Saddler Street Townhouses
Durham, ON
Transportation Impact Study

Paradigm Transportation Solutions Limited

2024-01-08
230119

ptsl.com

Project Summary

Project Number:

230119

Date and Version:

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Saddler Street Townhouses, Durham ON Transportation Impact Study

Matt Brouwer, P.Eng.

Disclaimer

Executive Summary

Content

Paradigm Transportation Solutions Limited has been retained to conduct this Transportation Impact Study (TIS) for a proposed residential development located between Lambton Street East and Saddler Street East, east of Rock Street in the community of Durham, Municipality of West Grey, County of Grey.

This TIS includes an analysis of existing traffic conditions, a description of the proposed development, traffic forecasts for a five-year horizon from full build-out (2033), and assessment of traffic impacts with recommendations to accommodate the proposed development as appropriate.

Development Concept

The subject site is located between Saddler Street East and Lambton Street East, east of Rock Street. The proposed development consists of 56 townhouse units. Vehicle access is proposed via Street 'A' which has two connections; one to Saddler Street East and one to Lambton Street East, opposite of George Street East.

The development is anticipated to be completed by 2028.

Conclusions

Based on the investigations carried out, it is concluded that:

- **Existing Traffic Conditions:** The study area intersections are operating with acceptable levels of service.
- **Development Trip Generation:** The development is forecast to generate 40 and 45 trips during the AM and PM peak hours, respectively.
- **2033 Background and Total Traffic Conditions:** The study area intersections are forecast to operate within acceptable levels of service.
- **Remedial Measures:** A westbound left-turn lane on Lambton Street East and an eastbound left-turn lane on Saddler Street East are not warranted at Street 'A' under 2033 total traffic conditions.

Recommendations

Based on the findings of this study, it is recommended that the development be considered for approval as proposed with no off-site transportation improvements.

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1 Introduction

1.1 Overview

Paradigm Transportation Solutions Limited has been retained to conduct this Transportation Impact Study (TIS) for a proposed residential development located between Lambton Street East and Saddler Street East, east of Rock Street in the community of Durham, Municipality of West Grey, County of Grey. **Figure 1.1** illustrates the subject development location.

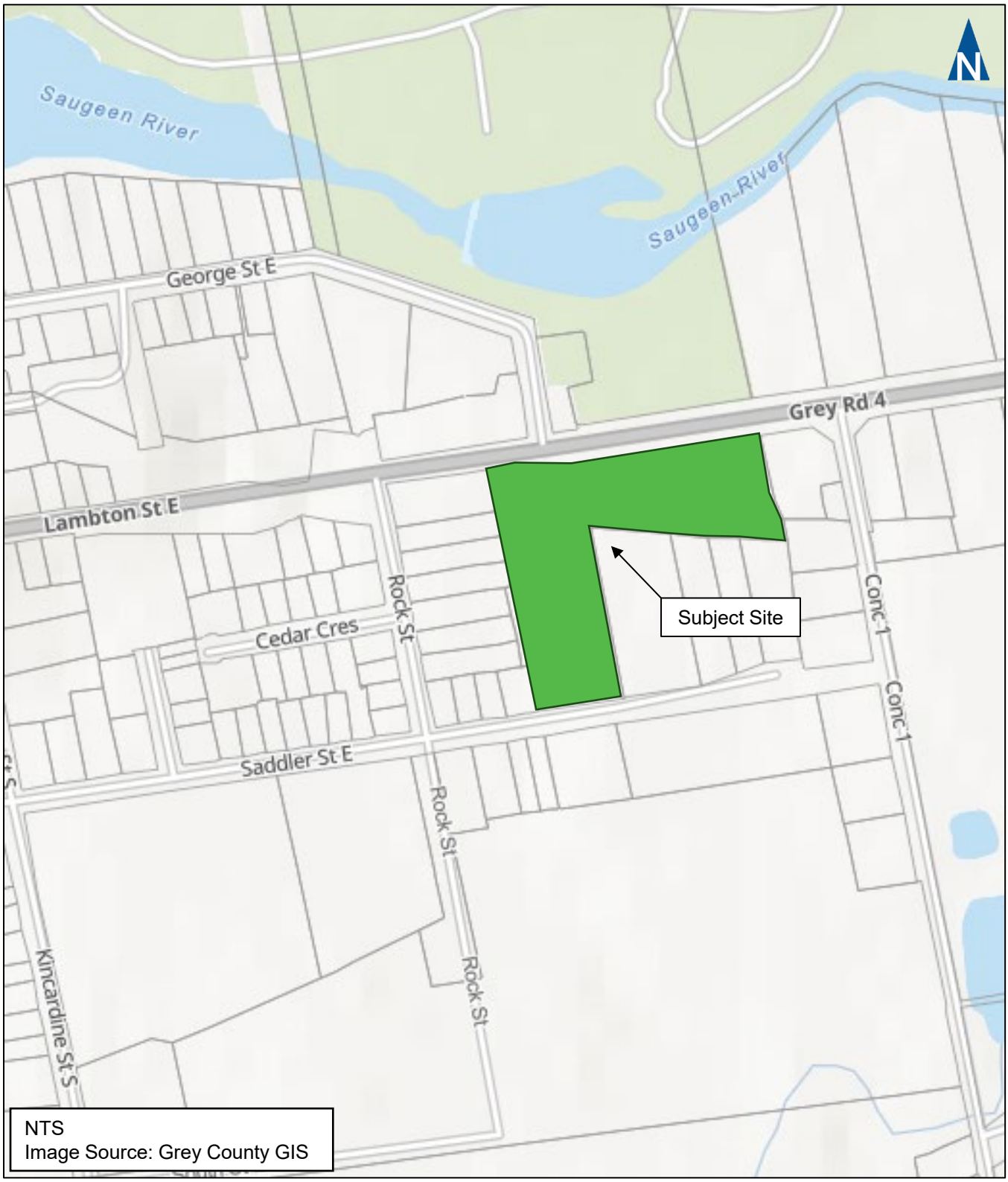
1.2 Purpose and Scope

The purpose of this report is to identify and assess the potential traffic impact resulting from the proposed development. The scope of the study, developed in consultation with County of Grey and Municipality of West Grey staff via e-mail in October 2023, includes:

- Assessment of the current traffic and site conditions within the study area;
- Estimates of background traffic growth for a five-year horizon from full build-out (2033);
- Estimates of additional traffic generated by the subject site;
- Analyses of the impact of future traffic on the surrounding road network, including the following study area intersections:
  - Lambton Street East and Rock Street;
  - Lambton Street East and George Street East/Street 'A'; and
  - Saddler Street East and Street 'A'.
- Recommendations necessary to mitigate the site generated traffic in a satisfactory manner.

This study has been prepared in accordance with the requirements detailed by the Grey County Transportation Impact Study Guidelines[1].

[1] Transportation Impact Report, County of Grey, n.d.



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Location of Subject Site

2 Existing Conditions

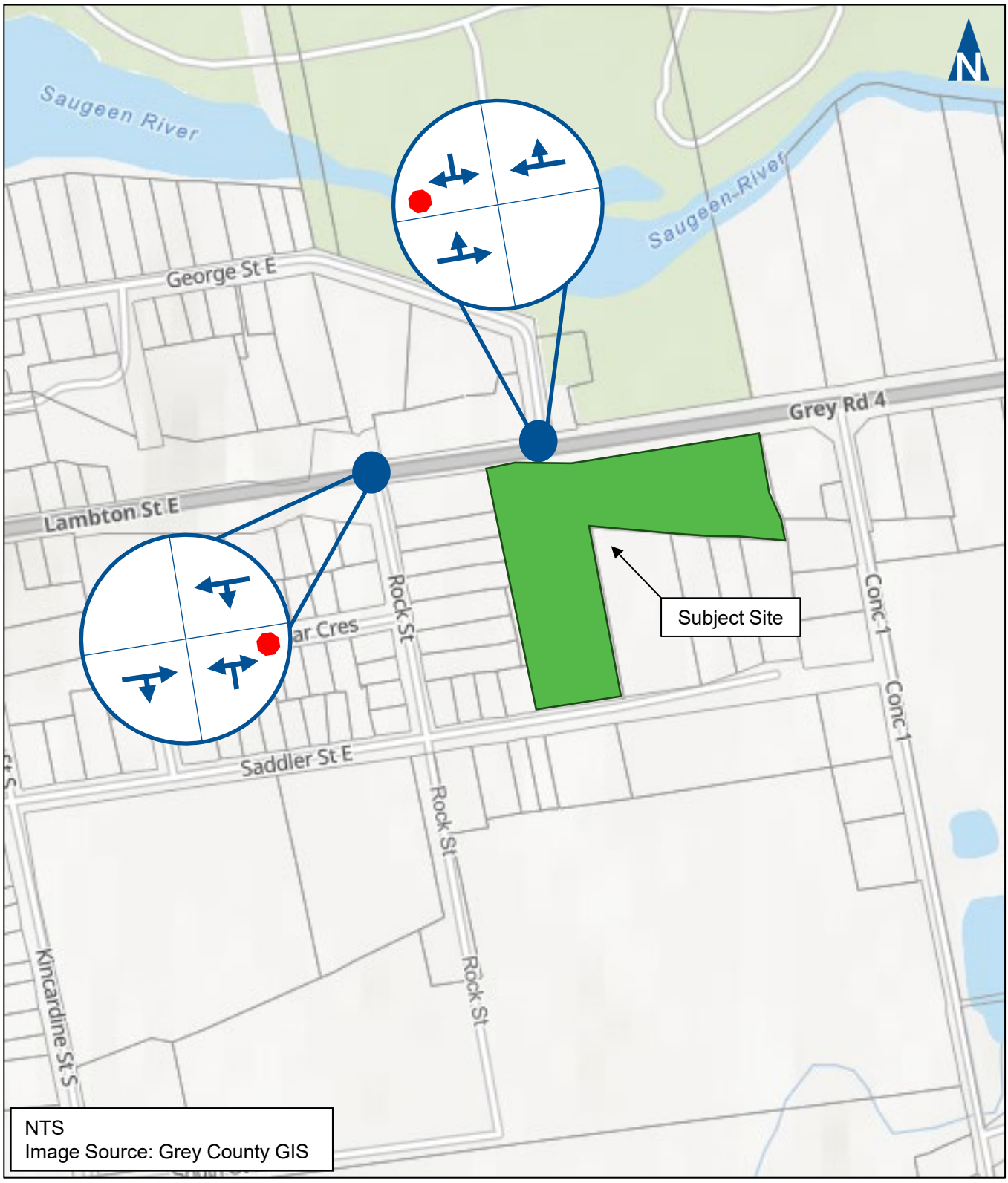
2.1 Existing Roadways

The main roadways near the subject site considered in assessing the traffic impacts of the development include:

- **Lambton Street East (Grey Road 4)** is an east-west arterial road[2] under the jurisdiction of the County. The roadway operates with a two-lane cross section and a posted speed limit of 50 km/h within the study area. Sidewalks are provided on the north side of the roadway, west of George Street East. No dedicated cycling facilities are present along the roadway.
- **Saddler Street East** is an east-west local road under the jurisdiction of the Municipality. The roadway operates with a two-lane cross section and a posted speed limit of 40 km/h. Sidewalks are provided on the south side of the roadway. No dedicated cycling facilities are present along the roadway.
- **Rock Street** is a north-south local road under the jurisdiction of the Municipality. The roadway operates with a two-lane cross section and an assumed speed limit of 50 km/h. Sidewalks are provided on the west side of the roadway between Lambton Street East and Saddler Street East. No dedicated cycling facilities are present along the roadway.
- **George Street East** is an east-west local road under the jurisdiction of the Municipality. The roadway operates with a two-lane cross section and an assumed speed limit of 50 km/h. Sidewalks are provided on the south side of the roadway. No dedicated cycling facilities are present along this roadway.

Figure 2.1 illustrates the existing lane configuration and traffic control at the study area intersections.

[2] The County of Grey Official Plan, *Appendix D Functional Road Classification and Planned Corridors*, May 2023.



Existing Lane Configuration and Traffic Control

Saddler Street Townhouses, Durham ON TIS
230119

Figure 2.1

2.2 Transit Service

No transit service is provided within the study area.

2.3 Traffic Volumes

Turning movement counts were collected by Paradigm on 2 August 2023. **Table 2.1** summarizes the traffic count date and peak hour start times for each intersection.

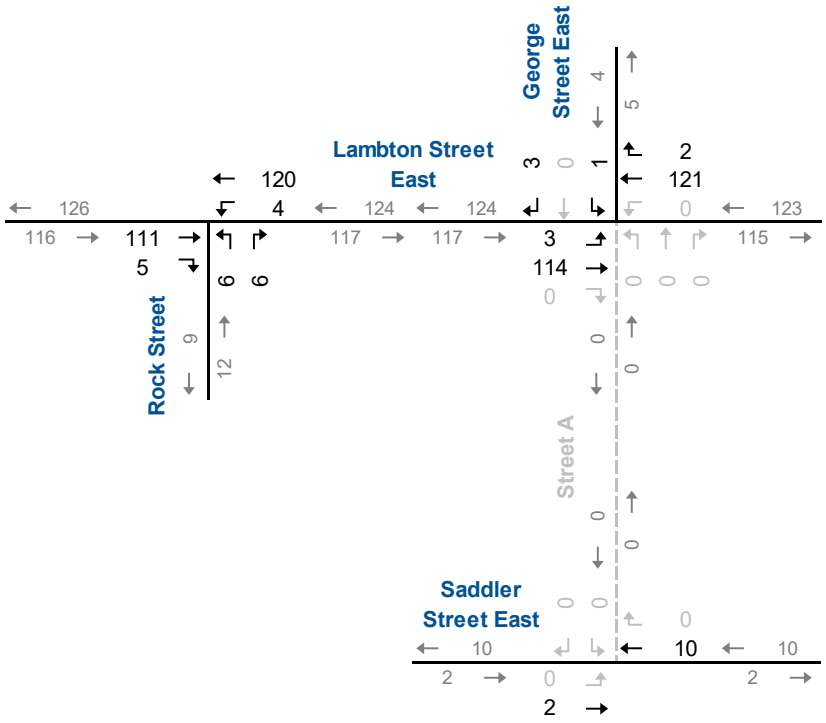
TABLE 2.1: EXISTING TURNING MOVEMENT COUNT SUMMARY

Intersection	Count Date	Source	AM Peak Hour	PM Peak Hour
Lambton Street East & Rock Street	2023-08-02	PTSL	9:30 AM	3:45 PM
Lambton Street East & George Street	2023-08-02	PTSL	9:30 AM	3:45 PM
Saddler Street East & Rock Street	2023-08-02	PTSL	7:30 AM	3:45 PM

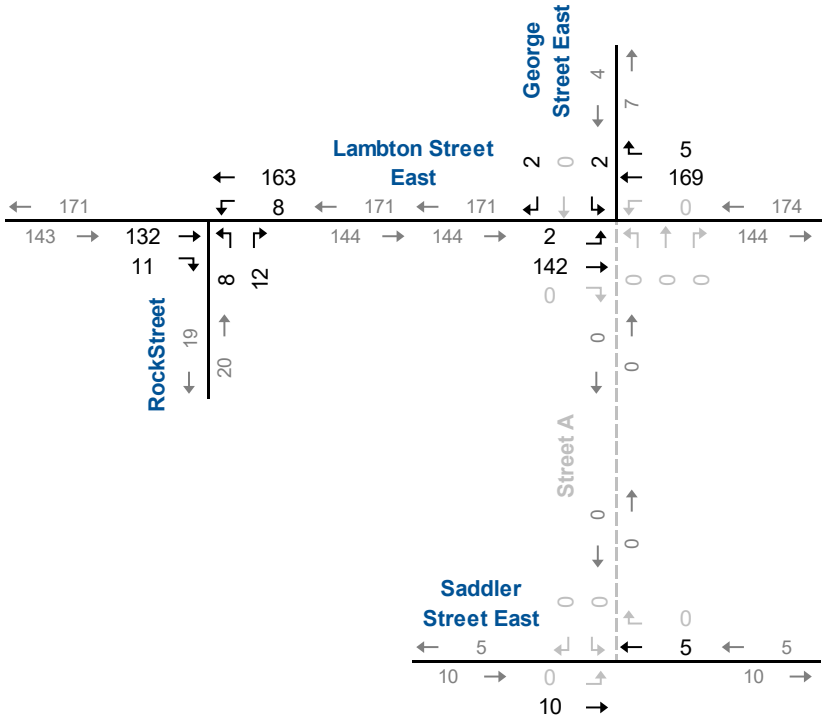
Figure 2.2 illustrates the existing AM and PM weekday peak hour traffic volumes.

