400 LANARK STREET, CARLETON PLACE
TRANSPORTATION IMPACT ANALYSIS

Project No.: CCO-22-0597

Prepared for:

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September 2023

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1.0 INTRODUCTION

McIntosh Perry Consulting Engineers Ltd. (MP) was retained by Wintergreen Ridge Ltd. to complete a Traffic Impact Analysis (TIA) in support of the proposed subdivision at 400 Lanark Street located in Carleton Place, Ontario.

The subject site is anticipated to have a 2026-year full buildout for the residential subdivision. This TIA will determine the net site traffic changes due to the proposed development during the critical weekday AM and PM peak periods and assess the impact of this traffic on the study road network.

2.0 SITE CHARACTERISTICS

2.1 Study Location

The proposed development is located on the north side of Townline Road East between Lanark Street and Edmund Street in Lanark County, as illustrated in Figure 2-1. The land falls under schedule A of Lanark County's Official Plan (revised January 2017) the proposed development is located in a settlement area. As per the town of Carleton Place Official Plan, the proposed development is within the residential district zoning.

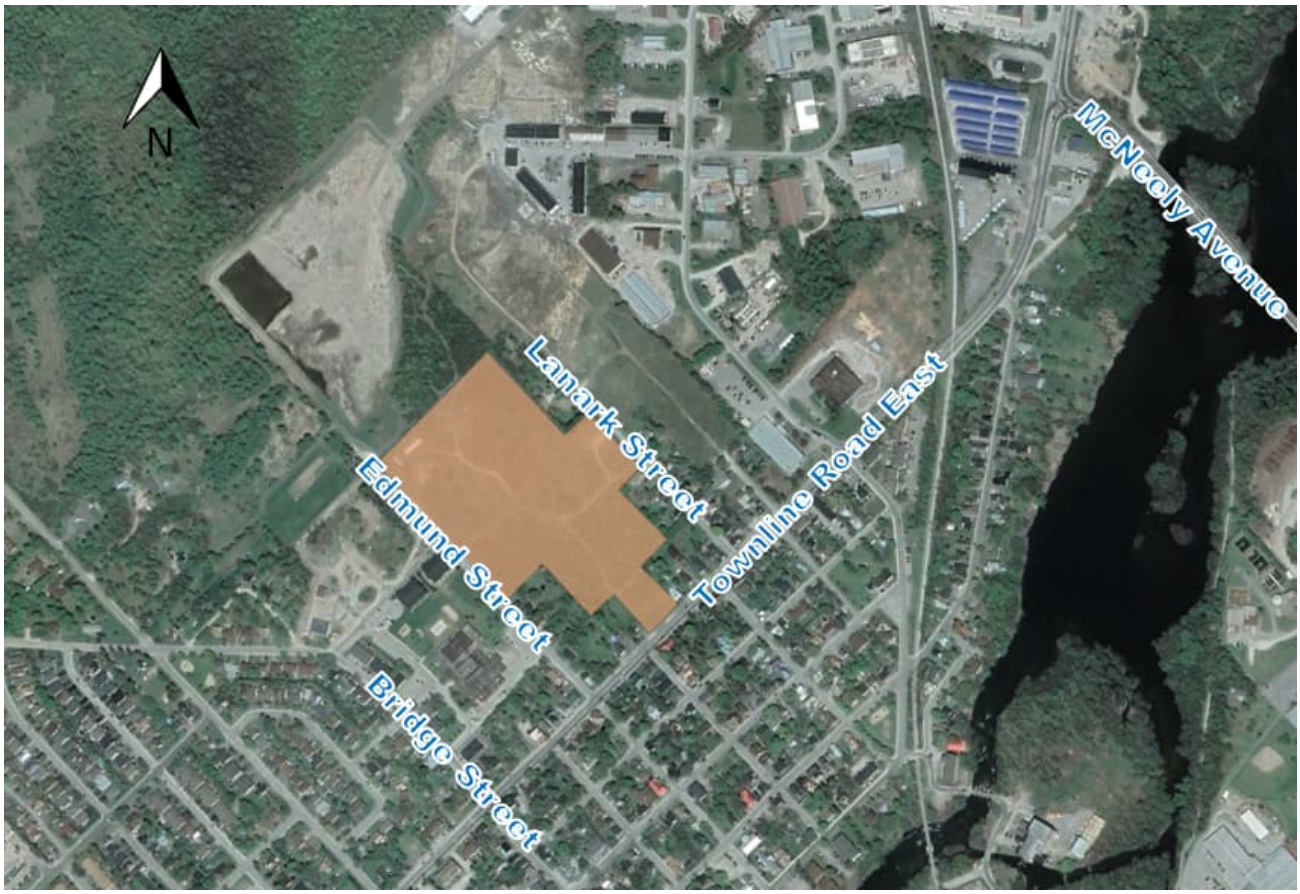

Figure 2-1: Proposed Development and Surrounding Area

3.0 PROPOSED DEVELOPMENT

The site is expected to consist of 250 fully serviced dwelling units which includes three medium density apartments with a total of 125 units, 32 street townhouses, 58 stacked townhouses, and 35 low density single detached homes. The lands have frontage on Townline Road East to the south, Lanark Street to the east, and Edmund Street to the west. The subject property has a total area of 6.27 hectares. The site plan and detailed site statistics for the proposed development has been provided in Appendix A.

4.0 EXISTING CONDITIONS

The following subsections outline the existing traffic conditions and site characteristics.

4.1 Existing Site

The Town has designated these lands for residential land use. Our desktop review shows the proposed land is currently occupied by the Sobczak tree farm. In addition, there are existing residential developments to the south and west of the site. We also understand a residential development is proposed to the east fronting onto Lanark Street.

4.2 Existing Road Network

Townline Road is classified as an arterial roadway and is under the jurisdiction of Lanark County. The roadway cross section is 2-lanes consisting of one lane per direction and has a dedicated turning lanes near intersections. There is a shared left turn lane between east-west bound traffic to take left turns at the driveways/intersections. There are sidewalks on both the sides of the road within the vicinity of study area. However east of Mullete Street/ Industrial Avenue intersection sidewalk is provided only on the south side of the road. The posted speed limit is 50 kilometres per hour east of Baines Street and 40 kilometer per hour west of Baines Street.

McNeely Avenue is classified as an arterial roadway and is under the jurisdiction of Lanark County. The roadway cross section is 2-lanes consisting of one lane per direction and has a dedicated turning lanes near intersections. There are paved shoulders on both the sides of the road and sidewalk is provided on the west side of the roadway. The posted speed limit is 60 kilometres per hour.

Bridge Street is classified as collector roadway and is under the jurisdiction of Carleton Place. The roadway run generally north–south direction, has a two-lane cross section. The sidewalk is provided on both the sides of the roadway. The posted speed limit is 50 kilometres per hour.

Edmund Street is classified as a local road and is under the jurisdiction of the Carleton Place. This roadway provides access to residential neighborhoods. Sidewalk is provided on the east side of the roadway south to the Townline Road intersection and on the west side north of the Townline Road intersection. The speed limit is assumed to be 40 kilometres per hour.

Lanark Street is classified as a local road and is under the jurisdiction of the Town of Carleton Place. This roadway has a two-lane cross section and provides access to residential neighborhoods. Sidewalk is provided on the east side of the roadway. The roadway runs north-south direction with a posted speed limit is 40 kilometres per hour.

The existing road network is provided in Figure 4-1

Figure 4-1: Existing Road Network

4.3 Existing Intersections

The existing study area intersections to be included in this report are as follows:

- Townline Road and Bridge Street;
- Townline Road and Edmund Street;
- Townline Road and Lanark Street and,
- Townline Road and McNeely Avenue

The following is a description of the lane configurations and traffic control at these intersections:

Townline Road and Bridge Street as illustrated in Figure 4-2. is a signalised intersection. Westbound the intersection has a dedicated left, through and right turning lanes, eastbound a left turn lane and a shared through-right turning lane whereas the north-south bound a shared left-through-right turning lane is provided. Protected pedestrian crossing is provided across all four approaches.

Figure 4-2: Townline Road and Bridge Street

Townline Road and Edmund Street as illustrated in Figure 4-3 is a two way stop-controlled intersection with stop-signs on the minor legs, Edmund Street. The eastbound traffic has a dedicated left, through and right turning lanes, westbound traffic has a left turn lane and a shared through-right turning lane whereas the north-south bound traffic has a single shared left-through-right turning lane. There is no pedestrian crossing at this intersection, however a sidewalk is provided on east side of Edmund Street south of the intersection and on west side of Edmund Street north of the intersection.

Figure 4-3: Townline Road and Edmund Street

Townline Road and Lanark Street as illustrated in Figure 4-4. is stop-controlled intersection with stop-sign at the minor leg, Lanark Street. Westbound left, through and right turn lanes are provided, eastbound a dedicated left turning lane and a shared through-right turning lane are present at the intersection. The south bound traffic has a single shared left-through-right turning lane. There is no protected pedestrian crossing at this intersection, however a sidewalk is provided on both the sides of Townline Road and on the east side of Lanark Street.

It is noted this segment of Townline Road has a continuous two-way left-turn lane.

Figure 4-4: Townline Road and Lanark Street

Townline Road and McNeely Avenue as illustrated in Figure 4-5 is a signalised intersection. The eastbound traffic has a dedicated through and right turning lanes, westbound traffic has a dedicated left and through turning lane. The northbound traffic has a dedicated left and right turning lane. Protected pedestrian crossing is provided across all three approaches.

Figure 4-5: Townline Road and McNeely Avenue

4.4 Existing Pedestrian and Cycling Facilities

Sidewalks are provided on both sides of Townline Road west of Mullete Street/Industrial Avenue. East of Mullete Street/ Industrial Avenue intersection sidewalk is provided only on the south side of the Townline Road. Protected pedestrian crossings are provided at the signalized study intersections.

The sidewalk locations are presented in Figure 4-6.

Figure 4-6: Existing Sidewalks

Figure 4-7 illustrates the existing cycle network within Carleton Place. As shown, below within the vicinity of the proposed development, both of Townline Road and McNeely Avenue are both part of the existing town recommended cycle route.

Figure 4-7: Existing Cycling Network

4.5 Existing Transit System

Classic Alliance Motorcoach (a division of Leduc Bus Lines Ltd.) provides commuter service between Carleton Place, adjacent municipalities, and the City of Ottawa. Leduc Bus Lines operates the Routes 502 & 503 (between Almonte, Carleton Place and Perth), with a stop at Bridge Street and Townline Road.

4.6 Existing Traffic Volumes

MP used *Appendix B1* from the Carleton Place TMP as reference for the existing condition traffic volumes for the intersection of Bridge Street at Townline Road and McNeely Avenue at Townline Road. MP referred to the Inverness Homes development TIS located approximately 670 m west of the intersection of Townline Road and McNeely Avenue completed on November 16, 2022, by D. J. Halpenny & Associates Ltd., to obtain the turning movement count for the Lanark Street and Townline Road intersection. MP conducted 2-hour counts for AM and PM peak hours at the intersection of Edmund Street and Townline Road on August 24, 2023. Traffic data used for this study is provided in Appendix B. Traffic volumes for existing study conditions are provided in Figure 4-8.

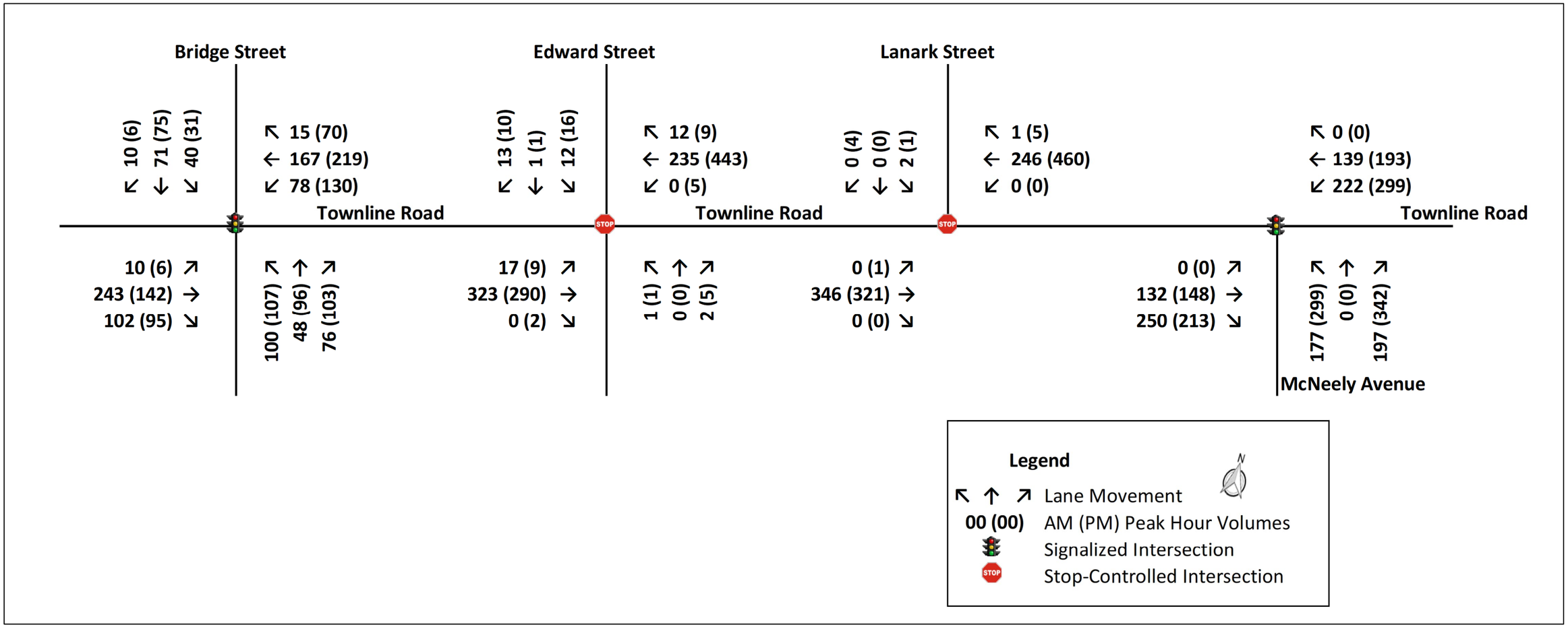

Figure 4-8: Existing (2023) Traffic Volumes

4.7 Existing Traffic Analysis

Intersection operations were assessed using the Synchro 11 software which utilizes the Highway Capacity Manual (HCM) 6th Edition methodology published by the Transportation Research Board National Research Council. Synchro 11 can analyze both signalized and unsignalized intersections in a road corridor or network.

Intersection operations performance metrics are reported in terms of Level of Service (LOS), delays, volume-to-capacity (v/c) ratios, and 95th percentile queues. Level of service is based on the average control delay per vehicle for a given movement. Delay is an indicator of how long a vehicle must wait to complete a movement and is represented by a letter between 'A' and 'F', with 'F' being the longest delay. Table 4:1 summarizes the LOS criteria for signalized and unsignalized intersections.

Table 4:1: LOS Criteria for Signalized and Unsignalized Intersections

Level of Service	Average Control Delay per Vehicle (seconds / vehicle)	
	Signalized Intersection[1]	Unsignalized Intersection[1]
A	≤ 10	≤ 10
B	>10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

[1] HCM 2000 Methodology

[2] *LOS F is reached if any movement exceeds capacity (i.e., v/c > 1.0)*

The existing intersection operations were analyzed for the weekday AM and weekday PM peak hours. Analysis indicates that all turning movements will operate with acceptable LOS and delay during both the AM and PM peak hour periods. Maximum queue of 58 m was observed during PM peak hour on the northbound left movement at the intersection of McNeely Avenue and Townline Road. All the study intersections are expected to have reserve capacity to accommodate any increase in traffic volume. The overall signalized and unsignalized intersections operation results are provided in Table 4:2. Detailed Synchro 11 results are provided in Appendix C.

Table 4:2: Existing (2023) Conditions Capacity Analysis Summary

Intersection	Approach	AM Peak Hour				PM Peak Hour			
		LOS	v/c Ratio	Delay (s)	Queue (m)	LOS	v/c Ratio	Delay (s)	Queue (m)
Bridge Street & Townline Road	EB-L	B	0.03	14	8	B	0.02	14	6
	EB-TR	B	0.59	19	56	B	0.40	14	42
	WB-L	A	0.18	8	20	A	0.24	8	25
	WB-T	A	0.21	10	31	B	0.27	10	39
	WB-R	A	0.02	1	9	A	0.10	3	16
	NB-LTR	B	0.49	17	38	C	0.64	22	46
	SB-LTR	B	0.26	16	21	B	0.23	16	21
Edmund Street and Townline Road	EB-L	A	0.01	8	6	A	0.01	8	5
	WB-L	A	-	-	-	A	0.00	8	4
	NB-LTR	B	0.01	12	5	B	0.01	11	7
	SB-LTR	B	0.06	12	9	C	0.08	16	10
Townline Road & Lanark Street	EB-LT	A	0.00	-	2	A	0.00	8	2
	SB-LR	B	0.00	12	5	B	0.01	12	6
McNeely Avenue & Townline Road	EB-T	B	0.19	12	26	B	0.23	14	29
	EB-R	A	0.34	3	30	A	0.31	4	27
	WB-L	A	0.34	7	32	B	0.49	10	44
	WB-T	A	0.14	6	21	A	0.21	8	26
	NB-LTR	C	0.49	23	39	C	0.71	28	58
	NB-R	A	0.42	6	22	A	0.54	6	39

5.0 FUTURE BACKGROUD CONTIDIONS

Future background conditions were reviewed for a 2026 full build out condition and a 2031, 5-year post build condition.

5.1 Background Growth

Background traffic growth is a function of the projected population growth, changes to employment, roadway network modifications and other external factors. The Carleton Place Transportation Master Plan indicates that a linear background growth rate should be applied for key corridors such as:

- McNeely Avenue – 3.0%
- Townline Road/Bridge Street – 2.5%
- Collector Streets – 1%

This growth rate is assumed to account for the background growth within the vicinity of the subjected development. As such MP applied a 3.0% linear background traffic growth rate to McNeely Avenue and a 2.5% linear background traffic growth rate to Townline Road and Bridge Street and 1% growth rate to the remaining roadways within the study area to remain conservative in the estimation of the future scenario traffic volumes.

5.2 Background Developments

Two background developments have been identified for consideration for inclusion in this study.

The development at 28 High Street, Carleton Place is expected to include a mix of residential and restaurant land uses. The development consists of 5-storey and 7-storey residential buildings, respectively, with a total combined Gross Floor Area (GFA) of 17,839 m^2 and 213 residential units as well as 200 m^2 of restaurant GFA. Construction for the development is proposed to be completed in a single phase with the buildout year anticipated in 2024.

The Inverness Homes Development is located 670 m west of the intersection of Townline Road East and McNeely Avenue, fronting onto Lanark Street. The development will consist of 248 semi-detached homes and townhomes. The subdivision is expected to be completed in 2026.

The anticipated site-generated traffic for both the development was extracted from the completed TIS and was applied to the Build-out year (2026) and Horizon year (2031) background traffic volumes.

Traffic volumes generated from these two area developments are shown in Figure 5-1.

