	-	11.7	85.7	1.5	1.0	-	-	75.0	25.0	0.0	0.0	-	-	0.0	93.8	6.2	0.0	-	-	-
Total %	2.5	0.0	7.6	0.0	-	10.2	6.5	47.6	0.8	0.6	-	55.5	1.7	0.6	0.0	0.0	-	2.3	0.0	30.0	2.0	0.0	-	32.0	-
PHF	0.450	0.000	0.614	0.000	-	0.692	0.719	0.933	0.375	0.250	-	0.891	0.375	0.250	0.000	0.000	-	0.333	0.000	0.779	0.875	0.000	-	0.785	0.849
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	-	0.0	-	0.9	0.0	-	-	0.9	0.3
Cars & Light Goods	9	0	27	0	-	36	23	164	1	2	-	190	5	2	0	0	-	7	0	97	7	0	-	104	337
% Cars & Light Goods	100.0	-	100.0	-	-	100.0	100.0	97.6	33.3	100.0	-	96.9	83.3	100.0	-	-	-	87.5	-	91.5	100.0	-	-	92.0	95.5
Other Vehicles	0	0	0	0	-	0	0	4	2	0	-	6	1	0	0	0	-	1	0	8	0	0	-	8	15
% Other Vehicles	0.0	-	0.0	-	-	0.0	0.0	2.4	66.7	0.0	-	3.1	16.7	0.0	-	-	-	12.5	-	7.5	0.0	-	-	7.1	4.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



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

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

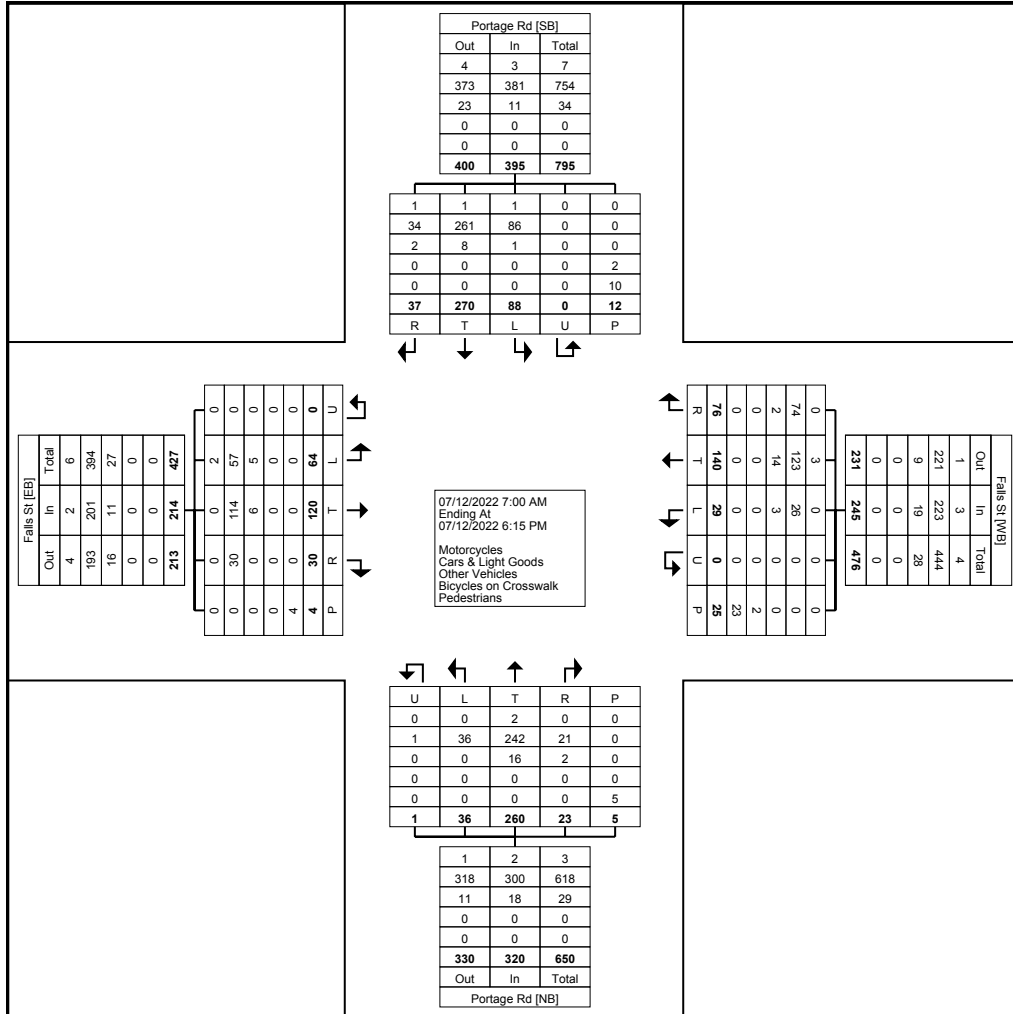
Count Name: Portage Rd & Falls St
Site Code:
Start Date: 07/12/2022
Page No: 1

Niagara, New York
July 12, 2022

Turning Movement Data

Start Time	Portage Rd Southbound						Falls St Westbound						Portage Rd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	4	3	0	0	7	0	2	0	0	0	2	1	3	0	0	0	4	2	2	1	0	0	5	18
7:15 AM	3	6	0	0	0	9	1	4	0	0	0	5	1	15	0	0	1	16	0	1	1	0	0	2	32
7:30 AM	3	6	4	0	1	13	4	8	0	0	1	12	0	15	2	0	0	17	0	3	2	0	0	5	47
7:45 AM	2	8	2	0	0	12	3	13	1	0	3	17	0	17	3	0	1	20	1	5	3	0	0	9	58
Hourly Total	8	24	9	0	1	41	8	27	1	0	4	36	2	50	5	0	2	57	3	11	7	0	0	21	155
8:00 AM	0	9	2	0	1	11	1	6	1	0	0	8	0	7	1	0	0	8	1	2	2	0	1	5	32
8:15 AM	3	5	0	0	2	8	1	15	0	0	0	16	1	11	5	0	1	17	1	3	3	0	0	7	48
8:30 AM	0	13	2	0	0	15	3	5	1	0	0	9	0	15	1	0	0	16	0	1	2	0	0	3	43
8:45 AM	0	10	2	0	0	12	2	2	1	0	1	5	0	10	1	0	0	11	0	0	2	0	1	2	30
Hourly Total	3	37	6	0	3	46	7	28	3	0	1	38	1	43	8	0	1	52	2	6	9	0	2	17	153
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	1	12	3	0	1	16	3	3	2	0	1	8	1	12	2	0	0	15	3	7	4	0	1	14	53
11:15 AM	1	10	2	0	0	13	4	5	0	0	2	9	0	16	4	0	0	20	0	8	2	0	0	10	52
11:30 AM	0	13	4	0	0	17	4	5	2	0	2	11	2	13	0	0	0	15	1	3	3	0	0	7	50
11:45 AM	2	18	3	0	1	23	0	5	1	0	1	6	0	9	7	0	0	16	1	8	5	0	0	14	59
Hourly Total	4	53	12	0	2	69	11	18	5	0	6	34	3	50	13	0	0	66	5	26	14	0	1	45	214
12:00 PM	2	22	5	0	0	29	5	5	3	0	4	13	1	21	1	1	0	24	2	4	0	0	0	6	72
12:15 PM	2	18	6	0	0	26	3	4	3	0	2	10	2	9	1	0	0	12	0	8	4	0	1	12	60
12:30 PM	0	8	4	0	1	12	4	11	3	0	0	18	3	10	1	0	0	14	0	9	4	0	0	13	57
12:45 PM	0	9	3	0	0	12	5	8	1	0	1	14	0	7	1	0	0	8	2	5	2	0	0	9	43
Hourly Total	4	57	18	0	1	79	17	28	10	0	7	55	6	47	4	1	0	58	4	26	10	0	1	40	232
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	4	12	9	0	0	25	3	6	3	0	3	12	0	10	0	0	1	10	3	20	4	0	0	27	74
4:15 PM	2	15	3	0	0	20	5	5	0	0	1	10	2	7	1	0	1	10	2	7	4	0	0	13	53
4:30 PM	2	17	6	0	1	25	4	7	3	0	1	14	1	10	0	0	0	11	2	8	5	0	0	15	65
4:45 PM	2	15	6	0	0	23	4	5	0	0	2	9	2	13	1	0	0	16	3	5	2	0	0	10	58
Hourly Total	10	59	24	0	1	93	16	23	6	0	7	45	5	40	2	0	2	47	10	40	15	0	0	65	250
5:00 PM	0	13	4	0	2	17	8	4	1	0	0	13	4	10	1	0	0	15	2	2	2	0	0	6	51
5:15 PM	2	9	5	0	1	16	4	4	2	0	0	10	2	7	2	0	0	11	3	5	2	0	0	10	47
5:30 PM	3	11	8	0	0	22	4	3	1	0	0	8	0	7	0	0	0	7	0	2	3	0	0	5	42
5:45 PM	3	7	2	0	1	12	1	5	0	0	0	6	0	6	1	0	0	7	1	2	2	0	0	5	30
Hourly Total	8	40	19	0	4	67	17	16	4	0	0	37	6	30	4	0	0	40	6	11	9	0	0	26	170
6:00 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
Grand Total	37	270	88	0	12	395	76	140	29	0	25	245	23	260	36	1	5	320	30	120	64	0	4	214	1174
Approach %	9.4	68.4	22.3	0.0	-	-	31.0	57.1	11.8	0.0	-	-	7.2	81.3	11.3	0.3	-	-	14.0	56.1	29.9	0.0	-	-	-
Total %	3.2	23.0	7.5	0.0	-	33.6	6.5	11.9	2.5	0.0	-	20.9	2.0	22.1	3.1	0.1	-	27.3	2.6	10.2	5.5	0.0	-	18.2	-
Motorcycles	1	1	1	0	-	3	0	3	0	0	-	3	0	2	0	0	-	2	0	0	2	0	-	2	10
% Motorcycles	2.7	0.4	1.1	-	-	0.8	0.0	2.1	0.0	-	-	1.2	0.0	0.8	0.0	0.0	-	0.6	0.0	0.0	3.1	-	-	0.9	0.9
Cars & Light Goods	34	261	86	0	-	381	74	123	26	0	-	223	21	242	36	1	-	300	30	114	57	0	-	201	1105
% Cars & Light Goods	91.9	96.7	97.7	-	-	96.5	97.4	87.9	89.7	-	-	91.0	91.3	93.1	100.0	100.0	-	93.8	100.0	95.0	89.1	-	-	93.9	94.1
Other Vehicles	2	8	1	0	-	11	2	14	3	0	-	19	2	16	0	0	-	18	0	6	5	0	-	11	59
% Other Vehicles	5.4	3.0	1.1	-	-	2.8	2.6	10.0	10.3	-	-	7.8	8.7	6.2	0.0	0.0	-	5.6	0.0	5.0	7.8	-	-	5.1	5.0
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	16.7	-	-	-	-	-	8.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	10	-	-	-	-	-	23	-	-	-	-	-	5	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	83.3	-	-	-	-	-	92.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 12, 2022



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

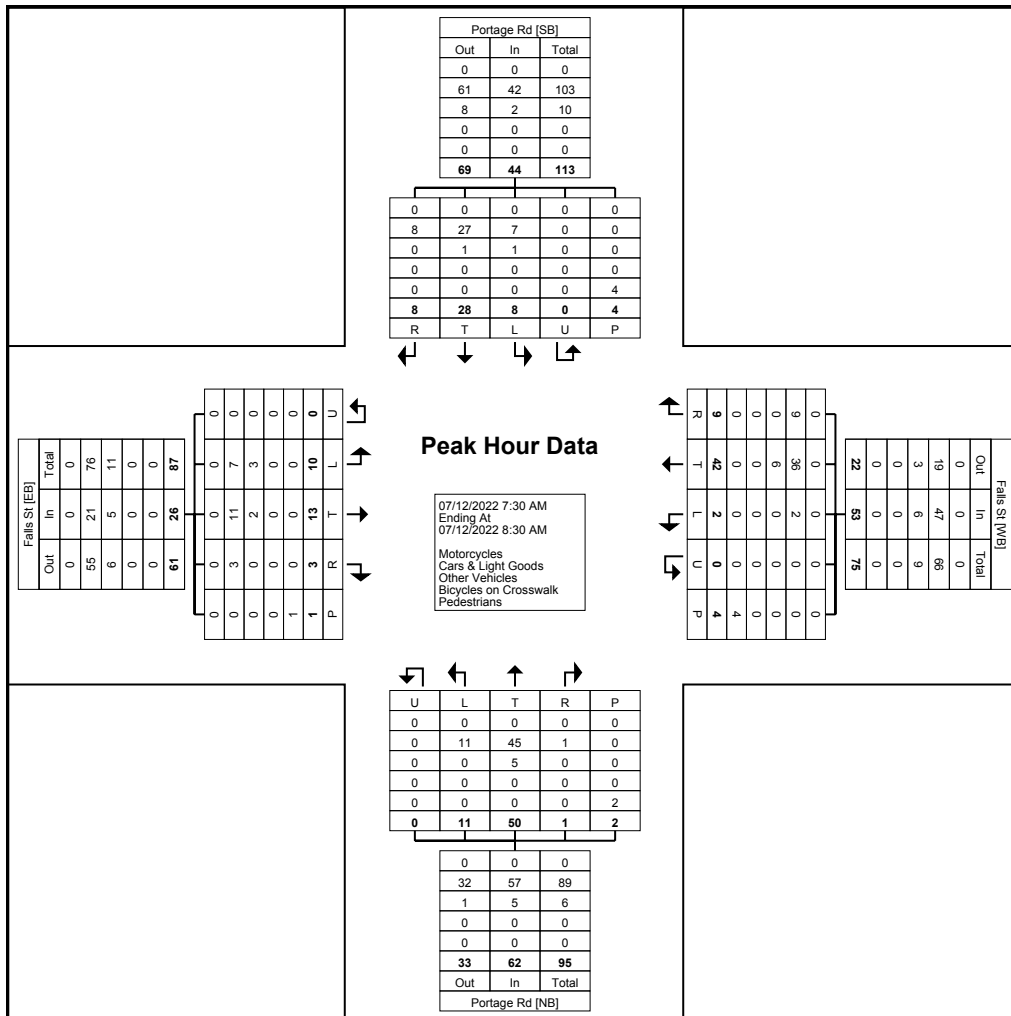
Count Name: Portage Rd & Falls St
Site Code:
Start Date: 07/12/2022
Page No: 3

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Portage Rd Southbound						Falls St Westbound						Portage Rd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	3	6	4	0	1	13	4	8	0	0	1	12	0	15	2	0	0	17	0	3	2	0	0	5	47
7:45 AM	2	8	2	0	0	12	3	13	1	0	3	17	0	17	3	0	1	20	1	5	3	0	0	9	58
8:00 AM	0	9	2	0	1	11	1	6	1	0	0	8	0	7	1	0	0	8	1	2	2	0	1	5	32
8:15 AM	3	5	0	0	2	8	1	15	0	0	0	16	1	11	5	0	1	17	1	3	3	0	0	7	48
Total	8	28	8	0	4	44	9	42	2	0	4	53	1	50	11	0	2	62	3	13	10	0	1	26	185
Approach %	18.2	63.6	18.2	0.0	-	-	17.0	79.2	3.8	0.0	-	-	1.6	80.6	17.7	0.0	-	-	11.5	50.0	38.5	0.0	-	-	-
Total %	4.3	15.1	4.3	0.0	-	23.8	4.9	22.7	1.1	0.0	-	28.6	0.5	27.0	5.9	0.0	-	33.5	1.6	7.0	5.4	0.0	-	14.1	-
PHF	0.667	0.778	0.500	0.000	-	0.846	0.563	0.700	0.500	0.000	-	0.779	0.250	0.735	0.550	0.000	-	0.775	0.750	0.650	0.833	0.000	-	0.722	0.797
Motorcycles	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
Cars & Light Goods	8	27	7	0	-	42	9	36	2	0	-	47	1	45	11	0	-	57	3	11	7	0	-	21	167
% Cars & Light Goods	100.0	96.4	87.5	-	-	95.5	100.0	85.7	100.0	-	-	88.7	100.0	90.0	100.0	-	-	91.9	100.0	84.6	70.0	-	-	80.8	90.3
Other Vehicles	0	1	1	0	-	2	0	6	0	0	-	6	0	5	0	0	-	5	0	2	3	0	-	5	18
% Other Vehicles	0.0	3.6	12.5	-	-	4.5	0.0	14.3	0.0	-	-	11.3	0.0	10.0	0.0	-	-	8.1	0.0	15.4	30.0	-	-	19.2	9.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 12, 2022



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



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

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

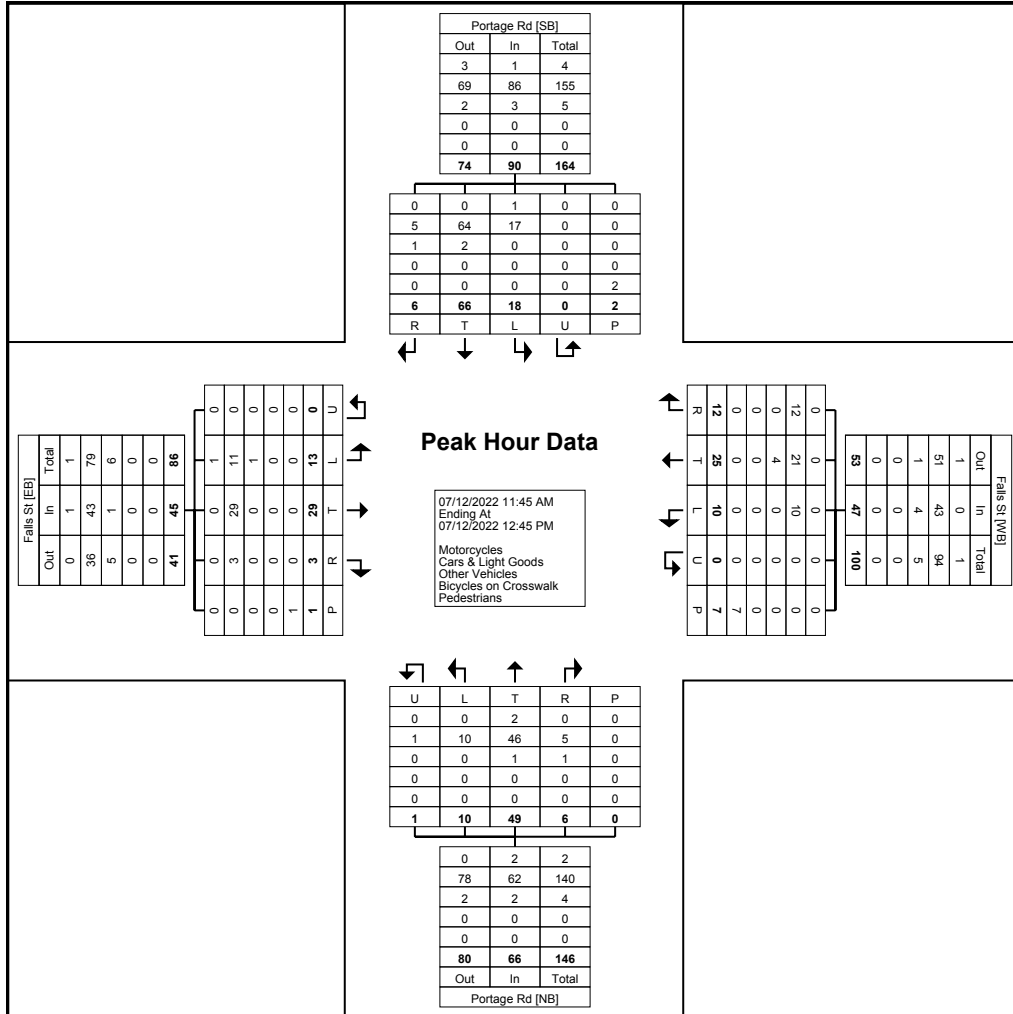
Count Name: Portage Rd & Falls St
Site Code:
Start Date: 07/12/2022
Page No: 5

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (11:45 AM)

Start Time	Portage Rd Southbound						Falls St Westbound						Portage Rd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:45 AM	2	18	3	0	1	23	0	5	1	0	1	6	0	9	7	0	0	16	1	8	5	0	0	14	59
12:00 PM	2	22	5	0	0	29	5	5	3	0	4	13	1	21	1	1	0	24	2	4	0	0	0	6	72
12:15 PM	2	18	6	0	0	26	3	4	3	0	2	10	2	9	1	0	0	12	0	8	4	0	1	12	60
12:30 PM	0	8	4	0	1	12	4	11	3	0	0	18	3	10	1	0	0	14	0	9	4	0	0	13	57
Total	6	66	18	0	2	90	12	25	10	0	7	47	6	49	10	1	0	66	3	29	13	0	1	45	248
Approach %	6.7	73.3	20.0	0.0	-	-	25.5	53.2	21.3	0.0	-	-	9.1	74.2	15.2	1.5	-	-	6.7	64.4	28.9	0.0	-	-	-
Total %	2.4	26.6	7.3	0.0	-	36.3	4.8	10.1	4.0	0.0	-	19.0	2.4	19.8	4.0	0.4	-	26.6	1.2	11.7	5.2	0.0	-	18.1	-
PHF	0.750	0.750	0.750	0.000	-	0.776	0.600	0.568	0.833	0.000	-	0.653	0.500	0.583	0.357	0.250	-	0.688	0.375	0.806	0.650	0.000	-	0.804	0.861
Motorcycles	0	0	1	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	0	0	1	0	-	1	4
% Motorcycles	0.0	0.0	5.6	-	-	1.1	0.0	0.0	0.0	-	-	0.0	0.0	4.1	0.0	0.0	-	3.0	0.0	0.0	7.7	-	-	2.2	1.6
Cars & Light Goods	5	64	17	0	-	86	12	21	10	0	-	43	5	46	10	1	-	62	3	29	11	0	-	43	234
% Cars & Light Goods	83.3	97.0	94.4	-	-	95.6	100.0	84.0	100.0	-	-	91.5	83.3	93.9	100.0	100.0	-	93.9	100.0	100.0	84.6	-	-	95.6	94.4
Other Vehicles	1	2	0	0	-	3	0	4	0	0	-	4	1	1	0	0	-	2	0	0	1	0	-	1	10
% Other Vehicles	16.7	3.0	0.0	-	-	3.3	0.0	16.0	0.0	-	-	8.5	16.7	2.0	0.0	0.0	-	3.0	0.0	0.0	7.7	-	-	2.2	4.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Niagara, New York
July 12, 2022



Turning Movement Peak Hour Data Plot (11:45 AM)



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

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

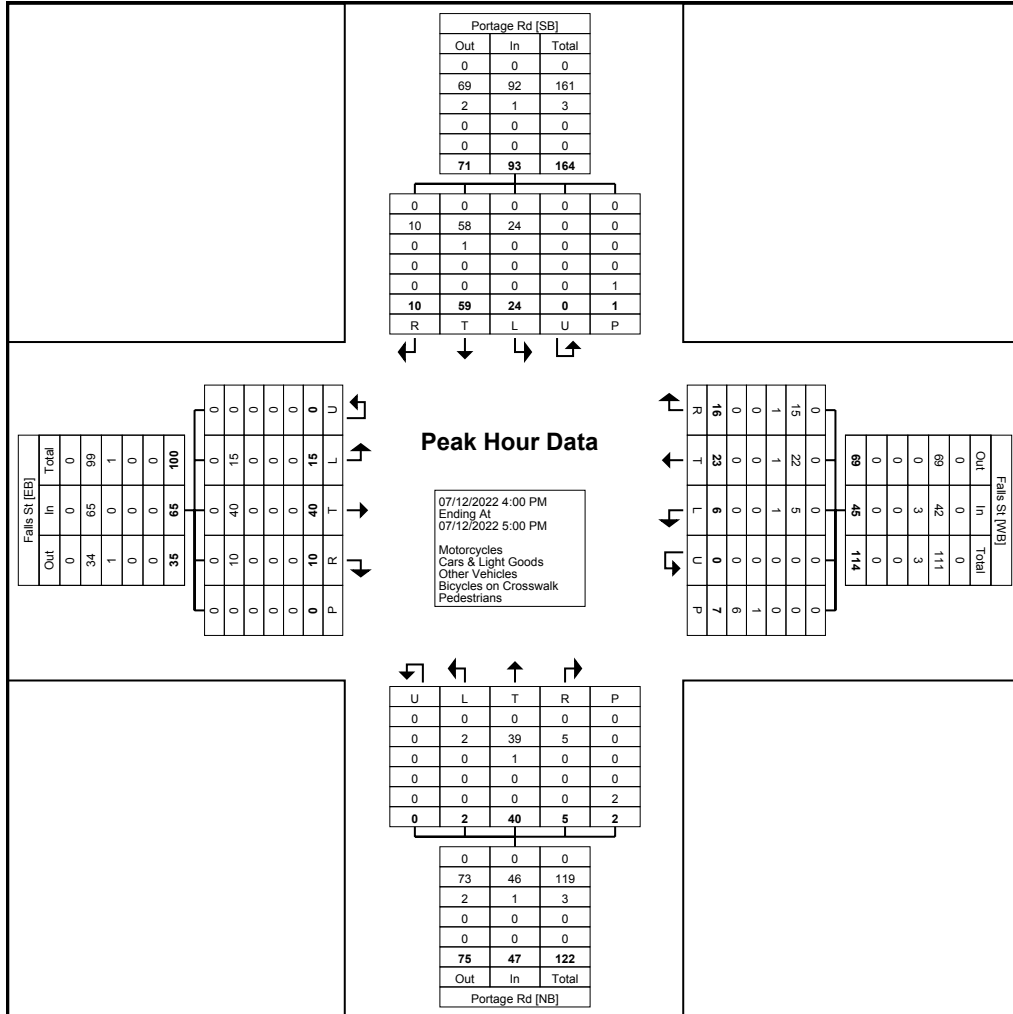
Count Name: Portage Rd & Falls St
Site Code:
Start Date: 07/12/2022
Page No: 7

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Portage Rd Southbound						Falls St Westbound						Portage Rd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	4	12	9	0	0	25	3	6	3	0	3	12	0	10	0	0	1	10	3	20	4	0	0	27	74
4:15 PM	2	15	3	0	0	20	5	5	0	0	1	10	2	7	1	0	1	10	2	7	4	0	0	13	53
4:30 PM	2	17	6	0	1	25	4	7	3	0	1	14	1	10	0	0	0	11	2	8	5	0	0	15	65
4:45 PM	2	15	6	0	0	23	4	5	0	0	2	9	2	13	1	0	0	16	3	5	2	0	0	10	58
Total	10	59	24	0	1	93	16	23	6	0	7	45	5	40	2	0	2	47	10	40	15	0	0	65	250
Approach %	10.8	63.4	25.8	0.0	-	-	35.6	51.1	13.3	0.0	-	-	10.6	85.1	4.3	0.0	-	-	15.4	61.5	23.1	0.0	-	-	-
Total %	4.0	23.6	9.6	0.0	-	37.2	6.4	9.2	2.4	0.0	-	18.0	2.0	16.0	0.8	0.0	-	18.8	4.0	16.0	6.0	0.0	-	26.0	-
PHF	0.625	0.868	0.667	0.000	-	0.930	0.800	0.821	0.500	0.000	-	0.804	0.625	0.769	0.500	0.000	-	0.734	0.833	0.500	0.750	0.000	-	0.602	0.845
Motorcycles	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
Cars & Light Goods	10	58	24	0	-	92	15	22	5	0	-	42	5	39	2	0	-	46	10	40	15	0	-	65	245
% Cars & Light Goods	100.0	98.3	100.0	-	-	98.9	93.8	95.7	83.3	-	-	93.3	100.0	97.5	100.0	-	-	97.9	100.0	100.0	100.0	-	-	100.0	98.0
Other Vehicles	0	1	0	0	-	1	1	1	1	0	-	3	0	1	0	0	-	1	0	0	0	0	-	0	5
% Other Vehicles	0.0	1.7	0.0	-	-	1.1	6.3	4.3	16.7	-	-	6.7	0.0	2.5	0.0	-	-	2.1	0.0	0.0	0.0	-	-	0.0	2.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	14.3	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	85.7	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Niagara, New York
July 12, 2022



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

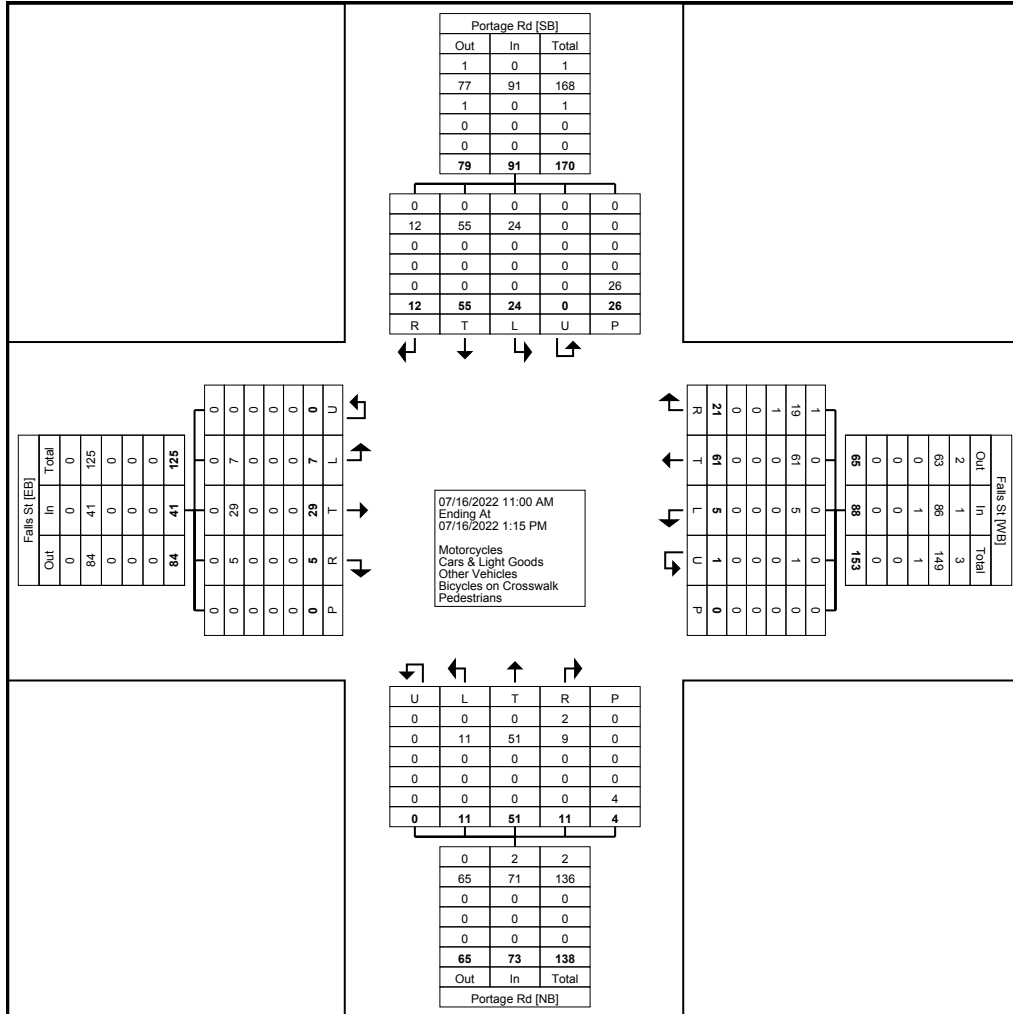
Count Name: Portage Rd & Falls St
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	Portage Rd Southbound						Falls St Westbound						Portage Rd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	2	7	3	0	3	12	2	11	0	0	0	13	1	4	1	0	2	6	2	3	1	0	0	6	37
11:15 AM	1	7	0	0	3	8	1	10	0	0	0	11	1	5	1	0	0	7	0	4	2	0	0	6	32
11:30 AM	4	5	2	0	4	11	4	6	1	0	0	11	2	5	1	0	0	8	0	0	0	0	0	0	30
11:45 AM	0	6	1	0	4	7	4	6	0	0	0	10	1	8	5	0	1	14	0	2	0	0	0	2	33
Hourly Total	7	25	6	0	14	38	11	33	1	0	0	45	5	22	8	0	3	35	2	9	3	0	0	14	132
12:00 PM	0	7	1	0	1	8	3	7	2	1	0	13	0	7	1	0	0	8	1	7	3	0	0	11	40
12:15 PM	1	12	3	0	0	16	2	6	2	0	0	10	4	6	0	0	1	10	0	4	1	0	0	5	41
12:30 PM	2	4	12	0	7	18	2	2	0	0	0	4	1	8	2	0	0	11	0	2	0	0	0	2	35
12:45 PM	2	7	2	0	4	11	3	13	0	0	0	16	1	8	0	0	0	9	2	7	0	0	0	9	45
Hourly Total	5	30	18	0	12	53	10	28	4	1	0	43	6	29	3	0	1	38	3	20	4	0	0	27	161
1:00 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
Grand Total	12	55	24	0	26	91	21	61	5	1	0	88	11	51	11	0	4	73	5	29	7	0	0	41	293
Approach %	13.2	60.4	26.4	0.0	-	-	23.9	69.3	5.7	1.1	-	-	15.1	69.9	15.1	0.0	-	-	12.2	70.7	17.1	0.0	-	-	-
Total %	4.1	18.8	8.2	0.0	-	31.1	7.2	20.8	1.7	0.3	-	30.0	3.8	17.4	3.8	0.0	-	24.9	1.7	9.9	2.4	0.0	-	14.0	-
Motorcycles	0	0	0	0	-	0	1	0	0	0	-	1	2	0	0	0	-	2	0	0	0	0	-	0	3
% Motorcycles	0.0	0.0	0.0	-	-	0.0	4.8	0.0	0.0	0.0	-	1.1	18.2	0.0	0.0	-	-	2.7	0.0	0.0	0.0	-	-	0.0	1.0
Cars & Light Goods	12	55	24	0	-	91	19	61	5	1	-	86	9	51	11	0	-	71	5	29	7	0	-	41	289
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	90.5	100.0	100.0	100.0	-	97.7	81.8	100.0	100.0	-	-	97.3	100.0	100.0	100.0	-	-	100.0	98.6
Other Vehicles	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Other Vehicles	0.0	0.0	0.0	-	-	0.0	4.8	0.0	0.0	0.0	-	1.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	26	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Niagara, New York
July 16, 2022



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

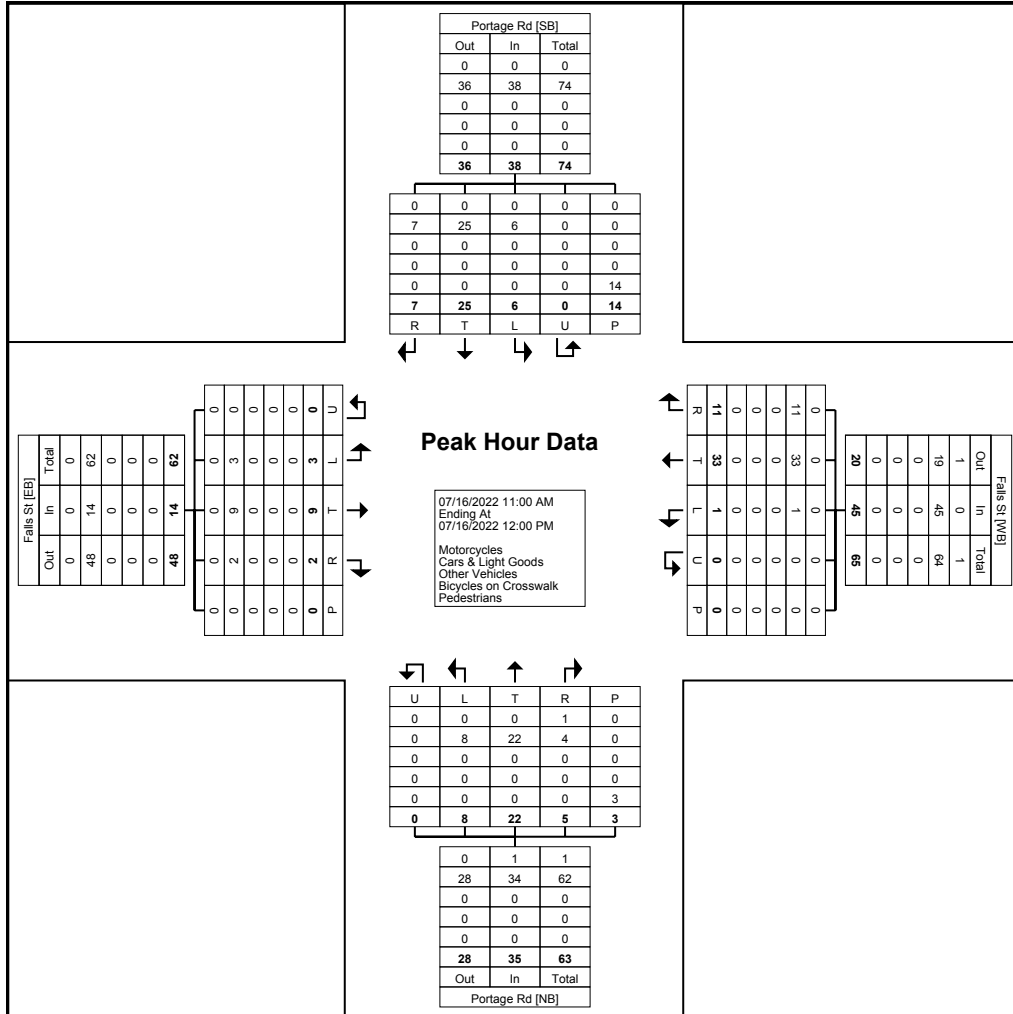
Count Name: Portage Rd & Falls St
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Portage Rd Southbound						Falls St Westbound						Portage Rd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	2	7	3	0	3	12	2	11	0	0	0	13	1	4	1	0	2	6	2	3	1	0	0	6	37
11:15 AM	1	7	0	0	3	8	1	10	0	0	0	11	1	5	1	0	0	7	0	4	2	0	0	6	32
11:30 AM	4	5	2	0	4	11	4	6	1	0	0	11	2	5	1	0	0	8	0	0	0	0	0	0	30
11:45 AM	0	6	1	0	4	7	4	6	0	0	0	10	1	8	5	0	1	14	0	2	0	0	0	2	33
Total	7	25	6	0	14	38	11	33	1	0	0	45	5	22	8	0	3	35	2	9	3	0	0	14	132
Approach %	18.4	65.8	15.8	0.0	-	-	24.4	73.3	2.2	0.0	-	-	14.3	62.9	22.9	0.0	-	-	14.3	64.3	21.4	0.0	-	-	-
Total %	5.3	18.9	4.5	0.0	-	28.8	8.3	25.0	0.8	0.0	-	34.1	3.8	16.7	6.1	0.0	-	26.5	1.5	6.8	2.3	0.0	-	10.6	-
PHF	0.438	0.893	0.500	0.000	-	0.792	0.688	0.750	0.250	0.000	-	0.865	0.625	0.688	0.400	0.000	-	0.625	0.250	0.563	0.375	0.000	-	0.583	0.892
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	20.0	0.0	0.0	-	-	2.9	0.0	0.0	0.0	-	-	0.0	0.8
Cars & Light Goods	7	25	6	0	-	38	11	33	1	0	-	45	4	22	8	0	-	34	2	9	3	0	-	14	131
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	80.0	100.0	100.0	-	-	97.1	100.0	100.0	100.0	-	-	100.0	99.2
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Other Vehicles	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
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	14	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (11:00 AM)