Appendix A contains the detailed traffic counts for the study area intersections.

AM Peak Hour



PM Peak Hour



Existing Traffic Volumes

Saddler Street Townhouses, Durham ON TIS
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Figure 2.2

2.4 Traffic Operations

Intersection level of service (LOS) is a recognized method of quantifying the average delay experienced by drivers at intersections. It is based on the delay experienced by individual vehicles executing various movements. The delay is related to the number of vehicles intending to make a particular movement, compared to the estimated capacity for that movement. The capacity is based on a number of criteria related to the opposing traffic flows and intersection geometry.

The highest possible rating is LOS A, under which the average total delay is equal to or less than 10.0 seconds per vehicle. When the average delay exceeds 80 seconds for signalized intersections, 50 seconds for unsignalized intersections or when the volume to capacity ratio is greater than 1.0, the movement is classed as LOS F and remedial measures are usually implemented, if they are feasible. LOS E is usually used as a guideline for the determination of road improvement needs on through lanes, while LOS F may be acceptable for left-turn movements at peak times, depending on delays.

The operations at the study area intersections have been assessed using Synchro 11. Grey County TIS guidelines do not indicate a critical threshold for unsignalized intersections; therefore, the following critical movement thresholds have been assumed:

- Overall intersection Level of Service E or F; and/or
- 95th percentile queue lengths for individual movements exceeds available lane storage.

Table 2.2 summarizes the results of the intersection operational analysis under existing conditions, including the AM and PM peak hour LOS, v/c ratios, and 95th percentile queues.

The results indicate that the study area intersections are operating with acceptable levels of service and with no problem movements.

Appendix B contains the detailed Synchro 11 reports.

TABLE 2.2: EXISTING TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																	
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rock Street & Lambton Street East	TWSC	LOS		A	>	**A**	<	A		**A**	A		>	**A**					
			Delay		0	>	**0**	<	8		**0**	10		>	**10**					
			V/C		0.00	>		<	0.00			0.02		>						
			Q		0	>		<	0			0		>						
	Lambton Street East & George Street East	TWSC	LOS	<	A		**A**		A	>	**A**					A		>	**A**	
			Delay	<	8		**0**		0	>	**0**					9		>	**9**	
			V/C	<	0.00				0.00	>						0.01		>		
			Q	<	0				0	>						0		>		
PM Peak Hour	Rock Street & Lambton Street East	TWSC	LOS		A	>	**A**	<	A		**A**	A		>	**A**					
			Delay		0	>	**0**	<	8		**0**	10		>	**10**					
			V/C		0.00	>		<	0.01			0.03		>						
			Q		0	>		<	0			1		>						
	Lambton Street East & George Street East	TWSC	LOS	<	A		**A**		A	>	**A**					A		>	**A**	
			Delay	<	8		**0**		0	>	**0**					10		>	**10**	
			V/C	<	0.00				0.00	>						0.01		>		
			Q	<	0				0	>						0		>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
TWSC - Two-Way Stop Control
< / > - Shared with through movement

3 Development Concept

3.1 Development Description

The subject site is located between Saddler Street East and Lambton Street East, east of Rock Street. The proposed development consists of 56 townhouse units. Vehicle access is proposed via Street 'A' which has two connections; one to Saddler Street East and one to Lambton Street East, opposite of George Street East.

The development is anticipated to be completed by 2028.

Figure 3.1 shows the development concept.

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Proposed Concept Plan

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Figure 3.1

3.2 Development Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual[3] provides rates and equations used to estimate the peak hour traffic volumes generated by the Land Use Code (LUC) 220 (Multifamily Housing (Low-Rise)).

Table 3.1 summarizes the forecast number of net new trips generated by the proposed development.

TABLE 3.1: TRIP GENERATION

Land Use	Number of Units	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
LUC 220 - Multifamily Housing (Low-Rise)	56	Eqn[1]	10	30	**40**	Eqn[1]	28	17	**45**
Total Trip Generation			**10**	**30**	**40**		**28**	**17**	**45**

[1] *AM: T = 0.31(X) + 22.85 | PM: T = 0.43(X) + 20.55*

3.3 Development Trip Distribution and Assignment

The trip distribution was determined based on existing travel patterns within the study area and likely trip origins/destinations. **Table 3.2** displays the breakdown of trip distributions used in this study.

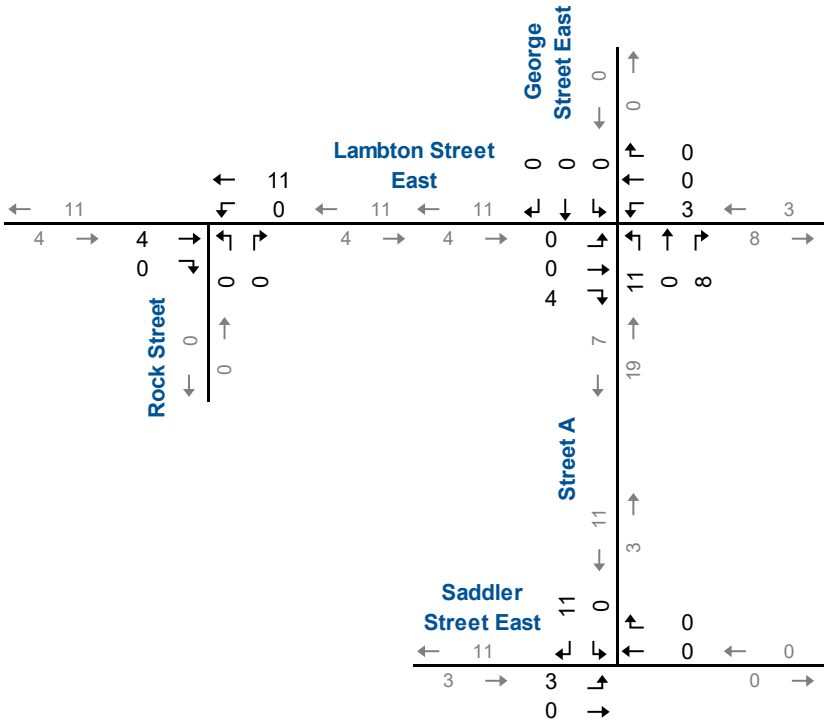
TABLE 3.2: ESTIMATED TRIP DISTRIBUTION

Origin/Destination	Percentage
West via Lambton Street East	35%
East via Lambton Street East	30%
West via Saddler Street East	35%
Total	**100%**

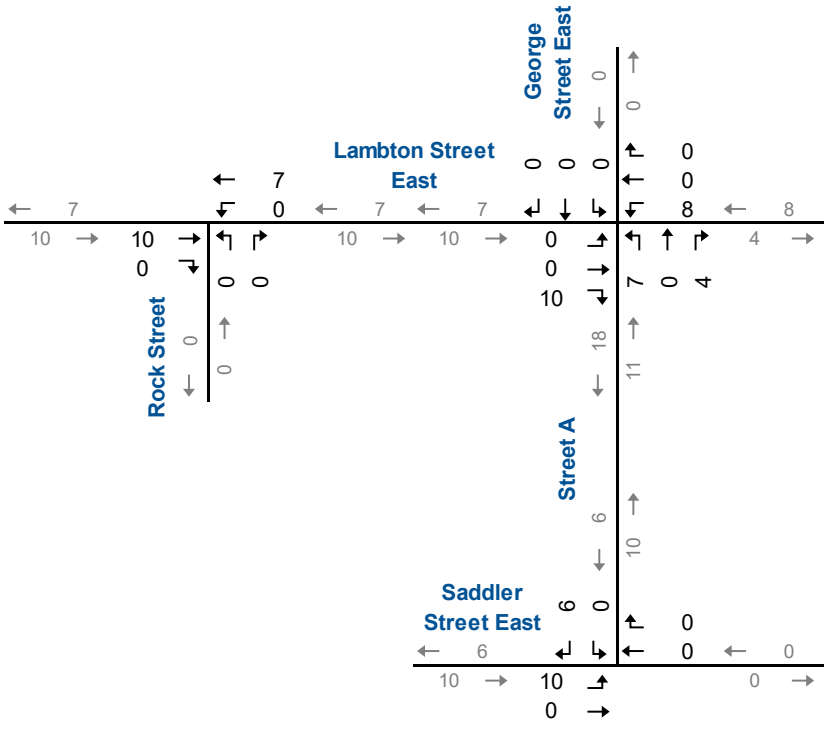
Figure 3.2 illustrates the site-generated traffic volumes for the AM and PM peak hours.

[3] Institute of Transportation Engineers, *Trip Generation Manual,* 11th ed., (Washington, DC: ITE, 2021).

AM Peak Hour



PM Peak Hour



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Site Generated Traffic Volumes

4 Evaluation of Future Traffic Conditions

The assessment of future traffic conditions in this section includes estimates of future background and total traffic volumes, and the analyses for the 2033 horizon.

4.1 Background Traffic Forecasts

To derive the 2033 generalized background traffic volumes, a growth rate of 1% was applied to the existing roadway traffic volumes. This growth rate is considered conservative as the County's Growth Management Strategy[4] indicates an annual growth rate of 0.9% and 0.8% in 2031 and 2036, respectively.

4.2 2033 Background Traffic Operations

Figure 4.1 illustrates the 2033 background traffic volumes, including road traffic growth.

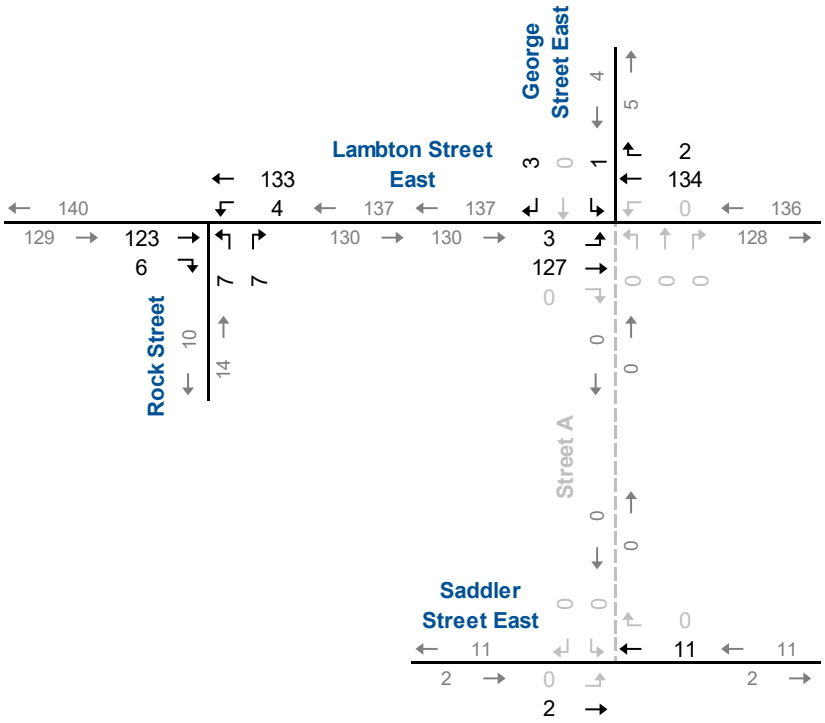
The 2033 background traffic volumes have been analyzed using the same methodology as under existing traffic conditions.

Table 4.1 summarizes the results of the 2033 background traffic operations. The results indicate that the study area intersections are forecast to operate with acceptable levels of service during the AM and PM peak hours.

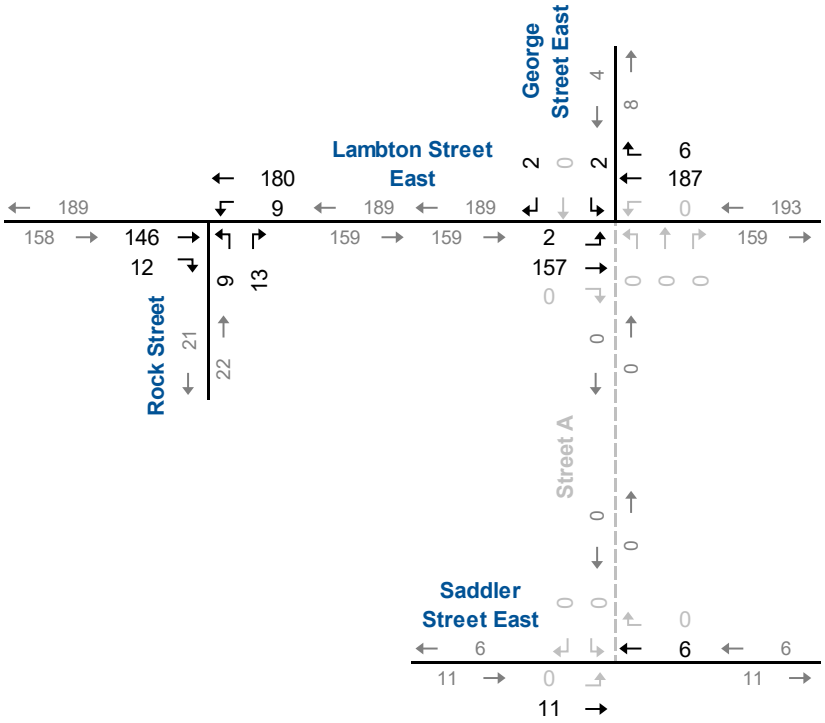
Appendix C contains the supporting detailed Synchro 11 reports.

[4] "Growth Management Strategy," Hemson Consulting Ltd., July 2021, https://www.grey.ca/government/strategic-planning-and-studies/growth-management-strategy

AM Peak Hour



PM Peak Hour



2033 Background Traffic Volumes

TABLE 4.1: 2033 BACKGROUND TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																	
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rock Street & Lambton Street East	TWSC	LOS		A	>	**A**	<	A		**A**	A		>	**A**					
			Delay		0	>	**0**	<	8		**0**	10		>	**10**					
			V/C		0.00	>		<	0.00			0.02		>						
			Q		0	>		<	0			1		>						
	Lambton Street East & George Street East	TWSC	LOS	<	A		**A**		A	>	**A**					A		>	**A**	
			Delay	<	8		**0**		0	>	**0**					9		>	**9**	
			V/C	<	0.00				0.00	>						0.01		>		
			Q	<	0				0	>						0		>		
PM Peak Hour	Rock Street & Lambton Street East	TWSC	LOS		A	>	**A**	<	A		**A**	A		>	**A**					
			Delay		0	>	**0**	<	8		**0**	10		>	**10**					
			V/C		0.00	>		<	0.01			0.03		>						
			Q		0	>		<	0			1		>						
	Lambton Street East & George Street East	TWSC	LOS	<	A		**A**		A	>	**A**					B		>	**B**	
			Delay	<	8		**0**		0	>	**0**					10		>	**10**	
			V/C	<	0.00				0.00	>						0.01		>		
			Q	<	0				0	>						0		>		

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Q - 95th Percentile Queue Length (m)
TWSC - Two-Way Stop Control
< / > - Shared with through movement

4.3 2033 Total Traffic Operations

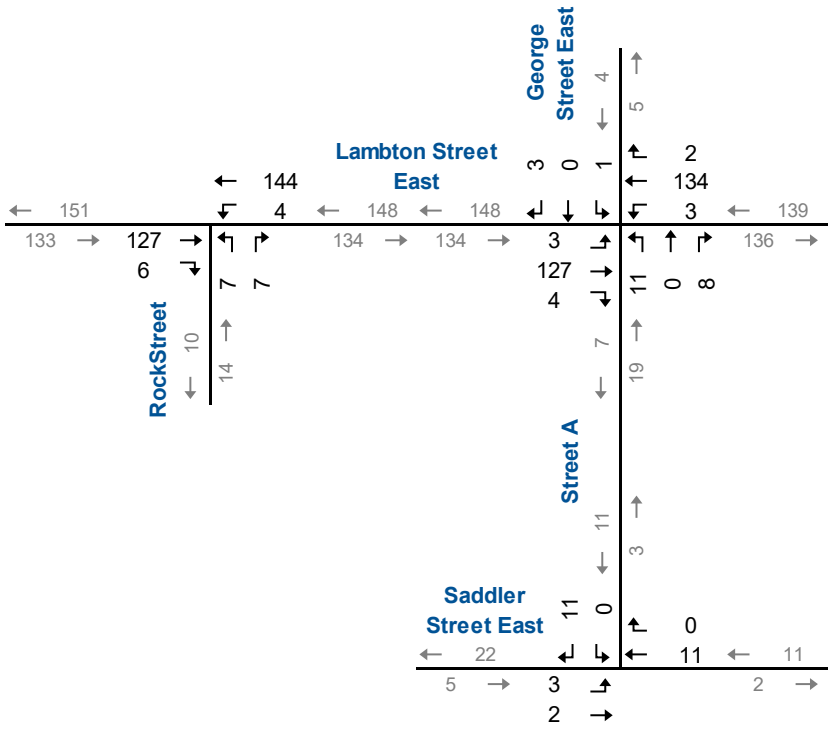
Figure 4.2 illustrates the 2033 total traffic volumes, including trips generated by the proposed development.

