650 Victoria Terrace, Fergus, ON
Transportation Impact Study

Paradigm Transportation Solutions Limited

2025-08
250272

ptsl.com

Project Summary

Project Number:

250272

Date and Version:

2025-08
1.2.1

Client:

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650 Victoria Terrace, Fergus, ON
Transportation Impact Study

Erica Bayley, P.Eng.

Disclaimer

Executive Summary

Content

2566201 Ontario Inc. retained Paradigm Transportation Solutions Limited (Paradigm) to conduct this Transportation Impact Study for a proposed development located at 650 Victoria Terrace in Fergus, Ontario.

This Transportation Impact Study (TIS) includes an analysis of existing traffic conditions, a description of the proposed development, traffic forecasts for a five-year horizon and any recommendations required to manage future traffic conditions.

Development Concept

The subject site is proposed to be developed into 192 townhouse units and 11 commercial/light industrial units with a combined area of 19,250 ft^2.

Vehicle access is proposed via two driveway connections to Gzowski Street and three driveway connections to Victoria Terrace.

The full build-out is assumed to be completed by 2029.

Conclusions

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

- **Existing Traffic Conditions:** The study area intersections are currently operating within acceptable levels of service during the AM and PM peak hours with the following critical movement during noted:
  - The westbound approach at the intersection of St David Street North and Parkside Drive East/West is forecast to operate at LOS E during the PM peak hour.
- **Development Trip Generation:** The development is forecast to generate approximately 108 and 124 trips during the AM and PM peak hours respectively.
- **Background Traffic Conditions:** The study area intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours with the following critical movements noted:

  St David Street North at Parkside Drive East/West:

- The eastbound approach is forecast to operate at LOS E during the PM peak hour; and
- The westbound approach is forecast to operate at LOS F during the PM peak hour.

Gartshore Street and Forfar Street East:

- The eastbound approach is forecast to operate at LOS E during the PM peak hour.

- **Total Traffic Conditions:** The study area intersections are forecast to operate at acceptable levels of service similar to background traffic conditions with no additional critical movements noted during the AM and PM peak hours.
- **Left-Turn Lane Warrant:** A 15 m northbound left-turn lane is warranted under background and total traffic conditions at the intersection of Gartshore Street and Forfar Street East. Left-turn lanes are not warranted at any of the site access connections to Victoria Terrace and Gzowski Street.
- **Traffic Control Signal Warrant:** Traffic control signals are not justified at the intersections of St David Street at Parkside Drive East/West and Gartshore Street at Forfar Street East/Middleton Avenue.

Recommendations

Based on the findings of this study, it is recommended that the development be considered for approval.

It is further recommended that the road authorities monitor the intersections of St David Street at Parkside Drive East/West and Gartshore Street at Forfar Street East/Middleton Avenue to assess the need for future remedial measures and the intersection of Gartshore Street at Forfar Street East to determine the need for a 15 m northbound left-turn lane.

Contents

Appendices

Figures

Tables

1 Introduction

1.1 Overview

2566201 Ontario Inc. retained Paradigm Transportation Solutions Limited (Paradigm) to conduct this Transportation Impact Study for a proposed development located at 650 Victoria Terrace in Fergus, Ontario. **Figure 1.1** illustrates the location of the subject site.

The study scope was developed in consultation with the Township of Centre Wellington in July 2025 and includes:

- Assessing current traffic and site conditions within the study area;
- Review of the proposed site plan to accommodate design vehicles;
- Forecasting future non-development (background) traffic growth;
- Forecasting site-generated traffic;
- Analysing future traffic impacts on the surrounding road network for five years after the full build-out; and
- Recommending any necessary mitigation to manage future traffic conditions.

Appendix A contains the pre-study consultation email and responses from the Township.

1.2 Study Area

The intersections assessed in this study include:

- Parkside Drive East/Bellamy Crescent and Victoria Terrace;
- Parkside Drive East/West and St David Street North;
- Forfar Street East and Victoria Terrace;
- Forfar Street East and Gzowski Street;
- Forfar Street East/Middleton Avenue and Gartshore Street;
- Strathallan Street and Victoria Terrace;
- Two new connections to Gzowski Street; and
- Three new connections to Victoria Terrace.

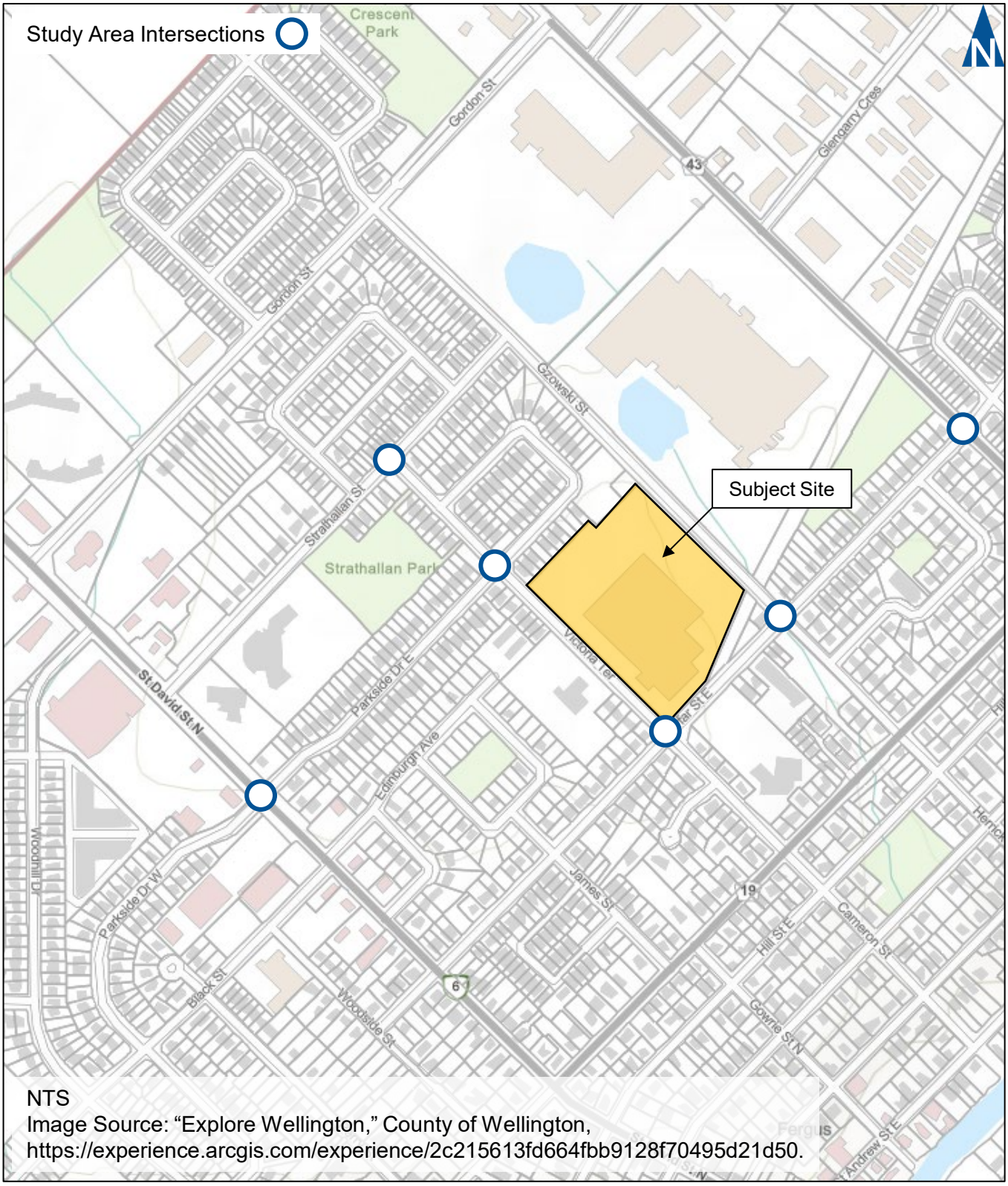

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Image Source: "Explore Wellington," County of Wellington, https://experience.arcgis.com/experience/2c215613fd664fbb9128f70495d21d50.

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Location of Subject Site

650 Victoria Terrace, Fergus TIS
250272

Figure 1.1

2 Existing Conditions

2.1 Road Characteristics

The roadways of interest within the study area include the County of Wellington governed Gartshore Street and the Township of Centre Wellington governed St David Street North, Parkside Drive East/West, Forfar Street East, Victoria Terrace, Gzowski Street, Strathallan Street, Middleton Avenue, and Bellamy Crescent. These roadways are generally described as follows[1,2,3]:

- **Gartshore Street** is a two-lane, 50 km/h arterial road within the study area. Between the Forfar Recreational Trail and Garafraxa Street East, sidewalks are provided on both sides of the roadway. South of Garafraxa Street East, a sidewalk is only provided on the west side of the roadway;
- **St David Street North** is an arterial road and a Ministry of Transportation Ontario (MTO) connecting link within the study area. North of Side Road 19, the speed limit is 60 km/h. South of Side Road 19, the speed limit is 50 km/h although, between the Animal Hospital of North Fergus driveway and Parkside Drive East/West, there is a flashing 40 km/h zone. Sidewalks are provided on both sides of the roadway. North of Edinburgh Avenue/Black Street, the roadway has a three-lane cross-section with a centre Two-Way Left-Turn Lane (TWLTL). South of Edinburgh Avenue/Black Street, the roadway has a two-lane cross-section;
- **Parkside Drive East/West** is a two-lane, 50 km/h local road within the study area. Sidewalks are provided on both sides of the roadway;
- **Forfar Street East** is a two-lane collector road within the study area. A Sidewalk is provided on the south side of the roadway. East of Gzowski Street, the speed limit is 50 km/h. West of Gzowski Street, the speed limit is 40 km/h;
- **Victoria Terrace** is a two-lane, 40 km/h local road within the study area. North of Forfar Street East, a sidewalk is provided on the west side of the roadway. South of Forfar Street East, sidewalks are provided on both sides of the roadway;

[1] WSP, *Township of Centre Wellington Transportation Master Plan Draft Report v.4 Figure 12. Principal roadway classification in Elora and Fergus,* (Elora: Township of Centre Wellington, 2018).
[2] County of Wellington, *Official Plan Schedule B1 – Land Use Centre Wellington,* (Guelph: County of Wellington, 2025).
[3] Ontario Ministry of Transportation, *Connecting Links Program Guide Appendix 2 – Municipalities with Connecting Links,* (Toronto: King's Printer for Ontario, 2022).

- **Gzowski Street** is a two-lane local road within the study area. North of Strathallan Street, the speed limit is assumed to be 50 km/h. South of Strathallan Street, the speed limit is 40 km/h. North of the Forfar Recreational Trail, there are no sidewalks provided on either side of the roadway. South of the Forfar Recreational Trail, a sidewalk is provided on the east side of the roadway;
- **Strathallan Street** is a two-lane, 40 km/h local road within the study area. East of 255 Strathallan Street, sidewalks are provided on both sides of the roadway. West of 255 Strathallan Street, a sidewalk is only provided on the south side of the roadway;
- **Midleton Avenue** is a two-lane, 50 km/h local road within the study area. Between Findlay Way and Gartshore Street, sidewalks are provided on both sides of the roadway. East of Findlay Way, a sidewalk is only provided on the north side of the roadway; and
- **Bellamy Crescent** is a two-lane, 50 km/h local road within the study area. A sidewalk is provided along inner side of the roadway crescent.

Figure 2.1 details the existing traffic control and lane configurations at the study area intersections.

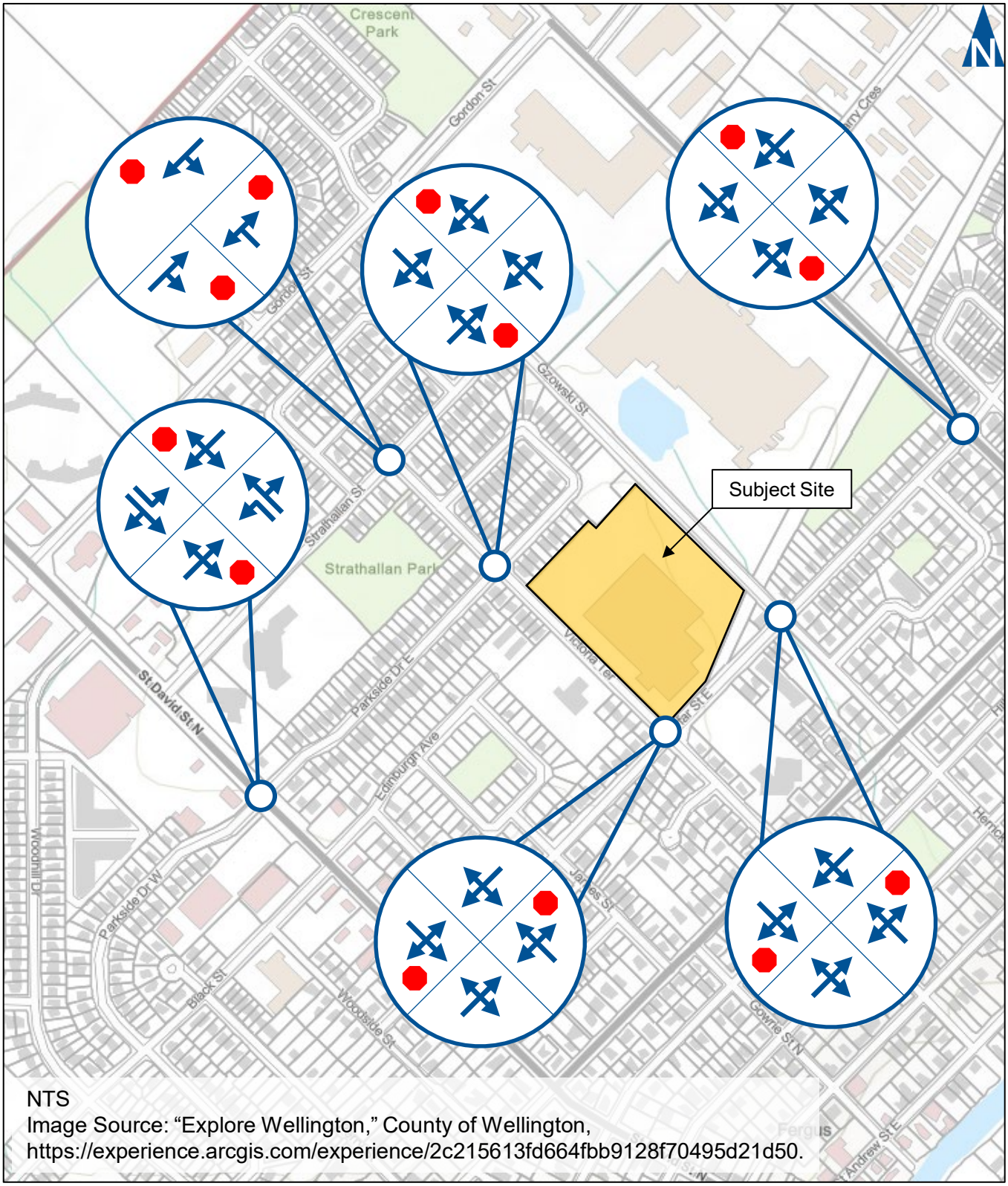

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Image Source: "Explore Wellington," County of Wellington, https://experience.arcgis.com/experience/2c215613fd664fbb9128f70495d21d50.

Existing Lane Configuration and Traffic Control

2.2 Active Transportation

Figure 2.2 and **Figure 2.3** illustrate the active transportation network in the vicinity of the subject site.

The existing trail network includes:

- The Elora Cataract Trailway;
- The Forfar Recreational Trail; and
- Cycle tracks running along St David Street North to the south of Edinburgh Avenue/Black Street.

The proposed future network will include:

- A multi-use path running along St David Street North to the north of Edinburgh Avenue/Black Street;
- Neighbourhood bikeways provided along;
  - Victoria Terrace between Strathallan Street and Forfar Street East;
  - Strathallan Street; and
  - Forfar Street East.
- Cycle lanes provided along:
  - Gzowski Street; and
  - Victoria Terrace to the south of Forfar Street East.

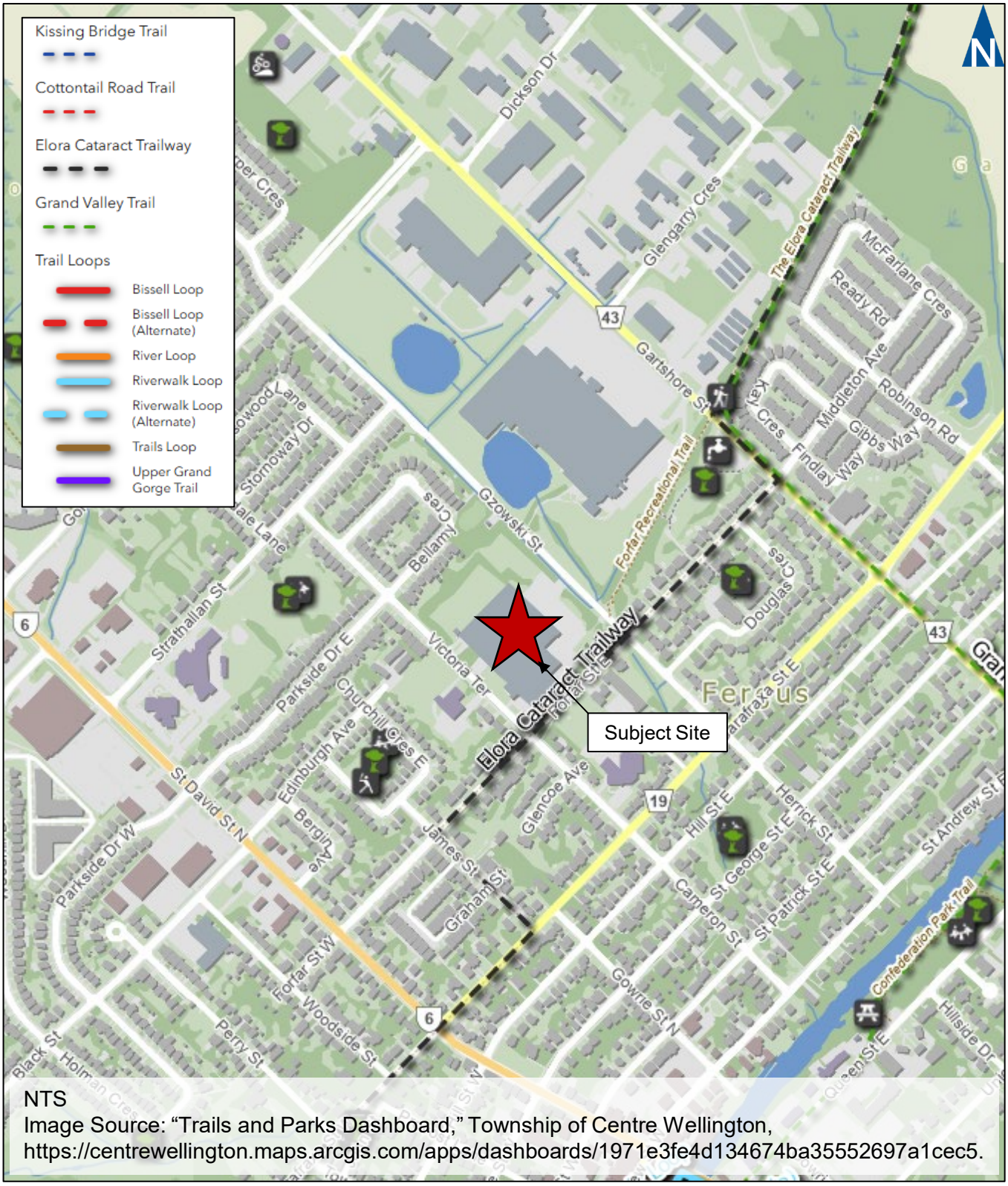

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Image Source: “Trails and Parks Dashboard,” Township of Centre Wellington, https://centrewellington.maps.arcgis.com/apps/dashboards/1971e3fe4d134674ba35552697a1cec5.

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Existing Trail Network

650 Victoria Terrace, Fergus TIS
250272

Figure 2.2

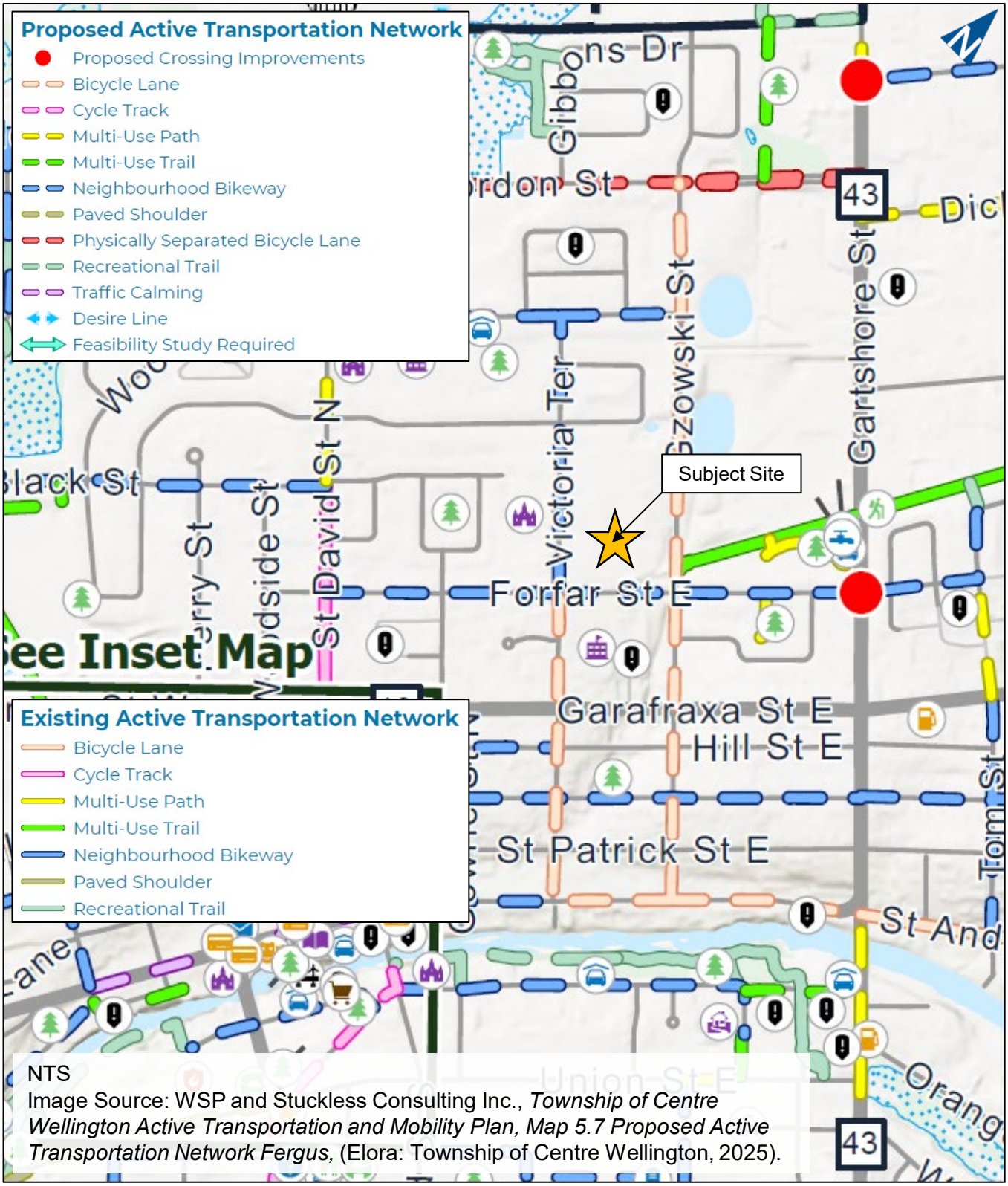

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Image Source: WSP and Stuckless Consulting Inc., *Township of Centre Wellington Active Transportation and Mobility Plan, Map 5.7 Proposed Active Transportation Network Fergus,* (Elora: Township of Centre Wellington, 2025).

Proposed Active Transportation Network

2.3 Transit Service

Guelph Owen Sound Transit[4] operates near the study area travelling between Guelph Central Station and the Owen Sound Transit Terminal. The route operates every day of the week from 7:30 AM to 9:50 AM, 10:40 AM to 1:00 PM, 2:30 PM to 4:50 PM, and 5:30 PM to 7:50 PM.

The closest bus stop is located approximately 2.4 km southeast of subject site (34-minute walk) at 550 Belsyde Avenue East.

[4] "Guelph Owen Sound Transit (GOST)," City of Owen Sound, 2025, https://www.owensound.ca/roads-transportation/public-transit/guelph-owen-sound-transit-gost/.

2.4 Traffic Volumes

Table 2.1 summarizes the location and date of the existing turning movement count (TMC) data and used in this study.

All TMC data was collected by Paradigm except for the intersection of Gartshore Street at Forfar Street East/Middleton Avenue (collected by Triton Engineering Services Limited).

TABLE 2.1: EXISTING COUNT DATA SUMMARY

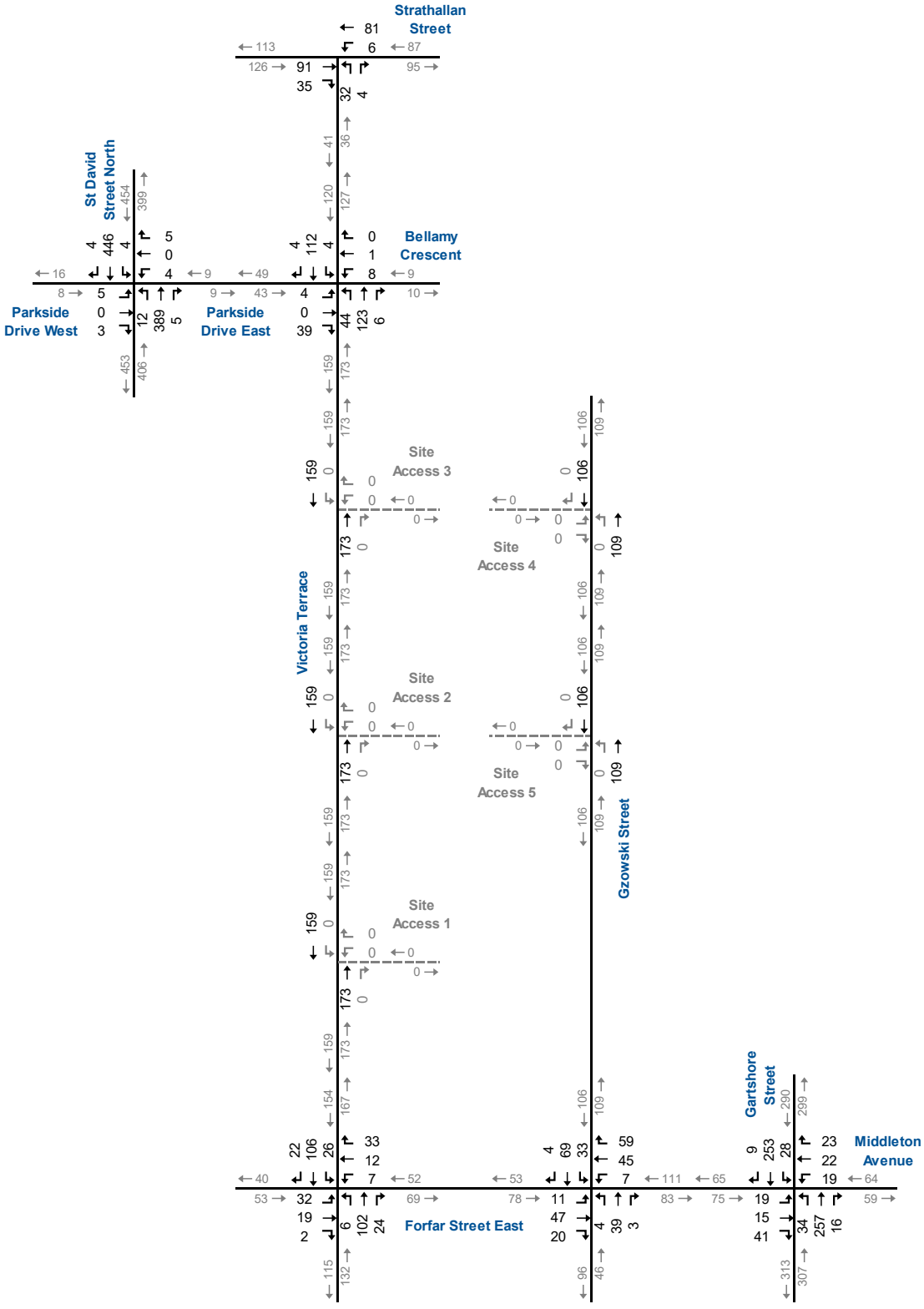
Location	Date
Victoria Terrace at Parkside Drive East/Bellamy Crescent	Wednesday, June 25, 2025
Forfar Street East at Victoria Terrace	Wednesday, June 25, 2025
Forfar Street East at Gzowski Street	Wednesday, June 25, 2025
St David Street North at Parkside Drive East/West	Tuesday, April 16, 2024
Strathallan Street at Victoria Terrace	Wednesday, May 1, 2024
Gartshore Street at Forfar Street East/Middleton Avenue	Wednesday, May 8, 2024

Appendix B contains the observed traffic counts for the study area intersections.