5.3 Background Traffic Volume

Background traffic volumes were determined by adding existing volumes, background area development traffic and background growth. The Build-out (2026) background traffic volumes and Future Horizon (2031) Traffic Volumes are provided in Figure 5-2 and Figure 5-3.

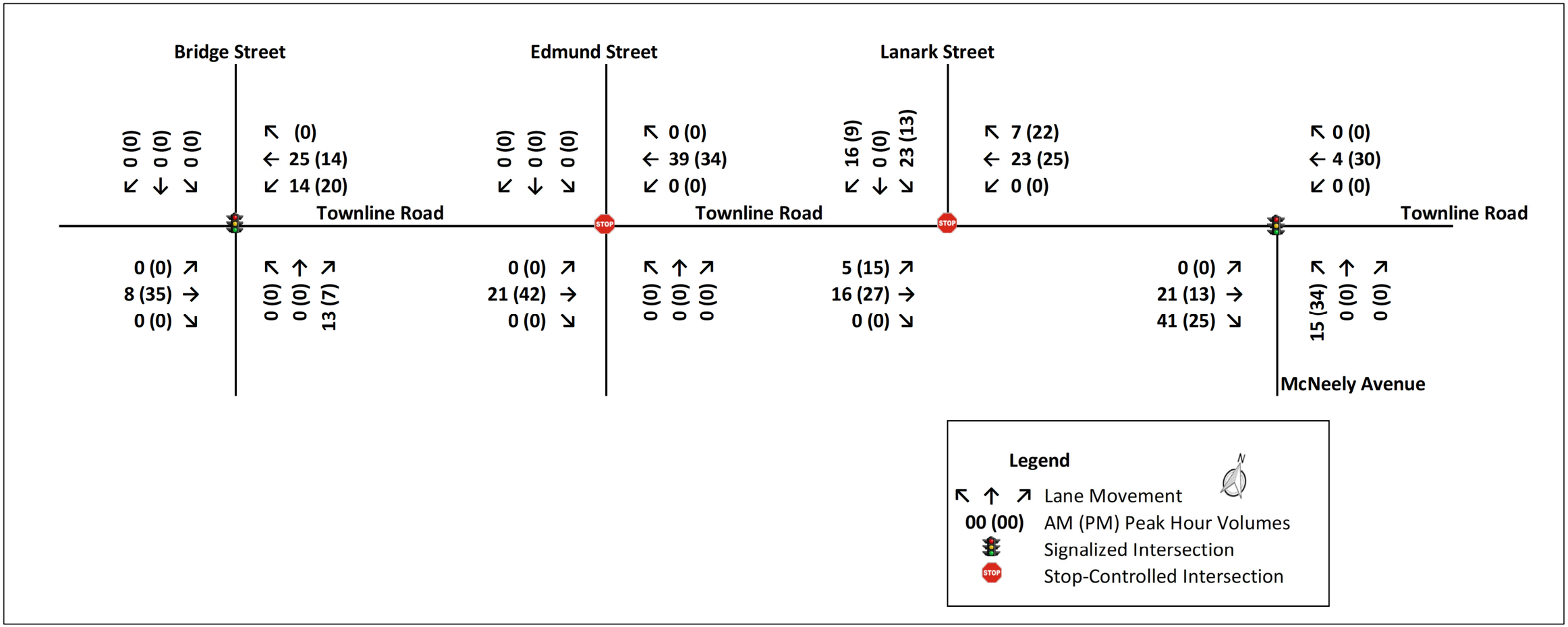

Figure 5-1: Area Development Background Traffic Volume

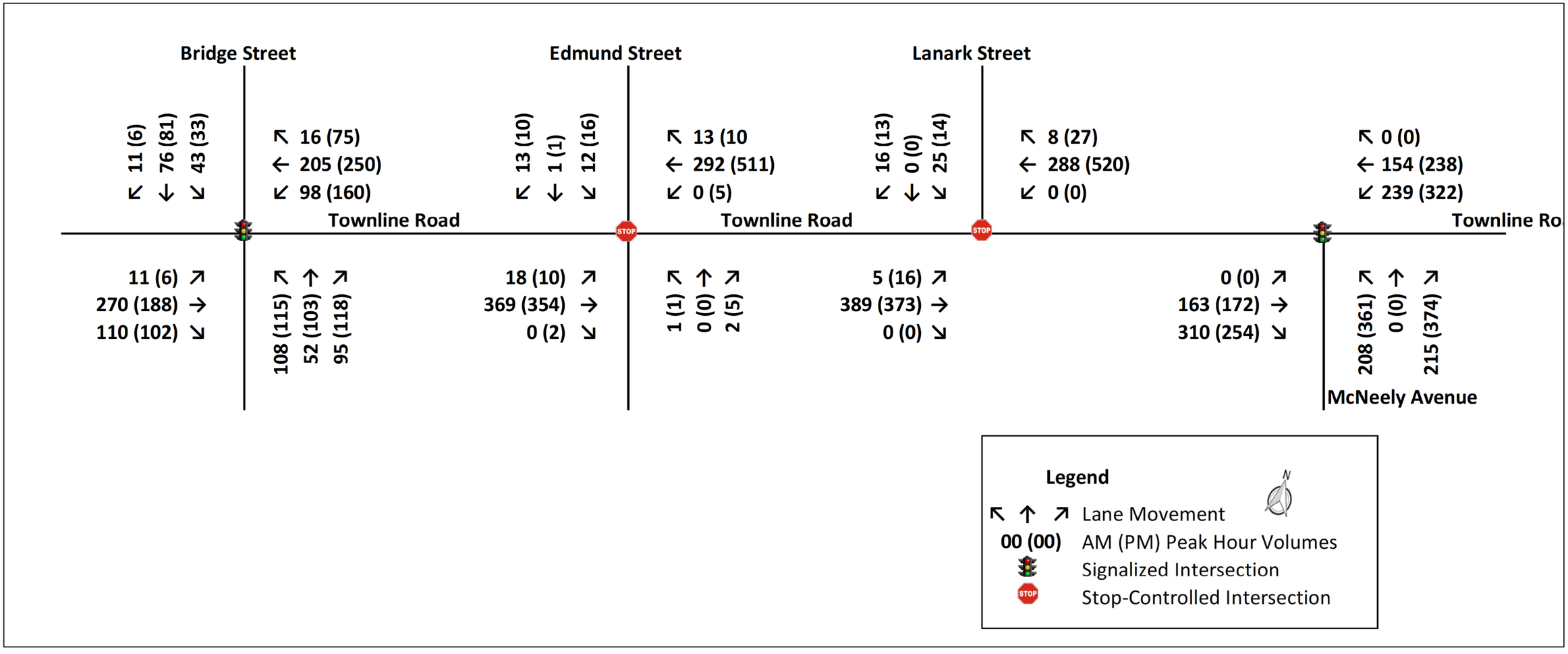

Figure 5-2: Background (2026) Traffic Volumes

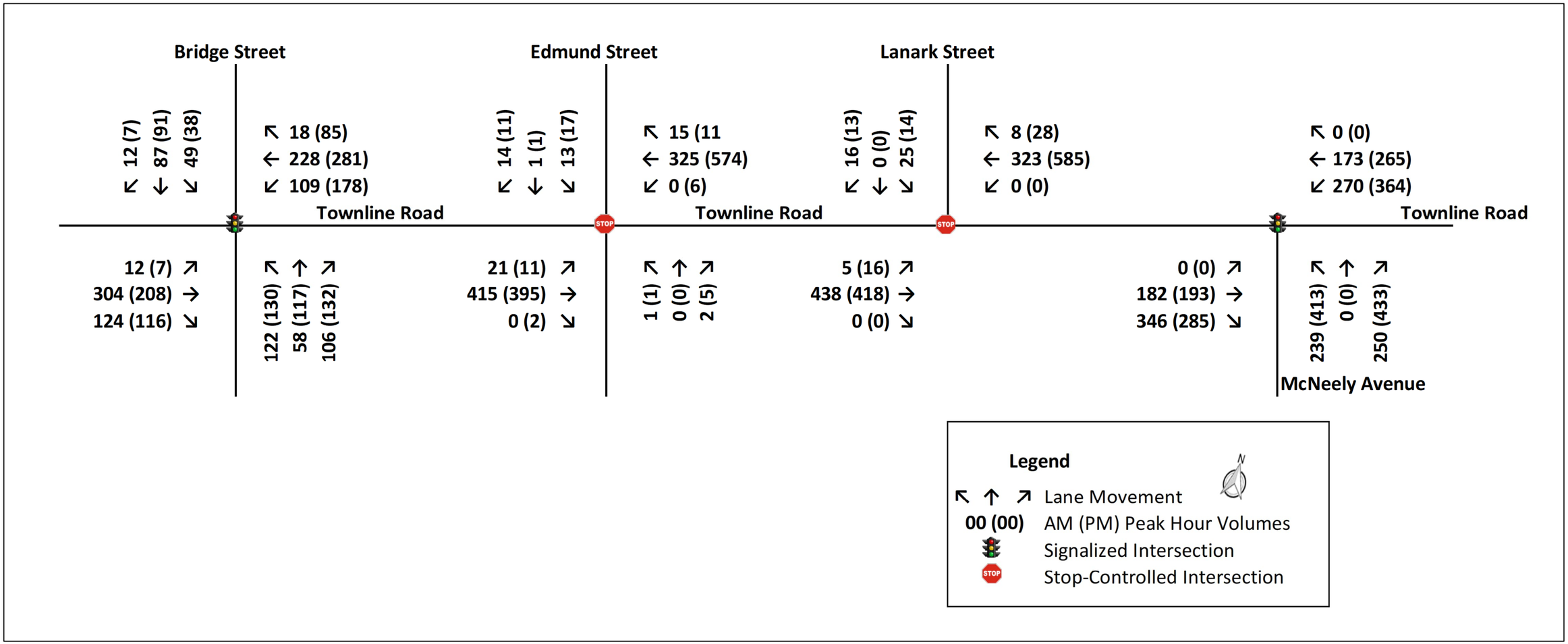

Figure 5-3: Background (2031) Traffic Volumes

5.4 Background (2026) Traffic Analysis

Intersection capacity analysis for background (2026) traffic conditions were completed for study area intersections to determine future operational measures of performance during the weekday AM and PM peak periods.

Intersection analysis for the 2026 background conditions indicate study intersections will continue to operate good level of service B or better in both the AM and PM peak hours within minimal delay similar to existing condition operations.

Analysis indicate that turning movements at all intersections will operate with significant reserve capacity. As such, network improvements would not be required under 2026 background conditions. With the increase of traffic volumes due to background conditions the network exhibits no operational constraints. The study area has the potential to accommodate increased development given the available capacity along the boundary road network. A summary of the results is provided in Table 5:1

Table 5:1: Background (2026) Conditions Capacity Analysis Summary

Intersection	Approach	AM Peak Hour				PM Peak Hour			
		LOS	v/c Ratio	Delay (s)	Queue (m)	LOS	v/c Ratio	Delay (s)	Queue (m)
Bridge Street & Townline Road	EB-L	B	0.03	14	9	B	0.02	14	6
	EB-TR	C	0.65	21	62	B	0.49	16	52
	WB-L	A	0.24	8	24	A	0.32	9	32
	WB-T	A	0.25	10	37	B	0.31	10	41
	WB-R	A	0.02	1	9	A	0.10	3	18
	NB-LTR	B	0.54	18	41	C	0.69	24	58
	SB-LTR	B	0.28	16	23	B	0.25	16	24
Edmund Street and Townline Road	EB-L	A	0.02	8	7	A	0.01	9	6
	WB-L	A	-	0	-	A	0.01	8	4
	NB-LTR	B	0.01	13	5.2	B	0.01	12	7
	SB-LTR	B	0.06	14	10	C	0.10	19	10
Townline Road & Lanark Street	EB-LT	A	0.00	8	1	A	0.02	9	21
	SB-LR	A	0.08	12	15	B	0.07	14	13
McNeely Avenue & Townline Road	EB-T	B	0.24	13	32	B	0.27	15	33
	EB-R	A	0.41	4	34	A	0.37	4	32
	WB-L	A	0.38	8	36	B	0.55	12	46
	WB-T	A	0.16	7	23	A	0.26	9	35
	NB-LTR	C	0.56	24	41	C	0.80	33	78
	NB-R	A	0.43	6	24	A	0.56	5	53

5.5 Background (2031) Traffic Analysis

Intersection capacity analysis for background (2026) traffic conditions were completed for study area intersections to determine future operational measures of performance during the weekday AM and PM peak periods.

Intersection analysis for the 2031 future background conditions indicate study intersections will continue to operate good level of service B or better in both the AM and PM peak hours within minimal delay.

Similar to 2026 background assessment, analysis for future 2031 background conditions continue to indicate that turning movements at all intersections will operate with significant reserve capacity. Improvements for the 2031 background network would not be required based on the minimal level of development anticipated. The network continues to exhibit no operational constraints and the available network capacity continues to provide potential to accommodate increased area development. A summary of the results is provided in Table 5:2.

Table 5:2: Background (2031) Conditions Capacity Analysis Summary

Intersection	Approach	AM Peak Hour				PM Peak Hour			
		LOS	v/c Ratio	Delay (s)	Queue (m)	LOS	v/c Ratio	Delay (s)	Queue (m)
Bridge Street & Townline Road	EB-L	B	0.03	14	8	B	0.02	14	7
	EB-TR	C	0.73	25	69	B	0.57	18	59
	WB-L	A	0.29	9	26	A	0.38	9	36
	WB-T	B	0.28	10	39	B	0.33	11	38
	WB-R	A	0.03	1	9	A	0.11	3	18
	NB-LTR	C	0.61	20	49	C	0.81	32	65
	SB-LTR	B	0.32	17	32	B	0.30	17	26
Edmund Street and Townline Road	EB-L	A	0.02	8	8	A	0.01	9	7
	WB-L	A	-	0		A	0.01	8	4
	NB-LTR	B	0.01	14	4.7	B	0.02	13	8
	SB-LTR	B	0.08	15	11	C	0.13	22	10
Townline Road & Lanark Street	EB-LT	A	0.01	8	7	A	0.02	9	12
	SB-LR	A	0.09	13	15	A	0.07	15	14
McNeely Avenue & Townline Road	EB-T	B	0.28	14	34	B	0.31	16	36
	EB-R	A	0.45	4	38	A	0.40	4	37
	WB-L	A	0.44	9	39	B	0.65	15	67
	WB-T	A	0.18	7	24	A	0.30	9	36
	NB-LTR	C	0.61	25	48	D	0.87	40	121
	NB-R	A	0.46	6	27	A	0.59	6	80

6.0 FUTURE TOTAL CONDITIONS

6.1 Trip Generation

Trip generation for the proposed development was calculated in accordance with Institute of Transportation Engineers (ITE) Trip Generation 11th Edition methodologies and data. The development consists of residential developments including single family detached homes (Land-Use Code 210), street townhouse (Land-Use Code 215), stacked townhouse (Land-Use Code 220), and apartment building (Land-Use Code 221). All trip generation rates were taken for the weekday AM and PM peak hour of adjacent street traffic using the number of units for residential uses. A total of 126 new trips will be generated during AM Peak hour and 146 trips will be generated around PM Peak Hour. Table 6:1 summarize the proposed developments trip generation.

Table 6:1: Trip Generation

Site Component	Units	ITE Code	Item	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Single Detached Home	35	Single-Family Detached Housing (210)	Directional Distribution	25%	75%	100%	63%	37%	100%
			(Fitted Curve)	T= 0.91 Ln(X) + 0.12			Ln(T) = 0.94 Ln(X) + 0.27		
			Gross Trips	7	22	29	23	14	37
Street Townhouse	32	Single-Family Attached Housing (215)	Directional Distribution	25%	75%	100%	59%	41%	100%
			(Fitted Curve)	T = 0.52(X) - 5.70			T = 0.60(X) - 3.93		
			Gross Trips	3	8	11	9	6	15
Stacked Townhouse	58	Multifamily Housing (Low-Rise) (220)	Directional Distribution	24%	76%	100%	63%	37%	100%
			(Fitted Curve)	T = 0.31(X) + 22.85			T = 0.43(X) + 20.55		
			Gross Trips	10	31	41	29	16	45
Apartment	125	Multifamily Housing (Mid-Rise) (221)	Directional Distribution	23%	77%	100%	61%	39%	100%
			(Fitted Curve)	T = 0.44(X) - 11.61			T = 0.39(X) + 0.34		
			Gross Trips	10	33	43	30	19	49
Total				30	94	124	91	55	146

6.2 Trip Distribution and Assignment

The distribution of trips is developed considering the site layout. A new street is proposed within the site connecting both the site accesses. Site trip distribution and assignment to the study area network was developed based on network connectivity, consideration of splits from Carleton Place TMP and existing traffic patterns.

Distribution of site generated to the study area network has been summarized in Table 6:2. The assignment of forecasted site traffic volumes has been provided in Figure 6-1.

Table 6:2 Trip Distribution, Origin/Destination Review

To/From	Percentage
East (Ottawa, Gatineau, Internal Carleton Place)	71%
West (Perth, Tay Valley)	3%
North (Mississippi Mills)	6%
South (Internal Carleton Place, Smith's Falls, Beckwith)	20%

6.3 Build-Out (2026) Total Traffic Volumes

The Build-Out (2026) total traffic volumes were derived by summing Build-Out (2026) background traffic volumes and forecasted site traffic volume for the AM and PM peak periods. The Future (2026) total traffic volumes are presented in Figure 6-2.