The 2033 total traffic volumes have been analyzed using the same methodology as under existing and background traffic conditions.

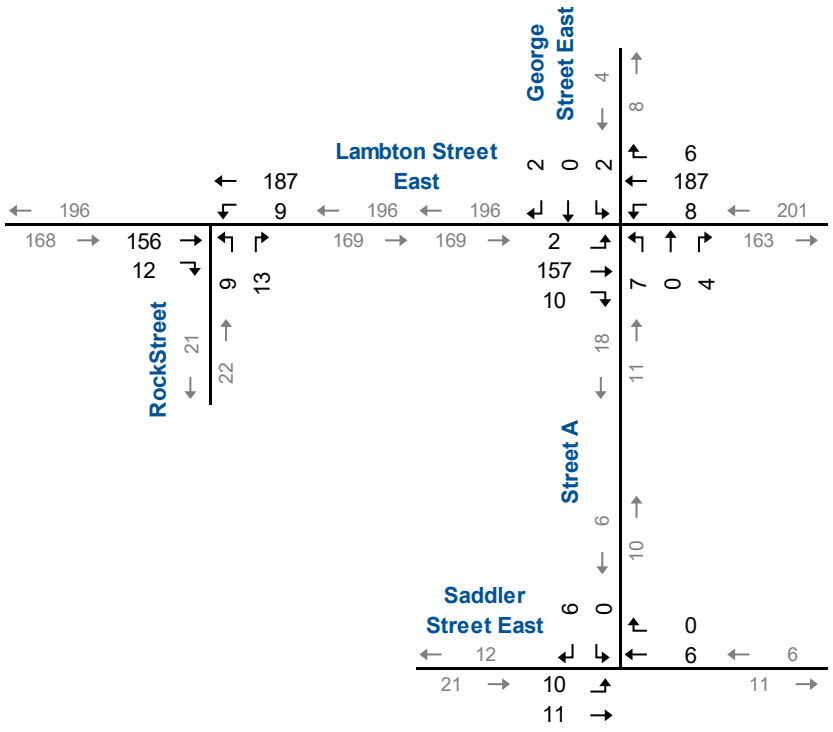
Table 4.2 summarizes the results of the 2033 total traffic operations. The results indicate that the study area intersections are forecast to operate with acceptable levels of service during the AM and PM peak hours.

Appendix D contains the supporting detailed Synchro 11 reports.

AM Peak Hour



PM Peak Hour



2033 Total Traffic Volumes

Saddler Street Townhouses, Durham ON TIS
230119

Figure 4.2

TABLE 4.2: 2033 TOTAL TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rock Street & Lambton Street East	TWSC	LOS		A	>	**A**	<	A		**A**	A		>	**A**					
			Delay		0	>	**0**	<	8		**0**	10		>	**10**					
			V/C		0.00	>		<	0.00			0.02		>						
			Q		0	>		<	0			1		>						
	Street 'A'/George Street East & Lambton Street East	TWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	
			Delay	<	8	>	**0**	<	8	>	**0**	<	10	>	**10**	<	9	>	**9**	
			V/C	<	0.00	>		<	0.00	>		<	0.03	>		<	0.01	>		
			Q	<	0	>		<	0	>		<	1	>		<	0	>		
	Sadler Street East & Street 'A'	TWSC	LOS	<	A		**A**		A		**A**					A		>	**A**	
			Delay	<	7		**4**		0		**0**					8		>	**8**	
			V/C	<	0.00				0.00							0.01		>		
			Q	<	0				0							0		>		
PM Peak Hour	Rock Street & Lambton Street East	TWSC	LOS		A	>	**A**	<	A		**A**	A		>	**A**					
			Delay		0	>	**0**	<	8		**0**	10		>	**10**					
			V/C		0.00	>		<	0.01			0.03		>						
			Q		0	>		<	0			1		>						
	Street 'A'/George Street East & Lambton Street East	TWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	B	>	**B**	<	B	>	**B**	
			Delay	<	8	>	**0**	<	8	>	**0**	<	11	>	**11**	<	10	>	**10**	
			V/C	<	0.00	>		<	0.01	>		<	0.02	>		<	0.01	>		
			Q	<	0	>		<	0	>		<	1	>		<	0	>		
	Sadler Street East & Street 'A'	TWSC	LOS	<	A		**A**		A		**A**					A		>	**A**	
			Delay	<	7		**3**		0		**0**					8		>	**8**	
			V/C	<	0.01				0.00							0.01		>		
			Q	<	0				0							0		>		

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< / > - Shared with through movement

5 Remedial Measures

5.1 Left-Turn Lanes

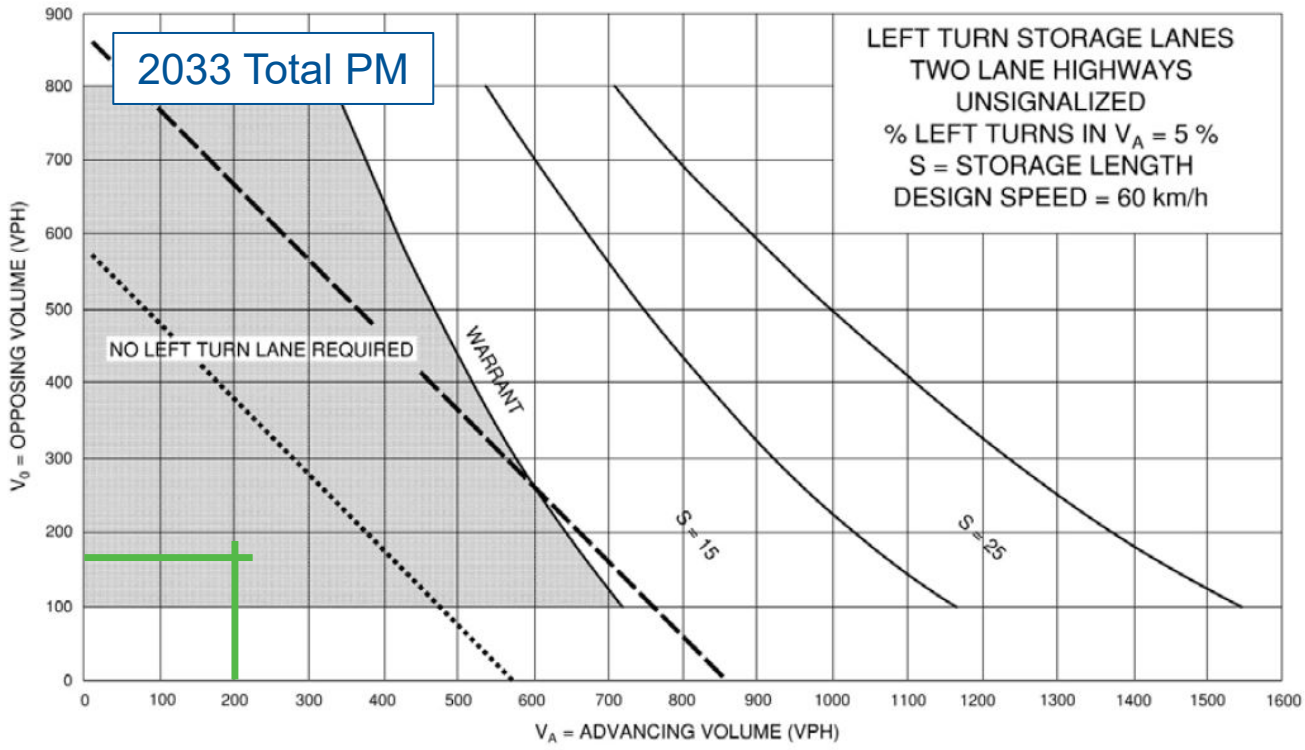
The Ministry of Transportation Design Supplement for the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads[5] provides guidance on the assessment and/or need for auxiliary left-turn lanes.

Warrants have been calculated for westbound left-turns at Lambton Street East and Street 'A' during the PM peak hour. The warrant was calculated using the nomographs for left-turn lanes on a two-lane undivided highway at an unsignalized intersection with a design speed of 60 km/h (10 kilometres per hour over the posted speed limit). Based on this criterion, a westbound left-turn lane on Lambton Street East at Street 'A' is not warranted under 2033 total traffic volumes.

An eastbound left-turn lane on Saddler Street East at Street 'A' is also not warranted under 2033 total traffic volumes as the traffic is forecast to be less than 100 vph during the AM and PM peak hours.

Figure 5.1 contains the warrant nomograph.

[5] *MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads*, June 2017.



Westbound Left-Turn Lane Warrant
Lambton Street East and Street 'A'

6 Conclusions and Recommendations

6.1 Conclusions

Based on the investigations carried out, it is concluded that:

- **Existing Traffic Conditions:** The study area intersections are operating with acceptable levels of service.
- **Development Trip Generation:** The development is forecast to generate 40 and 45 trips during the AM and PM peak hours, respectively.
- **2033 Background and Total Traffic Conditions:** The study area intersections are forecast to operate within acceptable levels of service.
- **Remedial Measures:** A westbound left-turn lane on Lambton Street East and an eastbound left-turn lane on Saddler Street East are not warranted at Street 'A' under 2033 total traffic conditions.

6.2 Recommendations

Based on the findings of this study, it is recommended that the development be considered for approval as proposed with no off-site transportation improvements.

Appendix A

Existing Traffic Data

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023

Turning Movement Data

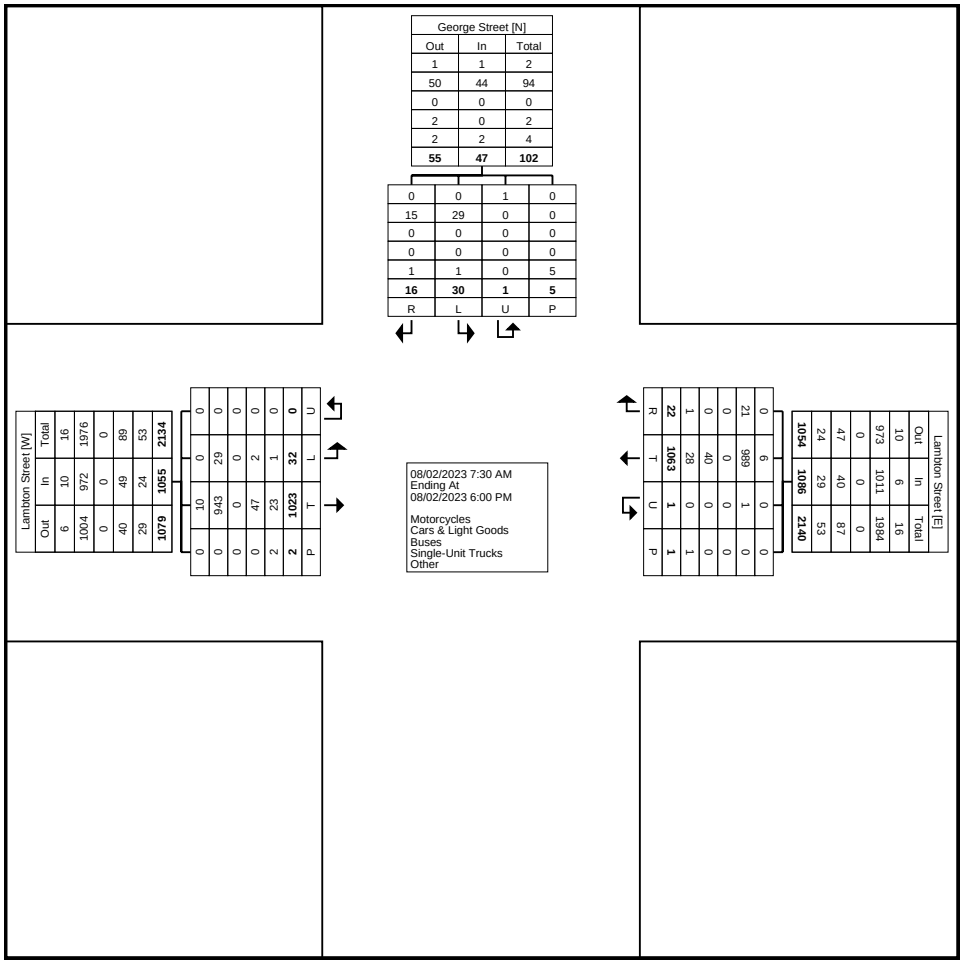
Start Time	Lambton Street Eastbound					Lambton Street Westbound					George Street Southbound					
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
7:30 AM	1	35	0	0	36	16	0	0	0	16	0	1	0	0	1	53
7:45 AM	0	24	0	0	24	28	0	0	0	28	0	1	0	0	1	53
Hourly Total	1	59	0	0	60	44	0	0	0	44	0	2	0	0	2	106
8:00 AM	1	21	0	0	22	18	0	0	0	18	2	1	0	0	3	43
8:15 AM	0	24	0	0	24	41	0	0	0	41	1	0	0	0	1	66
8:30 AM	0	26	0	0	26	35	0	0	0	35	0	0	0	0	0	61
8:45 AM	1	23	0	0	24	27	1	0	0	28	0	0	0	0	0	52
Hourly Total	2	94	0	0	96	121	1	0	0	122	3	1	0	0	4	222
9:00 AM	1	26	0	0	27	27	0	0	0	27	1	0	0	0	1	55
9:15 AM	2	23	0	0	25	25	1	0	0	26	1	0	0	0	1	52
9:30 AM	1	24	0	0	25	33	1	0	0	34	0	1	0	0	1	60
9:45 AM	1	26	0	1	27	25	0	0	0	25	0	0	0	0	0	52
Hourly Total	5	99	0	1	104	110	2	0	0	112	2	1	0	0	3	219
10:00 AM	1	27	0	0	28	29	0	0	0	29	1	0	0	0	1	58
10:15 AM	0	37	0	1	37	33	1	0	0	34	0	2	0	0	2	73
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	64	0	1	65	62	1	0	0	63	1	2	0	0	3	131
12:00 PM	6	40	0	0	46	39	0	0	0	39	3	0	0	0	3	88
12:15 PM	1	32	0	0	33	33	1	0	0	34	2	0	0	2	2	69
12:30 PM	3	39	0	0	42	29	2	0	0	31	1	1	0	0	2	75
12:45 PM	0	35	0	0	35	30	0	0	0	30	5	0	0	0	5	70
Hourly Total	10	146	0	0	156	131	3	0	0	134	11	1	0	2	12	302
1:00 PM	2	39	0	0	41	31	0	0	0	31	0	0	0	1	0	72
1:15 PM	2	36	0	0	38	47	1	0	0	48	2	0	0	0	2	88
1:30 PM	2	31	0	0	33	39	1	0	0	40	1	1	1	0	3	76
1:45 PM	1	35	0	0	36	21	1	0	0	22	0	0	0	1	0	58
Hourly Total	7	141	0	0	148	138	3	0	0	141	3	1	1	2	5	294
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	36	0	0	36	17	1	0	0	18	2	1	0	0	3	57
3:15 PM	1	40	0	0	41	40	0	0	0	40	0	0	0	0	0	81
3:30 PM	1	31	0	0	32	46	0	0	0	46	1	1	0	0	2	80
3:45 PM	1	36	0	0	37	45	0	0	0	45	1	0	0	0	1	83
Hourly Total	3	143	0	0	146	148	1	0	0	149	4	2	0	0	6	301
4:00 PM	1	33	0	0	34	37	1	0	1	38	1	1	0	0	2	74
4:15 PM	0	41	0	0	41	42	1	0	0	43	0	0	0	0	0	84
4:30 PM	0	32	0	0	32	45	3	1	0	49	0	1	0	0	1	82