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

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

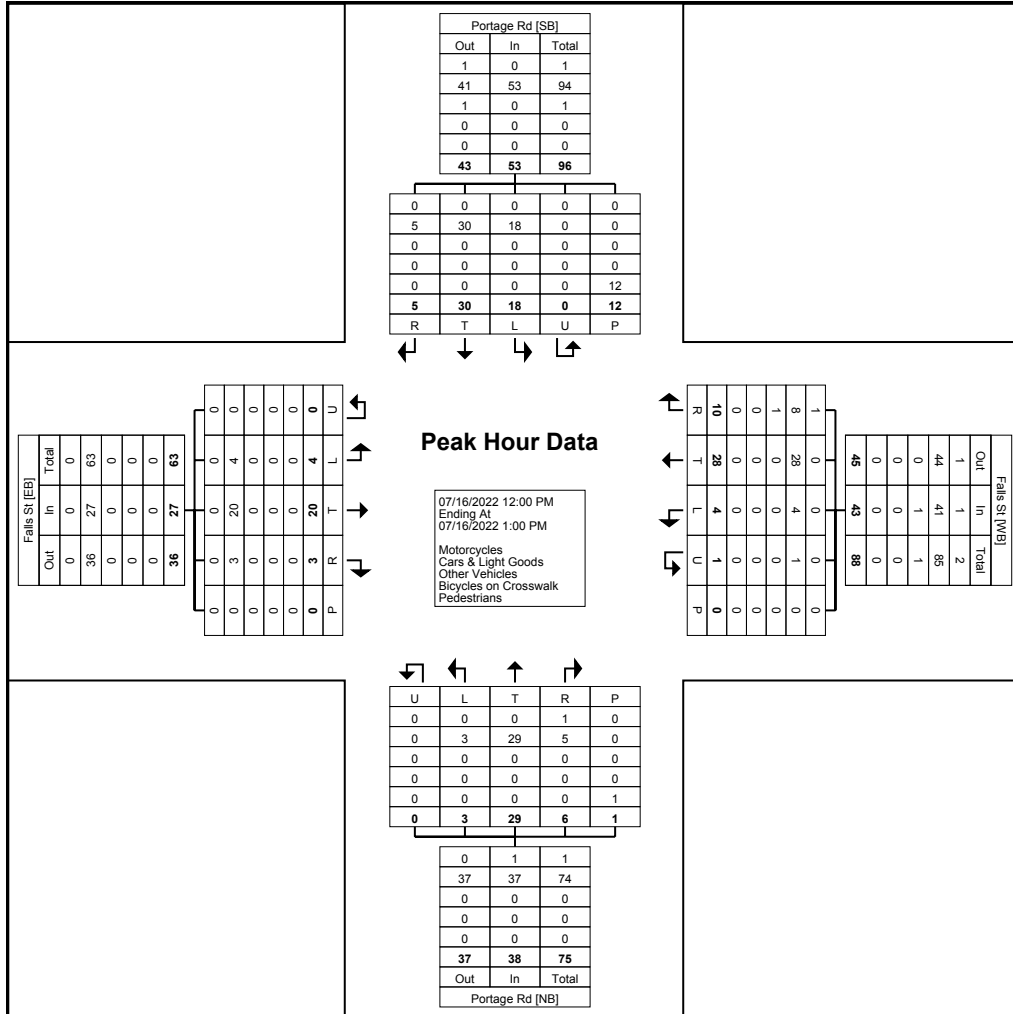
Count Name: Portage Rd & Falls St
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Portage Rd Southbound						Falls St Westbound						Portage Rd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	0	7	1	0	1	8	3	7	2	1	0	13	0	7	1	0	0	8	1	7	3	0	0	11	40
12:15 PM	1	12	3	0	0	16	2	6	2	0	0	10	4	6	0	0	1	10	0	4	1	0	0	5	41
12:30 PM	2	4	12	0	7	18	2	2	0	0	0	4	1	8	2	0	0	11	0	2	0	0	0	2	35
12:45 PM	2	7	2	0	4	11	3	13	0	0	0	16	1	8	0	0	0	9	2	7	0	0	0	9	45
Total	5	30	18	0	12	53	10	28	4	1	0	43	6	29	3	0	1	38	3	20	4	0	0	27	161
Approach %	9.4	56.6	34.0	0.0	-	-	23.3	65.1	9.3	2.3	-	-	15.8	76.3	7.9	0.0	-	-	11.1	74.1	14.8	0.0	-	-	-
Total %	3.1	18.6	11.2	0.0	-	32.9	6.2	17.4	2.5	0.6	-	26.7	3.7	18.0	1.9	0.0	-	23.6	1.9	12.4	2.5	0.0	-	16.8	-
PHF	0.625	0.625	0.375	0.000	-	0.736	0.833	0.538	0.500	0.250	-	0.672	0.375	0.906	0.375	0.000	-	0.864	0.375	0.714	0.333	0.000	-	0.614	0.894
Motorcycles	0	0	0	0	-	0	1	0	0	0	-	1	1	0	0	0	-	1	0	0	0	0	-	0	2
% Motorcycles	0.0	0.0	0.0	-	-	0.0	10.0	0.0	0.0	0.0	-	2.3	16.7	0.0	0.0	-	-	2.6	0.0	0.0	0.0	-	-	0.0	1.2
Cars & Light Goods	5	30	18	0	-	53	8	28	4	1	-	41	5	29	3	0	-	37	3	20	4	0	-	27	158
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	80.0	100.0	100.0	100.0	-	95.3	83.3	100.0	100.0	-	-	97.4	100.0	100.0	100.0	-	-	100.0	98.1
Other Vehicles	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Other Vehicles	0.0	0.0	0.0	-	-	0.0	10.0	0.0	0.0	0.0	-	2.3	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

Count Name: Rainbow Blvd &
Buffalo Ave
Site Code:
Start Date: 07/14/2022
Page No: 1

Niagara, New York
July 14, 2022

Turning Movement Data

Start Time	10th Street Southbound						Buffalo Ave Westbound						Buffalo Ave Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	1	0	13	0	0	14	7	3	0	2	0	12	0	0	0	0	0	0	0	6	0	0	0	6	32
7:15 AM	1	0	10	0	0	11	11	3	0	0	0	14	0	0	0	0	0	0	0	5	0	0	0	5	30
7:30 AM	4	0	8	0	0	12	16	7	0	0	0	23	0	0	0	0	0	0	0	6	1	0	0	7	42
7:45 AM	1	0	10	0	0	11	32	4	0	0	0	36	0	0	0	0	0	0	0	12	8	0	0	20	67
Hourly Total	7	0	41	0	0	48	66	17	0	2	0	85	0	0	0	0	0	0	0	29	9	0	0	38	171
8:00 AM	1	0	8	0	0	9	16	5	0	2	0	23	0	0	0	0	0	0	0	9	3	0	0	12	44
8:15 AM	3	0	12	0	0	15	22	5	0	2	0	29	0	0	0	0	0	0	0	3	0	0	0	3	47
8:30 AM	1	0	15	0	0	16	13	8	0	0	0	21	0	0	0	0	0	0	0	6	0	0	0	6	43
8:45 AM	0	0	15	0	0	15	26	2	0	0	0	28	0	0	0	0	0	0	0	7	2	0	0	9	52
Hourly Total	5	0	50	0	0	55	77	20	0	4	0	101	0	0	0	0	0	0	0	25	5	0	0	30	186
9:00 AM	4	0	13	1	2	18	17	8	0	1	0	26	1	0	0	0	0	1	0	5	2	0	0	7	52
9:15 AM	3	0	13	0	0	16	23	7	0	1	0	31	0	0	0	0	0	0	0	10	0	0	0	10	57
9:30 AM	6	0	15	0	0	21	30	10	0	0	0	40	0	0	0	0	0	0	0	8	1	0	0	9	70
9:45 AM	4	0	21	0	0	25	22	9	0	0	0	31	0	0	0	0	0	0	0	12	2	0	0	14	70
Hourly Total	17	0	62	1	2	80	92	34	0	2	0	128	1	0	0	0	0	1	0	35	5	0	0	40	249
10:00 AM	5	1	9	1	0	16	22	5	0	0	1	27	0	0	0	0	1	0	0	7	2	0	0	9	52
10:15 AM	0	0	13	1	0	14	23	9	0	0	1	32	1	0	0	0	0	1	0	9	1	0	0	10	57
10:30 AM	5	0	19	1	0	25	26	9	0	0	0	35	0	0	0	0	0	0	0	8	0	0	0	8	68
10:45 AM	2	0	30	0	0	32	27	5	0	0	0	32	0	0	0	0	0	0	0	13	2	0	0	15	79
Hourly Total	12	1	71	3	0	87	98	28	0	0	2	126	1	0	0	0	1	1	0	37	5	0	0	42	256
11:00 AM	0	0	26	0	0	26	32	5	0	0	0	37	0	0	0	0	0	0	0	8	1	0	0	9	72
11:15 AM	3	0	21	1	0	25	27	6	0	0	0	33	0	0	0	0	0	0	0	12	2	0	0	14	72
11:30 AM	1	0	20	0	0	21	37	8	0	0	0	45	0	0	0	0	0	0	0	3	4	0	0	7	73
11:45 AM	2	0	15	0	0	17	30	6	0	0	0	36	0	0	0	0	0	0	0	9	1	0	0	10	63
Hourly Total	6	0	82	1	0	89	126	25	0	0	0	151	0	0	0	0	0	0	0	32	8	0	0	40	280
12:00 PM	7	0	26	0	0	33	27	14	0	1	0	42	0	0	0	0	4	0	0	5	1	0	0	6	81
12:15 PM	1	0	23	0	0	24	25	10	0	0	0	35	0	0	0	0	2	0	0	13	3	0	0	16	75
12:30 PM	4	0	32	0	0	36	30	4	0	0	0	34	0	0	0	0	0	0	0	12	0	0	0	12	82
12:45 PM	1	0	24	0	0	25	29	5	1	0	0	35	0	0	0	0	0	0	0	11	4	0	0	15	75
Hourly Total	13	0	105	0	0	118	111	33	1	1	0	146	0	0	0	0	6	0	0	41	8	0	0	49	313
1:00 PM	0	0	19	0	0	19	31	2	0	0	0	33	0	1	0	0	0	1	0	12	4	0	0	16	69
1:15 PM	4	0	23	0	0	27	44	9	0	0	1	53	0	0	0	0	1	0	0	13	2	0	0	15	95
1:30 PM	2	0	22	2	0	26	41	5	0	1	2	47	0	0	0	0	2	0	0	8	2	0	0	10	83
1:45 PM	5	0	22	0	0	27	33	7	0	0	0	40	1	0	0	0	1	1	1	5	3	0	0	9	77
Hourly Total	11	0	86	2	0	99	149	23	0	1	3	173	1	1	0	0	4	2	1	38	11	0	0	50	324
2:00 PM	6	0	33	0	0	39	26	7	0	0	0	33	0	0	0	0	0	0	0	10	2	0	0	12	84
2:15 PM	6	0	20	0	0	26	25	8	0	0	1	33	0	0	0	0	2	0	0	10	1	0	0	11	70
2:30 PM	8	0	22	0	0	30	47	5	0	0	0	52	0	0	0	0	0	0	0	13	2	0	0	15	97
2:45 PM	1	1	27	0	0	29	29	9	0	0	0	38	0	0	0	0	0	0	0	9	2	0	0	11	78
Hourly Total	21	1	102	0	0	124	127	29	0	0	1	156	0	0	0	0	2	0	0	42	7	0	0	49	329
3:00 PM	2	0	31	0	0	33	28	13	0	0	0	41	0	1	0	0	0	1	0	9	1	0	0	10	85
3:15 PM	1	0	18	0	0	19	24	9	0	0	0	33	0	0	0	0	0	0	0	8	2	0	0	10	62
3:30 PM	1	0	24	0	0	25	16	8	0	0	0	24	0	0	0	0	0	0	0	10	3	0	0	13	62
3:45 PM	2	0	20	0	0	22	29	13	0	0	0	42	1	0	0	0	0	1	1	14	1	0	0	16	81
Hourly Total	6	0	93	0	0	99	97	43	0	0	0	140	1	1	0	0	0	2	1	41	7	0	0	49	290
4:00 PM	28	0	39	0	0	67	26	7	0	0	0	33	0	0	0	0	1	0	0	10	2	0	0	12	112
4:15 PM	3	0	22	0	1	25	29	4	0	0	0	33	0	0	0	0	0	0	0	7	2	0	0	9	67
4:30 PM	6	0	18	0	0	24	24	6	0	0	0	30	0	0	0	0	0	0	0	11	1	0	0	12	66
4:45 PM	7	0	22	0	0	29	17	8	0	0	0	25	0	0	0	0	0	0	0	9	1	0	0	10	64
Hourly Total	44	0	101	0	1	145	96	25	0	0	0	121	0	0	0	0	1	0	0	37	6	0	0	43	309
5:00 PM	3	0	20	1	0	24	24	8	0	0	1	32	0	0	0	0	0	0	0	7	1	1	0	9	65
5:15 PM	3	0	13	0	0	16	28	9	0	0	0	37	0	0	0	0	0	0	0	5	1	0	0	6	59
5:30 PM	3	0	26	0	0	29	20	5	0	0	0	25	0	0	0	0	0	0	0	5	1	0	0	6	60
5:45 PM	5	0	28	0	0	33	29	3	0	0	1	32	0	0	0	0	0	0	0	8	0	0	0	8	73
Hourly Total	14	0	87	1	0	102	101	25	0	0	2	126	0	0	0	0	0	0	0	25	3	1	0	29	257
6:00 PM	3	0	21	0	0	24	23	6	0	0	0	29	0	0	0	0	0	0	0	11	2	0	0	13	66
6:15 PM	2	0	13	1	0	16	24	8	0	0	0	32	0	0	0	0	0	0	0	5	1	0	0	6	54
6:30 PM	4	0	19	0	0	23	25	8	0	0	0	33	0	0	0	0	1	0	1	5	0	0	0	6	62
6:45 PM	0	0	16	1	0	17	26	9	0	0	1	35	0	1	0	0	1	1	0	5	0	0	0	5	58
Hourly Total	9	0	69	2	0	80	98	31	0	0	1	129	0	1	0	0	2	1	1	26	3	0	0	30	240

Grand Total	165	2	949	10	3	1126	1238	333	1	10	9	1582	4	3	0	0	16	7	3	408	77	1	0	489	3204
Approach %	14.7	0.2	84.3	0.9	-	-	78.3	21.0	0.1	0.6	-	-	57.1	42.9	0.0	0.0	-	-	0.6	83.4	15.7	0.2	-	-	-
Total %	5.1	0.1	29.6	0.3	-	35.1	38.6	10.4	0.0	0.3	-	49.4	0.1	0.1	0.0	0.0	-	0.2	0.1	12.7	2.4	0.0	-	15.3	-
Motorcycles	0	0	6	0	-	6	4	3	0	0	-	7	0	0	0	0	-	0	0	2	1	0	-	3	16
% Motorcycles	0.0	0.0	0.6	0.0	-	0.5	0.3	0.9	0.0	0.0	-	0.4	0.0	0.0	-	-	-	0.0	0.0	0.5	1.3	0.0	-	0.6	0.5
Cars & Light Goods	160	2	869	10	-	1041	1152	310	1	2	-	1465	3	3	0	0	-	6	3	375	76	1	-	455	2967
% Cars & Light Goods	97.0	100.0	91.6	100.0	-	92.5	93.1	93.1	100.0	20.0	-	92.6	75.0	100.0	-	-	-	85.7	100.0	91.9	98.7	100.0	-	93.0	92.6
Other Vehicles	5	0	74	0	-	79	82	20	0	8	-	110	1	0	0	0	-	1	0	31	0	0	-	31	221
% Other Vehicles	3.0	0.0	7.8	0.0	-	7.0	6.6	6.0	0.0	80.0	-	7.0	25.0	0.0	-	-	-	14.3	0.0	7.6	0.0	0.0	-	6.3	6.9
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	33.3	-	-	-	-	33.3	-	-	-	-	-	-	12.5	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	6	-	-	-	-	-	14	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	66.7	-	-	-	-	66.7	-	-	-	-	-	-	87.5	-	-	-	-	-	-	-	-

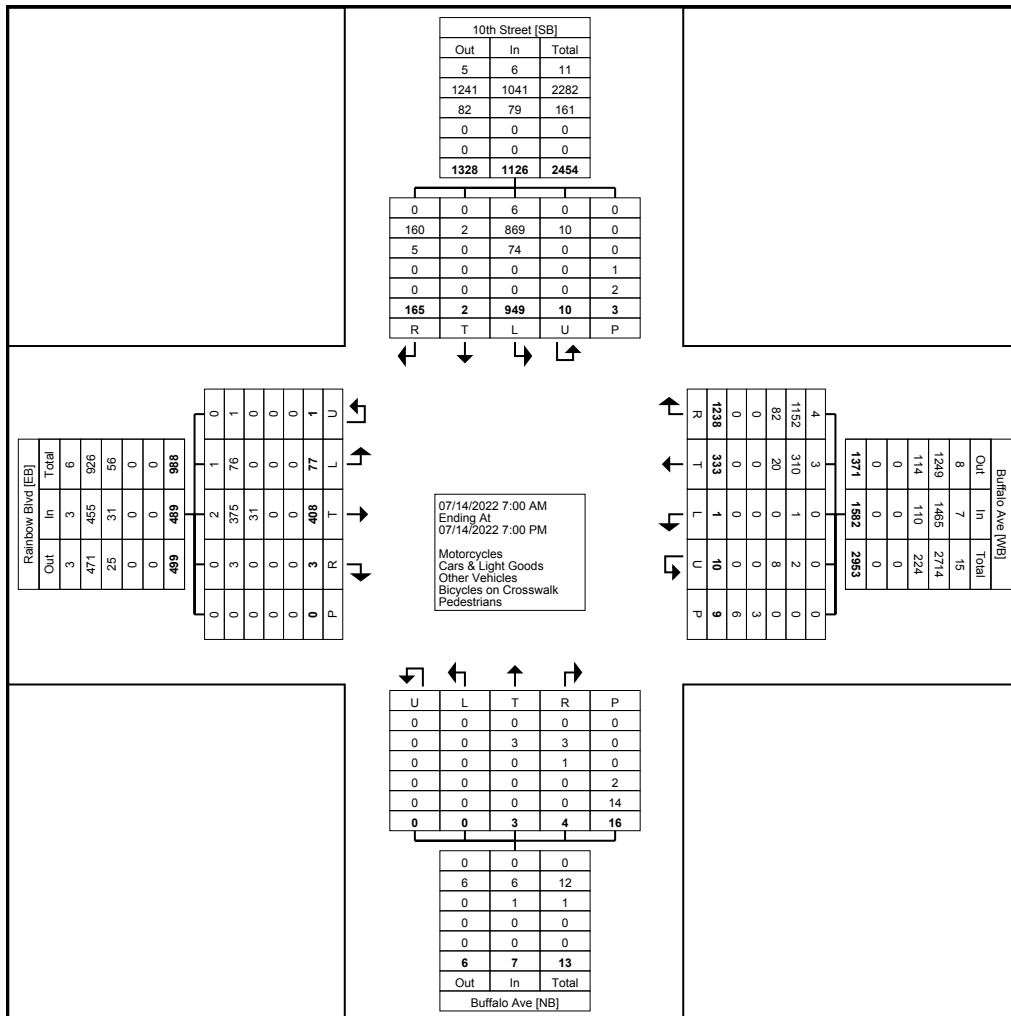


Tri-State Traffic Data: New York Division
184 Baker Rd

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

Count Name: Rainbow Blvd &
Buffalo Ave
Site Code:
Start Date: 07/14/2022
Page No: 3

Niagara, New York
July 14, 2022



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: Rainbow Blvd &
Buffalo Ave
Site Code:
Start Date: 07/14/2022
Page No: 4

Niagara, New York
July 14, 2022

Turning Movement Peak Hour Data (7:45 AM)

Start Time	10th Street Southbound						Buffalo Ave Westbound						Buffalo Ave Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:45 AM	1	0	10	0	0	11	32	4	0	0	0	36	0	0	0	0	0	0	0	12	8	0	0	20	67
8:00 AM	1	0	8	0	0	9	16	5	0	2	0	23	0	0	0	0	0	0	0	9	3	0	0	12	44
8:15 AM	3	0	12	0	0	15	22	5	0	2	0	29	0	0	0	0	0	0	0	3	0	0	0	3	47
8:30 AM	1	0	15	0	0	16	13	8	0	0	0	21	0	0	0	0	0	0	0	6	0	0	0	6	43
Total	6	0	45	0	0	51	83	22	0	4	0	109	0	0	0	0	0	0	0	30	11	0	0	41	201
Approach %	11.8	0.0	88.2	0.0	-	-	76.1	20.2	0.0	3.7	-	-	0.0	0.0	0.0	0.0	-	-	0.0	73.2	26.8	0.0	-	-	-
Total %	3.0	0.0	22.4	0.0	-	25.4	41.3	10.9	0.0	2.0	-	54.2	0.0	0.0	0.0	0.0	-	0.0	0.0	14.9	5.5	0.0	-	20.4	-
PHF	0.500	0.000	0.750	0.000	-	0.797	0.648	0.688	0.000	0.500	-	0.757	0.000	0.000	0.000	0.000	-	0.000	0.000	0.625	0.344	0.000	-	0.513	0.750
Motorcycles	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
Cars & Light Goods	6	0	42	0	-	48	73	19	0	1	-	93	0	0	0	0	-	0	0	27	11	0	-	38	179
% Cars & Light Goods	100.0	-	93.3	-	-	94.1	88.0	86.4	-	25.0	-	85.3	-	-	-	-	-	-	-	90.0	100.0	-	-	92.7	89.1
Other Vehicles	0	0	3	0	-	3	10	3	0	3	-	16	0	0	0	0	-	0	0	3	0	0	-	3	22
% Other Vehicles	0.0	-	6.7	-	-	5.9	12.0	13.6	-	75.0	-	14.7	-	-	-	-	-	-	-	10.0	0.0	-	-	7.3	10.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

Coatesville, Pennsylvania, United States 19320
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Count Name: Rainbow Blvd &
Buffalo Ave
Site Code:
Start Date: 07/14/2022
Page No: 6

Niagara, New York
July 14, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	10th Street Southbound						Buffalo Ave Westbound						Buffalo Ave Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	7	0	26	0	0	33	27	14	0	1	0	42	0	0	0	0	4	0	0	5	1	0	0	6	81
12:15 PM	1	0	23	0	0	24	25	10	0	0	0	35	0	0	0	0	2	0	0	13	3	0	0	16	75
12:30 PM	4	0	32	0	0	36	30	4	0	0	0	34	0	0	0	0	0	0	0	12	0	0	0	12	82
12:45 PM	1	0	24	0	0	25	29	5	1	0	0	35	0	0	0	0	0	0	0	11	4	0	0	15	75
Total	13	0	105	0	0	118	111	33	1	1	0	146	0	0	0	0	6	0	0	41	8	0	0	49	313
Approach %	11.0	0.0	89.0	0.0	-	-	76.0	22.6	0.7	0.7	-	-	0.0	0.0	0.0	0.0	-	-	0.0	83.7	16.3	0.0	-	-	-
Total %	4.2	0.0	33.5	0.0	-	37.7	35.5	10.5	0.3	0.3	-	46.6	0.0	0.0	0.0	0.0	-	0.0	0.0	13.1	2.6	0.0	-	15.7	-
PHF	0.464	0.000	0.820	0.000	-	0.819	0.925	0.589	0.250	0.250	-	0.869	0.000	0.000	0.000	0.000	-	0.000	0.000	0.788	0.500	0.000	-	0.766	0.954
Motorcycles	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	0.0	-	1.0	-	-	0.8	0.0	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.3
Cars & Light Goods	12	0	96	0	-	108	105	32	1	0	-	138	0	0	0	0	-	0	0	38	8	0	-	46	292
% Cars & Light Goods	92.3	-	91.4	-	-	91.5	94.6	97.0	100.0	0.0	-	94.5	-	-	-	-	-	-	-	92.7	100.0	-	-	93.9	93.3
Other Vehicles	1	0	8	0	-	9	6	1	0	1	-	8	0	0	0	0	-	0	0	3	0	0	-	3	20
% Other Vehicles	7.7	-	7.6	-	-	7.6	5.4	3.0	0.0	100.0	-	5.5	-	-	-	-	-	-	-	7.3	0.0	-	-	6.1	6.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



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

Coatesville, Pennsylvania, United States 19320
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Count Name: Rainbow Blvd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	10th St Southbound						Buffalo Ave Westbound						Buffalo Ave Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	0	18	0	0	19	34	5	0	0	0	39	0	0	0	0	0	0	0	8	0	0	0	8	66
11:15 AM	2	0	30	1	0	33	38	13	0	0	0	51	0	0	1	0	0	1	1	8	4	0	0	13	98
11:30 AM	5	1	18	1	0	25	42	4	0	0	0	46	2	1	0	0	0	3	0	5	4	0	0	9	83
11:45 AM	1	0	18	1	0	20	32	7	0	0	0	39	0	0	1	0	0	1	1	5	0	0	0	6	66
Hourly Total	9	1	84	3	0	97	146	29	0	0	0	175	2	1	2	0	0	5	2	26	8	0	0	36	313
12:00 PM	4	0	26	0	0	30	30	9	1	0	0	40	1	0	0	0	0	1	0	9	3	1	0	13	84
12:15 PM	2	0	20	0	1	22	41	9	0	0	0	50	0	0	0	0	0	0	0	7	0	0	1	7	79
12:30 PM	3	0	17	0	0	20	36	5	1	0	0	42	0	0	0	0	0	0	0	8	0	0	0	8	70
12:45 PM	2	0	18	0	0	20	37	10	1	0	0	48	0	0	0	0	0	0	0	10	2	0	0	12	80
Hourly Total	11	0	81	0	1	92	144	33	3	0	0	180	1	0	0	0	0	1	0	34	5	1	1	40	313
1:00 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
Grand Total	20	1	165	3	1	189	290	62	3	0	0	355	3	1	2	0	0	6	2	60	13	1	1	76	626
Approach %	10.6	0.5	87.3	1.6	-	-	81.7	17.5	0.8	0.0	-	-	50.0	16.7	33.3	0.0	-	-	2.6	78.9	17.1	1.3	-	-	-
Total %	3.2	0.2	26.4	0.5	-	30.2	46.3	9.9	0.5	0.0	-	56.7	0.5	0.2	0.3	0.0	-	1.0	0.3	9.6	2.1	0.2	-	12.1	-
Motorcycles	1	0	1	0	-	2	2	0	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	4
% Motorcycles	5.0	0.0	0.6	0.0	-	1.1	0.7	0.0	0.0	-	-	0.6	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.6
Cars & Light Goods	19	1	158	3	-	181	273	56	3	0	-	332	3	1	2	0	-	6	2	57	12	1	-	72	591
% Cars & Light Goods	95.0	100.0	95.8	100.0	-	95.8	94.1	90.3	100.0	-	-	93.5	100.0	100.0	100.0	-	-	100.0	100.0	95.0	92.3	100.0	-	94.7	94.4
Other Vehicles	0	0	6	0	-	6	15	6	0	0	-	21	0	0	0	0	-	0	0	3	1	0	-	4	31
% Other Vehicles	0.0	0.0	3.6	0.0	-	3.2	5.2	9.7	0.0	-	-	5.9	0.0	0.0	0.0	-	-	0.0	0.0	5.0	7.7	0.0	-	5.3	5.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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: Rainbow Blvd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	10th St Southbound						Buffalo Ave Westbound						Buffalo Ave Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	0	18	0	0	19	34	5	0	0	0	39	0	0	0	0	0	0	0	8	0	0	0	8	66
11:15 AM	2	0	30	1	0	33	38	13	0	0	0	51	0	0	1	0	0	1	1	8	4	0	0	13	98
11:30 AM	5	1	18	1	0	25	42	4	0	0	0	46	2	1	0	0	0	3	0	5	4	0	0	9	83
11:45 AM	1	0	18	1	0	20	32	7	0	0	0	39	0	0	1	0	0	1	1	5	0	0	0	6	66
Total	9	1	84	3	0	97	146	29	0	0	0	175	2	1	2	0	0	5	2	26	8	0	0	36	313
Approach %	9.3	1.0	86.6	3.1	-	-	83.4	16.6	0.0	0.0	-	-	40.0	20.0	40.0	0.0	-	-	5.6	72.2	22.2	0.0	-	-	-
Total %	2.9	0.3	26.8	1.0	-	31.0	46.6	9.3	0.0	0.0	-	55.9	0.6	0.3	0.6	0.0	-	1.6	0.6	8.3	2.6	0.0	-	11.5	-
PHF	0.450	0.250	0.700	0.750	-	0.735	0.869	0.558	0.000	0.000	-	0.858	0.250	0.250	0.500	0.000	-	0.417	0.500	0.813	0.500	0.000	-	0.692	0.798
Motorcycles	1	0	0	0	-	1	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Motorcycles	11.1	0.0	0.0	0.0	-	1.0	0.7	0.0	-	-	-	0.6	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.6
Cars & Light Goods	8	1	79	3	-	91	138	27	0	0	-	165	2	1	2	0	-	5	2	25	7	0	-	34	295
% Cars & Light Goods	88.9	100.0	94.0	100.0	-	93.8	94.5	93.1	-	-	-	94.3	100.0	100.0	100.0	-	-	100.0	100.0	96.2	87.5	-	-	94.4	94.2
Other Vehicles	0	0	5	0	-	5	7	2	0	0	-	9	0	0	0	0	-	0	0	1	1	0	-	2	16
% Other Vehicles	0.0	0.0	6.0	0.0	-	5.2	4.8	6.9	-	-	-	5.1	0.0	0.0	0.0	-	-	0.0	0.0	3.8	12.5	-	-	5.6	5.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

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

Count Name: Rainbow Blvd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	10th St Southbound						Buffalo Ave Westbound						Buffalo Ave Northbound						Rainbow Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	4	0	26	0	0	30	30	9	1	0	0	40	1	0	0	0	0	1	0	9	3	1	0	13	84
12:15 PM	2	0	20	0	1	22	41	9	0	0	0	50	0	0	0	0	0	0	0	7	0	0	1	7	79
12:30 PM	3	0	17	0	0	20	36	5	1	0	0	42	0	0	0	0	0	0	0	8	0	0	0	8	70
12:45 PM	2	0	18	0	0	20	37	10	1	0	0	48	0	0	0	0	0	0	0	10	2	0	0	12	80
Total	11	0	81	0	1	92	144	33	3	0	0	180	1	0	0	0	0	1	0	34	5	1	1	40	313
Approach %	12.0	0.0	88.0	0.0	-	-	80.0	18.3	1.7	0.0	-	-	100.0	0.0	0.0	0.0	-	-	0.0	85.0	12.5	2.5	-	-	-
Total %	3.5	0.0	25.9	0.0	-	29.4	46.0	10.5	1.0	0.0	-	57.5	0.3	0.0	0.0	0.0	-	0.3	0.0	10.9	1.6	0.3	-	12.8	-
PHF	0.688	0.000	0.779	0.000	-	0.767	0.878	0.825	0.750	0.000	-	0.900	0.250	0.000	0.000	0.000	-	0.250	0.000	0.850	0.417	0.250	-	0.769	0.932
Motorcycles	0	0	1	0	-	1	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Motorcycles	0.0	-	1.2	-	-	1.1	0.7	0.0	0.0	-	-	0.6	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.6
Cars & Light Goods	11	0	79	0	-	90	135	29	3	0	-	167	1	0	0	0	-	1	0	32	5	1	-	38	296
% Cars & Light Goods	100.0	-	97.5	-	-	97.8	93.8	87.9	100.0	-	-	92.8	100.0	-	-	-	-	100.0	-	94.1	100.0	100.0	-	95.0	94.6
Other Vehicles	0	0	1	0	-	1	8	4	0	0	-	12	0	0	0	0	-	0	0	2	0	0	-	2	15
% Other Vehicles	0.0	-	1.2	-	-	1.1	5.6	12.1	0.0	-	-	6.7	0.0	-	-	-	-	0.0	-	5.9	0.0	0.0	-	5.0	4.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



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

Niagara, New York
July 12, 2022

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

Count Name: Falls St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 1

Turning Movement Data

Start Time	9th St Southbound						Falls St Westbound						9th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	4	4
7:15 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	5
7:30 AM	0	0	0	0	2	0	1	4	0	0	1	5	0	0	0	0	1	0	0	8	1	0	1	9	14
7:45 AM	0	0	0	0	0	0	1	7	0	0	0	8	0	0	0	0	0	0	0	19	0	0	0	19	27
Hourly Total	0	0	0	0	3	0	2	13	0	0	1	15	0	0	0	0	2	0	0	34	1	0	1	35	50
8:00 AM	0	0	0	0	1	0	2	2	0	0	0	4	0	0	0	0	0	0	0	8	0	0	0	8	12
8:15 AM	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	18	0	0	0	18	23
8:30 AM	0	0	0	0	1	0	0	5	0	0	0	5	0	0	0	0	2	0	0	5	0	0	1	5	10
8:45 AM	0	0	0	0	0	0	2	3	0	0	0	5	0	0	0	0	0	0	0	0	2	0	0	2	7
Hourly Total	0	0	0	0	2	0	4	15	0	0	0	19	0	0	0	0	2	0	0	31	2	0	1	33	52
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	2	5	0	0	0	7	0	0	0	0	0	0	0	5	1	0	0	6	13
11:15 AM	0	0	0	0	1	0	2	6	0	0	0	8	0	0	0	0	0	0	0	5	0	0	0	5	13
11:30 AM	0	0	0	0	2	0	2	11	0	0	0	13	0	0	0	0	0	0	0	3	1	0	0	4	17
11:45 AM	0	0	0	0	1	0	1	7	0	0	0	8	0	0	0	0	2	0	0	7	0	0	0	7	15
Hourly Total	0	0	0	0	4	0	7	29	0	0	0	36	0	0	0	0	2	0	0	20	2	0	0	22	58
12:00 PM	0	0	0	0	1	0	0	7	0	0	0	7	0	0	0	0	0	0	0	9	0	0	0	9	16
12:15 PM	0	0	0	0	1	0	1	6	0	0	0	7	0	0	0	0	0	0	0	5	2	0	0	7	14
12:30 PM	1	0	0	0	6	1	4	9	0	0	0	13	0	0	0	0	0	0	6	3	0	0	1	9	23
12:45 PM	0	0	1	0	2	1	0	10	0	0	0	10	0	0	0	0	1	0	0	3	3	0	0	6	17
Hourly Total	1	0	1	0	10	2	5	32	0	0	0	37	0	0	0	0	1	0	0	23	8	0	1	31	70
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	0	0	3	14	0	0	0	17	0	0	0	0	0	0	0	7	0	1	0	8	25
4:15 PM	0	0	0	0	0	0	2	5	0	0	0	7	0	0	0	0	0	0	0	5	1	0	0	6	13
4:30 PM	0	0	0	0	0	0	1	13	0	0	0	14	0	0	0	0	0	0	0	5	0	0	0	5	19
4:45 PM	0	0	0	0	1	0	1	7	0	0	0	8	0	0	0	0	1	0	0	6	0	0	0	6	14
Hourly Total	0	0	0	0	1	0	7	39	0	0	0	46	0	0	0	0	1	0	0	23	1	1	0	25	71
5:00 PM	0	0	0	0	1	0	0	9	0	0	0	9	0	0	0	0	1	0	0	5	0	0	0	5	14
5:15 PM	0	0	0	0	1	0	1	6	0	0	0	7	0	0	0	0	0	0	0	5	1	0	0	6	13
5:30 PM	1	0	0	0	1	1	0	5	0	0	0	5	0	0	0	0	0	0	0	5	1	0	0	6	12
5:45 PM	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	2	1	0	0	3	13
Hourly Total	1	0	0	0	3	1	1	30	0	0	0	31	0	0	0	0	1	0	0	17	3	0	0	20	52
6:00 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
Grand Total	2	0	1	0	23	3	26	158	0	0	1	184	0	0	0	0	9	0	0	148	17	1	3	166	353
Approach %	66.7	0.0	33.3	0.0	-	-	14.1	85.9	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	89.2	10.2	0.6	-	-	-
Total %	0.6	0.0	0.3	0.0	-	0.8	7.4	44.8	0.0	0.0	-	52.1	0.0	0.0	0.0	0.0	-	0.0	0.0	41.9	4.8	0.3	-	47.0	-
Motorcycles	2	0	0	0	-	2	0	4	0	0	-	4	0	0	0	0	-	0	0	2	0	0	-	2	8
% Motorcycles	100.0	-	0.0	-	-	66.7	0.0	2.5	-	-	-	2.2	-	-	-	-	-	-	-	1.4	0.0	0.0	-	1.2	2.3
Cars & Light Goods	0	0	1	0	-	1	25	148	0	0	-	173	0	0	0	0	-	0	0	144	17	1	-	162	336
% Cars & Light Goods	0.0	-	100.0	-	-	33.3	96.2	93.7	-	-	-	94.0	-	-	-	-	-	-	-	97.3	100.0	100.0	-	97.6	95.2
Other Vehicles	0	0	0	0	-	0	1	6	0	0	-	7	0	0	0	0	-	0	0	2	0	0	-	2	9
% Other Vehicles	0.0	-	0.0	-	-	0.0	3.8	3.8	-	-	-	3.8	-	-	-	-	-	-	-	1.4	0.0	0.0	-	1.2	2.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	23	-	-	-	-	-	1	-	-	-	-	-	9	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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

Niagara, New York
July 12, 2022

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

Count Name: Falls St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	9th St Southbound						Falls St Westbound						9th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	0	0	0	0	2	0	1	4	0	0	1	5	0	0	0	0	1	0	0	8	1	0	1	9	14
7:45 AM	0	0	0	0	0	0	1	7	0	0	0	8	0	0	0	0	0	0	0	19	0	0	0	19	27
8:00 AM	0	0	0	0	1	0	2	2	0	0	0	4	0	0	0	0	0	0	0	8	0	0	0	8	12
8:15 AM	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	18	0	0	0	18	23
Total	0	0	0	0	3	0	4	18	0	0	1	22	0	0	0	0	1	0	0	53	1	0	1	54	76
Approach %	0.0	0.0	0.0	0.0	-	-	18.2	81.8	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	98.1	1.9	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	5.3	23.7	0.0	0.0	-	28.9	0.0	0.0	0.0	0.0	-	0.0	0.0	69.7	1.3	0.0	-	71.1	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.500	0.643	0.000	0.000	-	0.688	0.000	0.000	0.000	0.000	-	0.000	0.000	0.697	0.250	0.000	-	0.711	0.704
Motorcycles	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
Cars & Light Goods	0	0	0	0	-	0	3	17	0	0	-	20	0	0	0	0	-	0	0	52	1	0	-	53	73
% Cars & Light Goods	-	-	-	-	-	-	75.0	94.4	-	-	-	90.9	-	-	-	-	-	-	-	98.1	100.0	-	-	98.1	96.1
Other Vehicles	0	0	0	0	-	0	1	1	0	0	-	2	0	0	0	0	-	0	0	1	0	0	-	1	3
% Other Vehicles	-	-	-	-	-	-	25.0	5.6	-	-	-	9.1	-	-	-	-	-	-	-	1.9	0.0	-	-	1.9	3.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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

Niagara, New York
July 12, 2022

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

Count Name: Falls St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 5

Turning Movement Peak Hour Data (12:00 PM)

Start Time	9th St Southbound						Falls St Westbound						9th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	0	0	0	0	1	0	0	7	0	0	0	7	0	0	0	0	0	0	0	9	0	0	0	9	16
12:15 PM	0	0	0	0	1	0	1	6	0	0	0	7	0	0	0	0	0	0	0	5	2	0	0	7	14
12:30 PM	1	0	0	0	6	1	4	9	0	0	0	13	0	0	0	0	0	0	0	6	3	0	1	9	23
12:45 PM	0	0	1	0	2	1	0	10	0	0	0	10	0	0	0	0	1	0	0	3	3	0	0	6	17
Total	1	0	1	0	10	2	5	32	0	0	0	37	0	0	0	0	1	0	0	23	8	0	1	31	70
Approach %	50.0	0.0	50.0	0.0	-	-	13.5	86.5	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	74.2	25.8	0.0	-	-	-
Total %	1.4	0.0	1.4	0.0	-	2.9	7.1	45.7	0.0	0.0	-	52.9	0.0	0.0	0.0	0.0	-	0.0	0.0	32.9	11.4	0.0	-	44.3	-
PHF	0.250	0.000	0.250	0.000	-	0.500	0.313	0.800	0.000	0.000	-	0.712	0.000	0.000	0.000	0.000	-	0.000	0.000	0.639	0.667	0.000	-	0.861	0.761
Motorcycles	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	2
% Motorcycles	100.0	-	0.0	-	-	50.0	0.0	0.0	-	-	-	0.0	-	-	-	-	-	-	-	4.3	0.0	-	-	3.2	2.9
Cars & Light Goods	0	0	1	0	-	1	5	30	0	0	-	35	0	0	0	0	-	0	0	21	8	0	-	29	65
% Cars & Light Goods	0.0	-	100.0	-	-	50.0	100.0	93.8	-	-	-	94.6	-	-	-	-	-	-	-	91.3	100.0	-	-	93.5	92.9
Other Vehicles	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	1	0	0	-	1	3
% Other Vehicles	0.0	-	0.0	-	-	0.0	0.0	6.3	-	-	-	5.4	-	-	-	-	-	-	-	4.3	0.0	-	-	3.2	4.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	10	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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

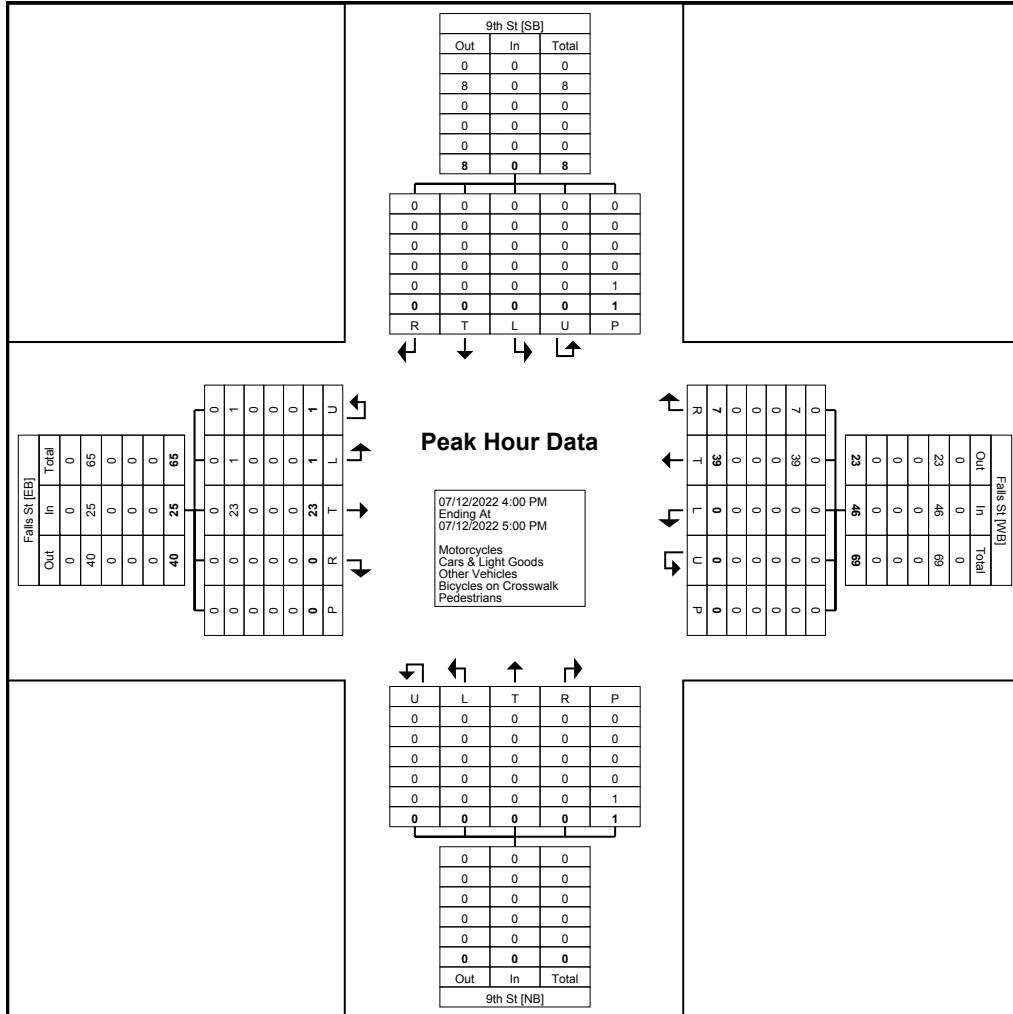
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: Falls St & 9th St
Site Code:
Start Date: 07/12/2022
Page No: 7