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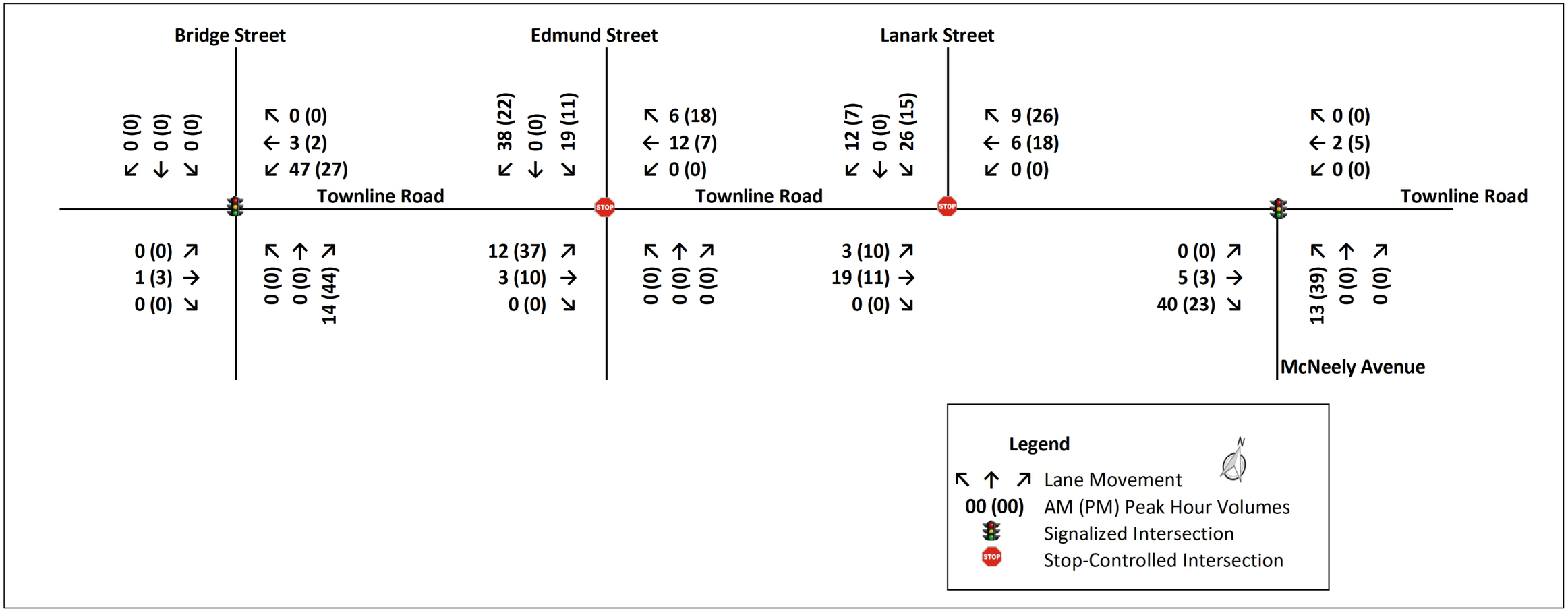

Figure 6-1: Site Traffic Volumes

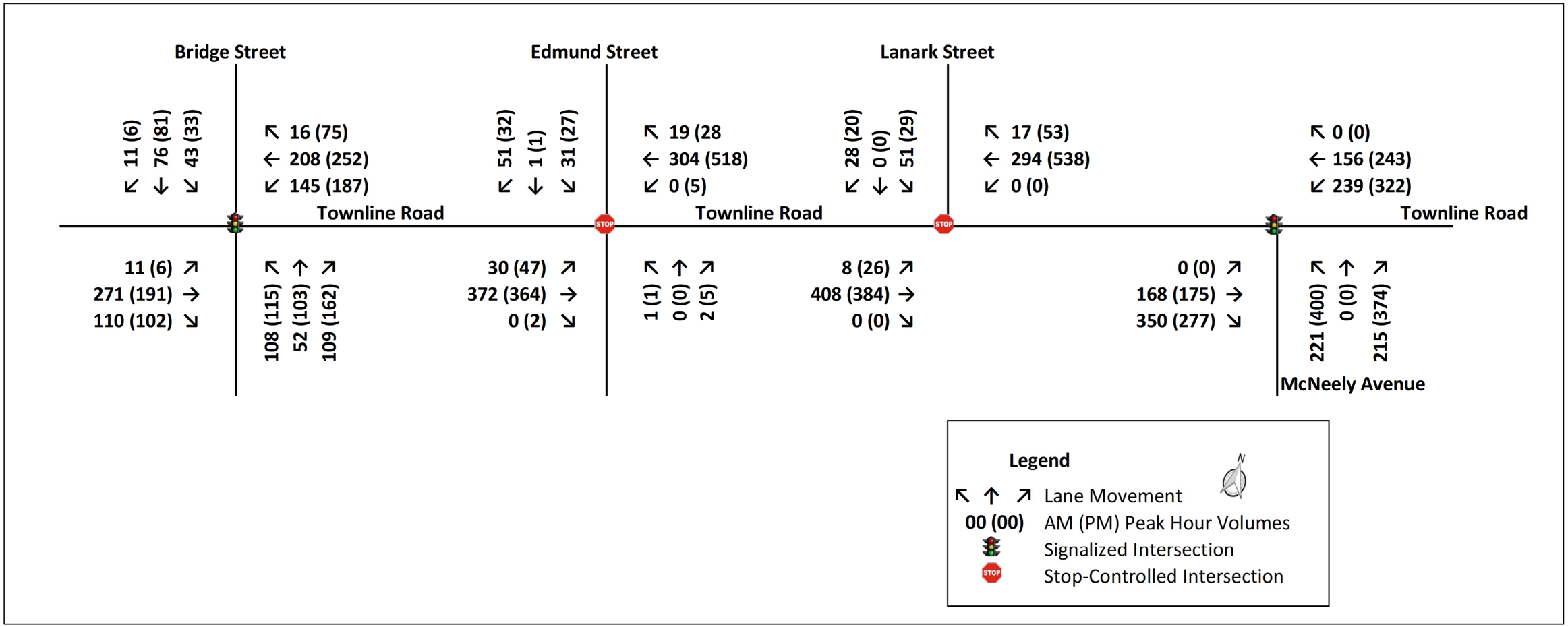

Figure 6-2: Build-Out (2026) Total Traffic Volumes

6.4 Build-Out (2026) Total Traffic Analysis

Intersection capacity analysis for the Build-Out (2026) total traffic conditions was completed for study area intersections to determine the future operational measures of performance during the AM and PM weekday peak periods. Lane configurations remained the same as the existing conditions.

With the addition development generated trips to the network, peak hour traffic volumes continue to operate with significant reserve capacity without any capacity constraints or concerns. However, at McNeely Avenue and Townline Road intersection, 95th percentile queue of 129 m is observed. The movement operates with LOS D and v/c ratio of 0.85. Based on the level of development and available capacity for the future total 2031 study horizon no network improvements are currently proposed for the study area. A summary of the results is provided in Table 6:3.

Table 6:3: Build-Out (2026) Total Conditions Capacity Analysis Summary

Intersection	Approach	AM Peak Hour				PM Peak Hour			
		LOS	v/c Ratio	Delay (s)	Queue (m)	LOS	v/c Ratio	Delay (s)	Queue (m)
Bridge Street & Townline Road	EB-L	B	0.03	14	8	B	0.02	14	9
	EB-TR	C	0.65	21	62	B	0.51	17	49
	WB-L	A	0.35	9	31	A	0.37	9	36
	WB-T	A	0.26	10	34	B	0.30	10	39
	WB-R	A	0.02	1	9	A	0.10	3	18
	NB-LTR	B	0.56	18	44	C	0.79	29	66
	SB-LTR	B	0.28	16	30	B	0.27	17	27
Edmund Street and Townline Road	EB-L	A	0.03	8	8	A	0.05	9	12
	WB-L	A	-	0	-	A	0.01	8	3
	NB-LTR	B	0.01	13	5	B	0.02	13	7
	SB-LTR	B	0.20	15	15	C	0.23	21	15
Townline Road & Lanark Street	EB-LT	A	0.01	8	6	A	0.03	9	21
	SB-LR	B	0.16	13	17	C	0.13	15	16
McNeely Avenue & Townline Road	EB-T	B	0.25	14	31	B	0.28	15	32
	EB-R	A	0.45	4	37	A	0.39	4	32
	WB-L	A	0.39	8	36	B	0.56	12	61
	WB-T	A	0.16	7	23	A	0.27	9	36
	NB-LTR	C	0.58	24	45	D	0.85	38	129
	NB-R	A	0.42	5	26	A	0.55	5	65

6.5 Future (2031) Total Traffic Volumes

The Future (2031) total traffic volumes were derived by summing future (2031) background traffic volumes and forecasted site traffic volume for the AM and PM peak periods. The Future (2031) total traffic volumes are presented in Figure 6-3.

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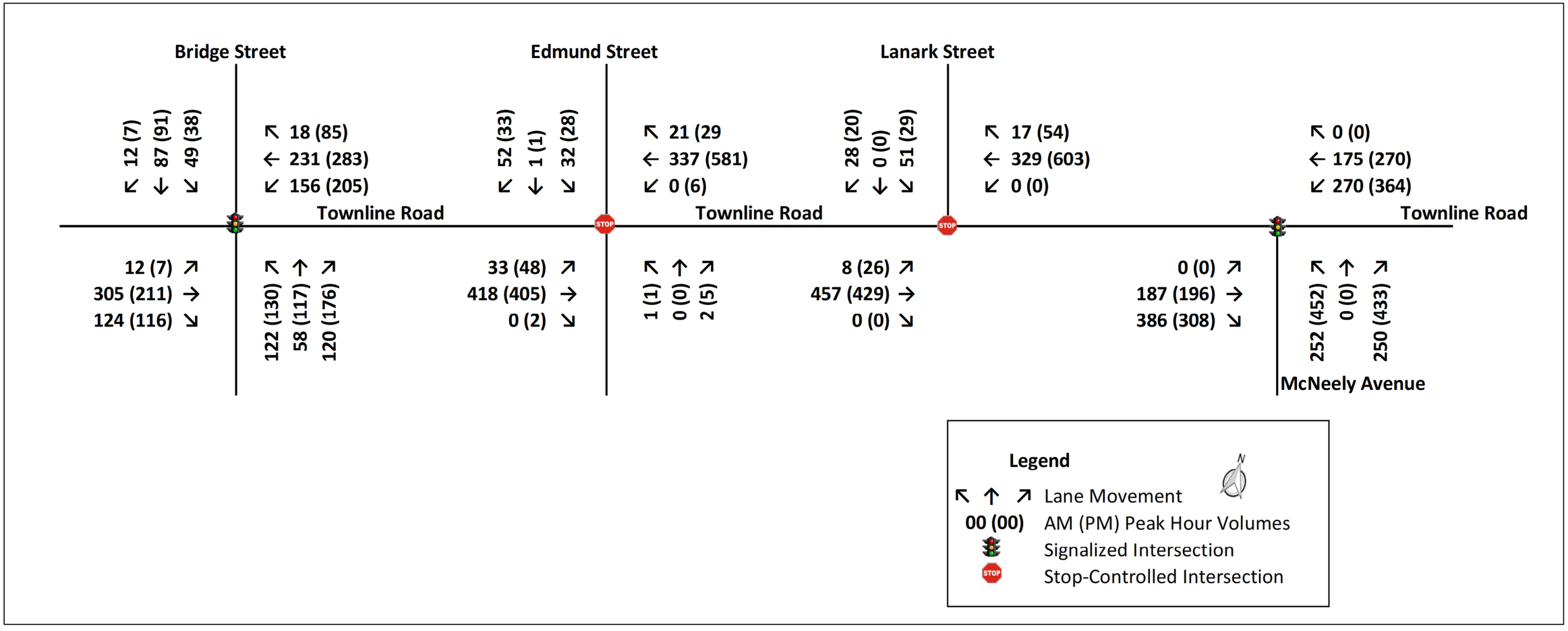


Figure 6-3: Future Total (2031) Traffic Volumes

6.6 Future (2031) Total Traffic Analysis

Intersection capacity analysis for the future (2031) total traffic conditions was completed for study area intersections to determine the future operational measures of performance during the AM and PM weekday peak periods. Lane configurations remained the same as the existing conditions.

Like Build-Out (2026) Total Conditions, the results for 2031 total conditions shows that all the study intersections will operate well under capacity. The northbound left movement at McNeely Avenue and Townline Road operates with a v/c ratio of 0.93 and a 95th percentile queue of 121 m, signal timing adjustments might be required to improve the operations at this intersection in future. The overall study network will be well situated to accommodate future development growth and increase traffic related to this growth. A summary of the results is provided in Table 6:4.

Table 6:4: Future (2031) Total Conditions Capacity Analysis Summary

Intersection	Approach	AM Peak Hour				PM Peak Hour			
		LOS	v/c Ratio	Delay (s)	Queue (m)	LOS	v/c Ratio	Delay (s)	Queue (m)
Bridge Street & Townline Road	EB-L	B	0.03	14	10	B	0.02	14	7
	EB-TR	C	0.73	25	70	B	0.57	18	57
	WB-L	B	0.42	10	32	B	0.44	10	38
	WB-T	B	0.29	10	35	B	0.34	11	42
	WB-R	A	0.03	1	8	A	0.11	3	18
	NB-LTR	C	0.63	21	54	D	0.88	38	83
	SB-LTR	B	0.32	17	33	B	0.31	17	27
Edmund Street and Townline Road	EB-L	A	0.03	8	8	A	0.06	9	12
	WB-L	A	-	0	-	A	0.01	8	4
	NB-LTR	B	0.01	15	5	B	0.02	14	8
	SB-LTR	C	0.22	16	15	D	0.28	26	15
Townline Road & Lanark Street	EB-LT	A	0.01	8	5	A	0.03	9	21
	SB-LR	B	0.17	14	17	C	0.14	16	18
McNeely Avenue & Townline Road	EB-T	B	0.28	14	34	B	0.32	16	38
	EB-R	A	0.49	4	42	A	0.43	4	35
	WB-L	A	0.45	9	45	B	0.66	15	78
	WB-T	A	0.18	7	27	A	0.30	9	47
	NB-LTR	C	0.63	26	49	D	0.93	48	121
	NB-R	A	0.46	5	32	A	0.59	5	88

7.0 FINDINGS AND CONCLUSIONS

7.1 Study Findings

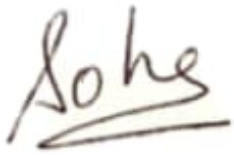
The findings and conclusion of this Traffic Impact Study for the proposed residential development located at 400 Lanark Street are summarized as follows:

- The proposed residential development is expected to consist of a 250 fully serviced dwelling units consisting of three medium density apartments consisting of a total of 125 units, 32 street townhouses, 58 stacked townhouses, and 35 low densities single detached homes.
- The existing transportation network within the study area currently operates well with all movements at all intersections operate at an LOS of D or better.
- The proposed development is anticipated to generate 124 trips during the AM peak hour and 146 total trips during the PM peak hour.
- The development is expected to be completed by 2026.
- The development generated trips are expected to have minimal impact on the existing roadway with all movements at all intersections operating under acceptable levels for all analysis periods.
- Sight Lines were reviewed, and no concerns were presented.

7.2 Conclusions

Forecasted development site traffic can be accommodated at boundary road intersections for both the build-out (2026) and post-build-out (2031) future horizons without significant impact on study area operations. The available sight distances at the proposed site accesses are in conformance with TAC guidelines. As such the proposed development does not trigger the need for any changes to the existing roadway infrastructure.

Prepared by,



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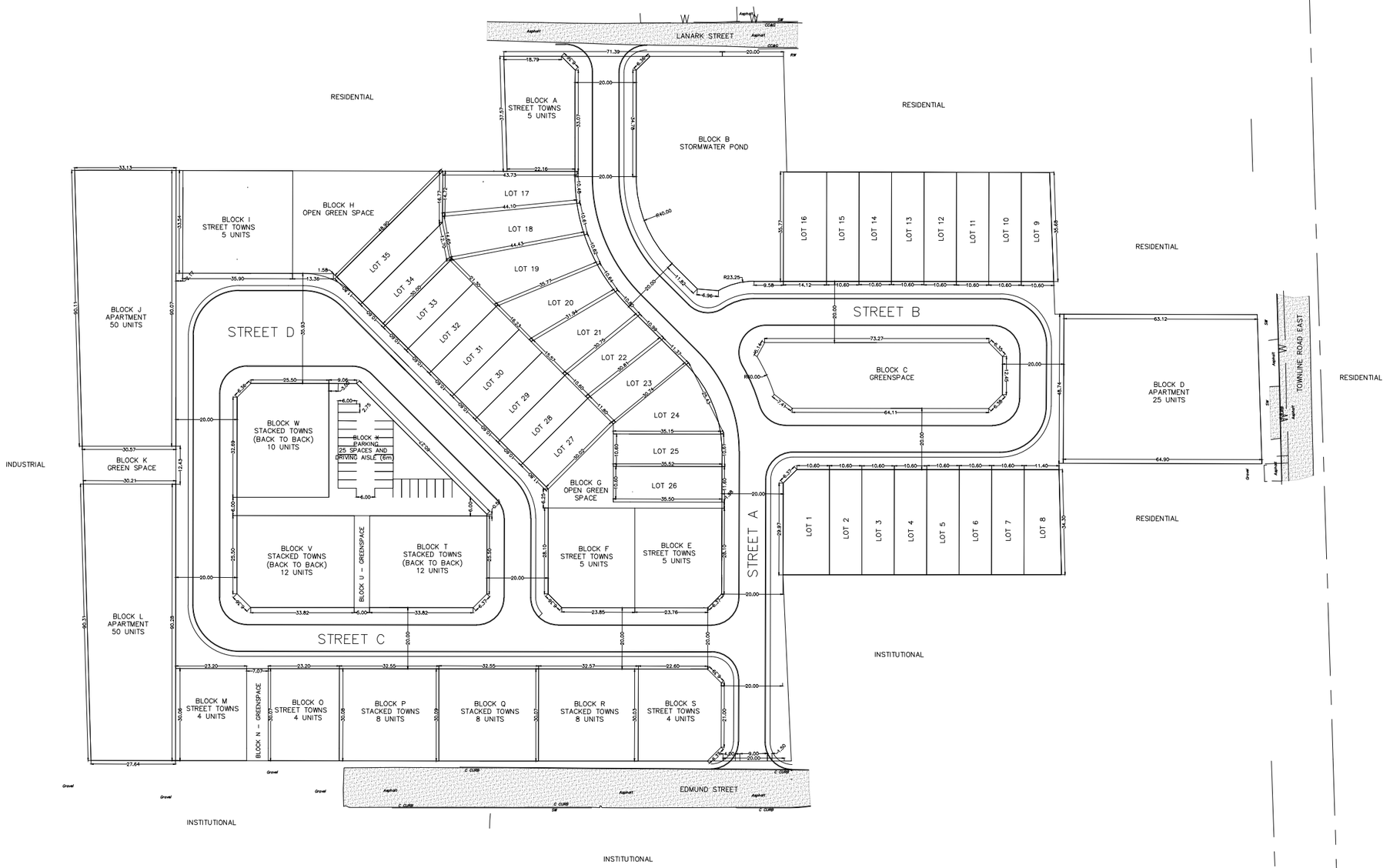
365.509.2040

APPENDIX A – SITE PLAN

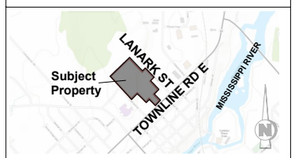


DRAFT PLAN OF SUBDIVISION

400 LANARK STREET, CARLETON PLACE

LOTS 17, 20, 23, 26, 29 & 32 R PLAN 787 & LOTS 85 TO 94 R PLAN 3469, TOWN OF CARLETON PLACE, COUNTY OF LANARK

LANDPRO PLANNING SOLUTIONS INC.
110 James Street, Suite 204
St. Catharines, ON
289-687-3730
info@landproplan.ca



KEY MAP - NTS

LOT INFORMATION

LOT	AREA				
1	521.44m²	13	378.59m²	26	411.80m²
2	364.95m²	14	378.74m²	27	354.18m²
3	364.72m²	15	378.89m²	28	318.11m²
4	364.50m²	16	504.87m²	29	318.11m²
5	364.27m²	17	548.37m²	30	318.11m²
6	364.05m²	18	554.54m²	31	318.11m²
7	363.82m²	19	581.34m²	32	318.11m²
8	406.00m²	20	441.81m²	33	318.11m²
9	353.98m²	21	402.71m²	34	354.24m²
10	378.13m²	22	330.74m²	35	505.15m²
11	378.29m²	23	354.72m²		
12	378.44m²	24	469.44m²		
		25	375.88m²		

LAND USE SCHEDULE

LAND USE	AREA	UNITS	DENSITY
RESIDENTIAL	34,436.91m²	250	72.6 UPH
SINGLE DETACHED	13,803.32m²	35	25.4 UPH
STREET TOWNHOUSE	5,681.32m²	32	56.3 UPH
STACKED TOWNHOUSE	6,352.31m²	58	91.3 UPH
APARTMENT	8,599.96m²	125	145.3 UPH
ROW	18,901.23m²		
BLOCK B SWM POND	3,388.68m²	BLOCK X PARKING	1,503.94m²
BLOCK C GREEN SPACE	1,617.27m²		
BLOCK G GREEN SPACE	427.89m²		
BLOCK H GREEN SPACE	1,083.73m²		
BLOCK K GREEN SPACE	377.93m²		
BLOCK N GREEN SPACE	212.73m²		
BLOCK U GREEN SPACE	150.00m²		

REQUIREMENTS OF THE PLANNING ACT, R.S.O, 1990 - SECTION 51(17):
(A) SEE PLAN.
(B) SEE PLAN.
(C) SEE KEY MAP.
(D) SEE LAND USE SCHEDULE.
(E) SEE PLAN.
(F) SEE PLAN.
(G) SEE PLAN.
(H) MUNICIPAL SERVICING.
(I)
(J) SEE PLAN.
(K) MUNICIPAL SERVICING AVAILABLE.
(L) NOT APPLICABLE.