4:45 PM	0	33	0	0	33	35	3	0	0	38	0	1	0	0	1	72
Hourly Total	1	139	0	0	140	159	8	1	1	168	1	3	0	0	4	312
5:00 PM	0	36	0	0	36	38	0	0	0	38	1	0	0	1	1	75
5:15 PM	0	40	0	0	40	50	0	0	0	50	1	1	0	0	2	92
5:30 PM	1	35	0	0	36	31	1	0	0	32	2	1	0	0	3	71
5:45 PM	1	27	0	0	28	31	2	0	0	33	1	1	0	0	2	63
Hourly Total	2	138	0	0	140	150	3	0	0	153	5	3	0	1	8	301
Grand Total	32	1023	0	2	1055	1063	22	1	1	1086	30	16	1	5	47	2188
Approach %	3.0	97.0	0.0	-	-	97.9	2.0	0.1	-	-	63.8	34.0	2.1	-	-	-
Total %	1.5	46.8	0.0	-	48.2	48.6	1.0	0.0	-	49.6	1.4	0.7	0.0	-	2.1	-
Motorcycles	0	10	0	-	10	6	0	0	-	6	0	0	1	-	1	17
% Motorcycles	0.0	1.0	-	-	0.9	0.6	0.0	0.0	-	0.6	0.0	0.0	100.0	-	2.1	0.8
Cars & Light Goods	29	943	0	-	972	989	21	1	-	1011	29	15	0	-	44	2027
% Cars & Light Goods	90.6	92.2	-	-	92.1	93.0	95.5	100.0	-	93.1	96.7	93.8	0.0	-	93.6	92.6
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	2	47	0	-	49	40	0	0	-	40	0	0	0	-	0	89
% Single-Unit Trucks	6.3	4.6	-	-	4.6	3.8	0.0	0.0	-	3.7	0.0	0.0	0.0	-	0.0	4.1
Articulated Trucks	0	23	0	-	23	28	0	0	-	28	0	1	0	-	1	52
% Articulated Trucks	0.0	2.2	-	-	2.2	2.6	0.0	0.0	-	2.6	0.0	6.3	0.0	-	2.1	2.4
Bicycles on Road	1	0	0	-	1	0	1	0	-	1	1	0	0	-	1	3
% Bicycles on Road	3.1	0.0	-	-	0.1	0.0	4.5	0.0	-	0.1	3.3	0.0	0.0	-	2.1	0.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	20.0	-	-
Pedestrians	-	-	-	2	-	-	-	-	1	-	-	-	-	4	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	80.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023

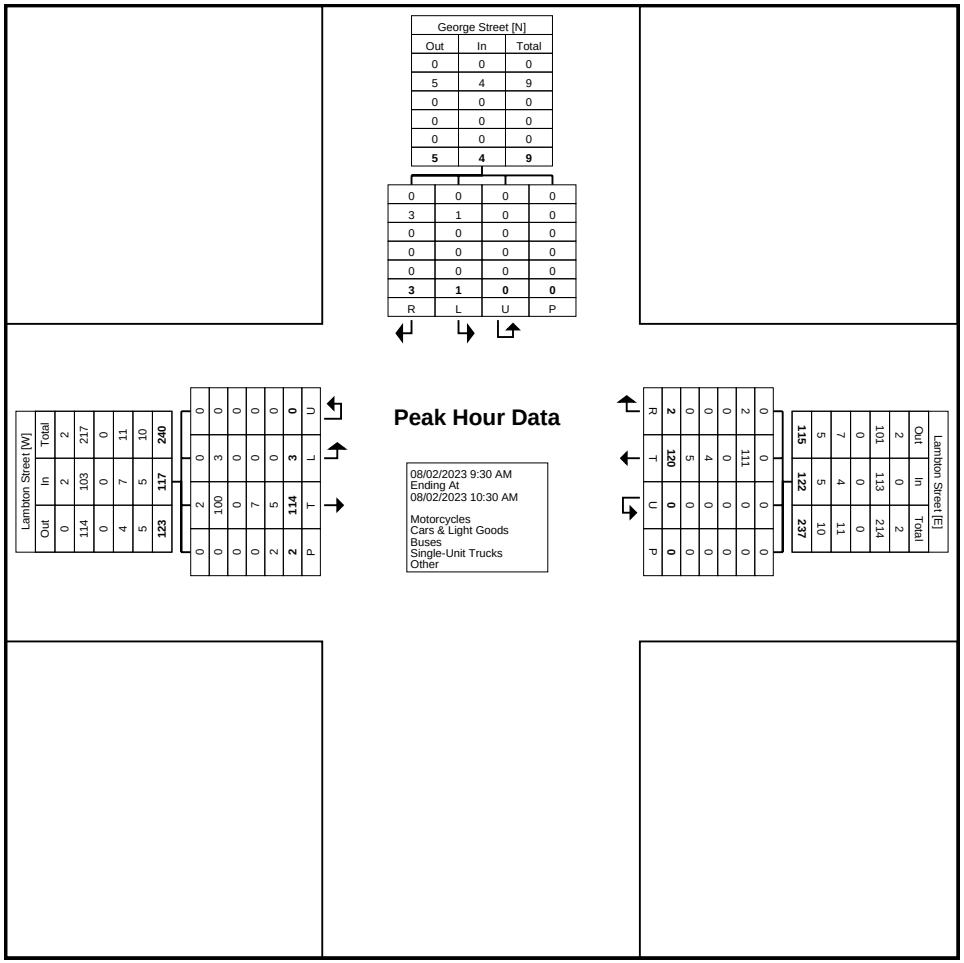
Turning Movement Peak Hour Data (9:30 AM)

Start Time	Lambton Street Eastbound					Lambton Street Westbound					George Street Southbound					
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
9:30 AM	1	24	0	0	25	33	1	0	0	34	0	1	0	0	1	60
9:45 AM	1	26	0	1	27	25	0	0	0	25	0	0	0	0	0	52
10:00 AM	1	27	0	0	28	29	0	0	0	29	1	0	0	0	1	58
10:15 AM	0	37	0	1	37	33	1	0	0	34	0	2	0	0	2	73
Total	3	114	0	2	117	120	2	0	0	122	1	3	0	0	4	243
Approach %	2.6	97.4	0.0	-	-	98.4	1.6	0.0	-	-	25.0	75.0	0.0	-	-	-
Total %	1.2	46.9	0.0	-	48.1	49.4	0.8	0.0	-	50.2	0.4	1.2	0.0	-	1.6	-
PHF	0.750	0.770	0.000	-	0.791	0.909	0.500	0.000	-	0.897	0.250	0.375	0.000	-	0.500	0.832
Motorcycles	0	2	0	-	2	0	0	0	-	0	0	0	0	-	0	2
% Motorcycles	0.0	1.8	-	-	1.7	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.8
Cars & Light Goods	3	100	0	-	103	111	2	0	-	113	1	3	0	-	4	220
% Cars & Light Goods	100.0	87.7	-	-	88.0	92.5	100.0	-	-	92.6	100.0	100.0	-	-	100.0	90.5
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	7	0	-	7	4	0	0	-	4	0	0	0	-	0	11
% Single-Unit Trucks	0.0	6.1	-	-	6.0	3.3	0.0	-	-	3.3	0.0	0.0	-	-	0.0	4.5
Articulated Trucks	0	5	0	-	5	5	0	0	-	5	0	0	0	-	0	10
% Articulated Trucks	0.0	4.4	-	-	4.3	4.2	0.0	-	-	4.1	0.0	0.0	-	-	0.0	4.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023



Turning Movement Peak Hour Data Plot (9:30 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023

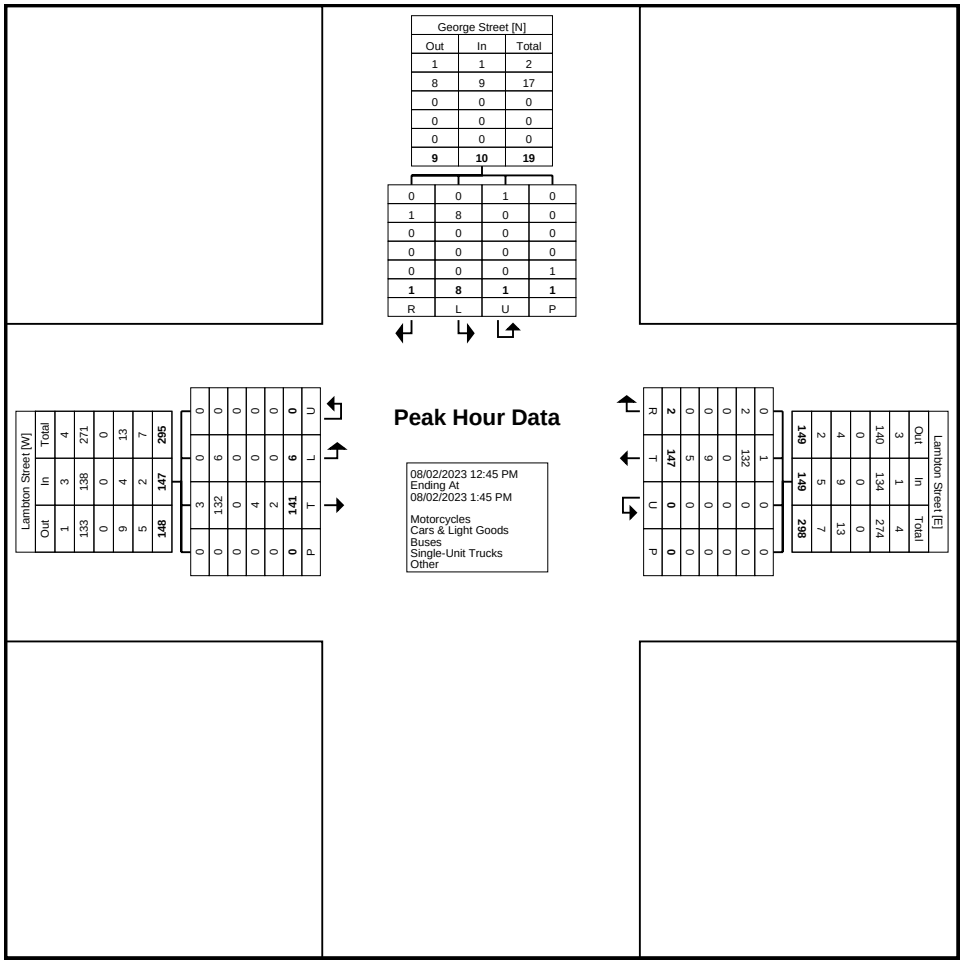
Turning Movement Peak Hour Data (12:45 PM)

Start Time	Lambton Street Eastbound					Lambton Street Westbound					George Street Southbound					
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
12:45 PM	0	35	0	0	35	30	0	0	0	30	5	0	0	0	5	70
1:00 PM	2	39	0	0	41	31	0	0	0	31	0	0	0	1	0	72
1:15 PM	2	36	0	0	38	47	1	0	0	48	2	0	0	0	2	88
1:30 PM	2	31	0	0	33	39	1	0	0	40	1	1	1	0	3	76
Total	6	141	0	0	147	147	2	0	0	149	8	1	1	1	10	306
Approach %	4.1	95.9	0.0	-	-	98.7	1.3	0.0	-	-	80.0	10.0	10.0	-	-	-
Total %	2.0	46.1	0.0	-	48.0	48.0	0.7	0.0	-	48.7	2.6	0.3	0.3	-	3.3	-
PHF	0.750	0.904	0.000	-	0.896	0.782	0.500	0.000	-	0.776	0.400	0.250	0.250	-	0.500	0.869
Motorcycles	0	3	0	-	3	1	0	0	-	1	0	0	1	-	1	5
% Motorcycles	0.0	2.1	-	-	2.0	0.7	0.0	-	-	0.7	0.0	0.0	100.0	-	10.0	1.6
Cars & Light Goods	6	132	0	-	138	132	2	0	-	134	8	1	0	-	9	281
% Cars & Light Goods	100.0	93.6	-	-	93.9	89.8	100.0	-	-	89.9	100.0	100.0	0.0	-	90.0	91.8
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	4	0	-	4	9	0	0	-	9	0	0	0	-	0	13
% Single-Unit Trucks	0.0	2.8	-	-	2.7	6.1	0.0	-	-	6.0	0.0	0.0	0.0	-	0.0	4.2
Articulated Trucks	0	2	0	-	2	5	0	0	-	5	0	0	0	-	0	7
% Articulated Trucks	0.0	1.4	-	-	1.4	3.4	0.0	-	-	3.4	0.0	0.0	0.0	-	0.0	2.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023



Turning Movement Peak Hour Data Plot (12:45 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023

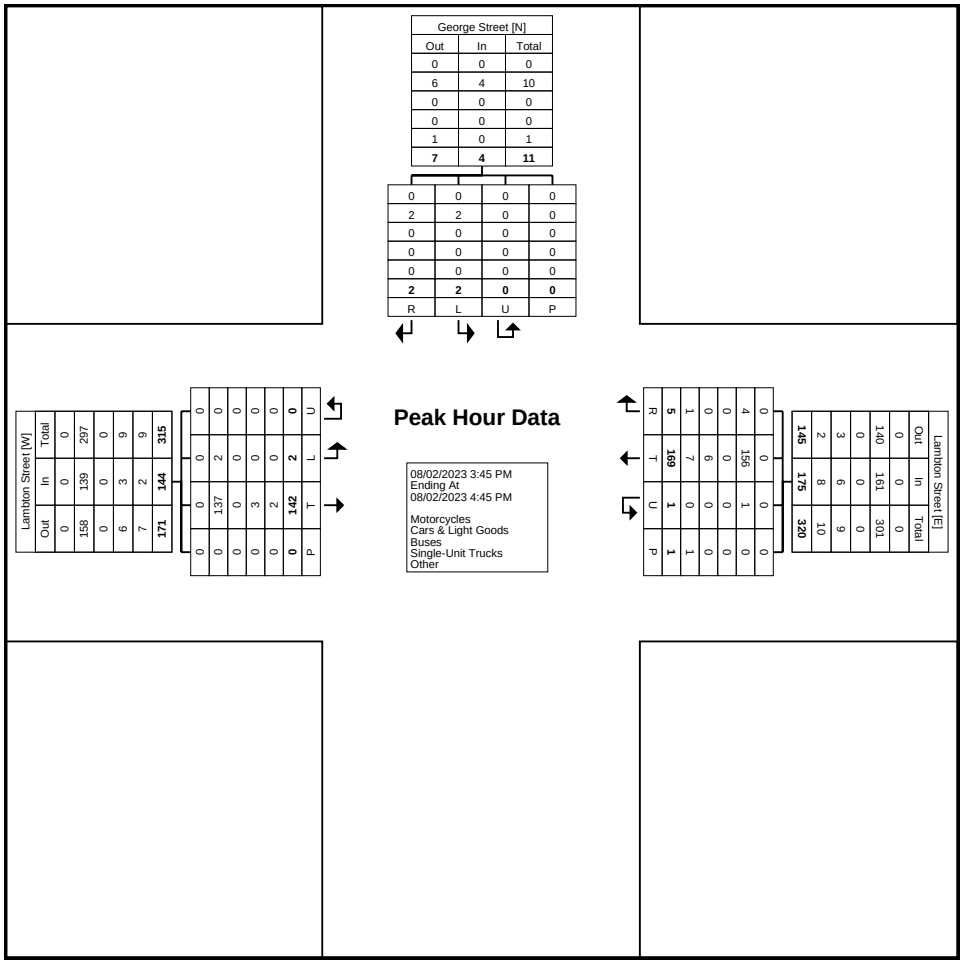
Turning Movement Peak Hour Data (3:45 PM)