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	9th St Southbound						Falls St Westbound						9th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	0	0	0	0	0	0	3	14	0	0	0	17	0	0	0	0	0	0	0	7	0	1	0	8	25
4:15 PM	0	0	0	0	0	0	2	5	0	0	0	7	0	0	0	0	0	0	0	5	1	0	0	6	13
4:30 PM	0	0	0	0	0	0	1	13	0	0	0	14	0	0	0	0	0	0	0	5	0	0	0	5	19
4:45 PM	0	0	0	0	1	0	1	7	0	0	0	8	0	0	0	0	1	0	0	6	0	0	0	6	14
Total	0	0	0	0	1	0	7	39	0	0	0	46	0	0	0	0	1	0	0	23	1	1	0	25	71
Approach %	0.0	0.0	0.0	0.0	-	-	15.2	84.8	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	92.0	4.0	4.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	9.9	54.9	0.0	0.0	-	64.8	0.0	0.0	0.0	0.0	-	0.0	0.0	32.4	1.4	1.4	-	35.2	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.583	0.696	0.000	0.000	-	0.676	0.000	0.000	0.000	0.000	-	0.000	0.000	0.821	0.250	0.250	-	0.781	0.710
Motorcycles	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
Cars & Light Goods	0	0	0	0	-	0	7	39	0	0	-	46	0	0	0	0	-	0	0	23	1	1	-	25	71
% Cars & Light Goods	-	-	-	-	-	-	100.0	100.0	-	-	-	100.0	-	-	-	-	-	-	-	100.0	100.0	100.0	-	100.0	100.0
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Other Vehicles	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	-	-	-	-	-	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



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: Falls St & 9th St
Site Code:
Start Date: 08/06/2022
Page No: 1

Turning Movement Data

Start Time	9th St Southbound					Falls St Westbound					9th St Northbound					Falls St Eastbound					Int. Total				
	Right	Thru	Left	U-Turn	Peds	Right	Thru	Left	U-Turn	Peds	Right	Thru	Left	U-Turn	Peds	Right	Thru	Left	U-Turn	Peds		App. Total			
	App. Total					App. Total					App. Total					App. Total									
11:00 AM	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
11:15 AM	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	4	1	0	0	0	4	0	0	5
11:30 AM	0	0	0	0	1	0	6	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	4
11:45 AM	0	0	0	0	0	1	11	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	3
Hourly Total	0	0	0	0	1	4	28	0	0	0	32	0	0	0	0	0	15	1	0	0	0	16	0	0	16
12:00 PM	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0	5	0	0	0	0	5	0	0	5
12:15 PM	0	0	0	0	0	2	6	0	0	0	8	0	0	0	0	0	4	0	0	0	0	4	0	0	4
12:30 PM	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	1	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	2	0	0	0	0	2	0	0	2
Hourly Total	0	0	0	0	0	2	28	0	0	0	30	0	0	0	0	12	0	0	0	0	12	0	0	12	
1:00 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
Grand Total	0	0	0	0	1	6	56	0	0	0	62	0	0	0	0	0	27	1	0	0	0	28	0	0	28
Approach %	0.0	0.0	0.0	0.0	-	9.7	90.3	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	96.4	3.6	0.0	-	-	-	-	-
Total %	0.0	0.0	0.0	0.0	-	6.7	62.2	0.0	0.0	-	66.9	0.0	0.0	0.0	0.0	-	0.0	30.0	1.1	0.0	-	31.1	-	-	31.1
Motorcycles	0	0	0	0	-	0	1	0	0	-	1	0	0	0	-	0	2	0	0	-	0	2	0	-	2
% Motorcycles	-	-	-	-	-	0.0	1.8	-	-	-	1.6	-	-	-	-	-	7.4	0.0	-	-	-	7.1	-	-	7.1
Cars & Light Goods	0	0	0	0	-	6	55	0	0	-	61	0	0	0	-	0	25	1	0	-	0	26	-	-	26
% Cars & Light Goods	-	-	-	-	-	100.0	98.2	-	-	-	96.4	-	-	-	-	-	92.6	100.0	-	-	-	92.9	-	-	92.9
Other Vehicles	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	-	-	0
% Other Vehicles	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	-	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	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: Falls St & 9th St
Site Code:
Start Date: 08/06/2022
Page No. 5

Turning Movement Peak Hour Data (12:00 PM)

Start Time	9th St Southbound					Falls St Westbound					9th St Northbound					Falls St Eastbound					Int. Total				
	Right	Thru	Left	U-Turn	Peds	Right	Thru	Left	U-Turn	Peds	Right	Thru	Left	U-Turn	Peds	Right	Thru	Left	U-Turn	Peds		App. Total			
	App. Total					App. Total					App. Total					App. Total									
12:00 PM	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
12:15 PM	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	4
12:30 PM	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	2	28	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	0	0	12
Approach %	0.0	0.0	0.0	0.0	-	6.7	93.3	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	100.0	0.0	0.0	-	0.0	0.0	0.0	-
Total %	0.0	0.0	0.0	0.0	0.0	4.8	66.7	0.0	0.0	0.0	71.4	0.0	0.0	0.0	0.0	-	0.0	28.6	0.0	0.0	-	0.0	0.0	0.0	28.6
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.778	0.000	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.600	0.000	0.000	0.000	0.000	0.600	0.000	0.000	0.600
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1
% Motorcycles	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	-	-	-	-	8.3	-	-	-	-	8.3	-	-	8.3
Cars & Light Goods	0	0	0	0	0	2	28	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	0	0	11
% Cars & Light Goods	-	-	-	-	-	100.0	100.0	-	-	-	100.0	-	-	-	-	-	91.7	-	-	-	-	91.7	-	-	91.7
Other Vehicles	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
% Other Vehicles	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

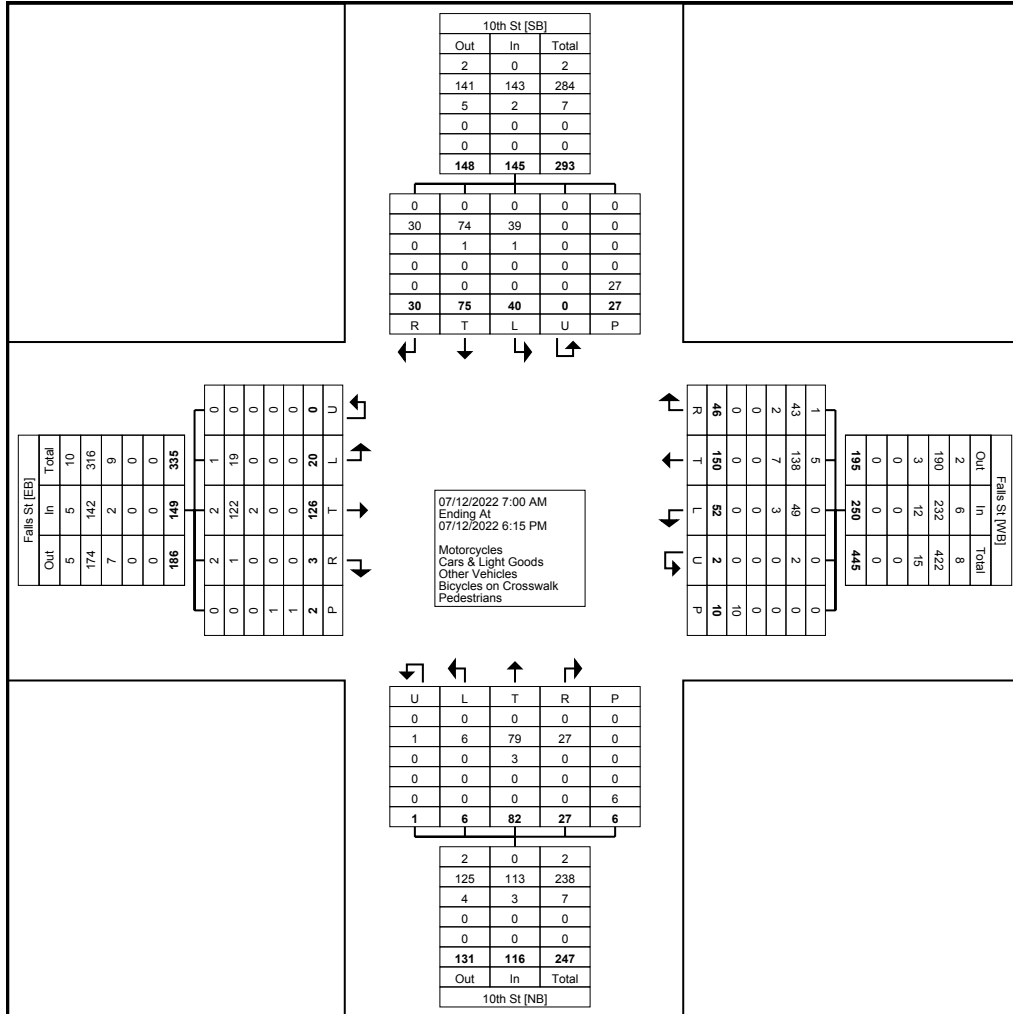
Niagara, New York
July 12, 2022

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

Count Name: Falls St & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 1

Turning Movement Data

Start Time	10th St Southbound						Falls St Westbound						10th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	1	1	0	0	2	1	1	1	1	0	4	1	1	0	0	1	2	0	2	0	0	0	2	10
7:15 AM	0	1	0	0	0	1	1	1	0	0	0	2	3	2	0	0	0	5	0	4	0	0	0	4	12
7:30 AM	0	2	2	0	3	4	1	7	4	0	0	12	1	2	0	0	0	3	0	5	1	0	0	6	25
7:45 AM	0	3	0	0	0	3	2	6	1	0	0	9	7	4	1	0	0	12	0	20	1	0	0	21	45
Hourly Total	0	7	3	0	3	10	5	15	6	1	0	27	12	9	1	0	1	22	0	31	2	0	0	33	92
8:00 AM	1	3	3	0	1	7	3	4	0	0	2	7	4	7	0	0	0	11	0	5	1	0	0	6	31
8:15 AM	0	4	2	0	0	6	6	4	1	1	1	12	0	4	0	0	0	4	0	14	5	0	0	19	41
8:30 AM	1	0	0	0	2	1	2	4	3	0	1	9	1	4	0	1	1	6	0	5	1	0	0	6	22
8:45 AM	1	2	1	0	0	4	0	2	2	0	0	4	0	6	1	0	0	7	0	0	0	0	0	0	15
Hourly Total	3	9	6	0	3	18	11	14	6	1	4	32	5	21	1	1	1	28	0	24	7	0	0	31	109
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	2	6	2	0	0	10	0	7	1	0	1	8	2	2	0	0	0	4	0	5	0	0	0	5	27
11:15 AM	1	1	1	0	0	3	2	5	1	0	0	8	0	5	1	0	0	6	0	5	0	0	0	5	22
11:30 AM	5	3	1	0	2	9	2	10	2	0	0	14	2	5	0	0	1	7	0	3	0	0	0	3	33
11:45 AM	0	5	2	0	2	7	1	5	2	0	0	8	1	2	0	0	0	3	0	4	2	0	0	6	24
Hourly Total	8	15	6	0	4	29	5	27	6	0	1	38	5	14	1	0	1	20	0	17	2	0	0	19	106
12:00 PM	1	1	1	0	2	3	4	10	3	0	1	17	0	3	0	0	0	3	0	6	2	0	0	8	31
12:15 PM	2	6	2	0	0	10	1	5	0	0	0	6	0	4	0	0	0	4	1	4	1	0	0	6	26
12:30 PM	4	2	3	0	8	9	2	8	2	0	1	12	0	3	0	0	0	3	0	7	1	0	0	8	32
12:45 PM	4	5	1	0	2	10	3	7	0	0	1	10	1	9	0	0	1	10	2	2	2	0	0	6	36
Hourly Total	11	14	7	0	12	32	10	30	5	0	3	45	1	19	0	0	1	20	3	19	6	0	0	28	125
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	11	3	0	0	15	4	14	17	0	2	35	1	2	1	0	0	4	0	3	2	0	2	5	59
4:15 PM	0	2	0	0	0	2	0	6	3	0	0	9	1	1	2	0	0	4	0	7	0	0	0	7	22
4:30 PM	2	3	5	0	1	10	4	10	2	0	0	16	1	3	0	0	0	4	0	5	0	0	0	5	35
4:45 PM	1	6	2	0	2	9	2	7	4	0	0	13	1	2	0	0	1	3	0	5	0	0	0	5	30
Hourly Total	4	22	10	0	3	36	10	37	26	0	2	73	4	8	3	0	1	15	0	20	2	0	2	22	146
5:00 PM	3	3	4	0	0	10	2	7	0	0	0	9	0	4	0	0	1	4	0	1	1	0	0	2	25
5:15 PM	0	3	0	0	1	3	1	6	0	0	0	7	0	1	0	0	0	1	0	8	0	0	0	8	19
5:30 PM	0	1	0	0	0	1	0	4	0	0	0	4	0	2	0	0	0	2	0	4	0	0	0	4	11
5:45 PM	1	1	4	0	1	6	2	10	3	0	0	15	0	4	0	0	0	4	0	2	0	0	0	2	27
Hourly Total	4	8	8	0	2	20	5	27	3	0	0	35	0	11	0	0	1	11	0	15	1	0	0	16	82
6:00 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
Grand Total	30	75	40	0	27	145	46	150	52	2	10	250	27	82	6	1	6	116	3	126	20	0	2	149	660
Approach %	20.7	51.7	27.6	0.0	-	-	18.4	60.0	20.8	0.8	-	-	23.3	70.7	5.2	0.9	-	-	2.0	84.6	13.4	0.0	-	-	-
Total %	4.5	11.4	6.1	0.0	-	22.0	7.0	22.7	7.9	0.3	-	37.9	4.1	12.4	0.9	0.2	-	17.6	0.5	19.1	3.0	0.0	-	22.6	-
Motorcycles	0	0	0	0	-	0	1	5	0	0	-	6	0	0	0	0	-	0	2	2	1	0	-	5	11
% Motorcycles	0.0	0.0	0.0	-	-	0.0	2.2	3.3	0.0	0.0	-	2.4	0.0	0.0	0.0	0.0	-	0.0	66.7	1.6	5.0	-	-	3.4	1.7
Cars & Light Goods	30	74	39	0	-	143	43	138	49	2	-	232	27	79	6	1	-	113	1	122	19	0	-	142	630
% Cars & Light Goods	100.0	98.7	97.5	-	-	98.6	93.5	92.0	94.2	100.0	-	92.8	100.0	96.3	100.0	100.0	-	97.4	33.3	96.8	95.0	-	-	95.3	95.5
Other Vehicles	0	1	1	0	-	2	2	7	3	0	-	12	0	3	0	0	-	3	0	2	0	0	-	2	19
% Other Vehicles	0.0	1.3	2.5	-	-	1.4	4.3	4.7	5.8	0.0	-	4.8	0.0	3.7	0.0	0.0	-	2.6	0.0	1.6	0.0	-	-	1.3	2.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-
Pedestrians	-	-	-	-	27	-	-	-	-	-	10	-	-	-	-	-	6	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-



Turning Movement Data Plot



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

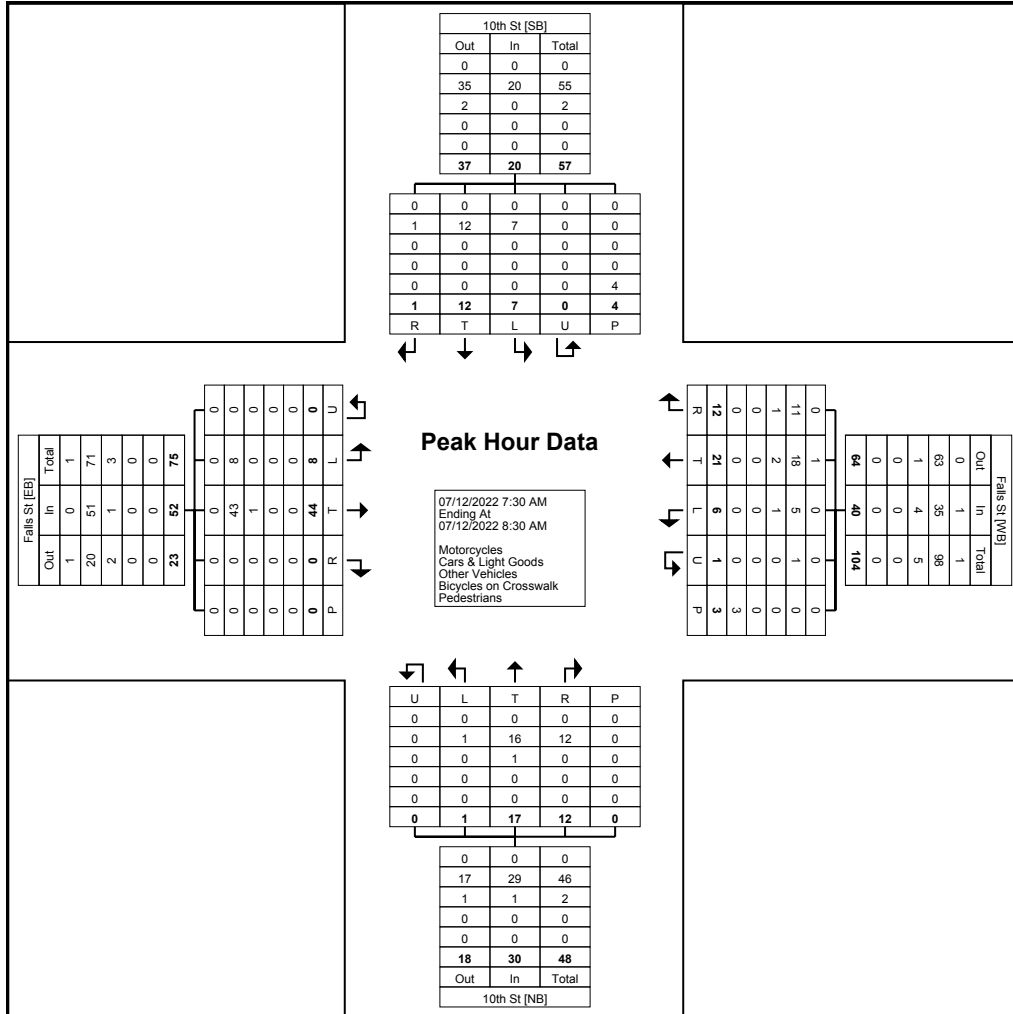
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

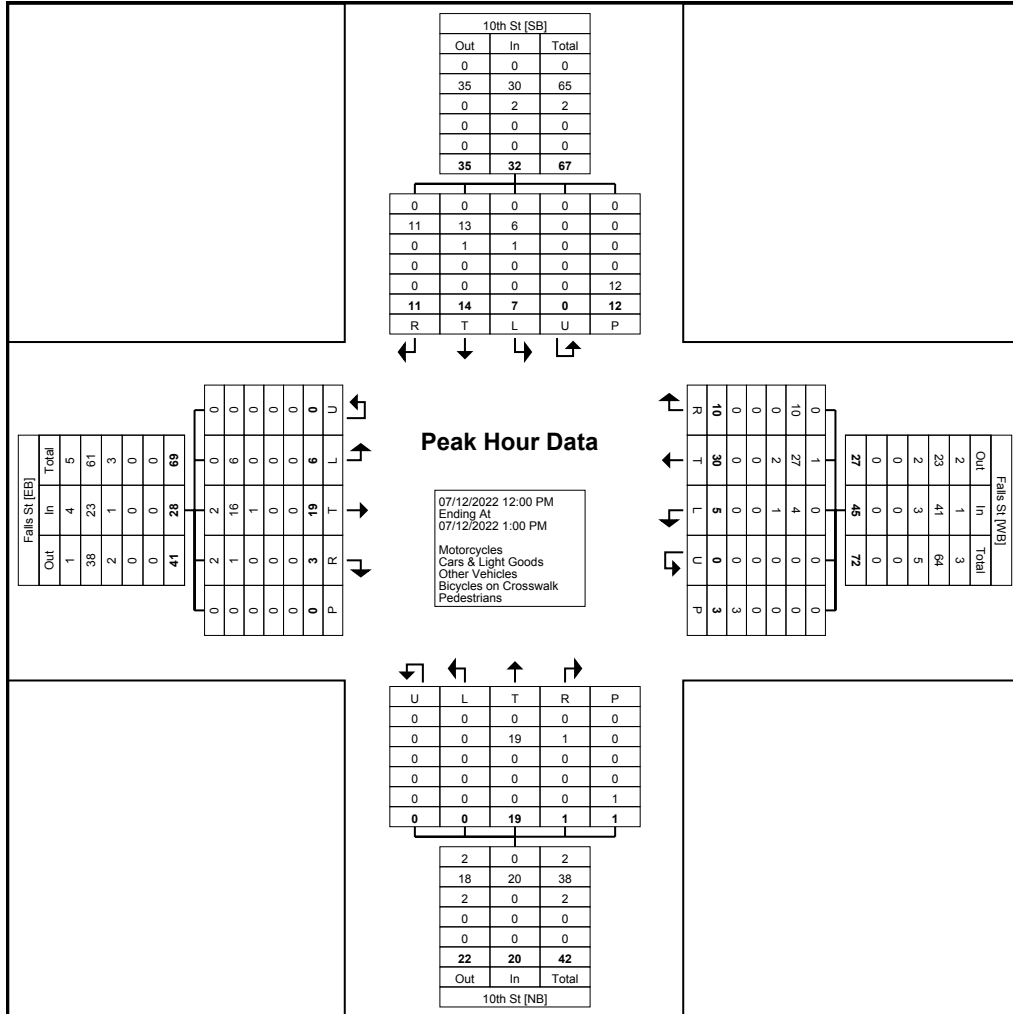
Count Name: Falls St & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 3

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	10th St Southbound						Falls St Westbound						10th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	0	2	2	0	3	4	1	7	4	0	0	12	1	2	0	0	0	3	0	5	1	0	0	6	25
7:45 AM	0	3	0	0	0	3	2	6	1	0	0	9	7	4	1	0	0	12	0	20	1	0	0	21	45
8:00 AM	1	3	3	0	1	7	3	4	0	0	2	7	4	7	0	0	0	11	0	5	1	0	0	6	31
8:15 AM	0	4	2	0	0	6	6	4	1	1	1	12	0	4	0	0	0	4	0	14	5	0	0	19	41
Total	1	12	7	0	4	20	12	21	6	1	3	40	12	17	1	0	0	30	0	44	8	0	0	52	142
Approach %	5.0	60.0	35.0	0.0	-	-	30.0	52.5	15.0	2.5	-	-	40.0	56.7	3.3	0.0	-	-	0.0	84.6	15.4	0.0	-	-	-
Total %	0.7	8.5	4.9	0.0	-	14.1	8.5	14.8	4.2	0.7	-	28.2	8.5	12.0	0.7	0.0	-	21.1	0.0	31.0	5.6	0.0	-	36.6	-
PHF	0.250	0.750	0.583	0.000	-	0.714	0.500	0.750	0.375	0.250	-	0.833	0.429	0.607	0.250	0.000	-	0.625	0.000	0.550	0.400	0.000	-	0.619	0.789
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	4.8	0.0	0.0	-	2.5	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.7
Cars & Light Goods	1	12	7	0	-	20	11	18	5	1	-	35	12	16	1	0	-	29	0	43	8	0	-	51	135
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	91.7	85.7	83.3	100.0	-	87.5	100.0	94.1	100.0	-	-	96.7	-	97.7	100.0	-	-	98.1	95.1
Other Vehicles	0	0	0	0	-	0	1	2	1	0	-	4	0	1	0	0	-	1	0	1	0	0	-	1	6
% Other Vehicles	0.0	0.0	0.0	-	-	0.0	8.3	9.5	16.7	0.0	-	10.0	0.0	5.9	0.0	-	-	3.3	-	2.3	0.0	-	-	1.9	4.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-





Turning Movement Peak Hour Data Plot (12:00 PM)



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

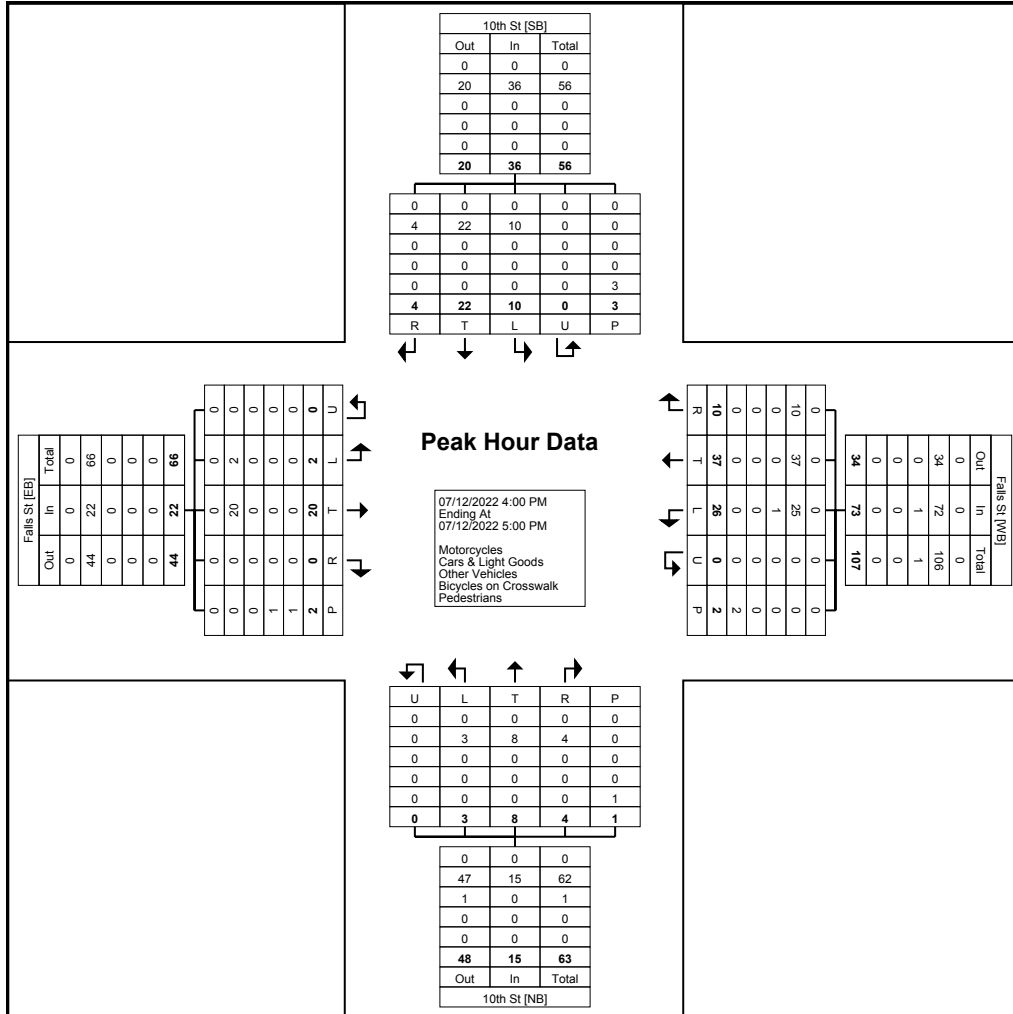
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: Falls St & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 7

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	10th St Southbound						Falls St Westbound						10th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	1	11	3	0	0	15	4	14	17	0	2	35	1	2	1	0	0	4	0	3	2	0	2	5	59
4:15 PM	0	2	0	0	0	2	0	6	3	0	0	9	1	1	2	0	0	4	0	7	0	0	0	7	22
4:30 PM	2	3	5	0	1	10	4	10	2	0	0	16	1	3	0	0	0	4	0	5	0	0	0	5	35
4:45 PM	1	6	2	0	2	9	2	7	4	0	0	13	1	2	0	0	1	3	0	5	0	0	0	5	30
Total	4	22	10	0	3	36	10	37	26	0	2	73	4	8	3	0	1	15	0	20	2	0	2	22	146
Approach %	11.1	61.1	27.8	0.0	-	-	13.7	50.7	35.6	0.0	-	-	26.7	53.3	20.0	0.0	-	-	0.0	90.9	9.1	0.0	-	-	-
Total %	2.7	15.1	6.8	0.0	-	24.7	6.8	25.3	17.8	0.0	-	50.0	2.7	5.5	2.1	0.0	-	10.3	0.0	13.7	1.4	0.0	-	15.1	-
PHF	0.500	0.500	0.500	0.000	-	0.600	0.625	0.661	0.382	0.000	-	0.521	1.000	0.667	0.375	0.000	-	0.938	0.000	0.714	0.250	0.000	-	0.786	0.619
Motorcycles	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
Cars & Light Goods	4	22	10	0	-	36	10	37	25	0	-	72	4	8	3	0	-	15	0	20	2	0	-	22	145
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	100.0	100.0	96.2	-	-	98.6	100.0	100.0	100.0	-	-	100.0	-	100.0	100.0	-	-	100.0	99.3
Other Vehicles	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Other Vehicles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	3.8	-	-	1.4	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-



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



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

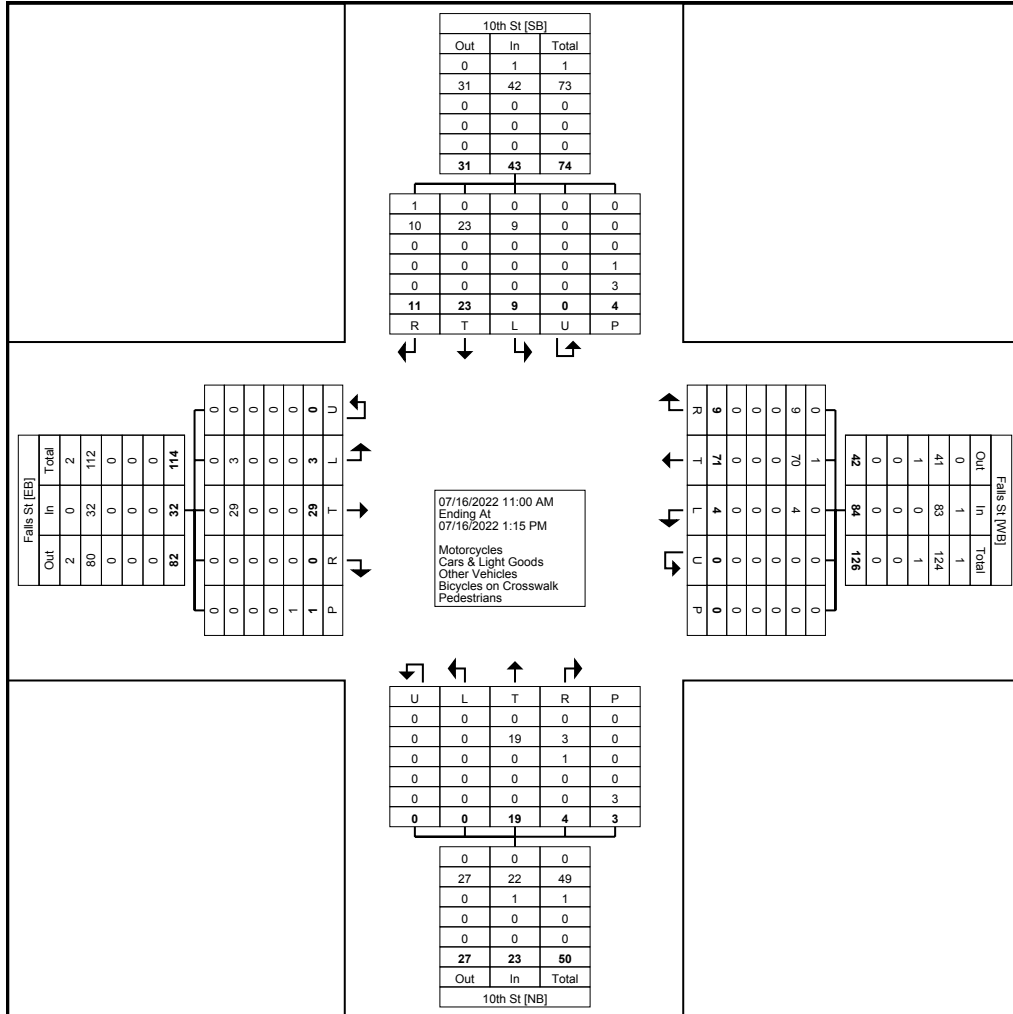
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: Falls St & 10th St
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	10th St Southbound						Falls St Westbound						10th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	1	1	0	0	3	1	15	0	0	0	16	1	1	0	0	0	2	0	2	1	0	0	3	24
11:15 AM	3	5	0	0	0	8	0	11	0	0	0	11	0	4	0	0	2	4	0	5	0	0	0	5	28
11:30 AM	0	6	0	0	0	6	0	9	1	0	0	10	0	6	0	0	0	6	0	2	0	0	0	2	24
11:45 AM	1	3	0	0	1	4	3	6	1	0	0	10	0	4	0	0	0	4	0	2	0	0	0	2	20
Hourly Total	5	15	1	0	1	21	4	41	2	0	0	47	1	15	0	0	2	16	0	11	1	0	0	12	96
12:00 PM	2	1	4	0	0	7	0	9	2	0	0	11	1	2	0	0	0	3	0	7	1	0	1	8	29
12:15 PM	1	3	0	0	3	4	2	5	0	0	0	7	1	1	0	0	0	2	0	5	1	0	0	6	19
12:30 PM	3	0	1	0	0	4	3	7	0	0	0	10	0	0	0	0	0	0	0	3	0	0	0	3	17
12:45 PM	0	4	3	0	0	7	0	9	0	0	0	9	1	1	0	0	1	2	0	3	0	0	0	3	21
Hourly Total	6	8	8	0	3	22	5	30	2	0	0	37	3	4	0	0	1	7	0	18	2	0	1	20	86
1:00 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
Grand Total	11	23	9	0	4	43	9	71	4	0	0	84	4	19	0	0	3	23	0	29	3	0	1	32	182
Approach %	25.6	53.5	20.9	0.0	-	-	10.7	84.5	4.8	0.0	-	-	17.4	82.6	0.0	0.0	-	-	0.0	90.6	9.4	0.0	-	-	-
Total %	6.0	12.6	4.9	0.0	-	23.6	4.9	39.0	2.2	0.0	-	46.2	2.2	10.4	0.0	0.0	-	12.6	0.0	15.9	1.6	0.0	-	17.6	-
Motorcycles	1	0	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Motorcycles	9.1	0.0	0.0	-	-	2.3	0.0	1.4	0.0	-	-	1.2	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	1.1
Cars & Light Goods	10	23	9	0	-	42	9	70	4	0	-	83	3	19	0	0	-	22	0	29	3	0	-	32	179
% Cars & Light Goods	90.9	100.0	100.0	-	-	97.7	100.0	98.6	100.0	-	-	98.8	75.0	100.0	-	-	-	95.7	-	100.0	100.0	-	-	100.0	98.4
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1
% Other Vehicles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	25.0	0.0	-	-	-	4.3	-	0.0	0.0	-	-	0.0	0.5
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	25.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	75.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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: Falls St & 10th St
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	10th St Southbound						Falls St Westbound						10th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	1	1	1	0	0	3	1	15	0	0	0	16	1	1	0	0	0	2	0	2	1	0	0	3	24
11:15 AM	3	5	0	0	0	8	0	11	0	0	0	11	0	4	0	0	2	4	0	5	0	0	0	5	28
11:30 AM	0	6	0	0	0	6	0	9	1	0	0	10	0	6	0	0	0	6	0	2	0	0	0	2	24
11:45 AM	1	3	0	0	1	4	3	6	1	0	0	10	0	4	0	0	0	4	0	2	0	0	0	2	20
Total	5	15	1	0	1	21	4	41	2	0	0	47	1	15	0	0	2	16	0	11	1	0	0	12	96
Approach %	23.8	71.4	4.8	0.0	-	-	8.5	87.2	4.3	0.0	-	-	6.3	93.8	0.0	0.0	-	-	0.0	91.7	8.3	0.0	-	-	-
Total %	5.2	15.6	1.0	0.0	-	21.9	4.2	42.7	2.1	0.0	-	49.0	1.0	15.6	0.0	0.0	-	16.7	0.0	11.5	1.0	0.0	-	12.5	-
PHF	0.417	0.625	0.250	0.000	-	0.656	0.333	0.683	0.500	0.000	-	0.734	0.250	0.625	0.000	0.000	-	0.667	0.000	0.550	0.250	0.000	-	0.600	0.857
Motorcycles	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	20.0	0.0	0.0	-	-	4.8	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	1.0
Cars & Light Goods	4	15	1	0	-	20	4	41	2	0	-	47	0	15	0	0	-	15	0	11	1	0	-	12	94
% Cars & Light Goods	80.0	100.0	100.0	-	-	95.2	100.0	100.0	100.0	-	-	100.0	0.0	100.0	-	-	-	93.8	-	100.0	100.0	-	-	100.0	97.9
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1
% Other Vehicles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	-	6.3	-	0.0	0.0	-	-	0.0	1.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	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: Falls St & 10th St
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	10th St Southbound						Falls St Westbound						10th St Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	2	1	4	0	0	7	0	9	2	0	0	11	1	2	0	0	0	3	0	7	1	0	1	8	29
12:15 PM	1	3	0	0	3	4	2	5	0	0	0	7	1	1	0	0	0	2	0	5	1	0	0	6	19
12:30 PM	3	0	1	0	0	4	3	7	0	0	0	10	0	0	0	0	0	0	0	3	0	0	0	3	17
12:45 PM	0	4	3	0	0	7	0	9	0	0	0	9	1	1	0	0	1	2	0	3	0	0	0	3	21
Total	6	8	8	0	3	22	5	30	2	0	0	37	3	4	0	0	1	7	0	18	2	0	1	20	86
Approach %	27.3	36.4	36.4	0.0	-	-	13.5	81.1	5.4	0.0	-	-	42.9	57.1	0.0	0.0	-	-	0.0	90.0	10.0	0.0	-	-	-
Total %	7.0	9.3	9.3	0.0	-	25.6	5.8	34.9	2.3	0.0	-	43.0	3.5	4.7	0.0	0.0	-	8.1	0.0	20.9	2.3	0.0	-	23.3	-
PHF	0.500	0.500	0.500	0.000	-	0.786	0.417	0.833	0.250	0.000	-	0.841	0.750	0.500	0.000	0.000	-	0.583	0.000	0.643	0.500	0.000	-	0.625	0.741
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	3.3	0.0	-	-	2.7	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	1.2
Cars & Light Goods	6	8	8	0	-	22	5	29	2	0	-	36	3	4	0	0	-	7	0	18	2	0	-	20	85
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	100.0	96.7	100.0	-	-	97.3	100.0	100.0	-	-	-	100.0	-	100.0	100.0	-	-	100.0	98.8
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Other Vehicles	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
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	33.3	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	66.7	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	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: Ferry Ave & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 1

Niagara, New York
July 12, 2022

Turning Movement Data

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	8	4	0	0	12	0	0	0	0	0	0	2	18	0	0	0	20	5	17	3	0	0	25	57
7:15 AM	0	8	3	0	0	11	0	0	0	0	3	0	3	11	0	0	0	14	3	13	2	0	0	18	43
7:30 AM	0	13	2	0	0	15	0	0	0	0	3	0	2	21	0	0	1	23	0	7	3	0	0	10	48
7:45 AM	0	9	5	0	2	14	0	0	0	0	1	0	6	28	0	0	0	34	3	25	4	0	0	32	80
Hourly Total	0	38	14	0	2	52	0	0	0	0	7	0	13	78	0	0	1	91	11	62	12	0	0	85	228
8:00 AM	0	14	6	0	0	20	0	0	0	0	0	0	7	28	0	0	1	35	1	24	4	0	0	29	84
8:15 AM	0	19	3	0	0	22	0	0	0	0	0	0	5	19	0	0	2	24	6	15	4	0	1	25	71
8:30 AM	0	12	6	0	1	18	0	0	0	0	3	0	1	13	0	0	2	14	3	18	3	0	6	24	56
8:45 AM	0	21	9	0	0	30	0	0	0	0	1	0	4	25	0	0	1	29	2	21	7	0	5	30	89
Hourly Total	0	66	24	0	1	90	0	0	0	0	4	0	17	85	0	0	6	102	12	78	18	0	12	108	300
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	17	8	0	0	25	0	0	0	0	3	0	4	13	0	0	0	17	2	36	3	0	0	41	83
11:15 AM	0	16	6	0	0	22	0	0	0	0	1	0	1	12	0	0	1	13	5	39	3	0	3	47	82
11:30 AM	0	21	7	0	2	28	0	0	0	0	0	0	6	20	0	0	0	26	3	34	4	0	2	41	95
11:45 AM	0	19	10	0	0	29	0	0	0	0	3	0	2	12	0	0	1	14	2	36	1	0	0	39	82
Hourly Total	0	73	31	0	2	104	0	0	0	0	7	0	13	57	0	0	2	70	12	145	11	0	5	168	342
12:00 PM	0	18	14	0	0	32	0	0	0	0	1	0	3	19	0	0	0	22	3	35	8	0	1	46	100
12:15 PM	0	27	11	0	3	38	0	0	0	0	1	0	7	22	0	0	2	29	1	33	3	0	3	37	104
12:30 PM	0	21	8	0	0	29	0	0	0	0	2	0	2	14	0	0	1	16	5	37	5	0	1	47	92
12:45 PM	0	24	10	0	6	34	0	0	0	0	0	0	7	24	0	0	1	31	2	53	9	0	2	64	129
Hourly Total	0	90	43	0	9	133	0	0	0	0	4	0	19	79	0	0	4	98	11	158	25	0	7	194	425
1:00 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
Grand Total	0	267	112	0	14	379	0	0	0	0	22	0	62	299	0	0	13	361	46	443	66	0	24	555	1295
Approach %	0.0	70.4	29.6	0.0	-	-	0.0	0.0	0.0	0.0	-	-	17.2	82.8	0.0	0.0	-	-	8.3	79.8	11.9	0.0	-	-	-
Total %	0.0	20.6	8.6	0.0	-	29.3	0.0	0.0	0.0	0.0	-	0.0	4.8	23.1	0.0	0.0	-	27.9	3.6	34.2	5.1	0.0	-	42.9	-
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.1
Cars & Light Goods	0	255	110	0	-	365	0	0	0	0	-	0	61	293	0	0	-	354	45	421	66	0	-	532	1251
% Cars & Light Goods	-	95.5	98.2	-	-	96.3	-	-	-	-	-	-	98.4	98.0	-	-	-	98.1	97.8	95.0	100.0	-	-	95.9	96.6
Other Vehicles	0	12	2	0	-	14	0	0	0	0	-	0	1	6	0	0	-	7	1	21	0	0	-	22	43
% Other Vehicles	-	4.5	1.8	-	-	3.7	-	-	-	-	-	-	1.6	2.0	-	-	-	1.9	2.2	4.7	0.0	-	-	4.0	3.3
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-
% Bicycles on Crosswalk	-	-	-	-	7.1	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	16.7	-	-
Pedestrians	-	-	-	-	13	-	-	-	-	-	22	-	-	-	-	-	13	-	-	-	-	-	20	-	-
% Pedestrians	-	-	-	-	92.9	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	83.3	-	-