OWNER'S CERTIFICATE:
I HEREBY AUTHORIZE LANDPRO PLANNING SOLUTIONS INC. TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION FOR APPROVAL.

OWNER _____ DATE _____

REVISIONS

No.	Updates
1	26-05-2023 Adjusted lot sizes, created 1 lot.
2	07-06-2023 Added singles, stacked towns.
3	15-08-2023 Adjusted ROW, singles, street blocks, created larger lots and blocks.
4	
5	
6	

SURVEYOR'S CERTIFICATE:
I HEREBY AUTHORIZE THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY SHOWN.

SURVEYOR (MCINTOSH PERRY) _____ DATE _____

0 4 10 20 40

SCALE: 1:1500

DATE: 08-15-2023

DRAWING NO: 1/1

PLOT: 11x17"

DESIGNED BY: MK

REVIEWED BY: MS

EXHIBIT B – TRAFFIC DATA

Figure B1-1: Existing Peak Hour Traffic Volumes

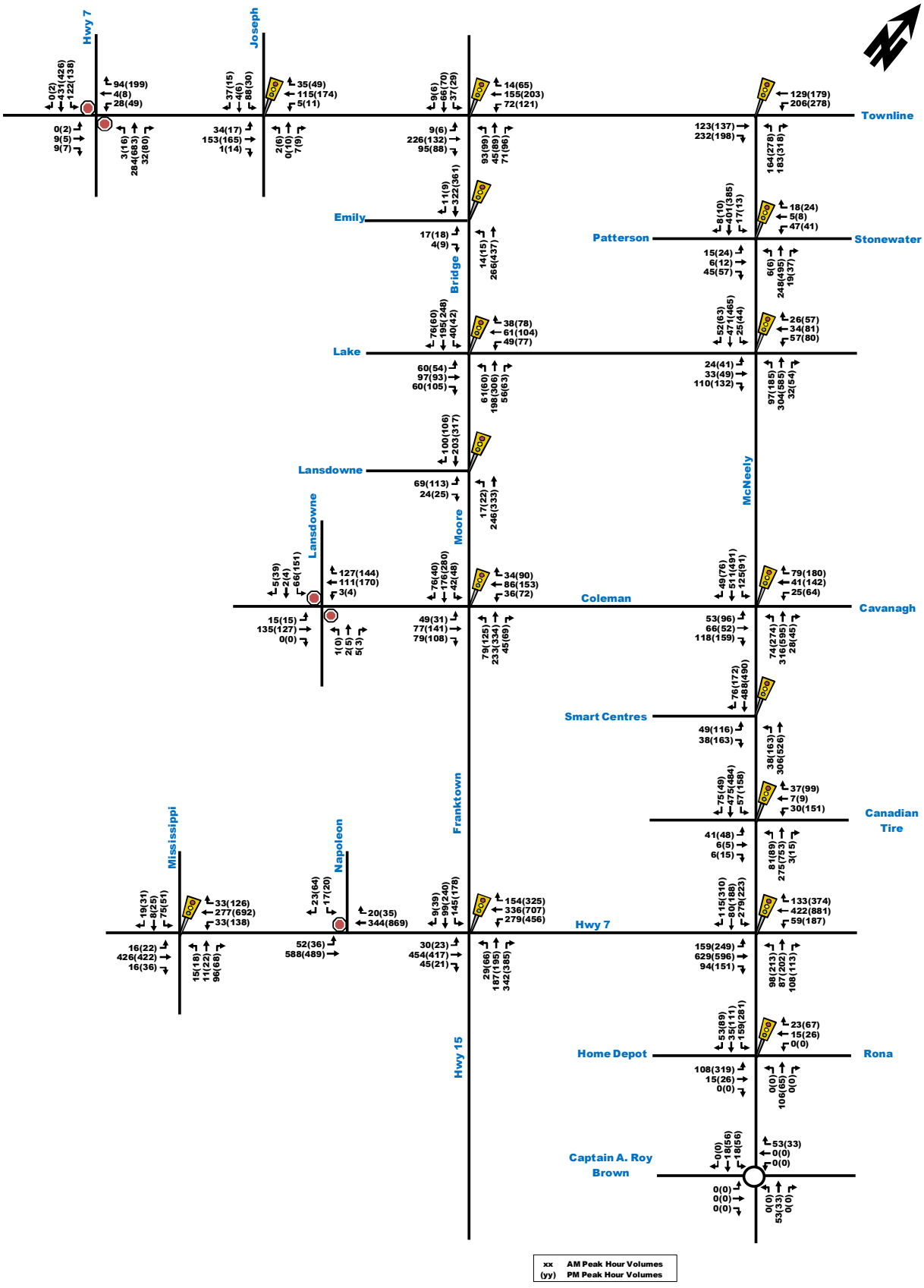
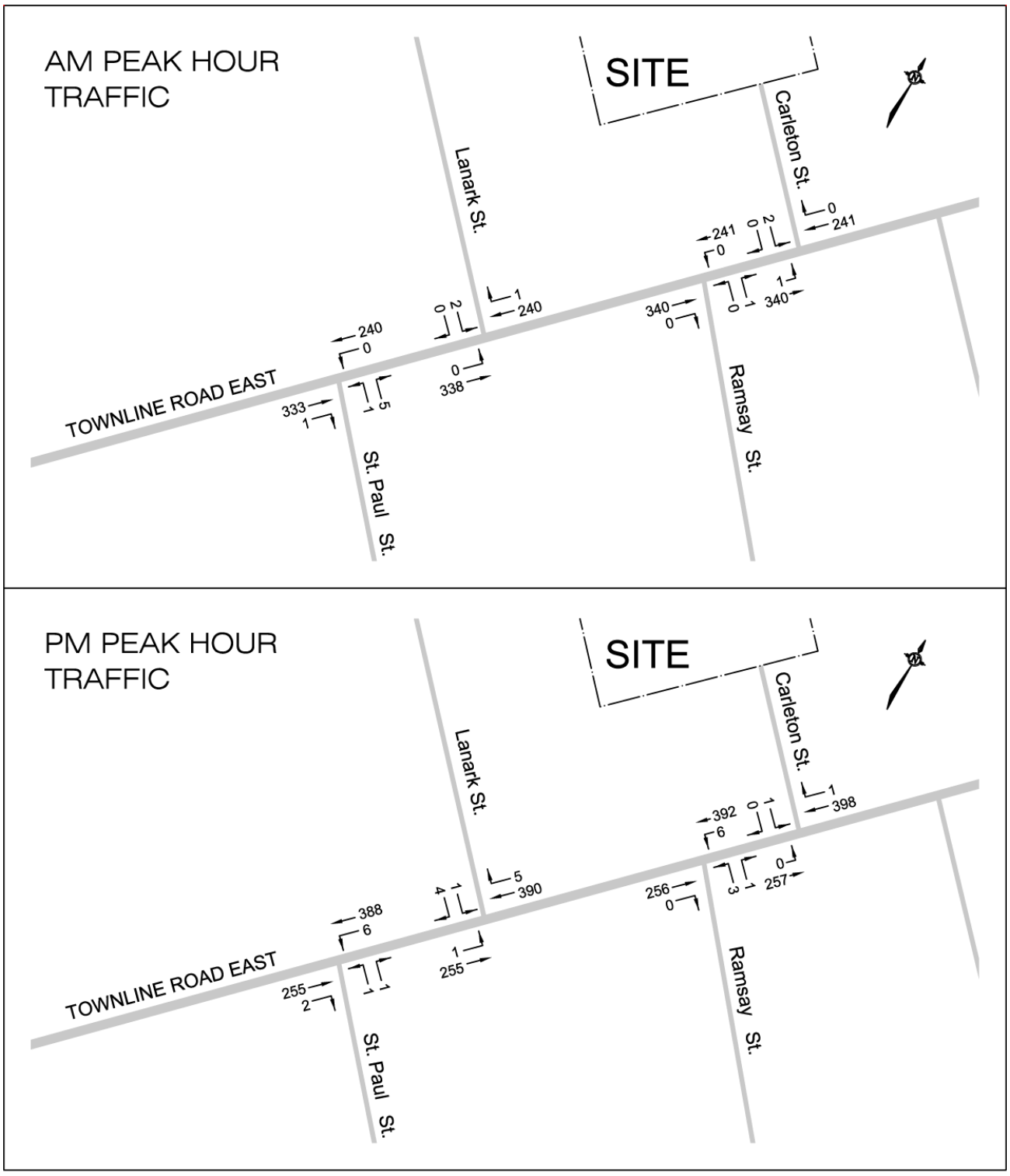


FIGURE 2.1
EXISTING PEAK AM AND PM HOUR TRAFFIC COUNTS



NOT TO SCALE

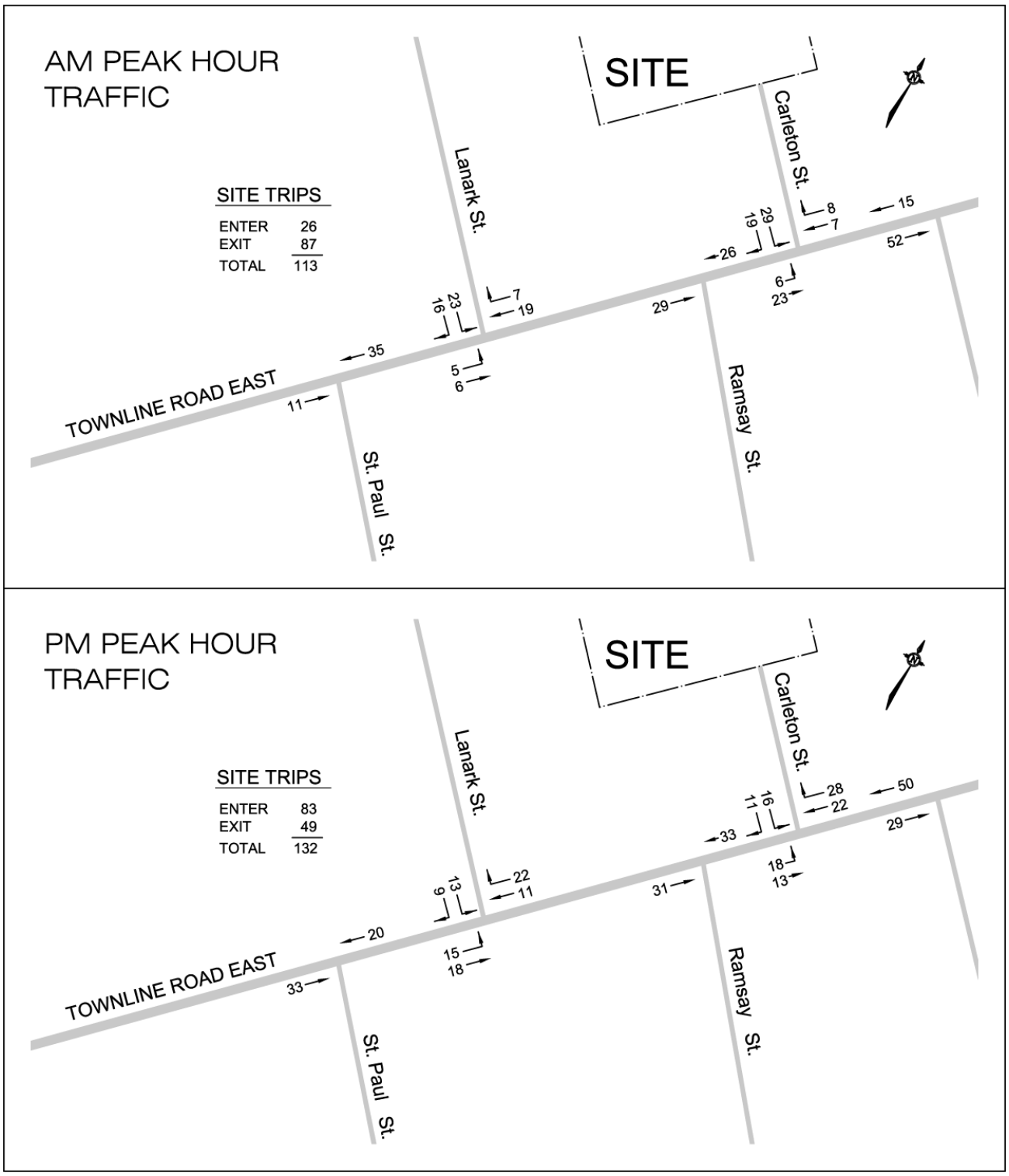
Townline and Edmund Street
Townline (Eastbound)
August 23rd 2023

Vehicles

Time	Eastbound			Westbound			Northbound			Southbound			Total
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
8:00	1	48	0	0	33	0	0	0	0	1	0	1	84
Heavy %	0%	2%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	
8:15	1	56	0	1	46	0	0	0	0	3	0	2	109
Heavy %	0%	4%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	
8:30	4	79	0	0	44	1	1	0	0	4	0	2	135
Heavy %	0%	3%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	
8:45	5	71	0	0	47	2	0	0	1	2	0	3	131
Heavy %	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	
9:00	5	60	0	0	34	5	0	0	0	3	1	3	111
Heavy %	0%	2%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	
9:15	3	53	0	0	50	4	0	0	1	3	0	5	119
Heavy %	33%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	
9:30	3	66	1	1	36	2	0	1	1	0	1	0	112
Heavy %	0%	5%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%	
9:45	1	47	0	0	38	2	1	1	1	1	0	4	96
Heavy %	0%	2%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	
3:00	1	61	0	1	81	1	1	0	1	3	2	2	154
Heavy %	0%	3%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	
3:15	2	79	0	1	82	2	0	0	0	0	0	3	169
Heavy %	50%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
3:30	3	64	0	2	129	0	1	0	2	5	0	2	208
Heavy %	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	
3:45	2	60	1	0	91	6	0	0	0	4	0	2	166
Heavy %	0%	0%	0%	0%	0%	17%	0%	0%	0%	0%	0%	0%	
4:00	3	87	1	2	122	1	0	0	2	5	1	3	227
Heavy %	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	
4:15	1	79	0	1	101	2	0	0	1	2	0	3	190
Heavy %	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
4:30	1	65	0	1	92	1	0	0	0	1	0	2	163
Heavy %	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	
4:45	2	68	0	0	89	2	1	0	1	2	1	3	169
Heavy %	0%	3%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	

EXHIBIT B – TRAFFIC DATA (BACKGROUND DEVELOPMENT)

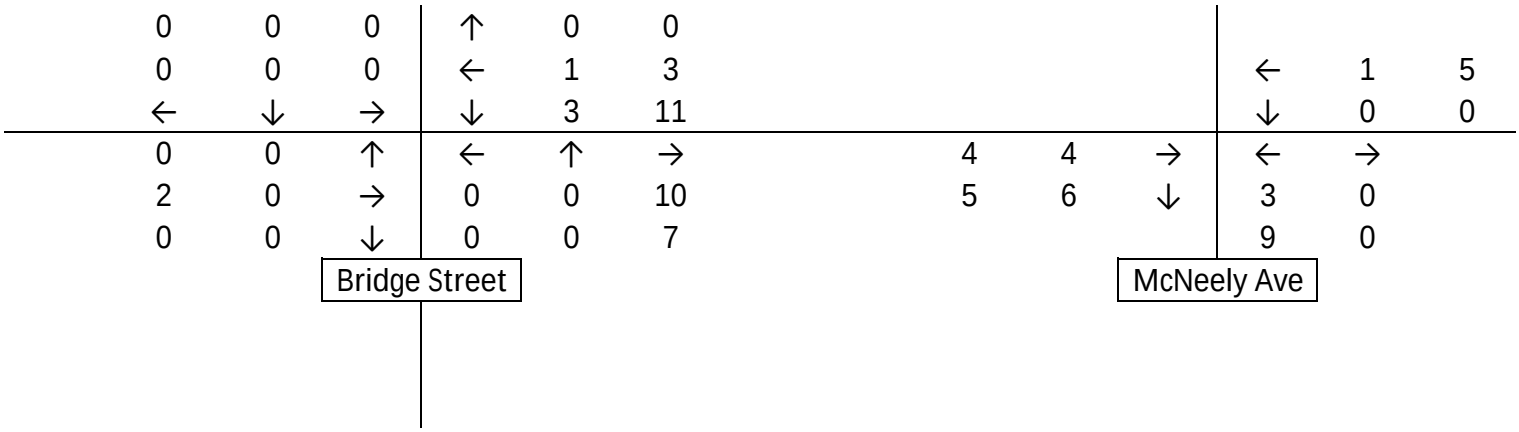
FIGURE 4.1
PEAK AM AND PM HOUR SITE GENERATED TRIPS



Development Generated Trip Assignment

AM Peak XX

PM Peak XX



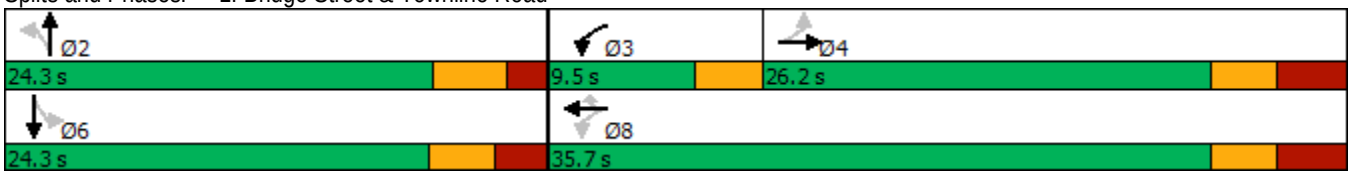
APPENDIX C: CAPACITY ANALYSIS RESULTS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	243	102	78	167	15	100	48	76	40	71	10
Future Volume (vph)	10	243	102	78	167	15	100	48	76	40	71	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956				0.850		0.954			0.989	
Flt Protected	0.950			0.950				0.978			0.984	
Satd. Flow (prot)	1770	1781	0	1770	1863	1583	0	1738	0	0	1813	0
Flt Permitted	0.643			0.376				0.800			0.841	
Satd. Flow (perm)	1198	1781	0	700	1863	1583	0	1422	0	0	1549	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38				44		45			8	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	11	264	111	85	182	16	109	52	83	43	77	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	375	0	85	182	16	0	244	0	0	131	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.1	20.1		30.6	27.4	27.4		19.2			19.0	
Actuated g/C Ratio	0.35	0.35		0.53	0.47	0.47		0.33			0.33	
v/c Ratio	0.03	0.59		0.18	0.21	0.02		0.49			0.26	
Control Delay	13.8	19.1		7.5	9.5	0.9		17.3			16.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.8	19.1		7.5	9.5	0.9		17.3			16.1	
LOS	B	B		A	A	A		B			B	
Approach Delay		18.9			8.4			17.3			16.1	
Approach LOS		B			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