It is noted that the June 2025 TMCs are likely to include increased traffic as St David Street North was closed between Edinburgh Avenue/Black Street and Garafraxa Street East/West.

The TMC data collected before 2025 was factored to a 2025 base year condition with the application of a 2% growth rate per annum.

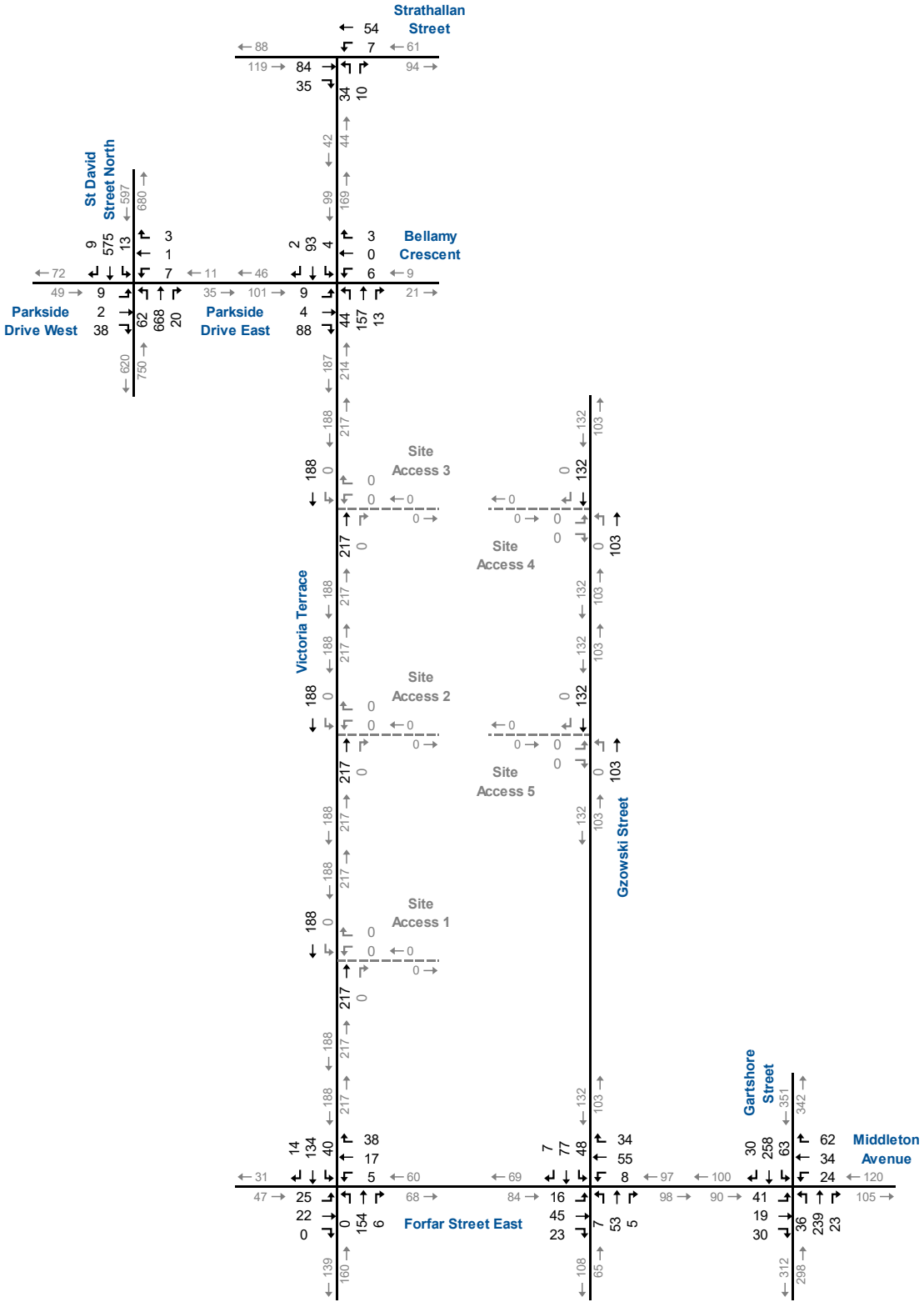
Figure 2.4 and **Figure 2.5** illustrate the adjusted base year weekday AM and PM peak hour traffic volumes.



Base Year Traffic Volumes (AM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

Figure 2.4



Base Year Traffic Volumes (PM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

Figure 2.5

2.5 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 the 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 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 of the study intersections were evaluated using the existing lane configurations, traffic controls, and the base year traffic peak hour volumes.

The level of service conditions on the existing road network have been assessed using Synchro 12. As noted in Wellington County TIS guidelines[5], movements are considered critical under the following conditions:

- Volume/capacity ratios for overall intersection operations, through movements or shared through/turning movements increased to 0.85 or above (signalized intersections);
- V/C ratios for dedicated turning movements that exceed 0.90 (signalized intersections);
- LOS E or F for the global performance at unsignalized intersections; and
- 95th percentile queue lengths for individual movements exceed available lane storage.

Table 2.2 and **Table 2.3** summarizes the existing intersection operations. The entries in the table indicating the AM and PM peak hour level of service (LOS), volume to capacity ratios (V/C), and 95th percentile queues experienced.

[5] Dillon Consulting, *Wellington County Road Action Master Plan: Appendix G Traffic Impact Study Guidelines,* (Guelph: Wellington County, 2021).

All study area intersections are currently operating at acceptable levels of service during the weekday AM peak hour and weekday PM peak hour with the following critical movement noted:

- The westbound approach at the intersection of St David Street North and Parkside Drive East/West is forecast to operate at LOS E during the PM peak hour.

Appendix C contains the detailed Synchro reports.

TABLE 2.2: BASE YEAR OPERATIONS (AM PEAK HOUR)

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	St David Street North & Parkside Drive East/West	TWSC	LOS	<	C	>	C	<	C	>	C	A	A	A	A	A	A	A	A	
			Delay	<	18	>	18	<	16	>	16	9	0	0	0	8	0	0	0	
			V/C	<	0.03	>		<	0.03	>		0.01	0.00	0.00		0.00	0.00	0.00		
			Q	<	1	>		<	1	>		0	0	0		0	0	0		
			Stor.	<	-	>		<	-	>		15	-	-		15	-	-		
			Avail.	<	-	>		<	-	>		15	-	-		15	-	-		
	Victoria Terrace & Parkside Drive East/Bellamy Crescent	TWSC	LOS	<	B	>	B	<	B	>	B	A	A	A	A	A	A	A	A	
			Delay	<	10	>	10	<	12	>	12	8	0	0	2	8	0	0	0	
			V/C	<	0.07	>		<	0.02	>		0.04	0.00	0.00		0.00	0.00	0.00		
			Q	<	2	>		<	1	>		1	0	0		0	0	0		
	Victoria Terrace & Forfar Street East	TWSC	LOS	A	A	A	A	A	A	A	A	<	B	>	B	<	B	>	B	
			Delay	7	0	0	4	8	0	0	1	<	13	>	13	<	13	>	13	
			V/C	0.03	0.00	0.00		0.01	0.00	0.00		<	0.26	>		<	0.30	>		
			Q	1	0	0		0	0	0		<	8	>		<	10	>		
	Gzowski Street & Forfar Street East	TWSC	LOS	A	A	A	A	A	A	A	A	<	B	>	B	<	B	>	B	
			Delay	8	0	0	1	8	0	0	0	<	12	>	12	<	13	>	13	
			V/C	0.01	0.00	0.00		0.01	0.00	0.00		<	0.11	>		<	0.24	>		
			Q	0	0	0		0	0	0		<	3	>		<	7	>		
	Victoria Terrace & Strathallan Street	AWSC	LOS		A	>	A	<	A		A		A	>	A					
			Delay		8	>	8	<	8		8		8	>	8					
			V/C		0.19	>		<	0.14				0.06	>						
			Q		5	>		<	4				2	>						
	Gartshore Street & Forfar Street East/Middleton Avenue	TWSC	LOS	<	B	>	B	<	C	>	C	A	A	A	A	A	A	A	A	
			Delay	<	15	>	15	<	16	>	16	8	0	0	1	8	0	0	1	
			V/C	<	0.18	>		<	0.18	>		0.03	0.00	0.00		0.02	0.00	0.00		
			Q	<	5	>		<	4	>		1	0	0		1	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)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared Movement

TABLE 2.3: BASE YEAR OPERATIONS (PM PEAK HOUR)

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	
PM Peak Hour	St David Street North & Parkside Drive East/West	TWSC	LOS	<	D	>	D	<	E	>	E	A	A	A	A	A	A	A	A	
			Delay	<	27	>	27	<	49	>	49	9	0	0	1	9	0	0	0	
			V/C	<	0.25	>		<	0.13	>		0.08	0.00	0.00		0.02	0.00	0.00		
			Q	<	7	>		<	3	>		2	0	0		1	0	0		
			Stor.	<	-	>		<	-	>		15	-	-		15	-	-		
			Avail.	<	-	>		<	-	>		13	-	-		14	-	-		
	Victoria Terrace & Parkside Drive East/Bellamy Crescent	TWSC	LOS	<	A	>	A	<	B	>	B	A	A	A	A	A	A	A	A	
			Delay	<	10	>	10	<	11	>	11	8	0	0	2	8	0	0	0	
			V/C	<	0.13	>		<	0.02	>		0.03	0.00	0.00		0.00	0.00	0.00		
			Q	<	3	>		<	1	>		1	0	0		0	0	0		
	Victoria Terrace & Forfar Street East	TWSC	LOS	A	A	A	A	A	A	A	A	<	B	>	B	<	B	>	B	
			Delay	7	0	0	4	7	0	0	1	<	12	>	12	<	13	>	13	
			V/C	0.02	0.00	0.00		0.00	0.00	0.00		<	0.26	>		<	0.32	>		
			Q	1	0	0		0	0	0		<	8	>		<	10	>		
	Gzowski Street & Forfar Street East	TWSC	LOS	A	A	A	A	A	A	A	A	<	B	>	B	<	B	>	B	
			Delay	7	0	0	1	8	0	0	1	<	12	>	12	<	13	>	13	
			V/C	0.01	0.00	0.00		0.01	0.00	0.00		<	0.14	>		<	0.27	>		
			Q	0	0	0		0	0	0		<	4	>		<	8	>		
	Victoria Terrace & Strathallan Street	AWSC	LOS		A	>	A	<	A		A		A	>	A					
			Delay		8	>	8	<	8		8		8	>	8					
			V/C		0.18	>		<	0.1				0.08	>						
			Q		5	>		<	2				2	>						
	Gartshore Street & Forfar Street East/Middleton Avenue	TWSC	LOS	<	C	>	C	<	C	>	C	A	A	A	A	A	A	A	A	
			Delay	<	23	>	23	<	20	>	20	8	0	0	1	8	0	0	1	
			V/C	<	0.33	>		<	0.35	>		0.03	0.00	0.00		0.06	0.00	0.00		
			Q	<	10	>		<	11	>		1	0	0		2	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)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared Movement

3 Development Concept

3.1 Development Description

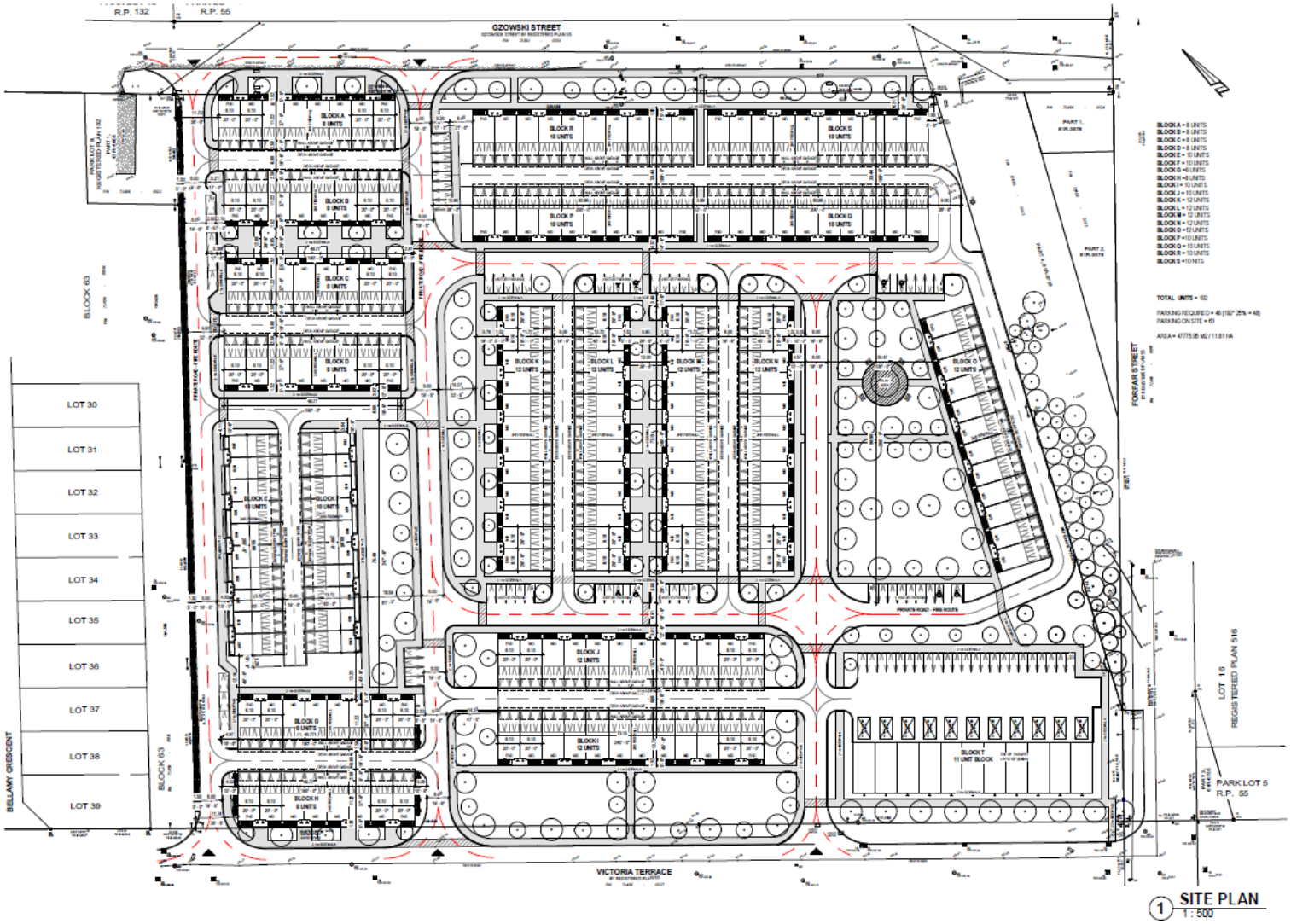
The subject site is located at 650 Victoria Terrace in Fergus, Ontario.

The subject site is proposed to be developed into 192 townhouse units plus 11 commercial/light industrial units with a combined area of 19,250 ft^2.

Vehicle access is proposed via two driveway connections to Gzowski Street and three driveway connections to Victoria Terrace.

The full build-out is assumed to be completed by 2029.

Figure 3.1 shows the proposed concept plan.



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Concept Plan

650 Victoria Terrace, Fergus TIS
250272

Figure 3.1

3.2 Site Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation manual[6] methods forecast site-generated trips. Land Use Code (LUC) 110 – General Light Industrial and LUC 215 – Single-Family Attached Housing were used to estimate the site trip generation.

As indicated by the low r^2 values for the weekday AM and weekday PM peak hours, the equations for LUC 110 have a poor fit and the average rates were used instead.

Table 3.1 summarizes the forecast site-generated trips indicating 108 AM peak hour and 124 PM peak hour trips. No reductions for alternative modes of transportation were used in the calculation.

TABLE 3.1: FORECAST SITE-GENERATED TRIPS

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
LUC 110 – 19,250 ft²	13	1	**14**	2	11	**13**
LUC 215 – 192 Units	24	70	**94**	66	45	**111**
Total Generation	**37**	**71**	**108**	**68**	**56**	**124**

LUC 110: AM – Average Rate = 0.74 | PM – Average Rate = 0.65
LUC 215: AM – T = 0.52(X) - 5.70 | PM – T = 0.60(X) - 3.93

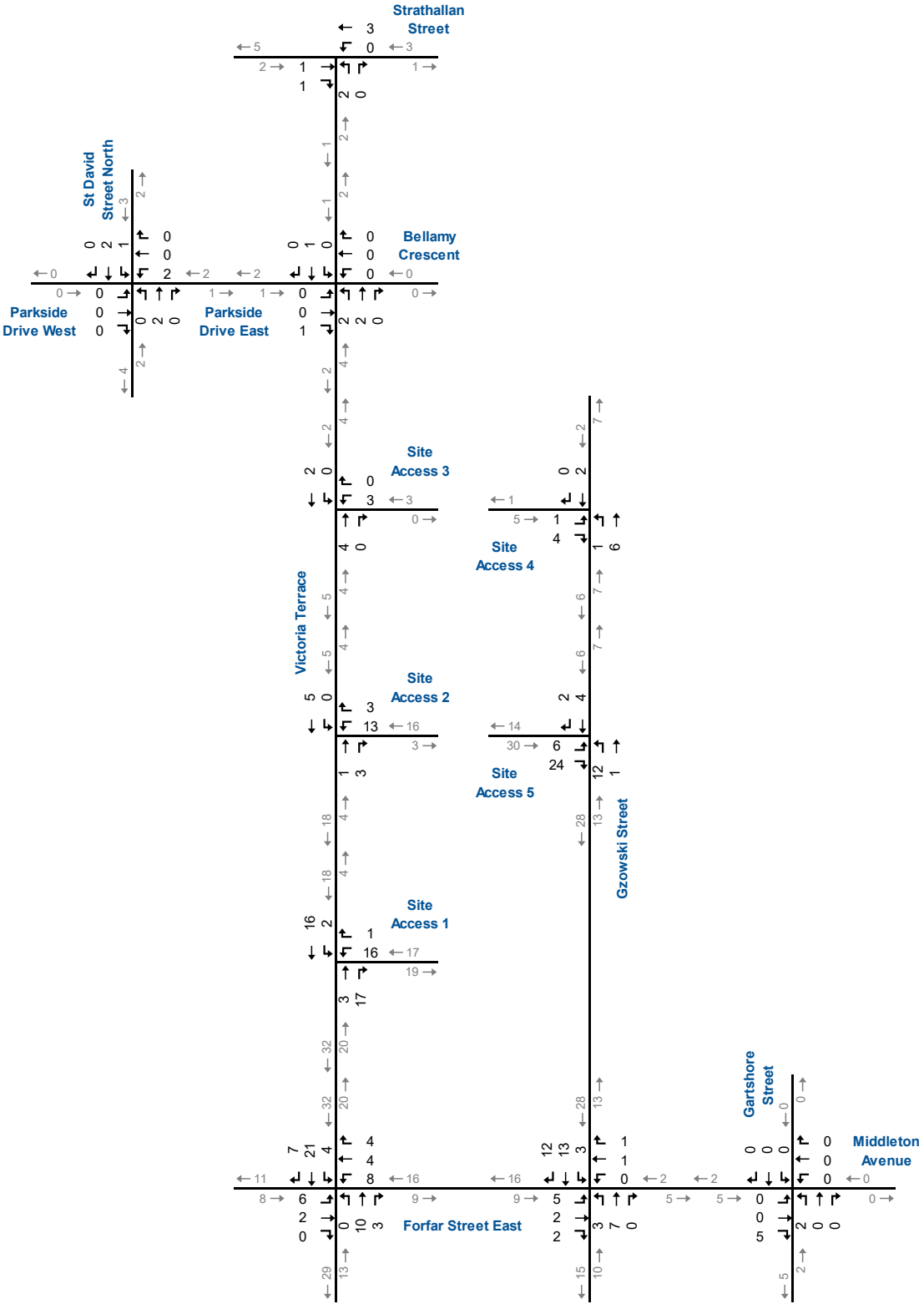
The trip assignment used for this study was based on the existing travel behaviour from the adjacent residential area and the 2022 Transportation Tomorrow Survey (TTS) data. The trip assignment for this study is appropriate for this study because most trips travel to/from locations with urbanized development. **Table 3.2** summarizes the estimated trip assignment.

Figure 3.2 and **Figure 3.3** illustrate the site-generated traffic for the AM and PM peak hours.

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

TABLE 3.2: TRIP ASSIGNMENT

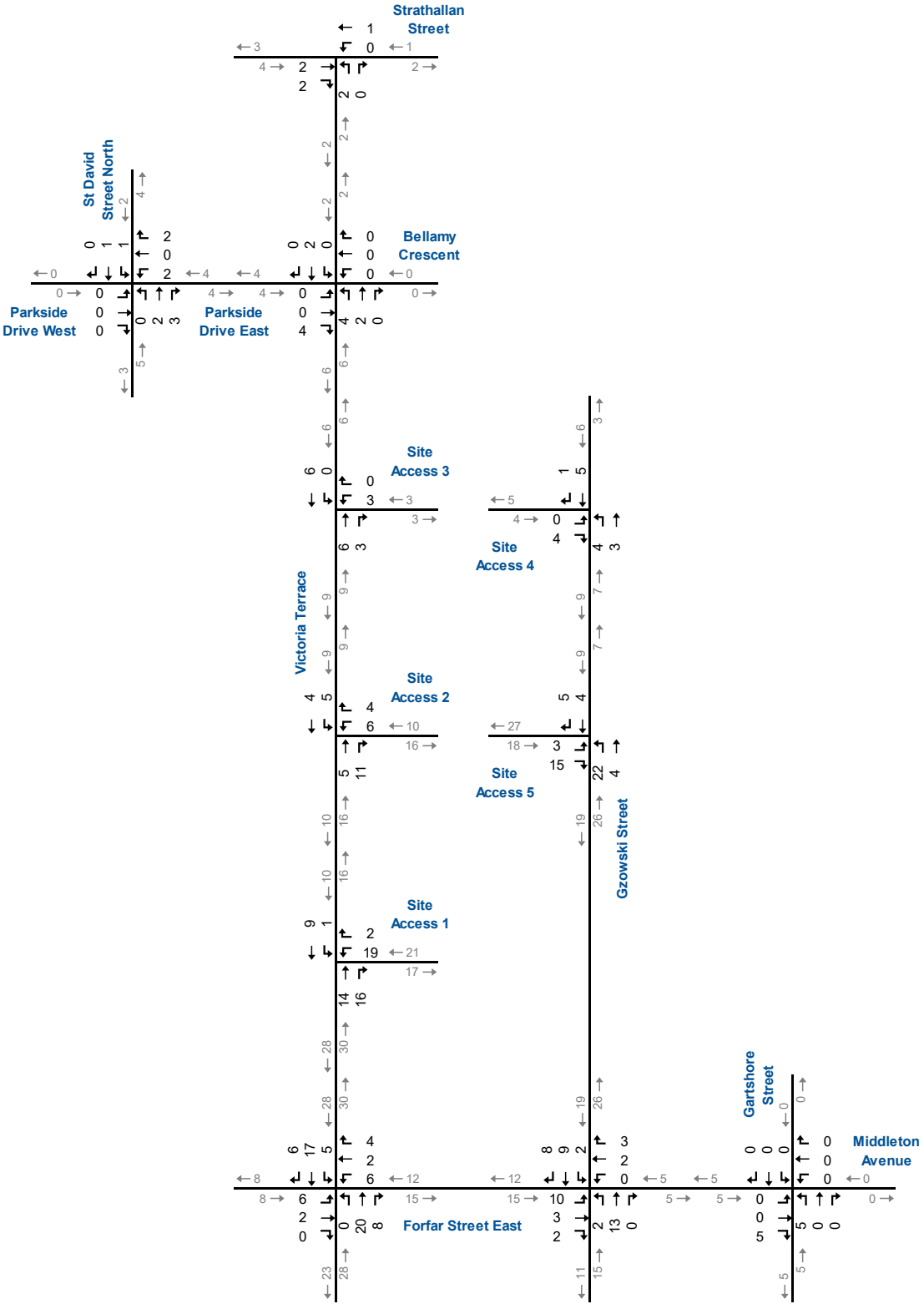
Origin/Destination	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
North via Gzowski Street	3%	6%	6%	4%
North via St David Street North	14%	10%	9%	12%
South via St David Street North	16%	15%	15%	14%
South via Gartshore Street	5%	7%	7%	9%
South via Victoria Terrace	35%	41%	41%	41%
South via Gzowski Street	27%	21%	22%	20%
Total	**100%**	**100%**	**100%**	**100%**



Site-Generated Traffic Volumes (AM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

Figure 3.2



Site-Generated Traffic Volumes (PM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

Figure 3.3

4 Future Conditions

The assessment of the future traffic conditions contained in this section includes the future traffic forecasts as an intersection operational analysis. A five year horizon (2034) from the date of the full build-out (2029) has been assessed to determine the impact of the subject site.

4.1 Road Improvements

As indicated by Township staff, Forfar Street East and Gzowski Street are scheduled for future infrastructure upgrades. However, it is assumed that the proposed infrastructure upgrades along Forfar Street East and Gzowski Street won't include any modifications to the existing lane configurations and traffic control at the following intersections:

- Forfar Street East and Victoria Terrace; and
- Forfar Street East and Gzowski Street.

It is also noted that the construction of the proposed infrastructure upgrades along Forfar Street East are expected to occur in 2028 and could impact vehicular travel. However, it is assumed that the proposed development at 650 Victoria Terrace could be fully built-out after the Forfar Street East improvements. Therefore, it is not anticipated that the future construction along Forfar Street East will impact travel to/from the proposed development after the initial date of full occupancy.

4.2 Forecast Traffic

Future background traffic volumes reflect an annual growth rate of 2.0% applied to the existing volumes as directed by Township of Centre Wellington staff.

In addition to the generalized background traffic growth, the following development was included in the background traffic volumes:

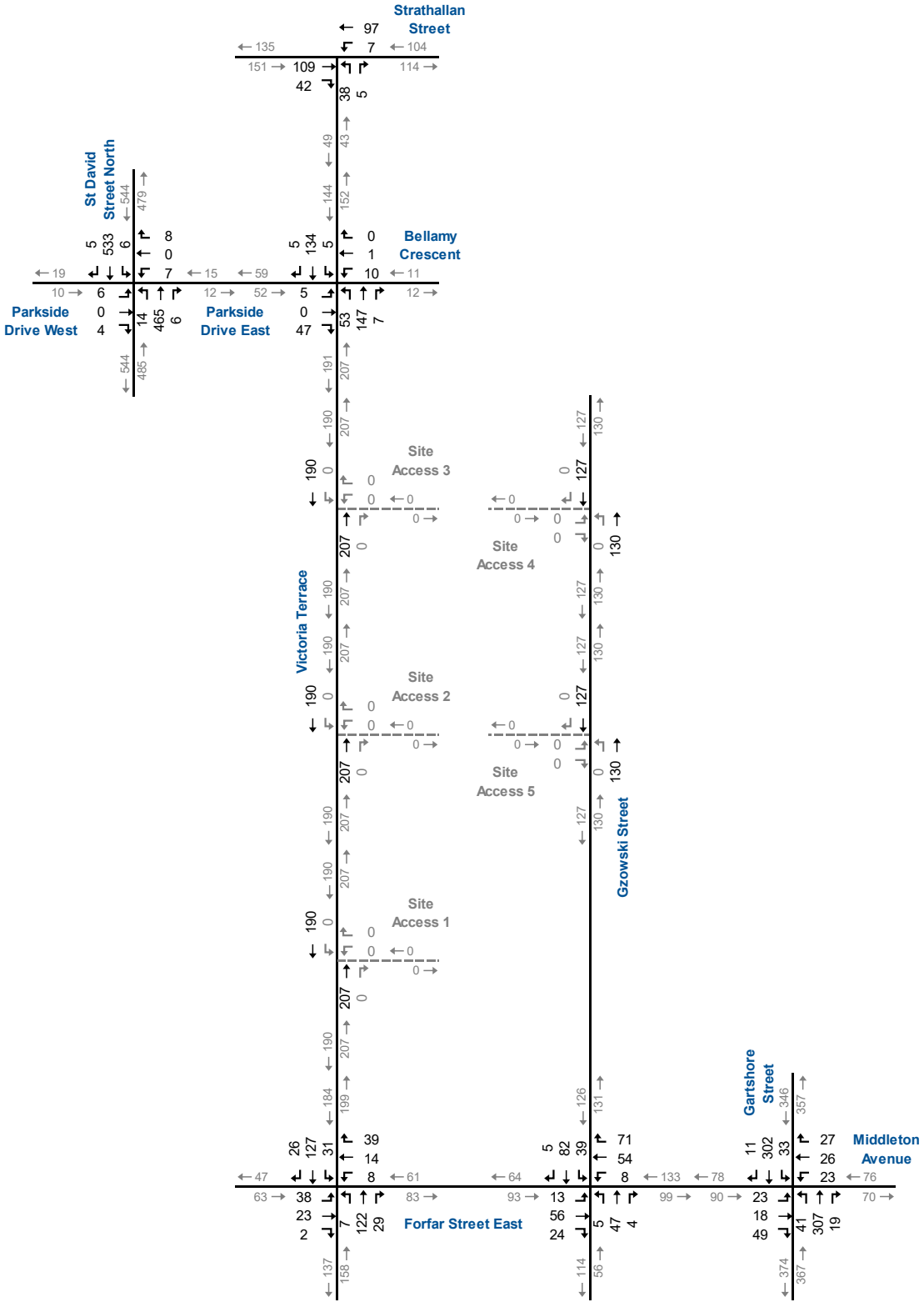
- 750 St David Street North[7]: The residential development is located west of the subject site in the northeast corner of the St David Street North and Parkside Drive East/West intersection. The development is proposed to consist of 12 to 20 stacked townhouses and is forecast to generate 5 and 8 trips during the AM and PM peak hours, respectively.