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

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

Count Name: Ferry Ave & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 3

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (8:00 AM)

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
8:00 AM	0	14	6	0	0	20	0	0	0	0	0	0	7	28	0	0	1	35	1	24	4	0	0	29	84
8:15 AM	0	19	3	0	0	22	0	0	0	0	0	0	5	19	0	0	2	24	6	15	4	0	1	25	71
8:30 AM	0	12	6	0	1	18	0	0	0	0	3	0	1	13	0	0	2	14	3	18	3	0	6	24	56
8:45 AM	0	21	9	0	0	30	0	0	0	0	1	0	4	25	0	0	1	29	2	21	7	0	5	30	89
Total	0	66	24	0	1	90	0	0	0	0	4	0	17	85	0	0	6	102	12	78	18	0	12	108	300
Approach %	0.0	73.3	26.7	0.0	-	-	0.0	0.0	0.0	0.0	-	-	16.7	83.3	0.0	0.0	-	-	11.1	72.2	16.7	0.0	-	-	-
Total %	0.0	22.0	8.0	0.0	-	30.0	0.0	0.0	0.0	0.0	-	0.0	5.7	28.3	0.0	0.0	-	34.0	4.0	26.0	6.0	0.0	-	36.0	-
PHF	0.000	0.786	0.667	0.000	-	0.750	0.000	0.000	0.000	0.000	-	0.000	0.607	0.759	0.000	0.000	-	0.729	0.500	0.813	0.643	0.000	-	0.900	0.843
Motorcycles	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
Cars & Light Goods	0	62	23	0	-	85	0	0	0	0	-	0	17	83	0	0	-	100	12	74	18	0	-	104	289
% Cars & Light Goods	-	93.9	95.8	-	-	94.4	-	-	-	-	-	-	100.0	97.6	-	-	-	98.0	100.0	94.9	100.0	-	-	96.3	96.3
Other Vehicles	0	4	1	0	-	5	0	0	0	0	-	0	0	2	0	0	-	2	0	4	0	0	-	4	11
% Other Vehicles	-	6.1	4.2	-	-	5.6	-	-	-	-	-	-	0.0	2.4	-	-	-	2.0	0.0	5.1	0.0	-	-	3.7	3.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	16.7	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	6	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	83.3	-	-



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

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

Count Name: Ferry Ave & 10th St
Site Code:
Start Date: 07/12/2022
Page No: 5

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	0	18	14	0	0	32	0	0	0	0	1	0	3	19	0	0	0	22	3	35	8	0	1	46	100
12:15 PM	0	27	11	0	3	38	0	0	0	0	1	0	7	22	0	0	2	29	1	33	3	0	3	37	104
12:30 PM	0	21	8	0	0	29	0	0	0	0	2	0	2	14	0	0	1	16	5	37	5	0	1	47	92
12:45 PM	0	24	10	0	6	34	0	0	0	0	0	0	7	24	0	0	1	31	2	53	9	0	2	64	129
Total	0	90	43	0	9	133	0	0	0	0	4	0	19	79	0	0	4	98	11	158	25	0	7	194	425
Approach %	0.0	67.7	32.3	0.0	-	-	0.0	0.0	0.0	0.0	-	-	19.4	80.6	0.0	0.0	-	-	5.7	81.4	12.9	0.0	-	-	-
Total %	0.0	21.2	10.1	0.0	-	31.3	0.0	0.0	0.0	0.0	-	0.0	4.5	18.6	0.0	0.0	-	23.1	2.6	37.2	5.9	0.0	-	45.6	-
PHF	0.000	0.833	0.768	0.000	-	0.875	0.000	0.000	0.000	0.000	-	0.000	0.679	0.823	0.000	0.000	-	0.790	0.550	0.745	0.694	0.000	-	0.758	0.824
Motorcycles	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
Cars & Light Goods	0	85	43	0	-	128	0	0	0	0	-	0	19	79	0	0	-	98	10	150	25	0	-	185	411
% Cars & Light Goods	-	94.4	100.0	-	-	96.2	-	-	-	-	-	-	100.0	100.0	-	-	-	100.0	90.9	94.9	100.0	-	-	95.4	96.7
Other Vehicles	0	5	0	0	-	5	0	0	0	0	-	0	0	0	0	0	-	0	1	8	0	0	-	9	14
% Other Vehicles	-	5.6	0.0	-	-	3.8	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	9.1	5.1	0.0	-	-	4.6	3.3
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	11.1	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	14.3	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	88.9	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	85.7	-	-



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

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

Count Name: Ferry Ave & 10th St
Site Code:
Start Date: 07/14/2022
Page No: 1

Niagara, New York
July 14, 2022

Turning Movement Data

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	0	46	22	0	0	68	0	0	0	0	2	0	4	15	0	0	1	19	3	59	3	0	1	65	152
4:15 PM	0	25	10	0	0	35	0	0	0	0	0	0	5	5	0	0	0	10	4	58	2	0	0	64	109
4:30 PM	0	42	14	0	0	56	0	0	0	0	0	0	4	6	0	0	0	10	4	49	5	0	3	58	124
4:45 PM	0	20	11	0	0	31	0	0	0	0	0	0	1	11	0	0	2	12	2	55	3	0	0	60	103
Hourly Total	0	133	57	0	0	190	0	0	0	0	2	0	14	37	0	0	3	51	13	221	13	0	4	247	488
5:00 PM	0	30	4	0	0	34	0	0	0	0	0	0	5	8	0	0	0	13	2	58	4	0	0	64	111
5:15 PM	0	23	7	0	5	30	0	0	0	0	1	0	6	7	0	0	3	13	1	56	2	1	0	60	103
5:30 PM	0	19	3	0	0	22	0	0	0	0	1	0	3	6	0	0	0	9	4	40	2	0	0	46	77
5:45 PM	0	20	5	0	1	25	0	0	0	0	0	0	1	8	0	0	1	9	5	43	2	0	1	50	84
Hourly Total	0	92	19	0	6	111	0	0	0	0	2	0	15	29	0	0	4	44	12	197	10	1	1	220	375
Grand Total	0	225	76	0	6	301	0	0	0	0	4	0	29	66	0	0	7	95	25	418	23	1	5	467	863
Approach %	0.0	74.8	25.2	0.0	-	-	0.0	0.0	0.0	0.0	-	-	30.5	69.5	0.0	0.0	-	-	5.4	89.5	4.9	0.2	-	-	-
Total %	0.0	26.1	8.8	0.0	-	34.9	0.0	0.0	0.0	0.0	-	0.0	3.4	7.6	0.0	0.0	-	11.0	2.9	48.4	2.7	0.1	-	54.1	-
Motorcycles	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	2
% Motorcycles	-	0.9	0.0	-	-	0.7	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.2
Cars & Light Goods	0	223	76	0	-	299	0	0	0	0	-	0	29	65	0	0	-	94	25	409	23	1	-	458	851
% Cars & Light Goods	-	99.1	100.0	-	-	99.3	-	-	-	-	-	-	100.0	98.5	-	-	-	98.9	100.0	97.8	100.0	100.0	-	98.1	98.6
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	9	0	0	-	9	10
% Other Vehicles	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	1.5	-	-	-	1.1	0.0	2.2	0.0	0.0	-	1.9	1.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	25.0	-	-	-	-	-	14.3	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	75.0	-	-	-	-	-	85.7	-	-	-	-	-	100.0	-	-



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

Coatesville, Pennsylvania, United States 19320
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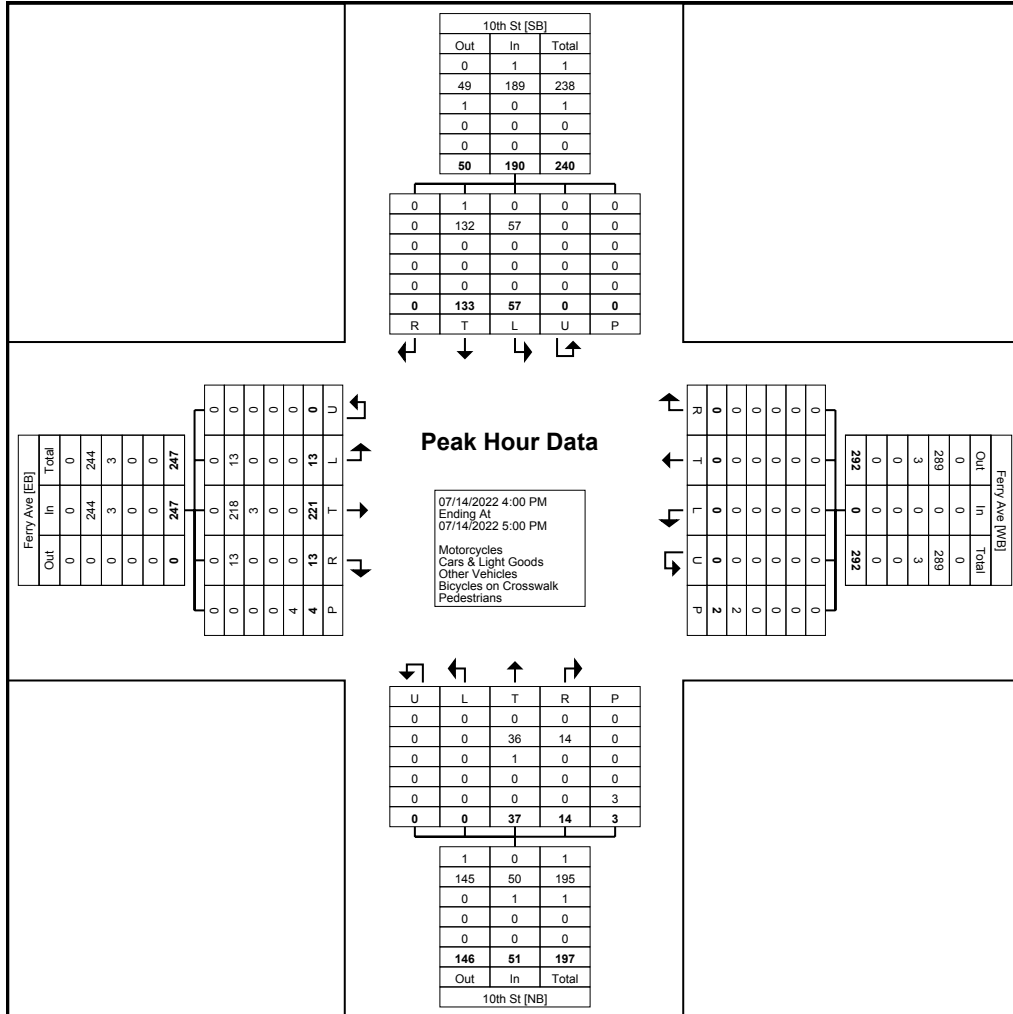
Count Name: Ferry Ave & 10th St
Site Code:
Start Date: 07/14/2022
Page No: 3

Niagara, New York
July 14, 2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	0	46	22	0	0	68	0	0	0	0	2	0	4	15	0	0	1	19	3	59	3	0	1	65	152
4:15 PM	0	25	10	0	0	35	0	0	0	0	0	0	5	5	0	0	0	10	4	58	2	0	0	64	109
4:30 PM	0	42	14	0	0	56	0	0	0	0	0	0	4	6	0	0	0	10	4	49	5	0	3	58	124
4:45 PM	0	20	11	0	0	31	0	0	0	0	0	0	1	11	0	0	2	12	2	55	3	0	0	60	103
Total	0	133	57	0	0	190	0	0	0	0	2	0	14	37	0	0	3	51	13	221	13	0	4	247	488
Approach %	0.0	70.0	30.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	27.5	72.5	0.0	0.0	-	-	5.3	89.5	5.3	0.0	-	-	-
Total %	0.0	27.3	11.7	0.0	-	38.9	0.0	0.0	0.0	0.0	-	0.0	2.9	7.6	0.0	0.0	-	10.5	2.7	45.3	2.7	0.0	-	50.6	-
PHF	0.000	0.723	0.648	0.000	-	0.699	0.000	0.000	0.000	0.000	-	0.000	0.700	0.617	0.000	0.000	-	0.671	0.813	0.936	0.650	0.000	-	0.950	0.803
Motorcycles	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	-	0.8	0.0	-	-	0.5	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.2
Cars & Light Goods	0	132	57	0	-	189	0	0	0	0	-	0	14	36	0	0	-	50	13	218	13	0	-	244	483
% Cars & Light Goods	-	99.2	100.0	-	-	99.5	-	-	-	-	-	-	100.0	97.3	-	-	-	98.0	100.0	98.6	100.0	-	-	98.8	99.0
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	3	0	0	-	3	4
% Other Vehicles	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	2.7	-	-	-	2.0	0.0	1.4	0.0	-	-	1.2	0.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 14, 2022



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



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

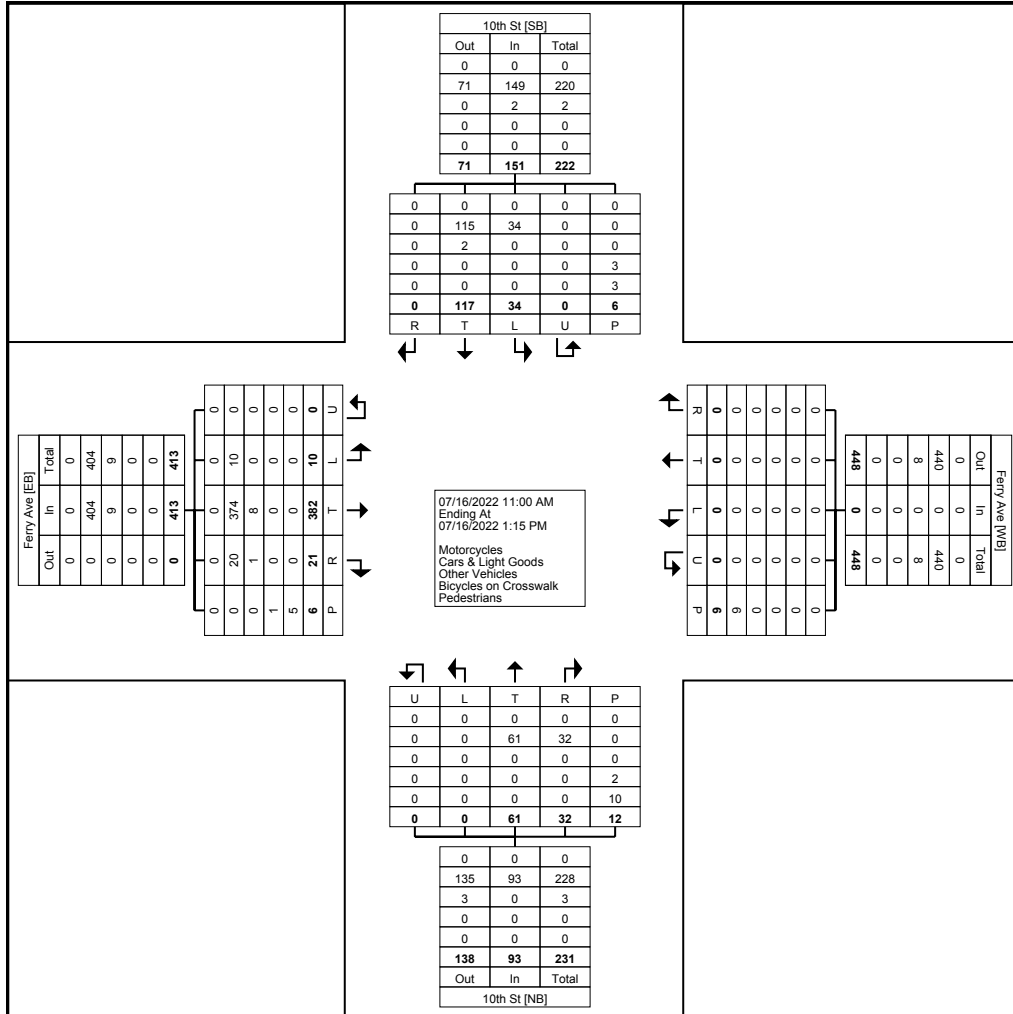
Coatesville, Pennsylvania, United States 19320
610-517-2338 bkarz@tstdata.com

Count Name: Ferry Ave & 10th St
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	0	11	2	0	0	13	0	0	0	0	1	0	2	6	0	0	2	8	5	43	1	0	1	49	70
11:15 AM	0	16	3	0	0	19	0	0	0	0	0	0	5	3	0	0	1	8	2	33	3	0	1	38	65
11:30 AM	0	17	4	0	0	21	0	0	0	0	0	0	2	10	0	0	3	12	2	56	3	0	0	61	94
11:45 AM	0	5	3	0	0	8	0	0	0	0	0	0	10	9	0	0	1	19	5	52	1	0	1	58	85
Hourly Total	0	49	12	0	0	61	0	0	0	0	1	0	19	28	0	0	7	47	14	184	8	0	3	206	314
12:00 PM	0	16	4	0	0	20	0	0	0	0	5	0	4	7	0	0	2	11	4	50	0	0	3	54	85
12:15 PM	0	17	6	0	3	23	0	0	0	0	0	0	2	7	0	0	1	9	0	52	0	0	0	52	84
12:30 PM	0	18	4	0	0	22	0	0	0	0	0	0	3	7	0	0	0	10	1	51	2	0	0	54	86
12:45 PM	0	17	8	0	3	25	0	0	0	0	0	0	4	12	0	0	2	16	2	45	0	0	0	47	88
Hourly Total	0	68	22	0	6	90	0	0	0	0	5	0	13	33	0	0	5	46	7	198	2	0	3	207	343
1:00 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
Grand Total	0	117	34	0	6	151	0	0	0	0	6	0	32	61	0	0	12	93	21	382	10	0	6	413	657
Approach %	0.0	77.5	22.5	0.0	-	-	0.0	0.0	0.0	0.0	-	-	34.4	65.6	0.0	0.0	-	-	5.1	92.5	2.4	0.0	-	-	-
Total %	0.0	17.8	5.2	0.0	-	23.0	0.0	0.0	0.0	0.0	-	0.0	4.9	9.3	0.0	0.0	-	14.2	3.2	58.1	1.5	0.0	-	62.9	-
Motorcycles	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
Cars & Light Goods	0	115	34	0	-	149	0	0	0	0	-	0	32	61	0	0	-	93	20	374	10	0	-	404	646
% Cars & Light Goods	-	98.3	100.0	-	-	98.7	-	-	-	-	-	-	100.0	100.0	-	-	-	100.0	95.2	97.9	100.0	-	-	97.8	98.3
Other Vehicles	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	1	8	0	0	-	9	11
% Other Vehicles	-	1.7	0.0	-	-	1.3	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	4.8	2.1	0.0	-	-	2.2	1.7
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	50.0	-	-	-	-	-	0.0	-	-	-	-	-	16.7	-	-	-	-	-	16.7	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	10	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	50.0	-	-	-	-	-	100.0	-	-	-	-	-	83.3	-	-	-	-	-	83.3	-	-



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

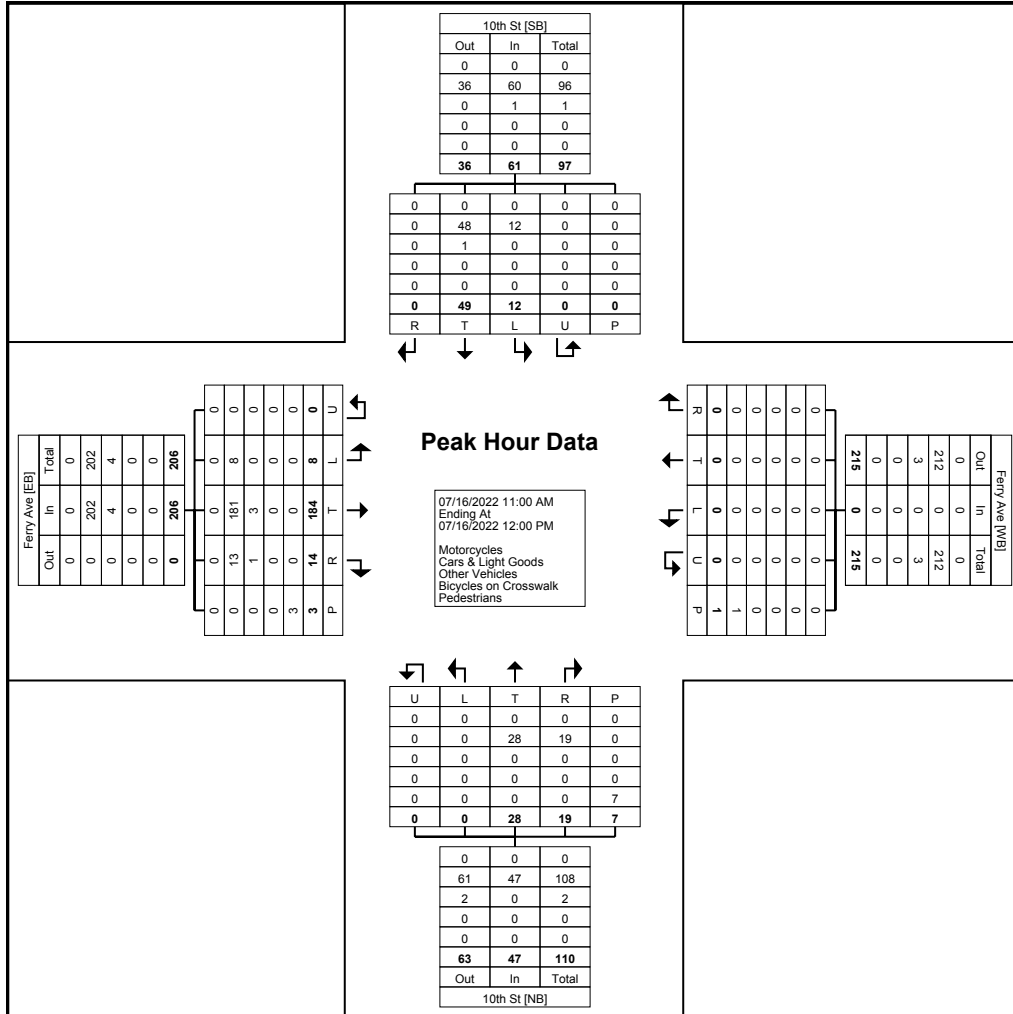
Count Name: Ferry Ave & 10th St
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	0	11	2	0	0	13	0	0	0	0	1	0	2	6	0	0	2	8	5	43	1	0	1	49	70
11:15 AM	0	16	3	0	0	19	0	0	0	0	0	0	5	3	0	0	1	8	2	33	3	0	1	38	65
11:30 AM	0	17	4	0	0	21	0	0	0	0	0	0	2	10	0	0	3	12	2	56	3	0	0	61	94
11:45 AM	0	5	3	0	0	8	0	0	0	0	0	0	10	9	0	0	1	19	5	52	1	0	1	58	85
Total	0	49	12	0	0	61	0	0	0	0	1	0	19	28	0	0	7	47	14	184	8	0	3	206	314
Approach %	0.0	80.3	19.7	0.0	-	-	0.0	0.0	0.0	0.0	-	-	40.4	59.6	0.0	0.0	-	-	6.8	89.3	3.9	0.0	-	-	-
Total %	0.0	15.6	3.8	0.0	-	19.4	0.0	0.0	0.0	0.0	-	0.0	6.1	8.9	0.0	0.0	-	15.0	4.5	58.6	2.5	0.0	-	65.6	-
PHF	0.000	0.721	0.750	0.000	-	0.726	0.000	0.000	0.000	0.000	-	0.000	0.475	0.700	0.000	0.000	-	0.618	0.700	0.821	0.667	0.000	-	0.844	0.835
Motorcycles	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
Cars & Light Goods	0	48	12	0	-	60	0	0	0	0	-	0	19	28	0	0	-	47	13	181	8	0	-	202	309
% Cars & Light Goods	-	98.0	100.0	-	-	98.4	-	-	-	-	-	-	100.0	100.0	-	-	-	100.0	92.9	98.4	100.0	-	-	98.1	98.4
Other Vehicles	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1	3	0	0	-	4	5
% Other Vehicles	-	2.0	0.0	-	-	1.6	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	7.1	1.6	0.0	-	-	1.9	1.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	7	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (11:00 AM)



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

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

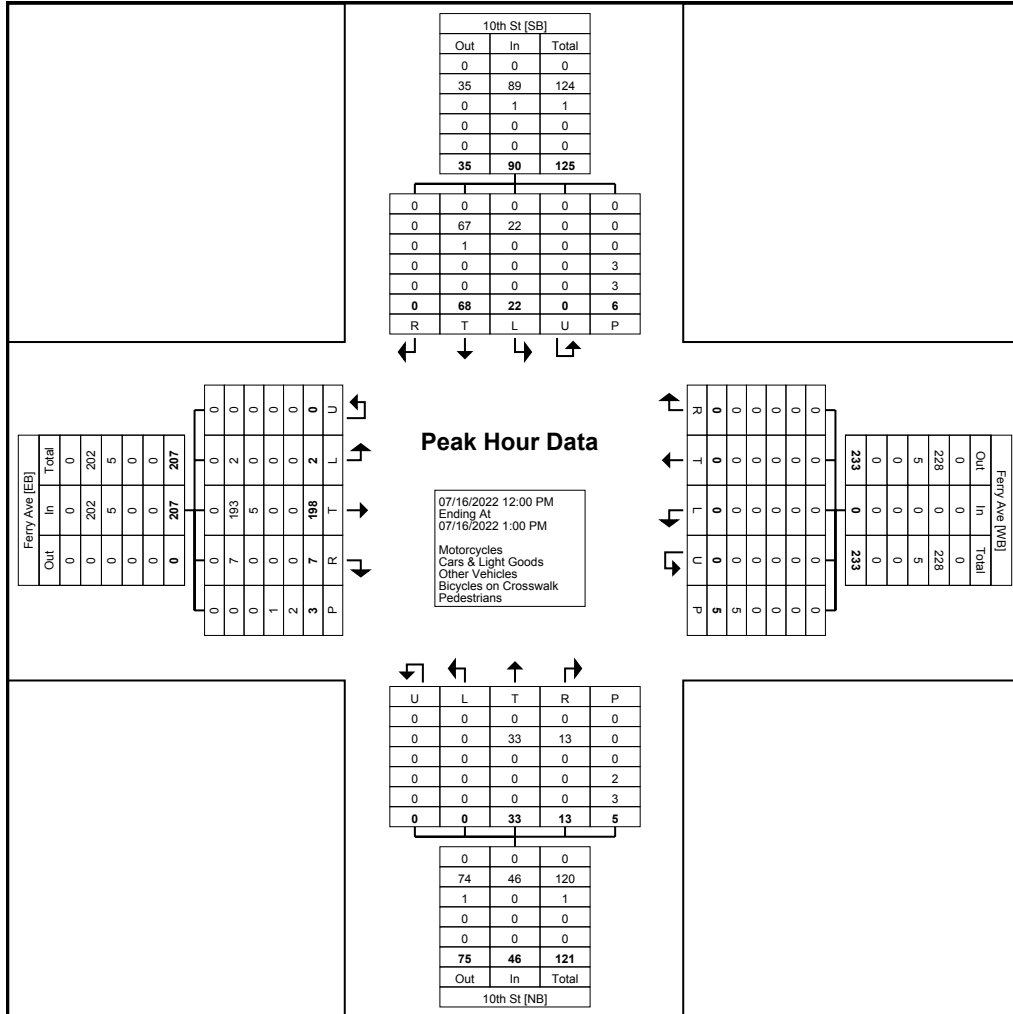
Count Name: Ferry Ave & 10th St
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	10th St Southbound						Ferry Ave Westbound						10th St Northbound						Ferry Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	0	16	4	0	0	20	0	0	0	0	5	0	4	7	0	0	2	11	4	50	0	0	3	54	85
12:15 PM	0	17	6	0	3	23	0	0	0	0	0	0	2	7	0	0	1	9	0	52	0	0	0	52	84
12:30 PM	0	18	4	0	0	22	0	0	0	0	0	0	3	7	0	0	0	10	1	51	2	0	0	54	86
12:45 PM	0	17	8	0	3	25	0	0	0	0	0	0	4	12	0	0	2	16	2	45	0	0	0	47	88
Total	0	68	22	0	6	90	0	0	0	0	5	0	13	33	0	0	5	46	7	198	2	0	3	207	343
Approach %	0.0	75.6	24.4	0.0	-	-	0.0	0.0	0.0	0.0	-	-	28.3	71.7	0.0	0.0	-	-	3.4	95.7	1.0	0.0	-	-	-
Total %	0.0	19.8	6.4	0.0	-	26.2	0.0	0.0	0.0	0.0	-	0.0	3.8	9.6	0.0	0.0	-	13.4	2.0	57.7	0.6	0.0	-	60.3	-
PHF	0.000	0.944	0.688	0.000	-	0.900	0.000	0.000	0.000	0.000	-	0.000	0.813	0.688	0.000	0.000	-	0.719	0.438	0.952	0.250	0.000	-	0.958	0.974
Motorcycles	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
Cars & Light Goods	0	67	22	0	-	89	0	0	0	0	-	0	13	33	0	0	-	46	7	193	2	0	-	202	337
% Cars & Light Goods	-	98.5	100.0	-	-	98.9	-	-	-	-	-	-	100.0	100.0	-	-	-	100.0	100.0	97.5	100.0	-	-	97.6	98.3
Other Vehicles	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	5	0	0	-	5	6
% Other Vehicles	-	1.5	0.0	-	-	1.1	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	2.5	0.0	-	-	2.4	1.7
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	50.0	-	-	-	-	-	0.0	-	-	-	-	-	40.0	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	50.0	-	-	-	-	-	100.0	-	-	-	-	-	60.0	-	-	-	-	-	66.7	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

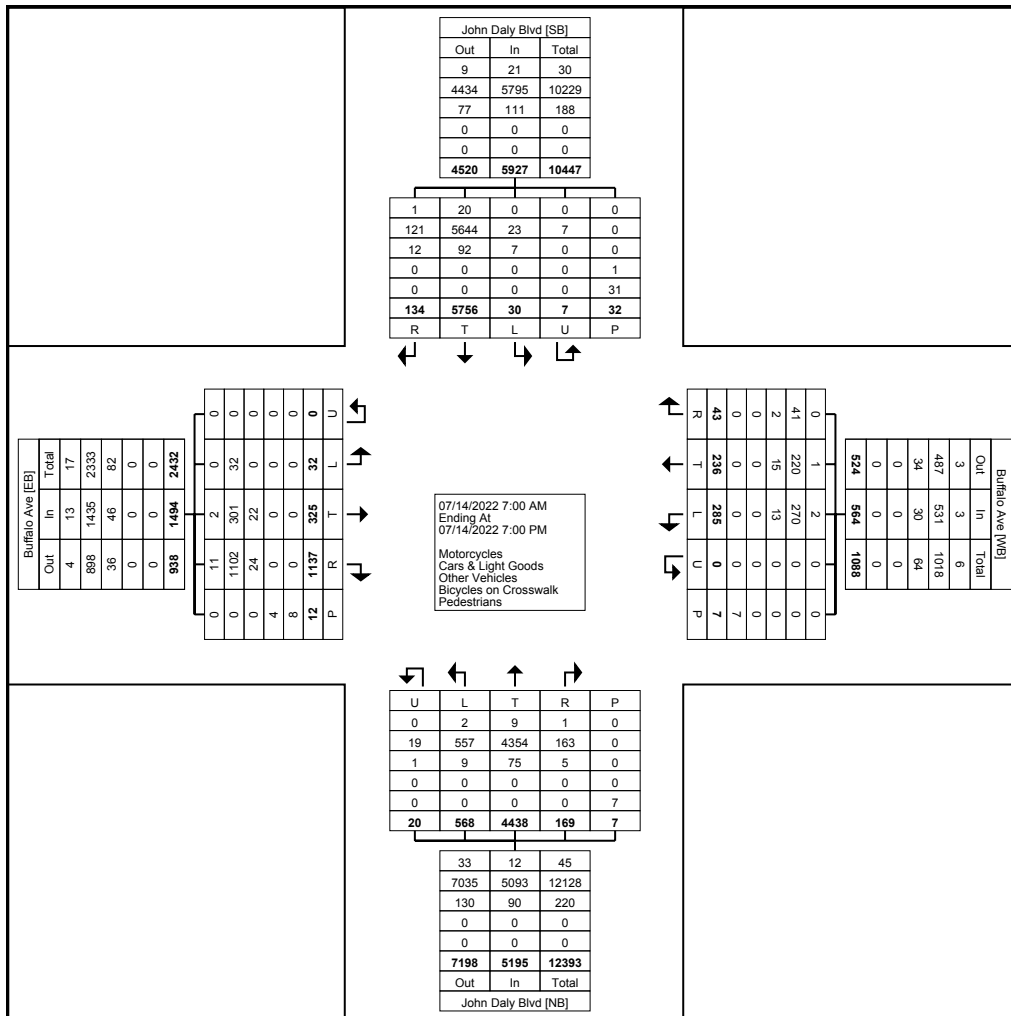
Count Name: John Daly Blvd &
Buffalo Ave
Site Code:
Start Date: 07/14/2022
Page No: 1

Niagara, New York
July 14, 2022

Turning Movement Data

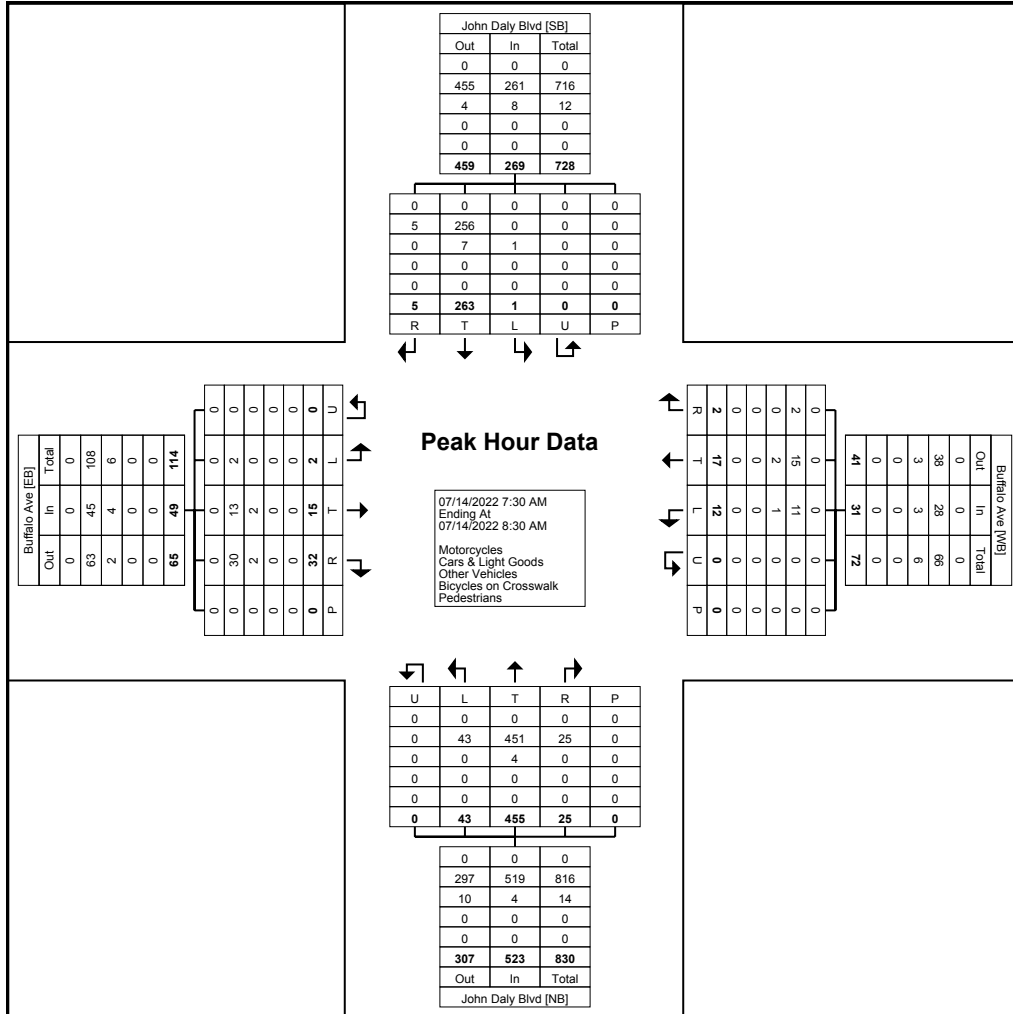
Start Time	John Daly Blvd Southbound							Buffalo Ave Westbound							John Daly Blvd Northbound							Buffalo Ave Eastbound							Int. Total
	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	Rght	Rght on Red	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	0	44	1	0	0	45	0	0	4	2	0	0	6	0	1	44	0	0	0	45	3	3	5	1	0	0	12	108
7:15 AM	0	0	48	0	0	0	48	0	0	2	3	0	0	5	3	0	70	8	0	0	81	4	2	1	0	0	0	7	141
7:30 AM	0	0	69	0	0	0	69	0	0	5	5	0	0	10	0	0	113	6	0	0	119	8	1	7	1	0	0	17	215
7:45 AM	2	0	55	0	0	0	57	1	0	3	3	0	0	7	13	2	154	17	0	0	186	6	3	2	1	0	0	12	262
Hourly Total	2	0	216	1	0	0	219	1	0	14	13	0	0	28	16	3	381	31	0	0	431	21	9	15	3	0	0	48	726
8:00 AM	0	0	79	1	0	0	80	0	0	5	1	0	0	6	8	2	92	7	0	0	109	8	2	3	0	0	0	13	208
8:15 AM	3	0	60	0	0	0	63	1	0	4	3	0	0	8	0	0	96	13	0	0	109	1	3	3	0	0	0	7	187
8:30 AM	3	1	67	1	0	0	72	2	0	5	5	0	0	12	1	0	88	19	0	0	108	5	1	3	0	0	0	9	201
8:45 AM	3	0	85	0	1	2	89	0	1	2	0	0	0	3	4	0	104	18	0	0	126	9	5	6	0	0	0	20	238
Hourly Total	9	1	291	2	1	2	304	3	1	16	9	0	0	29	13	2	380	57	0	0	452	23	11	15	0	0	0	49	834
9:00 AM	3	0	75	0	0	0	78	0	0	4	8	0	0	12	1	1	74	9	2	0	87	5	6	5	0	0	0	16	193
9:15 AM	1	0	96	1	0	4	98	0	0	5	7	0	0	12	3	4	52	11	0	0	70	2	4	6	1	0	0	13	193
9:30 AM	2	1	77	0	0	2	80	2	0	6	11	0	0	19	2	0	61	11	1	0	75	3	13	5	1	0	0	22	196
9:45 AM	5	1	80	1	1	0	88	0	0	7	6	0	0	13	1	0	77	13	1	0	92	5	4	12	2	0	0	23	216
Hourly Total	11	2	328	2	1	6	344	2	0	22	32	0	0	56	7	5	264	44	4	0	324	15	27	28	4	0	0	74	798
10:00 AM	3	0	108	0	1	0	112	1	1	7	7	0	0	16	3	2	60	14	2	1	81	12	7	4	2	0	0	25	234
10:15 AM	3	0	106	0	0	1	109	2	0	6	2	0	0	10	2	1	74	8	1	0	86	17	5	7	0	0	0	29	234
10:30 AM	7	0	90	0	0	0	97	2	0	9	8	0	0	19	2	1	85	15	0	0	103	17	4	8	0	0	0	29	248
10:45 AM	1	0	115	1	0	0	117	0	0	4	3	0	0	7	3	4	78	12	0	1	97	19	4	7	0	0	0	30	251
Hourly Total	14	0	419	1	1	1	435	5	1	26	20	0	0	52	10	8	297	49	3	2	367	65	20	26	2	0	0	113	967
11:00 AM	2	0	123	0	0	0	125	2	0	2	7	0	0	11	4	0	84	9	0	0	97	12	8	7	1	0	0	28	261
11:15 AM	2	1	103	1	0	0	107	0	0	2	6	0	0	8	4	4	93	13	0	0	114	16	8	7	1	0	0	32	261
11:30 AM	6	0	114	0	0	6	120	0	1	5	6	0	0	12	0	1	107	12	1	0	121	11	13	6	1	0	2	31	284
11:45 AM	1	0	117	0	0	0	118	0	0	3	7	0	0	10	4	0	121	9	0	0	134	17	2	7	1	0	2	27	289
Hourly Total	11	1	457	1	0	6	470	2	1	12	26	0	0	41	12	5	405	43	1	0	466	56	31	27	4	0	4	118	1095
12:00 PM	2	0	137	1	0	0	140	1	0	15	6	0	2	22	4	0	110	10	0	0	124	18	6	2	0	0	0	26	312
12:15 PM	2	0	106	0	0	0	108	1	0	6	4	0	0	11	1	1	94	13	2	0	111	9	2	12	2	0	0	25	255
12:30 PM	6	1	111	1	0	1	119	1	0	5	7	0	0	13	2	2	119	13	0	0	136	17	8	9	0	0	0	34	302
12:45 PM	1	0	120	1	0	0	122	0	0	4	3	0	0	7	3	2	88	15	0	0	108	23	1	8	0	0	0	32	269
Hourly Total	11	1	474	3	0	1	489	3	0	30	20	0	2	53	10	5	411	51	2	0	479	67	17	31	2	0	0	117	1138
1:00 PM	1	0	105	0	0	0	106	0	1	2	1	0	0	4	4	2	87	15	0	0	108	18	1	14	0	0	0	33	251
1:15 PM	2	0	121	0	0	0	123	1	0	6	3	0	0	10	2	2	91	13	1	1	109	18	5	9	0	0	0	32	274
1:30 PM	2	0	137	1	0	0	140	1	1	6	1	0	0	9	2	0	105	18	0	1	125	14	10	9	0	0	0	33	307
1:45 PM	3	0	145	1	0	0	149	0	0	6	6	0	0	12	3	0	85	14	0	1	102	26	9	3	1	0	0	39	302
Hourly Total	8	0	508	2	0	0	518	2	2	20	11	0	0	35	11	4	368	60	1	3	444	76	25	35	1	0	0	137	1134
2:00 PM	5	1	136	2	1	0	145	1	1	8	4	0	0	14	2	2	96	15	1	0	116	21	8	7	0	0	0	36	311
2:15 PM	1	1	142	1	0	2	145	0	0	8	4	0	0	12	2	0	88	13	0	2	103	20	12	9	1	0	0	42	302
2:30 PM	2	1	142	0	0	0	145	0	0	2	9	0	4	11	5	2	95	14	2	0	118	20	7	8	1	0	4	36	310
2:45 PM	0	0	138	1	0	2	139	1	0	5	3	0	0	9	3	0	101	10	0	0	114	26	8	7	2	0	2	43	305
Hourly Total	8	3	558	4	1	4	574	2	1	23	20	0	4	46	12	4	380	52	3	2	451	87	35	31	4	0	6	157	1228
3:00 PM	2	0	192	2	0	0	196	0	0	6	14	0	0	20	1	1	91	13	1	0	107	32	12	8	0	0	0	52	375
3:15 PM	1	0	179	2	0	0	182	1	0	6	5	0	0	12	5	0	99	15	0	0	119	29	7	6	0	0	0	42	355
3:30 PM	1	0	181	0	1	0	183	1	0	4	17	0	0	22	3	2	112	7	0	0	124	23	10	9	0	0	0	42	371
3:45 PM	6	0	193	1	0	0	200	0	1	6	13	0	0	20	6	0	123	14	0	0	143	32	14	10	0	0	0	56	419
Hourly Total	10	0	745	5	1	0	761	2	1	22	49	0	0	74	15	3	425	49	1	0	493	116	43	33	0	0	0	192	1520
4:00 PM	1	0	197	0	0	0	198	1	0	1	35	0	0	37	1	1	122	16	0	0	140	32	16	12	0	0	0	60	435
4:15 PM	3	0	167	0	0	5	170	1	0	3	5	0	0	9	1	1	91	16	1	0	110	28	9	7	1	0	0	45	334
4:30 PM	1	0	149	0	1	2	151	1	0	3	9	0	0	13	1	0	105	9	0	0	115	25	11	11	1	0	0	48	327
4:45 PM	6	0	162	3	1	0	172	0	2	7	6	0	0	15	3	0	99	16	0	0	118	22	12	6	2	0	0	42	347
Hourly Total	11	0	675	3	2	7	691	3	2	14	55	0	0	74	6	2	417	57	1	0	483	107	48	36	4	0	0	195	1443
5:00 PM	2	1	181	1	0	0	185	1	0	2	8	0	0	11	1	1	99	10	0	0	111	24	14	7	1	0	0	46	353
5:15 PM	5	0	144	0	0	0	149	1	0	6	2	0	0	9	1	0	74	8	1	0	84	23	13	6	2	0	0	44	286
5:30 PM	3	0	157	1	0	0	161	2	0	4	2	0	0	8	0	0	77	10	0	0	87	26	6	4	2	0	0	38	294
5:45 PM	3	0	134	1	0	0	138	0	0	3	3	0	0	6	3	1	82	17	1	0	104	20	7	4	0	0	0	31	279
Hourly Total	13	1	616	3	0	0	633	4	0	15	15	0	0	34	5	2	332	45	2	0	386	93	40	21	5	0	0	159	1212
6:00 PM	6	0	113	2	0	0	121	0	1	6	3	0	0	10	0	2	88	6	1	0	97	24	16	11	0	0	0	51	279
6:15 PM	3	0	116	0	0	0	119	1	0	4	3	0	0	8	0	0	83	10	0	0	93	15	5	6	2	0	0	28	248
6:30 PM	4	1	131	1	0	0	137	1	1	6	5	0	0	13	2	0	114	7	0										