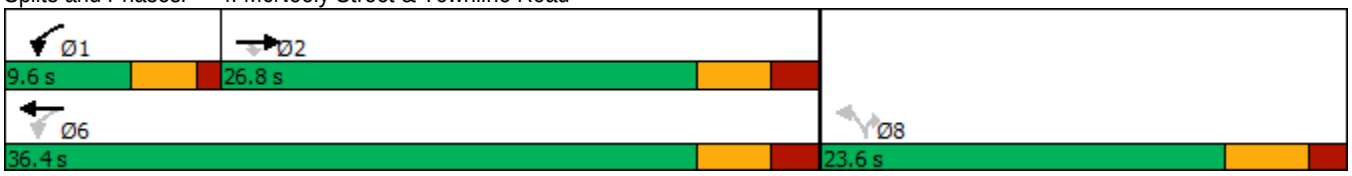


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	132	250	222	139	177	197
Future Volume (vph)	132	250	222	139	177	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.561		0.950	
Satd. Flow (perm)	1863	1583	1045	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		272				214
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	143	272	241	151	192	214
Shared Lane Traffic (%)						
Lane Group Flow (vph)	143	272	241	151	192	214
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.3	21.3	32.4	30.9	11.8	11.8
Actuated g/C Ratio	0.40	0.40	0.60	0.58	0.22	0.22
v/c Ratio	0.19	0.34	0.34	0.14	0.49	0.42
Control Delay	12.1	3.4	6.9	6.2	23.1	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	3.4	6.9	6.2	23.1	5.9
LOS	B	A	A	A	C	A
Approach Delay	6.4			6.6	14.0	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 53.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	323	0	0	235	12	1	0	2	12	1	13
Future Vol, veh/h	17	323	0	0	235	12	1	0	2	12	1	13
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	351	0	0	255	13	1	0	2	13	1	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	268	0	0	351	0	0	656	655	351	643	642	255
Stage 1	-	-	-	-	-	-	387	387	-	255	255	-
Stage 2	-	-	-	-	-	-	269	268	-	388	387	-
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	1296	-	-	1208	-	-	379	386	692	386	392	784
Stage 1	-	-	-	-	-	-	637	610	-	749	696	-
Stage 2	-	-	-	-	-	-	737	687	-	636	610	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1296	-	-	1208	-	-	367	381	692	381	387	784
Mov Cap-2 Maneuver	-	-	-	-	-	-	367	381	-	381	387	-
Stage 1	-	-	-	-	-	-	628	601	-	739	696	-
Stage 2	-	-	-	-	-	-	723	687	-	625	601	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	11.8	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	534	1296	-	-	1208	-	-	513
HCM Lane V/C Ratio	0.006	0.014	-	-	-	-	-	0.055
HCM Control Delay (s)	11.8	7.8	-	-	0	-	-	12.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	346	246	1	2	0
Future Vol, veh/h	0	346	246	1	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	376	267	1	2	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	268	0	-	0	644	268
Stage 1	-	-	-	-	268	-
Stage 2	-	-	-	-	376	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1296	-	-	-	437	771
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1296	-	-	-	437	771
Mov Cap-2 Maneuver	-	-	-	-	532	-
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	694	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1296	-	-	-	532
HCM Lane V/C Ratio	-	-	-	-	0.004
HCM Control Delay (s)	0	-	-	-	11.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	8:25	8:25	8:25	8:25	8:25	8:25
End Time	9:45	9:45	9:45	9:45	9:45	9:45
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1503	1543	1502	1501	1484	1508
Vehs Exited	1500	1538	1523	1505	1482	1508
Starting Vehs	48	48	59	55	37	49
Ending Vehs	51	53	38	51	39	44
Travel Distance (km)	1774	1846	1814	1763	1780	1795
Travel Time (hr)	46.4	48.3	47.6	46.0	46.2	46.9
Total Delay (hr)	7.7	8.3	8.4	7.8	7.6	8.0
Total Stops	1298	1357	1363	1263	1271	1310
Fuel Used (l)	140.3	147.4	144.1	139.8	139.9	142.3

Interval #0 Information Seeding

Start Time	8:25
End Time	8:45
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	8:45
End Time	9:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1503	1543	1502	1501	1484	1508
Vehs Exited	1500	1538	1523	1505	1482	1508
Starting Vehs	48	48	59	55	37	49
Ending Vehs	51	53	38	51	39	44
Travel Distance (km)	1774	1846	1814	1763	1780	1795
Travel Time (hr)	46.4	48.3	47.6	46.0	46.2	46.9
Total Delay (hr)	7.7	8.3	8.4	7.8	7.6	8.0
Total Stops	1298	1357	1363	1263	1271	1310
Fuel Used (l)	140.3	147.4	144.1	139.8	139.9	142.3

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	13.0	66.9	22.1	37.3	9.2	45.9	25.7
Average Queue (m)	1.8	31.7	11.1	16.5	2.4	20.7	10.7
95th Queue (m)	8.1	55.6	20.2	30.8	8.8	37.8	21.3
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (m)	8.9	9.0	7.9
Average Queue (m)	1.0	0.7	3.8
95th Queue (m)	5.5	4.8	9.1
Link Distance (m)		297.5	217.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	31.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Townline Road & Lanark Street

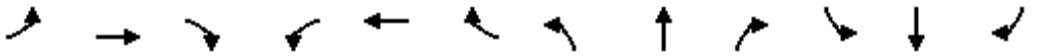
Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	1.8	7.2
Average Queue (m)	0.1	0.7
95th Queue (m)	1.6	4.5
Link Distance (m)	21.3	303.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	31.0	38.3	35.5	24.8	46.7	24.3
Average Queue (m)	13.0	16.9	18.3	9.7	21.9	12.5
95th Queue (m)	26.1	30.2	32.4	20.9	38.5	21.7
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			0		0	
Queuing Penalty (veh)			0		1	

Network Summary

Network wide Queuing Penalty: 1

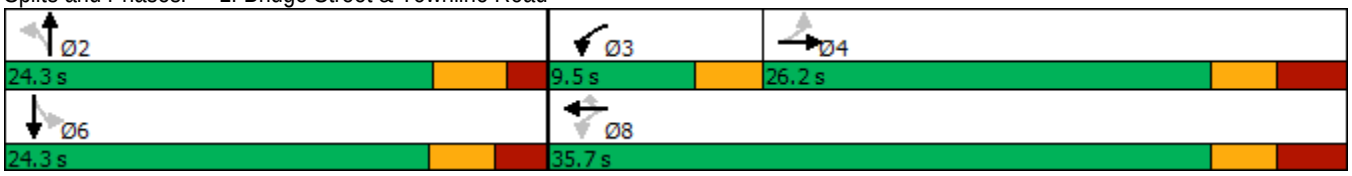


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	142	95	130	219	70	107	96	103	31	75	6
Future Volume (vph)	6	142	95	130	219	70	107	96	103	31	75	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940				0.850		0.954			0.992	
Flt Protected	0.950			0.950				0.983			0.986	
Satd. Flow (prot)	1770	1751	0	1770	1863	1583	0	1747	0	0	1822	0
Flt Permitted	0.611			0.516				0.837			0.870	
Satd. Flow (perm)	1138	1751	0	961	1863	1583	0	1487	0	0	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60				76		45			5	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	7	154	103	141	238	76	116	104	112	34	82	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	257	0	141	238	76	0	332	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.1	20.1		30.7	27.5	27.5		19.2			19.0	
Actuated g/C Ratio	0.35	0.35		0.53	0.47	0.47		0.33			0.33	
v/c Ratio	0.02	0.40		0.24	0.27	0.10		0.64			0.23	
Control Delay	13.7	13.8		7.9	10.0	2.8		21.7			16.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.7	13.8		7.9	10.0	2.8		21.7			16.2	
LOS	B	B		A	B	A		C			B	
Approach Delay		13.8			8.2			21.7			16.2	
Approach LOS		B			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 71.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

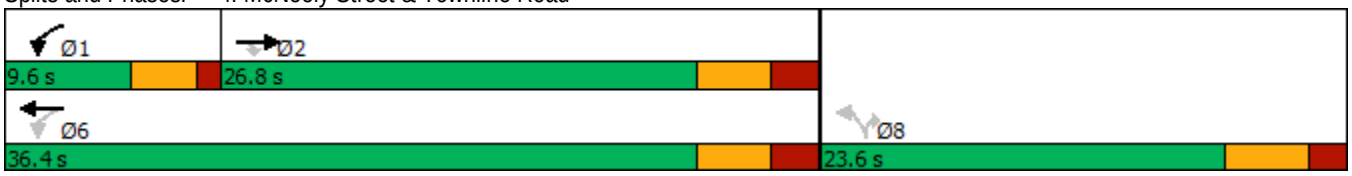


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	148	213	299	193	299	342
Future Volume (vph)	148	213	299	193	299	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.552		0.950	
Satd. Flow (perm)	1863	1583	1028	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		232				372
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	232	325	210	325	372
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	232	325	210	325	372
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.4	21.4	32.5	31.0	14.8	14.8
Actuated g/C Ratio	0.38	0.38	0.57	0.55	0.26	0.26
v/c Ratio	0.23	0.31	0.49	0.21	0.71	0.54
Control Delay	14.1	3.7	10.2	8.0	28.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	3.7	10.2	8.0	28.1	5.5
LOS	B	A	B	A	C	A
Approach Delay	7.9			9.3	16.1	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 56.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	290	2	5	443	9	1	0	5	16	1	10
Future Vol, veh/h	9	290	2	5	443	9	1	0	5	16	1	10
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	315	2	5	482	10	1	0	5	17	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	492	0	0	317	0	0	839	838	316	831	829	482
Stage 1	-	-	-	-	-	-	336	336	-	492	492	-
Stage 2	-	-	-	-	-	-	503	502	-	339	337	-
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	1071	-	-	1243	-	-	285	302	724	289	306	584
Stage 1	-	-	-	-	-	-	678	642	-	558	548	-
Stage 2	-	-	-	-	-	-	551	542	-	676	641	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	1243	-	-	276	298	724	284	302	584
Mov Cap-2 Maneuver	-	-	-	-	-	-	276	298	-	284	302	-
Stage 1	-	-	-	-	-	-	672	636	-	553	546	-
Stage 2	-	-	-	-	-	-	537	540	-	665	635	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	11.4	16.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	570	1071	-	-	1243	-	-	352
HCM Lane V/C Ratio	0.011	0.009	-	-	0.004	-	-	0.083
HCM Control Delay (s)	11.4	8.4	-	-	7.9	-	-	16.2
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	321	460	5	1	4
Future Vol, veh/h	1	321	460	5	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	349	500	5	1	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	505	0	-	0	854	503
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1060	-	-	-	329	569
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1060	-	-	-	329	569
Mov Cap-2 Maneuver	-	-	-	-	447	-
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	713	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1060	-	-	-	540
HCM Lane V/C Ratio	0.001	-	-	-	0.01
HCM Control Delay (s)	8.4	0	-	-	11.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:10	3:10	3:10	3:10	3:10	3:10
End Time	4:30	4:30	4:30	4:30	4:30	4:30
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1915	1831	1956	1800	1912	1883
Vehs Exited	1918	1844	1944	1804	1911	1886
Starting Vehs	73	62	55	63	55	58
Ending Vehs	70	49	67	59	56	61
Travel Distance (km)	2302	2203	2347	2133	2255	2248
Travel Time (hr)	61.3	58.9	62.7	56.8	59.9	59.9
Total Delay (hr)	11.9	11.5	12.3	10.7	11.5	11.6
Total Stops	1742	1689	1770	1596	1733	1705
Fuel Used (l)	180.7	174.8	184.4	168.3	178.2	177.3

Interval #0 Information Seeding

Start Time	3:10
End Time	3:30
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	3:30
End Time	4:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1915	1831	1956	1800	1912	1883
Vehs Exited	1918	1844	1944	1804	1911	1886
Starting Vehs	73	62	55	63	55	58
Ending Vehs	70	49	67	59	56	61
Travel Distance (km)	2302	2203	2347	2133	2255	2248
Travel Time (hr)	61.3	58.9	62.7	56.8	59.9	59.9
Total Delay (hr)	11.9	11.5	12.3	10.7	11.5	11.6
Total Stops	1742	1689	1770	1596	1733	1705
Fuel Used (l)	180.7	174.8	184.4	168.3	178.2	177.3

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	9.9	48.4	27.8	47.1	18.9	53.9	26.0
Average Queue (m)	1.2	24.2	14.6	21.3	6.9	27.9	11.1
95th Queue (m)	6.2	41.7	25.2	39.0	16.1	45.6	21.3
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				1			
Queuing Penalty (veh)				1			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LTR
Maximum Queue (m)	8.9	7.2	1.3	9.1	10.4
Average Queue (m)	0.7	0.4	0.1	1.4	4.1
95th Queue (m)	4.7	3.5	1.3	6.7	9.7
Link Distance (m)				297.5	217.5
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	31.0	39.0	17.0		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Townline Road & Lanark Street

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	5.4	9.1
Average Queue (m)	0.2	1.3
95th Queue (m)	2.3	6.4
Link Distance (m)	21.3	303.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	37.2	33.5	48.0	34.3	69.1	51.1
Average Queue (m)	15.3	15.4	26.6	13.4	36.6	22.4
95th Queue (m)	29.2	26.8	43.5	26.4	57.9	39.3
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			2	0	4	0
Queuing Penalty (veh)			4	0	13	0

Network Summary

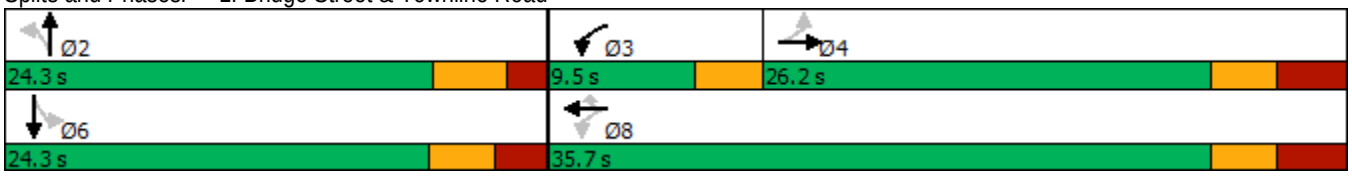
Network wide Queuing Penalty: 18

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	270	110	98	205	16	108	52	95	43	76	11
Future Volume (vph)	11	270	110	98	205	16	108	52	95	43	76	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956				0.850		0.950			0.989	
Flt Protected	0.950			0.950				0.979			0.984	
Satd. Flow (prot)	1770	1781	0	1770	1863	1583	0	1732	0	0	1813	0
Flt Permitted	0.619			0.333				0.819			0.848	
Satd. Flow (perm)	1153	1781	0	620	1863	1583	0	1449	0	0	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				44		52			8	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	12	293	120	107	223	17	117	57	103	47	83	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	413	0	107	223	17	0	277	0	0	142	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.1	20.1		30.7	27.5	27.5		19.2			19.0	
Actuated g/C Ratio	0.35	0.35		0.53	0.47	0.47		0.33			0.33	
v/c Ratio	0.03	0.65		0.24	0.25	0.02		0.54			0.28	
Control Delay	13.9	20.8		8.0	9.9	1.1		18.2			16.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.9	20.8		8.0	9.9	1.1		18.2			16.4	
LOS	B	C		A	A	A		B			B	
Approach Delay		20.6			8.9			18.2			16.4	
Approach LOS		C			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

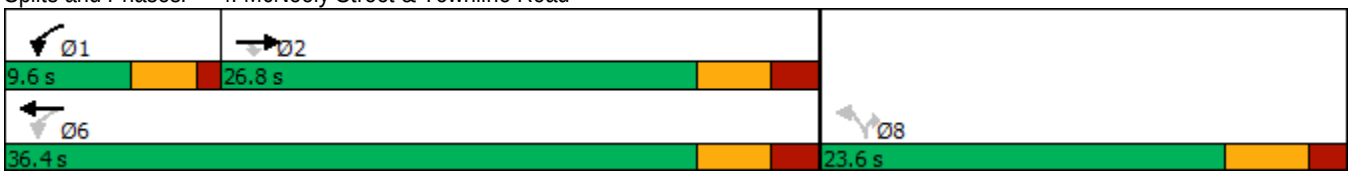


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	163	310	238	154	208	215
Future Volume (vph)	163	310	238	154	208	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.544		0.950	
Satd. Flow (perm)	1863	1583	1013	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		337				234
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	177	337	259	167	226	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	177	337	259	167	226	234
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.4	21.4	32.5	31.0	12.6	12.6
Actuated g/C Ratio	0.39	0.39	0.60	0.57	0.23	0.23
v/c Ratio	0.24	0.41	0.38	0.16	0.56	0.43
Control Delay	13.1	3.6	7.7	6.8	24.0	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	3.6	7.7	6.8	24.0	5.6
LOS	B	A	A	A	C	A
Approach Delay	6.9			7.4	14.7	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 54.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 45.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	369	0	0	292	13	1	0	2	12	1	13
Future Vol, veh/h	18	369	0	0	292	13	1	0	2	12	1	13
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	401	0	0	317	14	1	0	2	13	1	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	331	0	0	401	0	0	773	772	401	759	758	317
Stage 1	-	-	-	-	-	-	441	441	-	317	317	-
Stage 2	-	-	-	-	-	-	332	331	-	442	441	-
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	1228	-	-	1158	-	-	316	330	649	323	336	724
Stage 1	-	-	-	-	-	-	595	577	-	694	654	-
Stage 2	-	-	-	-	-	-	681	645	-	594	577	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1228	-	-	1158	-	-	305	325	649	318	331	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	305	325	-	318	331	-
Stage 1	-	-	-	-	-	-	585	568	-	683	654	-
Stage 2	-	-	-	-	-	-	667	645	-	582	568	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	12.7	13.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	472	1228	-	-	1158	-	-	443
HCM Lane V/C Ratio	0.007	0.016	-	-	-	-	-	0.064
HCM Control Delay (s)	12.7	8	-	-	0	-	-	13.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	389	288	8	25	16
Future Vol, veh/h	5	389	288	8	25	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	423	313	9	27	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	322	0	-	0	751	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	433	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1238	-	-	-	378	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	654	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1238	-	-	-	376	723
Mov Cap-2 Maneuver	-	-	-	-	486	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	654	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1238	-	-	-	557
HCM Lane V/C Ratio	0.004	-	-	-	0.08
HCM Control Delay (s)	7.9	0	-	-	12
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	8:25	8:25	8:25	8:25	8:25	8:25
End Time	9:45	9:45	9:45	9:45	9:45	9:45
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1700	1757	1715	1706	1709	1717
Vehs Exited	1712	1757	1730	1718	1713	1725
Starting Vehs	65	51	66	57	58	58
Ending Vehs	53	51	51	45	54	50
Travel Distance (km)	2084	2150	2062	2052	2063	2082
Travel Time (hr)	55.5	57.4	54.7	54.5	54.2	55.3
Total Delay (hr)	10.1	10.6	9.9	9.7	9.5	10.0
Total Stops	1609	1633	1606	1595	1516	1590
Fuel Used (l)	167.3	172.5	164.6	164.0	164.6	166.6