Start Time	Lambton Street Eastbound					Lambton Street Westbound					George Street Southbound					
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	1	36	0	0	37	45	0	0	0	45	1	0	0	0	1	83
4:00 PM	1	33	0	0	34	37	1	0	1	38	1	1	0	0	2	74
4:15 PM	0	41	0	0	41	42	1	0	0	43	0	0	0	0	0	84
4:30 PM	0	32	0	0	32	45	3	1	0	49	0	1	0	0	1	82
Total	2	142	0	0	144	169	5	1	1	175	2	2	0	0	4	323
Approach %	1.4	98.6	0.0	-	-	96.6	2.9	0.6	-	-	50.0	50.0	0.0	-	-	-
Total %	0.6	44.0	0.0	-	44.6	52.3	1.5	0.3	-	54.2	0.6	0.6	0.0	-	1.2	-
PHF	0.500	0.866	0.000	-	0.878	0.939	0.417	0.250	-	0.893	0.500	0.500	0.000	-	0.500	0.961
Motorcycles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	2	137	0	-	139	156	4	1	-	161	2	2	0	-	4	304
% Cars & Light Goods	100.0	96.5	-	-	96.5	92.3	80.0	100.0	-	92.0	100.0	100.0	-	-	100.0	94.1
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	3	0	-	3	6	0	0	-	6	0	0	0	-	0	9
% Single-Unit Trucks	0.0	2.1	-	-	2.1	3.6	0.0	0.0	-	3.4	0.0	0.0	-	-	0.0	2.8
Articulated Trucks	0	2	0	-	2	7	0	0	-	7	0	0	0	-	0	9
% Articulated Trucks	0.0	1.4	-	-	1.4	4.1	0.0	0.0	-	4.0	0.0	0.0	-	-	0.0	2.8
Bicycles on Road	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	20.0	0.0	-	0.6	0.0	0.0	-	-	0.0	0.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & George Street
Site Code: 230119
Start Date: 08/02/2023



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

Turning Movement Data

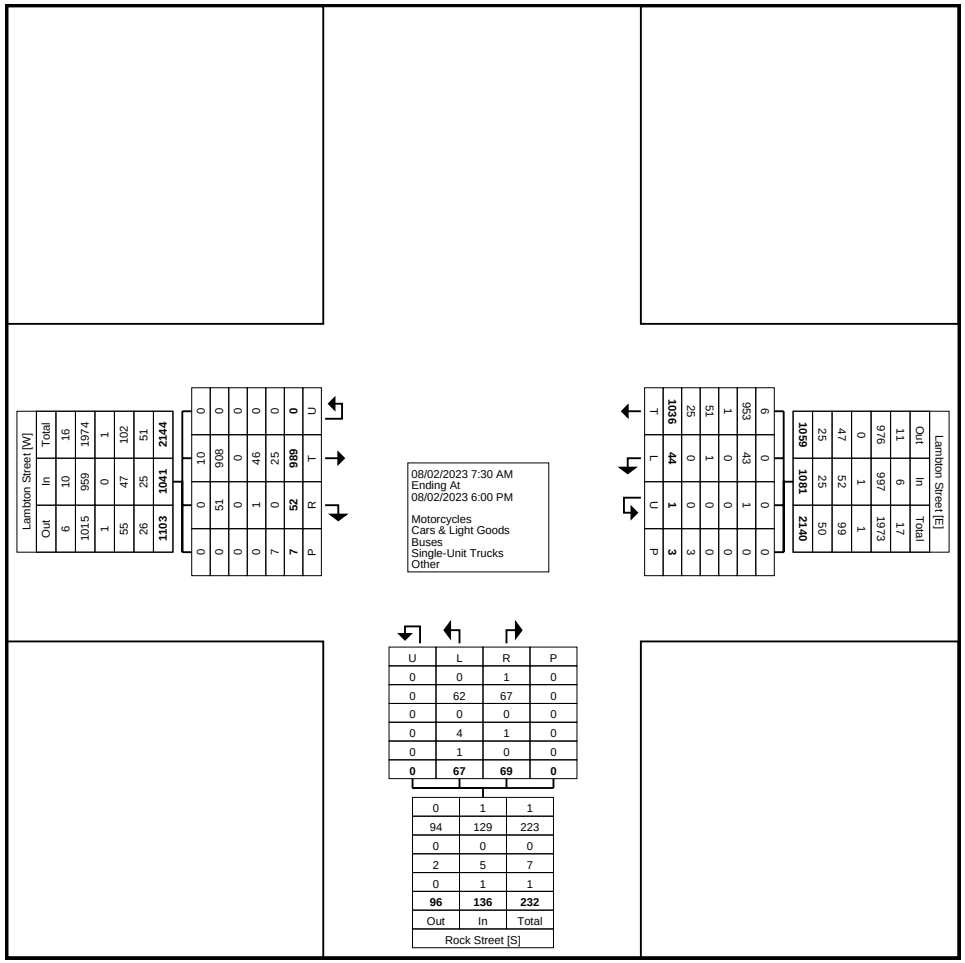
Start Time	Lambton Street Eastbound					Lambton Street Westbound					Rock Street Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
7:30 AM	33	1	0	0	34	1	16	0	0	17	1	4	0	0	5	56
7:45 AM	22	2	0	0	24	4	24	0	0	28	2	1	0	0	3	55
Hourly Total	55	3	0	0	58	5	40	0	0	45	3	5	0	0	8	111
8:00 AM	22	1	0	0	23	0	20	0	0	20	3	0	0	0	3	46
8:15 AM	24	0	0	0	24	1	40	0	0	41	4	0	0	0	4	69
8:30 AM	25	1	0	1	26	0	34	0	0	34	1	2	0	0	3	63
8:45 AM	23	5	0	0	28	2	26	0	0	28	1	1	0	0	2	58
Hourly Total	94	7	0	1	101	3	120	0	0	123	9	3	0	0	12	236
9:00 AM	25	4	0	0	29	0	26	0	0	26	3	2	0	0	5	60
9:15 AM	25	0	0	0	25	1	25	0	0	26	1	0	0	0	1	52
9:30 AM	24	1	0	0	25	3	32	0	0	35	3	0	0	0	3	63
9:45 AM	28	2	0	0	30	0	25	0	0	25	1	1	0	0	2	57
Hourly Total	102	7	0	0	109	4	108	0	0	112	8	3	0	0	11	232
10:00 AM	26	1	0	0	27	0	28	0	0	28	1	1	0	0	2	57
10:15 AM	33	1	0	2	34	1	35	0	0	36	1	4	0	0	5	75
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	59	2	0	2	61	1	63	0	0	64	2	5	0	0	7	132
12:00 PM	42	1	0	0	43	2	36	0	1	38	1	4	0	0	5	86
12:15 PM	33	0	0	0	33	0	35	0	2	35	5	0	0	0	5	73
12:30 PM	41	3	0	0	44	0	30	0	0	30	1	2	0	0	3	77
12:45 PM	31	1	0	0	32	3	28	0	0	31	4	3	0	0	7	70
Hourly Total	147	5	0	0	152	5	129	0	3	134	11	9	0	0	20	306
1:00 PM	41	2	0	0	43	1	28	1	0	30	1	1	0	0	2	75
1:15 PM	33	1	0	0	34	5	42	0	0	47	1	4	0	0	5	86
1:30 PM	30	2	0	0	32	3	37	0	0	40	1	2	0	0	3	75
1:45 PM	35	0	0	0	35	0	21	0	0	21	2	2	0	0	4	60
Hourly Total	139	5	0	0	144	9	128	1	0	138	5	9	0	0	14	296
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	32	0	0	3	32	1	19	0	0	20	6	4	0	0	10	62
3:15 PM	38	1	0	1	39	1	39	0	0	40	1	4	0	0	5	84
3:30 PM	28	2	0	0	30	0	46	0	0	46	3	4	0	0	7	83
3:45 PM	31	2	0	0	33	6	40	0	0	46	2	6	0	0	8	87
Hourly Total	129	5	0	4	134	8	144	0	0	152	12	18	0	0	30	316
4:00 PM	33	1	0	0	34	1	37	0	0	38	1	1	0	0	2	74
4:15 PM	38	3	0	0	41	1	40	0	0	41	1	3	0	0	4	86
4:30 PM	30	5	0	0	35	0	46	0	0	46	4	2	0	0	6	87

4:45 PM	32	2	0	0	34	1	34	0	0	35	2	1	0	0	3	72
Hourly Total	133	11	0	0	144	3	157	0	0	160	8	7	0	0	15	319
5:00 PM	32	4	0	0	36	2	36	0	0	38	1	3	0	0	4	78
5:15 PM	40	0	0	0	40	2	48	0	0	50	2	1	0	0	3	93
5:30 PM	32	0	0	0	32	2	31	0	0	33	1	3	0	0	4	69
5:45 PM	27	3	0	0	30	0	32	0	0	32	5	3	0	0	8	70
Hourly Total	131	7	0	0	138	6	147	0	0	153	9	10	0	0	19	310
Grand Total	989	52	0	7	1041	44	1036	1	3	1081	67	69	0	0	136	2258
Approach %	95.0	5.0	0.0	-	-	4.1	95.8	0.1	-	-	49.3	50.7	0.0	-	-	-
Total %	43.8	2.3	0.0	-	46.1	1.9	45.9	0.0	-	47.9	3.0	3.1	0.0	-	6.0	-
Motorcycles	10	0	0	-	10	0	6	0	-	6	0	1	0	-	1	17
% Motorcycles	1.0	0.0	-	-	1.0	0.0	0.6	0.0	-	0.6	0.0	1.4	-	-	0.7	0.8
Cars & Light Goods	908	51	0	-	959	43	953	1	-	997	62	67	0	-	129	2085
% Cars & Light Goods	91.8	98.1	-	-	92.1	97.7	92.0	100.0	-	92.2	92.5	97.1	-	-	94.9	92.3
Buses	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Buses	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	46	1	0	-	47	1	51	0	-	52	4	1	0	-	5	104
% Single-Unit Trucks	4.7	1.9	-	-	4.5	2.3	4.9	0.0	-	4.8	6.0	1.4	-	-	3.7	4.6
Articulated Trucks	25	0	0	-	25	0	25	0	-	25	0	0	0	-	0	50
% Articulated Trucks	2.5	0.0	-	-	2.4	0.0	2.4	0.0	-	2.3	0.0	0.0	-	-	0.0	2.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	1.5	0.0	-	-	0.7	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	7	-	-	-	-	3	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

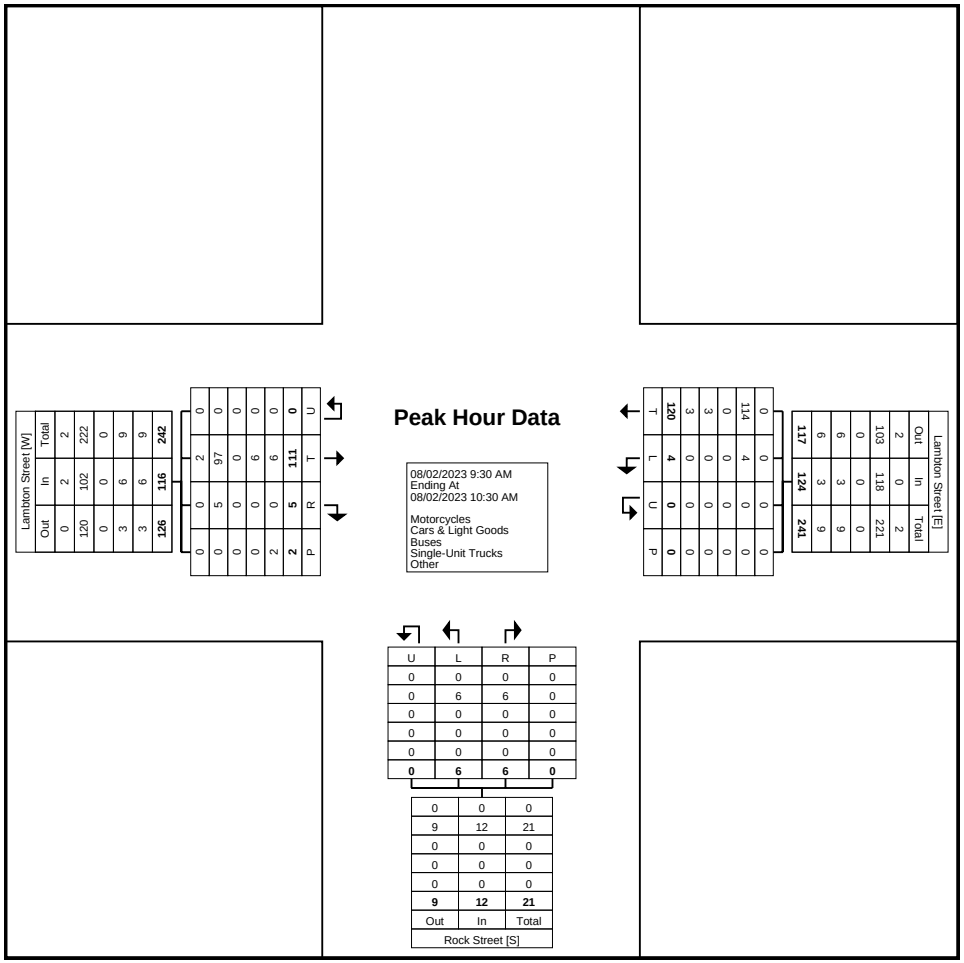
Turning Movement Peak Hour Data (9:30 AM)

Start Time	Lambton Street Eastbound					Lambton Street Westbound					Rock Street Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
9:30 AM	24	1	0	0	25	3	32	0	0	35	3	0	0	0	3	63
9:45 AM	28	2	0	0	30	0	25	0	0	25	1	1	0	0	2	57
10:00 AM	26	1	0	0	27	0	28	0	0	28	1	1	0	0	2	57
10:15 AM	33	1	0	2	34	1	35	0	0	36	1	4	0	0	5	75
Total	111	5	0	2	116	4	120	0	0	124	6	6	0	0	12	252
Approach %	95.7	4.3	0.0	-	-	3.2	96.8	0.0	-	-	50.0	50.0	0.0	-	-	-
Total %	44.0	2.0	0.0	-	46.0	1.6	47.6	0.0	-	49.2	2.4	2.4	0.0	-	4.8	-
PHF	0.841	0.625	0.000	-	0.853	0.333	0.857	0.000	-	0.861	0.500	0.375	0.000	-	0.600	0.840
Motorcycles	2	0	0	-	2	0	0	0	-	0	0	0	0	-	0	2
% Motorcycles	1.8	0.0	-	-	1.7	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.8
Cars & Light Goods	97	5	0	-	102	4	114	0	-	118	6	6	0	-	12	232
% Cars & Light Goods	87.4	100.0	-	-	87.9	100.0	95.0	-	-	95.2	100.0	100.0	-	-	100.0	92.1
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	6	0	0	-	6	0	3	0	-	3	0	0	0	-	0	9
% Single-Unit Trucks	5.4	0.0	-	-	5.2	0.0	2.5	-	-	2.4	0.0	0.0	-	-	0.0	3.6
Articulated Trucks	6	0	0	-	6	0	3	0	-	3	0	0	0	-	0	9
% Articulated Trucks	5.4	0.0	-	-	5.2	0.0	2.5	-	-	2.4	0.0	0.0	-	-	0.0	3.6
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023



Turning Movement Peak Hour Data Plot (9:30 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

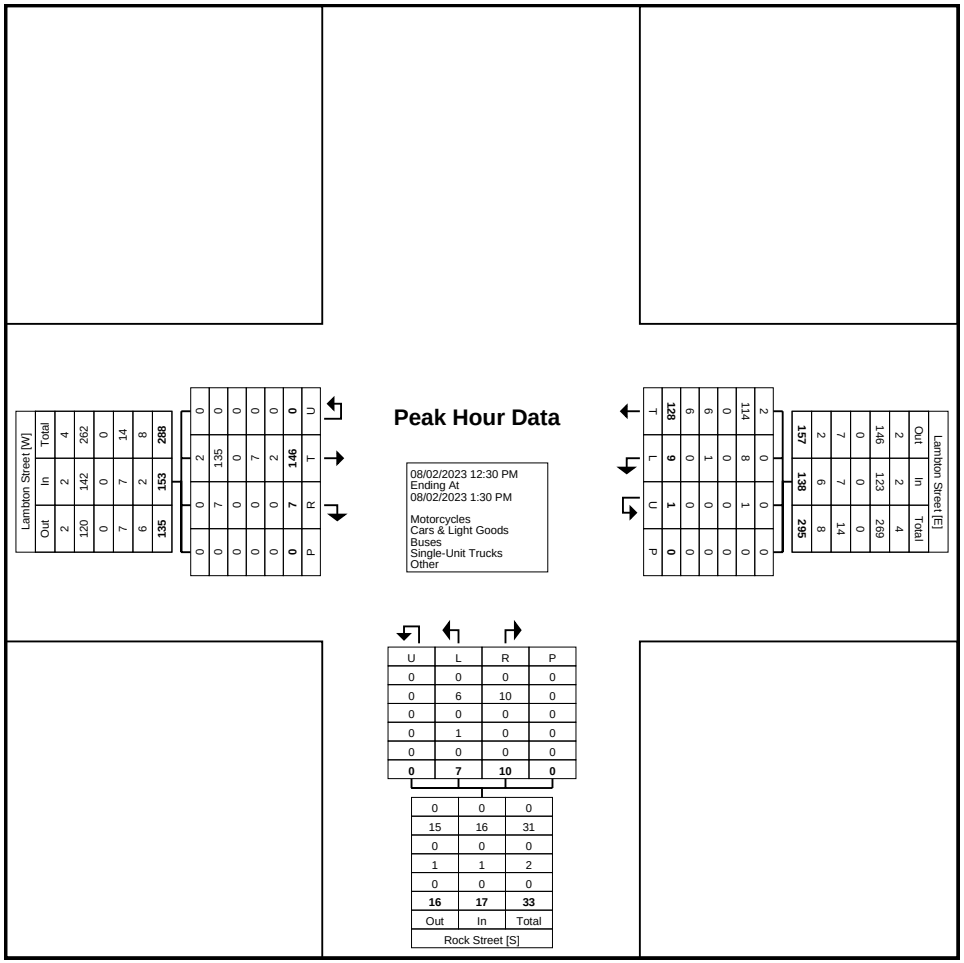
Turning Movement Peak Hour Data (12:30 PM)