[7] Paradigm Transportation Solutions Limited, *750 St. David Street North, Fergus, ON Transportation Impact Assessment,* (Cambridge: PTSL, 2024).

Appendix D contains the future background development traffic volumes.

Figure 4.1 and **Figure 4.2** illustrates the forecast background traffic volumes for the weekday AM and weekday PM peak hours.

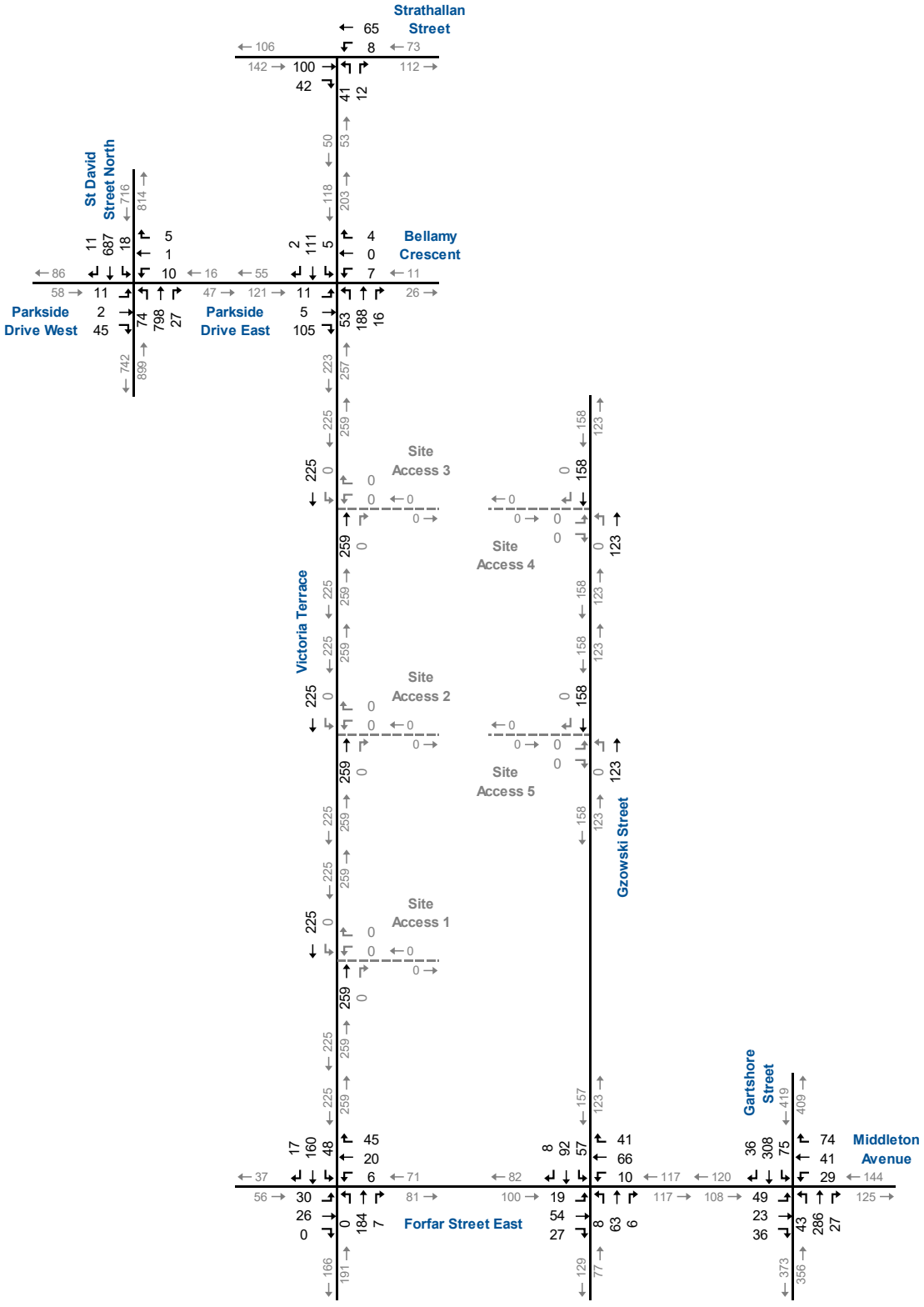
Figure 4.3 and **Figure 4.4** illustrates the forecast total (background + site traffic) traffic volumes for the weekday AM and weekday PM peak hours.



Background Traffic Volumes (AM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

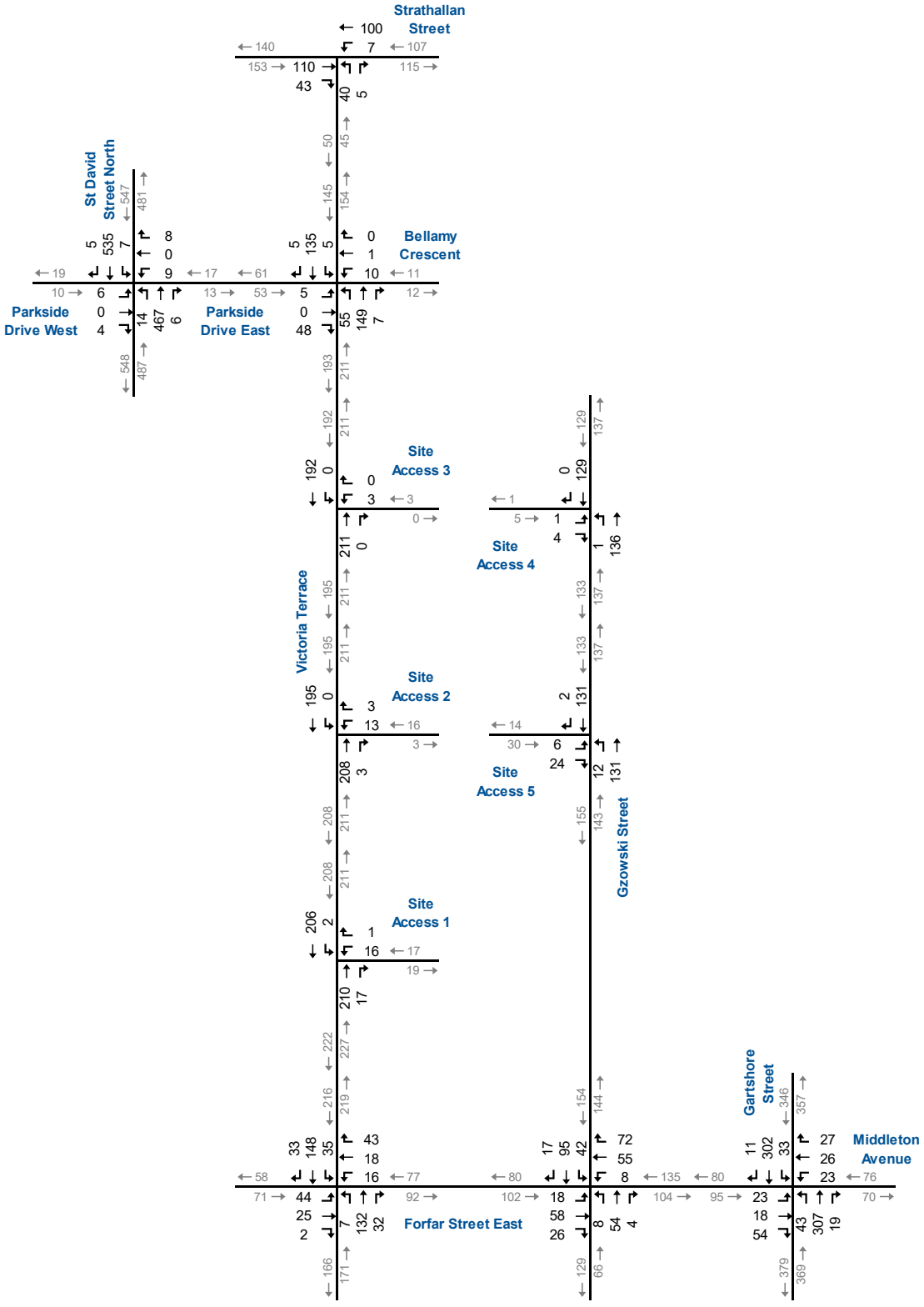
Figure 4.1



Background Traffic Volumes (PM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

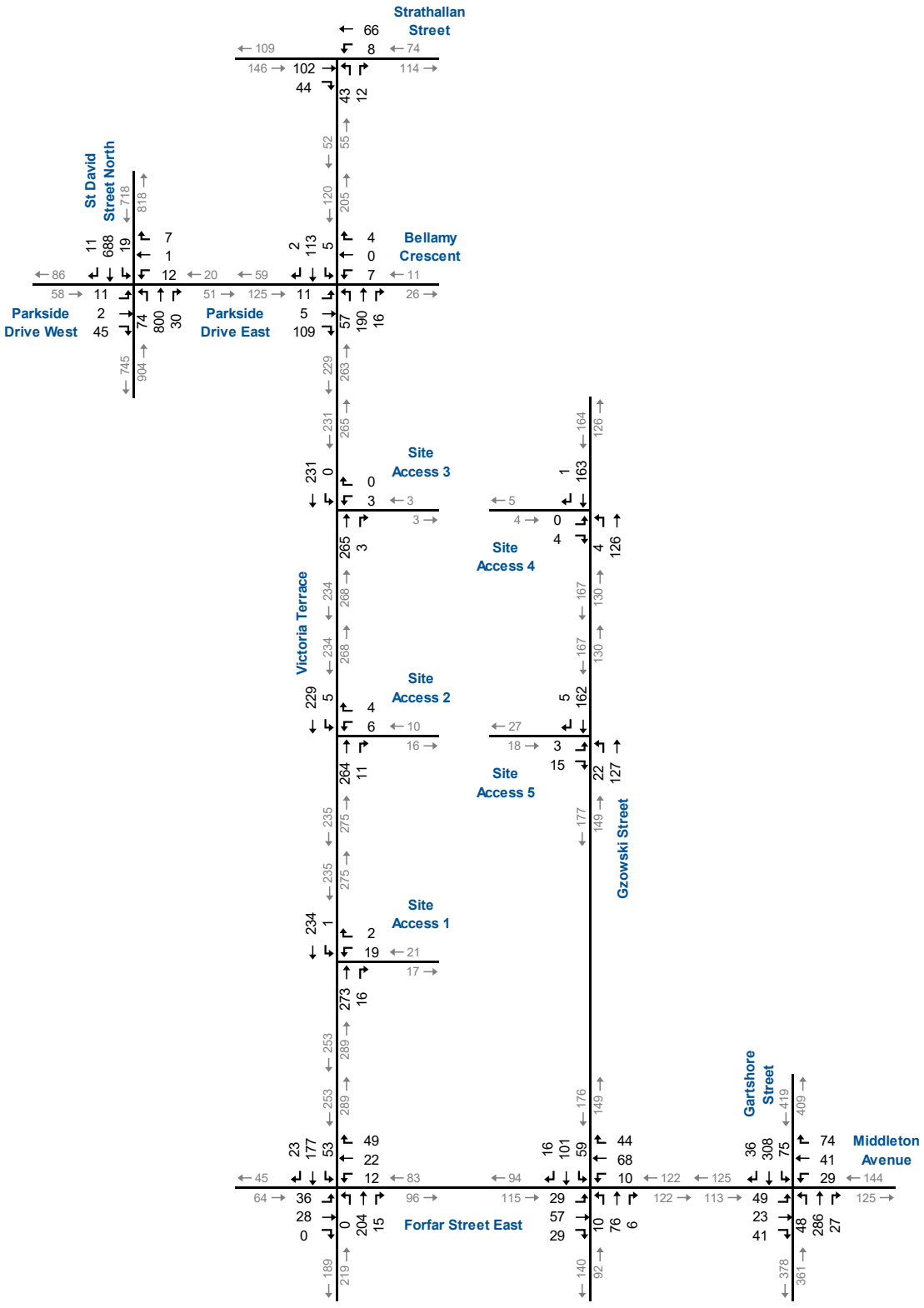
Figure 4.2



Total Traffic Volumes (AM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

Figure 4.3



Total Traffic Volumes (PM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

Figure 4.4

4.3 Background Traffic Operations

The operations at the study area intersections for the forecast background traffic scenario followed the same methodology used for base year traffic conditions. **Table 4.1** and **Table 4.2** summarize the five-year background traffic level of service conditions.

The study intersections are forecast to operate at acceptable levels of service during the weekday AM peak hour and weekday PM peak hour with the following critical movements noted:

- St David Street North at Parkside Drive East/West:
  - The eastbound approach is forecast to operate at LOS E during the PM peak hour; and
  - The westbound approach is forecast to operate at LOS F during the PM peak hour (critical under existing traffic conditions).
- Gartshore Street and Forfar Street East:
  - The eastbound approach is forecast to operate at LOS E during the PM peak hour.

Appendix E contains the detailed Synchro reports.

TABLE 4.1: BACKGROUND OPERATIONS (AM PEAK HOUR)

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	St David Street North & Parkside Drive East/West	TWSC	LOS	<	C	>	C	<	C	>	C	A	A	A	A	A	A	A	A	
			Delay	<	22	>	22	<	20	>	20	9	0	0	0	8	0	0	0	
			V/C	<	0.05	>		<	0.07	>		0.02	0.00	0.00		0.01	0.00	0.00		
			Q	<	2	>		<	2	>		1	0	0		0	0	0		
			Stor.	<	-	>		<	-	>		15	-	-		15	-	-		
			Avail.	<	-	>		<	-	>		14	-	-		15	-	-		
	Victoria Terrace & Parkside Drive East/Bellamy Crescent	TWSC	LOS	<	B	>	B	<	B	>	B	A	A	A	A	A	A	A	A	
			Delay	<	11	>	11	<	14	>	14	8	0	0	2	8	0	0	0	
			V/C	<	0.09	>		<	0.03	>		0.05	0.00	0.00		0.00	0.00	0.00		
			Q	<	2	>		<	1	>		2	0	0		0	0	0		
	Victoria Terrace & Forfar Street East	TWSC	LOS	A	A	A	A	A	A	A	A	<	B	>	B	<	B	>	B	
			Delay	7	0	0	4	8	0	0	1	<	14	>	14	<	15	>	15	
			V/C	0.03	0.00	0.00		0.01	0.00	0.00		<	0.33	>		<	0.38	>		
			Q	1	0	0		0	0	0		<	10	>		<	14	>		
	Gzowski Street & Forfar Street East	TWSC	LOS	A	A	A	A	A	A	A	A	<	B	>	B	<	B	>	B	
			Delay	8	0	0	1	8	0	0	0	<	13	>	13	<	14	>	14	
			V/C	0.01	0.00	0.00		0.01	0.00	0.00		<	0.14	>		<	0.31	>		
			Q	0	0	0		0	0	0		<	4	>		<	10	>		
	Victoria Terrace & Strathallan Street	AWSC	LOS		A	>	A	<	A		A		A	>	A					
			Delay		8	>	8	<	8		8		8	>	8					
			V/C		0.23	>		<	0.16				0.08	>						
			Q		7	>		<	5				2	>						
	Gartshore Street & Forfar Street East/Middleton Avenue	TWSC	LOS	<	C	>	C	<	C	>	C	A	A	A	A	A	A	A	A	
			Delay	<	19	>	19	<	20	>	20	8	0	0	1	8	0	0	1	
			V/C	<	0.27	>		<	0.26	>		0.04	0.00	0.00		0.03	0.00	0.00		
			Q	<	8	>		<	8	>		1	0	0		1	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)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared Movement

TABLE 4.2: BACKGROUND OPERATIONS (PM PEAK HOUR)

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	
PM Peak Hour	St David Street North & Parkside Drive East/West	TWSC	LOS	<	E	>	**E**	<	F	>	**F**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	49	>	**49**	<	100	>	**100**	10	0	0	**1**	10	0	0	**0**	
			V/C	<	0.45	>		<	0.33	>		0.10	0.00	0.00		0.03	0.00	0.00		
			Q	<	15	>		<	9	>		2	0	0		1	0	0		
			Stor.	<	-	>		<	-	>		15	-	-		15	-	-		
			Avail.	<	-	>		<	-	>		13	-	-		14	-	-		
	Victoria Terrace & Parkside Drive East/Bellamy Crescent	TWSC	LOS	<	B	>	**B**	<	B	>	**B**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	10	>	**10**	<	12	>	**12**	8	0	0	**2**	8	0	0	**0**	
			V/C	<	0.16	>		<	0.02	>		0.04	0.00	0.00		0.01	0.00	0.00		
			Q	<	4	>		<	1	>		1	0	0		0	0	0		
	Victoria Terrace & Forfar Street East	TWSC	LOS	A	A	A	**A**	A	A	A	**A**	<	B	>	**B**	<	B	>	**B**	
			Delay	7	0	0	**4**	7	0	0	**1**	<	13	>	**13**	<	15	>	**15**	
			V/C	0.02	0.00	0.00		0.00	0.00	0.00		<	0.33	>		<	0.41	>		
			Q	1	0	0		0	0	0		<	10	>		<	15	>		
	Gzowski Street & Forfar Street East	TWSC	LOS	A	A	A	**A**	A	A	A	**A**	<	B	>	**B**	<	B	>	**B**	
			Delay	8	0	0	**1**	8	0	0	**1**	<	13	>	**13**	<	15	>	**15**	
			V/C	0.02	0.00	0.00		0.01	0.00	0.00		<	0.17	>		<	0.34	>		
			Q	0	0	0		0	0	0		<	4	>		<	11	>		
	Victoria Terrace & Strathallan Street	AWSC	LOS		A	>	**A**	<	A		**A**		A	>	**A**					
			Delay		8	>	**8**	<	8		**8**		8	>	**8**					
			V/C		0.22	>		<	0.13				0.09	>						
			Q		6	>		<	3				2	>						
	Gartshore Street & Forfar Street East/Middleton Avenue	TWSC	LOS	<	E	>	**E**	<	D	>	**D**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	40	>	**40**	<	30	>	**30**	8	0	0	**1**	8	0	0	**1**	
			V/C	<	0.55	>		<	0.53	>		0.04	0.00	0.00		0.07	0.00	0.00		
			Q	<	22	>		<	22	>		1	0	0		2	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)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared Movement

4.4 Total Traffic Operations

The operations at the study area intersections for the forecast background traffic scenario followed the same methodology used for base year and background traffic conditions. **Table 4.3** and **Table 4.4** summarize the five-year total traffic level of service conditions.

The study intersections are forecast to operate at acceptable levels of service during the weekday AM peak hour and the weekday PM peak hour with the same critical movements as noted under background conditions.

With the addition of the site generated traffic volumes, the approach delays increase by six seconds or less during the AM and PM peak hours.

Appendix F contains the detailed Synchro reports.

TABLE 4.3: TOTAL OPERATIONS (AM PEAK HOUR)

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	St David Street North & Parkside Drive East/West	TWSC	LOS	<	C	>	**C**	<	C	>	**C**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	22	>	**22**	<	21	>	**21**	9	0	0	**0**	8	0	0	**0**	
			V/C	<	0.05	>		<	0.08	>		0.02	0.00	0.00		0.01	0.00	0.00		
			Q	<	2	>		<	2	>		1	0	0		0	0	0		
			Stor.	<	-	>		<	-	>		15	-	-		15	-	-		
			Avail.	<	-	>		<	-	>		14	-	-		15	-	-		
	Victoria Terrace & Parkside Drive East/Bellamy Crescent	TWSC	LOS	<	B	>	**B**	<	B	>	**B**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	11	>	**11**	<	14	>	**14**	8	0	0	**2**	8	0	0	**0**	
			V/C	<	0.09	>		<	0.03	>		0.05	0.00	0.00		0.00	0.00	0.00		
			Q	<	2	>		<	1	>		2	0	0		0	0	0		
	Victoria Terrace & Forfar Street East	TWSC	LOS	A	A	A	**A**	A	A	A	**A**	<	C	>	**C**	<	C	>	**C**	
			Delay	8	0	0	**5**	8	0	0	**2**	<	16	>	**16**	<	18	>	**18**	
			V/C	0.04	0.00	0.00		0.01	0.00	0.00		<	0.38	>		<	0.48	>		
			Q	1	0	0		0	0	0		<	14	>		<	20	>		
	Gzowski Street & Forfar Street East	TWSC	LOS	A	A	A	**A**	A	A	A	**A**	<	B	>	**B**	<	C	>	**C**	
			Delay	8	0	0	**1**	8	0	0	**0**	<	13	>	**13**	<	15	>	**15**	
			V/C	0.02	0.00	0.00		0.01	0.00	0.00		<	0.17	>		<	0.38	>		
			Q	1	0	0		0	0	0		<	4	>		<	14	>		
	Victoria Terrace & Strathallan Street	AWSC	LOS		A	>	**A**	<	A		**A**		A	>	**A**					
			Delay		8	>	**8**	<	8		**8**		8	>	**8**					
			V/C		0.23	>		<	0.17				0.08	>						
			Q		7	>		<	5				2	>						
	Gartshore Street & Forfar Street East/Middleton Avenue	TWSC	LOS	<	C	>	**C**	<	C	>	**C**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	18	>	**18**	<	20	>	**20**	8	0	0	**1**	8	0	0	**1**	
			V/C	<	0.28	>		<	0.26	>		0.04	0.00	0.00		0.03	0.00	0.00		
			Q	<	8	>		<	8	>		1	0	0		1	0	0		
	Victoria Terrace & Site Access 1	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					12		>	**12**		0	0	**0**	8	0		**0**	
			V/C					0.03		>			0.00	0.00		0.00	0.00			
			Q					1		>			0	0		0	0			
	Victoria Terrace & Site Access 2	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					11		>	**11**		0	0	**0**	0	0		**0**	
			V/C					0.03		>			0.00	0.00		0.00	0.00			
			Q					1		>			0	0		0	0			
	Victoria Terrace & Site Access 3	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					11		>	**11**		0	0	**0**	0	0		**0**	
			V/C					0.01		>			0.00	0.00		0.00	0.00			
			Q					0		>			0	0		0	0			
	Gzowski Street & Site Access 4	TWSC	LOS	A		>	**A**					A	A		**A**		A	A	**A**	
			Delay	9		>	**9**					8	0		**0**		0	0	**0**	
			V/C	0.01		>						0.00	0.00				0.00	0.00		
			Q	0		>						0	0				0	0		
	Gzowski Street & Site Access 5	TWSC	LOS	A		>	**A**					A	A		**A**		A	A	**A**	
			Delay	9		>	**9**					8	0		**1**		0	0	**0**	
			V/C	0.04		>						0.01	0.00				0.00	0.00		
			Q	1		>						0	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)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared Movement

TABLE 4.4: TOTAL OPERATIONS (PM PEAK HOUR)

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
PM Peak Hour	St David Street North & Parkside Drive East/West	TWSC	LOS	<	E	>	**E**	<	F	>	**F**	A	A	A	**A**	B	A	A	**A**	
			Delay	<	50	>	**50**	<	106	>	**106**	10	0	0	**1**	10	0	0	**0**	
			V/C	<	0.46	>		<	0.40	>		0.10	0.00	0.00		0.03	0.00	0.00		
			Q	<	16	>		<	11	>		2	0	0		1	0	0		
			Stor.	<	-	>		<	-	>		15	-	-		15	-	-		
			Avail.	<	-	>		<	-	>		13	-	-		14	-	-		
	Victoria Terrace & Parkside Drive East/Bellamy Crescent	TWSC	LOS	<	B	>	**B**	<	B	>	**B**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	10	>	**10**	<	12	>	**12**	8	0	0	**2**	8	0	0	**0**	
			V/C	<	0.17	>		<	0.02	>		0.04	0.00	0.00		0.01	0.00	0.00		
			Q	<	4	>		<	1	>		1	0	0		0	0	0		
	Victoria Terrace & Forfar Street East	TWSC	LOS	A	A	A	**A**	A	A	A	**A**	<	B	>	**B**	<	C	>	**C**	
			Delay	7	0	0	**4**	7	0	0	**1**	<	14	>	**14**	<	17	>	**17**	
			V/C	0.03	0.00	0.00		0.01	0.00	0.00		<	0.39	>		<	0.50	>		
			Q	1	0	0		0	0	0		<	14	>		<	21	>		
	Gzowski Street & Forfar Street East	TWSC	LOS	A	A	A	**A**	A	A	A	**A**	<	B	>	**B**	<	C	>	**C**	
			Delay	8	0	0	**2**	8	0	0	**1**	<	14	>	**14**	<	16	>	**16**	
			V/C	0.03	0.00	0.00		0.01	0.00	0.00		<	0.22	>		<	0.41	>		
			Q	1	0	0		0	0	0		<	6	>		<	15	>		
	Victoria Terrace & Strathallan Street	AWSC	LOS		A	>	**A**	<	A		**A**		A	>	**A**					
			Delay		8	>	**8**	<	8		**8**		8	>	**8**					
			V/C		0.23	>		<	0.13				0.10	>						
			Q		6	>		<	3				2	>						
	Gartshore Street & Forfar Street East/Middleton Avenue	TWSC	LOS	<	E	>	**E**	<	D	>	**D**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	42	>	**42**	<	31	>	**31**	8	0	0	**1**	8	0	0	**1**	
			V/C	<	0.57	>		<	0.54	>		0.04	0.00	0.00		0.07	0.00	0.00		
			Q	<	23	>		<	22	>		1	0	0		2	0	0		
	Victoria Terrace & Site Access 1	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					12		>	**12**		0	0	**0**	8	0		**0**	
			V/C					0.04		>			0.00	0.00		0.00	0.00			
			Q					1		>			0	0		0	0			
	Victoria Terrace & Site Access 2	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					11		>	**11**		0	0	**0**	8	0		**0**	
			V/C					0.02		>			0.00	0.00		0.00	0.00			
			Q					1		>			0	0		0	0			
	Victoria Terrace & Site Access 3	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					12		>	**12**		0	0	**0**	0	0		**0**	
			V/C					0.01		>			0.00	0.00		0.00	0.00			
			Q					0		>			0	0		0	0			
	Gzowski Street & Site Access 4	TWSC	LOS	A		>	**A**					A	A		**A**		A	A	**A**	
			Delay	9		>	**9**					8	0		**0**		0	0	**0**	
			V/C	0.01		>						0.00	0.00				0.00	0.00		
			Q	0		>						0	0				0	0		
	Gzowski Street & Site Access 5	TWSC	LOS	A		>	**A**					A	A		**A**		A	A	**A**	
			Delay	10		>	**10**					8	0		**1**		0	0	**0**	
			V/C	0.02		>						0.02	0.00				0.00	0.00		
			Q	1		>						1	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)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared Movement

4.5 St David Street North at Forfar Street East/West

During pre-consultation, the Township of Centre Wellington requested that the intersection of St David Street North at Forfar Street East/West be included in this study.

With no access to historical count data and the current construction along St David Street North providing a full intersection operational analysis at the intersection of St David Street North at Forfar Street East/West would not be possible in the short-term.

In absence of recent turning movement data, the intersection of St David Street North at Forfar Street East/West was qualitatively assessed based on the percentage of site traffic anticipated to enter/exit the intersections during the AM and PM peak hours.

Based on total traffic conditions, maximum total of 1,035 AM peak hour trips and 1,649 PM peak hour trips are anticipated to reach the north leg of the St David Street North and Forfar Street East intersection. Site demand is estimated to represent less than 1% of total traffic on the north leg during both the AM and PM peak hours.

Based on total traffic conditions, a maximum total of 129 AM peak hour trips and 109 PM peak hour trips are anticipated to reach the east leg of the St David Street North and Forfar Street East intersection. Site demand is estimated to represent about 15% of total traffic on the east leg during the AM and PM peak hours.