Interval #0 Information Seeding

Start Time	8:25
End Time	8:45
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	8:45
End Time	9:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1700	1757	1715	1706	1709	1717
Vehs Exited	1712	1757	1730	1718	1713	1725
Starting Vehs	65	51	66	57	58	58
Ending Vehs	53	51	51	45	54	50
Travel Distance (km)	2084	2150	2062	2052	2063	2082
Travel Time (hr)	55.5	57.4	54.7	54.5	54.2	55.3
Total Delay (hr)	10.1	10.6	9.9	9.7	9.5	10.0
Total Stops	1609	1633	1606	1595	1516	1590
Fuel Used (l)	167.3	172.5	164.6	164.0	164.6	166.6

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	11.7	77.7	30.6	50.1	10.6	50.3	27.5
Average Queue (m)	2.5	36.3	13.3	19.3	2.3	23.7	11.5
95th Queue (m)	9.2	62.1	24.3	36.9	9.0	41.4	22.7
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (m)	10.4	9.1	10.4
Average Queue (m)	1.3	0.9	3.8
95th Queue (m)	6.8	5.2	9.5
Link Distance (m)		297.5	217.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	31.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Townline Road & Lanark Street

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	1.8	15.7
Average Queue (m)	0.1	7.7
95th Queue (m)	1.3	15.0
Link Distance (m)	21.3	303.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	34.4	39.6	43.4	27.9	47.0	29.6
Average Queue (m)	17.1	20.2	21.5	10.5	24.4	13.5
95th Queue (m)	31.9	34.4	35.6	23.2	41.0	23.5
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			1		0	
Queuing Penalty (veh)			1		1	

Network Summary

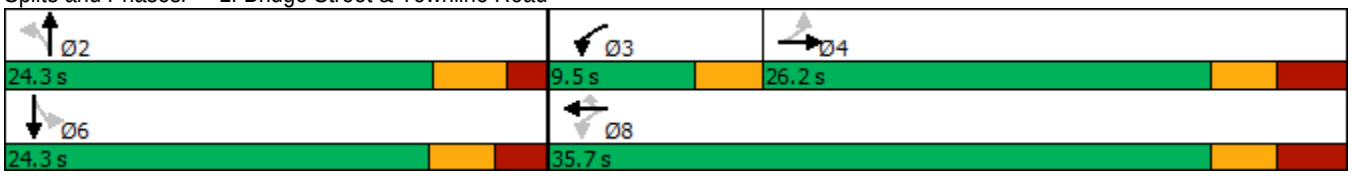
Network wide Queuing Penalty: 2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	188	102	160	250	75	115	103	118	33	81	6
Future Volume (vph)	6	188	102	160	250	75	115	103	118	33	81	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947				0.850		0.953			0.993	
Flt Protected	0.950			0.950				0.983			0.986	
Satd. Flow (prot)	1770	1764	0	1770	1863	1583	0	1745	0	0	1824	0
Flt Permitted	0.592			0.446				0.846			0.860	
Satd. Flow (perm)	1103	1764	0	831	1863	1583	0	1502	0	0	1591	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				82		48			5	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	7	204	111	174	272	82	125	112	128	36	88	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	315	0	174	272	82	0	365	0	0	131	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.1	20.1		30.7	27.5	27.5		19.2			19.0	
Actuated g/C Ratio	0.35	0.35		0.53	0.47	0.47		0.33			0.33	
v/c Ratio	0.02	0.49		0.32	0.31	0.10		0.69			0.25	
Control Delay	13.7	16.4		8.7	10.4	2.7		24.1			16.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.7	16.4		8.7	10.4	2.7		24.1			16.4	
LOS	B	B		A	B	A		C			B	
Approach Delay		16.3			8.7			24.1			16.4	
Approach LOS		B			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 73.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

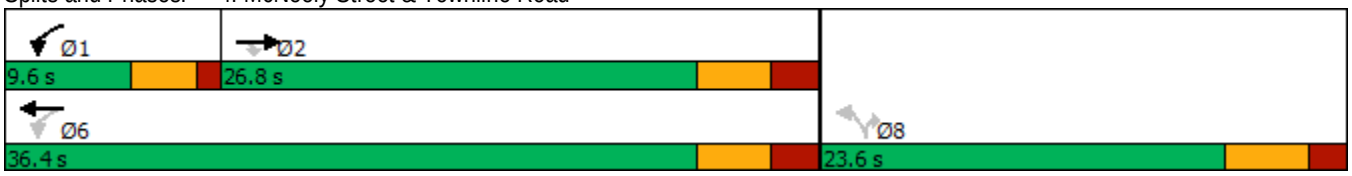


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	172	254	322	238	361	374
Future Volume (vph)	172	254	322	238	361	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.539		0.950	
Satd. Flow (perm)	1863	1583	1004	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		276				407
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	276	350	259	392	407
Shared Lane Traffic (%)						
Lane Group Flow (vph)	187	276	350	259	392	407
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.4	21.4	32.5	31.0	16.2	16.2
Actuated g/C Ratio	0.37	0.37	0.56	0.53	0.28	0.28
v/c Ratio	0.27	0.37	0.55	0.26	0.80	0.56
Control Delay	15.0	3.7	11.8	8.8	33.4	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	3.7	11.8	8.8	33.4	5.4
LOS	B	A	B	A	C	A
Approach Delay	8.3			10.5	19.1	
Approach LOS	A			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 13.6		Intersection LOS: B	
Intersection Capacity Utilization 59.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	354	2	5	511	10	1	0	5	16	1	10
Future Vol, veh/h	10	354	2	5	511	10	1	0	5	16	1	10
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	385	2	5	555	11	1	0	5	17	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	566	0	0	387	0	0	985	984	386	976	974	555
Stage 1	-	-	-	-	-	-	408	408	-	565	565	-
Stage 2	-	-	-	-	-	-	577	576	-	411	409	-
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	1006	-	-	1171	-	-	227	248	662	230	252	531
Stage 1	-	-	-	-	-	-	620	597	-	510	508	-
Stage 2	-	-	-	-	-	-	502	502	-	618	596	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1006	-	-	1171	-	-	219	244	662	225	248	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	244	-	225	248	-
Stage 1	-	-	-	-	-	-	613	590	-	504	506	-
Stage 2	-	-	-	-	-	-	489	500	-	606	589	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	12.4	19
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	495	1006	-	-	1171	-	-	287
HCM Lane V/C Ratio	0.013	0.011	-	-	0.005	-	-	0.102
HCM Control Delay (s)	12.4	8.6	-	-	8.1	-	-	19
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	373	520	27	14	13
Future Vol, veh/h	16	373	520	27	14	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	405	565	29	15	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	594	0	-	0	1019	580
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	439	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	982	-	-	-	263	514
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	982	-	-	-	257	514
Mov Cap-2 Maneuver	-	-	-	-	387	-
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	982	-	-	-	439
HCM Lane V/C Ratio	0.018	-	-	-	0.067
HCM Control Delay (s)	8.7	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:10	3:10	3:10	3:10	3:10	3:10
End Time	4:30	4:30	4:30	4:30	4:30	4:30
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2184	2182	2230	2107	2173	2174
Vehs Exited	2184	2192	2234	2129	2160	2180
Starting Vehs	81	73	81	85	64	77
Ending Vehs	81	63	77	63	77	73
Travel Distance (km)	2662	2676	2709	2549	2646	2648
Travel Time (hr)	72.5	74.3	73.7	69.2	72.3	72.4
Total Delay (hr)	15.1	16.7	15.4	14.3	15.3	15.4
Total Stops	2089	2232	2157	1977	2123	2116
Fuel Used (l)	211.8	215.9	215.1	202.2	210.9	211.2

Interval #0 Information Seeding

Start Time	3:10
End Time	3:30
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	3:30
End Time	4:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2184	2182	2230	2107	2173	2174
Vehs Exited	2184	2192	2234	2129	2160	2180
Starting Vehs	81	73	81	85	64	77
Ending Vehs	81	63	77	63	77	73
Travel Distance (km)	2662	2676	2709	2549	2646	2648
Travel Time (hr)	72.5	74.3	73.7	69.2	72.3	72.4
Total Delay (hr)	15.1	16.7	15.4	14.3	15.3	15.4
Total Stops	2089	2232	2157	1977	2123	2116
Fuel Used (l)	211.8	215.9	215.1	202.2	210.9	211.2

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	8.8	62.9	39.1	44.8	20.4	66.0	29.0
Average Queue (m)	1.0	30.0	18.6	23.6	8.2	33.5	11.9
95th Queue (m)	5.6	51.8	32.1	41.2	18.4	57.7	24.0
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				1			
Queuing Penalty (veh)				2			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (m)	8.4	7.3	9.1	12.1
Average Queue (m)	1.0	0.6	1.5	4.2
95th Queue (m)	5.7	4.3	6.9	10.1
Link Distance (m)			297.5	217.5
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	31.0	39.0		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Townline Road & Lanark Street

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	27.4	14.4
Average Queue (m)	3.4	5.1
95th Queue (m)	15.4	13.0
Link Distance (m)	21.3	303.5
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	40.3	37.2	56.7	41.4	87.4	59.3
Average Queue (m)	19.6	19.3	28.9	17.9	45.4	25.5
95th Queue (m)	33.2	32.2	46.4	34.8	78.4	52.5
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			3	0	9	0
Queuing Penalty (veh)			7	1	32	1

Network Summary

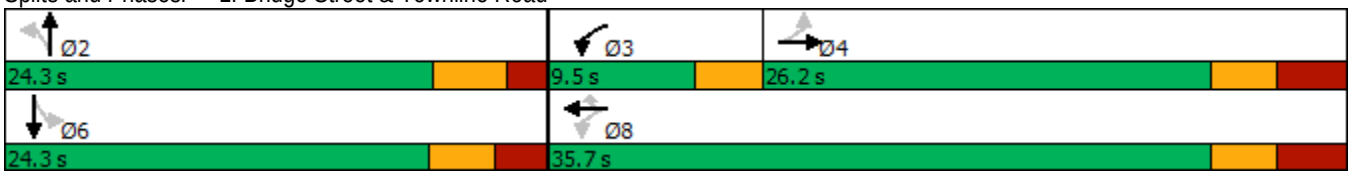
Network wide Queuing Penalty: 44

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	304	124	109	228	18	122	58	106	49	87	12
Future Volume (vph)	12	304	124	109	228	18	122	58	106	49	87	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956				0.850		0.950			0.989	
Flt Protected	0.950			0.950				0.979			0.984	
Satd. Flow (prot)	1770	1781	0	1770	1863	1583	0	1732	0	0	1813	0
Flt Permitted	0.605			0.276				0.812			0.833	
Satd. Flow (perm)	1127	1781	0	514	1863	1583	0	1437	0	0	1535	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				44		52			8	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	13	330	135	118	248	20	133	63	115	53	95	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	465	0	118	248	20	0	311	0	0	161	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.1	20.1		30.7	27.5	27.5		19.2			19.0	
Actuated g/C Ratio	0.35	0.35		0.53	0.47	0.47		0.33			0.33	
v/c Ratio	0.03	0.73		0.29	0.28	0.03		0.61			0.32	
Control Delay	13.9	24.5		8.6	10.1	1.3		20.3			17.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.9	24.5		8.6	10.1	1.3		20.3			17.0	
LOS	B	C		A	B	A		C			B	
Approach Delay		24.2			9.2			20.3			17.0	
Approach LOS		C			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

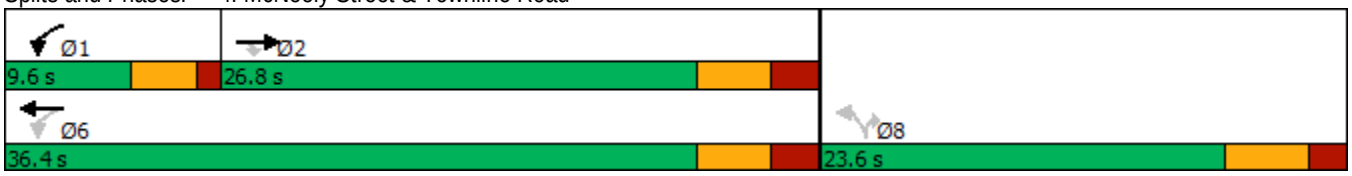


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	182	346	270	173	239	250
Future Volume (vph)	182	346	270	173	239	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.534		0.950	
Satd. Flow (perm)	1863	1583	995	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		376				272
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	376	293	188	260	272
Shared Lane Traffic (%)						
Lane Group Flow (vph)	198	376	293	188	260	272
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.4	21.4	32.5	31.0	13.4	13.4
Actuated g/C Ratio	0.39	0.39	0.59	0.56	0.24	0.24
v/c Ratio	0.28	0.45	0.44	0.18	0.61	0.46
Control Delay	13.9	3.8	8.9	7.3	25.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.9	3.8	8.9	7.3	25.1	5.5
LOS	B	A	A	A	C	A
Approach Delay	7.3			8.3	15.1	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 50.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	415	0	0	325	15	1	0	2	13	1	14
Future Vol, veh/h	21	415	0	0	325	15	1	0	2	13	1	14
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	451	0	0	353	16	1	0	2	14	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	369	0	0	451	0	0	866	866	451	851	850	353
Stage 1	-	-	-	-	-	-	497	497	-	353	353	-
Stage 2	-	-	-	-	-	-	369	369	-	498	497	-
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	1190	-	-	1109	-	-	274	291	608	280	298	691
Stage 1	-	-	-	-	-	-	555	545	-	664	631	-
Stage 2	-	-	-	-	-	-	651	621	-	554	545	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1190	-	-	1109	-	-	263	285	608	275	292	691
Mov Cap-2 Maneuver	-	-	-	-	-	-	263	285	-	275	292	-
Stage 1	-	-	-	-	-	-	544	535	-	651	631	-
Stage 2	-	-	-	-	-	-	636	621	-	541	535	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	13.6	14.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	423	1190	-	-	1109	-	-	395
HCM Lane V/C Ratio	0.008	0.019	-	-	-	-	-	0.077
HCM Control Delay (s)	13.6	8.1	-	-	0	-	-	14.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	438	323	8	25	16
Future Vol, veh/h	5	438	323	8	25	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	476	351	9	27	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	360	0	-	0	842	356
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	486	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1199	-	-	-	334	688
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1199	-	-	-	332	688
Mov Cap-2 Maneuver	-	-	-	-	451	-
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	618	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1199	-	-	-	521
HCM Lane V/C Ratio	0.005	-	-	-	0.086
HCM Control Delay (s)	8	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	8:25	8:25	8:25	8:25	8:25	8:25
End Time	9:45	9:45	9:45	9:45	9:45	9:45
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1971	2035	2017	1906	2035	1991
Vehs Exited	1963	2061	2011	1913	2021	1996
Starting Vehs	61	81	61	63	59	62
Ending Vehs	69	55	67	56	73	61
Travel Distance (km)	2380	2473	2398	2303	2444	2399
Travel Time (hr)	64.2	67.3	65.0	61.8	66.6	65.0
Total Delay (hr)	12.5	13.6	12.9	11.8	13.3	12.8
Total Stops	1820	1971	1917	1792	2003	1902
Fuel Used (l)	189.4	199.1	192.9	184.8	197.1	192.6

Interval #0 Information Seeding

Start Time	8:25
End Time	8:45
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	8:45
End Time	9:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1971	2035	2017	1906	2035	1991
Vehs Exited	1963	2061	2011	1913	2021	1996
Starting Vehs	61	81	61	63	59	62
Ending Vehs	69	55	67	56	73	61
Travel Distance (km)	2380	2473	2398	2303	2444	2399
Travel Time (hr)	64.2	67.3	65.0	61.8	66.6	65.0
Total Delay (hr)	12.5	13.6	12.9	11.8	13.3	12.8
Total Stops	1820	1971	1917	1792	2003	1902
Fuel Used (l)	189.4	199.1	192.9	184.8	197.1	192.6

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	10.3	82.7	30.7	46.4	9.1	56.9	44.0
Average Queue (m)	2.1	43.4	15.0	20.0	2.5	29.4	15.7
95th Queue (m)	8.2	69.2	26.2	39.4	9.0	49.0	32.2
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				1			
Queuing Penalty (veh)				1			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (m)	10.2	9.1	14.1
Average Queue (m)	1.7	0.7	4.2
95th Queue (m)	7.5	4.7	10.5
Link Distance (m)		297.5	217.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	31.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Townline Road & Lanark Street

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	11.3	1.2	15.9
Average Queue (m)	1.0	0.0	7.1
95th Queue (m)	6.6	0.9	14.8
Link Distance (m)	21.3	163.6	303.5
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	41.4	46.0	48.7	29.2	60.0	32.1
Average Queue (m)	18.2	22.7	24.0	12.7	29.2	15.6
95th Queue (m)	34.2	37.8	39.3	24.1	48.1	27.3
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			1	0	1	
Queuing Penalty (veh)			2	0	4	

Network Summary

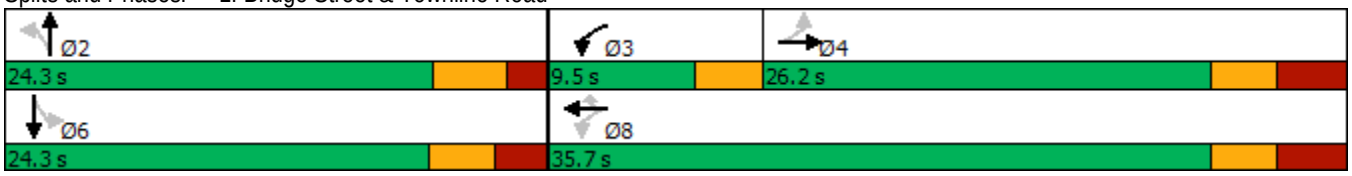
Network wide Queuing Penalty: 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	208	116	178	281	85	130	117	132	38	91	7
Future Volume (vph)	7	208	116	178	281	85	130	117	132	38	91	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946				0.850		0.953			0.993	
Flt Protected	0.950			0.950				0.983			0.986	
Satd. Flow (prot)	1770	1762	0	1770	1863	1583	0	1745	0	0	1824	0
Flt Permitted	0.574			0.394				0.847			0.828	
Satd. Flow (perm)	1069	1762	0	734	1863	1583	0	1504	0	0	1532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50				92		47			5	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	8	226	126	193	305	92	141	127	143	41	99	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	352	0	193	305	92	0	411	0	0	148	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.0	20.0		32.7	29.5	29.5		19.1			18.9	
Actuated g/C Ratio	0.33	0.33		0.54	0.49	0.49		0.32			0.32	
v/c Ratio	0.02	0.57		0.38	0.33	0.11		0.81			0.30	
Control Delay	13.7	18.2		9.3	10.6	2.6		31.6			17.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.7	18.2		9.3	10.6	2.6		31.6			17.2	
LOS	B	B		A	B	A		C			B	
Approach Delay		18.1			8.9			31.6			17.2	
Approach LOS		B			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 76.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