Start Time	Lambton Street Eastbound					Lambton Street Westbound					Rock Street Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
12:30 PM	41	3	0	0	44	0	30	0	0	30	1	2	0	0	3	77
12:45 PM	31	1	0	0	32	3	28	0	0	31	4	3	0	0	7	70
1:00 PM	41	2	0	0	43	1	28	1	0	30	1	1	0	0	2	75
1:15 PM	33	1	0	0	34	5	42	0	0	47	1	4	0	0	5	86
Total	146	7	0	0	153	9	128	1	0	138	7	10	0	0	17	308
Approach %	95.4	4.6	0.0	-	-	6.5	92.8	0.7	-	-	41.2	58.8	0.0	-	-	-
Total %	47.4	2.3	0.0	-	49.7	2.9	41.6	0.3	-	44.8	2.3	3.2	0.0	-	5.5	-
PHF	0.890	0.583	0.000	-	0.869	0.450	0.762	0.250	-	0.734	0.438	0.625	0.000	-	0.607	0.895
Motorcycles	2	0	0	-	2	0	2	0	-	2	0	0	0	-	0	4
% Motorcycles	1.4	0.0	-	-	1.3	0.0	1.6	0.0	-	1.4	0.0	0.0	-	-	0.0	1.3
Cars & Light Goods	135	7	0	-	142	8	114	1	-	123	6	10	0	-	16	281
% Cars & Light Goods	92.5	100.0	-	-	92.8	88.9	89.1	100.0	-	89.1	85.7	100.0	-	-	94.1	91.2
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	7	0	0	-	7	1	6	0	-	7	1	0	0	-	1	15
% Single-Unit Trucks	4.8	0.0	-	-	4.6	11.1	4.7	0.0	-	5.1	14.3	0.0	-	-	5.9	4.9
Articulated Trucks	2	0	0	-	2	0	6	0	-	6	0	0	0	-	0	8
% Articulated Trucks	1.4	0.0	-	-	1.3	0.0	4.7	0.0	-	4.3	0.0	0.0	-	-	0.0	2.6
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

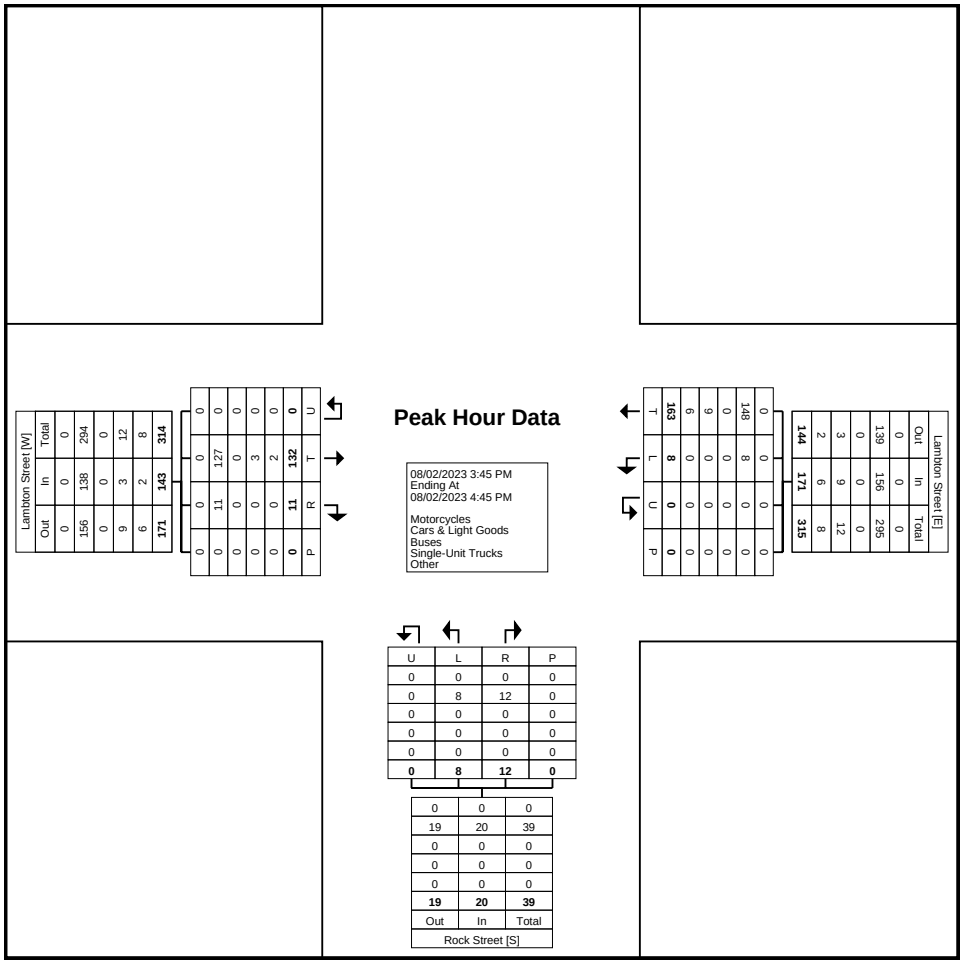
Turning Movement Peak Hour Data (3:45 PM)

Start Time	Lambton Street Eastbound					Lambton Street Westbound					Rock Street Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	31	2	0	0	33	6	40	0	0	46	2	6	0	0	8	87
4:00 PM	33	1	0	0	34	1	37	0	0	38	1	1	0	0	2	74
4:15 PM	38	3	0	0	41	1	40	0	0	41	1	3	0	0	4	86
4:30 PM	30	5	0	0	35	0	46	0	0	46	4	2	0	0	6	87
Total	132	11	0	0	143	8	163	0	0	171	8	12	0	0	20	334
Approach %	92.3	7.7	0.0	-	-	4.7	95.3	0.0	-	-	40.0	60.0	0.0	-	-	-
Total %	39.5	3.3	0.0	-	42.8	2.4	48.8	0.0	-	51.2	2.4	3.6	0.0	-	6.0	-
PHF	0.868	0.550	0.000	-	0.872	0.333	0.886	0.000	-	0.929	0.500	0.500	0.000	-	0.625	0.960
Motorcycles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	127	11	0	-	138	8	148	0	-	156	8	12	0	-	20	314
% Cars & Light Goods	96.2	100.0	-	-	96.5	100.0	90.8	-	-	91.2	100.0	100.0	-	-	100.0	94.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	3	0	0	-	3	0	9	0	-	9	0	0	0	-	0	12
% Single-Unit Trucks	2.3	0.0	-	-	2.1	0.0	5.5	-	-	5.3	0.0	0.0	-	-	0.0	3.6
Articulated Trucks	2	0	0	-	2	0	6	0	-	6	0	0	0	-	0	8
% Articulated Trucks	1.5	0.0	-	-	1.4	0.0	3.7	-	-	3.5	0.0	0.0	-	-	0.0	2.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Lambton Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Saddler Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

Turning Movement Data

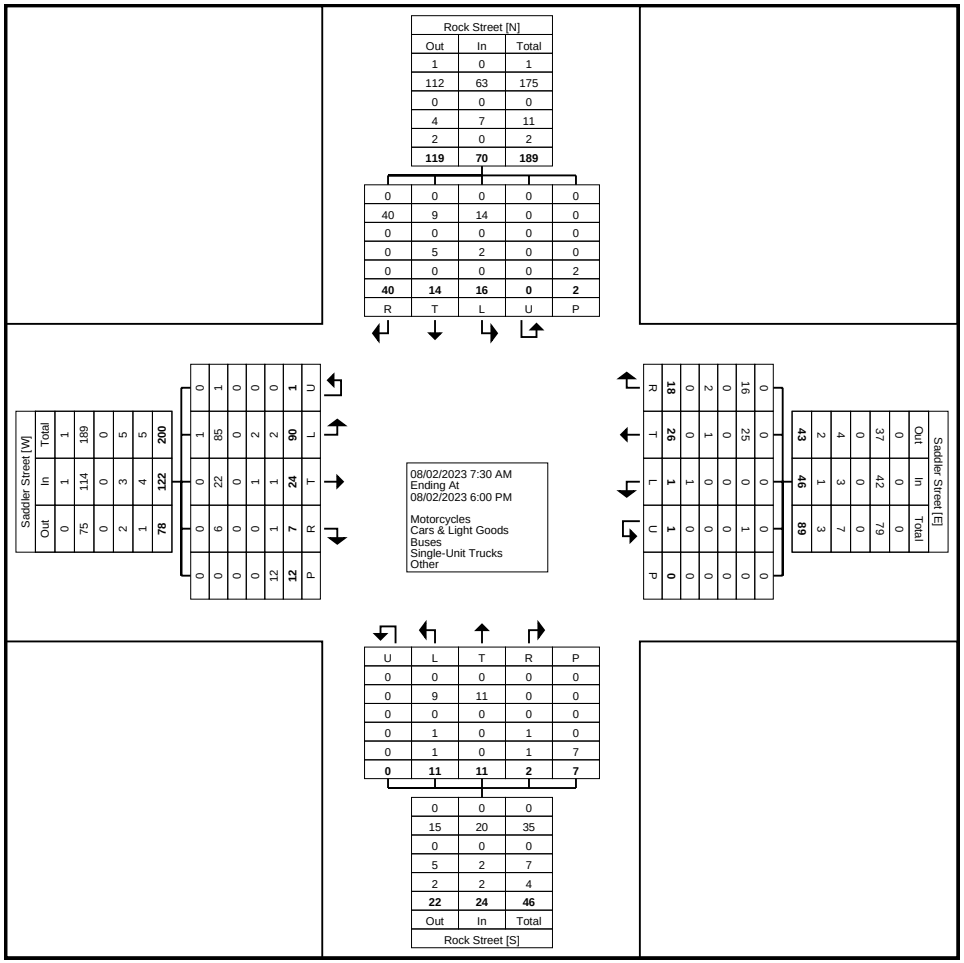
Start Time	Saddler Street Eastbound						Saddler Street Westbound						Rock Street Northbound						Rock Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	2	1	1	0	0	4	0	2	2	0	0	4	0	0	0	0	1	0	0	1	1	0	0	2	10
7:45 AM	1	0	0	0	0	1	0	1	1	0	0	2	1	0	0	0	1	1	1	1	3	0	0	5	9
Hourly Total	3	1	1	0	0	5	0	3	3	0	0	6	1	0	0	0	2	1	1	2	4	0	0	7	19
8:00 AM	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	4
8:15 AM	2	0	0	0	1	2	0	2	1	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	8
8:30 AM	1	0	0	0	1	1	1	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	3
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	0	0	6	7
Hourly Total	4	1	0	0	2	5	1	3	1	0	0	5	0	0	1	0	0	1	3	2	6	0	0	11	22
9:00 AM	1	0	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	1	0	3	0	0	4	7
9:15 AM	2	0	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	4
9:30 AM	1	0	0	0	0	1	0	2	0	0	0	2	0	1	0	0	0	1	2	1	0	0	0	3	7
9:45 AM	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	3
Hourly Total	5	0	0	0	0	5	0	4	2	0	0	6	0	1	0	0	0	1	3	1	5	0	0	9	21
10:00 AM	1	1	1	0	0	3	0	1	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	6
10:15 AM	4	1	1	0	2	6	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	9
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	5	2	2	0	2	9	0	3	1	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	15
12:00 PM	3	0	0	0	0	3	0	1	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	1	6
12:15 PM	3	1	0	0	0	4	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7
12:30 PM	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	6
12:45 PM	4	0	0	0	0	4	0	1	1	0	0	2	0	0	0	0	0	0	1	0	2	0	0	3	9
Hourly Total	14	1	0	0	0	15	0	2	4	0	0	6	0	1	0	0	0	1	2	1	3	0	0	6	28
1:00 PM	3	1	0	0	2	4	0	1	0	0	0	1	0	0	0	0	1	0	0	1	2	0	0	3	8
1:15 PM	5	0	0	0	0	5	0	0	0	0	0	0	1	0	0	0	0	1	0	0	4	0	0	4	10
1:30 PM	3	2	0	0	0	5	0	1	0	0	0	1	1	0	1	0	1	2	1	0	2	0	0	3	11
1:45 PM	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hourly Total	12	3	0	1	2	16	0	2	0	0	0	2	2	0	1	0	2	3	1	1	8	0	0	10	31
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	9	1	2	0	3	12	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	2	1	14
3:15 PM	4	0	0	0	3	4	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	5
3:30 PM	5	1	0	0	0	6	0	0	0	0	0	0	0	2	0	0	0	2	0	2	1	0	0	3	11
3:45 PM	5	1	0	0	0	6	0	0	0	0	0	0	0	1	0	0	0	1	2	1	2	0	0	5	12
Hourly Total	23	3	2	0	6	28	0	1	0	0	0	1	0	4	0	0	1	4	2	3	4	0	2	9	42
4:00 PM	3	1	0	0	0	4	0	2	0	0	0	2	1	1	0	0	1	2	0	1	1	0	0	2	10
4:15 PM	2	4	1	0	0	7	0	1	1	0	0	2	2	2	0	0	0	4	0	2	1	0	0	3	16