5 Remedial Measures

5.1 Left-Turn Lane Warrant

The following intersections were assessed to determine if the projected traffic volumes warrant installation of a left-turn lane:

- Victoria Terrace at Parkside Drive East (northbound left-turn);
- Forfar Street East at Victoria Terrace (eastbound left-turn);
- Forfar Street at Gzowski Street (eastbound left-turn);
- Gartshore Street at Forfar Street East (northbound left-turn);
- All three site accesses to Victoria Terrace (southbound left-turn); and
- Both site accesses to Gzowski Street (northbound left-turn).

The warrants for left-turn lanes follow the requirements in the Ministry of Transportation's (MTO) Geometric Design Standards[8]. A design speed of 50 km/h (10 km/h over the assumed speed limit) was used for all study roadways except for Gartshore Street. A design speed of 60 km/h (10 km/h over the assumed speed limit) was used for Gartshore Street.

The percentages of left-turning vehicles in the approaching volume were rounded to the nearest 5%, as nomographs are only provided for 5% increments. This apparent requirement is due to the nature of the warrant procedure that assumes a minimum of 5% of left turning vehicles in the advancing volume.

Table 5.1 and **Table 5.2** summarize the left-turn lane warrant for the existing and proposed study intersections, respectively. The warrant analysis suggests that a 15 m northbound left-turn lane is warranted under total traffic conditions at the intersection of Gartshore Street and Forfar Street East. Site-generated traffic accounts for less than 10% of the turns at this movement. The operations are acceptable at this intersection under background and total traffic conditions.

Left-turn lanes are not warranted at any of the site accesses to Victoria Terrace and Gzowski Street.

[8] Ontario Ministry of Transportation, *MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads,* (Toronto: Queen's Printer for Ontario, 2020).

TABLE 5.1: LEFT-TURN LANE WARRANT SUMMARY – EXISTING INTERSECTIONS

Roadway	Victoria Terrace		Forfar Street East				Gartshore Street			
Intersection	Parkside Drive East		Victoria Terrace		Gzowski Street		Forfar Street East			
Approach Direction	Northbound		Eastbound		Eastbound		Northbound			
Design Speed	50 km/h		50 km/h		50 km/h		60 km/h			
Horizon	Total 2034		Total 2034		Total 2034		Total 2034		Background 2034	
Peak Hour	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Advancing Volume	211	263	71	64	102	115	369	361	367	356
Opposing Volume	145	120	77	83	135	122	346	419	346	419
Left Turning Traffic	55	57	44	36	18	29	43	48	41	43
% of Left Turning Traffic	26%	22%	62%	56%	18%	25%	12%	13%	11%	12%
Figure Used*	9A-5	9A-4	9A-6	9A-6	9A-4	9A-5	9A-7	9A-8	9A-7	9A-7
Warranted	No	No	No	No	No	No	No	Yes	No	No
Storage Length Required	-	-	-	-	-	-	-	15 m	-	-

*Ontario Ministry of Transportation, *MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads,* (Toronto: Queens Printer for Ontario, 2020).

TABLE 5.2: LEFT-TURN LANE WARRANT SUMMARY – PROPOSED INTERSECTIONS

Roadway	Victoria Terrace						Gzowski Street			
Intersection	Site Access 1		Site Access 2		Site Access 3		Site Access 4		Site Access 5	
Approach Direction	Southbound		Southbound		Southbound		Northbound		Northbound	
Design Speed	50 km/h		50 km/h		50 km/h		50 km/h		50 km/h	
Horizon	Total 2034		Total 2034		Total 2034		Total 2034		Total 2034	
Peak Hour	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Advancing Volume	208	235	195	234	192	231	137	130	143	149
Opposing Volume	227	289	211	275	211	268	129	164	133	167
Left Turning Traffic	2	1	0	5	0	0	1	4	12	22
% of Left Turning Traffic	1%	0%	0%	2%	0%	0%	1%	3%	8%	15%
Figure Used*	NA	NA	NA	NA	NA	NA	NA	9A-3	9A-3	9A-4
Warranted	No	No	No	No	No	No	No	No	No	No
Storage Length Required	-	-	-	-	-	-	-	-	-	-

*Ontario Ministry of Transportation, *MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads,* (Toronto: Queens Printer for Ontario, 2020).

Appendix G contains the left-turn lane warrant nomographs.

5.2 Traffic Control Signal Warrant

The intersections of St David Street at Parkside Drive East/West and Gartshore Street at Forfar Street East/Middleton Avenue were assessed using the Ontario Traffic Manual (OTM) Book 12 – Justification 7[9] procedures.

Based on the warrant analysis, traffic control signals are not justified at the intersections of St David Street at Parkside Drive East/West and Gartshore Street at Forfar Street East/Middleton Avenue.

Under total traffic conditions, all approaches at the intersections of St David Street at Parkside Drive East/West and Gartshore Street at Forfar Street East/Middleton Avenue are forecast to have v/c ratios less than 0.60. Therefore, all approaches at both intersections have excess capacity.

[9] Ontario Ministry of Transportation, *Ontario Traffic Manual Book 12: Traffic Signals,* (Toronto: Queen's Printer for Ontario, 2012).

However, the road authorities should monitor the intersections of St David Street at Parkside Drive East/West and Gartshore Street at Forfar Street East/Middleton Avenue to assess the need for future remedial measures.

Appendix H contains the warrant analysis.

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 currently operating within acceptable levels of service during the AM and PM peak hours with the following critical movement during noted:
  - The westbound approach at the intersection of St David Street North and Parkside Drive East/West is forecast to operate at LOS E during the PM peak hour.
- **Development Trip Generation:** The development is forecast to generate approximately 108 and 124 trips during the AM and PM peak hours respectively.
- **Background Traffic Conditions:** The study area intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours with the following critical movements noted:

  St David Street North at Parkside Drive East/West:

  - The eastbound approach is forecast to operate at LOS E during the PM peak hour; and
  - The westbound approach is forecast to operate at LOS F during the PM peak hour.

  Gartshore Street and Forfar Street East:

  - The eastbound approach is forecast to operate at LOS E during the PM peak hour.
- **Total Traffic Conditions:** The study area intersections are forecast to operate at acceptable levels of service similar to background traffic conditions with no additional critical movements noted during the AM and PM peak hours.
- **Left-Turn Lane Warrant:** A 15 m northbound left-turn lane is warranted under background and total traffic conditions at the intersection of Gartshore Street and Forfar Street East. Left-turn lanes are not warranted at any of the site accesses to Victoria Terrace and Gzowski Street.
- **Traffic Control Signal Warrant:** Traffic control signals are not justified at the intersections of St David Street at Parkside Drive

East/West and Gartshore Street at Forfar Street East/Middleton Avenue.

6.2 Recommendations

Based on the findings of this study, it is recommended that the development be considered for approval.

It is further recommended that the road authorities monitor the intersections of St David Street at Parkside Drive East/West and Gartshore Street at Forfar Street East/Middleton Avenue to assess the need for future remedial measures and the intersection of Gartshore Street at Forfar Street East to determine the need for a 15 m northbound left-turn lane.

Appendix A

Pre-Study

Andrew Orr

From: Lee Wheildon <LWheildon@centrewellington.ca>
Sent: July 14, 2025 9:37 AM
To: Erica Bayley
Cc: Andrew Orr
Subject: FW: 250272 (650 Victoria Terrace, Fergus) TIS
Attachments: St David-Strahallan School CG Warrant Analysis Report.pdf; Gartshore-Forfar School Crossing Guard Warrant Analysis Report.pdf; RE: Pulling Traffic Count Data

Erica,

As previously discussed, I have attached the traffic counting data. Hopefully this is of benefit to your TIS reporting.

Should you have any questions or concerns, please do not hesitate to contact me.

Regards,

Lee Wheildon
Supervisor of Development Engineering |
Planning & Development
1 MacDonald Square. Elora ON, N0B 1S0
T: 519.846.9691 X253 www.centrewellington.ca

Centre Wellington

From: Lee Wheildon
Sent: July 11, 2025 11:06 AM
To: 'Erica Bayley' <ebayley@ptsl.com>; Andrew Orr <aorr@ptsl.com>
Cc: Colin Baker <CBaker@centrewellington.ca>
Subject: RE: 250272 (650 Victoria Terrace, Fergus) TIS

Erica,

As requested, please see the attached crossing guard warrant information.

As it relates to the summer data collection at Forfar & Gartshore, technically with a portion of St. David Street North under construction and with schools out the summer, traffic data may be skewed. Staff will try and obtain for existing traffic count data for two locations around that intersection, if it would be of assistance. With the above noted information will Paradigm take a conservative approach to summer data intersection counting (factor of safety)?

The Township have a couple of Traffic Count locations

BC-21 – May 8, 2024 – 1,445 vehicles
CW-58 – May 17, 2023 – 1,852 vehicles

As noted above Staff will look to obtain the full reports from these counts and forward to your attention for the purposes of completing traffic data for the area.

Should you have any questions or concerns, please do not hesitate to contact me.

Regards,

Lee Wheildon
Supervisor of Development Engineering | Planning & Development
1 MacDonald Square. Elora ON, N0B 1S0
T: 519.846.9691 X253 www.centrewellington.ca

Centre Wellington

From: Erica Bayley <ebayley@ptsl.com>
Sent: July 10, 2025 5:29 PM

To: Lee Wheildon <LWheildon@centrewellington.ca>; Andrew Orr <aorr@ptsl.com>
Subject: RE: 250272 (650 Victoria Terrace, Fergus) TIS

Thanks Lee. We did the TIS for 750 St David so we are flush with background info 😊

Can you confirm if you'll accept summer data collection at Forfar & Gartshore? (would be next week likely)

Please also send the info from the crossing guard analysis and we'll see if we can pull anything from it.

Thanks for your help,

Erica Bayley, P.Eng.
Senior Project Manager, Associate
(She/Her)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Road Cambridge ON N1R 8J8
m: 519-635-5349
e: ebayley@ptsl.com

From: Lee Wheildon <LWheildon@centrewellington.ca>
Sent: July 10, 2025 1:50 PM
To: Erica Bayley <ebayley@ptsl.com>; Andrew Orr <aorr@ptsl.com>
Subject: FW: 250272 (650 Victoria Terrace, Fergus) TIS

Erika,

Further to the information as noted below, a background development property that may be of interest is 750 St. David Street North (1st Submission Civil package and Site Plan) provided for your information purposes.

Should you have any questions or concerns, please do not hesitate to contact me.

Regards,

Lee Wheildon
Supervisor of Development Engineering | Planning & Development
1 MacDonald Square. Elora ON, N0B 1S0
T: 519.846.9691 X253 www.centrewellington.ca
Centre Wellington

From: Lee Wheildon
Sent: July 10, 2025 10:15 AM
To: 'Erica Bayley' <ebayley@ptsl.com>; Andrew Orr <aorr@ptsl.com>
Cc: Colin Baker <CBaker@centrewellington.ca>
Subject: RE: 250272 (650 Victoria Terrace, Fergus) TIS

Erica,

We do not have any historical data for intersection movements at the locations as noted below.

Township Staff do have Crossing Guard Warrant Analysis reports for the two intersections as noted below from October of 2024 if this would be relevant at all to Paradigm's analysis? Please let me know.

Should you have any questions or concerns, please do not hesitate to contact me.

Regards,

Lee Wheildon
Supervisor of Development Engineering |
Planning & Development
1 MacDonald Square. Elora ON, N0B 1S0
T: 519.846.9691 X253 www.centrewellington.ca

From: Erica Bayley <ebayley@ptsl.com>
Sent: July 9, 2025 4:49 PM
To: Lee Wheildon <LWheildon@centrewellington.ca>; Andrew Orr <aorr@ptsl.com>
Cc: Colin Baker <CBaker@centrewellington.ca>
Subject: RE: 250272 (650 Victoria Terrace, Fergus) TIS

Thanks for the responses, Lee.

Regarding the 3 additional intersections:

- We had originally contemplated including St David & Forfar but as I understand there is construction here. Do you have historical data?
- We have data for Strathallan & Victoria Terrace from another project (April 2024)
- Can we collect Forfar & Gartshore this month?

Erica Bayley, P.Eng.
Senior Project Manager, Associate
(She/Her)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Road Cambridge ON N1R 8J8
m: 519-635-5349
e: ebayley@ptsl.com

From: Lee Wheildon <LWheildon@centrewellington.ca>
Sent: July 9, 2025 3:26 PM
To: Andrew Orr <aorr@ptsl.com>
Cc: Erica Bayley <ebayley@ptsl.com>; Colin Baker <CBaker@centrewellington.ca>
Subject: RE: 250272 (650 Victoria Terrace, Fergus) TIS

Andrew,

Apologies for the delay. Please see Staff comments below (highlighted).

Should you have any questions or concerns, please do not hesitate to contact me.

Regards,

Lee Wheildon
Supervisor of Development Engineering | Planning & Development
1 MacDonald Square. Elora ON, N0B 1S0
T: 519.846.9691 X253 www.centrewellington.ca

From: Andrew Orr
Sent: June 18, 2025 1:27 PM
To: Lee Wheildon <lwheildon@centrewellington.ca>
Cc: Erica Bayley <ebayley@ptsl.com>
Subject: 250272 (650 Victoria Terrace, Fergus) TIS

Greetings,

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Transportation Impact Study (TIS) for a proposed mixed-use development located at 650 Victoria Terrace in Fergus (Township of Centre Wellington). The subject site is proposed to include 192 townhouse units (Blocks A to S) plus 11 commercial/light industrial units (Block T) with a combined area of 19,250 square feet. Vehicle access is proposed via two driveway connections to Gzowski Street and three driveway connections to Victoria Terrace (concept attached).

We'd like to prepare our report based on the following scope, subject to your comments:

PROPOSED TERMS OF REFERENCE

Study Area Intersections:

- Parkside Drive and Victoria Terrace
- Parkside Drive and St David Street
- Forfar Street and Victoria Terrace
- Forfar Street and Gzowski Street
- Two new connections to Gzowski Street; and
- Three new connections to Victoria Terrace
- Forfar Street/Gartshore Street
- Forfar Street/ St. David Street North
- Strathallan Street and Victoria Terrace

Analysis Periods:

- Weekday AM peak hour
- Weekday PM peak hour

Existing Data:

- Existing 8-hour TMC data collected from the above intersections in June/July 2025 (Parkside Drive and St David Street was already collected in 2024)

Horizon Year:

- Five-years from the full build-out date.

Analysis:

- Synchro 12, HCM 7 analysis

Background Traffic:

- Background traffic annual growth rate **2%**
- Developments to include in background. **750 St. David Street North**

Future Road Improvements:

Refer to active transportation master plan/improvements which can be found online at https://www.connectcw.ca/active-transportation-and-mobility-plan

Trip Generation:

- ITE Trip Generation Data 11th Edition.

Site Traffic Distribution:

- Existing Traffic Patterns and 2022 Transportation Tomorrow Survey (TTS) Data.

The Development (TIS) is to take into account proposed sidewalks along all development frontage(s), the long-term urbanization of Gzowski Street, and Forfar Street reconstruction from St. David Street North to James Street in 2028.

Best Regards,

Andrew Orr, M.A.Sc., EIT
Transportation Consultant, Associate
(He/Him)

5A-150 Pinebush Road, Cambridge ON, N1R 8J8
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Appendix B

Traffic Data

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025

Turning Movement Data

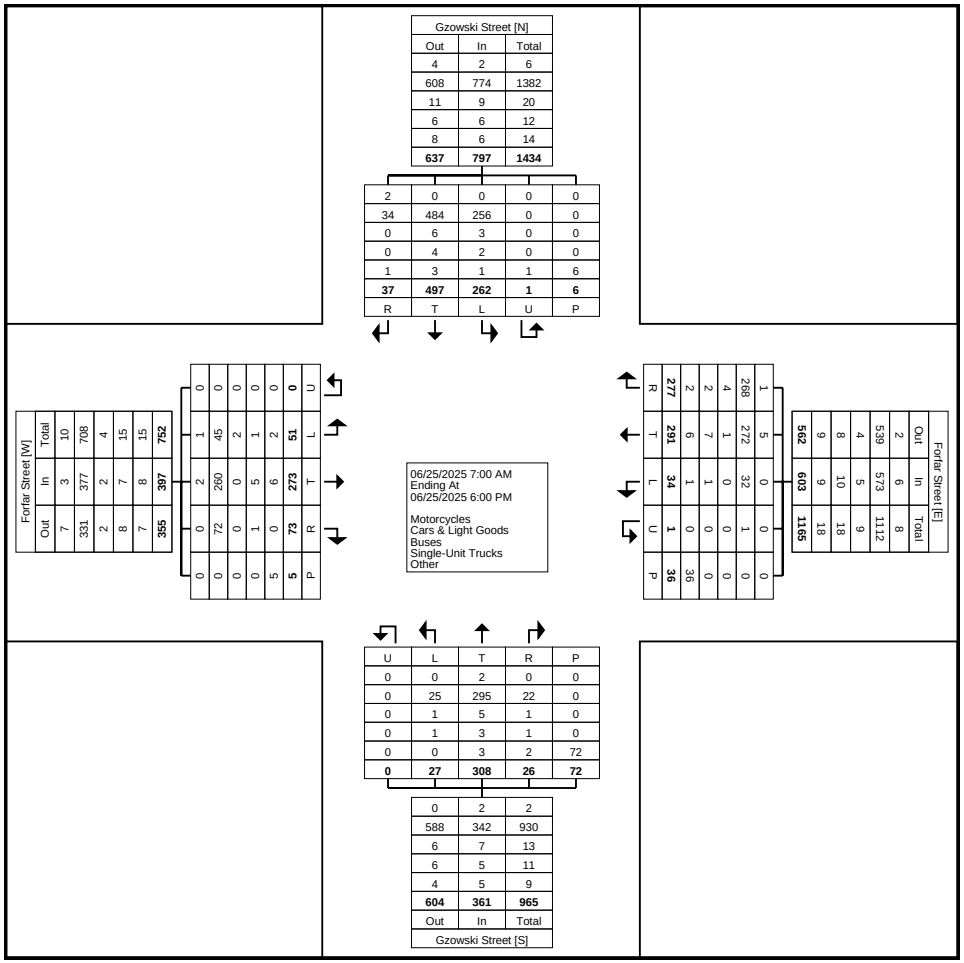
Start Time	Forfar Street Eastbound						Forfar Street Westbound						Gzowski Street Northbound						Gzowski Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	2	1	0	0	3	0	4	8	0	1	12	0	5	0	0	1	5	4	10	0	0	0	14	34
7:15 AM	2	8	1	0	1	11	1	6	5	0	1	12	0	5	1	0	0	6	5	12	1	0	1	18	47
7:30 AM	0	8	2	0	0	10	1	5	8	0	0	14	1	14	0	0	1	15	3	14	0	0	1	17	56
7:45 AM	2	6	1	0	0	9	1	6	7	0	0	14	0	7	0	0	0	7	7	11	0	0	0	18	48
Hourly Total	4	24	5	0	1	33	3	21	28	0	2	52	1	31	1	0	2	33	19	47	1	0	2	67	185
8:00 AM	2	9	1	0	0	12	1	11	8	0	1	20	1	10	0	0	2	11	7	8	2	0	0	17	60
8:15 AM	3	12	2	0	0	17	1	7	10	0	2	18	2	8	1	0	7	11	3	12	0	0	0	15	61
8:30 AM	5	16	12	0	1	33	3	14	21	0	1	38	1	8	2	0	12	11	9	27	0	0	0	36	118
8:45 AM	1	10	5	0	0	16	2	13	20	0	2	35	0	13	0	0	1	13	14	22	2	0	0	38	102
Hourly Total	11	47	20	0	1	78	7	45	59	0	6	111	4	39	3	0	22	46	33	69	4	0	0	106	341
9:00 AM	0	11	1	0	0	12	0	9	8	0	3	17	2	3	2	0	0	7	4	8	0	0	1	12	48
9:15 AM	2	6	2	0	0	10	1	3	9	0	3	13	0	5	1	0	0	6	2	10	0	0	0	12	41
9:30 AM	2	3	1	0	0	6	2	7	3	0	3	12	2	5	1	0	0	8	9	13	1	0	0	23	49
9:45 AM	0	5	2	0	0	7	2	5	8	0	5	15	0	6	1	0	0	7	6	10	2	0	0	18	47
Hourly Total	4	25	6	0	0	35	5	24	28	0	14	57	4	19	5	0	0	28	21	41	3	0	1	65	185
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	1	3	0	0	0	4	0	4	9	0	0	13	0	10	0	0	0	10	4	8	2	0	0	14	41
11:45 AM	0	9	0	0	1	9	0	5	6	0	0	11	0	14	1	0	0	15	7	14	2	0	0	23	58
Hourly Total	1	12	0	0	1	13	0	9	15	0	0	24	0	24	1	0	0	25	11	22	4	0	0	37	99
12:00 PM	0	7	4	0	0	11	0	5	3	0	1	8	1	16	0	0	0	17	9	16	4	0	0	29	65
12:15 PM	1	5	0	0	0	6	2	12	6	0	1	20	0	9	1	0	2	10	9	9	0	0	0	18	54
12:30 PM	3	5	1	0	0	9	1	11	5	0	2	17	1	5	0	0	2	6	10	17	3	0	0	30	62
12:45 PM	0	9	0	0	0	9	1	6	8	0	0	15	3	13	0	0	3	16	10	23	0	0	0	33	73
Hourly Total	4	26	5	0	0	35	4	34	22	0	4	60	5	43	1	0	7	49	38	65	7	0	0	110	254
1:00 PM	0	7	4	0	0	11	1	9	6	0	3	16	0	16	1	0	3	17	2	19	1	0	0	22	66
1:15 PM	1	11	2	0	0	14	0	2	10	0	0	12	1	4	1	0	2	6	11	16	1	0	0	28	60
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	18	6	0	0	25	1	11	16	0	3	28	1	20	2	0	5	23	13	35	2	0	0	50	126
3:00 PM	3	7	0	0	1	10	4	17	8	0	0	29	3	16	1	0	5	20	5	22	1	0	0	28	87
3:15 PM	11	15	17	0	0	43	2	15	11	0	1	28	2	11	2	0	22	15	8	22	2	0	0	32	118
3:30 PM	1	12	3	0	0	16	2	10	7	0	1	19	1	14	2	0	0	17	19	17	2	0	0	38	90
3:45 PM	1	11	3	0	0	15	0	13	8	0	2	21	1	12	0	0	1	13	16	16	2	0	0	34	83
Hourly Total	16	45	23	0	1	84	8	55	34	0	4	97	7	53	5	0	28	65	48	77	7	0	0	132	378
4:00 PM	1	9	2	0	1	12	0	4	5	0	0	9	0	9	1	0	0	10	8	25	0	0	0	33	64
4:15 PM	1	9	1	0	0	11	1	15	7	1	0	24	0	3	3	0	1	6	3	19	2	1	0	25	66

4:30 PM	2	17	1	0	0	20	2	11	8	0	3	21	0	12	1	0	1	13	11	16	1	0	2	28	82
4:45 PM	3	12	1	0	0	16	0	16	18	0	0	34	1	8	0	0	2	9	8	12	0	0	0	20	79
Hourly Total	7	47	5	0	1	59	3	46	38	1	3	88	1	32	5	0	4	38	30	72	3	1	2	106	291
5:00 PM	0	5	2	0	0	7	1	13	7	0	0	21	0	10	2	0	2	12	13	18	0	0	0	31	71
5:15 PM	0	11	0	0	0	11	0	9	10	0	0	19	2	16	0	0	0	18	21	17	4	0	0	42	90
5:30 PM	3	5	0	0	0	8	1	15	12	0	0	28	1	11	1	0	0	13	7	18	1	0	1	26	75
5:45 PM	0	8	1	0	0	9	1	9	8	0	0	18	1	10	0	0	2	11	8	16	1	0	0	25	63
Hourly Total	3	29	3	0	0	35	3	46	37	0	0	86	4	47	3	0	4	54	49	69	6	0	1	124	299
Grand Total	51	273	73	0	5	397	34	291	277	1	36	603	27	308	26	0	72	361	262	497	37	1	6	797	2158
Approach %	12.8	68.8	18.4	0.0	-	-	5.6	48.3	45.9	0.2	-	-	7.5	85.3	7.2	0.0	-	-	32.9	62.4	4.6	0.1	-	-	-
Total %	2.4	12.7	3.4	0.0	-	18.4	1.6	13.5	12.8	0.0	-	27.9	1.3	14.3	1.2	0.0	-	16.7	12.1	23.0	1.7	0.0	-	36.9	-
Motorcycles	1	2	0	0	-	3	0	5	1	0	-	6	0	2	0	0	-	2	0	0	2	0	-	2	13
% Motorcycles	2.0	0.7	0.0	-	-	0.8	0.0	1.7	0.4	0.0	-	1.0	0.0	0.6	0.0	-	-	0.6	0.0	0.0	5.4	0.0	-	0.3	0.6
Cars & Light Goods	45	260	72	0	-	377	32	272	268	1	-	573	25	295	22	0	-	342	256	484	34	0	-	774	2066
% Cars & Light Goods	88.2	95.2	98.6	-	-	95.0	94.1	93.5	96.8	100.0	-	95.0	92.6	95.8	84.6	-	-	94.7	97.7	97.4	91.9	0.0	-	97.1	95.7
Buses	2	0	0	0	-	2	0	1	4	0	-	5	1	5	1	0	-	7	3	6	0	0	-	9	23
% Buses	3.9	0.0	0.0	-	-	0.5	0.0	0.3	1.4	0.0	-	0.8	3.7	1.6	3.8	-	-	1.9	1.1	1.2	0.0	0.0	-	1.1	1.1
Single-Unit Trucks	1	5	1	0	-	7	1	7	2	0	-	10	1	3	1	0	-	5	2	4	0	0	-	6	28
% Single-Unit Trucks	2.0	1.8	1.4	-	-	1.8	2.9	2.4	0.7	0.0	-	1.7	3.7	1.0	3.8	-	-	1.4	0.8	0.8	0.0	0.0	-	0.8	1.3
Articulated Trucks	0	0	0	0	-	0	0	1	1	0	-	2	0	0	0	0	-	0	0	1	1	0	-	2	4
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.4	0.0	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	0.2	2.7	0.0	-	0.3	0.2
Bicycles on Road	2	6	0	0	-	8	1	5	1	0	-	7	0	3	2	0	-	5	1	2	0	1	-	4	24
% Bicycles on Road	3.9	2.2	0.0	-	-	2.0	2.9	1.7	0.4	0.0	-	1.2	0.0	1.0	7.7	-	-	1.4	0.4	0.4	0.0	100.0	-	0.5	1.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	5	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	11.1	-	-	-	-	-	6.9	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	32	-	-	-	-	-	67	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	88.9	-	-	-	-	-	93.1	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025



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: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025