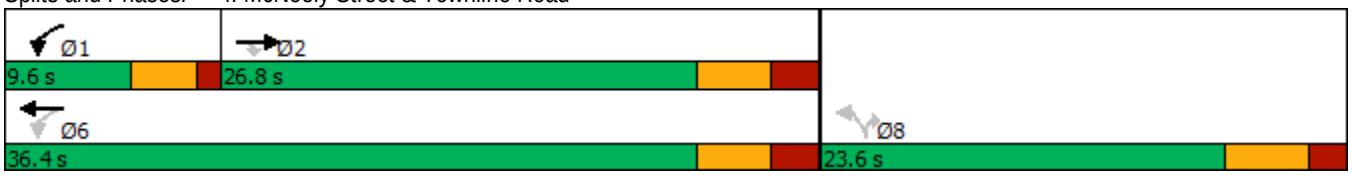


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	193	285	364	265	413	433
Future Volume (vph)	193	285	364	265	413	433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.527		0.950	
Satd. Flow (perm)	1863	1583	982	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		310				471
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	310	396	288	449	471
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	310	396	288	449	471
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.3	21.3	32.4	30.9	17.3	17.3
Actuated g/C Ratio	0.36	0.36	0.55	0.52	0.29	0.29
v/c Ratio	0.31	0.40	0.65	0.30	0.87	0.59
Control Delay	15.6	3.8	14.5	9.3	40.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	3.8	14.5	9.3	40.2	5.5
LOS	B	A	B	A	D	A
Approach Delay	8.6			12.3	22.4	
Approach LOS	A			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 59.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	395	2	6	574	11	1	0	5	17	1	11
Future Vol, veh/h	11	395	2	6	574	11	1	0	5	17	1	11
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	429	2	7	624	12	1	0	5	18	1	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	636	0	0	431	0	0	1105	1104	430	1095	1093	624
Stage 1	-	-	-	-	-	-	454	454	-	638	638	-
Stage 2	-	-	-	-	-	-	651	650	-	457	455	-
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	947	-	-	1129	-	-	188	211	625	191	214	485
Stage 1	-	-	-	-	-	-	586	569	-	465	471	-
Stage 2	-	-	-	-	-	-	457	465	-	583	569	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	947	-	-	1129	-	-	180	207	625	187	210	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	180	207	-	187	210	-
Stage 1	-	-	-	-	-	-	578	562	-	459	468	-
Stage 2	-	-	-	-	-	-	442	462	-	571	562	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	13.2	21.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	443	947	-	-	1129	-	-	245
HCM Lane V/C Ratio	0.015	0.013	-	-	0.006	-	-	0.129
HCM Control Delay (s)	13.2	8.8	-	-	8.2	-	-	21.9
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	418	585	28	14	13
Future Vol, veh/h	16	418	585	28	14	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	454	636	30	15	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	666	0	-	0	1139	651
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	488	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	923	-	-	-	223	469
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	617	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	923	-	-	-	217	469
Mov Cap-2 Maneuver	-	-	-	-	351	-
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	617	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	923	-	-	-	399
HCM Lane V/C Ratio	0.019	-	-	-	0.074
HCM Control Delay (s)	9	0	-	-	14.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:10	3:10	3:10	3:10	3:10	3:10
End Time	4:30	4:30	4:30	4:30	4:30	4:30
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2432	2500	2481	2483	2445	2469
Vehs Exited	2450	2496	2451	2491	2445	2467
Starting Vehs	94	89	74	101	87	89
Ending Vehs	76	93	104	93	87	90
Travel Distance (km)	2993	3029	3004	2970	2974	2994
Travel Time (hr)	85.1	86.9	86.3	83.0	84.1	85.1
Total Delay (hr)	20.7	21.5	21.6	18.9	19.6	20.5
Total Stops	2489	2609	2670	2428	2497	2536
Fuel Used (l)	242.4	243.3	241.6	238.2	238.8	240.9

Interval #0 Information Seeding

Start Time	3:10
End Time	3:30
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	3:30
End Time	4:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2432	2500	2481	2483	2445	2469
Vehs Exited	2450	2496	2451	2491	2445	2467
Starting Vehs	94	89	74	101	87	89
Ending Vehs	76	93	104	93	87	90
Travel Distance (km)	2993	3029	3004	2970	2974	2994
Travel Time (hr)	85.1	86.9	86.3	83.0	84.1	85.1
Total Delay (hr)	20.7	21.5	21.6	18.9	19.6	20.5
Total Stops	2489	2609	2670	2428	2497	2536
Fuel Used (l)	242.4	243.3	241.6	238.2	238.8	240.9

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	10.0	71.6	41.9	42.4	21.4	78.6	36.7
Average Queue (m)	1.5	33.4	20.3	22.0	8.4	38.7	13.0
95th Queue (m)	7.0	58.5	35.8	38.3	18.0	64.9	25.8
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				1			
Queuing Penalty (veh)				2			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LTR
Maximum Queue (m)	9.0	7.2	1.4	9.1	12.9
Average Queue (m)	1.5	0.5	0.0	1.9	3.8
95th Queue (m)	7.0	3.7	1.0	8.0	9.9
Link Distance (m)				297.5	217.5
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	31.0	39.0	17.0		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Townline Road & Lanark Street

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	22.2	13.6
Average Queue (m)	2.4	5.5
95th Queue (m)	11.5	13.6
Link Distance (m)	21.3	303.5
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	49.7	43.8	72.0	42.7	163.1	85.0
Average Queue (m)	20.4	21.8	39.9	19.5	61.9	37.6
95th Queue (m)	36.2	36.8	66.8	35.7	120.9	79.5
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			15	0	20	2
Queuing Penalty (veh)			39	2	87	9

Network Summary

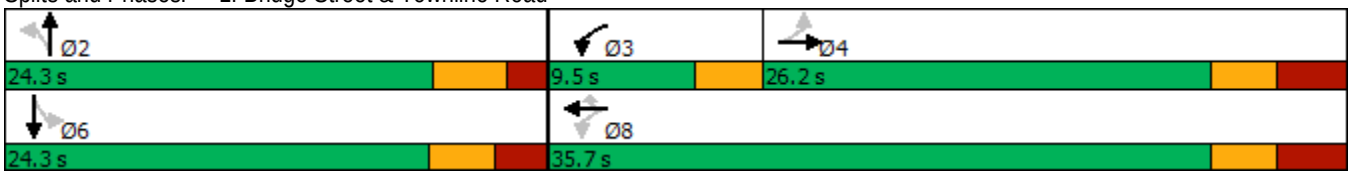
Network wide Queuing Penalty: 139

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	271	110	145	208	16	108	52	109	43	76	11
Future Volume (vph)	11	271	110	145	208	16	108	52	109	43	76	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.945			0.989	
Flt Protected	0.950			0.950				0.980			0.984	
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	0	1725	0	0	1813	0
Flt Permitted	0.617			0.331				0.826			0.845	
Satd. Flow (perm)	1149	1783	0	617	1863	1583	0	1454	0	0	1557	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				44		60			8	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	12	295	120	158	226	17	117	57	118	47	83	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	415	0	158	226	17	0	292	0	0	142	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.1	20.1		30.7	27.5	27.5		19.2			19.0	
Actuated g/C Ratio	0.35	0.35		0.53	0.47	0.47		0.33			0.33	
v/c Ratio	0.03	0.65		0.35	0.26	0.02		0.56			0.28	
Control Delay	13.9	20.9		9.2	9.9	1.1		18.3			16.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.9	20.9		9.2	9.9	1.1		18.3			16.4	
LOS	B	C		A	A	A		B			B	
Approach Delay		20.7			9.2			18.3			16.4	
Approach LOS		C			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 69.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

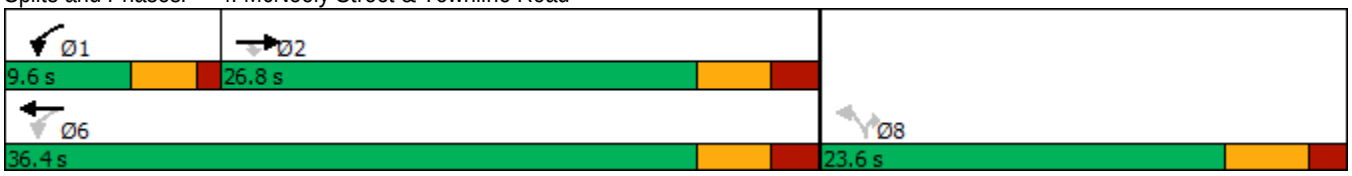


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	168	350	239	156	221	215
Future Volume (vph)	168	350	239	156	221	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.541		0.950	
Satd. Flow (perm)	1863	1583	1008	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		380				234
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	183	380	260	170	240	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	380	260	170	240	234
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.4	21.4	32.5	31.0	13.0	13.0
Actuated g/C Ratio	0.39	0.39	0.59	0.56	0.24	0.24
v/c Ratio	0.25	0.45	0.39	0.16	0.58	0.42
Control Delay	13.5	3.8	8.0	7.0	24.3	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	3.8	8.0	7.0	24.3	5.4
LOS	B	A	A	A	C	A
Approach Delay	6.9			7.6	15.0	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 46.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



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	30	372	0	0	304	19	1	0	2	31	1	51
Future Vol, veh/h	30	372	0	0	304	19	1	0	2	31	1	51
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	404	0	0	330	21	1	0	2	34	1	55

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	351	0	0	404	0	0	839	821	404	801	800	330
Stage 1	-	-	-	-	-	-	470	470	-	330	330	-
Stage 2	-	-	-	-	-	-	369	351	-	471	470	-
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	1208	-	-	1155	-	-	285	309	647	303	318	712
Stage 1	-	-	-	-	-	-	574	560	-	683	646	-
Stage 2	-	-	-	-	-	-	651	632	-	573	560	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1208	-	-	1155	-	-	257	301	647	296	309	712
Mov Cap-2 Maneuver	-	-	-	-	-	-	257	301	-	296	309	-
Stage 1	-	-	-	-	-	-	559	545	-	665	646	-
Stage 2	-	-	-	-	-	-	599	632	-	555	545	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	13.4	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	430	1208	-	-	1155	-	-	462
HCM Lane V/C Ratio	0.008	0.027	-	-	-	-	-	0.195
HCM Control Delay (s)	13.4	8.1	-	-	0	-	-	14.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.7

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	408	294	17	51	28
Future Vol, veh/h	8	408	294	17	51	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	443	320	18	55	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	338	0	-	0	790	329
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	461	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1221	-	-	-	359	712
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1221	-	-	-	355	712
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	635	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1221	-	-	-	534
HCM Lane V/C Ratio	0.007	-	-	-	0.161
HCM Control Delay (s)	8	0	-	-	13
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	8:25	8:25	8:25	8:25	8:25	8:25
End Time	9:45	9:45	9:45	9:45	9:45	9:45
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1823	1828	1945	1791	1898	1858
Vehs Exited	1823	1842	1919	1796	1887	1853
Starting Vehs	60	80	48	58	52	59
Ending Vehs	60	66	74	53	63	64
Travel Distance (km)	2201	2196	2342	2189	2316	2249
Travel Time (hr)	59.1	58.6	62.8	58.5	62.9	60.4
Total Delay (hr)	10.9	10.9	11.6	10.8	12.3	11.3
Total Stops	1725	1808	1844	1734	1906	1802
Fuel Used (l)	177.5	177.5	187.9	176.5	187.3	181.3

Interval #0 Information Seeding

Start Time	8:25
End Time	8:45
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	8:45
End Time	9:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1823	1828	1945	1791	1898	1858
Vehs Exited	1823	1842	1919	1796	1887	1853
Starting Vehs	60	80	48	58	52	59
Ending Vehs	60	66	74	53	63	64
Travel Distance (km)	2201	2196	2342	2189	2316	2249
Travel Time (hr)	59.1	58.6	62.8	58.5	62.9	60.4
Total Delay (hr)	10.9	10.9	11.6	10.8	12.3	11.3
Total Stops	1725	1808	1844	1734	1906	1802
Fuel Used (l)	177.5	177.5	187.9	176.5	187.3	181.3

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	10.1	70.1	39.3	42.9	13.2	57.3	38.4
Average Queue (m)	2.1	37.9	17.7	16.7	2.1	25.4	13.7
95th Queue (m)	8.3	62.1	30.6	33.5	9.0	44.2	29.7
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				0			
Queuing Penalty (veh)				1			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (m)	10.4	9.0	19.3
Average Queue (m)	1.8	0.9	7.8
95th Queue (m)	7.8	5.2	14.9
Link Distance (m)		297.5	217.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	31.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Townline Road & Lanark Street

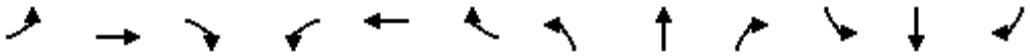
Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	11.3	19.3
Average Queue (m)	0.8	10.0
95th Queue (m)	6.3	17.3
Link Distance (m)	21.3	303.5
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	39.2	45.9	43.2	28.3	55.1	33.6
Average Queue (m)	16.9	22.5	21.8	11.5	27.3	14.7
95th Queue (m)	31.0	37.3	36.2	23.3	44.6	26.4
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			1	0	1	
Queuing Penalty (veh)			2	0	2	

Network Summary

Network wide Queuing Penalty: 4

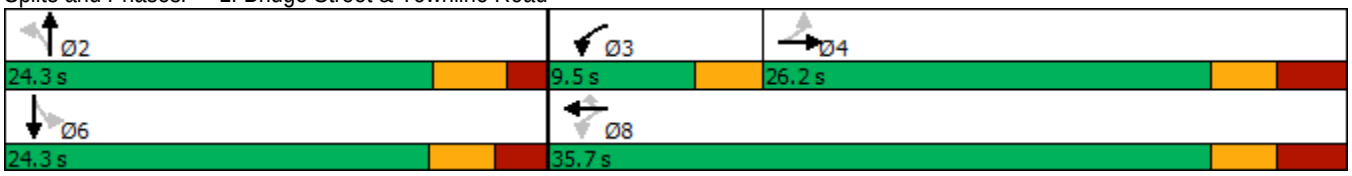


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	191	102	187	252	75	115	103	162	33	81	6
Future Volume (vph)	6	191	102	187	252	75	115	103	162	33	81	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.948				0.850		0.942			0.993	
Flt Protected	0.950			0.950				0.985			0.986	
Satd. Flow (prot)	1770	1766	0	1770	1863	1583	0	1728	0	0	1824	0
Flt Permitted	0.591			0.434				0.863			0.837	
Satd. Flow (perm)	1101	1766	0	808	1863	1583	0	1514	0	0	1548	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48				82		65			5	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	7	208	111	203	274	82	125	112	176	36	88	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	319	0	203	274	82	0	413	0	0	131	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.0	20.0		32.7	29.5	29.5		19.1			18.9	
Actuated g/C Ratio	0.33	0.33		0.54	0.49	0.49		0.32			0.32	
v/c Ratio	0.02	0.51		0.37	0.30	0.10		0.79			0.27	
Control Delay	13.7	17.1		9.2	10.2	2.7		28.8			16.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.7	17.1		9.2	10.2	2.7		28.8			16.6	
LOS	B	B		A	B	A		C			B	
Approach Delay		17.0			8.8			28.8			16.6	
Approach LOS		B			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

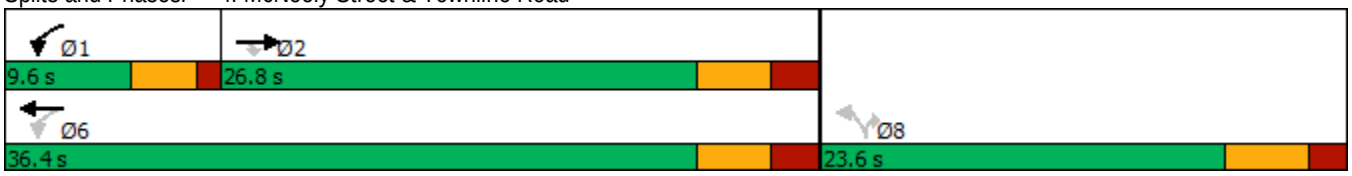


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	277	322	243	400	374
Future Volume (vph)	175	277	322	243	400	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.537		0.950	
Satd. Flow (perm)	1863	1583	1000	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		301				407
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	301	350	264	435	407
Shared Lane Traffic (%)						
Lane Group Flow (vph)	190	301	350	264	435	407
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.3	21.3	32.5	31.0	17.0	17.0
Actuated g/C Ratio	0.36	0.36	0.55	0.53	0.29	0.29
v/c Ratio	0.28	0.39	0.56	0.27	0.85	0.55
Control Delay	15.2	3.8	12.2	9.0	38.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	3.8	12.2	9.0	38.2	5.2
LOS	B	A	B	A	D	A
Approach Delay	8.2			10.8	22.3	
Approach LOS	A			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 59			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 61.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	364	2	5	518	28	1	0	5	27	1	32
Future Vol, veh/h	47	364	2	5	518	28	1	0	5	27	1	32
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	396	2	5	563	30	1	0	5	29	1	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	593	0	0	398	0	0	1105	1102	397	1075	1073	563
Stage 1	-	-	-	-	-	-	499	499	-	573	573	-
Stage 2	-	-	-	-	-	-	606	603	-	502	500	-
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	983	-	-	1161	-	-	188	212	652	197	220	526
Stage 1	-	-	-	-	-	-	554	544	-	505	504	-
Stage 2	-	-	-	-	-	-	484	488	-	552	543	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	983	-	-	1161	-	-	167	200	652	187	208	526
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	200	-	187	208	-
Stage 1	-	-	-	-	-	-	525	516	-	479	502	-
Stage 2	-	-	-	-	-	-	449	486	-	519	515	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	13.3	21.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	439	983	-	-	1161	-	-	286
HCM Lane V/C Ratio	0.015	0.052	-	-	0.005	-	-	0.228
HCM Control Delay (s)	13.3	8.9	-	-	8.1	-	-	21.3
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.9

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	384	538	53	29	20
Future Vol, veh/h	26	384	538	53	29	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	417	585	58	32	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	643	0	-	0	1087	614
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	473	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	942	-	-	-	239	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	942	-	-	-	230	492
Mov Cap-2 Maneuver	-	-	-	-	363	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	942	-	-	-	407
HCM Lane V/C Ratio	0.03	-	-	-	0.131
HCM Control Delay (s)	8.9	0	-	-	15.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:10	3:10	3:10	3:10	3:10	3:10
End Time	4:30	4:30	4:30	4:30	4:30	4:30
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2280	2359	2325	2289	2349	2321
Vehs Exited	2266	2367	2338	2293	2351	2323
Starting Vehs	72	77	88	66	79	74
Ending Vehs	86	69	75	62	77	74
Travel Distance (km)	2774	2840	2861	2745	2867	2818
Travel Time (hr)	77.3	79.7	83.0	76.0	80.3	79.2
Total Delay (hr)	17.1	18.1	21.0	16.3	18.0	18.1
Total Stops	2342	2374	2552	2228	2307	2362
Fuel Used (l)	223.4	228.0	231.5	218.6	230.8	226.5