4:30 PM	2	1	0	0	0	3	0	0	1	1	0	2	2	2	0	0	0	4	1	1	1	0	0	3	12
4:45 PM	3	0	0	0	0	3	0	0	1	0	0	1	1	0	0	0	0	1	2	0	0	0	0	2	7
Hourly Total	10	6	1	0	0	17	0	3	3	1	0	7	6	5	0	0	1	11	3	4	3	0	0	10	45
5:00 PM	2	3	0	0	0	5	0	2	1	0	0	3	1	0	0	0	0	1	0	0	3	0	0	3	12
5:15 PM	3	2	0	0	0	5	0	3	0	0	0	3	0	0	0	0	1	0	0	0	1	0	0	1	9
5:30 PM	4	1	0	0	0	5	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	5	1	1	0	0	7	0	0	2	0	0	2	1	0	0	0	0	1	1	0	1	0	0	2	12
Hourly Total	14	7	1	0	0	22	0	5	4	0	0	9	2	0	0	0	1	2	1	0	5	0	0	6	39
Grand Total	90	24	7	1	12	122	1	26	18	1	0	46	11	11	2	0	7	24	16	14	40	0	2	70	262
Approach %	73.8	19.7	5.7	0.8	-	-	2.2	56.5	39.1	2.2	-	-	45.8	45.8	8.3	0.0	-	-	22.9	20.0	57.1	0.0	-	-	-
Total %	34.4	9.2	2.7	0.4	-	46.6	0.4	9.9	6.9	0.4	-	17.6	4.2	4.2	0.8	0.0	-	9.2	6.1	5.3	15.3	0.0	-	26.7	-
Motorcycles	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	1.1	0.0	0.0	0.0	-	0.8	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.4
Cars & Light Goods	85	22	6	1	-	114	0	25	16	1	-	42	9	11	0	0	-	20	14	9	40	0	-	63	239
% Cars & Light Goods	94.4	91.7	85.7	100.0	-	93.4	0.0	96.2	88.9	100.0	-	91.3	81.8	100.0	0.0	-	-	83.3	87.5	64.3	100.0	-	-	90.0	91.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	2	1	0	0	-	3	0	1	2	0	-	3	1	0	1	0	-	2	2	5	0	0	-	7	15
% Single-Unit Trucks	2.2	4.2	0.0	0.0	-	2.5	0.0	3.8	11.1	0.0	-	6.5	9.1	0.0	50.0	-	-	8.3	12.5	35.7	0.0	-	-	10.0	5.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	2	1	1	0	-	4	1	0	0	0	-	1	1	0	1	0	-	2	0	0	0	0	-	0	7
% Bicycles on Road	2.2	4.2	14.3	0.0	-	3.3	100.0	0.0	0.0	0.0	-	2.2	9.1	0.0	50.0	-	-	8.3	0.0	0.0	0.0	-	-	0.0	2.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	85.7	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Saddler Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Saddler Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Saddler Street Eastbound						Saddler Street Westbound						Rock Street Northbound						Rock Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	2	1	1	0	0	4	0	2	2	0	0	4	0	0	0	0	1	0	0	1	1	0	0	2	10
7:45 AM	1	0	0	0	0	1	0	1	1	0	0	2	1	0	0	0	1	1	1	1	3	0	0	5	9
8:00 AM	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	4
8:15 AM	2	0	0	0	1	2	0	2	1	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	8
Total	6	1	1	0	1	8	0	6	4	0	0	10	1	0	0	0	2	1	1	3	8	0	0	12	31
Approach %	75.0	12.5	12.5	0.0	-	-	0.0	60.0	40.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	8.3	25.0	66.7	0.0	-	-	-
Total %	19.4	3.2	3.2	0.0	-	25.8	0.0	19.4	12.9	0.0	-	32.3	3.2	0.0	0.0	0.0	-	3.2	3.2	9.7	25.8	0.0	-	38.7	-
PHF	0.750	0.250	0.250	0.000	-	0.500	0.000	0.750	0.500	0.000	-	0.625	0.250	0.000	0.000	0.000	-	0.250	0.250	0.750	0.667	0.000	-	0.600	0.775
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	5	1	1	0	-	7	0	6	4	0	-	10	1	0	0	0	-	1	1	3	8	0	-	12	30
% Cars & Light Goods	83.3	100.0	100.0	-	-	87.5	-	100.0	100.0	-	-	100.0	100.0	-	-	-	-	100.0	100.0	100.0	100.0	-	-	100.0	96.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Single-Unit Trucks	16.7	0.0	0.0	-	-	12.5	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	3.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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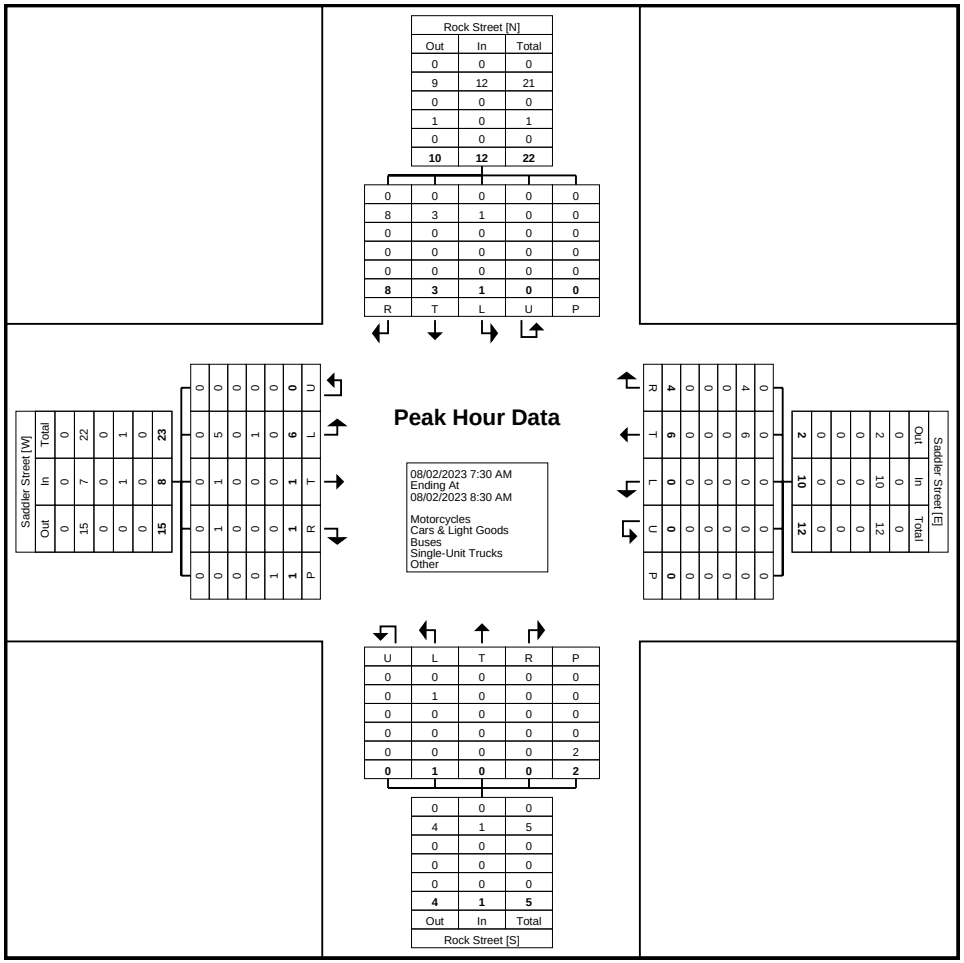
Start Date: 08/02/2023



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Saddler Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Saddler Street Eastbound						Saddler Street Westbound						Rock Street Northbound						Rock Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
12:45 PM	4	0	0	0	0	4	0	1	1	0	0	2	0	0	0	0	0	0	1	0	2	0	0	3	9
1:00 PM	3	1	0	0	2	4	0	1	0	0	0	1	0	0	0	0	1	0	0	1	2	0	0	3	8
1:15 PM	5	0	0	0	0	5	0	0	0	0	0	0	1	0	0	0	0	1	0	0	4	0	0	4	10
1:30 PM	3	2	0	0	0	5	0	1	0	0	0	1	1	0	1	0	1	2	1	0	2	0	0	3	11
Total	15	3	0	0	2	18	0	3	1	0	0	4	2	0	1	0	2	3	2	1	10	0	0	13	38
Approach %	83.3	16.7	0.0	0.0	-	-	0.0	75.0	25.0	0.0	-	-	66.7	0.0	33.3	0.0	-	-	15.4	7.7	76.9	0.0	-	-	-
Total %	39.5	7.9	0.0	0.0	-	47.4	0.0	7.9	2.6	0.0	-	10.5	5.3	0.0	2.6	0.0	-	7.9	5.3	2.6	26.3	0.0	-	34.2	-
PHF	0.750	0.375	0.000	0.000	-	0.900	0.000	0.750	0.250	0.000	-	0.500	0.500	0.000	0.250	0.000	-	0.375	0.500	0.250	0.625	0.000	-	0.813	0.864
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	15	2	0	0	-	17	0	2	0	0	-	2	1	0	0	0	-	1	1	1	10	0	-	12	32
% Cars & Light Goods	100.0	66.7	-	-	-	94.4	-	66.7	0.0	-	-	50.0	50.0	-	0.0	-	-	33.3	50.0	100.0	100.0	-	-	92.3	84.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	1	0	0	-	1	0	1	1	0	-	2	1	0	1	0	-	2	1	0	0	0	-	1	6
% Single-Unit Trucks	0.0	33.3	-	-	-	5.6	-	33.3	100.0	-	-	50.0	50.0	-	100.0	-	-	66.7	50.0	0.0	0.0	-	-	7.7	15.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	-	-	-

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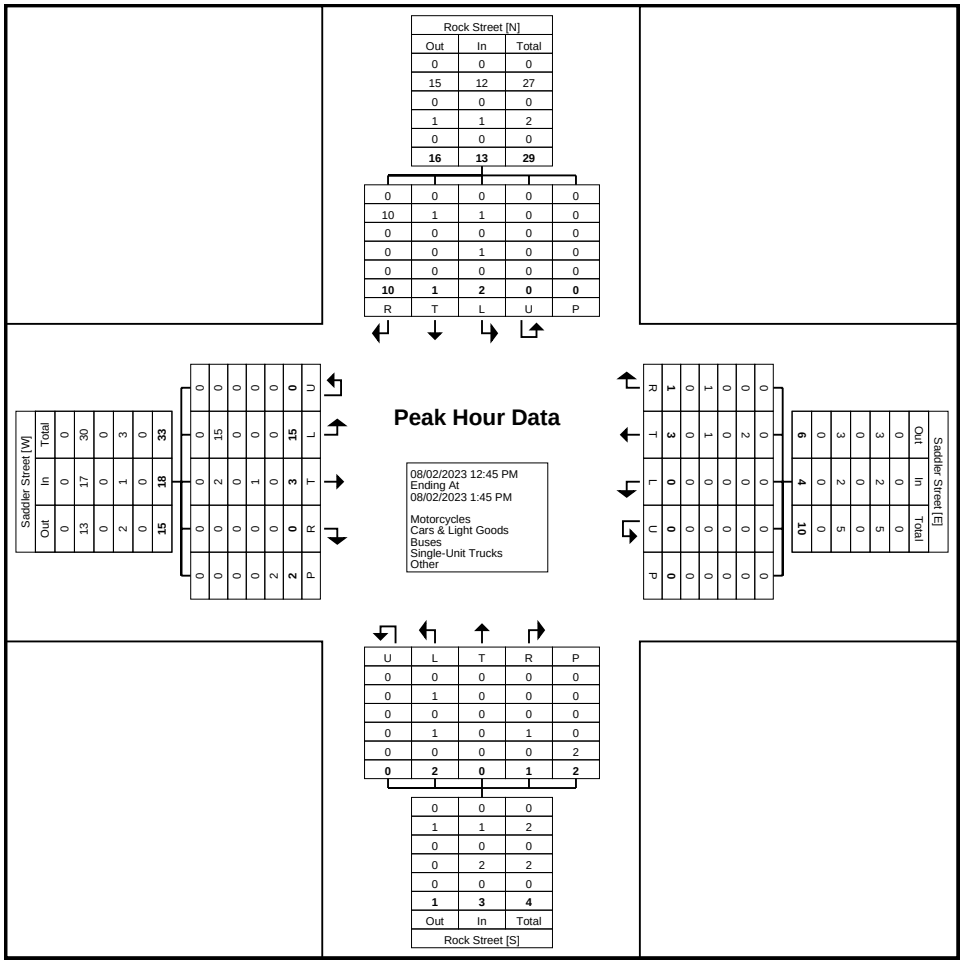

Turning Movement Peak Hour Data Plot (12:45 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Saddler Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Saddler Street Eastbound						Saddler Street Westbound						Rock Street Northbound						Rock Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
3:45 PM	5	1	0	0	0	6	0	0	0	0	0	0	0	1	0	0	0	1	2	1	2	0	0	5	12
4:00 PM	3	1	0	0	0	4	0	2	0	0	0	2	1	1	0	0	1	2	0	1	1	0	0	2	10
4:15 PM	2	4	1	0	0	7	0	1	1	0	0	2	2	2	0	0	0	4	0	2	1	0	0	3	16
4:30 PM	2	1	0	0	0	3	0	0	1	1	0	2	2	2	0	0	0	4	1	1	1	0	0	3	12
Total	12	7	1	0	0	20	0	3	2	1	0	6	5	6	0	0	1	11	3	5	5	0	0	13	50
Approach %	60.0	35.0	5.0	0.0	-	-	0.0	50.0	33.3	16.7	-	-	45.5	54.5	0.0	0.0	-	-	23.1	38.5	38.5	0.0	-	-	-
Total %	24.0	14.0	2.0	0.0	-	40.0	0.0	6.0	4.0	2.0	-	12.0	10.0	12.0	0.0	0.0	-	22.0	6.0	10.0	10.0	0.0	-	26.0	-
PHF	0.600	0.438	0.250	0.000	-	0.714	0.000	0.375	0.500	0.250	-	0.750	0.625	0.750	0.000	0.000	-	0.688	0.375	0.625	0.625	0.000	-	0.650	0.781
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	12	7	0	0	-	19	0	3	2	1	-	6	4	6	0	0	-	10	3	2	5	0	-	10	45
% Cars & Light Goods	100.0	100.0	0.0	-	-	95.0	-	100.0	100.0	100.0	-	100.0	80.0	100.0	-	-	-	90.9	100.0	40.0	100.0	-	-	76.9	90.0
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	3	3
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	-	0.0	0.0	60.0	0.0	-	-	23.1	6.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	2
% Bicycles on Road	0.0	0.0	100.0	-	-	5.0	-	0.0	0.0	0.0	-	0.0	20.0	0.0	-	-	-	9.1	0.0	0.0	0.0	-	-	0.0	4.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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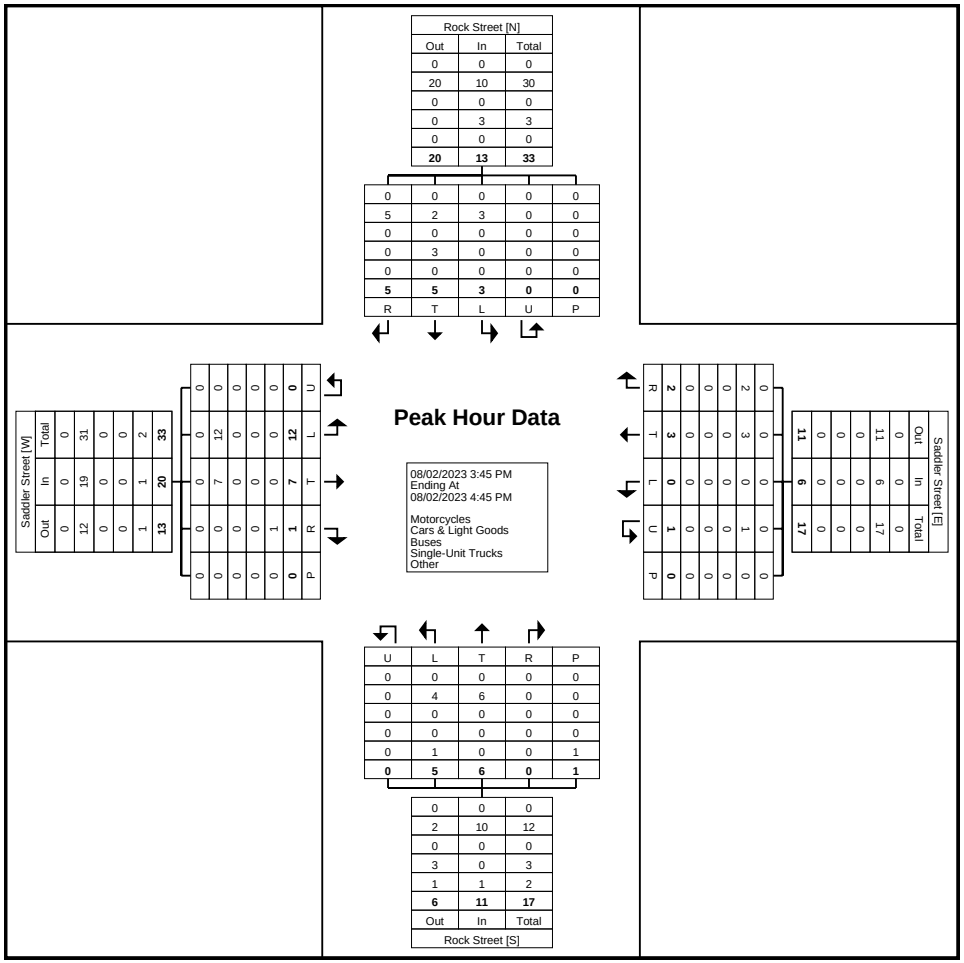
Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Saddler Street & Rock Street
Site Code: 230119
Start Date: 08/02/2023



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

Appendix B

Existing Traffic Operations Reports

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	111	5	4	120	6	6
Future Volume (vph)	111	5	4	120	6	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1710	0	0	1810	1728	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1710	0	0	1810	1728	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.8			140.4	180.6	
Travel Time (s)	17.9			10.1	13.0	
Confl. Peds. (#/hr)					2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	0%	0%	5%	0%	0%
Adj. Flow (vph)	121	5	4	130	7	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	126	0	0	134	14	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