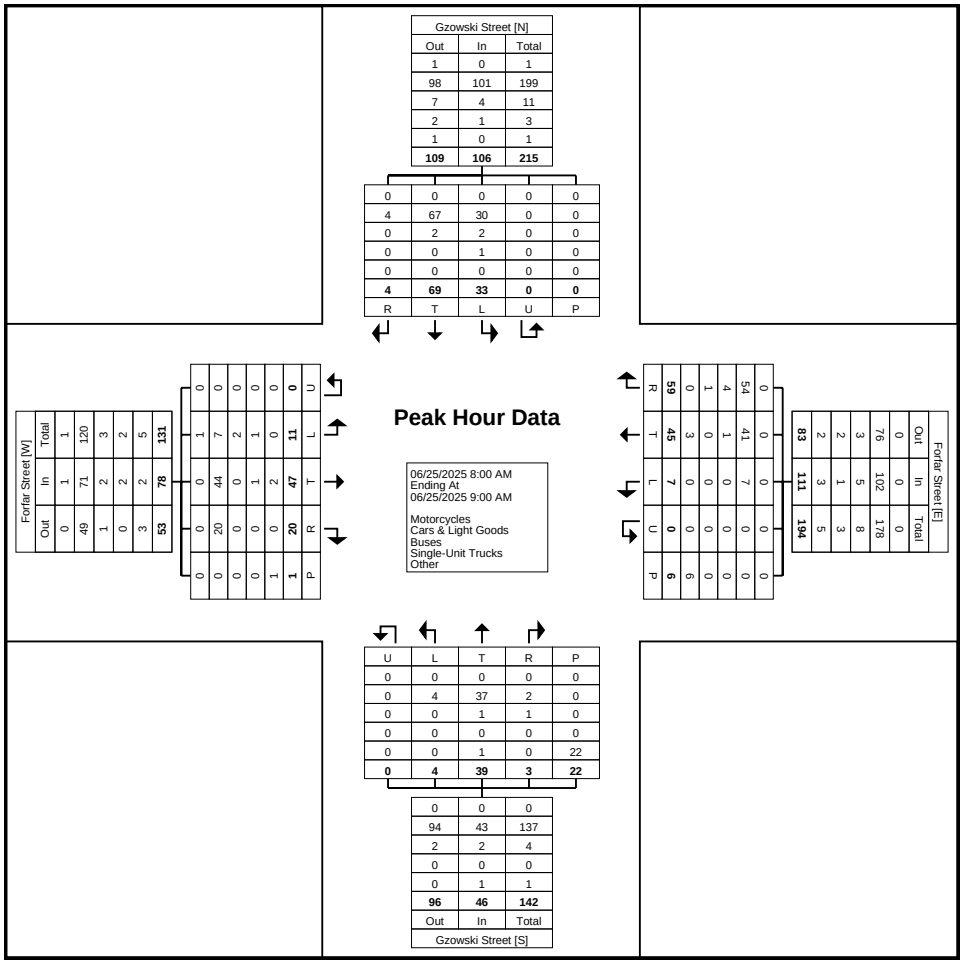
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Gzowski Street Northbound						Gzowski 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	
8:00 AM	2	9	1	0	0	12	1	11	8	0	1	20	1	10	0	0	2	11	7	8	2	0	0	17	60
8:15 AM	3	12	2	0	0	17	1	7	10	0	2	18	2	8	1	0	7	11	3	12	0	0	0	15	61
8:30 AM	5	16	12	0	1	33	3	14	21	0	1	38	1	8	2	0	12	11	9	27	0	0	0	36	118
8:45 AM	1	10	5	0	0	16	2	13	20	0	2	35	0	13	0	0	1	13	14	22	2	0	0	38	102
Total	11	47	20	0	1	78	7	45	59	0	6	111	4	39	3	0	22	46	33	69	4	0	0	106	341
Approach %	14.1	60.3	25.6	0.0	-	-	6.3	40.5	53.2	0.0	-	-	8.7	84.8	6.5	0.0	-	-	31.1	65.1	3.8	0.0	-	-	-
Total %	3.2	13.8	5.9	0.0	-	22.9	2.1	13.2	17.3	0.0	-	32.6	1.2	11.4	0.9	0.0	-	13.5	9.7	20.2	1.2	0.0	-	31.1	-
PHF	0.550	0.734	0.417	0.000	-	0.591	0.583	0.804	0.702	0.000	-	0.730	0.500	0.750	0.375	0.000	-	0.885	0.589	0.639	0.500	0.000	-	0.697	0.722
Motorcycles	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	9.1	0.0	0.0	-	-	1.3	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Cars & Light Goods	7	44	20	0	-	71	7	41	54	0	-	102	4	37	2	0	-	43	30	67	4	0	-	101	317
% Cars & Light Goods	63.6	93.6	100.0	-	-	91.0	100.0	91.1	91.5	-	-	91.9	100.0	94.9	66.7	-	-	93.5	90.9	97.1	100.0	-	-	95.3	93.0
Buses	2	0	0	0	-	2	0	1	4	0	-	5	0	1	1	0	-	2	2	2	0	0	-	4	13
% Buses	18.2	0.0	0.0	-	-	2.6	0.0	2.2	6.8	-	-	4.5	0.0	2.6	33.3	-	-	4.3	6.1	2.9	0.0	-	-	3.8	3.8
Single-Unit Trucks	1	1	0	0	-	2	0	0	1	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	4
% Single-Unit Trucks	9.1	2.1	0.0	-	-	2.6	0.0	0.0	1.7	-	-	0.9	0.0	0.0	0.0	-	-	0.0	3.0	0.0	0.0	-	-	0.9	1.2
Articulated Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	2.2	0.0	-	-	0.9	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Road	0	2	0	0	-	2	0	2	0	0	-	2	0	1	0	0	-	1	0	0	0	0	-	0	5
% Bicycles on Road	0.0	4.3	0.0	-	-	2.6	0.0	4.4	0.0	-	-	1.8	0.0	2.6	0.0	-	-	2.2	0.0	0.0	0.0	-	-	0.0	1.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	9.1	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	20	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	90.9	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025

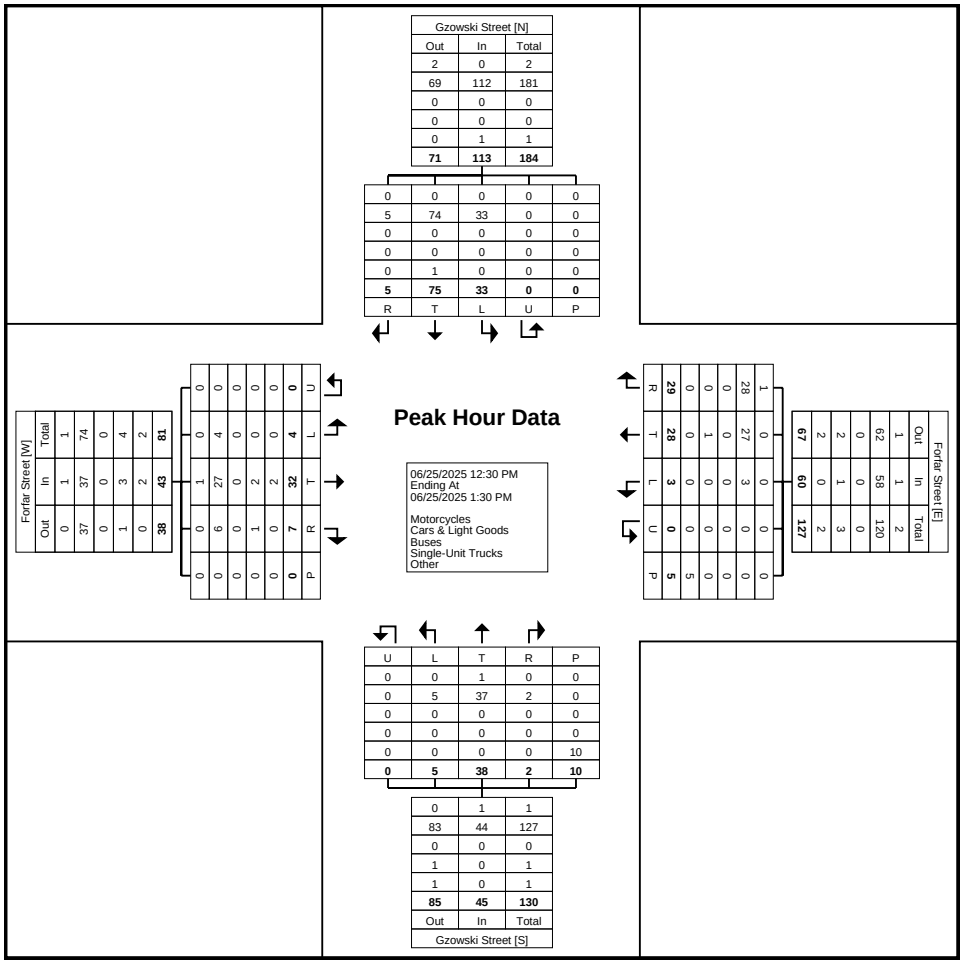
Turning Movement Peak Hour Data (12:30 PM)

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Gzowski Street Northbound						Gzowski 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	
12:30 PM	3	5	1	0	0	9	1	11	5	0	2	17	1	5	0	0	2	6	10	17	3	0	0	30	62
12:45 PM	0	9	0	0	0	9	1	6	8	0	0	15	3	13	0	0	3	16	10	23	0	0	0	33	73
1:00 PM	0	7	4	0	0	11	1	9	6	0	3	16	0	16	1	0	3	17	2	19	1	0	0	22	66
1:15 PM	1	11	2	0	0	14	0	2	10	0	0	12	1	4	1	0	2	6	11	16	1	0	0	28	60
Total	4	32	7	0	0	43	3	28	29	0	5	60	5	38	2	0	10	45	33	75	5	0	0	113	261
Approach %	9.3	74.4	16.3	0.0	-	-	5.0	46.7	48.3	0.0	-	-	11.1	84.4	4.4	0.0	-	-	29.2	66.4	4.4	0.0	-	-	-
Total %	1.5	12.3	2.7	0.0	-	16.5	1.1	10.7	11.1	0.0	-	23.0	1.9	14.6	0.8	0.0	-	17.2	12.6	28.7	1.9	0.0	-	43.3	-
PHF	0.333	0.727	0.438	0.000	-	0.768	0.750	0.636	0.725	0.000	-	0.882	0.417	0.594	0.500	0.000	-	0.662	0.750	0.815	0.417	0.000	-	0.856	0.894
Motorcycles	0	1	0	0	-	1	0	0	1	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	3
% Motorcycles	0.0	3.1	0.0	-	-	2.3	0.0	0.0	3.4	-	-	1.7	0.0	2.6	0.0	-	-	2.2	0.0	0.0	0.0	-	-	0.0	1.1
Cars & Light Goods	4	27	6	0	-	37	3	27	28	0	-	58	5	37	2	0	-	44	33	74	5	0	-	112	251
% Cars & Light Goods	100.0	84.4	85.7	-	-	86.0	100.0	96.4	96.6	-	-	96.7	100.0	97.4	100.0	-	-	97.8	100.0	98.7	100.0	-	-	99.1	96.2
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
Single-Unit Trucks	0	2	1	0	-	3	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	4
% Single-Unit Trucks	0.0	6.3	14.3	-	-	7.0	0.0	3.6	0.0	-	-	1.7	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	1.5
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
Bicycles on Road	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	3
% Bicycles on Road	0.0	6.3	0.0	-	-	4.7	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.3	0.0	-	-	0.9	1.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	20.0	-	-	-	-	-	10.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	9	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	80.0	-	-	-	-	-	90.0	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025



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: Forfar Street & Gzowski Street
Site Code: 250272
Start Date: 06/25/2025

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Gzowski Street Northbound						Gzowski Street Southbound						
	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	Int. Total
3:00 PM	3	7	0	0	1	10	4	17	8	0	0	29	3	16	1	0	5	20	5	22	1	0	0	28	87
3:15 PM	11	15	17	0	0	43	2	15	11	0	1	28	2	11	2	0	22	15	8	22	2	0	0	32	118
3:30 PM	1	12	3	0	0	16	2	10	7	0	1	19	1	14	2	0	0	17	19	17	2	0	0	38	90
3:45 PM	1	11	3	0	0	15	0	13	8	0	2	21	1	12	0	0	1	13	16	16	2	0	0	34	83
Total	16	45	23	0	1	84	8	55	34	0	4	97	7	53	5	0	28	65	48	77	7	0	0	132	378
Approach %	19.0	53.6	27.4	0.0	-	-	8.2	56.7	35.1	0.0	-	-	10.8	81.5	7.7	0.0	-	-	36.4	58.3	5.3	0.0	-	-	-
Total %	4.2	11.9	6.1	0.0	-	22.2	2.1	14.6	9.0	0.0	-	25.7	1.9	14.0	1.3	0.0	-	17.2	12.7	20.4	1.9	0.0	-	34.9	-
PHF	0.364	0.750	0.338	0.000	-	0.488	0.500	0.809	0.773	0.000	-	0.836	0.583	0.828	0.625	0.000	-	0.813	0.632	0.875	0.875	0.000	-	0.868	0.801
Motorcycles	0	0	0	0	-	0	0	3	0	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	3
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	5.5	0.0	-	-	3.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.8
Cars & Light Goods	16	44	23	0	-	83	6	51	33	0	-	90	6	48	5	0	-	59	47	74	7	0	-	128	360
% Cars & Light Goods	100.0	97.8	100.0	-	-	98.8	75.0	92.7	97.1	-	-	92.8	85.7	90.6	100.0	-	-	90.8	97.9	96.1	100.0	-	-	97.0	95.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	1	4	0	0	-	5	1	3	0	0	-	4	9
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	14.3	7.5	0.0	-	-	7.7	2.1	3.9	0.0	-	-	3.0	2.4
Single-Unit Trucks	0	0	0	0	-	0	1	0	1	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	12.5	0.0	2.9	-	-	2.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.5
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
Bicycles on Road	0	1	0	0	-	1	1	1	0	0	-	2	0	1	0	0	-	1	0	0	0	0	-	0	4
% Bicycles on Road	0.0	2.2	0.0	-	-	1.2	12.5	1.8	0.0	-	-	2.1	0.0	1.9	0.0	-	-	1.5	0.0	0.0	0.0	-	-	0.0	1.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-	-	-	-	7.1	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	26	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-	-	-	-	92.9	-	-	-	-	-	-	-	-

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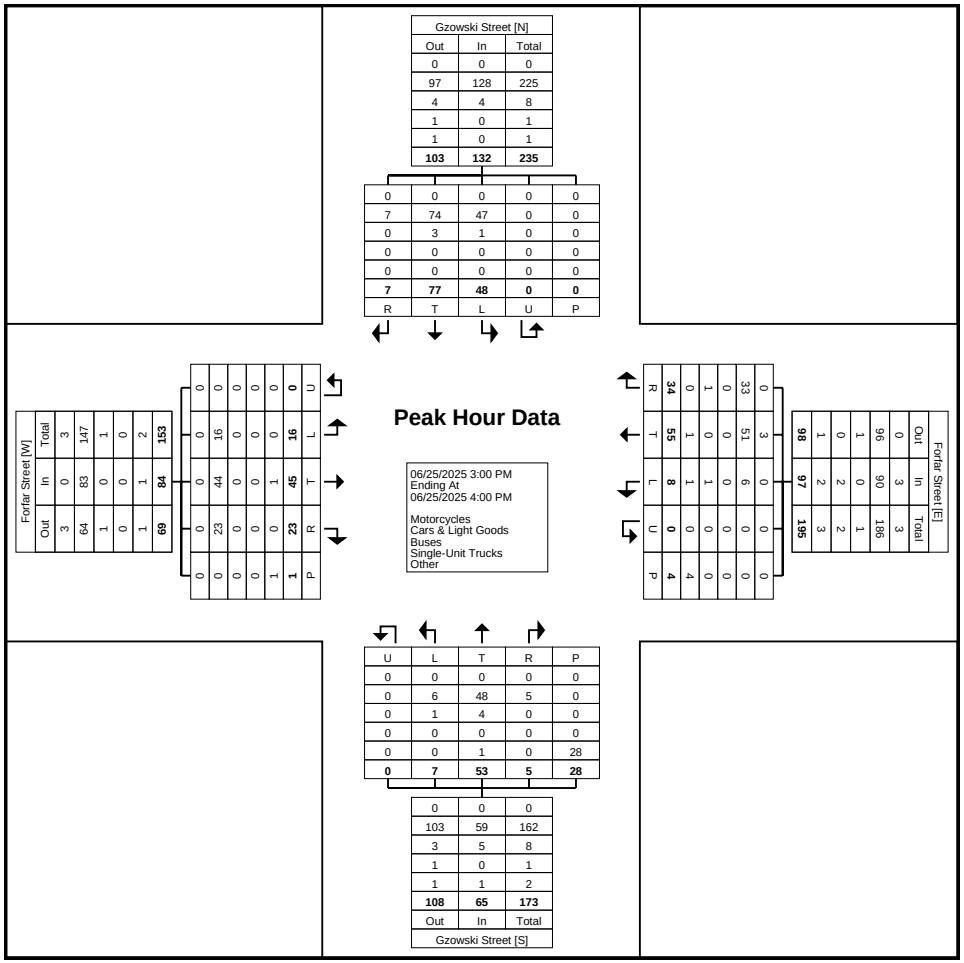
Start Date: 06/25/2025



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

Turning Movement Data

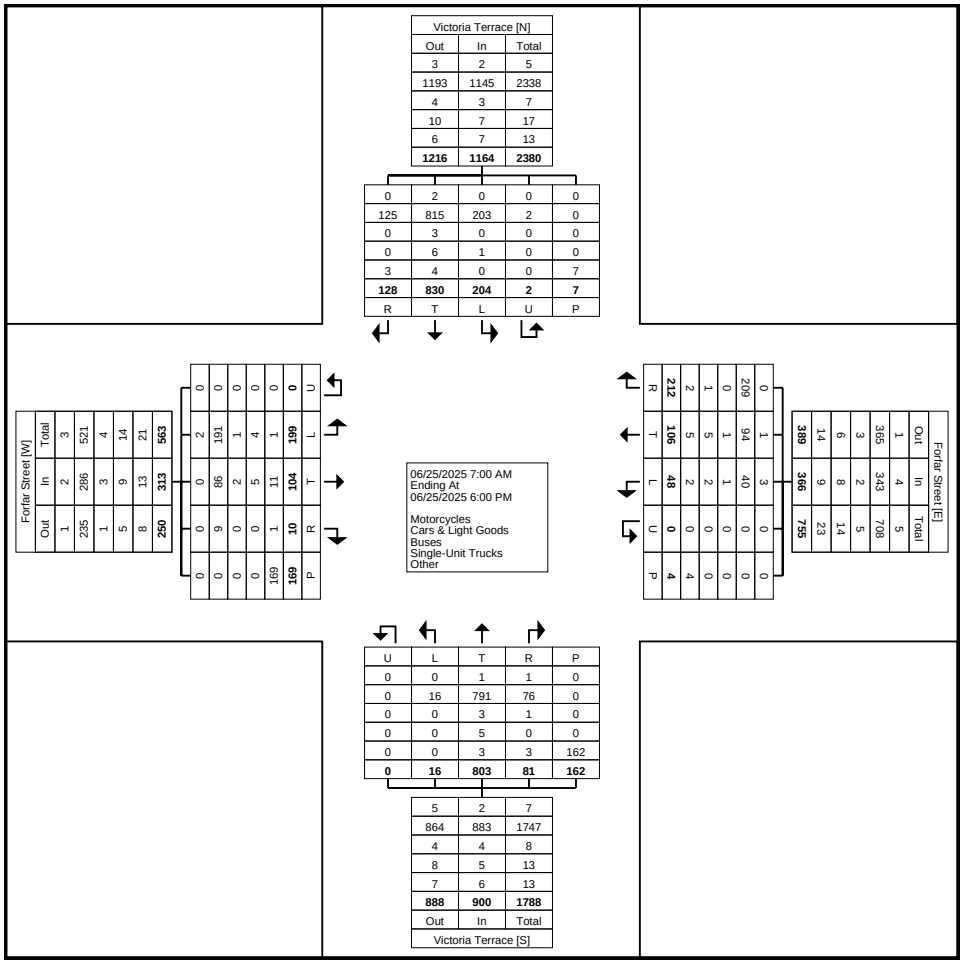
Start Time	Forfar Street Eastbound						Forfar Street Westbound						Victoria Terrace Northbound						Victoria Terrace Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	4	0	0	0	0	4	2	1	2	0	0	5	0	11	0	0	1	11	3	13	0	0	0	16	36
7:15 AM	3	5	0	0	1	8	1	0	7	0	0	8	0	12	1	0	0	13	4	21	0	1	0	26	55
7:30 AM	6	3	0	0	2	9	3	2	3	0	0	8	0	10	3	0	0	13	3	22	0	0	0	25	55
7:45 AM	4	6	0	0	0	10	0	2	7	0	1	9	0	12	1	0	0	13	6	23	3	0	0	32	64
Hourly Total	17	14	0	0	3	31	6	5	19	0	1	30	0	45	5	0	1	50	16	79	3	1	0	99	210
8:00 AM	4	4	2	0	7	10	3	5	5	0	0	13	0	18	0	0	2	18	4	24	4	0	1	32	73
8:15 AM	4	8	0	0	23	12	3	0	4	0	0	7	1	26	2	0	20	29	12	23	2	0	2	37	85
8:30 AM	13	5	0	0	33	18	1	2	14	0	0	17	5	31	15	0	35	51	6	22	6	0	0	34	120
8:45 AM	11	2	0	0	9	13	0	5	10	0	0	15	0	27	7	0	8	34	4	37	10	0	1	51	113
Hourly Total	32	19	2	0	72	53	7	12	33	0	0	52	6	102	24	0	65	132	26	106	22	0	4	154	391
9:00 AM	3	5	0	0	2	8	1	0	10	0	0	11	0	18	0	0	0	18	6	28	0	0	0	34	71
9:15 AM	5	0	1	0	2	6	0	2	2	0	0	4	0	10	0	0	0	10	7	22	4	0	0	33	53
9:30 AM	1	1	0	0	1	2	0	2	8	0	0	10	0	24	2	0	0	26	2	18	3	0	0	23	61
9:45 AM	1	0	0	0	0	1	0	2	2	0	0	4	0	18	0	0	0	18	3	11	4	0	0	18	41
Hourly Total	10	6	1	0	5	17	1	6	22	0	0	29	0	70	2	0	0	72	18	79	11	0	0	108	226
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	6	1	0	0	1	7	3	1	2	0	0	6	1	21	0	0	0	22	3	18	3	0	0	24	59
11:45 AM	4	1	0	0	0	5	2	2	3	0	1	7	0	23	1	0	1	24	8	22	4	0	0	34	70
Hourly Total	10	2	0	0	1	12	5	3	5	0	1	13	1	44	1	0	1	46	11	40	7	0	0	58	129
12:00 PM	7	3	1	0	2	11	2	6	4	0	0	12	0	27	1	0	0	28	7	31	4	1	0	43	94
12:15 PM	4	2	1	0	1	7	3	2	6	0	0	11	0	29	2	0	0	31	2	23	6	0	0	31	80
12:30 PM	8	2	0	0	2	10	2	7	6	0	0	15	0	22	2	0	1	24	6	29	4	0	0	39	88
12:45 PM	6	3	0	0	2	9	2	5	3	0	0	10	0	24	0	0	1	24	5	26	3	0	0	34	77
Hourly Total	25	10	2	0	7	37	9	20	19	0	0	48	0	102	5	0	2	107	20	109	17	1	0	147	339
1:00 PM	8	4	0	0	0	12	0	2	7	0	0	9	0	23	0	0	1	23	6	33	2	0	0	41	85
1:15 PM	10	5	0	0	0	15	1	1	3	0	0	5	0	19	2	0	0	21	8	27	2	0	0	37	78
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	18	9	0	0	0	27	1	3	10	0	0	14	0	42	2	0	1	44	14	60	4	0	0	78	163
3:00 PM	10	1	1	0	17	12	3	8	9	0	2	20	2	18	3	0	19	23	8	24	6	0	1	38	93
3:15 PM	17	3	1	0	43	21	2	7	9	0	0	18	4	32	18	0	57	54	13	35	9	0	1	57	150
3:30 PM	10	8	0	0	11	18	2	4	7	0	0	13	1	25	4	0	5	30	7	22	7	0	0	36	97
3:45 PM	2	3	1	0	2	6	3	4	8	0	0	15	1	33	3	0	0	37	8	24	2	0	1	34	92
Hourly Total	39	15	3	0	73	57	10	23	33	0	2	66	8	108	28	0	81	144	36	105	24	0	3	165	432
4:00 PM	5	5	0	0	0	10	0	3	12	0	0	15	0	40	0	0	3	40	7	29	3	0	0	39	104
4:15 PM	3	2	0	0	0	5	3	5	7	0	0	15	0	39	3	0	0	42	7	29	3	0	0	39	101

4:30 PM	7	6	0	0	6	13	1	2	10	0	0	13	0	35	2	0	6	37	13	40	2	0	0	55	118
4:45 PM	10	9	0	0	1	19	1	7	9	0	0	17	0	40	1	0	1	41	13	36	6	0	0	55	132
Hourly Total	25	22	0	0	7	47	5	17	38	0	0	60	0	154	6	0	10	160	40	134	14	0	0	188	455
5:00 PM	5	2	0	0	0	7	0	3	6	0	0	9	0	46	3	0	0	49	4	25	1	0	0	30	95
5:15 PM	6	1	1	0	0	8	0	5	8	0	0	13	1	33	2	0	0	36	10	32	10	0	0	52	109
5:30 PM	6	2	0	0	1	8	3	5	14	0	0	22	0	29	2	0	1	31	4	31	12	0	0	47	108
5:45 PM	6	2	1	0	0	9	1	4	5	0	0	10	0	28	1	0	0	29	5	30	3	0	0	38	86
Hourly Total	23	7	2	0	1	32	4	17	33	0	0	54	1	136	8	0	1	145	23	118	26	0	0	167	398
Grand Total	199	104	10	0	169	313	48	106	212	0	4	366	16	803	81	0	162	900	204	830	128	2	7	1164	2743
Approach %	63.6	33.2	3.2	0.0	-	-	13.1	29.0	57.9	0.0	-	-	1.8	89.2	9.0	0.0	-	-	17.5	71.3	11.0	0.2	-	-	-
Total %	7.3	3.8	0.4	0.0	-	11.4	1.7	3.9	7.7	0.0	-	13.3	0.6	29.3	3.0	0.0	-	32.8	7.4	30.3	4.7	0.1	-	42.4	-
Motorcycles	2	0	0	0	-	2	3	1	0	0	-	4	0	1	1	0	-	2	0	2	0	0	-	2	10
% Motorcycles	1.0	0.0	0.0	-	-	0.6	6.3	0.9	0.0	-	-	1.1	0.0	0.1	1.2	-	-	0.2	0.0	0.2	0.0	0.0	-	0.2	0.4
Cars & Light Goods	191	86	9	0	-	286	40	94	209	0	-	343	16	791	76	0	-	883	203	815	125	2	-	1145	2657
% Cars & Light Goods	96.0	82.7	90.0	-	-	91.4	83.3	88.7	98.6	-	-	93.7	100.0	98.5	93.8	-	-	98.1	99.5	98.2	97.7	100.0	-	98.4	96.9
Buses	1	2	0	0	-	3	1	1	0	0	-	2	0	3	1	0	-	4	0	3	0	0	-	3	12
% Buses	0.5	1.9	0.0	-	-	1.0	2.1	0.9	0.0	-	-	0.5	0.0	0.4	1.2	-	-	0.4	0.0	0.4	0.0	0.0	-	0.3	0.4
Single-Unit Trucks	4	5	0	0	-	9	2	5	1	0	-	8	0	5	0	0	-	5	1	6	0	0	-	7	29
% Single-Unit Trucks	2.0	4.8	0.0	-	-	2.9	4.2	4.7	0.5	-	-	2.2	0.0	0.6	0.0	-	-	0.6	0.5	0.7	0.0	0.0	-	0.6	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	2	1	0	-	3	0	2	0	0	-	2	5
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	1.2	-	-	0.3	0.0	0.2	0.0	0.0	-	0.2	0.2
Bicycles on Road	1	11	1	0	-	13	2	5	2	0	-	9	0	1	2	0	-	3	0	2	3	0	-	5	30
% Bicycles on Road	0.5	10.6	10.0	-	-	4.2	4.2	4.7	0.9	-	-	2.5	0.0	0.1	2.5	-	-	0.3	0.0	0.2	2.3	0.0	-	0.4	1.1
Bicycles on Crosswalk	-	-	-	-	16	-	-	-	-	-	2	-	-	-	-	-	19	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	9.5	-	-	-	-	-	50.0	-	-	-	-	-	11.7	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	153	-	-	-	-	-	2	-	-	-	-	-	143	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	90.5	-	-	-	-	-	50.0	-	-	-	-	-	88.3	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025



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: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Victoria Terrace Northbound						Victoria Terrace 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	
8:00 AM	4	4	2	0	7	10	3	5	5	0	0	13	0	18	0	0	2	18	4	24	4	0	1	32	73
8:15 AM	4	8	0	0	23	12	3	0	4	0	0	7	1	26	2	0	20	29	12	23	2	0	2	37	85
8:30 AM	13	5	0	0	33	18	1	2	14	0	0	17	5	31	15	0	35	51	6	22	6	0	0	34	120
8:45 AM	11	2	0	0	9	13	0	5	10	0	0	15	0	27	7	0	8	34	4	37	10	0	1	51	113
Total	32	19	2	0	72	53	7	12	33	0	0	52	6	102	24	0	65	132	26	106	22	0	4	154	391
Approach %	60.4	35.8	3.8	0.0	-	-	13.5	23.1	63.5	0.0	-	-	4.5	77.3	18.2	0.0	-	-	16.9	68.8	14.3	0.0	-	-	-
Total %	8.2	4.9	0.5	0.0	-	13.6	1.8	3.1	8.4	0.0	-	13.3	1.5	26.1	6.1	0.0	-	33.8	6.6	27.1	5.6	0.0	-	39.4	-
PHF	0.615	0.594	0.250	0.000	-	0.736	0.583	0.600	0.589	0.000	-	0.765	0.300	0.823	0.400	0.000	-	0.647	0.542	0.716	0.550	0.000	-	0.755	0.815
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	31	15	2	0	-	48	6	10	33	0	-	49	6	99	23	0	-	128	26	104	21	0	-	151	376
% Cars & Light Goods	96.9	78.9	100.0	-	-	90.6	85.7	83.3	100.0	-	-	94.2	100.0	97.1	95.8	-	-	97.0	100.0	98.1	95.5	-	-	98.1	96.2
Buses	0	2	0	0	-	2	0	1	0	0	-	1	0	0	1	0	-	1	0	1	0	0	-	1	5
% Buses	0.0	10.5	0.0	-	-	3.8	0.0	8.3	0.0	-	-	1.9	0.0	0.0	4.2	-	-	0.8	0.0	0.9	0.0	-	-	0.6	1.3
Single-Unit Trucks	1	1	0	0	-	2	0	0	0	0	-	0	0	3	0	0	-	3	0	1	0	0	-	1	6
% Single-Unit Trucks	3.1	5.3	0.0	-	-	3.8	0.0	0.0	0.0	-	-	0.0	0.0	2.9	0.0	-	-	2.3	0.0	0.9	0.0	-	-	0.6	1.5
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
Bicycles on Road	0	1	0	0	-	1	1	1	0	0	-	2	0	0	0	0	-	0	0	0	1	0	-	1	4
% Bicycles on Road	0.0	5.3	0.0	-	-	1.9	14.3	8.3	0.0	-	-	3.8	0.0	0.0	0.0	-	-	0.0	0.0	0.0	4.5	-	-	0.6	1.0
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	13	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	5.6	-	-	-	-	-	-	-	-	-	-	-	20.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	68	-	-	-	-	-	0	-	-	-	-	-	52	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	94.4	-	-	-	-	-	-	-	-	-	-	-	80.0	-	-	-	-	-	100.0	-	-