Interval #0 Information Seeding

Start Time	3:10
End Time	3:30
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	3:30
End Time	4:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2280	2359	2325	2289	2349	2321
Vehs Exited	2266	2367	2338	2293	2351	2323
Starting Vehs	72	77	88	66	79	74
Ending Vehs	86	69	75	62	77	74
Travel Distance (km)	2774	2840	2861	2745	2867	2818
Travel Time (hr)	77.3	79.7	83.0	76.0	80.3	79.2
Total Delay (hr)	17.1	18.1	21.0	16.3	18.0	18.1
Total Stops	2342	2374	2552	2228	2307	2362
Fuel Used (l)	223.4	228.0	231.5	218.6	230.8	226.5

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	13.8	59.0	51.2	49.6	23.2	76.0	34.2
Average Queue (m)	1.4	29.2	20.3	21.9	7.8	39.5	13.2
95th Queue (m)	8.6	49.2	36.4	39.3	17.9	66.2	26.5
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				1			
Queuing Penalty (veh)				2			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LTR
Maximum Queue (m)	14.3	7.2	5.8	10.4	21.2
Average Queue (m)	4.2	0.4	0.2	1.3	7.1
95th Queue (m)	12.4	3.2	2.8	6.7	14.7
Link Distance (m)				297.5	217.5
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	31.0	39.0	17.0		
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 3: Townline Road & Lanark Street

Movement	EB	B14	SB
Directions Served	LT	T	LR
Maximum Queue (m)	32.2	4.1	20.2
Average Queue (m)	4.6	0.1	8.2
95th Queue (m)	18.7	2.9	16.2
Link Distance (m)	21.3	194.7	303.5
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	2		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	39.0	41.3	80.5	53.5	157.6	76.2
Average Queue (m)	18.1	19.1	33.3	18.1	58.3	29.9
95th Queue (m)	32.2	31.8	61.2	36.2	128.9	64.9
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			6	0	16	1
Queuing Penalty (veh)			15	1	59	3

Network Summary

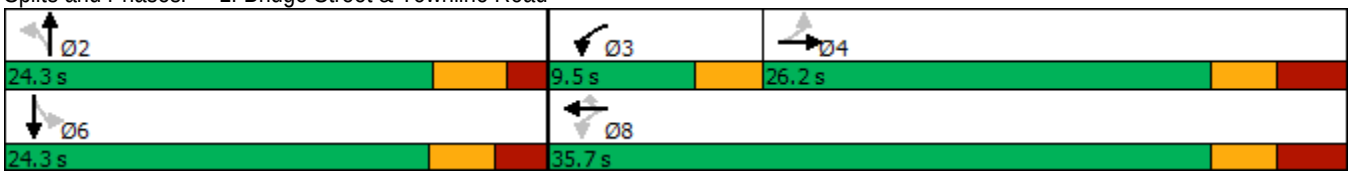
Network wide Queuing Penalty: 80

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	305	124	156	231	18	122	58	120	49	87	12
Future Volume (vph)	12	305	124	156	231	18	122	58	120	49	87	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.946			0.989	
Flt Protected	0.950			0.950				0.980			0.984	
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	0	1727	0	0	1813	0
Flt Permitted	0.603			0.274				0.819			0.826	
Satd. Flow (perm)	1123	1783	0	510	1863	1583	0	1443	0	0	1522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				44		58			8	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	13	332	135	170	251	20	133	63	130	53	95	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	467	0	170	251	20	0	326	0	0	161	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.1	20.1		30.7	27.5	27.5		19.2			19.0	
Actuated g/C Ratio	0.35	0.35		0.53	0.47	0.47		0.33			0.33	
v/c Ratio	0.03	0.73		0.42	0.29	0.03		0.63			0.32	
Control Delay	13.9	24.6		10.2	10.2	1.3		20.9			17.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.9	24.6		10.2	10.2	1.3		20.9			17.1	
LOS	B	C		B	B	A		C			B	
Approach Delay		24.3			9.8			20.9			17.1	
Approach LOS		C			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 58.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 71.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

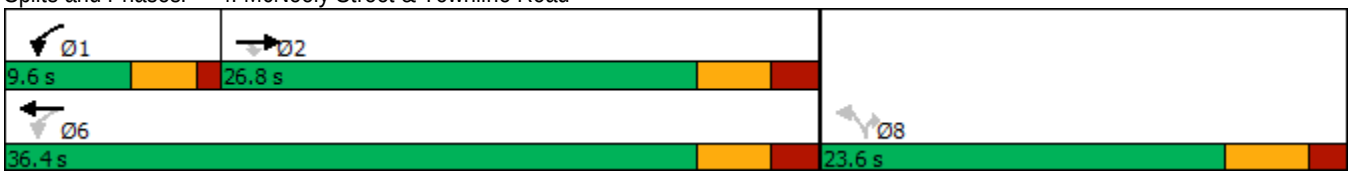


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	187	386	270	175	252	250
Future Volume (vph)	187	386	270	175	252	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.531		0.950	
Satd. Flow (perm)	1863	1583	989	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		420				272
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	203	420	293	190	274	272
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	420	293	190	274	272
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.4	21.4	32.5	31.0	13.7	13.7
Actuated g/C Ratio	0.38	0.38	0.58	0.56	0.25	0.25
v/c Ratio	0.28	0.49	0.45	0.18	0.63	0.46
Control Delay	14.1	3.9	9.1	7.4	25.7	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	3.9	9.1	7.4	25.7	5.4
LOS	B	A	A	A	C	A
Approach Delay	7.2			8.4	15.6	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 10.3		Intersection LOS: B	
Intersection Capacity Utilization 51.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



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	33	418	0	0	337	21	1	0	2	32	1	52
Future Vol, veh/h	33	418	0	0	337	21	1	0	2	32	1	52
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	454	0	0	366	23	1	0	2	35	1	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	389	0	0	454	0	0	933	915	454	893	892	366
Stage 1	-	-	-	-	-	-	526	526	-	366	366	-
Stage 2	-	-	-	-	-	-	407	389	-	527	526	-
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	1170	-	-	1107	-	-	246	273	606	262	281	679
Stage 1	-	-	-	-	-	-	535	529	-	653	623	-
Stage 2	-	-	-	-	-	-	621	608	-	535	529	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1170	-	-	1107	-	-	220	265	606	255	272	679
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	265	-	255	272	-
Stage 1	-	-	-	-	-	-	518	513	-	633	623	-
Stage 2	-	-	-	-	-	-	568	608	-	517	513	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	14.5	16.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	1170	-	-	1107	-	-	413
HCM Lane V/C Ratio	0.009	0.031	-	-	-	-	-	0.224
HCM Control Delay (s)	14.5	8.2	-	-	0	-	-	16.2
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.8

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	457	329	17	51	28
Future Vol, veh/h	8	457	329	17	51	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	497	358	18	55	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	376	0	-	0	882	367
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	515	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1182	-	-	-	317	678
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	600	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1182	-	-	-	314	678
Mov Cap-2 Maneuver	-	-	-	-	435	-
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	600	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1182	-	-	-	498
HCM Lane V/C Ratio	0.007	-	-	-	0.172
HCM Control Delay (s)	8.1	0	-	-	13.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	8:10	8:10	8:10	8:10	8:10	8:10
End Time	9:30	9:30	9:30	9:30	9:30	9:30
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2071	2087	2118	2052	2150	2095
Vehs Exited	2048	2100	2109	2083	2139	2095
Starting Vehs	57	81	54	86	70	69
Ending Vehs	80	68	63	55	81	69
Travel Distance (km)	2481	2503	2506	2523	2594	2522
Travel Time (hr)	68.1	68.3	68.1	69.3	71.3	69.0
Total Delay (hr)	13.8	13.7	13.5	14.2	14.6	14.0
Total Stops	2056	2057	2026	2063	2182	2076
Fuel Used (l)	200.2	202.9	201.7	205.1	210.1	204.0

Interval #0 Information Seeding

Start Time	8:10
End Time	8:30
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	8:30
End Time	9:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2071	2087	2118	2052	2150	2095
Vehs Exited	2048	2100	2109	2083	2139	2095
Starting Vehs	57	81	54	86	70	69
Ending Vehs	80	68	63	55	81	69
Travel Distance (km)	2481	2503	2506	2523	2594	2522
Travel Time (hr)	68.1	68.3	68.1	69.3	71.3	69.0
Total Delay (hr)	13.8	13.7	13.5	14.2	14.6	14.0
Total Stops	2056	2057	2026	2063	2182	2076
Fuel Used (l)	200.2	202.9	201.7	205.1	210.1	204.0

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	14.2	83.7	39.2	40.3	9.2	66.0	42.8
Average Queue (m)	2.7	42.5	18.7	18.9	1.9	31.2	15.5
95th Queue (m)	9.8	70.2	32.1	34.6	7.9	53.7	32.7
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (m)	9.0	9.1	18.6
Average Queue (m)	2.1	0.9	8.4
95th Queue (m)	8.3	5.4	15.2
Link Distance (m)		297.5	217.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	31.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Townline Road & Lanark Street

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	10.9	20.7
Average Queue (m)	0.6	9.8
95th Queue (m)	5.4	17.2
Link Distance (m)	21.3	303.5
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	42.8	48.9	56.3	32.6	60.5	42.3
Average Queue (m)	19.3	25.6	25.4	13.7	31.7	16.3
95th Queue (m)	34.2	41.9	44.5	26.8	48.9	31.6
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			2	0	2	
Queuing Penalty (veh)			4	0	4	

Network Summary

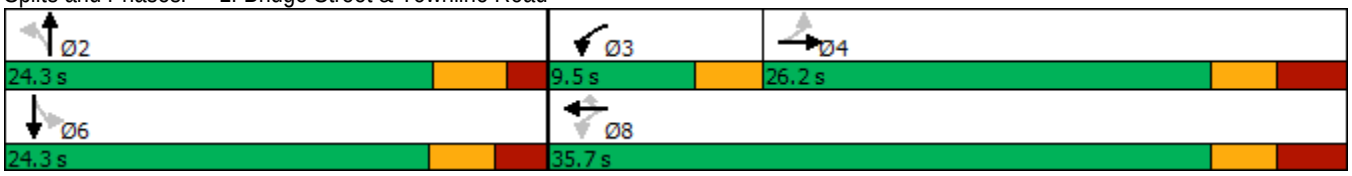
Network wide Queuing Penalty: 8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	211	116	205	283	85	130	117	176	38	91	7
Future Volume (vph)	7	211	116	205	283	85	130	117	176	38	91	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	119.0		40.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (m)	7.5			10.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947				0.850		0.944			0.993	
Flt Protected	0.950			0.950				0.985			0.986	
Satd. Flow (prot)	1770	1764	0	1770	1863	1583	0	1732	0	0	1824	0
Flt Permitted	0.573			0.391				0.860			0.806	
Satd. Flow (perm)	1067	1764	0	728	1863	1583	0	1512	0	0	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50				92		63			5	
Link Speed (k/h)		40			40			50			50	
Link Distance (m)		336.7			176.5			231.3			144.8	
Travel Time (s)		30.3			15.9			16.7			10.4	
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)	8	229	126	223	308	92	141	127	191	41	99	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	355	0	223	308	92	0	459	0	0	148	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(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
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 (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	26.2	26.2		9.5	26.2	26.2	23.2	23.2		23.4	23.4	
Total Split (s)	26.2	26.2		9.5	35.7	35.7	24.3	24.3		24.3	24.3	
Total Split (%)	43.7%	43.7%		15.8%	59.5%	59.5%	40.5%	40.5%		40.5%	40.5%	
Maximum Green (s)	20.0	20.0		6.5	29.5	29.5	19.1	19.1		18.9	18.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	3.3		3.0	3.0	
All-Red Time (s)	3.2	3.2		0.0	3.2	3.2	1.9	1.9		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.2	6.2		5.2			5.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
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	Max	Max		Max	Max	
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)	20.0	20.0		32.7	29.5	29.5		19.1			18.9	
Actuated g/C Ratio	0.33	0.33		0.54	0.49	0.49		0.32			0.32	
v/c Ratio	0.02	0.57		0.44	0.34	0.11		0.88			0.31	
Control Delay	13.7	18.4		10.1	10.6	2.6		37.9			17.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	13.7	18.4		10.1	10.6	2.6		37.9			17.3	
LOS	B	B		B	B	A		D			B	
Approach Delay		18.3			9.2			37.9			17.3	
Approach LOS		B			A			D			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 78.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Bridge Street & Townline Road

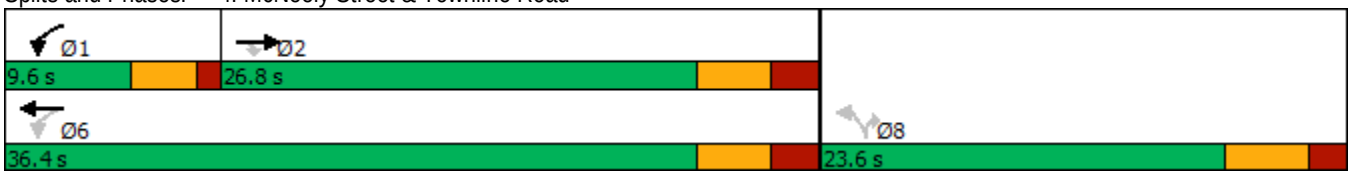


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	196	308	364	270	452	433
Future Volume (vph)	196	308	364	270	452	433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	38.0		0.0	45.0
Storage Lanes		1	1		1	1
Taper Length (m)			74.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.526		0.950	
Satd. Flow (perm)	1863	1583	980	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		335				471
Link Speed (k/h)	50			50	60	
Link Distance (m)	517.7			311.7	615.9	
Travel Time (s)	37.3			22.4	37.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	213	335	396	293	491	471
Shared Lane Traffic (%)						
Lane Group Flow (vph)	213	335	396	293	491	471
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	9.5	24.0	23.5	23.5
Total Split (s)	26.8	26.8	9.6	36.4	23.6	23.6
Total Split (%)	44.7%	44.7%	16.0%	60.7%	39.3%	39.3%
Maximum Green (s)	21.3	21.3	5.6	30.9	18.1	18.1
Yellow Time (s)	3.3	3.3	3.0	3.3	3.7	3.7
All-Red Time (s)	2.2	2.2	1.0	2.2	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.3	21.3	32.4	30.9	17.9	17.9
Actuated g/C Ratio	0.36	0.36	0.54	0.52	0.30	0.30
v/c Ratio	0.32	0.43	0.66	0.30	0.93	0.59
Control Delay	15.8	3.9	14.9	9.4	48.4	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	3.9	14.9	9.4	48.4	5.4
LOS	B	A	B	A	D	A
Approach Delay	8.5			12.6	27.3	
Approach LOS	A			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 59.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: McNeely Street & Townline Road



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	48	405	2	6	581	29	1	0	5	28	1	33
Future Vol, veh/h	48	405	2	6	581	29	1	0	5	28	1	33
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	31	-	-	39	-	17	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	440	2	7	632	32	1	0	5	30	1	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	664	0	0	442	0	0	1226	1223	441	1194	1192	632
Stage 1	-	-	-	-	-	-	545	545	-	646	646	-
Stage 2	-	-	-	-	-	-	681	678	-	548	546	-
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	925	-	-	1118	-	-	155	179	616	163	187	480
Stage 1	-	-	-	-	-	-	523	519	-	460	467	-
Stage 2	-	-	-	-	-	-	440	452	-	521	518	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	925	-	-	1118	-	-	136	168	616	154	175	480
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	168	-	154	175	-
Stage 1	-	-	-	-	-	-	494	490	-	434	464	-
Stage 2	-	-	-	-	-	-	404	449	-	487	489	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	14.4	25.5
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	388	925	-	-	1118	-	-	242
HCM Lane V/C Ratio	0.017	0.056	-	-	0.006	-	-	0.278
HCM Control Delay (s)	14.4	9.1	-	-	8.2	-	-	25.5
HCM Lane LOS	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	1.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	429	603	54	29	20
Future Vol, veh/h	26	429	603	54	29	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	466	655	59	32	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	714	0	-	0	1207	685
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	522	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	886	-	-	-	203	448
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	886	-	-	-	194	448
Mov Cap-2 Maneuver	-	-	-	-	329	-
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	595	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	16.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	886	-	-	-	369
HCM Lane V/C Ratio	0.032	-	-	-	0.144
HCM Control Delay (s)	9.2	0	-	-	16.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:10	3:10	3:10	3:10	3:10	3:10
End Time	4:30	4:30	4:30	4:30	4:30	4:30
Total Time (min)	80	80	80	80	80	80
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2505	2652	2620	2598	2558	2585
Vehs Exited	2499	2655	2622	2570	2554	2581
Starting Vehs	90	82	77	70	91	81
Ending Vehs	96	79	75	98	95	88
Travel Distance (km)	3039	3219	3177	3178	3081	3139
Travel Time (hr)	87.6	92.8	92.9	92.3	90.4	91.2
Total Delay (hr)	22.0	23.0	24.3	23.4	23.6	23.3
Total Stops	2714	2773	2868	2863	2722	2789
Fuel Used (l)	246.4	263.1	257.1	257.6	250.0	254.8

Interval #0 Information Seeding

Start Time	3:10
End Time	3:30
Total Time (min)	20

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	3:30
End Time	4:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2505	2652	2620	2598	2558	2585
Vehs Exited	2499	2655	2622	2570	2554	2581
Starting Vehs	90	82	77	70	91	81
Ending Vehs	96	79	75	98	95	88
Travel Distance (km)	3039	3219	3177	3178	3081	3139
Travel Time (hr)	87.6	92.8	92.9	92.3	90.4	91.2
Total Delay (hr)	22.0	23.0	24.3	23.4	23.6	23.3
Total Stops	2714	2773	2868	2863	2722	2789
Fuel Used (l)	246.4	263.1	257.1	257.6	250.0	254.8

Intersection: 1: Bridge Street & Townline Road

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (m)	8.8	68.8	50.7	48.3	21.3	94.7	35.1
Average Queue (m)	1.4	33.3	23.0	23.9	8.7	46.4	13.5
95th Queue (m)	6.5	57.2	38.3	41.6	17.8	82.7	26.8
Link Distance (m)	327.7	327.7		158.8		220.6	129.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			119.0		40.0		
Storage Blk Time (%)				1			
Queuing Penalty (veh)				2			

Intersection: 2: Edmund Street & Townline Road

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (m)	12.9	7.0	9.1	18.5
Average Queue (m)	4.4	0.4	1.9	7.4
95th Queue (m)	12.3	3.5	7.9	14.8
Link Distance (m)			297.5	217.5
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	31.0	39.0		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Townline Road & Lanark Street

Movement	EB	B14	WB	SB
Directions Served	LT	T	TR	LR
Maximum Queue (m)	31.3	3.0	3.1	21.0
Average Queue (m)	4.9	0.1	0.1	9.3
95th Queue (m)	19.2	2.1	1.6	18.0
Link Distance (m)	21.3	194.7	163.6	303.5
Upstream Blk Time (%)	1			
Queuing Penalty (veh)	2			
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: McNeely Street & Townline Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	47.5	42.4	98.9	82.6	157.4	85.0
Average Queue (m)	21.6	21.3	41.9	21.7	67.3	44.5
95th Queue (m)	37.9	35.2	77.6	47.2	120.7	87.6
Link Distance (m)	499.0	499.0		300.2	601.9	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			38.0			45.0
Storage Blk Time (%)			16	0	27	2
Queuing Penalty (veh)			43	1	115	11

Network Summary

Network wide Queuing Penalty: 175