Hourly Total	15	2	469	3	0	5	489	3	2	22	15	0	1	42	5	4	378	30	2	0	419	62	43	27	3	0	2	135	1085
Grand Total	123	11	5756	30	7	32	5927	32	11	236	285	0	7	564	122	47	4438	568	20	7	5195	788	349	325	32	0	12	1494	13180
Approach %	2.1	0.2	97.1	0.5	0.1	-	-	5.7	2.0	41.8	50.5	0.0	-	-	2.3	0.9	85.4	10.9	0.4	-	-	52.7	23.4	21.8	2.1	0.0	-	-	-
Total %	0.9	0.1	43.7	0.2	0.1	-	45.0	0.2	0.1	1.8	2.2	0.0	-	4.3	0.9	0.4	33.7	4.3	0.2	-	39.4	6.0	2.6	2.5	0.2	0.0	-	11.3	-
Motorcycles	1	0	20	0	0	-	21	0	0	1	2	0	-	3	1	0	9	2	0	-	12	7	4	2	0	0	-	13	49
% Motorcycles	0.8	0.0	0.3	0.0	0.0	-	0.4	0.0	0.0	0.4	0.7	-	-	0.5	0.8	0.0	0.2	0.4	0.0	-	0.2	0.9	1.1	0.6	0.0	-	-	0.9	0.4
Cars & Light Goods	111	10	5644	23	7	-	5795	31	10	220	270	0	-	531	116	47	4354	557	19	-	5093	762	340	301	32	0	-	1435	12854
% Cars & Light Goods	90.2	90.9	98.1	76.7	100.0	-	97.8	96.9	90.9	93.2	94.7	-	-	94.1	95.1	100.0	98.1	98.1	95.0	-	98.0	96.7	97.4	92.6	100.0	-	-	96.1	97.5
Other Vehicles	11	1	92	7	0	-	111	1	1	15	13	0	-	30	5	0	75	9	1	-	90	19	5	22	0	0	-	46	277
% Other Vehicles	8.9	9.1	1.6	23.3	0.0	-	1.9	3.1	9.1	6.4	4.6	-	-	5.3	4.1	0.0	1.7	1.6	5.0	-	1.7	2.4	1.4	6.8	0.0	-	-	3.1	2.1
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-
% Bicycles on Crosswalk	-	-	-	-	-	3.1	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	-	31	-	-	-	-	-	-	7	-	-	-	-	-	-	7	-	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	-	96.9	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	66.7	-	-



Turning Movement Data Plot

Niagara, New York
July 14, 2022



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



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

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

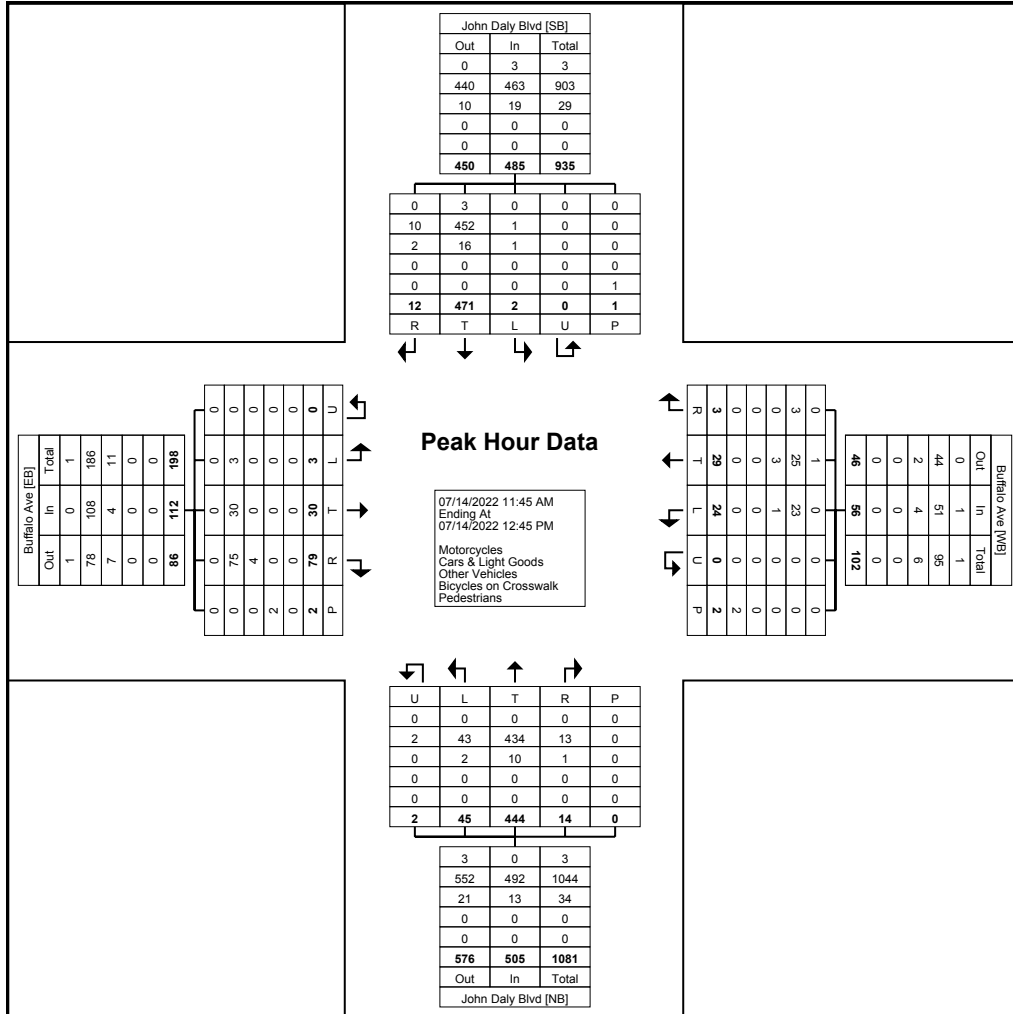
Count Name: John Daly Blvd &
Buffalo Ave
Site Code:
Start Date: 07/14/2022
Page No: 6

Niagara, New York
July 14, 2022

Turning Movement Peak Hour Data (11:45 AM)

Start Time	John Daly Blvd Southbound							Buffalo Ave Westbound							John Daly Blvd Northbound							Buffalo Ave Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
11:45 AM	1	0	117	0	0	0	118	0	0	3	7	0	0	10	4	0	121	9	0	0	134	17	2	7	1	0	2	27	289
12:00 PM	2	0	137	1	0	0	140	1	0	15	6	0	2	22	4	0	110	10	0	0	124	18	6	2	0	0	0	26	312
12:15 PM	2	0	106	0	0	0	108	1	0	6	4	0	0	11	1	1	94	13	2	0	111	9	2	12	2	0	0	25	255
12:30 PM	6	1	111	1	0	1	119	1	0	5	7	0	0	13	2	2	119	13	0	0	136	17	8	9	0	0	0	34	302
Total	11	1	471	2	0	1	485	3	0	29	24	0	2	56	11	3	444	45	2	0	505	61	18	30	3	0	2	112	1158
Approach %	2.3	0.2	97.1	0.4	0.0	-	-	5.4	0.0	51.8	42.9	0.0	-	-	2.2	0.6	87.9	8.9	0.4	-	-	54.5	16.1	26.8	2.7	0.0	-	-	-
Total %	0.9	0.1	40.7	0.2	0.0	-	41.9	0.3	0.0	2.5	2.1	0.0	-	4.8	0.9	0.3	38.3	3.9	0.2	-	43.6	5.3	1.6	2.6	0.3	0.0	-	9.7	-
PHF	0.458	0.250	0.859	0.500	0.000	-	0.866	0.750	0.000	0.483	0.857	0.000	-	0.636	0.688	0.375	0.917	0.865	0.250	-	0.928	0.847	0.563	0.625	0.375	0.000	-	0.824	0.928
Motorcycles	0	0	3	0	0	-	3	0	0	1	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	4
% Motorcycles	0.0	0.0	0.6	0.0	-	-	0.6	0.0	-	3.4	0.0	-	-	1.8	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Cars & Light Goods	9	1	452	1	0	-	463	3	0	25	23	0	-	51	10	3	434	43	2	-	492	57	18	30	3	0	-	108	1114
% Cars & Light Goods	81.8	100.0	96.0	50.0	-	-	95.5	100.0	-	86.2	95.8	-	-	91.1	90.9	100.0	97.7	95.6	100.0	-	97.4	93.4	100.0	100.0	100.0	-	-	96.4	96.2
Other Vehicles	2	0	16	1	0	-	19	0	0	3	1	0	-	4	1	0	10	2	0	-	13	4	0	0	0	0	-	4	40
% Other Vehicles	18.2	0.0	3.4	50.0	-	-	3.9	0.0	-	10.3	4.2	-	-	7.1	9.1	0.0	2.3	4.4	0.0	-	2.6	6.6	0.0	0.0	0.0	-	-	3.6	3.5
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-

Niagara, New York
July 14, 2022



Turning Movement Peak Hour Data Plot (11:45 AM)



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

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

Count Name: John Daly Blvd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 1

Niagara, New York
July 16, 2022

Turning Movement Data

Start Time	John Daly Blvd Southbound							Buffalo Ave Westbound							John Daly Blvd Northbound							Buffalo Ave Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	2	0	110	0	0	0	112	2	0	2	4	0	0	8	0	0	147	28	1	0	176	16	13	5	0	0	0	34	330
11:15 AM	2	1	118	1	0	0	122	0	0	6	11	0	0	17	6	0	127	22	2	0	157	23	6	6	1	1	0	37	333
11:30 AM	6	0	145	4	0	0	155	0	0	5	2	0	0	7	2	0	172	20	1	0	195	21	11	4	1	0	0	37	394
11:45 AM	3	0	132	3	0	0	138	1	0	9	2	0	0	12	1	2	169	16	0	0	188	16	5	2	2	0	6	25	363
Hourly Total	13	1	505	8	0	0	527	3	0	22	19	0	0	44	9	2	615	86	4	0	716	76	35	17	4	1	6	133	1420
12:00 PM	5	0	180	1	0	0	186	1	0	4	10	0	0	15	4	0	103	29	1	1	137	21	13	8	1	0	0	43	381
12:15 PM	2	0	141	0	0	0	143	1	0	6	6	0	0	13	0	2	114	26	2	0	144	12	9	2	0	0	4	23	323
12:30 PM	2	0	156	0	1	0	159	0	0	3	5	0	0	8	1	1	111	20	2	0	135	14	13	5	2	0	0	34	336
12:45 PM	1	0	146	3	0	0	150	0	0	10	3	0	0	13	3	1	121	19	2	0	146	27	6	6	0	0	0	39	348
Hourly Total	10	0	623	4	1	0	638	2	0	23	24	0	0	49	8	4	449	94	7	1	562	74	41	21	3	0	4	139	1388
Grand Total	23	1	1128	12	1	0	1165	5	0	45	43	0	0	93	17	6	1064	180	11	1	1278	150	76	38	7	1	10	272	2808
Approach %	2.0	0.1	96.8	1.0	0.1	-	-	5.4	0.0	48.4	46.2	0.0	-	-	1.3	0.5	83.3	14.1	0.9	-	-	55.1	27.9	14.0	2.6	0.4	-	-	-
Total %	0.8	0.0	40.2	0.4	0.0	-	41.5	0.2	0.0	1.6	1.5	0.0	-	3.3	0.6	0.2	37.9	6.4	0.4	-	45.5	5.3	2.7	1.4	0.2	0.0	-	9.7	-
Motorcycles	0	0	5	0	0	-	5	0	0	0	1	0	-	1	0	0	3	1	0	-	4	1	3	0	0	0	-	4	14
% Motorcycles	0.0	0.0	0.4	0.0	0.0	-	0.4	0.0	-	0.0	2.3	-	-	1.1	0.0	0.0	0.3	0.6	0.0	-	0.3	0.7	3.9	0.0	0.0	0.0	-	1.5	0.5
Cars & Light Goods	22	1	1111	8	1	-	1143	5	0	39	41	0	-	85	17	6	1054	173	11	-	1261	148	73	37	7	1	-	266	2755
% Cars & Light Goods	95.7	100.0	98.5	66.7	100.0	-	98.1	100.0	-	86.7	95.3	-	-	91.4	100.0	100.0	99.1	96.1	100.0	-	98.7	98.7	96.1	97.4	100.0	100.0	-	97.8	98.1
Other Vehicles	1	0	12	4	0	-	17	0	0	6	1	0	-	7	0	0	7	6	0	-	13	1	0	1	0	0	-	2	39
% Other Vehicles	4.3	0.0	1.1	33.3	0.0	-	1.5	0.0	-	13.3	2.3	-	-	7.5	0.0	0.0	0.7	3.3	0.0	-	1.0	0.7	0.0	2.6	0.0	0.0	-	0.7	1.4
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	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: John Daly Blvd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 3

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	John Daly Blvd Southbound							Buffalo Ave Westbound							John Daly Blvd Northbound							Buffalo Ave Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	2	0	110	0	0	0	112	2	0	2	4	0	0	8	0	0	147	28	1	0	176	16	13	5	0	0	0	34	330
11:15 AM	2	1	118	1	0	0	122	0	0	6	11	0	0	17	6	0	127	22	2	0	157	23	6	6	1	1	0	37	333
11:30 AM	6	0	145	4	0	0	155	0	0	5	2	0	0	7	2	0	172	20	1	0	195	21	11	4	1	0	0	37	394
11:45 AM	3	0	132	3	0	0	138	1	0	9	2	0	0	12	1	2	169	16	0	0	188	16	5	2	2	0	6	25	363
Total	13	1	505	8	0	0	527	3	0	22	19	0	0	44	9	2	615	86	4	0	716	76	35	17	4	1	6	133	1420
Approach %	2.5	0.2	95.8	1.5	0.0	-	-	6.8	0.0	50.0	43.2	0.0	-	-	1.3	0.3	85.9	12.0	0.6	-	-	57.1	26.3	12.8	3.0	0.8	-	-	-
Total %	0.9	0.1	35.6	0.6	0.0	-	37.1	0.2	0.0	1.5	1.3	0.0	-	3.1	0.6	0.1	43.3	6.1	0.3	-	50.4	5.4	2.5	1.2	0.3	0.1	-	9.4	-
PHF	0.54 2	0.250	0.871	0.500	0.000	-	0.850	0.375	0.000	0.611	0.432	0.000	-	0.647	0.375	0.250	0.894	0.768	0.500	-	0.918	0.826	0.673	0.708	0.500	0.250	-	0.899	0.901
Motorcycles	0	0	4	0	0	-	4	0	0	0	1	0	-	1	0	0	1	1	0	-	2	0	3	0	0	0	-	3	10
% Motorcycles	0.0	0.0	0.8	0.0	-	-	0.8	0.0	-	0.0	5.3	-	-	2.3	0.0	0.0	0.2	1.2	0.0	-	0.3	0.0	8.6	0.0	0.0	0.0	-	2.3	0.7
Cars & Light Goods	12	1	495	5	0	-	513	3	0	19	18	0	-	40	9	2	610	83	4	-	708	76	32	17	4	1	-	130	1391
% Cars & Light Goods	92.3	100.0	98.0	62.5	-	-	97.3	100.0	-	86.4	94.7	-	-	90.9	100.0	100.0	99.2	96.5	100.0	-	98.9	100.0	91.4	100.0	100.0	100.0	-	97.7	98.0
Other Vehicles	1	0	6	3	0	-	10	0	0	3	0	0	-	3	0	0	4	2	0	-	6	0	0	0	0	0	-	0	19
% Other Vehicles	7.7	0.0	1.2	37.5	-	-	1.9	0.0	-	13.6	0.0	-	-	6.8	0.0	0.0	0.7	2.3	0.0	-	0.8	0.0	0.0	0.0	0.0	0.0	-	0.0	1.3
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



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

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

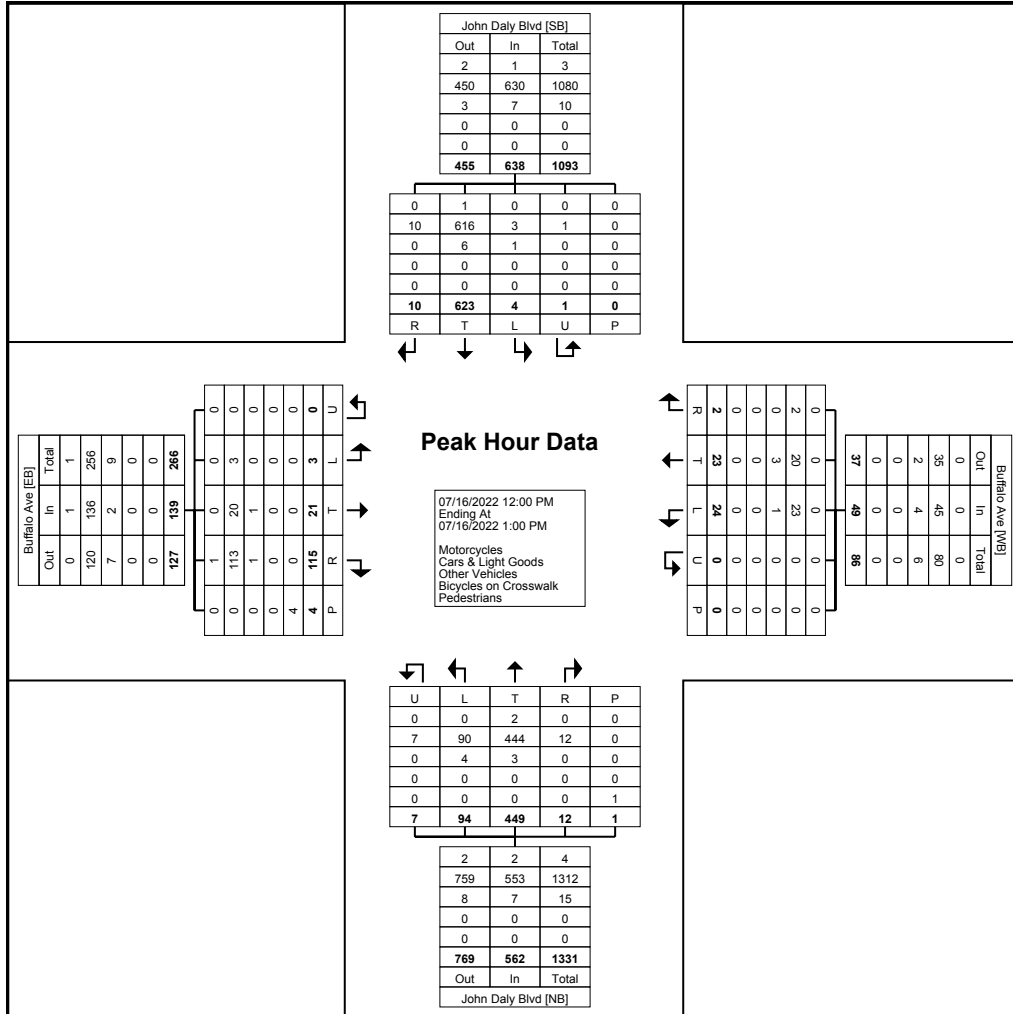
Count Name: John Daly Blvd &
Buffalo Ave
Site Code:
Start Date: 07/16/2022
Page No: 5

Niagara, New York
July 16, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	John Daly Blvd Southbound							Buffalo Ave Westbound							John Daly Blvd Northbound							Buffalo Ave Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	5	0	180	1	0	0	186	1	0	4	10	0	0	15	4	0	103	29	1	1	137	21	13	8	1	0	0	43	381
12:15 PM	2	0	141	0	0	0	143	1	0	6	6	0	0	13	0	2	114	26	2	0	144	12	9	2	0	0	4	23	323
12:30 PM	2	0	156	0	1	0	159	0	0	3	5	0	0	8	1	1	111	20	2	0	135	14	13	5	2	0	0	34	336
12:45 PM	1	0	146	3	0	0	150	0	0	10	3	0	0	13	3	1	121	19	2	0	146	27	6	6	0	0	0	39	348
Total	10	0	623	4	1	0	638	2	0	23	24	0	0	49	8	4	449	94	7	1	562	74	41	21	3	0	4	139	1388
Approach %	1.6	0.0	97.6	0.6	0.2	-	-	4.1	0.0	46.9	49.0	0.0	-	-	1.4	0.7	79.9	16.7	1.2	-	-	53.2	29.5	15.1	2.2	0.0	-	-	-
Total %	0.7	0.0	44.9	0.3	0.1	-	46.0	0.1	0.0	1.7	1.7	0.0	-	3.5	0.6	0.3	32.3	6.8	0.5	-	40.5	5.3	3.0	1.5	0.2	0.0	-	10.0	-
PHF	0.500	0.000	0.865	0.333	0.250	-	0.858	0.500	0.000	0.575	0.600	0.000	-	0.817	0.500	0.500	0.928	0.810	0.875	-	0.962	0.685	0.788	0.656	0.375	0.000	-	0.808	0.911
Motorcycles	0	0	1	0	0	-	1	0	0	0	0	0	-	0	0	0	2	0	0	-	2	1	0	0	0	0	-	1	4
% Motorcycles	0.0	-	0.2	0.0	0.0	-	0.2	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.4	0.0	0.0	-	0.4	1.4	0.0	0.0	0.0	-	-	0.7	0.3	
Cars & Light Goods	10	0	616	3	1	-	630	2	0	20	23	0	-	45	8	4	444	90	7	-	553	72	41	20	3	0	-	136	1364
% Cars & Light Goods	100.0	-	98.9	75.0	100.0	-	98.7	100.0	-	87.0	95.8	-	-	91.8	100.0	100.0	98.9	95.7	100.0	-	98.4	97.3	100.0	95.2	100.0	-	-	97.8	98.3
Other Vehicles	0	0	6	1	0	-	7	0	0	3	1	0	-	4	0	0	3	4	0	-	7	1	0	1	0	0	-	2	20
% Other Vehicles	0.0	-	1.0	25.0	0.0	-	1.1	0.0	-	13.0	4.2	-	-	8.2	0.0	0.0	0.7	4.3	0.0	-	1.2	1.4	0.0	4.8	0.0	-	-	1.4	1.4
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

Niagara, New York
July 16, 2022



Turning Movement Peak Hour Data Plot (12:00 PM)



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

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

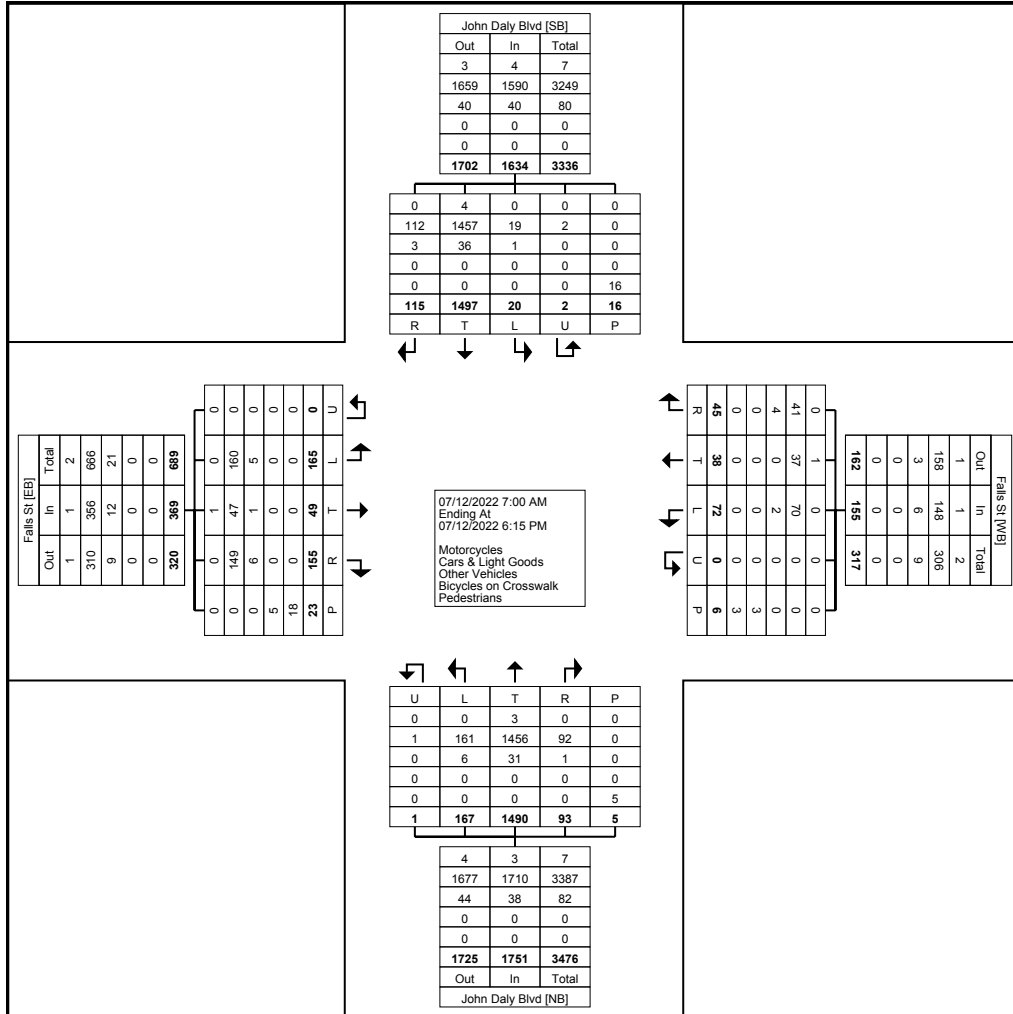
Count Name: John Daly Blvd &
Falls St
Site Code:
Start Date: 07/12/2022
Page No: 1

Niagara, New York
July 12, 2022

Turning Movement Data

Start Time	John Daly Blvd Southbound						Falls St Westbound						John Daly Blvd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	39	0	0	0	39	1	0	0	0	0	1	3	41	4	0	0	48	1	0	2	0	3	3	91
7:15 AM	1	37	0	1	0	39	0	0	1	0	0	1	4	48	4	0	1	56	1	1	5	0	0	7	103
7:30 AM	0	32	1	0	2	33	1	1	3	0	1	5	7	76	2	0	85	2	1	1	0	1	4	127	
7:45 AM	4	31	2	0	0	37	2	1	2	0	1	5	16	102	3	0	121	3	3	4	0	1	10	173	
Hourly Total	5	139	3	1	2	148	4	2	6	0	2	12	30	267	13	0	310	7	5	12	0	5	24	494	
8:00 AM	0	28	0	0	0	28	0	2	2	0	0	4	6	81	2	0	89	5	2	3	0	0	10	131	
8:15 AM	1	41	0	0	0	42	1	0	3	0	0	4	16	64	2	0	82	4	1	2	0	0	7	135	
8:30 AM	3	37	0	0	3	40	3	1	2	0	0	6	5	74	0	0	79	7	0	4	0	3	11	136	
8:45 AM	5	43	0	0	0	48	1	0	1	0	0	2	0	97	2	0	99	4	3	6	0	4	13	162	
Hourly Total	9	149	0	0	3	158	5	3	8	0	0	16	27	316	6	0	349	20	6	15	0	7	41	564	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	6	57	1	0	0	64	1	2	2	0	0	5	2	57	7	1	67	10	3	9	0	1	22	158	
11:15 AM	6	47	0	0	0	53	4	2	1	0	0	7	1	45	7	0	53	12	4	8	0	1	24	137	
11:30 AM	7	60	0	0	0	67	4	2	5	0	0	11	1	61	3	0	65	7	2	8	0	0	17	160	
11:45 AM	4	54	1	0	0	59	1	3	0	0	0	4	3	69	6	0	78	7	3	6	0	2	16	157	
Hourly Total	23	218	2	0	0	243	10	9	8	0	0	27	7	232	23	1	263	36	12	31	0	4	79	612	
12:00 PM	9	65	3	0	0	77	4	3	3	0	0	10	2	59	15	0	76	5	4	6	0	1	15	178	
12:15 PM	5	68	1	1	1	75	2	0	3	0	0	5	2	57	2	0	61	3	2	4	0	0	9	150	
12:30 PM	3	67	2	0	3	72	3	1	4	0	0	8	4	70	7	0	81	9	1	11	0	2	21	182	
12:45 PM	5	61	1	0	3	67	3	4	2	0	0	9	2	73	10	0	85	5	1	14	0	3	20	181	
Hourly Total	22	261	7	1	7	291	12	8	12	0	0	32	10	259	34	0	303	22	8	35	0	6	65	691	
1:00 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
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	7	140	0	0	0	147	1	2	13	0	0	16	3	54	14	0	71	11	4	9	0	1	24	258	
4:15 PM	6	84	4	0	0	94	1	1	4	0	0	6	1	53	5	0	59	10	2	7	0	0	19	178	
4:30 PM	12	114	0	0	0	126	1	3	6	0	0	10	2	69	12	0	83	6	3	9	0	0	18	237	
4:45 PM	6	80	0	0	0	86	3	1	3	0	0	7	5	59	17	0	81	6	1	11	0	0	18	192	
Hourly Total	31	418	4	0	0	453	6	7	26	0	0	39	11	235	48	0	294	33	10	36	0	1	79	865	
5:00 PM	9	92	0	0	1	101	4	4	2	0	3	10	0	40	10	0	50	6	2	11	0	0	19	180	
5:15 PM	3	77	1	0	2	81	2	2	1	0	0	5	4	46	8	0	58	9	4	2	0	0	15	159	
5:30 PM	8	75	2	0	1	85	1	1	1	0	0	3	2	48	12	0	62	15	2	15	0	0	32	182	
5:45 PM	5	68	1	0	0	74	1	2	8	0	1	11	2	47	13	0	62	7	0	8	0	0	15	162	
Hourly Total	25	312	4	0	4	341	8	9	12	0	4	29	8	181	43	0	232	37	8	36	0	0	81	683	
6:00 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
Grand Total	115	1497	20	2	16	1634	45	38	72	0	6	155	93	1490	167	1	1751	155	49	165	0	23	369	3909	
Approach %	7.0	91.6	1.2	0.1	-	-	29.0	24.5	46.5	0.0	-	-	5.3	85.1	9.5	0.1	-	42.0	13.3	44.7	0.0	-	-	-	
Total %	2.9	38.3	0.5	0.1	-	41.8	1.2	1.0	1.8	0.0	-	4.0	2.4	38.1	4.3	0.0	44.8	4.0	1.3	4.2	0.0	-	9.4	-	
Motorcycles	0	4	0	0	-	4	0	1	0	0	-	1	0	3	0	0	3	0	1	0	0	-	1	9	
% Motorcycles	0.0	0.3	0.0	0.0	-	0.2	0.0	2.6	0.0	-	-	0.6	0.0	0.2	0.0	0.0	-	0.2	0.0	2.0	0.0	-	-	0.3	0.2
Cars & Light Goods	112	1457	19	2	-	1590	41	37	70	0	-	148	92	1456	161	1	1710	149	47	160	0	-	356	3804	
% Cars & Light Goods	97.4	97.3	95.0	100.0	-	97.3	91.1	97.4	97.2	-	-	95.5	98.9	97.7	96.4	100.0	-	97.7	96.1	95.9	97.0	-	-	96.5	97.3
Other Vehicles	3	36	1	0	-	40	4	0	2	0	-	6	1	31	6	0	38	6	1	5	0	-	12	96	
% Other Vehicles	2.6	2.4	5.0	0.0	-	2.4	8.9	0.0	2.8	-	-	3.9	1.1	2.1	3.6	0.0	-	2.2	3.9	2.0	3.0	-	-	3.3	2.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	5	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-	-	-	-	0.0	-	-	-	-	-	21.7	-	-
Pedestrians	-	-	-	-	16	-	-	-	-	-	3	-	-	-	-	-	5	-	-	-	-	-	18	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-	-	-	-	100.0	-	-	-	-	-	78.3	-	-

Niagara, New York
July 12, 2022



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

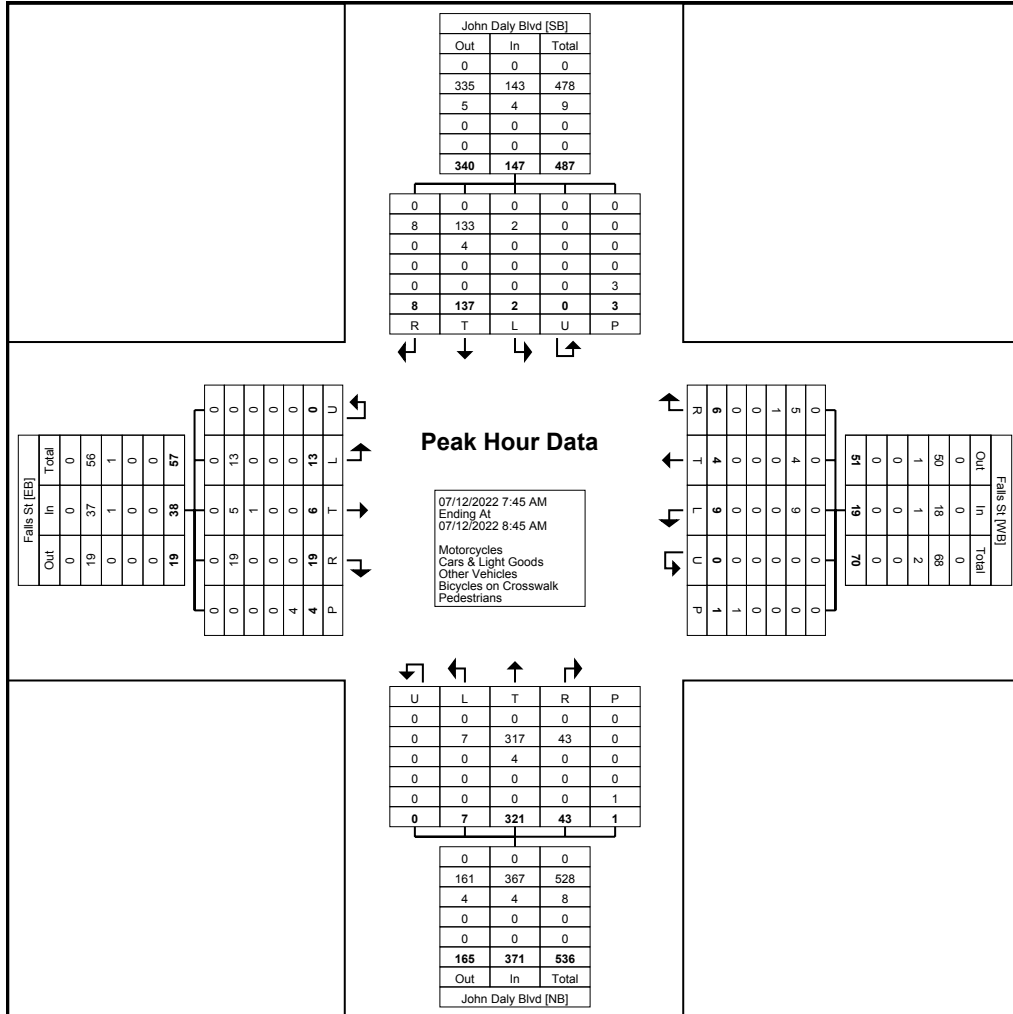
Count Name: John Daly Blvd &
Falls St
Site Code:
Start Date: 07/12/2022
Page No: 3

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (7:45 AM)

Start Time	John Daly Blvd Southbound						Falls St Westbound						John Daly Blvd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:45 AM	4	31	2	0	0	37	2	1	2	0	1	5	16	102	3	0	0	121	3	3	4	0	1	10	173
8:00 AM	0	28	0	0	0	28	0	2	2	0	0	4	6	81	2	0	0	89	5	2	3	0	0	10	131
8:15 AM	1	41	0	0	0	42	1	0	3	0	0	4	16	64	2	0	1	82	4	1	2	0	0	7	135
8:30 AM	3	37	0	0	3	40	3	1	2	0	0	6	5	74	0	0	0	79	7	0	4	0	3	11	136
Total	8	137	2	0	3	147	6	4	9	0	1	19	43	321	7	0	1	371	19	6	13	0	4	38	575
Approach %	5.4	93.2	1.4	0.0	-	-	31.6	21.1	47.4	0.0	-	-	11.6	86.5	1.9	0.0	-	-	50.0	15.8	34.2	0.0	-	-	-
Total %	1.4	23.8	0.3	0.0	-	25.6	1.0	0.7	1.6	0.0	-	3.3	7.5	55.8	1.2	0.0	-	64.5	3.3	1.0	2.3	0.0	-	6.6	-
PHF	0.500	0.835	0.250	0.000	-	0.875	0.500	0.500	0.750	0.000	-	0.792	0.672	0.787	0.583	0.000	-	0.767	0.679	0.500	0.813	0.000	-	0.864	0.831
Motorcycles	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
Cars & Light Goods	8	133	2	0	-	143	5	4	9	0	-	18	43	317	7	0	-	367	19	5	13	0	-	37	565
% Cars & Light Goods	100.0	97.1	100.0	-	-	97.3	83.3	100.0	100.0	-	-	94.7	100.0	98.8	100.0	-	-	98.9	100.0	83.3	100.0	-	-	97.4	98.3
Other Vehicles	0	4	0	0	-	4	1	0	0	0	-	1	0	4	0	0	-	4	0	1	0	0	-	1	10
% Other Vehicles	0.0	2.9	0.0	-	-	2.7	16.7	0.0	0.0	-	-	5.3	0.0	1.2	0.0	-	-	1.1	0.0	16.7	0.0	-	-	2.6	1.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Niagara, New York
July 12, 2022