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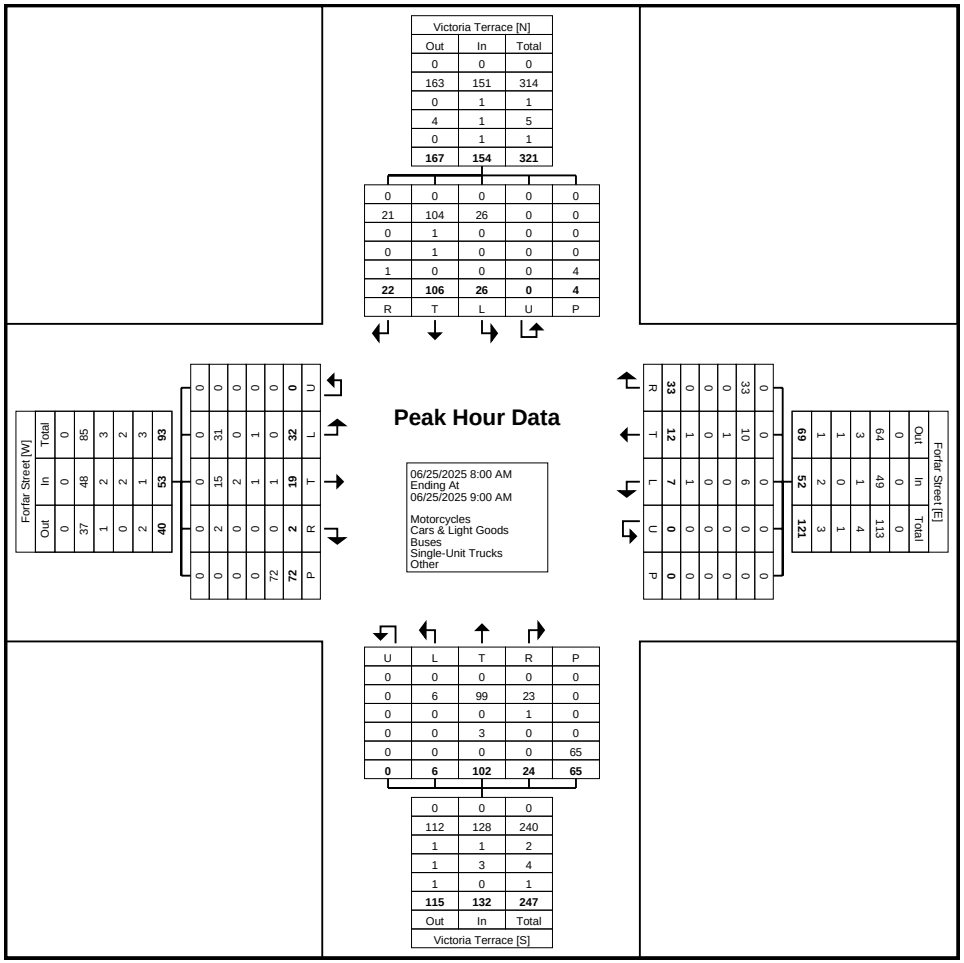

Turning Movement Peak Hour Data Plot (8:00 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
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Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Victoria Terrace Northbound						Victoria Terrace 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	
12:00 PM	7	3	1	0	2	11	2	6	4	0	0	12	0	27	1	0	0	28	7	31	4	1	0	43	94
12:15 PM	4	2	1	0	1	7	3	2	6	0	0	11	0	29	2	0	0	31	2	23	6	0	0	31	80
12:30 PM	8	2	0	0	2	10	2	7	6	0	0	15	0	22	2	0	1	24	6	29	4	0	0	39	88
12:45 PM	6	3	0	0	2	9	2	5	3	0	0	10	0	24	0	0	1	24	5	26	3	0	0	34	77
Total	25	10	2	0	7	37	9	20	19	0	0	48	0	102	5	0	2	107	20	109	17	1	0	147	339
Approach %	67.6	27.0	5.4	0.0	-	-	18.8	41.7	39.6	0.0	-	-	0.0	95.3	4.7	0.0	-	-	13.6	74.1	11.6	0.7	-	-	-
Total %	7.4	2.9	0.6	0.0	-	10.9	2.7	5.9	5.6	0.0	-	14.2	0.0	30.1	1.5	0.0	-	31.6	5.9	32.2	5.0	0.3	-	43.4	-
PHF	0.781	0.833	0.500	0.000	-	0.841	0.750	0.714	0.792	0.000	-	0.800	0.000	0.879	0.625	0.000	-	0.863	0.714	0.879	0.708	0.250	-	0.855	0.902
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	2
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	5.0	0.0	-	-	2.1	-	0.0	20.0	-	-	0.9	0.0	0.0	0.0	0.0	-	0.0	0.6
Cars & Light Goods	23	8	2	0	-	33	8	16	18	0	-	42	0	100	4	0	-	104	20	106	17	1	-	144	323
% Cars & Light Goods	92.0	80.0	100.0	-	-	89.2	88.9	80.0	94.7	-	-	87.5	-	98.0	80.0	-	-	97.2	100.0	97.2	100.0	100.0	-	98.0	95.3
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
Single-Unit Trucks	1	0	0	0	-	1	1	2	1	0	-	4	0	1	0	0	-	1	0	0	0	0	-	0	6
% Single-Unit Trucks	4.0	0.0	0.0	-	-	2.7	11.1	10.0	5.3	-	-	8.3	-	1.0	0.0	-	-	0.9	0.0	0.0	0.0	0.0	-	0.0	1.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	2	0	0	-	2	3
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	1.0	0.0	-	-	0.9	0.0	1.8	0.0	0.0	-	1.4	0.9
Bicycles on Road	1	2	0	0	-	3	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	5
% Bicycles on Road	4.0	20.0	0.0	-	-	8.1	0.0	5.0	0.0	-	-	2.1	-	0.0	0.0	-	-	0.0	0.0	0.9	0.0	0.0	-	0.7	1.5
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	85.7	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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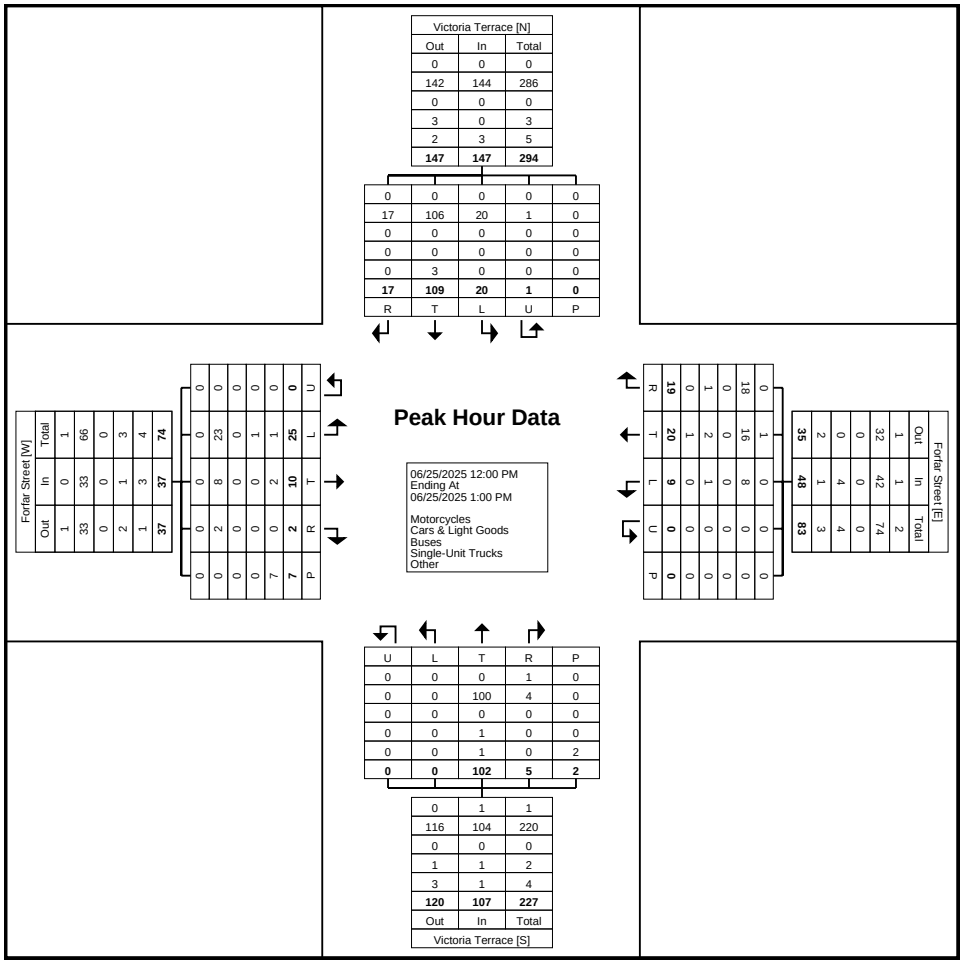
Site Code: 250272
Start Date: 06/25/2025



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

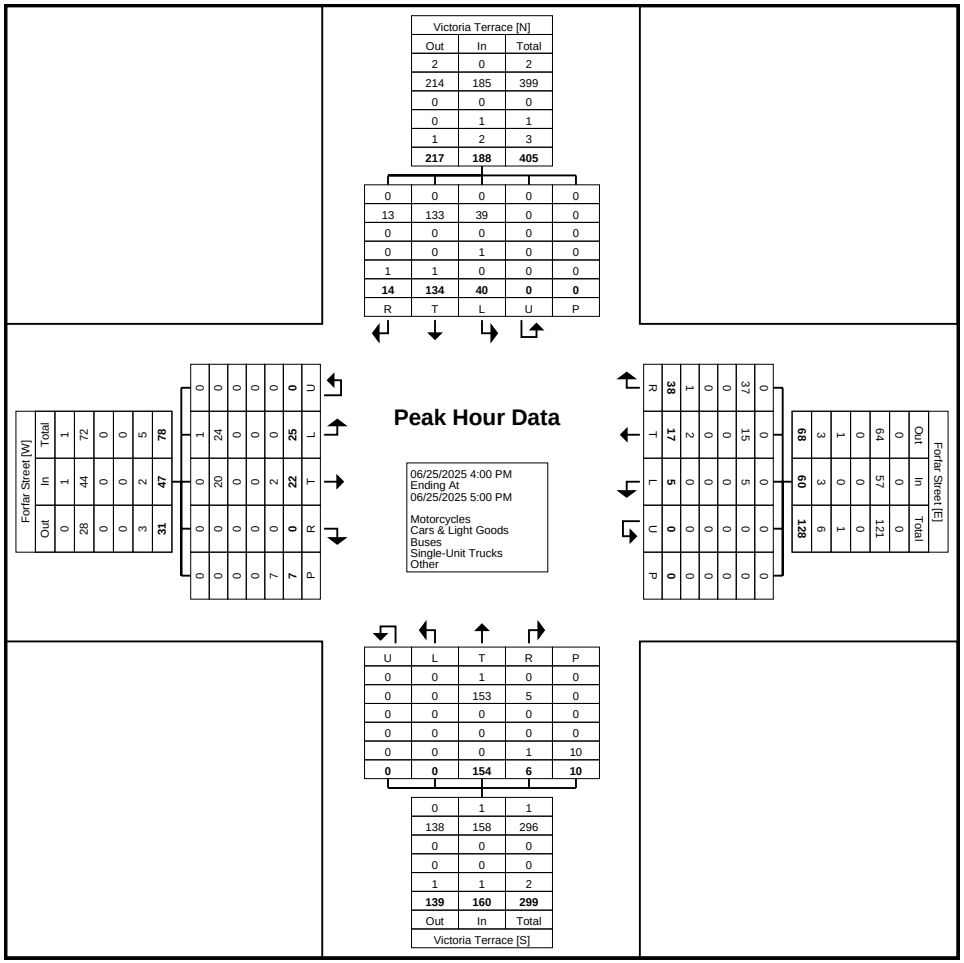
Turning Movement Peak Hour Data (4:00 PM)

Start Time	Forfar Street Eastbound						Forfar Street Westbound						Victoria Terrace Northbound						Victoria Terrace 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	
4:00 PM	5	5	0	0	0	10	0	3	12	0	0	15	0	40	0	0	3	40	7	29	3	0	0	39	104
4:15 PM	3	2	0	0	0	5	3	5	7	0	0	15	0	39	3	0	0	42	7	29	3	0	0	39	101
4:30 PM	7	6	0	0	6	13	1	2	10	0	0	13	0	35	2	0	6	37	13	40	2	0	0	55	118
4:45 PM	10	9	0	0	1	19	1	7	9	0	0	17	0	40	1	0	1	41	13	36	6	0	0	55	132
Total	25	22	0	0	7	47	5	17	38	0	0	60	0	154	6	0	10	160	40	134	14	0	0	188	455
Approach %	53.2	46.8	0.0	0.0	-	-	8.3	28.3	63.3	0.0	-	-	0.0	96.3	3.8	0.0	-	-	21.3	71.3	7.4	0.0	-	-	-
Total %	5.5	4.8	0.0	0.0	-	10.3	1.1	3.7	8.4	0.0	-	13.2	0.0	33.8	1.3	0.0	-	35.2	8.8	29.5	3.1	0.0	-	41.3	-
PHF	0.625	0.611	0.000	0.000	-	0.618	0.417	0.607	0.792	0.000	-	0.882	0.000	0.963	0.500	0.000	-	0.952	0.769	0.838	0.583	0.000	-	0.855	0.862
Motorcycles	1	0	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	2
% Motorcycles	4.0	0.0	-	-	-	2.1	0.0	0.0	0.0	-	-	0.0	-	0.6	0.0	-	-	0.6	0.0	0.0	0.0	-	-	0.0	0.4
Cars & Light Goods	24	20	0	0	-	44	5	15	37	0	-	57	0	153	5	0	-	158	39	133	13	0	-	185	444
% Cars & Light Goods	96.0	90.9	-	-	-	93.6	100.0	88.2	97.4	-	-	95.0	-	99.4	83.3	-	-	98.8	97.5	99.3	92.9	-	-	98.4	97.6
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
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	1
% Single-Unit Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	2.5	0.0	0.0	-	-	0.5	0.2
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	0.0
Bicycles on Road	0	2	0	0	-	2	0	2	1	0	-	3	0	0	1	0	-	1	0	1	1	0	-	2	8
% Bicycles on Road	0.0	9.1	-	-	-	4.3	0.0	11.8	2.6	-	-	5.0	-	0.0	16.7	-	-	0.6	0.0	0.7	7.1	-	-	1.1	1.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	10	-	-	-	-	-	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: Forfar Street & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

Turning Movement Data

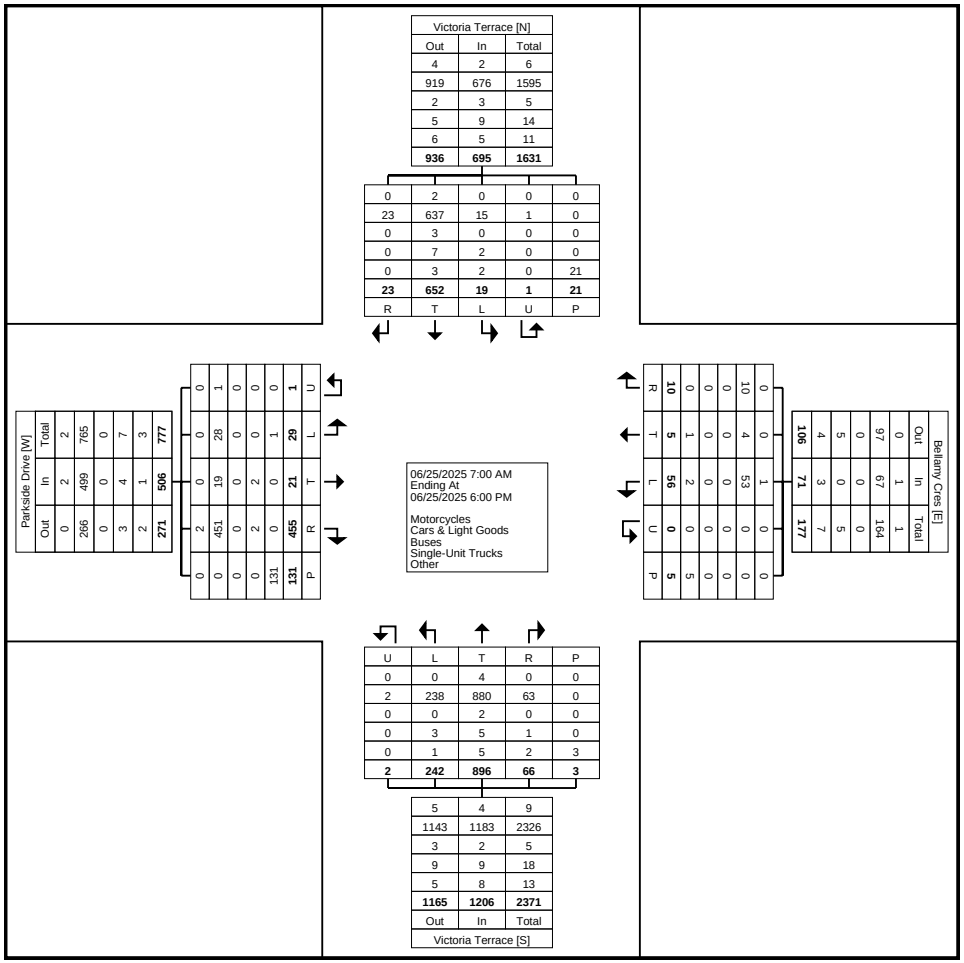
Start Time	Parkside Drive Eastbound						Bellamy Cres Westbound						Victoria Terrace Northbound						Victoria Terrace Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	2	0	0	2	2	0	1	0	0	3	2	12	0	0	0	14	0	13	0	0	1	13	32
7:15 AM	1	0	6	0	2	7	2	0	0	0	1	2	0	20	3	0	1	23	0	16	1	0	0	17	49
7:30 AM	1	0	9	0	0	10	0	0	1	0	0	1	3	14	1	0	1	18	0	16	1	0	1	17	46
7:45 AM	0	1	5	0	0	6	6	0	0	0	0	6	5	16	1	0	0	22	0	20	1	0	0	21	55
Hourly Total	2	1	22	0	2	25	10	0	2	0	1	12	10	62	5	0	2	77	0	65	3	0	2	68	182
8:00 AM	2	1	10	0	6	13	3	0	0	0	0	3	3	19	2	0	0	24	1	18	1	0	0	20	60
8:15 AM	1	0	12	0	32	13	2	0	0	0	2	2	10	26	0	0	1	36	2	22	0	0	0	24	75
8:30 AM	1	0	7	0	10	8	4	0	0	0	0	4	14	42	3	0	0	59	1	28	1	0	1	30	101
8:45 AM	0	0	8	0	16	8	1	1	0	0	0	2	11	35	2	0	0	48	1	39	3	0	0	43	101
Hourly Total	4	1	37	0	64	42	10	1	0	0	2	11	38	122	7	0	1	167	5	107	5	0	1	117	337
9:00 AM	2	0	12	0	2	14	1	0	0	0	0	1	9	20	1	0	0	30	0	23	0	0	1	23	68
9:15 AM	0	1	12	0	2	13	3	0	0	0	0	3	5	9	3	0	0	17	0	18	0	1	2	19	52
9:30 AM	1	0	8	0	0	9	2	0	0	0	0	2	6	23	0	0	0	29	0	13	0	0	0	13	53
9:45 AM	2	1	13	0	0	16	0	0	1	0	0	1	5	17	4	0	0	26	0	6	0	0	0	6	49
Hourly Total	5	2	45	0	4	52	6	0	1	0	0	7	25	69	8	0	0	102	0	60	0	1	3	61	222
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	1	0	15	1	1	17	4	0	1	0	0	5	9	18	1	0	0	28	1	7	1	0	0	9	59
11:45 AM	1	1	18	0	2	20	1	0	0	0	0	1	6	27	2	0	0	35	1	19	2	0	1	22	78
Hourly Total	2	1	33	1	3	37	5	0	1	0	0	6	15	45	3	0	0	63	2	26	3	0	1	31	137
12:00 PM	0	1	19	0	0	20	2	0	0	0	0	2	7	26	2	0	0	35	0	19	0	0	2	19	76
12:15 PM	0	1	12	0	0	13	2	0	0	0	2	2	8	28	2	0	0	38	0	18	1	0	2	19	72
12:30 PM	0	1	19	0	2	20	1	0	0	0	0	1	10	22	1	0	0	33	0	13	3	0	0	16	70
12:45 PM	0	1	9	0	0	10	0	0	0	0	0	0	8	25	0	0	0	33	1	25	1	0	0	27	70
Hourly Total	0	4	59	0	2	63	5	0	0	0	2	5	33	101	5	0	0	139	1	75	5	0	4	81	288
1:00 PM	1	1	18	0	2	20	1	1	0	0	0	2	6	30	2	0	0	38	0	24	0	0	1	24	84
1:15 PM	0	1	15	0	0	16	2	0	0	0	0	2	4	26	1	0	0	31	1	15	0	0	0	16	65
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	2	33	0	2	36	3	1	0	0	0	4	10	56	3	0	0	69	1	39	0	0	1	40	149
3:00 PM	2	0	21	0	5	23	1	0	0	0	0	1	8	27	2	0	0	37	0	21	1	0	2	22	83
3:15 PM	2	0	20	0	32	22	0	0	1	0	0	1	13	42	4	0	0	59	1	38	1	0	0	40	122
3:30 PM	0	0	17	0	12	17	1	1	0	0	0	2	6	33	5	0	0	44	1	16	2	0	0	19	82
3:45 PM	0	0	15	0	3	15	0	0	0	0	0	0	2	39	3	0	0	44	0	18	0	0	0	18	77
Hourly Total	4	0	73	0	52	77	2	1	1	0	0	4	29	141	14	0	0	184	2	93	4	0	2	99	364
4:00 PM	2	0	19	0	0	21	0	0	1	0	0	1	10	44	2	0	0	56	1	20	0	0	0	21	99
4:15 PM	2	1	23	0	0	26	1	0	1	0	0	2	7	39	2	0	0	48	3	18	0	0	0	21	97

4:30 PM	2	3	21	0	0	26	1	0	1	0	0	2	10	34	6	1	0	51	0	31	1	0	0	32	111
4:45 PM	3	0	25	0	2	28	4	0	0	0	0	4	15	40	3	1	0	59	0	24	1	0	2	25	116
Hourly Total	9	4	88	0	2	101	6	0	3	0	0	9	42	157	13	2	0	214	4	93	2	0	2	99	423
5:00 PM	0	2	13	0	0	15	1	1	1	0	0	3	9	47	3	0	0	59	2	20	0	0	2	22	99
5:15 PM	0	3	16	0	0	19	1	1	1	0	0	3	8	35	2	0	0	45	0	28	1	0	1	29	96
5:30 PM	1	1	17	0	0	19	3	0	0	0	0	3	10	37	1	0	0	48	0	29	0	0	1	29	99
5:45 PM	1	0	19	0	0	20	4	0	0	0	0	4	13	24	2	0	0	39	2	17	0	0	1	19	82
Hourly Total	2	6	65	0	0	73	9	2	2	0	0	13	40	143	8	0	0	191	4	94	1	0	5	99	376
Grand Total	29	21	455	1	131	506	56	5	10	0	5	71	242	896	66	2	3	1206	19	652	23	1	21	695	2478
Approach %	5.7	4.2	89.9	0.2	-	-	78.9	7.0	14.1	0.0	-	-	20.1	74.3	5.5	0.2	-	-	2.7	93.8	3.3	0.1	-	-	-
Total %	1.2	0.8	18.4	0.0	-	20.4	2.3	0.2	0.4	0.0	-	2.9	9.8	36.2	2.7	0.1	-	48.7	0.8	26.3	0.9	0.0	-	28.0	-
Motorcycles	0	0	2	0	-	2	1	0	0	0	-	1	0	4	0	0	-	4	0	2	0	0	-	2	9
% Motorcycles	0.0	0.0	0.4	0.0	-	0.4	1.8	0.0	0.0	-	-	1.4	0.0	0.4	0.0	0.0	-	0.3	0.0	0.3	0.0	0.0	-	0.3	0.4
Cars & Light Goods	28	19	451	1	-	499	53	4	10	0	-	67	238	880	63	2	-	1183	15	637	23	1	-	676	2425
% Cars & Light Goods	96.6	90.5	99.1	100.0	-	98.6	94.6	80.0	100.0	-	-	94.4	98.3	98.2	95.5	100.0	-	98.1	78.9	97.7	100.0	100.0	-	97.3	97.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	0	3	0	0	-	3	5
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	0.0	-	0.2	0.0	0.5	0.0	0.0	-	0.4	0.2
Single-Unit Trucks	0	2	2	0	-	4	0	0	0	0	-	0	3	5	1	0	-	9	2	7	0	0	-	9	22
% Single-Unit Trucks	0.0	9.5	0.4	0.0	-	0.8	0.0	0.0	0.0	-	-	0.0	1.2	0.6	1.5	0.0	-	0.7	10.5	1.1	0.0	0.0	-	1.3	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	1	1	0	0	-	2	4
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	0.0	-	0.2	5.3	0.2	0.0	0.0	-	0.3	0.2
Bicycles on Road	1	0	0	0	-	1	2	1	0	0	-	3	1	3	2	0	-	6	1	2	0	0	-	3	13
% Bicycles on Road	3.4	0.0	0.0	0.0	-	0.2	3.6	20.0	0.0	-	-	4.2	0.4	0.3	3.0	0.0	-	0.5	5.3	0.3	0.0	0.0	-	0.4	0.5
Bicycles on Crosswalk	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	4.6	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	14.3	-	-
Pedestrians	-	-	-	-	125	-	-	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-	18	-	-
% Pedestrians	-	-	-	-	95.4	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	85.7	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025



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: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

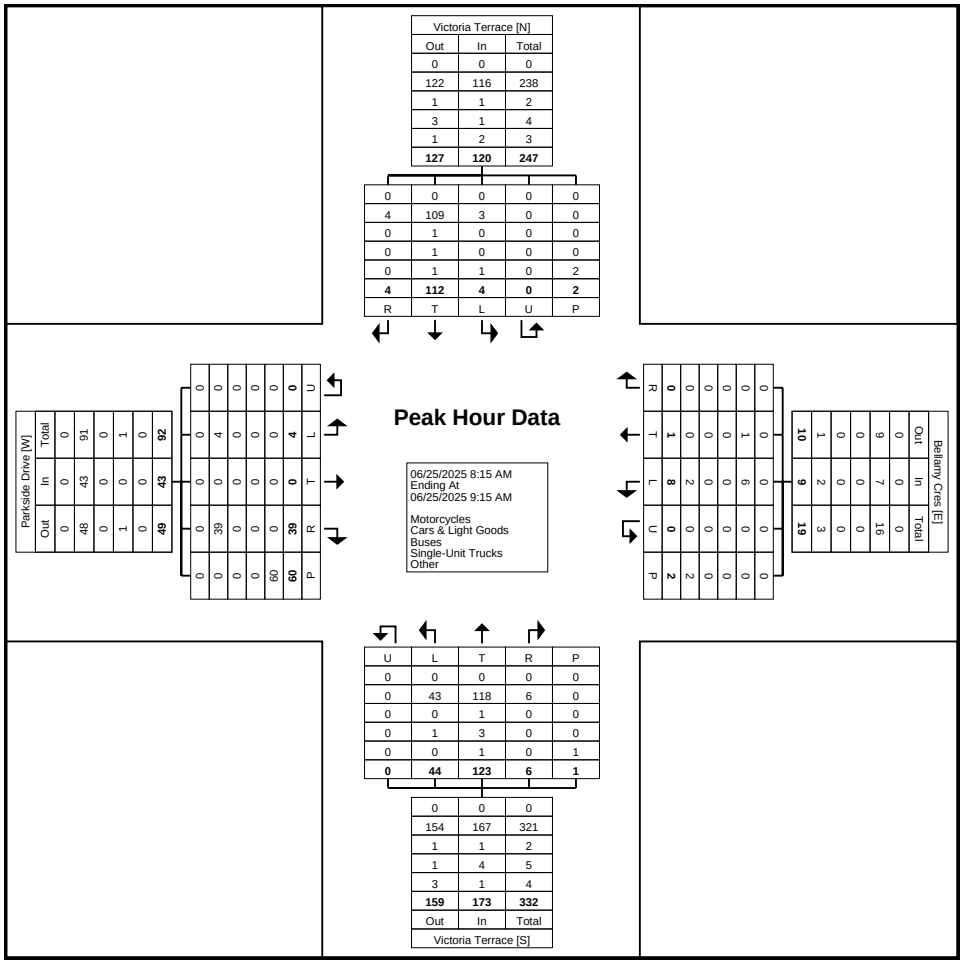
Turning Movement Peak Hour Data (8:15 AM)