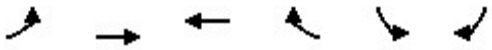
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	111	5	4	120	6	6
Future Vol, veh/h	111	5	4	120	6	6
Conflicting Peds, #/hr	0	0	0	0	2	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, %	11	0	0	5	0	0
Mvmt Flow	121	5	4	130	7	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	126	0	264	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1473	-	729	932
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1473	-	725	932
Mov Cap-2 Maneuver	-	-	-	-	725	-
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	888	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	816	-	-	1473	-
HCM Lane V/C Ratio	0.016	-	-	0.003	-
HCM Control Delay (s)	9.5	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	114	121	2	1	3
Future Volume (vph)	3	114	121	2	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.899	
Flt Protected		0.999			0.988	
Satd. Flow (prot)	0	1714	1758	0	1688	0
Flt Permitted		0.999			0.988	
Satd. Flow (perm)	0	1714	1758	0	1688	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		140.4	381.5		211.3	
Travel Time (s)		10.1	27.5		15.2	
Confl. Peds. (#/hr)						2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	11%	8%	0%	0%	0%
Adj. Flow (vph)	3	124	132	2	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	127	134	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	114	121	2	1	3
Future Vol, veh/h	3	114	121	2	1	3
Conflicting Peds, #/hr	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	11	8	0	0	0
Mvmt Flow	3	124	132	2	1	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	134	0	-	0	263	135
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	130	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1463	-	-	-	730	919
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	901	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1463	-	-	-	729	917
Mov Cap-2 Maneuver	-	-	-	-	729	-
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	901	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1463	-	-	-	861
HCM Lane V/C Ratio	0.002	-	-	-	0.005
HCM Control Delay (s)	7.5	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	132	11	8	163	8	12
Future Volume (vph)	132	11	8	163	8	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.990				0.920	
Flt Protected				0.998	0.980	
Satd. Flow (prot)	1814	0	0	1747	1713	0
Flt Permitted				0.998	0.980	
Satd. Flow (perm)	1814	0	0	1747	1713	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.8			140.4	180.6	
Travel Time (s)	17.9			10.1	13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	0%	0%	9%	0%	0%
Adj. Flow (vph)	143	12	9	177	9	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	0	186	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.1%		ICU Level of Service A	
Analysis Period (min) 15			

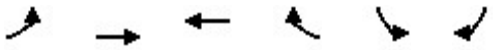
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	132	11	8	163	8	12
Future Vol, veh/h	132	11	8	163	8	12
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, %	4	0	0	9	0	0
Mvmt Flow	143	12	9	177	9	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	344	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	195	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1438	-	657	903
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	843	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1438	-	652	903
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	837	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	783	-	-	1438	-
HCM Lane V/C Ratio	0.028	-	-	0.006	-
HCM Control Delay (s)	9.7	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	142	169	5	2	2
Future Volume (vph)	2	142	169	5	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.932	
Flt Protected		0.999			0.976	
Satd. Flow (prot)	0	1826	1756	0	1728	0
Flt Permitted		0.999			0.976	
Satd. Flow (perm)	0	1826	1756	0	1728	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		140.4	381.5		211.3	
Travel Time (s)		10.1	27.5		15.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	8%	0%	0%	0%
Adj. Flow (vph)	2	154	184	5	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	156	189	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	142	169	5	2	2
Future Vol, veh/h	2	142	169	5	2	2
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	8	0	0	0
Mvmt Flow	2	154	184	5	2	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	189	0	-	0	346	187
Stage 1	-	-	-	-	187	-
Stage 2	-	-	-	-	159	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1397	-	-	-	655	860
Stage 1	-	-	-	-	850	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1397	-	-	-	654	860
Mov Cap-2 Maneuver	-	-	-	-	654	-
Stage 1	-	-	-	-	848	-
Stage 2	-	-	-	-	875	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1397	-	-	-	743
HCM Lane V/C Ratio	0.002	-	-	-	0.006
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Appendix C

2033 Background Traffic Operations Reports

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	123	6	4	133	7	7
Future Volume (vph)	123	6	4	133	7	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1708	0	0	1810	1728	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1708	0	0	1810	1728	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.8			140.4	202.9	
Travel Time (s)	17.9			10.1	14.6	
Confl. Peds. (#/hr)					2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	0%	0%	5%	0%	0%
Adj. Flow (vph)	134	7	4	145	8	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	141	0	0	149	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.2%		ICU Level of Service A	
Analysis Period (min) 15			

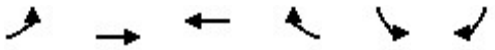
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	123	6	4	133	7	7
Future Vol, veh/h	123	6	4	133	7	7
Conflicting Peds, #/hr	0	0	0	0	2	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, %	11	0	0	5	0	0
Mvmt Flow	134	7	4	145	8	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	141	0	293	138
Stage 1	-	-	-	-	138	-
Stage 2	-	-	-	-	155	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1455	-	702	916
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1455	-	698	916
Mov Cap-2 Maneuver	-	-	-	-	698	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	874	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	792	-	-	1455	-
HCM Lane V/C Ratio	0.019	-	-	0.003	-
HCM Control Delay (s)	9.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	127	134	2	1	3
Future Volume (vph)	3	127	134	2	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.899	
Flt Protected		0.999			0.988	
Satd. Flow (prot)	0	1714	1757	0	1688	0
Flt Permitted		0.999			0.988	
Satd. Flow (perm)	0	1714	1757	0	1688	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		140.4	381.5		211.3	
Travel Time (s)		10.1	27.5		15.2	
Confl. Peds. (#/hr)						2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	11%	8%	0%	0%	0%
Adj. Flow (vph)	3	138	146	2	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	141	148	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	127	134	2	1	3
Future Vol, veh/h	3	127	134	2	1	3
Conflicting Peds, #/hr	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	11	8	0	0	0
Mvmt Flow	3	138	146	2	1	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	148	0	-	0	291	149
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	144	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1446	-	-	-	704	903
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	888	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1446	-	-	-	703	901
Mov Cap-2 Maneuver	-	-	-	-	703	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	888	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1446	-	-	-	842
HCM Lane V/C Ratio	0.002	-	-	-	0.005
HCM Control Delay (s)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	146	12	9	180	9	13
Future Volume (vph)	146	12	9	180	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.990				0.921	
Flt Protected				0.998	0.980	
Satd. Flow (prot)	1814	0	0	1747	1715	0
Flt Permitted				0.998	0.980	
Satd. Flow (perm)	1814	0	0	1747	1715	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.8			140.4	202.9	
Travel Time (s)	17.9			10.1	14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	0%	0%	9%	0%	0%
Adj. Flow (vph)	159	13	10	196	10	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	0	0	206	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.8%		ICU Level of Service A	
Analysis Period (min) 15			

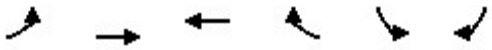
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	146	12	9	180	9	13
Future Vol, veh/h	146	12	9	180	9	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, %	4	0	0	9	0	0
Mvmt Flow	159	13	10	196	10	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	172	0	382	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1417	-	624	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1417	-	619	884
Mov Cap-2 Maneuver	-	-	-	-	619	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	818	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	752	-	-	1417	-
HCM Lane V/C Ratio	0.032	-	-	0.007	-
HCM Control Delay (s)	9.9	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	157	187	6	2	2
Future Volume (vph)	2	157	187	6	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.995		0.932	
Flt Protected		0.999			0.976	
Satd. Flow (prot)	0	1826	1755	0	1728	0
Flt Permitted		0.999			0.976	
Satd. Flow (perm)	0	1826	1755	0	1728	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		140.4	381.5		211.3	
Travel Time (s)		10.1	27.5		15.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	8%	0%	0%	0%
Adj. Flow (vph)	2	171	203	7	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	173	210	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	157	187	6	2	2
Future Vol, veh/h	2	157	187	6	2	2
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	8	0	0	0
Mvmt Flow	2	171	203	7	2	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	210	0	-	0	383	207
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1373	-	-	-	624	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1373	-	-	-	623	839
Mov Cap-2 Maneuver	-	-	-	-	623	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1373	-	-	-	715
HCM Lane V/C Ratio	0.002	-	-	-	0.006
HCM Control Delay (s)	7.6	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Appendix D

2033 Total Traffic Operations Reports

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	127	6	4	144	7	7
Future Volume (vph)	127	6	4	144	7	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1708	0	0	1810	1728	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1708	0	0	1810	1728	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.8			140.4	200.9	
Travel Time (s)	17.9			10.1	14.5	
Confl. Peds. (#/hr)					2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	0%	0%	5%	0%	0%
Adj. Flow (vph)	138	7	4	157	8	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	145	0	0	161	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			

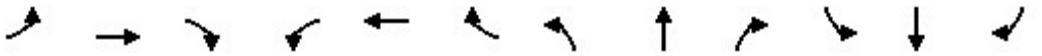
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	6	4	144	7	7
Future Vol, veh/h	127	6	4	144	7	7
Conflicting Peds, #/hr	0	0	0	0	2	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, %	11	0	0	5	0	0
Mvmt Flow	138	7	4	157	8	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	145	0	309	142
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	167	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1450	-	687	911
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	867	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1450	-	684	911
Mov Cap-2 Maneuver	-	-	-	-	684	-
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	863	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	781	-	-	1450	-
HCM Lane V/C Ratio	0.019	-	-	0.003	-
HCM Control Delay (s)	9.7	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	127	4	3	134	2	11	0	8	1	0	3
Future Volume (vph)	3	127	4	3	134	2	11	0	8	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.998			0.942			0.899	
Flt Protected		0.999			0.999			0.972			0.988	
Satd. Flow (prot)	0	1711	0	0	1758	0	0	1740	0	0	1688	0
Flt Permitted		0.999			0.999			0.972			0.988	
Satd. Flow (perm)	0	1711	0	0	1758	0	0	1740	0	0	1688	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		140.4			381.5			221.5			211.3	
Travel Time (s)		10.1			27.5			15.9			15.2	
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	11%	0%	0%	8%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	3	138	4	3	146	2	12	0	9	1	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	151	0	0	21	0	0	4	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)		0.0			0.0			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
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.3%		ICU Level of Service A	
Analysis Period (min) 15			

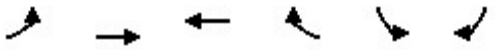
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	127	4	3	134	2	11	0	8	1	0	3
Future Vol, veh/h	3	127	4	3	134	2	11	0	8	1	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	11	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	3	138	4	3	146	2	12	0	9	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	148	0	0	142	0	0	303	300	140	304	301	149
Stage 1	-	-	-	-	-	-	146	146	-	153	153	-
Stage 2	-	-	-	-	-	-	157	154	-	151	148	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1446	-	-	1453	-	-	653	616	913	652	615	903
Stage 1	-	-	-	-	-	-	861	780	-	854	775	-
Stage 2	-	-	-	-	-	-	850	774	-	856	779	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1453	-	-	648	614	913	644	613	901
Mov Cap-2 Maneuver	-	-	-	-	-	-	648	614	-	644	613	-
Stage 1	-	-	-	-	-	-	859	778	-	852	773	-
Stage 2	-	-	-	-	-	-	844	772	-	846	777	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	10	9.4
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	738	1446	-	-	1453	-	-	819
HCM Lane V/C Ratio	0.028	0.002	-	-	0.002	-	-	0.005
HCM Control Delay (s)	10	7.5	0	-	7.5	-	-	9.4
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	2	11	0	0	11
Future Volume (vph)	3	2	11	0	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.971				
Satd. Flow (prot)	0	1845	1900	0	1644	0
Flt Permitted		0.971				
Satd. Flow (perm)	0	1845	1900	0	1644	0
Link Speed (k/h)		40	40		50	
Link Distance (m)		124.5	103.1		221.5	
Travel Time (s)		11.2	9.3		15.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	3	2	12	0	0	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	12	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

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

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	3	2	11	0	0	11
Future Vol, veh/h	3	2	11	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	2	12	0	0	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	12	0	-	0	20	12
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1620	-	-	0	1002	1074
Stage 1	-	-	-	0	1016	-
Stage 2	-	-	-	0	1020	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1620	-	-	-	1000	1074
Mov Cap-2 Maneuver	-	-	-	-	1000	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1020	-

Approach	EB	WB	SB
HCM Control Delay, s	4.3	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1620	-	-	1074
HCM Lane V/C Ratio	0.002	-	-	0.011
HCM Control Delay (s)	7.2	-	-	8.4
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	156	12	9	187	9	13
Future Volume (vph)	156	12	9	187	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.990				0.921	
Flt Protected				0.998	0.980	
Satd. Flow (prot)	1814	0	0	1746	1715	0
Flt Permitted				0.998	0.980	
Satd. Flow (perm)	1814	0	0	1746	1715	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	248.8			140.4	200.9	
Travel Time (s)	17.9			10.1	14.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	0%	0%	9%	0%	0%
Adj. Flow (vph)	170	13	10	203	10	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	0	0	213	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.2%		ICU Level of Service A	
Analysis Period (min) 15			

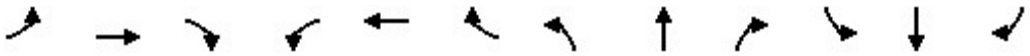
Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	156	12	9	187	9	13
Future Vol, veh/h	156	12	9	187	9	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, %	4	0	0	9	0	0
Mvmt Flow	170	13	10	203	10	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	183	0	400	177
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	223	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1404	-	610	871
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1404	-	605	871
Mov Cap-2 Maneuver	-	-	-	-	605	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	738	-	-	1404	-
HCM Lane V/C Ratio	0.032	-	-	0.007	-
HCM Control Delay (s)	10	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	157	10	8	187	6	7	0	4	2	0	2
Future Volume (vph)	2	157	10	8	187	6	7	0	4	2	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.996			0.955			0.932	
Flt Protected		0.999			0.998			0.968			0.976	
Satd. Flow (prot)	0	1815	0	0	1758	0	0	1756	0	0	1728	0
Flt Permitted		0.999			0.998			0.968			0.976	
Satd. Flow (perm)	0	1815	0	0	1758	0	0	1756	0	0	1728	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		140.4			381.5			221.5			211.3	
Travel Time (s)		10.1			27.5			15.9			15.2	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	0%	0%	8%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	171	11	9	203	7	8	0	4	2	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	184	0	0	219	0	0	12	0	0	4	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)		0.0			0.0			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		100	100		15	100		100	25		15
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.4%		ICU Level of Service A	
Analysis Period (min) 15			

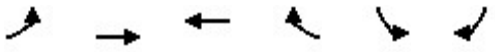
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	157	10	8	187	6	7	0	4	2	0	2
Future Vol, veh/h	2	157	10	8	187	6	7	0	4	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	4	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	171	11	9	203	7	8	0	4	2	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	210	0	0	182	0	0	407	409	178	409	411	207
Stage 1	-	-	-	-	-	-	181	181	-	225	225	-
Stage 2	-	-	-	-	-	-	226	228	-	184	186	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1373	-	-	1405	-	-	558	535	870	556	534	839
Stage 1	-	-	-	-	-	-	825	754	-	782	721	-
Stage 2	-	-	-	-	-	-	781	719	-	822	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1373	-	-	1405	-	-	553	530	869	549	529	839
Mov Cap-2 Maneuver	-	-	-	-	-	-	553	530	-	549	529	-
Stage 1	-	-	-	-	-	-	823	752	-	780	716	-
Stage 2	-	-	-	-	-	-	774	714	-	816	749	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	10.8	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	637	1373	-	-	1405	-	-	664
HCM Lane V/C Ratio	0.019	0.002	-	-	0.006	-	-	0.007
HCM Control Delay (s)	10.8	7.6	0	-	7.6	-	-	10.5
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	11	6	0	0	6
Future Volume (vph)	10	11	6	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.977				
Satd. Flow (prot)	0	1856	1900	0	1644	0
Flt Permitted		0.977				
Satd. Flow (perm)	0	1856	1900	0	1644	0
Link Speed (k/h)		40	40		50	
Link Distance (m)		124.5	103.1		221.5	
Travel Time (s)		11.2	9.3		15.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	11	12	7	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	23	7	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	100			100	100	100
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	10	11	6	0	0	6
Future Vol, veh/h	10	11	6	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	12	7	0	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	7	0	-	0	41	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1627	-	-	0	975	1081
Stage 1	-	-	-	0	1021	-
Stage 2	-	-	-	0	994	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1627	-	-	-	968	1081
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	994	-

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1627	-	-	1081
HCM Lane V/C Ratio	0.007	-	-	0.006
HCM Control Delay (s)	7.2	-	-	8.4
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0