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



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

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

Count Name: John Daly Blvd &
Falls St
Site Code:
Start Date: 07/12/2022
Page No: 5

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	John Daly Blvd Southbound						Falls St Westbound						John Daly Blvd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	9	65	3	0	0	77	4	3	3	0	0	10	2	59	15	0	0	76	5	4	6	0	1	15	178
12:15 PM	5	68	1	1	1	75	2	0	3	0	0	5	2	57	2	0	0	61	3	2	4	0	0	9	150
12:30 PM	3	67	2	0	3	72	3	1	4	0	0	8	4	70	7	0	0	81	9	1	11	0	2	21	182
12:45 PM	5	61	1	0	3	67	3	4	2	0	0	9	2	73	10	0	0	85	5	1	14	0	3	20	181
Total	22	261	7	1	7	291	12	8	12	0	0	32	10	259	34	0	0	303	22	8	35	0	6	65	691
Approach %	7.6	89.7	2.4	0.3	-	-	37.5	25.0	37.5	0.0	-	-	3.3	85.5	11.2	0.0	-	-	33.8	12.3	53.8	0.0	-	-	-
Total %	3.2	37.8	1.0	0.1	-	42.1	1.7	1.2	1.7	0.0	-	4.6	1.4	37.5	4.9	0.0	-	43.8	3.2	1.2	5.1	0.0	-	9.4	-
PHF	0.611	0.960	0.583	0.250	-	0.945	0.750	0.500	0.750	0.000	-	0.800	0.625	0.887	0.567	0.000	-	0.891	0.611	0.500	0.625	0.000	-	0.774	0.949
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.4	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	22	252	6	1	-	281	11	8	11	0	-	30	10	248	33	0	-	291	21	8	34	0	-	63	665
% Cars & Light Goods	100.0	96.6	85.7	100.0	-	96.6	91.7	100.0	91.7	-	-	93.8	100.0	95.8	97.1	-	-	96.0	95.5	100.0	97.1	-	-	96.9	96.2
Other Vehicles	0	9	1	0	-	10	1	0	1	0	-	2	0	10	1	0	-	11	1	0	1	0	-	2	25
% Other Vehicles	0.0	3.4	14.3	0.0	-	3.4	8.3	0.0	8.3	-	-	6.3	0.0	3.9	2.9	-	-	3.6	4.5	0.0	2.9	-	-	3.1	3.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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: John Daly Blvd &
Falls St
Site Code:
Start Date: 07/12/2022
Page No: 7

Niagara, New York
July 12, 2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	John Daly Blvd Southbound						Falls St Westbound						John Daly Blvd Northbound						Falls St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:00 PM	7	140	0	0	0	147	1	2	13	0	0	16	3	54	14	0	0	71	11	4	9	0	1	24	258
4:15 PM	6	84	4	0	0	94	1	1	4	0	0	6	1	53	5	0	0	59	10	2	7	0	0	19	178
4:30 PM	12	114	0	0	0	126	1	3	6	0	0	10	2	69	12	0	0	83	6	3	9	0	0	18	237
4:45 PM	6	80	0	0	0	86	3	1	3	0	0	7	5	59	17	0	1	81	6	1	11	0	0	18	192
Total	31	418	4	0	0	453	6	7	26	0	0	39	11	235	48	0	1	294	33	10	36	0	1	79	865
Approach %	6.8	92.3	0.9	0.0	-	-	15.4	17.9	66.7	0.0	-	-	3.7	79.9	16.3	0.0	-	-	41.8	12.7	45.6	0.0	-	-	-
Total %	3.6	48.3	0.5	0.0	-	52.4	0.7	0.8	3.0	0.0	-	4.5	1.3	27.2	5.5	0.0	-	34.0	3.8	1.2	4.2	0.0	-	9.1	-
PHF	0.646	0.746	0.250	0.000	-	0.770	0.500	0.583	0.500	0.000	-	0.609	0.550	0.851	0.706	0.000	-	0.886	0.750	0.625	0.818	0.000	-	0.823	0.838
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.4	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	31	414	4	0	-	449	6	7	26	0	-	39	11	231	47	0	-	289	32	10	35	0	-	77	854
% Cars & Light Goods	100.0	99.0	100.0	-	-	99.1	100.0	100.0	100.0	-	-	100.0	100.0	98.3	97.9	-	-	98.3	97.0	100.0	97.2	-	-	97.5	98.7
Other Vehicles	0	4	0	0	-	4	0	0	0	0	-	0	0	3	1	0	-	4	1	0	1	0	-	2	10
% Other Vehicles	0.0	1.0	0.0	-	-	0.9	0.0	0.0	0.0	-	-	0.0	0.0	1.3	2.1	-	-	1.4	3.0	0.0	2.8	-	-	2.5	1.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	1	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-

John Daly Blvd from Rainbow Rd to Niagara St

Year	Combined Volume	% Growth
2016	11820	
2018	12758	3.89%
2019	11219	-12.06%

John Daly Blvd from Rainbow Rd to Niagara St

2016	2018	2019
11820	12758	11219
	3.89%	-12.06%
	-1.72%	

Niagara Street from John Daly Blvd to to Portage Rd

Year	Combined Volume	% Growth
2012	3985	
2019	3469	-1.96%

Niagara Street from John Daly Blvd to to Portage Rd

2012	2019
3985	3469
	-1.96%

Intersections	Intersection Traffic Movement Data Weekday AM												Network Peak Hour					
	7:00-7:15	7:15-7:30	7:30-7:45	7:45-8:00	8:00-8:15	8:15-8:30	8:30-8:45	8:45-9:00	7:00-8:00	7:15-8:15	7:30-8:30	7:45-8:45	8:00-9:00	PHF				
John Daily Boulevard @ Falls Street	91	103	127	173	131	135	136	162	494	534	566	575	564	0.831				
John Daily Boulevard @ Niagara Street	102	108	141	167	138	144	140	204	518	554	590	589	626	0.882				
John Daily Boulevard @ Rainbow Boulevard	115	153	213	267	190	202	205	235	748	823	872	864	832	0.809				
Niagara Street @ 9th Street	57	48	62	90	71	67	64	103	257	271	290	292	305	0.811				
Niagara Street @ 10th Street	58	48	64	89	81	81	58	95	259	282	315	309	315	0.868				
Buffalo Ave @ Portage Road	64	61	60	82	74	80	83	76	267	277	296	319	313	0.961				
Falls Street @ Portage Road	18	32	47	58	32	48	43	30	155	169	185	181	153	0.780				
Buffalo Ave @ Rainbow Boulevard	32	30	42	67	44	47	43	52	171	183	200	201	186	0.750				
Falls Street @ 9th Street	4	5	14	27	12	23	10	7	50	58	76	72	52	0.667				
Falls Street @ 10th Street	10	12	25	45	31	41	22	15	92	113	142	139	109	0.772				
Ferry Ave @ 10th Street	57	43	48	80	84	71	56	89	228	255	283	291	300	0.866				
John Daily Blvd @ Buffalo Ave	108	141	215	262	208	187	201	238	726	826	872	858	834	0.819				
Intersection Traffic Movement Data Weekday PM													3011	4345	4687	4690	4589	

Intersections	Intersection Traffic Movement Data Weekday AM												Network Peak Hour					
	4:00-4:15	4:15-4:30	4:30-4:45	4:45-5:00	5:00-5:15	5:15-5:30	5:30-5:45	5:45-6:00	4:00-5:00	4:15-5:15	4:30-5:30	4:45-5:45	5:00-6:00	PHF				
John Daily Boulevard @ Falls Street	258	178	237	192	180	159	182	162	865	787	768	713	683	0.830				
John Daily Boulevard @ Niagara Street	252	202	279	206	203	169	202	170	939	890	857	780	744	0.797				
John Daily Boulevard @ Rainbow Boulevard	404	325	323	335	337	284	300	288	1387	1320	1279	1256	1209	0.979				
Niagara Street @ 9th Street	112	105	157	95	84	83	87	83	469	441	419	349	337	0.702				
Niagara Street @ 10th Street	120	99	153	100	100	80	75	87	472	452	433	355	342	0.739				
Buffalo Ave @ Portage Road	127	80	110	85	83	85	83	82	402	358	363	336	333	0.814				
Falls Street @ Portage Road	74	53	65	58	51	47	42	30	250	227	221	198	170	0.873				
Buffalo Ave @ Rainbow Boulevard	112	67	66	64	65	59	60	73	309	262	254	248	257	0.978				
Falls Street @ 9th Street	25	13	19	14	14	13	12	13	71	60	60	53	52	0.789				
Falls Street @ 10th Street	59	22	35	30	25	19	11	27	146	112	109	85	82	0.800				
Ferry Ave @ 10th Street	152	109	124	103	111	103	77	84	488	447	441	394	375	0.901				
John Daily Blvd @ Buffalo Ave	435	334	327	347	353	286	294	279	1443	1361	1313	1280	1212	0.964				
Intersection Traffic Movement Data Weekday PM													7241	6717	6517	6047	5796	

Trip Generation Manual (11th Edition)

Land Use Code: 160 Data Center

Description: A data center is a free-standing warehouse type facility that is primarily used for off-site storage of computer systems and associated components including applications and secure data. Some data centers may include maintenance areas and a small office. Data centers may be occupied by single or multiple tenants. Data centers typically have a small number of employees and visitors.

Peak Hour of Adjacent Street, Weekday AM – Average Rate

$X = 1232.7$ (X is 1000 Sq. Ft. Gross Floor Area)

AM: Average Rate = 0.11

55% Entering 45% Exiting

Calculation:

AM: $T = 0.11 (X)$

$T = 0.11 (1232.7)$

T = 136 trips

Distribution: $136 (55\%) = 75$ Trips Entering

$136 (45\%) = 61$ Trips Exiting

Peak Hour of Adjacent Street, Weekday PM – Average Rate

$X = 1232.7$ (X is 1000 Sq. Ft. Gross Floor Area)

PM: Average Rate = 0.09

30% Entering 70% Exiting

Calculation:

Midday: $T = 0.09 (X)$

$T = 0.09 (1232.7)$

T = 111 trips


















Distribution: $111 (30\%) = 33$ Trips Entering

$111 (70\%) = 78$ Trips Exiting

APPENDIX D – SYNCHRO REPORTS

16: John Daly Blvd & Buffalo Ave
Existing AM Peak

Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	11	29	12	17	4	56	430	26	2	261	9
Future Volume (vph)	1	11	29	12	17	4	56	430	26	2	261	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	45		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frnt		0.904			0.984			0.992			0.995	
Flt Protected		0.999			0.982			0.995		0.950		
Satd. Flow (prot)	0	1589	0	0	1669	0	0	3528	0	1752	3487	0
Flt Permitted								0.890		0.415		
Satd. Flow (perm)	0	1590	0	0	1700	0	0	3156	0	766	3487	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			5			10			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		893			547			632			407	
Travel Time (s)		20.3			12.4			14.4			9.3	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	1	13	35	15	21	5	68	524	32	2	318	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	41	0	0	624	0	2	329	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												
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		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		15.0	15.0		15.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Total Split (%)	36.8%	36.8%		36.8%	36.8%		63.2%	63.2%		63.2%	63.2%	
Maximum Green (s)	31.0	31.0		31.0	31.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

16: John Daly Blvd & Buffalo Ave
Existing AM Peak

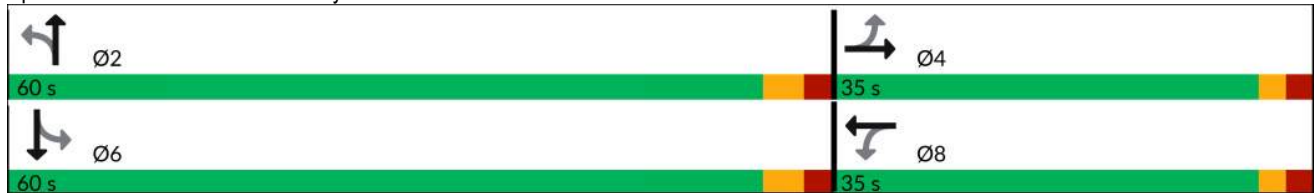
Lanes, Volumes, Timings
06/19/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.1			10.1			27.1		27.1	27.1	
Actuated g/C Ratio		0.33			0.33			0.89		0.89	0.89	
v/c Ratio		0.08			0.07			0.22		0.00	0.10	
Control Delay (s/veh)		4.8			7.3			2.3		3.5	2.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		4.8			7.3			2.3		3.5	2.0	
LOS		A			A			A		A	A	
Approach Delay (s/veh)		4.9			7.4			2.3			2.1	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)		2			4			0		0	0	
Queue Length 95th (ft)		14			16			53		2	27	
Internal Link Dist (ft)		813			467			552			327	
Turn Bay Length (ft)										45		
Base Capacity (vph)		1545			1651			3156		766	3487	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.03			0.02			0.20		0.00	0.09	

Intersection Summary

















Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	30.4
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.22
Intersection Signal Delay (s/veh):	2.6
Intersection LOS:	A
Intersection Capacity Utilization:	42.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 16: John Daly Blvd & Buffalo Ave



31: 10th St & Niagara St
Existing AM Peak

Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	59	7	1	65	2	2	25	3	7	29	31
Future Volume (vph)	79	59	7	1	65	2	2	25	3	7	29	31
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
Ped Bike Factor		0.99			0.99							
Frt		0.994			0.997			0.988			0.937	
Flt Protected		0.973			0.999			0.997			0.995	
Satd. Flow (prot)	0	1799	0	0	1801	0	0	1749	0	0	1737	0
Flt Permitted		0.829			0.998			0.985			0.972	
Satd. Flow (perm)	0	1530	0	0	1799	0	0	1728	0	0	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			2			3			36	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		366			929			787			828	
Travel Time (s)		8.3			21.1			17.9			18.8	
Confl. Peds. (#/hr)	3		6	6		3						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	91	68	8	1	75	2	2	29	3	8	33	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	0	0	78	0	0	34	0	0	77	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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%		32.0%	32.0%		32.0%	32.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		11.0	11.0		11.0	11.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		29.0			29.0			11.0			11.0	
Actuated g/C Ratio		0.58			0.58			0.22			0.22	
v/c Ratio		0.18			0.07			0.08			0.19	

31: 10th St & Niagara St
Existing AM Peak

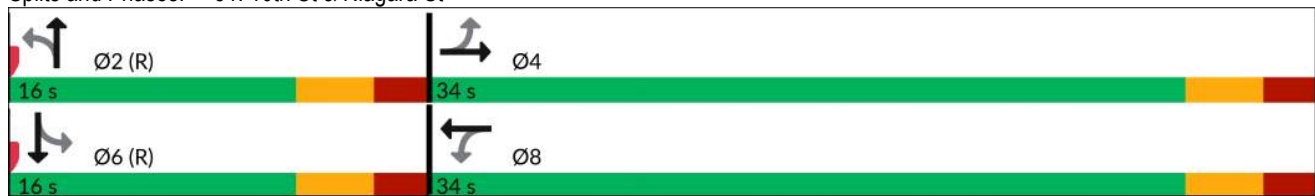
Lanes, Volumes, Timings
06/19/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		5.3			4.7			15.3			11.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		5.3			4.7			15.3			11.4	
LOS		A			A			B			B	
Approach Delay (s/veh)		5.4			4.8			15.3			11.5	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		19			8			7			10	
Queue Length 95th (ft)		38			20			24			34	
Internal Link Dist (ft)		286			849			707			748	
Turn Bay Length (ft)												
Base Capacity (vph)		890			1044			382			401	
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		0.19			0.07			0.09			0.19	

Intersection Summary

Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	50
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.19
Intersection Signal Delay (s/veh):	7.5
Intersection LOS:	A
Intersection Capacity Utilization:	29.0%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 31: 10th St & Niagara St



32: John Daly Bvd & Niagara St
Existing AM Peak

Lanes, Volumes, Timings
06/19/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖↑	↖	↗
Traffic Volume (vph)	50	111	34	74	175	139
Future Volume (vph)	50	111	34	74	175	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		175	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor		0.98		0.99	0.99	0.97
Frnt		0.850				0.850
Flt Protected				0.984	0.950	
Satd. Flow (prot)	1845	1568	0	3383	1770	1583
Flt Permitted				0.864	0.950	
Satd. Flow (perm)	1845	1547	0	2969	1767	1549
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		126				158
Link Speed (mph)	30			30	30	
Link Distance (ft)	889			318	777	
Travel Time (s)	20.2			7.2	17.7	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	5%	5%	2%	2%
Adj. Flow (vph)	57	126	39	84	199	158
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	126	0	123	199	158
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	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)		9	15		15	9
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	9.5	9.5	9.5	9.5	6.0	6.0
Minimum Split (s)	15.0	15.0	15.0	15.0	11.0	11.0
Total Split (s)	49.5	49.5	49.5	49.5	23.5	23.5
Total Split (%)	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%
Maximum Green (s)	44.0	44.0	44.0	44.0	18.5	18.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						

32: John Daly Bvd & Niagara St
Existing AM Peak

Lanes, Volumes, Timings
06/19/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.7	10.7		10.7	8.5	8.5
Actuated g/C Ratio	0.36	0.36		0.36	0.29	0.29
v/c Ratio	0.08	0.19		0.11	0.39	0.28
Control Delay (s/veh)	7.4	3.0		7.3	10.4	3.2
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	7.4	3.0		7.3	10.4	3.2
LOS	A	A		A	B	A
Approach Delay (s/veh)	4.4			7.4	7.3	
Approach LOS	A			A	A	
Queue Length 50th (ft)	5	0		5	22	0
Queue Length 95th (ft)	18	16		15	46	17
Internal Link Dist (ft)	809			238	697	
Turn Bay Length (ft)		175				
Base Capacity (vph)	1845	1547		2969	1107	1028
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.03	0.08		0.04	0.18	0.15

Intersection Summary




















Area Type: Other
 Cycle Length: 73
 Actuated Cycle Length: 29.7
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.39
 Intersection Signal Delay (s/veh): 6.5
 Intersection LOS: A
 Intersection Capacity Utilization 27.2%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 32: John Daly Bvd & Niagara St



78: Rainbow Blvd & 10th St
Existing AM Peak

Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	39	2	20	79	12	1	12	1	9	9	4
Future Volume (vph)	6	39	2	20	79	12	1	12	1	9	9	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Friction		0.992			0.980			0.992			0.977	
Flt Protected	0.950			0.950				0.997			0.980	
Satd. Flow (prot)	1770	3511	0	1770	3468	0	0	1842	0	0	1784	0
Flt Permitted	0.675			0.719								
Satd. Flow (perm)	1257	3511	0	1339	3468	0	0	1848	0	0	1820	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			16			1			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		301			259			127			1360	
Travel Time (s)		6.8			5.9			2.9			30.9	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	8	52	3	27	105	16	1	16	1	12	12	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	55	0	27	121	0	0	18	0	0	29	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			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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		9.0	9.0		9.0	9.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		14.0	14.0		14.0	14.0	
Total Split (s)	60.0	60.0		60.0	60.0		20.0	20.0		20.0	20.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	56.0	56.0		56.0	56.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	

78: Rainbow Blvd & 10th St
Existing AM Peak

Lanes, Volumes, Timings
06/19/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	25.7	25.7		25.7	25.7			9.0			9.0	
Actuated g/C Ratio	0.88	0.88		0.88	0.88			0.31			0.31	
v/c Ratio	0.00	0.01		0.02	0.03			0.03			0.05	
Control Delay (s/veh)	3.3	2.5		3.1	2.2			7.2			6.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.3	2.5		3.1	2.2			7.2			6.8	
LOS	A	A		A	A			A			A	
Approach Delay (s/veh)		2.7			2.4			7.3			6.9	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	0	0		0	0			2			2	
Queue Length 95th (ft)	3	5		7	9			7			9	
Internal Link Dist (ft)		221			179			47			1280	
Turn Bay Length (ft)	175			125								
Base Capacity (vph)	1257	3511		1339	3468			950			937	
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	0.01	0.02		0.02	0.03			0.02			0.03	

Intersection Summary























Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 29.2
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.05
 Intersection Signal Delay (s/veh): 3.3 Intersection LOS: A
 Intersection Capacity Utilization 23.3% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 78: Rainbow Blvd & 10th St



79: Rainbow Blvd & John Daly Blvd
Existing AM Peak

Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	35	129	10	51	22	101	321	8	13	127	21
Future Volume (vph)	22	35	129	10	51	22	101	321	8	13	127	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	255		140	240		200	235		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99	0.99							
Frts			0.850		0.955			0.996				0.979
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3471	1553	1687	4610	0	1787	3560	0	1752	3431	0
Flt Permitted	0.693			0.728			0.569			0.513		
Satd. Flow (perm)	1264	3471	1531	1290	4610	0	1070	3560	0	946	3431	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		27			2				18
Link Speed (mph)		30			30			30				30
Link Distance (ft)		271			371			407				1071
Travel Time (s)		6.2			8.4			9.3				24.3
Confl. Peds. (#/hr)	1		1	1		1						
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	27	43	159	12	63	27	125	396	10	16	157	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	43	159	12	90	0	125	406	0	16	183	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	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		3.0	6.0		3.0	6.0	
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0		8.0	11.0		8.0	11.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	43.0		25.0	43.0	
Total Split (%)	39.8%	39.8%	39.8%	39.8%	39.8%		22.1%	38.1%		22.1%	38.1%	
Maximum Green (s)	40.0	40.0	40.0	40.0	40.0		20.0	38.0		20.0	38.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.0	3.0		4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

79: Rainbow Blvd & John Daly Blvd
Existing AM Peak

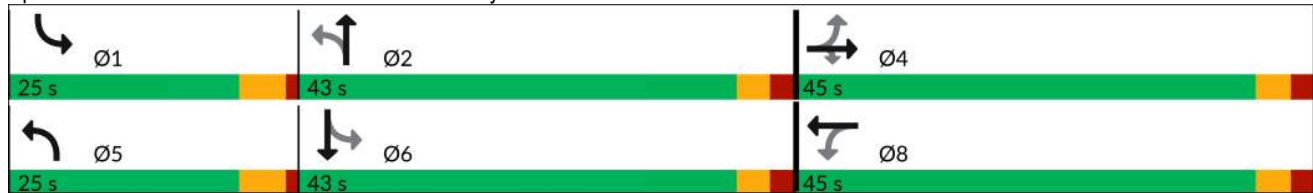
Lanes, Volumes, Timings
06/19/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	10.0	10.0	10.0	10.0	10.0		50.4	48.7		43.7	38.0	
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14		0.71	0.69		0.62	0.54	
v/c Ratio	0.15	0.08	0.45	0.06	0.13		0.14	0.16		0.02	0.09	
Control Delay (s/veh)	29.4	27.3	9.9	27.9	20.8		3.4	4.7		3.3	7.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	29.4	27.3	9.9	27.9	20.8		3.4	4.7		3.3	7.6	
LOS	C	C	A	C	C		A	A		A	A	
Approach Delay (s/veh)		15.5			21.7			4.4			7.3	
Approach LOS		B			C			A			A	
Queue Length 50th (ft)	11	8	0	5	8		13	23		2	17	
Queue Length 95th (ft)	29	20	37	17	19		23	55		5	28	
Internal Link Dist (ft)		191			291			327			991	
Turn Bay Length (ft)	255		140	240			235			200		
Base Capacity (vph)	713	1958	932	727	2612		969	2445		906	1846	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.02	0.17	0.02	0.03		0.13	0.17		0.02	0.10	

Intersection Summary

Area Type:	Other
Cycle Length:	113
Actuated Cycle Length:	70.9
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.45
Intersection Signal Delay (s/veh):	9.0
Intersection LOS:	A
Intersection Capacity Utilization:	34.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 79: Rainbow Blvd & John Daly Blvd



5: Buffalo Ave & Portage Rd
Existing AM Peak

HCM 7th TWSC
06/19/2024

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	73	5	18	115	46	2	2	3	14	7	16
Future Vol, veh/h	13	73	5	18	115	46	2	2	3	14	7	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	76	5	19	120	48	2	2	3	15	7	17

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	168	0	0	81	0	0	267	311	79	285	290	144
Stage 1	-	-	-	-	-	-	106	106	-	181	181	-
Stage 2	-	-	-	-	-	-	161	205	-	104	108	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1410	-	-	1516	-	-	686	604	982	667	621	904
Stage 1	-	-	-	-	-	-	900	808	-	821	750	-
Stage 2	-	-	-	-	-	-	841	732	-	902	806	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1410	-	-	1516	-	-	650	590	982	647	606	904
Mov Cap-2 Maneuver	-	-	-	-	-	-	650	590	-	647	606	-
Stage 1	-	-	-	-	-	-	891	800	-	809	739	-
Stage 2	-	-	-	-	-	-	806	722	-	887	798	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.08	0.74	9.95	10.23
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	735	254	-	-	171	-	-	727
HCM Lane V/C Ratio	0.01	0.01	-	-	0.012	-	-	0.053
HCM Control Delay (s/veh)	9.9	7.6	0	-	7.4	0	-	10.2
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	13	6	19	9	4	6	7	321	43	2	137	8
Future Vol, veh/h	13	6	19	9	4	6	7	321	43	2	137	8
Conflicting Peds, #/hr	3	0	1	1	0	3	4	0	1	1	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	5	5	5	1	1	1	3	3	3
Mvmt Flow	16	7	23	11	5	7	8	387	52	2	165	10

Major/Minor	Minor2		Minor1			Major1		Major2			
Conflicting Flow All	394	635	92	522	614	223	179	0	440	0	0
Stage 1	179	179	-	431	431	-	-	-	-	-	-
Stage 2	216	456	-	92	184	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.6	6.6	7	4.12	-	-	4.16	-
Critical Hdwy Stg 1	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.55	4.05	3.35	2.21	-	-	2.23	-
Pot Cap-1 Maneuver	537	392	943	431	399	771	1402	-	-	1110	-
Stage 1	803	748	-	565	574	-	-	-	-	-	-
Stage 2	764	564	-	896	739	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-
Mov Cap-1 Maneuver	517	387	939	408	394	768	1396	-	-	1109	-
Mov Cap-2 Maneuver	517	387	-	408	394	-	-	-	-	-	-
Stage 1	798	743	-	561	570	-	-	-	-	-	-
Stage 2	743	559	-	863	735	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.22		12.97	0.19	0.13
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	58	-	-	624	475	45	-	-
HCM Lane V/C Ratio	0.006	-	-	0.073	0.048	0.002	-	-
HCM Control Delay (s/veh)	7.6	0.1	-	11.2	13	8.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	45	146	0	0	87	11	1	2	0	0	0	0
Future Vol, veh/h	45	146	0	0	87	11	1	2	0	0	0	0
Conflicting Peds, #/hr	14	0	7	7	0	14	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	1	1	1	5	5	5	1	1	1	2	2	2
Mvmt Flow	56	180	0	0	107	14	1	2	0	0	0	0

Major/Minor	Major1	Major2			Minor1			
Conflicting Flow All	135	0	-	-	0	400	426	181
Stage 1	-	-	-	-	-	291	291	-
Stage 2	-	-	-	-	-	108	135	-
Critical Hdwy	4.11	-	-	-	-	6.41	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	5.41	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	5.41	5.51	-
Follow-up Hdwy	2.209	-	-	-	-	3.509	4.009	3.309
Pot Cap-1 Maneuver	1456	-	0	0	-	608	522	864
Stage 1	-	-	0	0	-	761	673	-
Stage 2	-	-	0	0	-	919	787	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1456	-	-	-	-	582	0	863
Mov Cap-2 Maneuver	-	-	-	-	-	582	0	-
Stage 1	-	-	-	-	-	728	0	-
Stage 2	-	-	-	-	-	918	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	1.78	0	11.23
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	582	424	-	-	-
HCM Lane V/C Ratio	0.006	0.038	-	-	-
HCM Control Delay (s/veh)	11.2	7.6	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0	0.1	-	-	-

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	11	3	3	39	8	19	50	1	6	35	5
Future Vol, veh/h	10	11	3	3	39	8	19	50	1	6	35	5
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	19	19	19	11	11	11	8	8	8	5	5	5
Mvmt Flow	13	14	4	4	50	10	24	64	1	8	45	6
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	7.8			7.7			7.9			7.6		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	42%	6%	13%
Vol Thru, %	71%	46%	78%	76%
Vol Right, %	1%	13%	16%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	24	50	46
LT Vol	19	10	3	6
Through Vol	50	11	39	35
RT Vol	1	3	8	5
Lane Flow Rate	90	31	64	59
Geometry Grp	1	1	1	1
Degree of Util (X)	0.107	0.04	0.076	0.068
Departure Headway (Hd)	4.291	4.64	4.283	4.179
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	826	776	823	845
Service Time	2.368	2.64	2.378	2.266
HCM Lane V/C Ratio	0.109	0.04	0.078	0.07
HCM Control Delay, s/veh	7.9	7.8	7.7	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	44	0	5	18	13	1	19	1	5	10	2
Future Vol, veh/h	8	44	0	5	18	13	1	19	1	5	10	2
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	10	10	10	3	3	3	1	1	1
Mvmt Flow	10	57	0	6	23	17	1	25	1	6	13	3
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	7.5	7.3	7.3	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	15%	14%	29%
Vol Thru, %	90%	85%	50%	59%
Vol Right, %	5%	0%	36%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	52	36	17
LT Vol	1	8	5	5
Through Vol	19	44	18	10
RT Vol	1	0	13	2
Lane Flow Rate	27	68	47	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.031	0.077	0.052	0.025
Departure Headway (Hd)	4.148	4.087	4.018	4.125
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	857	875	888	861
Service Time	2.204	2.119	2.056	2.183
HCM Lane V/C Ratio	0.032	0.078	0.053	0.026
HCM Control Delay, s/veh	7.3	7.5	7.3	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔			↔	
Traffic Vol, veh/h	15	82	13	0	0	0	0	88	19	20	54	0
Future Vol, veh/h	15	82	13	0	0	0	0	88	19	20	54	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	6	6	6
Mvmt Flow	17	94	15	0	0	0	0	101	22	23	62	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	8.2	8	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	27%	0%	27%
Vol Thru, %	82%	73%	76%	73%
Vol Right, %	18%	0%	24%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	56	54	74
LT Vol	0	15	0	20
Through Vol	88	41	41	54
RT Vol	19	0	13	0
Lane Flow Rate	123	64	62	85
Geometry Grp	2	5	5	2
Degree of Util (X)	0.145	0.092	0.084	0.106
Departure Headway (Hd)	4.241	5.17	4.866	4.504
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	849	695	739	799
Service Time	2.251	2.885	2.581	2.516
HCM Lane V/C Ratio	0.145	0.092	0.084	0.106
HCM Control Delay, s/veh	8	8.4	8	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.3	0.4

16: John Daly Blvd & Buffalo Ave
Existing PM Peak

Lanes, Volumes, Timings
06/19/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Volume (vph)	4	36	155	55	14	5	57	417	8	3	690	25
Future Volume (vph)	4	36	155	55	14	5	57	417	8	3	690	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	45		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99							
Frnt		0.893			0.991			0.997			0.995	
Flt Protected		0.999			0.964			0.994		0.950		
Satd. Flow (prot)	0	1646	0	0	1794	0	0	3507	0	1787	3556	0
Flt Permitted		0.995			0.776			0.792		0.433		
Satd. Flow (perm)	0	1639	0	0	1444	0	0	2795	0	815	3556	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		165			4			3			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		893			547			632			407	
Travel Time (s)		20.3			12.4			14.4			9.3	
Confl. Peds. (#/hr)	7					7						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	5	43	187	66	17	6	69	502	10	4	831	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	0	89	0	0	581	0	4	861	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												
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		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		15.0	15.0		15.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Total Split (%)	36.8%	36.8%		36.8%	36.8%		63.2%	63.2%		63.2%	63.2%	
Maximum Green (s)	31.0	31.0		31.0	31.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												

16: John Daly Blvd & Buffalo Ave
Existing PM Peak

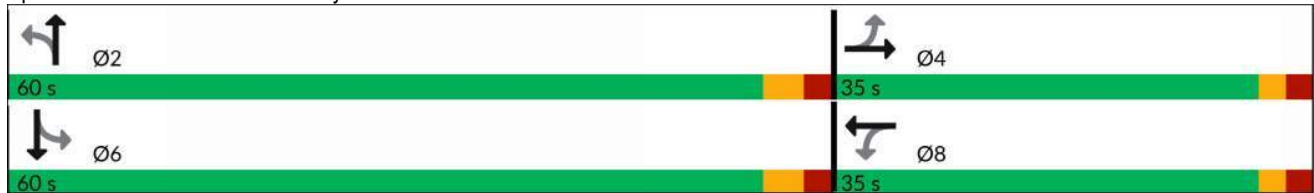
Lanes, Volumes, Timings
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)				7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)				0	0		0	0		0	0	
Act Effct Green (s)		10.4			10.4			16.6		16.6	16.6	
Actuated g/C Ratio		0.29			0.29			0.46		0.46	0.46	
v/c Ratio		0.39			0.21			0.45		0.01	0.52	
Control Delay (s/veh)		6.9			12.2			7.7		5.0	8.1	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		6.9			12.2			7.7		5.0	8.1	
LOS		A			B			A		A	A	
Approach Delay (s/veh)		6.9			12.3			7.8			8.1	
Approach LOS		A			B			A			A	
Queue Length 50th (ft)		9			12			34		1	53	
Queue Length 95th (ft)		46			39			57		3	82	
Internal Link Dist (ft)		813			467			552			327	
Turn Bay Length (ft)										45		
Base Capacity (vph)		1446			1256			2795		815	3556	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.16			0.07			0.21		0.00	0.24	

Intersection Summary

















Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	36.1
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.53
Intersection Signal Delay (s/veh):	8.1
Intersection LOS:	A
Intersection Capacity Utilization:	69.7%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 16: John Daly Blvd & Buffalo Ave















31: 10th St & Niagara St
Existing PM Peak

Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	125	5	1	122	10	5	13	2	5	34	126
Future Volume (vph)	34	125	5	1	122	10	5	13	2	5	34	126
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't		0.996			0.990			0.987			0.897	
Flt Protected		0.990						0.988			0.999	
Satd. Flow (prot)	0	1837	0	0	1844	0	0	1816	0	0	1669	0
Flt Permitted		0.933			0.999			0.918			0.993	
Satd. Flow (perm)	0	1731	0	0	1842	0	0	1688	0	0	1659	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			11			2			137	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		366			929			787			828	
Travel Time (s)		8.3			21.1			17.9			18.8	
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
Adj. Flow (vph)	37	136	5	1	133	11	5	14	2	5	37	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	145	0	0	21	0	0	179	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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%		32.0%	32.0%		32.0%	32.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		11.0	11.0		11.0	11.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		29.0			29.0			11.0			11.0	
Actuated g/C Ratio		0.58			0.58			0.22			0.22	
v/c Ratio		0.17			0.13			0.05			0.38	
Control Delay (s/veh)		5.3			4.8			15.1			8.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		5.3			4.8			15.1			8.5	

31: 10th St & Niagara St
Existing PM Peak

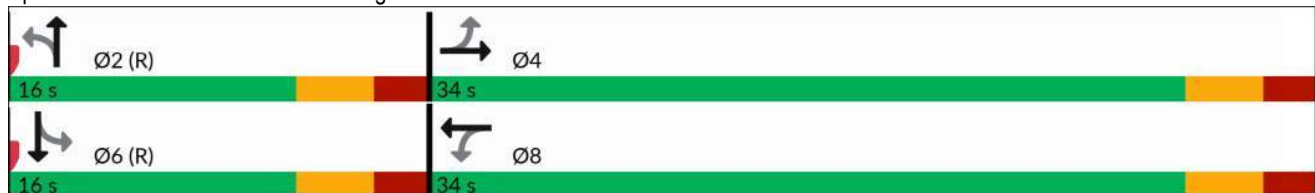
Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			A			B			A	
Approach Delay (s/veh)		5.3			4.8			15.2			8.6	
Approach LOS		A			A			B			A	
Queue Length 50th (ft)		20			15			4			10	
Queue Length 95th (ft)		41			33			18			50	
Internal Link Dist (ft)		286			849			707			748	
Turn Bay Length (ft)												
Base Capacity (vph)		1006			1072			372			471	
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		0.18			0.14			0.06			0.38	

Intersection Summary

Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	50
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.38
Intersection Signal Delay (s/veh):	6.7
Intersection LOS:	A
Intersection Capacity Utilization:	38.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 31: 10th St & Niagara St



32: John Daly Blvd & Niagara St
Existing PM Peak

Lanes, Volumes, Timings
06/19/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖↑	↖	↗
Traffic Volume (vph)	128	345	115	118	209	80
Future Volume (vph)	128	345	115	118	209	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		175	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor		0.98		0.99		0.97
Frnt		0.850				0.850
Flt Protected				0.976	0.950	
Satd. Flow (prot)	1863	1583	0	3488	1770	1583
Flt Permitted				0.764	0.950	
Satd. Flow (perm)	1863	1553	0	2723	1770	1549
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		411				95
Link Speed (mph)	30			30	30	
Link Distance (ft)	889			318	777	
Travel Time (s)	20.2			7.2	17.7	
Confl. Peds. (#/hr)		6	6			1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Adj. Flow (vph)	152	411	137	140	249	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	411	0	277	249	95
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	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)		9	15		15	9
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	9.5	9.5	9.5	9.5	6.0	6.0
Minimum Split (s)	15.0	15.0	15.0	15.0	11.0	11.0
Total Split (s)	49.5	49.5	49.5	49.5	23.5	23.5
Total Split (%)	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%
Maximum Green (s)	44.0	44.0	44.0	44.0	18.5	18.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						

32: John Daly Blvd & Niagara St
Existing PM Peak

Lanes, Volumes, Timings
06/19/2024

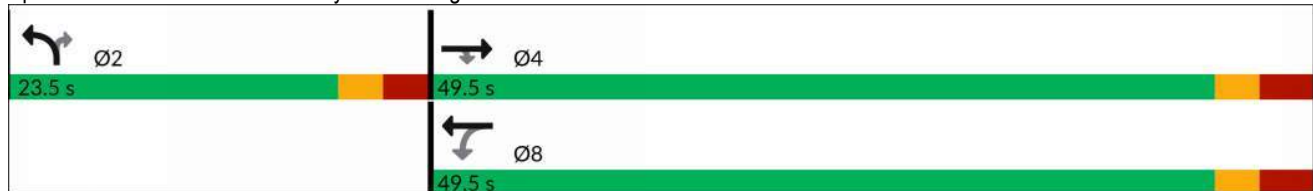


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	12.0	12.0		12.0	9.6	9.6
Actuated g/C Ratio	0.37	0.37		0.37	0.30	0.30
v/c Ratio	0.21	0.49		0.27	0.47	0.17
Control Delay (s/veh)	8.6	3.5		8.4	12.3	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	8.6	3.5		8.4	12.3	3.6
LOS	A	A		A	B	A
Approach Delay (s/veh)	4.9			8.5	9.9	
Approach LOS	A			A	A	
Queue Length 50th (ft)	16	0		15	28	0
Queue Length 95th (ft)	42	28		35	72	16
Internal Link Dist (ft)	809			238	697	
Turn Bay Length (ft)		175				
Base Capacity (vph)	1863	1553		2723	1026	937
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.08	0.26		0.10	0.24	0.10

Intersection Summary























Area Type:	Other
Cycle Length:	73
Actuated Cycle Length:	32.3
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.49
Intersection Signal Delay (s/veh):	7.2
Intersection Capacity Utilization:	42.1%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 32: John Daly Blvd & Niagara St















78: Rainbow Blvd & 10th St
Existing PM Peak

Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	1	100	15	29	89	12	2	4	1	10	30	8
Future Volume (vph)	1	100	15	29	89	12	2	4	1	10	30	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.980			0.983			0.986			0.977	
Flt Protected	0.950			0.950				0.985			0.990	
Satd. Flow (prot)	1770	3468	0	1770	3479	0	0	1809	0	0	1802	0
Flt Permitted	0.659			0.646								
Satd. Flow (perm)	1228	3468	0	1203	3479	0	0	1837	0	0	1820	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			17			1			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		301			259			127			1360	
Travel Time (s)		6.8			5.9			2.9			30.9	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Adj. Flow (vph)	1	145	22	42	129	17	3	6	1	14	43	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	167	0	42	146	0	0	10	0	0	69	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			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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		9.0	9.0		9.0	9.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		14.0	14.0		14.0	14.0	
Total Split (s)	60.0	60.0		60.0	60.0		20.0	20.0		20.0	20.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	56.0	56.0		56.0	56.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)										7.0	7.0	