Start Time	Parkside Drive Eastbound						Bellamy Cres Westbound						Victoria Terrace Northbound						Victoria Terrace 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	
8:15 AM	1	0	12	0	32	13	2	0	0	0	2	2	10	26	0	0	1	36	2	22	0	0	0	24	75
8:30 AM	1	0	7	0	10	8	4	0	0	0	0	4	14	42	3	0	0	59	1	28	1	0	1	30	101
8:45 AM	0	0	8	0	16	8	1	1	0	0	0	2	11	35	2	0	0	48	1	39	3	0	0	43	101
9:00 AM	2	0	12	0	2	14	1	0	0	0	0	1	9	20	1	0	0	30	0	23	0	0	1	23	68
Total	4	0	39	0	60	43	8	1	0	0	2	9	44	123	6	0	1	173	4	112	4	0	2	120	345
Approach %	9.3	0.0	90.7	0.0	-	-	88.9	11.1	0.0	0.0	-	-	25.4	71.1	3.5	0.0	-	-	3.3	93.3	3.3	0.0	-	-	-
Total %	1.2	0.0	11.3	0.0	-	12.5	2.3	0.3	0.0	0.0	-	2.6	12.8	35.7	1.7	0.0	-	50.1	1.2	32.5	1.2	0.0	-	34.8	-
PHF	0.500	0.000	0.813	0.000	-	0.768	0.500	0.250	0.000	0.000	-	0.563	0.786	0.732	0.500	0.000	-	0.733	0.500	0.718	0.333	0.000	-	0.698	0.854
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
Cars & Light Goods	4	0	39	0	-	43	6	1	0	0	-	7	43	118	6	0	-	167	3	109	4	0	-	116	333
% Cars & Light Goods	100.0	-	100.0	-	-	100.0	75.0	100.0	-	-	-	77.8	97.7	95.9	100.0	-	-	96.5	75.0	97.3	100.0	-	-	96.7	96.5
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	2
% Buses	0.0	-	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.8	0.0	-	-	0.6	0.0	0.9	0.0	-	-	0.8	0.6
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	1	3	0	0	-	4	0	1	0	0	-	1	5
% Single-Unit Trucks	0.0	-	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	2.3	2.4	0.0	-	-	2.3	0.0	0.9	0.0	-	-	0.8	1.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Articulated Trucks	0.0	-	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.8	0.0	-	-	0.6	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Road	0	0	0	0	-	0	2	0	0	0	-	2	0	0	0	0	-	0	1	1	0	0	-	2	4
% Bicycles on Road	0.0	-	0.0	-	-	0.0	25.0	0.0	-	-	-	22.2	0.0	0.0	0.0	-	-	0.0	25.0	0.9	0.0	-	-	1.7	1.2
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	3.3	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	58	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	96.7	-	-	-	-	-	100.0	-	-	-	-	-	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: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

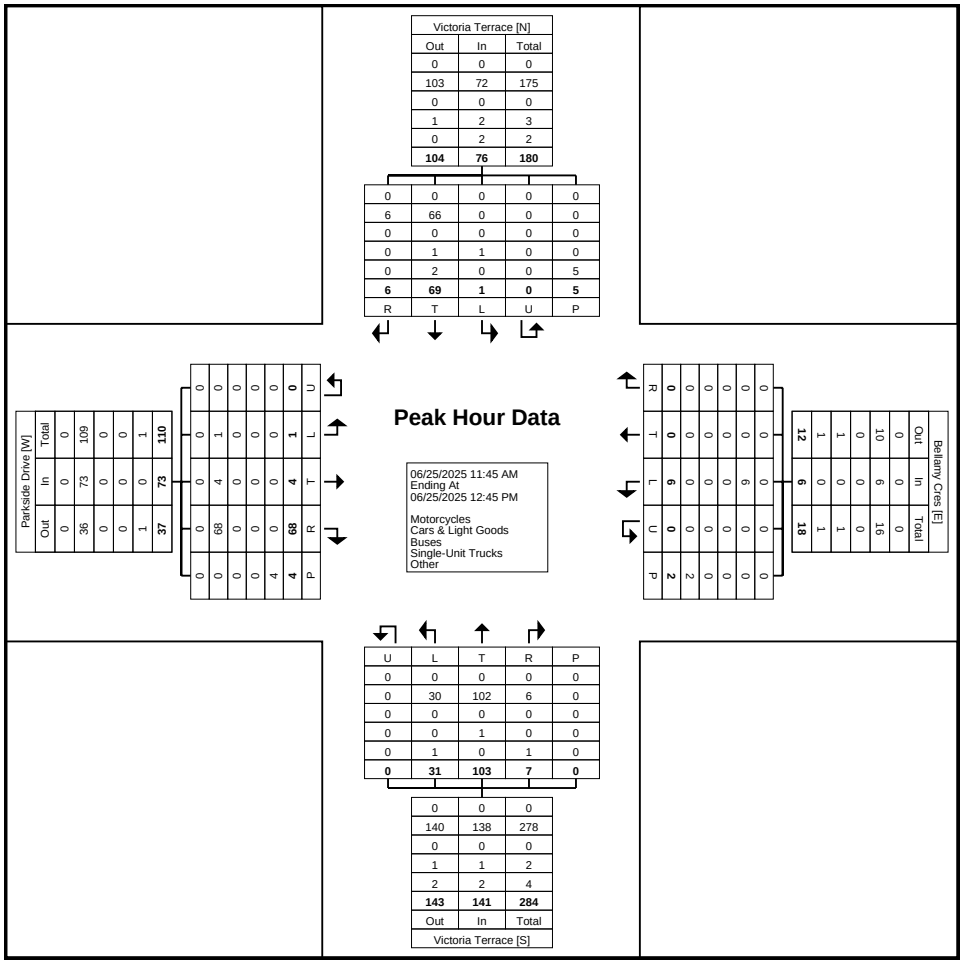
Turning Movement Peak Hour Data (11:45 AM)

Start Time	Parkside Drive Eastbound						Bellamy Cres Westbound						Victoria Terrace Northbound						Victoria Terrace 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	
11:45 AM	1	1	18	0	2	20	1	0	0	0	0	1	6	27	2	0	0	35	1	19	2	0	1	22	78
12:00 PM	0	1	19	0	0	20	2	0	0	0	0	2	7	26	2	0	0	35	0	19	0	0	2	19	76
12:15 PM	0	1	12	0	0	13	2	0	0	0	2	2	8	28	2	0	0	38	0	18	1	0	2	19	72
12:30 PM	0	1	19	0	2	20	1	0	0	0	0	1	10	22	1	0	0	33	0	13	3	0	0	16	70
Total	1	4	68	0	4	73	6	0	0	0	2	6	31	103	7	0	0	141	1	69	6	0	5	76	296
Approach %	1.4	5.5	93.2	0.0	-	-	100.0	0.0	0.0	0.0	-	-	22.0	73.0	5.0	0.0	-	-	1.3	90.8	7.9	0.0	-	-	-
Total %	0.3	1.4	23.0	0.0	-	24.7	2.0	0.0	0.0	0.0	-	2.0	10.5	34.8	2.4	0.0	-	47.6	0.3	23.3	2.0	0.0	-	25.7	-
PHF	0.250	1.000	0.895	0.000	-	0.913	0.750	0.000	0.000	0.000	-	0.750	0.775	0.920	0.875	0.000	-	0.928	0.250	0.908	0.500	0.000	-	0.864	0.949
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
Cars & Light Goods	1	4	68	0	-	73	6	0	0	0	-	6	30	102	6	0	-	138	0	66	6	0	-	72	289
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	100.0	-	-	-	-	100.0	96.8	99.0	85.7	-	-	97.9	0.0	95.7	100.0	-	-	94.7	97.6
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
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1	1	0	0	-	2	3
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	1.0	0.0	-	-	0.7	100.0	1.4	0.0	-	-	2.6	1.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.4	0.0	-	-	1.3	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	1	0	1	0	-	2	0	1	0	0	-	1	3
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	3.2	0.0	14.3	-	-	1.4	0.0	1.4	0.0	-	-	1.3	1.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	25.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	40.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	75.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	60.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025

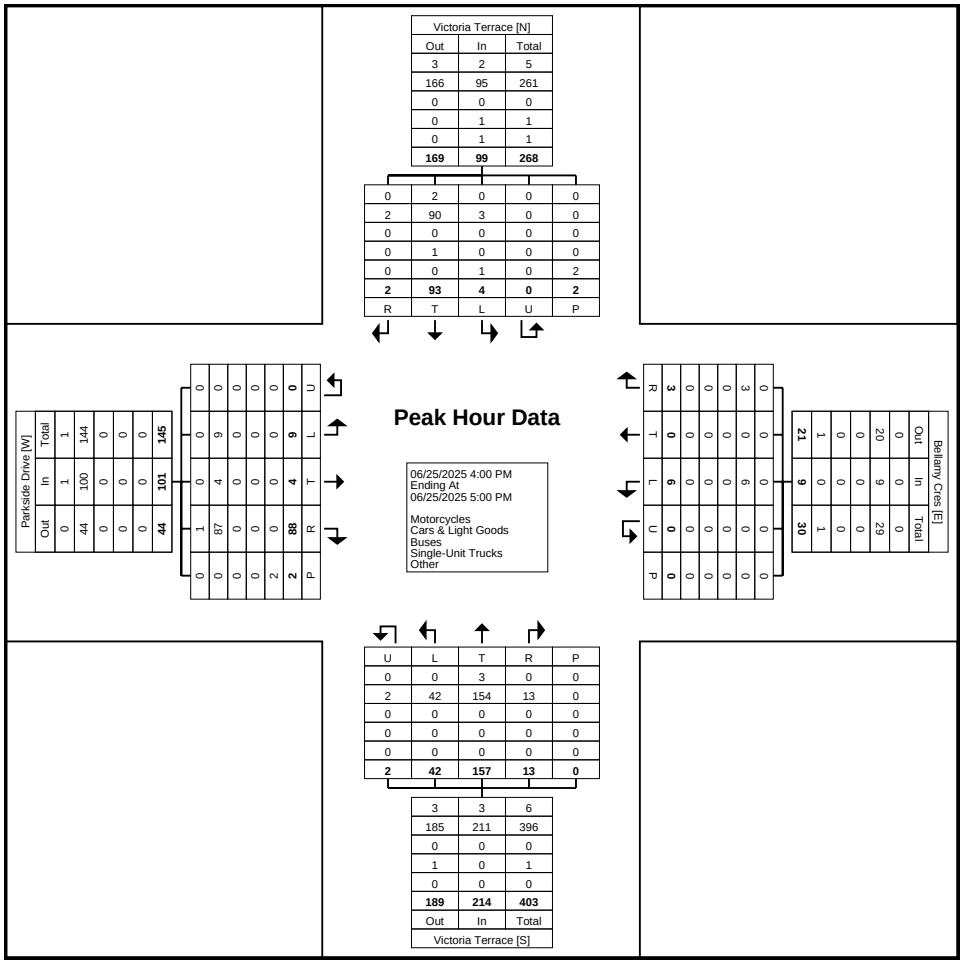
Turning Movement Peak Hour Data (4:00 PM)

Start Time	Parkside Drive Eastbound						Bellamy Cres Westbound						Victoria Terrace Northbound						Victoria Terrace 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	
4:00 PM	2	0	19	0	0	21	0	0	1	0	0	1	10	44	2	0	0	56	1	20	0	0	0	21	99
4:15 PM	2	1	23	0	0	26	1	0	1	0	0	2	7	39	2	0	0	48	3	18	0	0	0	21	97
4:30 PM	2	3	21	0	0	26	1	0	1	0	0	2	10	34	6	1	0	51	0	31	1	0	0	32	111
4:45 PM	3	0	25	0	2	28	4	0	0	0	0	4	15	40	3	1	0	59	0	24	1	0	2	25	116
Total	9	4	88	0	2	101	6	0	3	0	0	9	42	157	13	2	0	214	4	93	2	0	2	99	423
Approach %	8.9	4.0	87.1	0.0	-	-	66.7	0.0	33.3	0.0	-	-	19.6	73.4	6.1	0.9	-	-	4.0	93.9	2.0	0.0	-	-	-
Total %	2.1	0.9	20.8	0.0	-	23.9	1.4	0.0	0.7	0.0	-	2.1	9.9	37.1	3.1	0.5	-	50.6	0.9	22.0	0.5	0.0	-	23.4	-
PHF	0.750	0.333	0.880	0.000	-	0.902	0.375	0.000	0.750	0.000	-	0.563	0.700	0.892	0.542	0.500	-	0.907	0.333	0.750	0.500	0.000	-	0.773	0.912
Motorcycles	0	0	1	0	-	1	0	0	0	0	-	0	0	3	0	0	-	3	0	2	0	0	-	2	6
% Motorcycles	0.0	0.0	1.1	-	-	1.0	0.0	-	0.0	-	-	0.0	0.0	1.9	0.0	0.0	-	1.4	0.0	2.2	0.0	-	-	2.0	1.4
Cars & Light Goods	9	4	87	0	-	100	6	0	3	0	-	9	42	154	13	2	-	211	3	90	2	0	-	95	415
% Cars & Light Goods	100.0	100.0	98.9	-	-	99.0	100.0	-	100.0	-	-	100.0	100.0	98.1	100.0	100.0	-	98.6	75.0	96.8	100.0	-	-	96.0	98.1
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
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% 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	0.0	1.1	0.0	-	-	1.0	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	1
% 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	25.0	0.0	0.0	-	-	1.0	0.2
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	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & Victoria Terrace
Site Code: 250272
Start Date: 06/25/2025



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024

Turning Movement Data

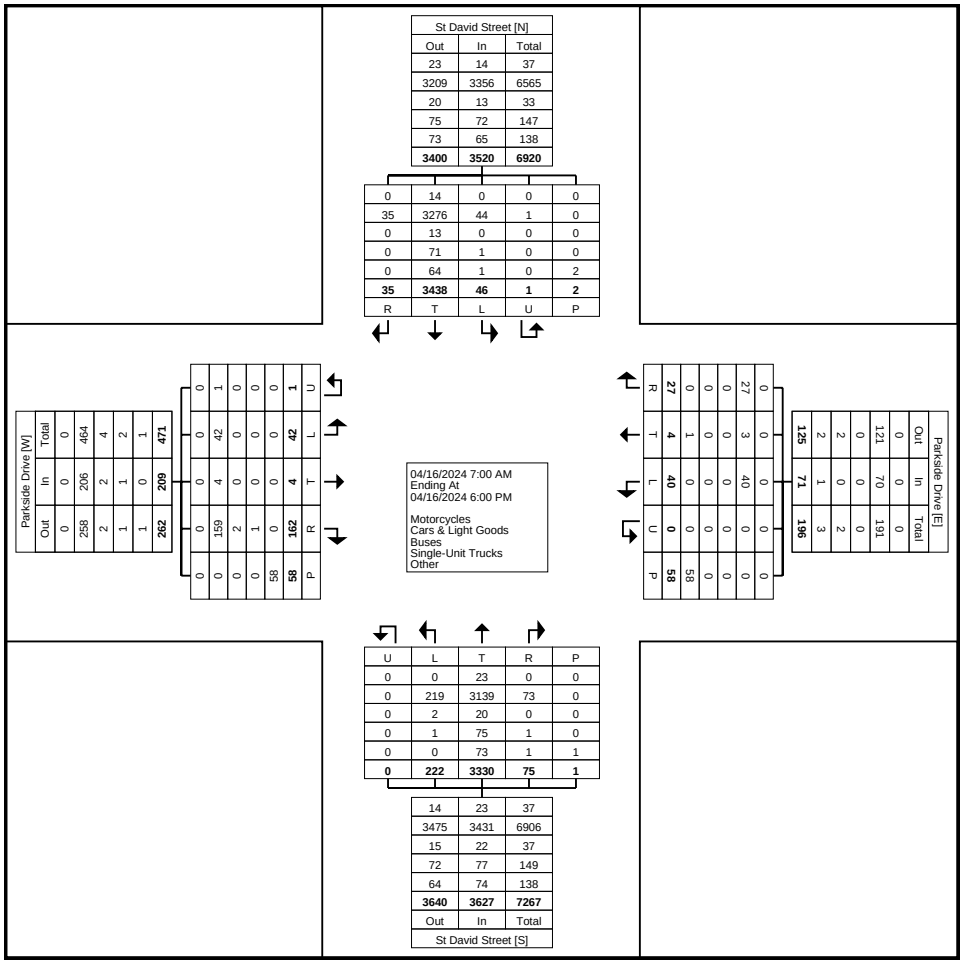
Start Time	Parkside Drive Eastbound						Parkside Drive Westbound						St David Street Northbound						St David Street Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	1	3	0	3	4	3	0	0	0	0	3	1	47	0	0	0	48	0	77	0	0	1	77	132
7:15 AM	1	0	5	0	2	6	0	0	1	0	2	1	0	57	2	0	0	59	0	96	0	0	0	96	162
7:30 AM	2	0	2	0	3	4	2	0	3	0	0	5	0	62	1	0	0	63	1	98	0	0	0	99	171
7:45 AM	5	0	2	0	0	7	3	1	1	0	1	5	0	104	0	0	0	104	1	99	1	0	0	101	217
Hourly Total	8	1	12	0	8	21	8	1	5	0	3	14	1	270	3	0	0	274	2	370	1	0	1	373	682
8:00 AM	1	0	1	0	0	2	0	0	0	0	1	0	1	70	2	0	0	73	2	97	0	0	0	99	174
8:15 AM	1	0	0	0	1	1	1	0	1	0	0	2	4	87	1	0	0	92	0	121	1	0	0	122	217
8:30 AM	2	0	2	0	1	4	2	0	3	0	1	5	3	104	2	0	0	109	0	108	1	0	0	109	227
8:45 AM	1	0	0	0	0	1	1	0	1	0	4	2	4	120	0	0	0	124	2	111	2	0	1	115	242
Hourly Total	5	0	3	0	2	8	4	0	5	0	6	9	12	381	5	0	0	398	4	437	4	0	1	445	860
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	1	0	5	0	2	6	1	1	2	0	2	4	8	112	1	0	0	121	1	115	1	0	0	117	248
11:45 AM	0	0	5	0	1	5	0	0	0	0	1	0	5	109	2	0	0	116	1	108	2	0	0	111	232
Hourly Total	1	0	10	0	3	11	1	1	2	0	3	4	13	221	3	0	0	237	2	223	3	0	0	228	480
12:00 PM	2	0	10	0	3	12	0	0	0	0	0	0	2	128	2	0	0	132	2	133	2	0	0	137	281
12:15 PM	4	0	3	0	2	7	4	0	0	0	1	4	3	116	2	0	0	121	3	127	0	0	0	130	262
12:30 PM	0	0	1	0	1	1	2	0	2	0	2	4	10	94	3	0	0	107	2	145	2	0	0	149	261
12:45 PM	3	0	9	0	0	12	1	0	0	0	2	1	8	118	6	0	0	132	0	122	3	0	0	125	270
Hourly Total	9	0	23	0	6	32	7	0	2	0	5	9	23	456	13	0	0	492	7	527	7	0	0	541	1074
1:00 PM	1	0	7	1	1	9	3	0	1	0	0	4	6	114	1	0	0	121	0	123	1	0	0	124	258
1:15 PM	1	0	5	0	5	6	1	0	0	0	4	1	7	121	1	0	0	129	1	122	0	0	0	123	259
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	2	0	12	1	6	15	4	0	1	0	4	5	13	235	2	0	0	250	1	245	1	0	0	247	517
3:00 PM	0	0	3	0	3	3	1	0	1	0	2	2	13	132	2	0	0	147	2	119	0	0	0	121	273
3:15 PM	0	0	8	0	4	8	3	0	1	0	11	4	9	147	3	0	0	159	1	148	3	0	0	152	323
3:30 PM	0	0	13	0	2	13	1	0	0	0	5	1	14	147	4	0	1	165	0	123	2	1	0	126	305
3:45 PM	2	1	8	0	1	11	1	0	1	0	2	2	7	162	8	0	0	177	6	155	2	0	0	163	353
Hourly Total	2	1	32	0	10	35	6	0	3	0	20	9	43	588	17	0	1	648	9	545	7	1	0	562	1254
4:00 PM	1	0	11	0	1	12	1	1	1	0	3	3	16	131	3	0	0	150	1	129	1	0	0	131	296
4:15 PM	0	0	9	0	5	9	1	1	1	0	1	3	11	159	3	0	0	173	5	141	4	0	0	150	335
4:30 PM	3	2	5	0	5	10	2	0	0	0	2	2	16	156	4	0	0	176	2	126	2	0	0	130	318
4:45 PM	3	0	13	0	2	16	4	0	2	0	2	6	16	156	8	0	0	180	4	130	2	0	0	136	338
Hourly Total	7	2	38	0	13	47	8	2	4	0	8	14	59	602	18	0	0	679	12	526	9	0	0	547	1287
5:00 PM	3	0	10	0	3	13	0	0	0	0	3	0	18	184	5	0	0	207	2	167	1	0	0	170	390
5:15 PM	3	0	4	0	4	7	1	0	2	0	3	3	9	138	3	0	0	150	4	129	1	0	0	134	294

5:30 PM	2	0	5	0	2	7	1	0	2	0	1	3	16	138	4	0	0	158	2	147	1	0	0	150	318
5:45 PM	0	0	13	0	1	13	0	0	1	0	2	1	15	117	2	0	0	134	1	122	0	0	0	123	271
Hourly Total	8	0	32	0	10	40	2	0	5	0	9	7	58	577	14	0	0	649	9	565	3	0	0	577	1273
Grand Total	42	4	162	1	58	209	40	4	27	0	58	71	222	3330	75	0	1	3627	46	3438	35	1	2	3520	7427
Approach %	20.1	1.9	77.5	0.5	-	-	56.3	5.6	38.0	0.0	-	-	6.1	91.8	2.1	0.0	-	-	1.3	97.7	1.0	0.0	-	-	-
Total %	0.6	0.1	2.2	0.0	-	2.8	0.5	0.1	0.4	0.0	-	1.0	3.0	44.8	1.0	0.0	-	48.8	0.6	46.3	0.5	0.0	-	47.4	-
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	23	0	0	-	23	0	14	0	0	-	14	37
% Motorcycles	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.7	0.0	-	-	0.6	0.0	0.4	0.0	0.0	-	0.4	0.5
Cars & Light Goods	42	4	159	1	-	206	40	3	27	0	-	70	219	3139	73	0	-	3431	44	3276	35	1	-	3356	7063
% Cars & Light Goods	100.0	100.0	98.1	100.0	-	98.6	100.0	75.0	100.0	-	-	98.6	98.6	94.3	97.3	-	-	94.6	95.7	95.3	100.0	100.0	-	95.3	95.1
Buses	0	0	2	0	-	2	0	0	0	0	-	0	2	20	0	0	-	22	0	13	0	0	-	13	37
% Buses	0.0	0.0	1.2	0.0	-	1.0	0.0	0.0	0.0	-	-	0.0	0.9	0.6	0.0	-	-	0.6	0.0	0.4	0.0	0.0	-	0.4	0.5
Single-Unit Trucks	0	0	1	0	-	1	0	0	0	0	-	0	1	75	1	0	-	77	1	71	0	0	-	72	150
% Single-Unit Trucks	0.0	0.0	0.6	0.0	-	0.5	0.0	0.0	0.0	-	-	0.0	0.5	2.3	1.3	-	-	2.1	2.2	2.1	0.0	0.0	-	2.0	2.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	71	0	0	-	71	0	63	0	0	-	63	134
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	2.1	0.0	-	-	2.0	0.0	1.8	0.0	0.0	-	1.8	1.8
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	2	1	0	-	3	1	1	0	0	-	2	6
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	25.0	0.0	-	-	1.4	0.0	0.1	1.3	-	-	0.1	2.2	0.0	0.0	0.0	-	0.1	0.1
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	3.4	-	-	-	-	-	5.2	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	56	-	-	-	-	-	55	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	96.6	-	-	-	-	-	94.8	-	-	-	-	-	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: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024



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: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024

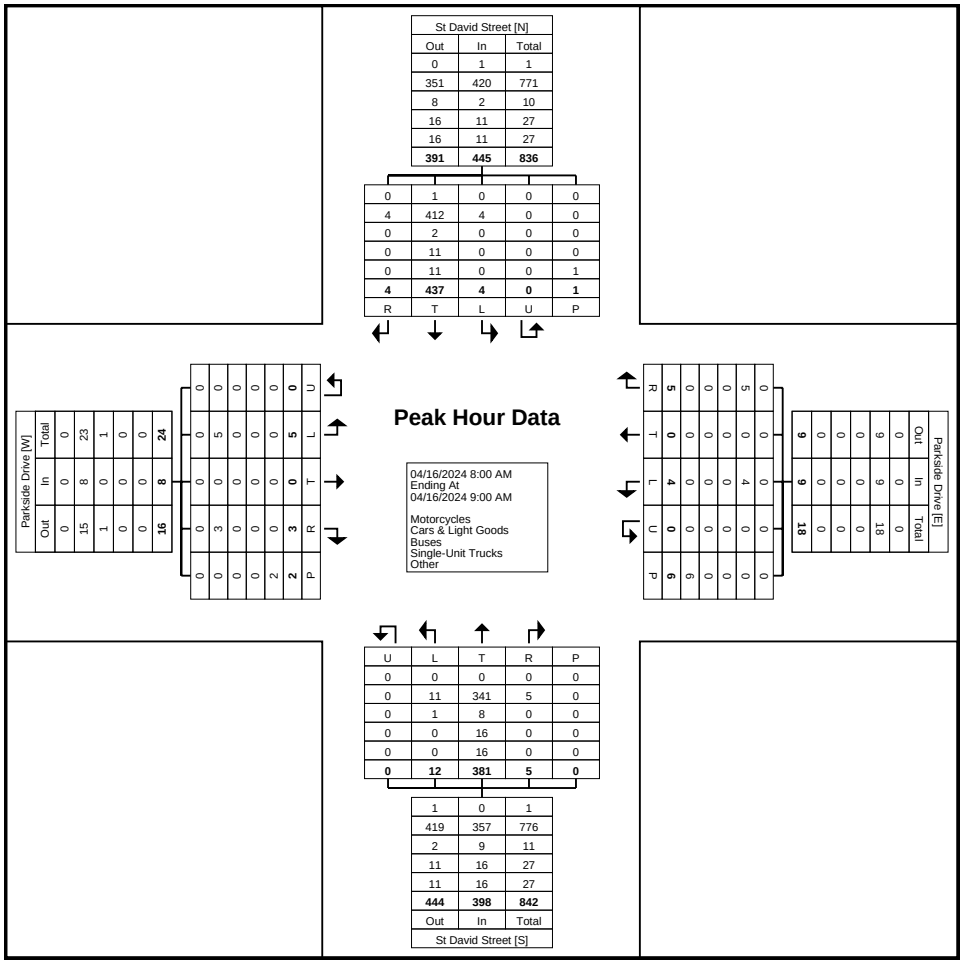
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Parkside Drive Eastbound						Parkside Drive Westbound						St David Street Northbound						St David 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	
8:00 AM	1	0	1	0	0	2	0	0	0	0	1	0	1	70	2	0	0	73	2	97	0	0	0	99	174
8:15 AM	1	0	0	0	1	1	1	0	1	0	0	2	4	87	1	0	0	92	0	121	1	0	0	122	217
8:30 AM	2	0	2	0	1	4	2	0	3	0	1	5	3	104	2	0	0	109	0	108	1	0	0	109	227
8:45 AM	1	0	0	0	0	1	1	0	1	0	4	2	4	120	0	0	0	124	2	111	2	0	1	115	242
Total	5	0	3	0	2	8	4	0	5	0	6	9	12	381	5	0	0	398	4	437	4	0	1	445	860
Approach %	62.5	0.0	37.5	0.0	-	-	44.4	0.0	55.6	0.0	-	-	3.0	95.7	1.3	0.0	-	-	0.9	98.2	0.9	0.0	-	-	-
Total %	0.6	0.0	0.3	0.0	-	0.9	0.5	0.0	0.6	0.0	-	1.0	1.4	44.3	0.6	0.0	-	46.3	0.5	50.8	0.5	0.0	-	51.7	-
PHF	0.625	0.000	0.375	0.000	-	0.500	0.500	0.000	0.417	0.000	-	0.450	0.750	0.794	0.625	0.000	-	0.802	0.500	0.903	0.500	0.000	-	0.912	0.888
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.1
Cars & Light Goods	5	0	3	0	-	8	4	0	5	0	-	9	11	341	5	0	-	357	4	412	4	0	-	420	794
% Cars & Light Goods	100.0	-	100.0	-	-	100.0	100.0	-	100.0	-	-	100.0	91.7	89.5	100.0	-	-	89.7	100.0	94.3	100.0	-	-	94.4	92.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	1	8	0	0	-	9	0	2	0	0	-	2	11
% Buses	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	8.3	2.1	0.0	-	-	2.3	0.0	0.5	0.0	-	-	0.4	1.3
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	16	0	0	-	16	0	11	0	0	-	11	27
% Single-Unit Trucks	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	4.2	0.0	-	-	4.0	0.0	2.5	0.0	-	-	2.5	3.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	16	0	0	-	16	0	11	0	0	-	11	27
% Articulated Trucks	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	4.2	0.0	-	-	4.0	0.0	2.5	0.0	-	-	2.5	3.1
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	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	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: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024