78: Rainbow Blvd & 10th St
Existing PM Peak

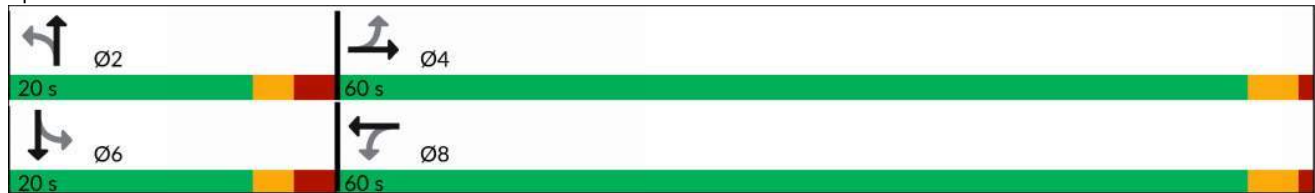
Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)										11.0	11.0	
Pedestrian Calls (#/hr)										0	0	
Act Effect Green (s)	24.0	24.0		24.0	24.0			9.1			9.1	
Actuated g/C Ratio	0.87	0.87		0.87	0.87			0.33			0.33	
v/c Ratio	0.00	0.05		0.04	0.04			0.01			0.11	
Control Delay (s/veh)	4.0	2.3		3.2	2.3			5.7			5.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	4.0	2.3		3.2	2.3			5.7			5.8	
LOS	A	A		A	A			A			A	
Approach Delay (s/veh)		2.3			2.6			5.7			5.8	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	0	0		0	0			1			6	
Queue Length 95th (ft)	1	11		9	10			4			12	
Internal Link Dist (ft)		221			179			47			1280	
Turn Bay Length (ft)	175			125								
Base Capacity (vph)	1228	3468		1203	3479			1012			1008	
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	0.00	0.05		0.03	0.04			0.01			0.07	

Intersection Summary























Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 27.5
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.11
 Intersection Signal Delay (s/veh): 3.1 Intersection LOS: A
 Intersection Capacity Utilization 23.3% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 78: Rainbow Blvd & 10th St



79: Rainbow Blvd & John Daly Blvd
Existing PM Peak

Lanes, Volumes, Timings
06/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	84	318	8	66	25	159	262	5	27	392	58
Future Volume (vph)	38	84	318	8	66	25	159	262	5	27	392	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	255		140	240		200	235		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99	0.99		0.99				0.99	
Frnt			0.850		0.959			0.997				0.981
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1787	4906	0	1770	3529	0	1787	3498	0
Flt Permitted	0.682			0.690			0.318			0.563		
Satd. Flow (perm)	1268	3539	1553	1289	4906	0	591	3529	0	1059	3498	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			370		29			2			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		271			371			407			1071	
Travel Time (s)		6.2			8.4			9.3			24.3	
Confl. Peds. (#/hr)	1		4	4		1	4					4
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	44	98	370	9	77	29	185	305	6	31	456	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	98	370	9	106	0	185	311	0	31	523	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	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		3.0	6.0		3.0	6.0	
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0		8.0	11.0		8.0	11.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	43.0		25.0	43.0	
Total Split (%)	39.8%	39.8%	39.8%	39.8%	39.8%		22.1%	38.1%		22.1%	38.1%	
Maximum Green (s)	40.0	40.0	40.0	40.0	40.0		20.0	38.0		20.0	38.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.0	3.0		4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

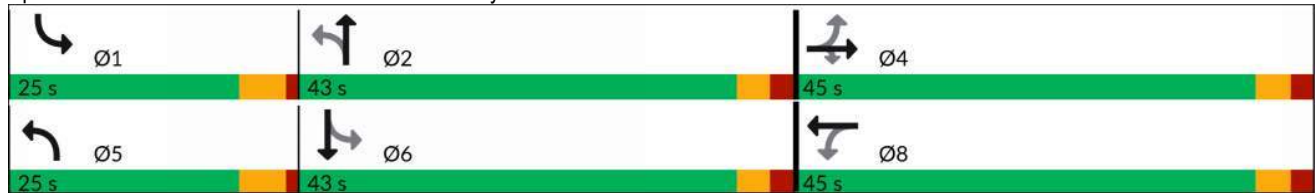
79: Rainbow Blvd & John Daly Blvd
Existing PM Peak

Lanes, Volumes, Timings
06/19/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	11.0	11.0	11.0	11.0	11.0		29.1	25.1		19.2	13.2	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.58	0.50		0.38	0.26	
v/c Ratio	0.15	0.12	0.58	0.03	0.09		0.31	0.17		0.06	0.56	
Control Delay (s/veh)	19.6	17.9	7.1	18.2	13.8		6.4	8.7		6.1	18.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	19.6	17.9	7.1	18.2	13.8		6.4	8.7		6.1	18.4	
LOS	B	B	A	B	B		A	A		A	B	
Approach Delay (s/veh)		10.3			14.2			7.9			17.8	
Approach LOS		B			B			A			B	
Queue Length 50th (ft)	10	12	0	2	6		20	17		3	65	
Queue Length 95th (ft)	36	31	51	12	19		49	58		12	120	
Internal Link Dist (ft)		191			291			327			991	
Turn Bay Length (ft)	255		140	240			235			200		
Base Capacity (vph)	1030	2875	1331	1047	3991		820	2724		907	2703	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.03	0.28	0.01	0.03		0.23	0.11		0.03	0.19	

Intersection Summary	
Area Type:	Other
Cycle Length:	113
Actuated Cycle Length:	50.3
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay (s/veh):	12.3
Intersection Capacity Utilization	54.0%
Analysis Period (min)	15
Intersection LOS:	B
ICU Level of Service	A

Splits and Phases: 79: Rainbow Blvd & John Daly Blvd



5: Buffalo Ave & Portage Rd
Existing PM Peak

HCM 7th TWSC
06/19/2024

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	137	2	2	117	41	2	2	28	63	1	11
Future Vol, veh/h	12	137	2	2	117	41	2	2	28	63	1	11
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	5	5	5
Mvmt Flow	15	173	3	3	148	52	3	3	35	80	1	14

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	201	0	0	177	0	0	360	412	176	385	387	175
Stage 1	-	-	-	-	-	-	206	206	-	180	180	-
Stage 2	-	-	-	-	-	-	154	206	-	205	207	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.11	6.51	6.21	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.509	4.009	3.309	3.545	4.045	3.345
Pot Cap-1 Maneuver	1371	-	-	1405	-	-	598	531	870	568	542	861
Stage 1	-	-	-	-	-	-	798	733	-	815	745	-
Stage 2	-	-	-	-	-	-	851	733	-	790	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1370	-	-	1404	-	-	578	523	869	534	534	860
Mov Cap-2 Maneuver	-	-	-	-	-	-	578	523	-	534	534	-
Stage 1	-	-	-	-	-	-	788	723	-	812	742	-
Stage 2	-	-	-	-	-	-	834	731	-	746	715	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.61	0.09	9.68	12.65
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	810	143	-	-	21	-	-	565
HCM Lane V/C Ratio	0.05	0.011	-	-	0.002	-	-	0.168
HCM Control Delay (s/veh)	9.7	7.7	0	-	7.6	0	-	12.7
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.6

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔			↔	
Traffic Vol, veh/h	36	29	33	26	7	6	67	247	11	11	418	31
Future Vol, veh/h	36	29	33	26	7	6	67	247	11	11	418	31
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	1	1	1	1	1	1	1	1	1
Mvmt Flow	43	35	39	31	8	7	80	294	13	13	498	37

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	854	1010	269	753	1022	154	536	0	0	307	0	0
Stage 1	543	543	-	460	460	-	-	-	-	-	-	-
Stage 2	311	467	-	293	562	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	251	237	726	300	236	868	1036	-	-	1258	-	-
Stage 1	489	515	-	553	567	-	-	-	-	-	-	-
Stage 2	672	558	-	693	510	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	217	214	724	218	213	868	1035	-	-	1258	-	-
Mov Cap-2 Maneuver	217	214	-	218	213	-	-	-	-	-	-	-
Stage 1	482	508	-	507	519	-	-	-	-	-	-	-
Stage 2	600	511	-	603	504	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	26.47	23.03	2.17	0.27
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	700	-	-	282	246	78	-	-
HCM Lane V/C Ratio	0.077	-	-	0.413	0.189	0.01	-	-
HCM Control Delay (s/veh)	8.8	0.5	-	26.5	23	7.9	0.1	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	1.9	0.7	0	-	-

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	44	164	0	0	228	25	5	4	0	0	0	0
Future Vol, veh/h	44	164	0	0	228	25	5	4	0	0	0	0
Conflicting Peds, #/hr	14	0	7	7	0	14	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	202	0	0	281	31	6	5	0	0	0	0

Major/Minor	Major1	Major2			Minor1			
Conflicting Flow All	326	0	-	-	0	594	637	203
Stage 1	-	-	-	-	-	311	311	-
Stage 2	-	-	-	-	-	282	326	-
Critical Hdwy	4.12	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1233	-	0	0	-	468	395	837
Stage 1	-	-	0	0	-	743	658	-
Stage 2	-	-	0	0	-	765	648	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1233	-	-	-	-	444	0	836
Mov Cap-2 Maneuver	-	-	-	-	-	444	0	-
Stage 1	-	-	-	-	-	706	0	-
Stage 2	-	-	-	-	-	765	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	1.7	0	13.31
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	444	381	-	-	-
HCM Lane V/C Ratio	0.025	0.044	-	-	-
HCM Control Delay (s/veh)	13.3	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	40	10	6	43	16	10	40	5	24	59	20
Future Vol, veh/h	15	40	10	6	43	16	10	40	5	24	59	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	1	1	1	7	7	7	2	2	2	1	1	1
Mvmt Flow	18	47	12	7	51	19	12	47	6	28	69	24
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	7.8	7.9	7.8	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	23%	9%	23%
Vol Thru, %	73%	62%	66%	57%
Vol Right, %	9%	15%	25%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	65	65	103
LT Vol	10	15	6	24
Through Vol	40	40	43	59
RT Vol	5	10	16	20
Lane Flow Rate	65	76	76	121
Geometry Grp	1	1	1	1
Degree of Util (X)	0.079	0.093	0.093	0.144
Departure Headway (Hd)	4.394	4.374	4.392	4.267
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	818	822	818	843
Service Time	2.407	2.387	2.406	2.278
HCM Lane V/C Ratio	0.079	0.092	0.093	0.144
HCM Control Delay, s/veh	7.8	7.8	7.9	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.3	0.5

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	47	0	26	37	10	1	17	12	14	22	4
Future Vol, veh/h	2	47	0	26	37	10	1	17	12	14	22	4
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	76	0	42	60	16	2	27	19	23	35	6
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	7.8			8			7.5			7.8		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	4%	36%	35%
Vol Thru, %	57%	96%	51%	55%
Vol Right, %	40%	0%	14%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	49	73	40
LT Vol	1	2	26	14
Through Vol	17	47	37	22
RT Vol	12	0	10	4
Lane Flow Rate	48	79	118	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.057	0.095	0.137	0.08
Departure Headway (Hd)	4.214	4.331	4.179	4.438
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	854	832	844	811
Service Time	2.221	2.331	2.274	2.444
HCM Lane V/C Ratio	0.056	0.095	0.14	0.08
HCM Control Delay, s/veh	7.5	7.8	8	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.5	0.3

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		TT						T			T	
Traffic Vol, veh/h	13	221	13	0	0	0	0	41	16	57	152	0
Future Vol, veh/h	13	221	13	0	0	0	0	41	16	57	152	0
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, %	1	1	1	1	1	1	2	2	2	1	1	1
Mvmt Flow	16	276	16	0	0	0	0	51	20	71	190	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	9.6	8.4	10.4
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	11%	0%	27%
Vol Thru, %	72%	89%	89%	73%
Vol Right, %	28%	0%	11%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	124	124	209
LT Vol	0	13	0	57
Through Vol	41	111	111	152
RT Vol	16	0	13	0
Lane Flow Rate	71	154	154	261
Geometry Grp	2	5	5	2
Degree of Util (X)	0.096	0.23	0.225	0.35
Departure Headway (Hd)	4.851	5.37	5.243	4.817
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	735	667	682	745
Service Time	2.905	3.122	2.995	2.855
HCM Lane V/C Ratio	0.097	0.231	0.226	0.35
HCM Control Delay, s/veh	8.4	9.7	9.5	10.4
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.3	0.9	0.9	1.6

1: Buffalo Ave
Build AM Peak

Lanes, Volumes, Timings
09/24/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕				↕
Traffic Volume (vph)	21	35	0	0	0	43
Future Volume (vph)	21	35	0	0	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Flt Protected		0.981				
Satd. Flow (prot)	0	1827	0	0	0	1611
Flt Permitted		0.981				
Satd. Flow (perm)	0	1827	0	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		547	280		127	
Travel Time (s)		12.4	6.4		2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	38	0	0	0	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	61	0	0	0	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	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		Free	Stop		Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	6.7% ICU Level of Service A
Analysis Period (min)	15

5: Buffalo Ave & Portage Rd
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	76	5	18	123	50	2	2	3	17	7	16
Future Volume (vph)	13	76	5	18	123	50	2	2	3	17	7	16
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
Frts		0.993			0.965			0.942			0.945	
Flt Protected		0.993			0.995			0.986			0.979	
Satd. Flow (prot)	0	1837	0	0	1789	0	0	1730	0	0	1723	0
Flt Permitted		0.993			0.995			0.986			0.979	
Satd. Flow (perm)	0	1837	0	0	1789	0	0	1730	0	0	1723	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1993			1271			305			1634	
Travel Time (s)		45.3			28.9			6.9			37.1	
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
Adj. Flow (vph)	14	79	5	19	128	52	2	2	3	18	7	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	199	0	0	7	0	0	42	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.0%
Analysis Period (min)	15
	ICU Level of Service A

11: Portage Rd & Falls St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	11	7	2	39	8	23	50	1	6	35	9
Future Volume (vph)	13	11	7	2	39	8	23	50	1	6	35	9
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 _t		0.970			0.979			0.999			0.975	
Fl _t Protected		0.979			0.998			0.985			0.994	
Satd. Flow (prot)	0	1516	0	0	1672	0	0	1731	0	0	1754	0
Fl _t Permitted		0.979			0.998			0.985			0.994	
Satd. Flow (perm)	0	1516	0	0	1672	0	0	1731	0	0	1754	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1985			1374			1634			720	
Travel Time (s)		45.1			31.2			37.1			16.4	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	19%	19%	19%	11%	11%	11%	8%	8%	8%	5%	5%	5%
Adj. Flow (vph)	17	14	9	3	50	10	29	64	1	8	45	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	63	0	0	94	0	0	65	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	22.2%
ICU Level of Service	A
Analysis Period (min)	15


















12: 10th St & Falls St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

														
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	8	78	0	5	39	19	7	19	1	5	13	2		
Future Volume (vph)	8	78	0	5	39	19	7	19	1	5	13	2		
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		
Ped Bike Factor														
Frt					0.959					0.996				
Flt Protected	0.996				0.996			0.987			0.989			
Satd. Flow (prot)	0	1855	0	0	1650	0	0	1813	0	0	1831	0		
Flt Permitted	0.996				0.996			0.987			0.989			
Satd. Flow (perm)	0	1855	0	0	1650	0	0	1813	0	0	1831	0		
Link Speed (mph)	30			30			30			30				
Link Distance (ft)	372				1985				1360					
Travel Time (s)	8.5			45.1			30.9			17.9				
Confl. Peds. (#/hr)	4						4			3	3			
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77		
Heavy Vehicles (%)	2%	2%	2%	10%	10%	10%	3%	3%	3%	1%	1%	1%		
Adj. Flow (vph)	10	101	0	6	51	25	9	25	1	6	17	3		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	111	0	0	82	0	0	35	0	0	26	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					
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	17.2%						ICU Level of Service A							
Analysis Period (min)	15													

16: John Daly Blvd & Buffalo Ave
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	11	29	24	17	4	56	453	41	2	271	9
Future Volume (vph)	1	11	29	24	17	4	56	453	41	2	271	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	45		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frnt		0.904			0.988			0.989			0.995	
Flt Protected		0.999			0.974			0.995		0.950		
Satd. Flow (prot)	0	1589	0	0	1662	0	0	3517	0	1752	3487	0
Flt Permitted		0.991			0.826			0.891		0.397		
Satd. Flow (perm)	0	1576	0	0	1410	0	0	3150	0	732	3487	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			5			15			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		893			547			632			407	
Travel Time (s)		20.3			12.4			14.4			9.3	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	1	13	35	29	21	5	68	552	50	2	330	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	55	0	0	670	0	2	341	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												
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		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		15.0	15.0		15.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Total Split (%)	36.8%	36.8%		36.8%	36.8%		63.2%	63.2%		63.2%	63.2%	
Maximum Green (s)	31.0	31.0		31.0	31.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

16: John Daly Blvd & Buffalo Ave
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

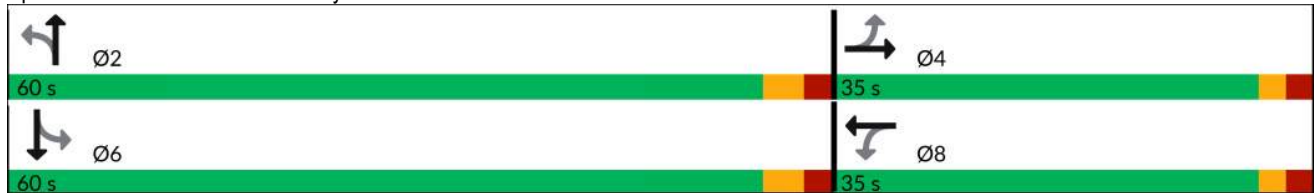


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.1			10.1			24.9		24.9	24.9	
Actuated g/C Ratio		0.32			0.32			0.78		0.78	0.78	
v/c Ratio		0.09			0.12			0.27		0.00	0.12	
Control Delay (s/veh)		5.7			9.1			4.0		5.0	3.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		5.7			9.1			4.0		5.0	3.5	
LOS		A			A			A		A	A	
Approach Delay (s/veh)		5.7			9.1			4.1			3.6	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)		1			5			0		0	0	
Queue Length 95th (ft)		14			21			56		2	28	
Internal Link Dist (ft)		813			467			552			327	
Turn Bay Length (ft)										45		
Base Capacity (vph)		1510			1350			3150		732	3487	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.03			0.04			0.21		0.00	0.10	

Intersection Summary

















Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 31.9
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.27
 Intersection Signal Delay (s/veh): 4.2
 Intersection LOS: A
 Intersection Capacity Utilization 44.6%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 16: John Daly Blvd & Buffalo Ave



17: John Daly Blvd & Falls St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	6	19	24	4	18	7	321	69	10	137	8
Future Volume (vph)	13	6	19	24	4	18	7	321	69	10	137	8
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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.932			0.947			0.974			0.992	
Flt Protected		0.983			0.975			0.999			0.997	
Satd. Flow (prot)	0	1690	0	0	1671	0	0	3478	0	0	3466	0
Flt Permitted		0.983			0.975			0.999			0.997	
Satd. Flow (perm)	0	1690	0	0	1671	0	0	3478	0	0	3466	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		748			304			1071			777	
Travel Time (s)		17.0			6.9			24.3			17.7	
Confl. Peds. (#/hr)	3		1	1		3	4		1	1		4
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	16	7	23	29	5	22	8	387	83	12	165	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	56	0	0	478	0	0	187	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												
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			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	28.0%						ICU Level of Service A					
Analysis Period (min)	15											

31: 10th St & Niagara St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	59	10	1	65	2	8	25	3	7	29	31
Future Volume (vph)	79	59	10	1	65	2	8	25	3	7	29	31
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
Ped Bike Factor		0.99			0.99							
Frt		0.991			0.997			0.990			0.937	
Flt Protected		0.974			0.999			0.989			0.995	
Satd. Flow (prot)	0	1795	0	0	1801	0	0	1739	0	0	1737	0
Flt Permitted		0.832			0.998			0.935			0.972	
Satd. Flow (perm)	0	1530	0	0	1799	0	0	1644	0	0	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			2			3			36	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		366			929			787			828	
Travel Time (s)		8.3			21.1			17.9			18.8	
Confl. Peds. (#/hr)	3		6	6		3						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	91	68	11	1	75	2	9	29	3	8	33	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	78	0	0	41	0	0	77	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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%		32.0%	32.0%		32.0%	32.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		11.0	11.0		11.0	11.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		29.0			29.0			11.0			11.0	
Actuated g/C Ratio		0.58			0.58			0.22			0.22	
v/c Ratio		0.19			0.07			0.11			0.19	

31: 10th St & Niagara St
Build AM Peak

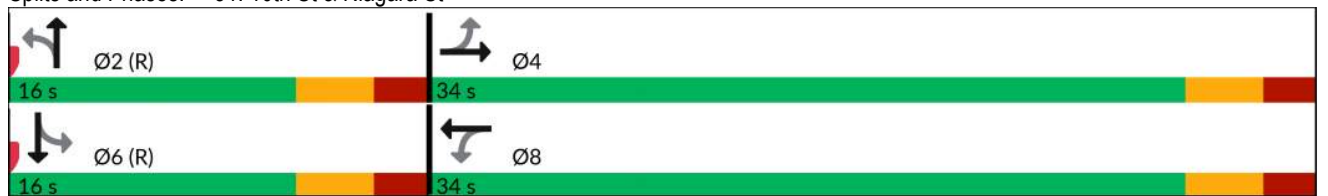
Lanes, Volumes, Timings
09/24/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay (s/veh)		5.2			4.7			15.7			11.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		5.2			4.7			15.7			11.4	
LOS		A			A			B			B	
Approach Delay (s/veh)		5.3			4.8			15.8			11.5	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		19			8			9			10	
Queue Length 95th (ft)		38			20			27			34	
Internal Link Dist (ft)		286			849			707			748	
Turn Bay Length (ft)												
Base Capacity (vph)		892			1044			364			401	
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		0.19			0.07			0.11			0.19	

Intersection Summary

Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	50
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.19
Intersection Signal Delay (s/veh):	7.7
Intersection LOS:	A
Intersection Capacity Utilization:	27.6%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 31: 10th St & Niagara St



32: John Daly Blvd & Niagara St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↗	↗
Traffic Volume (vph)	53	119	34	80	187	139
Future Volume (vph)	53	119	34	80	187	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		175	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor		0.98		0.99	0.99	0.97
Frnt		0.850				0.850
Flt Protected				0.985	0.950	
Satd. Flow (prot)	1845	1568	0	3387	1770	1583
Flt Permitted				0.866	0.950	
Satd. Flow (perm)	1845	1547	0	2976	1767	1549
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		135				158
Link Speed (mph)	30			30	30	
Link Distance (ft)	889			318	777	
Travel Time (s)	20.2			7.2	17.7	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	5%	5%	2%	2%
Adj. Flow (vph)	60	135	39	91	213	158
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	135	0	130	213	158
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	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)		9	15		15	9
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	9.5	9.5	9.5	9.5	6.0	6.0
Minimum Split (s)	15.0	15.0	15.0	15.0	11.0	11.0
Total Split (s)	49.5	49.5	49.5	49.5	23.5	23.5
Total Split (%)	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%
Maximum Green (s)	44.0	44.0	44.0	44.0	18.5	18.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						

32: John Daly Blvd & Niagara St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.4	10.4		10.4	8.7	8.7
Actuated g/C Ratio	0.35	0.35		0.35	0.29	0.29
v/c Ratio	0.09	0.21		0.12	0.41	0.27
Control Delay (s/veh)	7.6	3.0		7.5	10.5	3.2
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	7.6	3.0		7.5	10.5	3.2
LOS	A	A		A	B	A
Approach Delay (s/veh)	4.5			7.6	7.4	
Approach LOS	A			A	A	
Queue Length 50th (ft)	6	0		6	24	0
Queue Length 95th (ft)	19	17		16	48	17
Internal Link Dist (ft)	809			238	697	
Turn Bay Length (ft)		175				
Base Capacity (vph)	1845	1547		2976	1110	1030
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.03	0.09		0.04	0.19	0.15

Intersection Summary
















Area Type:	Other
Cycle Length:	73
Actuated Cycle Length:	29.6
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.41
Intersection Signal Delay (s/veh):	6.6
Intersection LOS:	A
Intersection Capacity Utilization:	27.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 32: John Daly Blvd & Niagara St



38: 10th St & Ferry Ave
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	82	13	0	0	0	0	88	19	20	54	0
Future Volume (vph)	15	82	13	0	0	0	0	88	19	20	54	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.982						0.976					
Flt Protected	0.993											0.987
Satd. Flow (prot)	0	3385	0	0	0	0	0	1818	0	0	1769	0
Flt Permitted	0.993											0.987
Satd. Flow (perm)	0	3385	0	0	0	0	0	1818	0	0	1769	0
Link Speed (mph)	30						30					
Link Distance (ft)	999						1177					
Travel Time (s)	22.7						26.8					
Confl. Peds. (#/hr)	1	6		6	1		12	4		4	12	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	17	94	15	0	0	0	0	101	22	23	62	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	126	0	0	0	0	0	123	0	0	85	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					
Link Offset(ft)	0						0					
Crosswalk Width(ft)	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			
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	26.7%						ICU Level of Service A					
Analysis Period (min)	15											

45: Falls St & 9th St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024


















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	84	46	3	0	0
Future Volume (vph)	1	84	46	3	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993					
Flt Protected						
Satd. Flow (prot)	0	1863	1850	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1850	0	0	0
Link Speed (mph)	30		30	30		
Link Distance (ft)	304		372	782		
Travel Time (s)	6.9		8.5	17.8		
Confl. Peds. (#/hr)	3			3		
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Adj. Flow (vph)	1	125	69	4	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	126	73	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0		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	Free		Free	Stop		

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	8.6%
Analysis Period (min)	15
	ICU Level of Service A

46: 9th St & Niagara St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	149	0	0	93	11	1	2	0	0	0	0
Future Volume (vph)	45	149	0	0	93	11	1	2	0	0	0	0
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
Ped Bike Factor												
Frt	0.985											
Flt Protected	0.988								0.984			
Satd. Flow (prot)	0	1859	0	0	1782	0	0	1851	0	0	0	0
Flt Permitted	0.988								0.984			
Satd. Flow (perm)	0	1859	0	0	1782	0	0	1851	0	0	0	0
Link Speed (mph)	30								30			
Link Distance (ft)	318								782		115	
Travel Time (s)	7.2								17.8		2.6	
Confl. Peds. (#/hr)	14		7	7		14	1		1	1		1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	1%	1%	1%	5%	5%	5%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	56	184	0	0	115	14	1	2	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	0	0	129	0	0	3	0	0	0	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			
Link Offset(ft)	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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Free								Free		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	27.3%						ICU Level of Service A					
Analysis Period (min)	15											

77:
Build AM Peak






















Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑		↑↑	↑↑	
Traffic Volume (vph)	0	28	0	111	48	0
Future Volume (vph)	0	28	0	111	48	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	0	2787	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	0	2787	3433	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		280	525		259	
Travel Time (s)		6.4	11.9		5.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	30	0	121	52	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	30	0	121	52	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		36	
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		Yield	Free		Free	

Intersection Summary

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

78: Rainbow Blvd & 10th St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	43	2	26	82	17	1	19	1	9	15	7
Future Volume (vph)	10	43	2	26	82	17	1	19	1	9	15	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frnt		0.992			0.974			0.995			0.970	
Flt Protected	0.950			0.950				0.998			0.986	
Satd. Flow (prot)	1770	3511	0	1770	3447	0	0	1850	0	0	1782	0
Flt Permitted	0.668			0.716								
Satd. Flow (perm)	1244	3511	0	1334	3447	0	0	1853	0	0	1807	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			23			1			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		301			259			127			1360	
Travel Time (s)		6.8			5.9			2.9			30.9	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	13	57	3	35	109	23	1	25	1	12	20	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	60	0	35	132	0	0	27	0	0	41	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			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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		9.0	9.0		9.0	9.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		14.0	14.0		14.0	14.0	
Total Split (s)	60.0	60.0		60.0	60.0		20.0	20.0		20.0	20.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	56.0	56.0		56.0	56.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	

78: Rainbow Blvd & 10th St
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	24.3	24.3		24.3	24.3			9.0			9.0	
Actuated g/C Ratio	0.87	0.87		0.87	0.87			0.32			0.32	
v/c Ratio	0.01	0.01		0.03	0.04			0.04			0.06	
Control Delay (s/veh)	3.4	2.7		3.2	2.3			6.2			5.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.4	2.7		3.2	2.3			6.2			5.5	
LOS	A	A		A	A			A			A	
Approach Delay (s/veh)		2.9			2.5			6.3			5.6	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	0	0		0	0			3			3	
Queue Length 95th (ft)	5	6		9	10			8			9	
Internal Link Dist (ft)		221			179			47			1280	
Turn Bay Length (ft)	175			125								
Base Capacity (vph)	1244	3511		1334	3447			1001			981	
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	0.01	0.02		0.03	0.04			0.03			0.04	

Intersection Summary























Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 27.9
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.07
 Intersection Signal Delay (s/veh): 3.3 Intersection LOS: A
 Intersection Capacity Utilization 23.3% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 78: Rainbow Blvd & 10th St















79: Rainbow Blvd & John Daly Blvd
Build AM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	43	129	8	60	22	101	344	8	13	136	27
Future Volume (vph)	25	43	129	8	60	22	101	344	8	13	136	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	255		140	240		200	235		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99	0.99							
Frts			0.850		0.960			0.997				0.975
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3471	1553	1687	4637	0	1787	3564	0	1752	3417	0
Flt Permitted	0.685			0.721			0.559			0.499		
Satd. Flow (perm)	1249	3471	1531	1278	4637	0	1052	3564	0	920	3417	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		27			2			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		271			371			407			1071	
Travel Time (s)		6.2			8.4			9.3			24.3	
Confl. Peds. (#/hr)	1		1	1		1						
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	1%	1%	1%	3%	3%	3%
Adj. Flow (vph)	31	53	159	10	74	27	125	425	10	16	168	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	53	159	10	101	0	125	435	0	16	201	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	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		3.0	6.0		3.0	6.0	
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0		8.0	11.0		8.0	11.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	43.0		25.0	43.0	
Total Split (%)	39.8%	39.8%	39.8%	39.8%	39.8%		22.1%	38.1%		22.1%	38.1%	
Maximum Green (s)	40.0	40.0	40.0	40.0	40.0		20.0	38.0		20.0	38.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.0	3.0		4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

79: Rainbow Blvd & John Daly Blvd
Build AM Peak

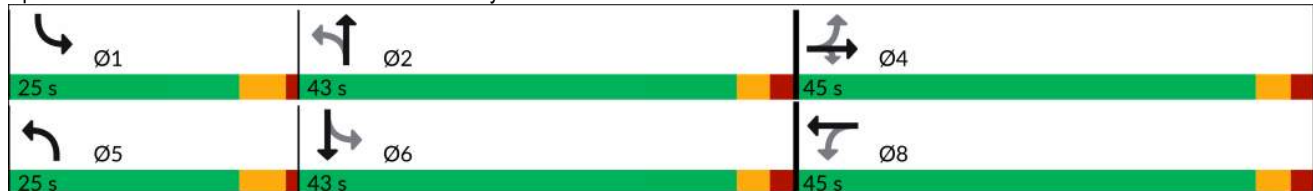
Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	10.0	10.0	10.0	10.0	10.0		50.4	48.7		43.7	38.0	
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14		0.71	0.69		0.62	0.54	
v/c Ratio	0.17	0.10	0.45	0.05	0.14		0.15	0.17		0.02	0.10	
Control Delay (s/veh)	29.9	27.5	9.9	27.7	21.3		3.4	4.7		3.3	7.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	29.9	27.5	9.9	27.7	21.3		3.4	4.7		3.3	7.5	
LOS	C	C	A	C	C		A	A		A	A	
Approach Delay (s/veh)		16.3			21.9			4.5			7.3	
Approach LOS		B			C			A			A	
Queue Length 50th (ft)	12	11	0	4	10		13	25		2	18	
Queue Length 95th (ft)	32	23	37	15	21		23	59		5	30	
Internal Link Dist (ft)		191			291			327			991	
Turn Bay Length (ft)	255		140	240			235			200		
Base Capacity (vph)	704	1958	932	721	2627		961	2448		894	1841	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.03	0.17	0.01	0.04		0.13	0.18		0.02	0.11	

Intersection Summary

Area Type:	Other
Cycle Length:	113
Actuated Cycle Length:	70.9
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.45
Intersection Signal Delay (s/veh):	9.3
Intersection LOS:	A
Intersection Capacity Utilization:	34.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 79: Rainbow Blvd & John Daly Blvd



Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	11	7	2	39	8	23	50	1	6	35	9
Future Vol, veh/h	13	11	7	2	39	8	23	50	1	6	35	9
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	19	19	19	11	11	11	8	8	8	5	5	5
Mvmt Flow	17	14	9	3	50	10	29	64	1	8	45	12
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	7.9	7.8	8	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	42%	4%	12%
Vol Thru, %	68%	35%	80%	70%
Vol Right, %	1%	23%	16%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	31	49	50
LT Vol	23	13	2	6
Through Vol	50	11	39	35
RT Vol	1	7	8	9
Lane Flow Rate	95	40	63	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.114	0.051	0.077	0.076
Departure Headway (Hd)	4.317	4.604	4.406	4.251
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	781	817	848
Service Time	2.407	2.61	2.411	2.251
HCM Lane V/C Ratio	0.116	0.051	0.077	0.075
HCM Control Delay, s/veh	8	7.9	7.8	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.2	0.2

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	78	0	5	39	19	7	19	1	5	13	2
Future Vol, veh/h	8	78	0	5	39	19	7	19	1	5	13	2
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	10	10	10	3	3	3	1	1	1
Mvmt Flow	10	101	0	6	51	25	9	25	1	6	17	3
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	7.8	7.6	7.6	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	9%	8%	25%
Vol Thru, %	70%	91%	62%	65%
Vol Right, %	4%	0%	30%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	86	63	20
LT Vol	7	8	5	5
Through Vol	19	78	39	13
RT Vol	1	0	19	2
Lane Flow Rate	35	112	82	26
Geometry Grp	1	1	1	1
Degree of Util (X)	0.043	0.128	0.093	0.032
Departure Headway (Hd)	4.435	4.121	4.095	4.371
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	812	863	866	824
Service Time	2.436	2.179	2.162	2.372
HCM Lane V/C Ratio	0.043	0.13	0.095	0.032
HCM Control Delay, s/veh	7.6	7.8	7.6	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.4	0.3	0.1

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←						→			←	
Traffic Vol, veh/h	15	82	13	0	0	0	0	88	19	20	54	0
Future Vol, veh/h	15	82	13	0	0	0	0	88	19	20	54	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	6	6	6
Mvmt Flow	17	94	15	0	0	0	0	101	22	23	62	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	8.2	8	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	27%	0%	27%
Vol Thru, %	82%	73%	76%	73%
Vol Right, %	18%	0%	24%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	56	54	74
LT Vol	0	15	0	20
Through Vol	88	41	41	54
RT Vol	19	0	13	0
Lane Flow Rate	123	64	62	85
Geometry Grp	2	5	5	2
Degree of Util (X)	0.145	0.092	0.084	0.106
Departure Headway (Hd)	4.241	5.17	4.866	4.504
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	849	695	739	799
Service Time	2.251	2.885	2.581	2.516
HCM Lane V/C Ratio	0.145	0.092	0.084	0.106
HCM Control Delay, s/veh	8	8.4	8	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.3	0.4

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	76	5	18	123	50	2	2	3	17	7	16
Future Vol, veh/h	13	76	5	18	123	50	2	2	3	17	7	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	79	5	19	128	52	2	2	3	18	7	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	180	0	0	84	0	0	278	327	82	299	303	154
Stage 1	-	-	-	-	-	-	109	109	-	192	192	-
Stage 2	-	-	-	-	-	-	169	218	-	107	111	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1395	-	-	1512	-	-	674	592	978	653	610	892
Stage 1	-	-	-	-	-	-	896	805	-	810	742	-
Stage 2	-	-	-	-	-	-	833	723	-	898	803	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1395	-	-	1512	-	-	638	578	978	633	595	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	638	578	-	633	595	-
Stage 1	-	-	-	-	-	-	887	797	-	799	732	-
Stage 2	-	-	-	-	-	-	798	713	-	884	795	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.05	0.7	10.02	10.41
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	724	246	-	-	160	-	-	707
HCM Lane V/C Ratio	0.01	0.01	-	-	0.012	-	-	0.059
HCM Control Delay (s/veh)	10	7.6	0	-	7.4	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	13	6	19	24	4	18	7	321	69	10	137	8
Future Vol, veh/h	13	6	19	24	4	18	7	321	69	10	137	8
Conflicting Peds, #/hr	3	0	1	1	0	3	4	0	1	1	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	5	5	5	1	1	1	3	3	3
Mvmt Flow	16	7	23	29	5	22	8	387	83	12	165	10

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	414	686	92	557	649	239	179	0	0	471	0	0
Stage 1	198	198	-	446	446	-	-	-	-	-	-	-
Stage 2	216	488	-	111	203	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.6	6.6	7	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.55	4.05	3.35	2.21	-	-	2.23	-	-
Pot Cap-1 Maneuver	520	367	943	406	381	753	1402	-	-	1080	-	-
Stage 1	782	734	-	553	565	-	-	-	-	-	-	-
Stage 2	764	546	-	873	725	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	486	358	939	381	372	750	1396	-	-	1079	-	-
Mov Cap-2 Maneuver	486	358	-	381	372	-	-	-	-	-	-	-
Stage 1	770	722	-	549	560	-	-	-	-	-	-	-
Stage 2	728	541	-	833	714	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.54		13.67	0.17	0.62
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	51	-	-	596	470	216	-	-
HCM Lane V/C Ratio	0.006	-	-	0.077	0.118	0.011	-	-
HCM Control Delay (s/veh)	7.6	0.1	-	11.5	13.7	8.4	0.1	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	45	149	0	0	93	11	1	2	0	0	0	0
Future Vol, veh/h	45	149	0	0	93	11	1	2	0	0	0	0
Conflicting Peds, #/hr	14	0	7	7	0	14	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	1	1	1	5	5	5	1	1	1	2	2	2
Mvmt Flow	56	184	0	0	115	14	1	2	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	142	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.11	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.209	-	-
Pot Cap-1 Maneuver	1447	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1447	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	1.76	0	11.32
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	573	418	-	-	-
HCM Lane V/C Ratio	0.006	0.038	-	-	-
HCM Control Delay (s/veh)	11.3	7.6	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0	0.1	-	-	-

1:
Build PM Peak



















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕				↕
Traffic Volume (vph)	7	43	0	0	0	92
Future Volume (vph)	7	43	0	0	0	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Flt Protected		0.993				
Satd. Flow (prot)	0	1850	0	0	0	1611
Flt Permitted		0.993				
Satd. Flow (perm)	0	1850	0	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		547	280		127	
Travel Time (s)		12.4	6.4		2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	47	0	0	0	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	55	0	0	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	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		Free	Stop		Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	9.0% ICU Level of Service A
Analysis Period (min)	15

















5: Buffalo Ave & Portage Rd
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	145	2	2	120	41	2	2	28	63	1	11
Future Volume (vph)	12	145	2	2	120	41	2	2	28	63	1	11
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
Ped Bike Factor												
Frt		0.998			0.966			0.885			0.980	
Flt Protected		0.996			0.999			0.996			0.960	
Satd. Flow (prot)	0	1852	0	0	1815	0	0	1658	0	0	1702	0
Flt Permitted		0.996			0.999			0.996			0.960	
Satd. Flow (perm)	0	1852	0	0	1815	0	0	1658	0	0	1702	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1993			1271			305			1634	
Travel Time (s)		45.3			28.9			6.9			37.1	
Confl. Peds. (#/hr)	1		1	1		1						
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	5%	5%	5%
Adj. Flow (vph)	15	184	3	3	152	52	3	3	35	80	1	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	0	0	207	0	0	41	0	0	95	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	32.7%						ICU Level of Service A					
Analysis Period (min)	15											

















11: Portage Rd & Falls St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	40	10	6	43	16	10	40	5	24	59	22
Future Volume (vph)	19	40	10	6	43	16	10	40	5	24	59	22
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
Ped Bike Factor												
Frt		0.980			0.967			0.988			0.971	
Flt Protected		0.987			0.995			0.991			0.989	
Satd. Flow (prot)	0	1820	0	0	1709	0	0	1824	0	0	1807	0
Flt Permitted		0.987			0.995			0.991			0.989	
Satd. Flow (perm)	0	1820	0	0	1709	0	0	1824	0	0	1807	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1985			1374			1634			720	
Travel Time (s)		45.1			31.2			37.1			16.4	
Confl. Peds. (#/hr)	1		2	2		1	7		7			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	7%	7%	7%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	22	47	12	7	51	19	12	47	6	28	69	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	0	0	77	0	0	65	0	0	123	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	23.5%						ICU Level of Service A					
Analysis Period (min)	15											

12: 10th St & Falls St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	63	1	26	69	10	9	12	4	14	25	4
Future Volume (vph)	2	63	1	26	69	10	9	12	4	14	25	4
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 _t		0.997			0.987			0.980			0.988	
Fl _t Protected		0.999			0.988			0.982			0.984	
Satd. Flow (prot)	0	1855	0	0	1816	0	0	1793	0	0	1811	0
Fl _t Permitted		0.999			0.988			0.982			0.984	
Satd. Flow (perm)	0	1855	0	0	1816	0	0	1793	0	0	1811	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		372			1985			1360			787	
Travel Time (s)		8.5			45.1			30.9			17.9	
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Adj. Flow (vph)	3	102	2	42	111	16	15	19	6	23	40	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	169	0	0	40	0	0	69	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	22.3%
Analysis Period (min)	15
	ICU Level of Service A

16: John Daly Blvd & Buffalo Ave
Build PM Peak













Lanes, Volumes, Timings
09/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Volume (vph)	4	36	155	73	14	5	57	424	11	3	711	25
Future Volume (vph)	4	36	155	73	14	5	57	424	11	3	711	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	45		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99							
Frt		0.893			0.993			0.997			0.995	
Flt Protected		0.999			0.962			0.994		0.950		
Satd. Flow (prot)	0	1646	0	0	1795	0	0	3507	0	1787	3556	0
Flt Permitted		0.994			0.723			0.791		0.428		
Satd. Flow (perm)	0	1637	0	0	1349	0	0	2791	0	805	3556	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		156			3			4			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		893			547			632			407	
Travel Time (s)		20.3			12.4			14.4			9.3	
Confl. Peds. (#/hr)	7					7						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	5	43	187	88	17	6	69	511	13	4	857	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	0	111	0	0	593	0	4	887	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												
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		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		15.0	15.0		15.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Total Split (%)	36.8%	36.8%		36.8%	36.8%		63.2%	63.2%		63.2%	63.2%	
Maximum Green (s)	31.0	31.0		31.0	31.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												

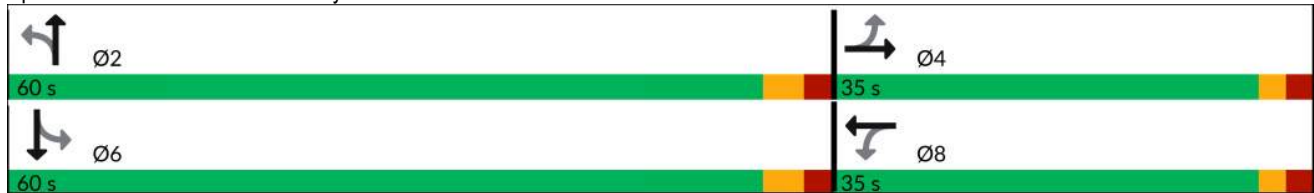
16: John Daly Blvd & Buffalo Ave
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)				7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)				0	0		0	0		0	0	
Act Effct Green (s)		10.9			10.9			17.6		17.6	17.6	
Actuated g/C Ratio		0.29			0.29			0.47		0.47	0.47	
v/c Ratio		0.40			0.28			0.45		0.01	0.53	
Control Delay (s/veh)		7.4			13.7			7.9		5.3	8.3	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		7.4			13.7			7.9		5.3	8.3	
LOS		A			B			A		A	A	
Approach Delay (s/veh)		7.4			13.8			8.0			8.3	
Approach LOS		A			B			A			A	
Queue Length 50th (ft)		11			16			35		1	55	
Queue Length 95th (ft)		50			50			65		3	95	
Internal Link Dist (ft)		813			467			552			327	
Turn Bay Length (ft)										45		
Base Capacity (vph)		1400			1133			2791		805	3556	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.17			0.10			0.21		0.00	0.25	

















Intersection Summary	
Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	37.7
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.53
Intersection Signal Delay (s/veh):	8.4
Intersection LOS:	A
Intersection Capacity Utilization:	70.6%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 16: John Daly Blvd & Buffalo Ave



















17: John Daly Blvd & Falls St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	29	33	21	7	17	67	247	21	18	418	31
Future Volume (vph)	36	29	33	21	7	17	67	247	21	18	418	31
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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.955			0.949			0.991			0.990	
Flt Protected		0.982			0.977			0.990			0.998	
Satd. Flow (prot)	0	1730	0	0	1744	0	0	3507	0	0	3531	0
Flt Permitted		0.982			0.977			0.990			0.998	
Satd. Flow (perm)	0	1730	0	0	1744	0	0	3507	0	0	3531	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		748			304			1071			777	
Travel Time (s)		17.0			6.9			24.3			17.7	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	43	35	39	25	8	20	80	294	25	21	498	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	0	0	53	0	0	399	0	0	556	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												
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			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	39.3%						ICU Level of Service A					
Analysis Period (min)	15											

31: 10th St & Niagara St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	125	8	1	122	10	9	13	2	5	34	126
Future Volume (vph)	34	125	8	1	122	10	9	13	2	5	34	126
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
Frts		0.993			0.990			0.990			0.897	
Flt Protected		0.990						0.981			0.999	
Satd. Flow (prot)	0	1831	0	0	1844	0	0	1809	0	0	1669	0
Flt Permitted		0.934			0.999			0.863			0.993	
Satd. Flow (perm)	0	1728	0	0	1842	0	0	1591	0	0	1659	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			2			137	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		366			929			787			828	
Travel Time (s)		8.3			21.1			17.9			18.8	
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
Adj. Flow (vph)	37	136	9	1	133	11	10	14	2	5	37	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	182	0	0	145	0	0	26	0	0	179	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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%		32.0%	32.0%		32.0%	32.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		11.0	11.0		11.0	11.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		29.0			29.0			11.0			11.0	
Actuated g/C Ratio		0.58			0.58			0.22			0.22	
v/c Ratio		0.18			0.13			0.07			0.38	
Control Delay (s/veh)		5.2			4.8			15.4			8.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		5.2			4.8			15.4			8.5	

31: 10th St & Niagara St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			A			B			A	
Approach Delay (s/veh)		5.2			4.8			15.4			8.6	
Approach LOS		A			A			B			A	
Queue Length 50th (ft)		20			15			6			10	
Queue Length 95th (ft)		42			33			21			50	
Internal Link Dist (ft)		286			849			707			748	
Turn Bay Length (ft)												
Base Capacity (vph)		1006			1072			351			471	
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		0.18			0.14			0.07			0.38	

Intersection Summary

Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	50
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.38
Intersection Signal Delay (s/veh):	6.7
Intersection LOS:	A
Intersection Capacity Utilization	38.4%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 31: 10th St & Niagara St



32: John Daly Blvd & Niagara St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↗	↗
Traffic Volume (vph)	131	352	115	122	220	80
Future Volume (vph)	131	352	115	122	220	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		175	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor		0.98		0.99		0.97
Frnt		0.850				0.850
Flt Protected				0.976	0.950	
Satd. Flow (prot)	1863	1583	0	3488	1770	1583
Flt Permitted				0.765	0.950	
Satd. Flow (perm)	1863	1553	0	2726	1770	1549
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		419				95
Link Speed (mph)	30			30	30	
Link Distance (ft)	889			318	777	
Travel Time (s)	20.2			7.2	17.7	
Confl. Peds. (#/hr)		6	6			1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Adj. Flow (vph)	156	419	137	145	262	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	156	419	0	282	262	95
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	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)		9	15		15	9
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	9.5	9.5	9.5	9.5	6.0	6.0
Minimum Split (s)	15.0	15.0	15.0	15.0	11.0	11.0
Total Split (s)	49.5	49.5	49.5	49.5	23.5	23.5
Total Split (%)	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%
Maximum Green (s)	44.0	44.0	44.0	44.0	18.5	18.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	3.0	3.0	3.0	3.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	11.8	11.8		11.8	9.9	9.9
Actuated g/C Ratio	0.37	0.37		0.37	0.31	0.31
v/c Ratio	0.22	0.50		0.28	0.48	0.17
Control Delay (s/veh)	8.8	3.6		8.6	12.4	3.5
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	8.8	3.6		8.6	12.4	3.5
LOS	A	A		A	B	A
Approach Delay (s/veh)	5.1			8.7	10.1	
Approach LOS	A			A	B	
Queue Length 50th (ft)	17	0		15	30	0
Queue Length 95th (ft)	44	29		36	76	16
Internal Link Dist (ft)	809			238	697	
Turn Bay Length (ft)		175				
Base Capacity (vph)	1863	1553		2726	1025	937
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.08	0.27		0.10	0.26	0.10

Intersection Summary
















Area Type:	Other
Cycle Length:	73
Actuated Cycle Length:	32.3
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.50
Intersection Signal Delay (s/veh):	7.4
Intersection LOS:	A
Intersection Capacity Utilization:	42.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 32: John Daly Blvd & Niagara St



38: 10th St & Ferry Ave
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	221	13	0	0	0	0	41	16	57	152	0
Future Volume (vph)	13	221	13	0	0	0	0	41	16	57	152	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.992						0.962					
Flt Protected	0.997						0.987					
Satd. Flow (prot)	0	3535	0	0	0	0	0	1792	0	0	1857	0
Flt Permitted	0.997						0.987					
Satd. Flow (perm)	0	3535	0	0	0	0	0	1792	0	0	1857	0
Link Speed (mph)	30						30					
Link Distance (ft)	999						1177					
Travel Time (s)	22.7						26.8					
Confl. Peds. (#/hr)	3			3			4			2		
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 (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	16	276	16	0	0	0	0	51	20	71	190	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	308	0	0	0	0	0	71	0	0	261	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					
Link Offset(ft)	0						0					
Crosswalk Width(ft)	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	32.0%						ICU Level of Service A					
Analysis Period (min)	15											

45: Falls St & 9th St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024


















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	66	75	7	0	0
Future Volume (vph)	2	66	75	7	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.998					
Flt Protected	0.998					
Satd. Flow (prot)	0	1877	1859	0	0	0
Flt Permitted	0.998					
Satd. Flow (perm)	0	1877	1859	0	0	0
Link Speed (mph)	30		30	30		
Link Distance (ft)	304		372	782		
Travel Time (s)	6.9		8.5	17.8		
Confl. Peds. (#/hr)	1				1	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	3	93	106	10	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	96	116	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0		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	Free		Free	Stop		

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	8.4%
ICU Level of Service	A
Analysis Period (min)	15

46: 9th St & Niagara St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	167	0	0	232	25	5	4	0	0	0	0
Future Volume (vph)	44	167	0	0	232	25	5	4	0	0	0	0
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
Ped Bike Factor												
Frt	0.987											
Flt Protected	0.990								0.973			
Satd. Flow (prot)	0	1844	0	0	1839	0	0	1812	0	0	0	0
Flt Permitted	0.990								0.973			
Satd. Flow (perm)	0	1844	0	0	1839	0	0	1812	0	0	0	0
Link Speed (mph)	30								30			
Link Distance (ft)	318								782			
Travel Time (s)	7.2								17.8			
Confl. Peds. (#/hr)	14		7	7		14	1		1	1		1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	54	206	0	0	286	31	6	5	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	260	0	0	317	0	0	11	0	0	0	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			
Link Offset(ft)	0								0			
Crosswalk Width(ft)	16								16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Free								Stop			
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	40.5%						ICU Level of Service A					
Analysis Period (min)	15											

77:
Build PM Peak






















Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑		↑↑	↑↑	
Traffic Volume (vph)	0	41	0	178	110	0
Future Volume (vph)	0	41	0	178	110	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	0	2787	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	0	2787	3433	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		280	525		259	
Travel Time (s)		6.4	11.9		5.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	45	0	193	120	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	45	0	193	120	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		36	
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		Yield	Free		Free	

Intersection Summary

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

78: Rainbow Blvd & 10th St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	103	15	43	93	14	2	4	1	14	34	12
Future Volume (vph)	3	103	15	43	93	14	2	4	1	14	34	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frnt		0.981			0.981			0.986			0.973	
Flt Protected	0.950			0.950				0.985			0.989	
Satd. Flow (prot)	1770	3472	0	1770	3472	0	0	1809	0	0	1793	0
Flt Permitted	0.654			0.644				0.868			0.917	
Satd. Flow (perm)	1218	3472	0	1200	3472	0	0	1594	0	0	1662	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			20			1			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		301			259			127			1360	
Travel Time (s)		6.8			5.9			2.9			30.9	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Adj. Flow (vph)	4	149	22	62	135	20	3	6	1	20	49	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	171	0	62	155	0	0	10	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)		12			12			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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		9.0	9.0		9.0	9.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		14.0	14.0		14.0	14.0	
Total Split (s)	60.0	60.0		60.0	60.0		20.0	20.0		20.0	20.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	56.0	56.0		56.0	56.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)										7.0	7.0	

78: Rainbow Blvd & 10th St
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)										11.0	11.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)	19.5	19.5		19.5	19.5			9.1			9.1	
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.30			0.30	
v/c Ratio	0.00	0.07		0.08	0.06			0.02			0.16	
Control Delay (s/veh)	5.6	4.6		5.9	4.7			6.8			7.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	5.6	4.6		5.9	4.7			6.8			7.5	
LOS	A	A		A	A			A			A	
Approach Delay (s/veh)		4.7			5.1			6.9			7.6	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	0	6		5	6			1			11	
Queue Length 95th (ft)	2	11		12	10			4			14	
Internal Link Dist (ft)		221			179			47			1280	
Turn Bay Length (ft)	175			125								
Base Capacity (vph)	1218	3472		1200	3472			800			841	
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	0.00	0.05		0.05	0.04			0.01			0.10	

Intersection Summary























Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 30.2
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.17
 Intersection Signal Delay (s/veh): 5.4 Intersection LOS: A
 Intersection Capacity Utilization 24.0% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 78: Rainbow Blvd & 10th St















79: Rainbow Blvd & John Daly Blvd
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	89	318	8	74	25	159	269	5	27	413	62
Future Volume (vph)	41	89	318	8	74	25	159	269	5	27	413	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	255		140	240		200	235		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99	0.99		0.99				0.99	
Frts			0.850		0.962			0.997				0.980
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1787	4923	0	1770	3529	0	1787	3494	0
Flt Permitted	0.676			0.687			0.303			0.558		
Satd. Flow (perm)	1257	3539	1553	1284	4923	0	563	3529	0	1050	3494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			370		29			2			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		271			371			407			1071	
Travel Time (s)		6.2			8.4			9.3			24.3	
Confl. Peds. (#/hr)	1		4	4		1	4					4
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	48	103	370	9	86	29	185	313	6	31	480	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	103	370	9	115	0	185	319	0	31	552	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	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		3.0	6.0		3.0	6.0	
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0		8.0	11.0		8.0	11.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	43.0		25.0	43.0	
Total Split (%)	39.8%	39.8%	39.8%	39.8%	39.8%		22.1%	38.1%		22.1%	38.1%	
Maximum Green (s)	40.0	40.0	40.0	40.0	40.0		20.0	38.0		20.0	38.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.0	3.0		4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

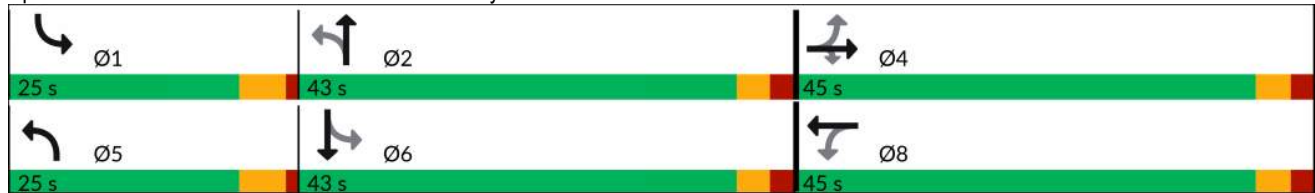
79: Rainbow Blvd & John Daly Blvd
Build PM Peak

Lanes, Volumes, Timings
09/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	11.2	11.2	11.2	11.2	11.2		29.9	26.0		19.9	14.0	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.58	0.51		0.39	0.27	
v/c Ratio	0.17	0.13	0.58	0.03	0.10		0.31	0.17		0.06	0.57	
Control Delay (s/veh)	20.1	18.3	7.1	18.6	14.3		6.5	8.7		6.2	18.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.1	18.3	7.1	18.6	14.3		6.5	8.7		6.2	18.7	
LOS	C	B	A	B	B		A	A		A	B	
Approach Delay (s/veh)		10.6			14.7			7.9			18.1	
Approach LOS		B			B			A			B	
Queue Length 50th (ft)	12	13	0	2	7		20	17		3	69	
Queue Length 95th (ft)	39	33	51	13	21		51	61		13	131	
Internal Link Dist (ft)		191			291			327			991	
Turn Bay Length (ft)	255		140	240			235			200		
Base Capacity (vph)	1001	2819	1312	1022	3927		808	2670		903	2647	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.04	0.28	0.01	0.03		0.23	0.12		0.03	0.21	

Intersection Summary	
Area Type:	Other
Cycle Length:	113
Actuated Cycle Length:	51.4
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay (s/veh):	12.6
Intersection LOS:	B
Intersection Capacity Utilization:	54.6%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 79: Rainbow Blvd & John Daly Blvd



Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	40	10	6	43	16	10	40	5	24	59	22
Future Vol, veh/h	19	40	10	6	43	16	10	40	5	24	59	22
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	1	1	1	7	7	7	2	2	2	1	1	1
Mvmt Flow	22	47	12	7	51	19	12	47	6	28	69	26
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	7.9	7.9	7.8	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	28%	9%	23%
Vol Thru, %	73%	58%	66%	56%
Vol Right, %	9%	14%	25%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	69	65	105
LT Vol	10	19	6	24
Through Vol	40	40	43	59
RT Vol	5	10	16	22
Lane Flow Rate	65	81	76	124
Geometry Grp	1	1	1	1
Degree of Util (X)	0.079	0.099	0.094	0.146
Departure Headway (Hd)	4.408	4.394	4.403	4.268
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	815	818	817	842
Service Time	2.423	2.407	2.416	2.282
HCM Lane V/C Ratio	0.08	0.099	0.093	0.147
HCM Control Delay, s/veh	7.8	7.9	7.9	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.3	0.5

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇄			⇄			⇄			⇄	
Traffic Vol, veh/h	2	63	1	26	69	10	9	12	4	14	25	4
Future Vol, veh/h	2	63	1	26	69	10	9	12	4	14	25	4
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	102	2	42	111	16	15	19	6	23	40	6
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	8	8.4	7.9	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	3%	25%	33%
Vol Thru, %	48%	95%	66%	58%
Vol Right, %	16%	2%	10%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	66	105	43
LT Vol	9	2	26	14
Through Vol	12	63	69	25
RT Vol	4	1	10	4
Lane Flow Rate	40	106	169	69
Geometry Grp	1	1	1	1
Degree of Util (X)	0.052	0.129	0.202	0.089
Departure Headway (Hd)	4.614	4.372	4.303	4.611
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	778	823	837	780
Service Time	2.63	2.386	2.316	2.626
HCM Lane V/C Ratio	0.051	0.129	0.202	0.088
HCM Control Delay, s/veh	7.9	8	8.4	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.8	0.3

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		TT						T			T	
Traffic Vol, veh/h	13	221	13	0	0	0	0	41	16	57	152	0
Future Vol, veh/h	13	221	13	0	0	0	0	41	16	57	152	0
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, %	1	1	1	1	1	1	2	2	2	1	1	1
Mvmt Flow	16	276	16	0	0	0	0	51	20	71	190	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	9.6	8.4	10.4
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	11%	0%	27%
Vol Thru, %	72%	89%	89%	73%
Vol Right, %	28%	0%	11%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	124	124	209
LT Vol	0	13	0	57
Through Vol	41	111	111	152
RT Vol	16	0	13	0
Lane Flow Rate	71	154	154	261
Geometry Grp	2	5	5	2
Degree of Util (X)	0.096	0.23	0.225	0.35
Departure Headway (Hd)	4.851	5.37	5.243	4.817
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	735	667	682	745
Service Time	2.905	3.122	2.995	2.855
HCM Lane V/C Ratio	0.097	0.231	0.226	0.35
HCM Control Delay, s/veh	8.4	9.7	9.5	10.4
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.3	0.9	0.9	1.6

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	145	2	2	120	41	2	2	28	63	1	11
Future Vol, veh/h	12	145	2	2	120	41	2	2	28	63	1	11
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	5	5	5
Mvmt Flow	15	184	3	3	152	52	3	3	35	80	1	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	205	0	0	187	0	0	374	426	186	399	401	179
Stage 1	-	-	-	-	-	-	216	216	-	184	184	-
Stage 2	-	-	-	-	-	-	158	210	-	215	217	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.11	6.51	6.21	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.509	4.009	3.309	3.545	4.045	3.345
Pot Cap-1 Maneuver	1367	-	-	1393	-	-	585	522	859	556	533	856
Stage 1	-	-	-	-	-	-	788	726	-	811	742	-
Stage 2	-	-	-	-	-	-	847	730	-	780	717	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1365	-	-	1392	-	-	565	513	858	522	524	856
Mov Cap-2 Maneuver	-	-	-	-	-	-	565	513	-	522	524	-
Stage 1	-	-	-	-	-	-	778	716	-	808	740	-
Stage 2	-	-	-	-	-	-	830	728	-	736	708	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.58			0.09			9.75			12.84		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	799	135	-	-	21	-	-	554
HCM Lane V/C Ratio	0.051	0.011	-	-	0.002	-	-	0.171
HCM Control Delay (s/veh)	9.7	7.7	0	-	7.6	0	-	12.8
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.6

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	36	29	33	21	7	17	67	247	21	18	418	31
Future Vol, veh/h	36	29	33	21	7	17	67	247	21	18	418	31
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	1	1	1	1	1	1	1	1	1
Mvmt Flow	43	35	39	25	8	20	80	294	25	21	498	37

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	871	1039	269	776	1044	160	536	0	0	319	0	0
Stage 1	560	560	-	466	466	-	-	-	-	-	-	-
Stage 2	311	479	-	310	578	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	244	228	726	289	229	861	1036	-	-	1245	-	-
Stage 1	478	506	-	549	563	-	-	-	-	-	-	-
Stage 2	672	551	-	678	502	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	205	204	724	207	205	861	1035	-	-	1245	-	-
Mov Cap-2 Maneuver	205	204	-	207	205	-	-	-	-	-	-	-
Stage 1	468	496	-	502	515	-	-	-	-	-	-	-
Stage 2	591	504	-	584	491	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v28.11		20.22	2.11	0.44
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	649	-	-	270	290	127	-	-
HCM Lane V/C Ratio	0.077	-	-	0.432	0.185	0.017	-	-
HCM Control Delay (s/veh)	8.8	0.5	-	28.1	20.2	7.9	0.1	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	2.1	0.7	0.1	-	-

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	44	167	0	0	232	25	5	4	0	0	0	0
Future Vol, veh/h	44	167	0	0	232	25	5	4	0	0	0	0
Conflicting Peds, #/hr	14	0	7	7	0	14	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	206	0	0	286	31	6	5	0	0	0	0

Major/Minor	Major1	Major2			Minor1			
Conflicting Flow All	331	0	-	-	0	602	646	207
Stage 1	-	-	-	-	-	315	315	-
Stage 2	-	-	-	-	-	287	331	-
Critical Hdwy	4.12	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1228	-	0	0	-	463	390	833
Stage 1	-	-	0	0	-	740	656	-
Stage 2	-	-	0	0	-	761	645	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1228	-	-	-	-	439	0	832
Mov Cap-2 Maneuver	-	-	-	-	-	439	0	-
Stage 1	-	-	-	-	-	703	0	-
Stage 2	-	-	-	-	-	761	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	1.68	0	13.41
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	439	375	-	-	-
HCM Lane V/C Ratio	0.025	0.044	-	-	-
HCM Control Delay (s/veh)	13.4	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

ATTACHMENT P.8

TRM Architect

Niagara Digital Campus

Noise Feasibility Study

October 2024

Niagara Digital Campus
Noise Feasibility Study

Niagara Digital Campus

Noise Feasibility Study

October 2024

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Tables

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Figures (after report)

Figure 1 – Noise Sources

Figure 2 – Sound Level Contours

Appendices

Appendix A Site Plan

Appendix B Current Zoning Maps

Appendix C Sound Level Meter Calibration Certificates

1 Introduction

Arcadis Canada Inc. (Arcadis) was retained by TRM Architect (TRM), on behalf of Niagara Falls Redevelopment, LLC (NFR), to prepare a noise feasibility study (Study) in support of an application for a Planned Unit District (PUD) referred to as the Data Center at the Niagara Digital Campus PUD (Campus PUD) located in Niagara Falls, New York. The proposed Campus PUD is bounded by Falls Street to the north, John B. Daly Boulevard to the west, 14th Street to the east and Buffalo Avenue to the south. A site plan is provided in **Appendix A**. It is anticipated that the first core element of the Niagara Digital Campus will be a state-of-the-art data center (Data Center). In this connection, Niagara Falls Redevelopment has partnered with Urbacon Data Centre Solutions Inc. (Urbacon), which is a preeminent developer, constructor, and operator of hyperscale and build-to-suit data centers in North America, to bring the innovative Data Center to Niagara Falls. Because Urbacon will drive the Data Center’s design, Arcadis studied other currently operating Urbacon facilities to assess potential noise impacts of the Data Center at the Niagara Digital Campus.

Since the current municipal approval sought currently solely relates to re-zoning and approval of the Campus PUD and not site plan approval, the Campus’ mechanical and acoustical information are considered preliminary. at this time, and conservative assumptions were made, as detailed below. Accordingly, Arcadis performed a high-level quantitative assessment to provide necessary information for the consideration of the PUD and demonstrate that operation of the Digital Campus is feasible from an acoustical perspective within the proposed Campus PUD.

2 Applicable Requirements

The following documents, policies and ordinance were used to assess anticipated noise levels at the Campus:

- New York State Department of Environmental Conservation – Assessing and Mitigating Noise Impacts;
- City of Niagara Falls, New York – Zoning Ordinance; and
- City of Niagara Falls, New York – High Energy Usage Overlay District Amendments (“High Energy Law”)

The Zoning Ordinance provides sound level criteria of 65 dBA only for light manufacturing facilities, but no other types of facilities or uses. However, the High Energy Law includes additional criteria that may be determined to be applicable to the Campus. **Table 1** provides a summary of the criteria listed in the General Requirements in Section 1319.5.4 of the City of Niagara Falls Proposed Zoning Ordinance Amendments. The criteria were applied at the nearest property line of the listed land use.

Table 1: City of Niagara Falls, NY, Proposed Zoning Ordinance Amendments - High Energy Law:

Land Use	Between 10:00 pm and 7:00 am, daily and any time on weekends (dBA)	Between 7:00 am and 10:00 pm (dBA)
Residential	40	50
Industrial	65	
Others (excluding Industrial)	50	

Although ambient sound level measurements were not conducted for the proposed Campus, the Department of Transportation (DOT) National Transportation Noise Map (Noise Map) was used to gauge the range of transportation-induced ambient sound levels on a 24-hour basis (24-hr LAeq). In accordance with the Noise Map,

the transportation-induced sound levels are in the 45 dBA to 55 dBA range between intersections where traffic flows freely. Sound levels (24-hour LAeq) at and near intersections increase to 55 dBA to 60 dBA. New York State Department of Transportation traffic data lists a range of Annual Average Daily Traffic in the area between 780 and 11,000, which aligns with DOT's Noise Map.

The results from DOT's Noise Map are considered a conservative representation of the ambient conditions of the Campus PUD area, as they only include transportation-induced contributions. The ambient environment is also influenced by nearby industrial and commercial activities, which would further increase the sound levels.

It should be noted that the criteria outlined under the High Energy Law is lower than the DOT transportation-induced sound levels in the vicinity of the Campus. Therefore, the use of the High Energy Law criteria, especially during the nighttime hours, is considered very conservative.

3 Methodology and Assumptions

Urbacon operates facilities similar to the operations planned for the Niagara Digital Campus in the Canadian provinces of Ontario and Quebec. Sound level measurements of the equipment at these existing sites were conducted using a Casella CEL-63X Type 1 Sound Level Meter. This sound level meter meets the General Requirements for sound level meters outlined in Section 1319.5.4 of the City of Niagara Falls Proposed Zoning Ordinance Amendments. Equipment calibration certificates are provided in **Appendix B**.

Measurements of the Quebec facility were conducted on September 24, 2024, while measurements of the Ontario facility were conducted on September 26 and 27, 2024. It was noted that some of the outdoor mechanical equipment was not operational as the sites' cooling demands were not at their peak. To obtain worst-case sound levels, i.e. the highest possible sound levels, sound level measurements were conducted only of the equipment that was operational. A sound power level per unit area of 66 dBA was calculated from the equipment that was operational.

It was observed that there is a potential for tonal sound in the 5,000 Hz frequency under some operating conditions. The measurements indicated that the 5,000 Hz frequency meets the definition of tonal sounds per ISO 1996-2:2017. As such, a 5 dB penalty was added to the equipment sound power level.

To represent the worst-case operating scenario for the proposed new data center, the calculated sound power level per area was applied to the entire mechanical equipment yard. This approach is conservative as it is assumed that mechanical equipment will be placed end-to-end to completely cover each mechanical yard. In reality, some spacing will be required between each unit for cooling, maintenance, and access purposes.

As a conservative approach, the sound level impacts of a fully phased-in development, with all mechanical yards operating simultaneously at their maximum operating condition, were assessed, i.e. the cumulative effects of all five (5) building phases were assessed on the neighboring properties. As observed at the Canadian sites, Urbacon's equipment sound levels fluctuate with cooling demand. This means that actual operating sound levels are likely lower than predicted, especially in the evenings when the cooling demands will be lessened.

4 Analysis

Noise modelling was completed using DataKustik's CadnaA software. CadnaA can predict sound levels surrounding a facility according to the ISO Standard 9613-2, "Acoustics – Attenuation of Sound during Propagation Outdoors". This ISO calculation method, considered conservative, accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding. The following parameters were used in the acoustic model:

- Overall Ground Absorption G was set to 0.40

- Temperature at 10 degrees and humidity at 70%
- All the buildings have been considered reflective
- Order of reflections set to two.

In addition, all proposed noise screens as detailed in Appendix A were considered to be absorptive in accordance with Section 1319.5.4 of the High Energy Law.

The following assumptions were made regarding the approximate heights of the sources, buildings and noise screens:

- Height of buildings (except for Phase 2B)– 30 feet
- Height of Phase 2B building – 15 feet
- Height of noise screens – 26 feet
- Height of mechanical equipment – 20 feet

Note that the height of the equipment is based on the approximate highest point on the equipment that was measured. This is a conservative modelling input as the mechanical equipment emits noise from various heights. Detailed measurements of each part of the mechanical equipment could not be undertaken. As design progresses, it is recommended that detailed sound level measurements are taken of the mechanical equipment.

The Campus mechanical yards were modelled as area sources. It was assumed that any heating or ventilation equipment that will be used for office purposes will be insignificant in comparison to the mechanical yards. As design progresses, this assumption should be confirmed. **Figure 1** (following the report) shows the locations of the buildings, area sources and noise screens.

5 Results

Figure 2 (following the report text) provides sound level contours when all mechanical equipment is operating at the same time. The figure includes zoning information for the current and adjacent land uses. The most potentially impacted property lines are represented by black and white “receiver” points, summarized in **Table 2**.

Table 2: Summary of Results

Receiver ID	Zoning	Sound Level (dBA)	Limit (dBA) ¹		In Compliance? (Y/N)
			Daytime (7:00 am – 10:00 pm)	Nighttime (10:00 pm – 7:00 am)	
POR01	Commercial	47	50	40	Y ²
POR02	Residential	46	50	40	Y ²
POR03	Downtown	46	50	40	Y ²
POR04	Downtown	47	50	40	Y ²
POR05	Downtown	47	50	40	Y ²
POR06	Institutional	51	50		N
POR07	Downtown	53	50	40	N

Receiver ID	Zoning	Sound Level (dBA)	Limit (dBA) ¹		In Compliance? (Y/N)
			Daytime (7:00 am – 10:00 pm)	Nighttime (10:00 pm – 7:00 am)	
POR08	Downtown	56	50	40	N
POR09	Downtown	46	50	40	Y ²

Notes

1. The most conservative criteria are provided in the table.
2. Compliance is demonstrated during daytime hours.

The Noise Ordinance limit of 65 dBA is met at all surrounding properties. The predicted sound levels exceed the stringent additional criteria by small amounts of 1 to 6 dB during the daytime hours. Per DEC, an increase of 0 to 3 dB has no appreciable effect. An increase of 6 dB is audible. Compliance for Daytime hours is met at nearly all receiver points. POR06, POR07 and POR08 where compliance was not met by small amounts are located immediately adjacent to a bus garage and maintenance/trolley shop. Again, it should be noted that the criteria outlined under the High Energy Law is lower than the DOT transportation-induced sound levels in the vicinity of the Campus PUD. Therefore, the use of the High Energy Law criteria, especially during the nighttime hours, is considered very conservative. The actual operating sound levels are likely to be lower than predicted, especially in the evenings when the cooling demands will be lessened.

Further, note that only the lands east of Phase 5 are zoned Residential, multi-family, high density (R3-C), but it appears that very few parcels are used for residential purposes, and despite the allowance for residential uses, none of the existing homes adjacent to the Campus are presently occupied. The majority of parcels appear to be used for commercial purposes. Other adjacent lands are currently zoned for downtown, commercial, and institutional uses. The most stringent criteria have been applied for these lands as the Zoning Ordinance permits residential uses. Therefore, compliance would be an issue only if construction of new homes is granted, or if the existing homes become occupied.

6 Recommendations

Due to the High Energy Law’s stringent criteria, noise mitigation should be considered and can be effective. The predicted sound levels exceed the stringent additional criteria by small amounts. There are a number of feasible measures that would reduce the Campus sound levels to achieve strict compliance with the more stringent criteria. These are outlined below in no particular order:

- **Modelling refinements** – the current sound levels are based on conservative assumptions, which should be refined through detailed noise measurements and understanding of the operational parameters of the mechanical yards.
- **Ambient conditions assessment** – as design progresses, the ambient environment should be assessed via sound level measurements along the property line of the proposed Campus.
- **Noise screen upgrades** – a combination of strategic height and length increases.
- **Administrative controls during nighttime hours** – consider operational schedule to allow dominant equipment to be throttled during nighttime hours.
- **Mechanical equipment redesign** – elimination of the pure tone would remove the acoustical penalty, which will reduce the sound levels by 5 dB. The equipment vendor should be contacted to investigate alternative design to eliminate the tone.

A combination of two (2) or more of the above, will demonstrate compliance with the most stringent of the High Energy Law criteria. Because the above measures are not considered onerous, the development of the Campus at the proposed location is feasible with some modest additional refinements.

7 Conclusions

Arcadis conducted a high-level quantitative noise assessment of the proposed Campus PUD. The Campus' sound levels meet the Zoning Ordinance general criteria of 65 dBA; however, some additional acoustical considerations are recommended to achieve compliance with the stringent High Energy Law criteria. Because the steps required to demonstrate compliance with the High Energy Law are not considered onerous, construction of the Campus is considered feasible from an acoustical perspective.

Figures



Title:
Figure 1:
Noise Sources

Prepared for:

TRM Architect
Niagara Digital Campus

Modelling Features:

- Area Source
- Building
- Barrier



Project code:
30242207

Prepared by:
SG

Date:
October 2024



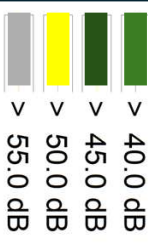


Title:
Figure 2:
Sound Level Contours

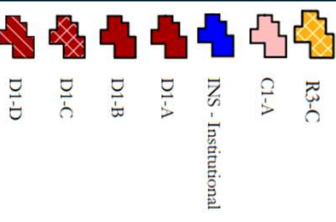
Prepared for:

TRM Architect
Niagara Digital Campus

Sound levels:



Zoning:



Project code:
30242207

Prepared by:
SG

Date:
October 2024



Appendix A

Site Plan

NIAGARA DIGITAL CAMPUS
NIAGARA FALLS, NEW YORK



Appendix B

Zoning

Schedule 8: Official Zoning Map

Residential

R1 - Detached Single

- R1-A
- R1-B
- R1-C
- R1-D

R2 - Doubles

- R2-A
- R2-B

R3 - Multi-Family

- R3-A
- R3-B
- R3-C

R4 - Heritage

- R4

Commercial

C1 - Neighborhood

- C1-A
- C1-B

C2 - Traditional

- C2-A
- C2-B

C3 - General

- C3

DOWNTOWN

D1 - Downtown

- D1-A
- D1-B
- D1-C
- D1-D

D2 - Gorge View

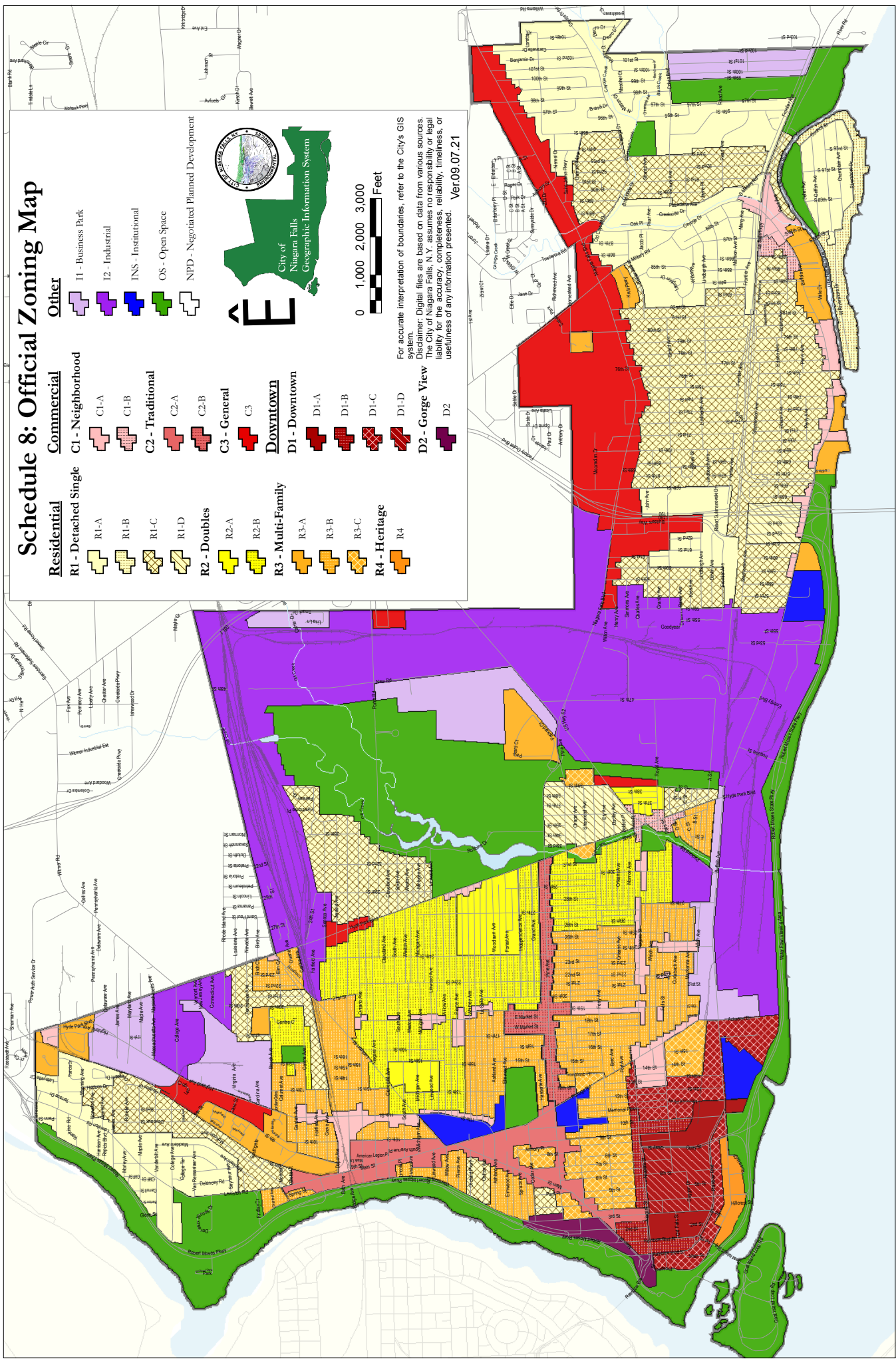
- D2

Other

- I1 - Business Park
- I2 - Industrial
- INS - Institutional
- OS - Open Space
- NPD - Negotiated Planned Development



For accurate interpretation of boundaries, refer to the City's GIS System. Digital files are based on data from various sources. The City of Niagara Falls does not assume any liability for the accuracy, completeness, reliability, timeliness, or usefulness of any information presented. Ver:09.07.21



Appendix C

Calibration Certificates

INSTRUMENT CALIBRATION REPORT



Advanced Labs, Inc.

Pine Environmental Services, Inc

Instrument ID R146364
Description Quest QC-10 Acoustic Calibrator
Calibrated 10/23/2023

Manufacturer Quest	Classification
Model Number QC-10	Status pass
Serial Number QIE010140	Frequency Yearly
Location New Jersey	Department Lab
Temp 74	Humidity 28

Calibration Specifications

Group # 1
Group Name Acoustic Tests Performed
Test Performed: Yes **As Found Result: Pass** **As Left Result: Pass**

Test Instruments Used During the Calibration

<u>Test Instrument ID</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Serial Number</u>	<u>(As Of Cal Entry Date)</u>	
				<u>Last Cal Date</u>	<u>Next Cal Date</u>
B&K 4226	Brüel & Kjær 4226	Brüel & Kjær	2590968	8/24/2023	8/24/2024
B&K 4228	Brüel & Kjær 4228	Brüel & Kjær	2667476	8/24/2023	8/24/2024
SOUNDPRO DL-1-1/3	3M SoundPro DL-1-1/3	Quest Technologies	BLL070002	9/6/2023	9/6/2024

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated David Galego

Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

INSTRUMENT CALIBRATION REPORT



Advanced Labs, Inc.

Pine Environmental Services, Inc

Instrument ID 50250
Description CEL-63X Sound Level Meter
Calibrated 11/10/2023

Manufacturer Casella
Model Number CEL-63X
Serial Number 2382988
Location New Jersey
Temp 70

Classification
Status pass
Frequency Yearly
Department Lab
Humidity 28

Calibration Specifications

Group # 1
Group Name Acoustic Tests Performed
Test Performed: Yes **As Found Result:** Pass **As Left Result:** Pass

Test Instruments Used During the Calibration

<u>Test Instrument ID</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Serial Number</u>	<u>(As Of Cal Entry Date)</u>	
				<u>Last Cal Date</u>	<u>Next Cal Date</u>
B&K 4226	Brüel & Kjær 4226	Brüel & Kjær	2590968	8/24/2023	8/24/2024
B&K 4228	Brüel & Kjær 4228	Brüel & Kjær	2667476	8/24/2023	8/24/2024

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated David Galego

Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

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Fax:
www.arcadis.com

ATTACHMENT P.9

DECinfo Locator

Base Map: Topographical

[Help](#)

Search

Tools

DEC Information Layers

- Environmental Quality
- Outdoor Activity
- Permits and Registrations
- Environmental Cleanup
- Environmental Monitoring
- Public Involvement
- Environmentally Sensitive Areas**
 - Check / Uncheck all
 - Layer Information
 - Critical Environmental Areas
 - Regulatory Tidal Wetlands Areas
 - Coastal Erosion Hazard Areas
- Legal Information
- Reference Layers



NIAGARA DIGITAL CAMPUS

NIAGARA FALLS, NEW YORK