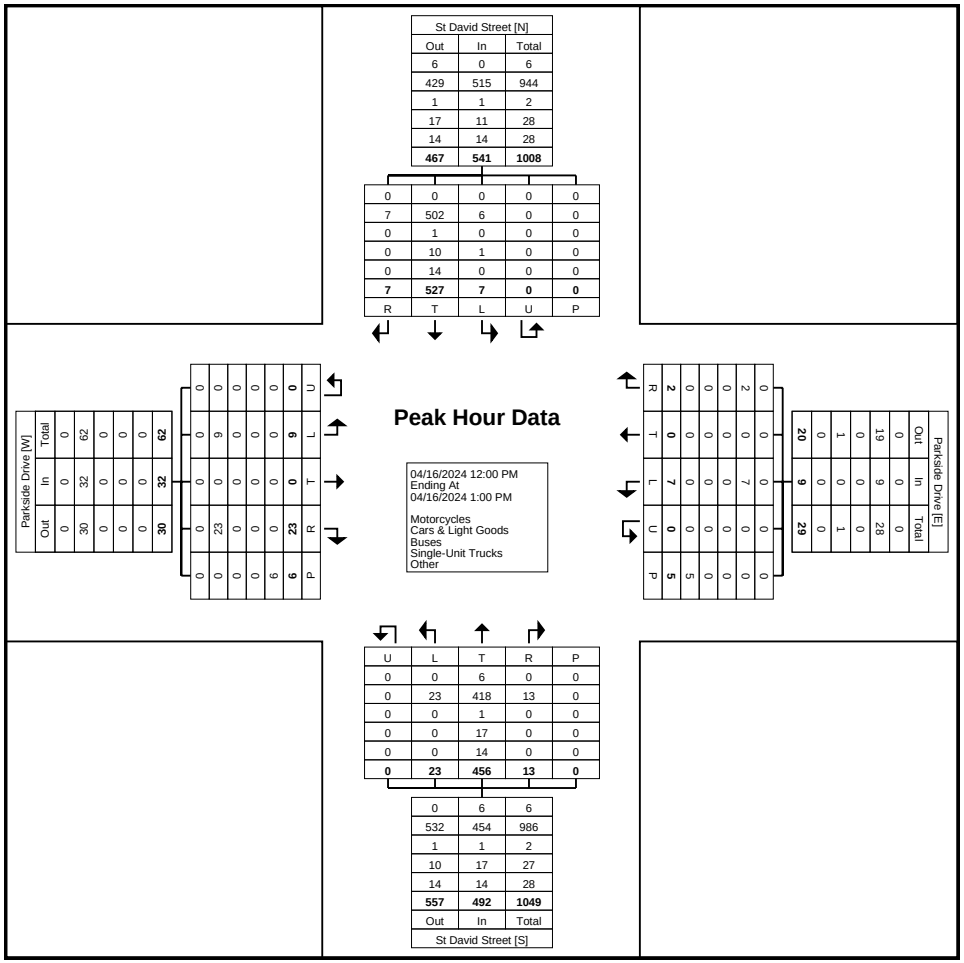
Turning Movement Peak Hour Data (12:00 PM)

Start Time	Parkside Drive Eastbound						Parkside Drive Westbound						St David Street Northbound						St David 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	
12:00 PM	2	0	10	0	3	12	0	0	0	0	0	0	2	128	2	0	0	132	2	133	2	0	0	137	281
12:15 PM	4	0	3	0	2	7	4	0	0	0	1	4	3	116	2	0	0	121	3	127	0	0	0	130	262
12:30 PM	0	0	1	0	1	1	2	0	2	0	2	4	10	94	3	0	0	107	2	145	2	0	0	149	261
12:45 PM	3	0	9	0	0	12	1	0	0	0	2	1	8	118	6	0	0	132	0	122	3	0	0	125	270
Total	9	0	23	0	6	32	7	0	2	0	5	9	23	456	13	0	0	492	7	527	7	0	0	541	1074
Approach %	28.1	0.0	71.9	0.0	-	-	77.8	0.0	22.2	0.0	-	-	4.7	92.7	2.6	0.0	-	-	1.3	97.4	1.3	0.0	-	-	-
Total %	0.8	0.0	2.1	0.0	-	3.0	0.7	0.0	0.2	0.0	-	0.8	2.1	42.5	1.2	0.0	-	45.8	0.7	49.1	0.7	0.0	-	50.4	-
PHF	0.563	0.000	0.575	0.000	-	0.667	0.438	0.000	0.250	0.000	-	0.563	0.575	0.891	0.542	0.000	-	0.932	0.583	0.909	0.583	0.000	-	0.908	0.956
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	6	0	0	-	6	0	0	0	0	-	0	6
% Motorcycles	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	1.3	0.0	-	-	1.2	0.0	0.0	0.0	-	-	0.0	0.6
Cars & Light Goods	9	0	23	0	-	32	7	0	2	0	-	9	23	418	13	0	-	454	6	502	7	0	-	515	1010
% Cars & Light Goods	100.0	-	100.0	-	-	100.0	100.0	-	100.0	-	-	100.0	100.0	91.7	100.0	-	-	92.3	85.7	95.3	100.0	-	-	95.2	94.0
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	2
% Buses	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.2	0.0	-	-	0.2	0.2
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	17	0	0	-	17	1	10	0	0	-	11	28
% Single-Unit Trucks	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	3.7	0.0	-	-	3.5	14.3	1.9	0.0	-	-	2.0	2.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	13	0	0	-	13	0	14	0	0	-	14	27
% Articulated Trucks	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	2.9	0.0	-	-	2.6	0.0	2.7	0.0	-	-	2.6	2.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	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: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024

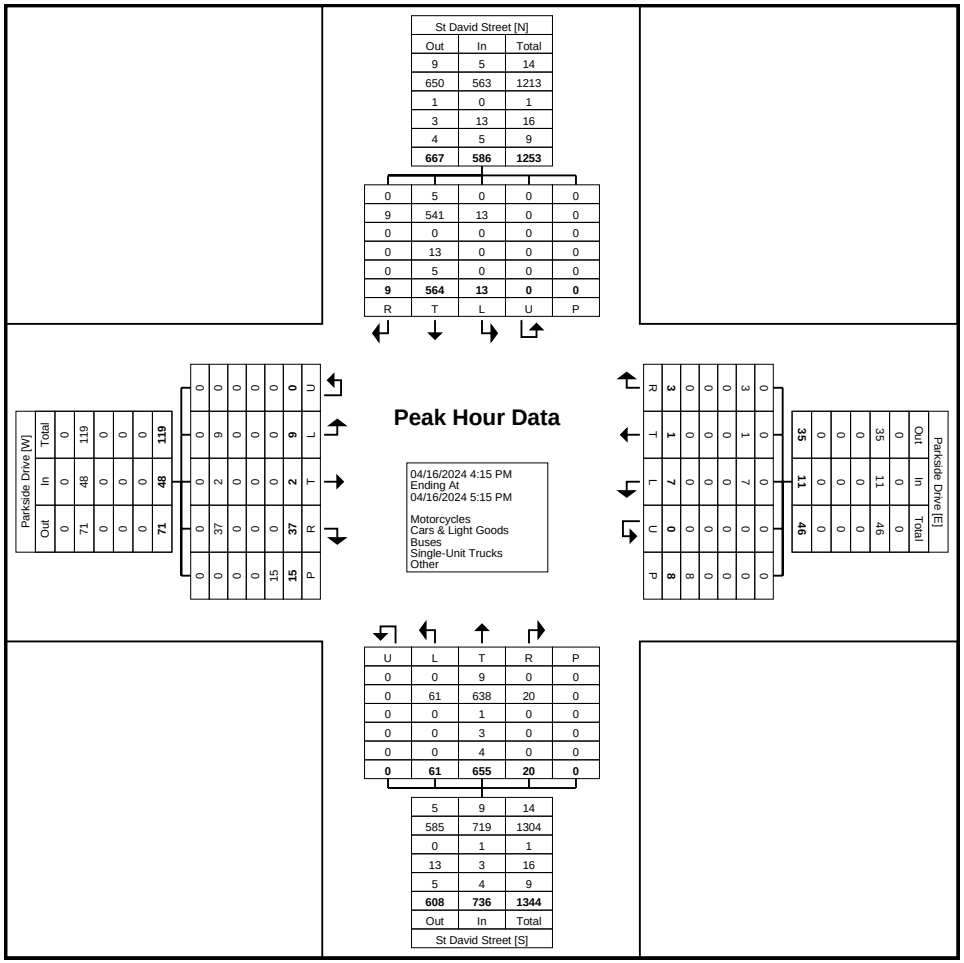
Turning Movement Peak Hour Data (4:15 PM)

Start Time	Parkside Drive Eastbound						Parkside Drive Westbound						St David Street Northbound						St David 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	
4:15 PM	0	0	9	0	5	9	1	1	1	0	1	3	11	159	3	0	0	173	5	141	4	0	0	150	335
4:30 PM	3	2	5	0	5	10	2	0	0	0	2	2	16	156	4	0	0	176	2	126	2	0	0	130	318
4:45 PM	3	0	13	0	2	16	4	0	2	0	2	6	16	156	8	0	0	180	4	130	2	0	0	136	338
5:00 PM	3	0	10	0	3	13	0	0	0	0	3	0	18	184	5	0	0	207	2	167	1	0	0	170	390
Total	9	2	37	0	15	48	7	1	3	0	8	11	61	655	20	0	0	736	13	564	9	0	0	586	1381
Approach %	18.8	4.2	77.1	0.0	-	-	63.6	9.1	27.3	0.0	-	-	8.3	89.0	2.7	0.0	-	-	2.2	96.2	1.5	0.0	-	-	-
Total %	0.7	0.1	2.7	0.0	-	3.5	0.5	0.1	0.2	0.0	-	0.8	4.4	47.4	1.4	0.0	-	53.3	0.9	40.8	0.7	0.0	-	42.4	-
PHF	0.750	0.250	0.712	0.000	-	0.750	0.438	0.250	0.375	0.000	-	0.458	0.847	0.890	0.625	0.000	-	0.889	0.650	0.844	0.563	0.000	-	0.862	0.885
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	9	0	0	-	9	0	5	0	0	-	5	14
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.4	0.0	-	-	1.2	0.0	0.9	0.0	-	-	0.9	1.0
Cars & Light Goods	9	2	37	0	-	48	7	1	3	0	-	11	61	638	20	0	-	719	13	541	9	0	-	563	1341
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	97.4	100.0	-	-	97.7	100.0	95.9	100.0	-	-	96.1	97.1
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.1
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	3	0	13	0	0	-	13	16
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.0	-	-	0.4	0.0	2.3	0.0	-	-	2.2	1.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	4	0	0	-	4	0	4	0	0	-	4	8
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.6	0.0	-	-	0.5	0.0	0.7	0.0	-	-	0.7	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	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	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.1
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	6.7	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	14	-	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	93.3	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Parkside Drive & St. David Street
Site Code: 240158
Start Date: 04/16/2024



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Strathallan Street & Victoria Terrance
Site Code: 240219
Start Date: 05-01-2024

Turning Movement Data

Start Time	Strathallan Street Eastbound					Strathallan Street Westbound					Victoria Terrance Northbound					Int. Total
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
7:00 AM	7	3	0	0	10	1	10	0	0	11	8	0	0	0	8	29
7:15 AM	8	5	0	1	13	3	13	0	0	16	3	0	0	1	3	32
7:30 AM	9	2	0	1	11	0	15	0	0	15	4	0	0	0	4	30
7:45 AM	7	4	0	0	11	1	14	0	0	15	7	3	0	0	10	36
Hourly Total	31	14	0	2	45	5	52	0	0	57	22	3	0	1	25	127
8:00 AM	8	5	0	0	13	0	20	0	0	20	12	0	0	3	12	45
8:15 AM	17	5	0	7	22	2	16	0	2	18	4	0	0	4	4	44
8:30 AM	21	14	0	2	35	4	22	0	1	26	10	2	0	10	12	73
8:45 AM	43	10	0	2	53	0	21	0	0	21	5	2	0	3	7	81
Hourly Total	89	34	0	11	123	6	79	0	3	85	31	4	0	20	35	243
9:00 AM	5	6	0	0	11	2	12	0	0	14	6	1	0	0	7	32
9:15 AM	16	3	0	0	19	1	7	0	0	8	3	1	0	1	4	31
9:30 AM	8	0	0	0	8	1	6	0	0	7	2	1	0	3	3	18
9:45 AM	8	2	0	0	10	0	8	0	0	8	2	0	0	1	2	20
Hourly Total	37	11	0	0	48	4	33	0	0	37	13	3	0	5	16	101
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	7	1	0	0	8	0	7	0	0	7	5	0	0	0	5	20
11:15 AM	8	5	0	0	13	1	7	0	0	8	1	0	0	1	1	22
11:30 AM	11	3	0	0	14	1	7	0	0	8	4	2	0	0	6	28
11:45 AM	5	2	0	0	7	0	10	0	0	10	4	1	0	0	5	22
Hourly Total	31	11	0	0	42	2	31	0	0	33	14	3	0	1	17	92
12:00 PM	10	2	0	0	12	0	8	0	0	8	3	1	0	1	4	24
12:15 PM	17	6	0	1	23	0	11	0	1	11	4	0	0	3	4	38
12:30 PM	10	5	0	0	15	0	11	0	0	11	6	0	0	0	6	32
12:45 PM	6	4	0	0	10	0	6	0	0	6	0	1	0	0	1	17
Hourly Total	43	17	0	1	60	0	36	0	1	36	13	2	0	4	15	111
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	20	6	0	0	26	2	17	0	0	19	4	1	0	4	5	50
3:15 PM	33	17	0	1	50	2	16	0	0	18	5	2	0	29	7	75
3:30 PM	18	4	0	4	22	2	11	0	0	13	15	1	0	5	16	51
3:45 PM	12	8	0	3	20	2	12	0	0	14	5	1	0	1	6	40
Hourly Total	83	35	0	8	118	8	56	0	0	64	29	5	0	39	34	216
4:00 PM	19	5	0	0	24	1	14	0	0	15	8	6	0	0	14	53
4:15 PM	17	8	0	0	25	1	18	0	0	19	5	1	0	0	6	50
4:30 PM	9	4	0	0	13	3	9	0	0	12	10	6	0	0	16	41
4:45 PM	15	4	0	1	19	2	13	0	0	15	7	3	0	1	10	44

Hourly Total	60	21	0	1	81	7	54	0	0	61	30	16	0	1	46	188
5:00 PM	12	1	0	1	13	1	11	0	0	12	5	4	0	0	9	34
5:15 PM	13	5	0	0	18	1	11	0	0	12	2	6	0	0	8	38
5:30 PM	13	9	0	1	22	0	17	0	0	17	5	1	0	0	6	45
5:45 PM	18	4	0	0	22	1	7	0	0	8	12	2	0	0	14	44
Hourly Total	56	19	0	2	75	3	46	0	0	49	24	13	0	0	37	161
Grand Total	430	162	0	25	592	35	387	0	4	422	176	49	0	71	225	1239
Approach %	72.6	27.4	0.0	-	-	8.3	91.7	0.0	-	-	78.2	21.8	0.0	-	-	-
Total %	34.7	13.1	0.0	-	47.8	2.8	31.2	0.0	-	34.1	14.2	4.0	0.0	-	18.2	-
Motorcycles	0	1	0	-	1	1	2	0	-	3	1	0	0	-	1	5
% Motorcycles	0.0	0.6	-	-	0.2	2.9	0.5	-	-	0.7	0.6	0.0	-	-	0.4	0.4
Cars & Light Goods	409	160	0	-	569	31	366	0	-	397	169	43	0	-	212	1178
% Cars & Light Goods	95.1	98.8	-	-	96.1	88.6	94.6	-	-	94.1	96.0	87.8	-	-	94.2	95.1
Buses	9	1	0	-	10	1	7	0	-	8	2	0	0	-	2	20
% Buses	2.1	0.6	-	-	1.7	2.9	1.8	-	-	1.9	1.1	0.0	-	-	0.9	1.6
Single-Unit Trucks	7	0	0	-	7	0	7	0	-	7	2	3	0	-	5	19
% Single-Unit Trucks	1.6	0.0	-	-	1.2	0.0	1.8	-	-	1.7	1.1	6.1	-	-	2.2	1.5
Articulated Trucks	2	0	0	-	2	0	2	0	-	2	0	0	0	-	0	4
% Articulated Trucks	0.5	0.0	-	-	0.3	0.0	0.5	-	-	0.5	0.0	0.0	-	-	0.0	0.3
Bicycles on Road	3	0	0	-	3	2	3	0	-	5	2	3	0	-	5	13
% Bicycles on Road	0.7	0.0	-	-	0.5	5.7	0.8	-	-	1.2	1.1	6.1	-	-	2.2	1.0
Bicycles on Crosswalk	-	-	-	3	-	-	-	-	0	-	-	-	-	6	-	-
% Bicycles on Crosswalk	-	-	-	12.0	-	-	-	-	0.0	-	-	-	-	8.5	-	-
Pedestrians	-	-	-	22	-	-	-	-	4	-	-	-	-	65	-	-
% Pedestrians	-	-	-	88.0	-	-	-	-	100.0	-	-	-	-	91.5	-	-

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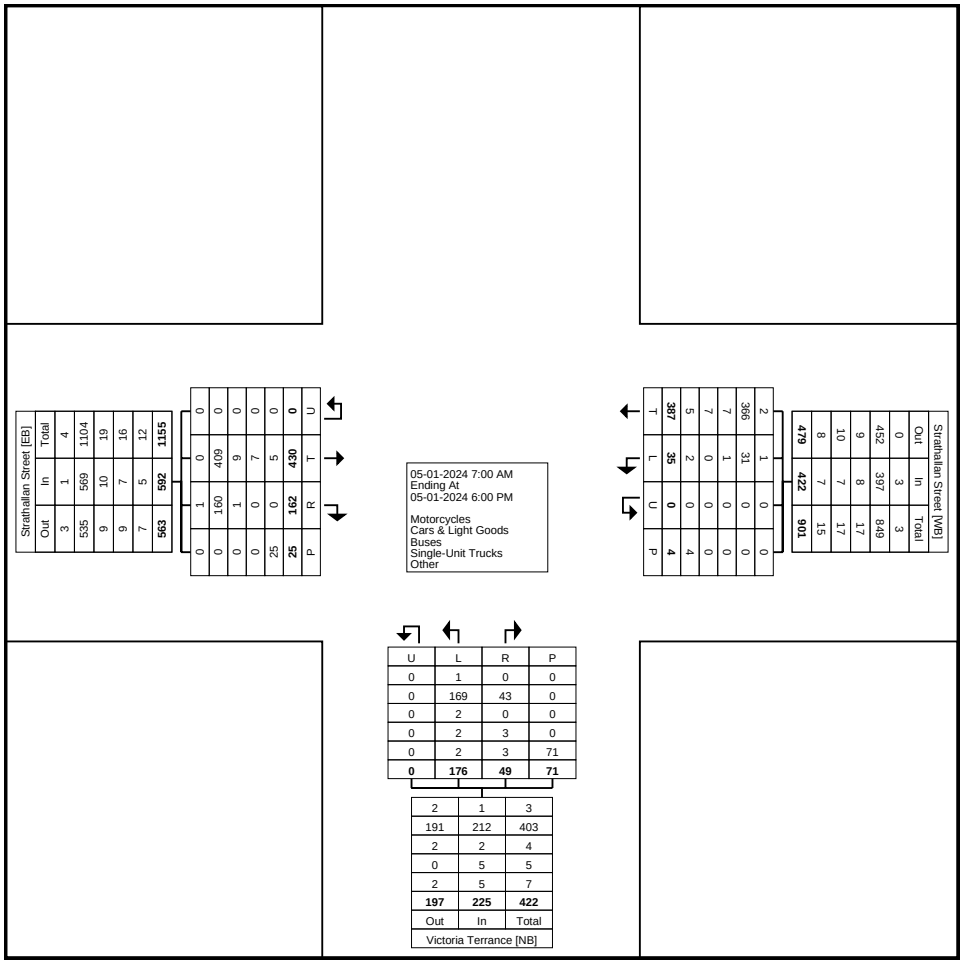
5A-150 Pinebush Rd

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

Count Name: Strathallan Street & Victoria Terrance
Site Code: 240219
Start Date: 05-01-2024



Turning Movement Data Plot

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Count Name: Strathallan Street & Victoria Terrance
Site Code: 240219
Start Date: 05-01-2024

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Strathallan Street Eastbound					Strathallan Street Westbound					Victoria Terrance Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
8:00 AM	8	5	0	0	13	0	20	0	0	20	12	0	0	3	12	45
8:15 AM	17	5	0	7	22	2	16	0	2	18	4	0	0	4	4	44
8:30 AM	21	14	0	2	35	4	22	0	1	26	10	2	0	10	12	73
8:45 AM	43	10	0	2	53	0	21	0	0	21	5	2	0	3	7	81
Total	89	34	0	11	123	6	79	0	3	85	31	4	0	20	35	243
Approach %	72.4	27.6	0.0	-	-	7.1	92.9	0.0	-	-	88.6	11.4	0.0	-	-	-
Total %	36.6	14.0	0.0	-	50.6	2.5	32.5	0.0	-	35.0	12.8	1.6	0.0	-	14.4	-
PHF	0.517	0.607	0.000	-	0.580	0.375	0.898	0.000	-	0.817	0.646	0.500	0.000	-	0.729	0.750
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	84	34	0	-	118	6	75	0	-	81	30	4	0	-	34	233
% Cars & Light Goods	94.4	100.0	-	-	95.9	100.0	94.9	-	-	95.3	96.8	100.0	-	-	97.1	95.9
Buses	4	0	0	-	4	0	3	0	-	3	0	0	0	-	0	7
% Buses	4.5	0.0	-	-	3.3	0.0	3.8	-	-	3.5	0.0	0.0	-	-	0.0	2.9
Single-Unit Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.3	-	-	1.2	0.0	0.0	-	-	0.0	0.4
Articulated Trucks	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
Bicycles on Road	1	0	0	-	1	0	0	0	-	0	1	0	0	-	1	2
% Bicycles on Road	1.1	0.0	-	-	0.8	0.0	0.0	-	-	0.0	3.2	0.0	-	-	2.9	0.8
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	9.1	-	-	-	-	0.0	-	-	-	-	10.0	-	-
Pedestrians	-	-	-	10	-	-	-	-	3	-	-	-	-	18	-	-
% Pedestrians	-	-	-	90.9	-	-	-	-	100.0	-	-	-	-	90.0	-	-

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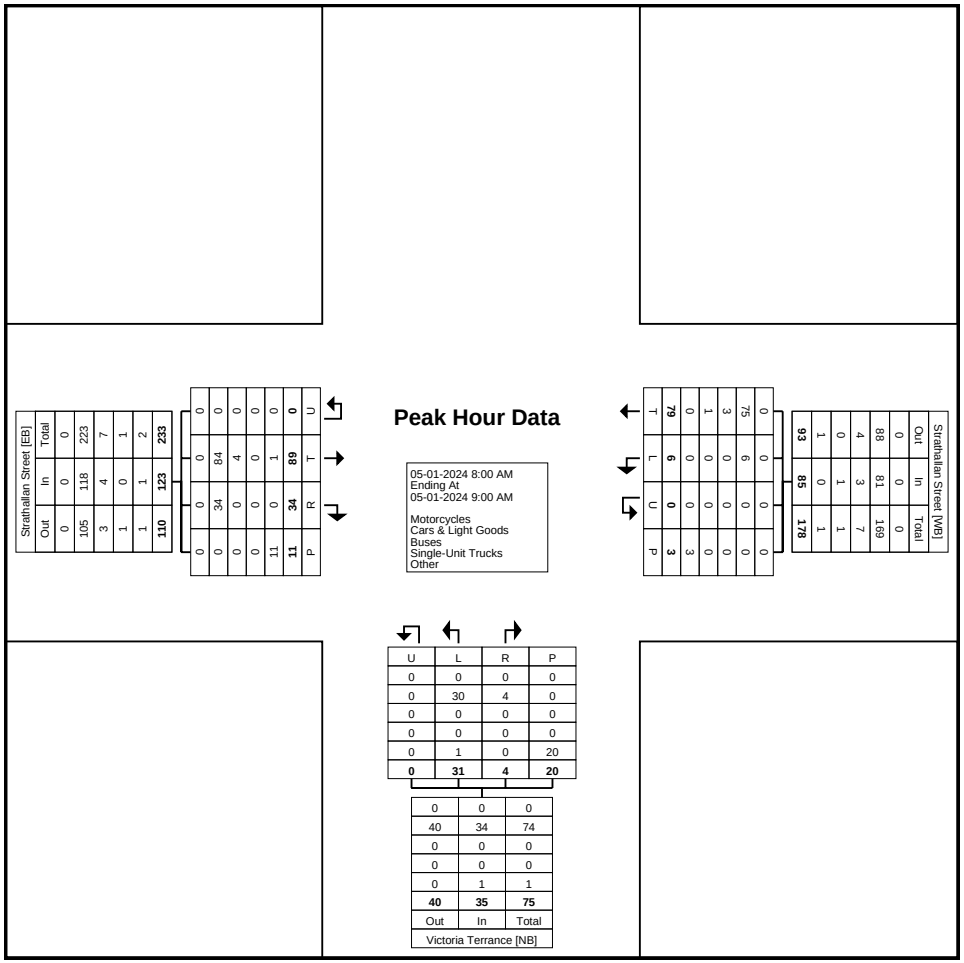

Turning Movement Peak Hour Data Plot (8:00 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
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Count Name: Strathallan Street & Victoria Terrance
Site Code: 240219
Start Date: 05-01-2024

Turning Movement Peak Hour Data (11:45 AM)

Start Time	Strathallan Street Eastbound					Strathallan Street Westbound					Victoria Terrance Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
11:45 AM	5	2	0	0	7	0	10	0	0	10	4	1	0	0	5	22
12:00 PM	10	2	0	0	12	0	8	0	0	8	3	1	0	1	4	24
12:15 PM	17	6	0	1	23	0	11	0	1	11	4	0	0	3	4	38
12:30 PM	10	5	0	0	15	0	11	0	0	11	6	0	0	0	6	32
Total	42	15	0	1	57	0	40	0	1	40	17	2	0	4	19	116
Approach %	73.7	26.3	0.0	-	-	0.0	100.0	0.0	-	-	89.5	10.5	0.0	-	-	-
Total %	36.2	12.9	0.0	-	49.1	0.0	34.5	0.0	-	34.5	14.7	1.7	0.0	-	16.4	-
PHF	0.618	0.625	0.000	-	0.620	0.000	0.909	0.000	-	0.909	0.708	0.500	0.000	-	0.792	0.763
Motorcycles	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Motorcycles	0.0	0.0	-	-	0.0	-	2.5	-	-	2.5	0.0	0.0	-	-	0.0	0.9
Cars & Light Goods	40	15	0	-	55	0	37	0	-	37	16	1	0	-	17	109
% Cars & Light Goods	95.2	100.0	-	-	96.5	-	92.5	-	-	92.5	94.1	50.0	-	-	89.5	94.0
Buses	0	0	0	-	0	0	0	0	-	0	1	0	0	-	1	1
% Buses	0.0	0.0	-	-	0.0	-	0.0	-	-	0.0	5.9	0.0	-	-	5.3	0.9
Single-Unit Trucks	2	0	0	-	2	0	1	0	-	1	0	1	0	-	1	4
% Single-Unit Trucks	4.8	0.0	-	-	3.5	-	2.5	-	-	2.5	0.0	50.0	-	-	5.3	3.4
Articulated Trucks	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
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	-	2.5	-	-	2.5	0.0	0.0	-	-	0.0	0.9
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	1	-	-	-	-	1	-	-	-	-	4	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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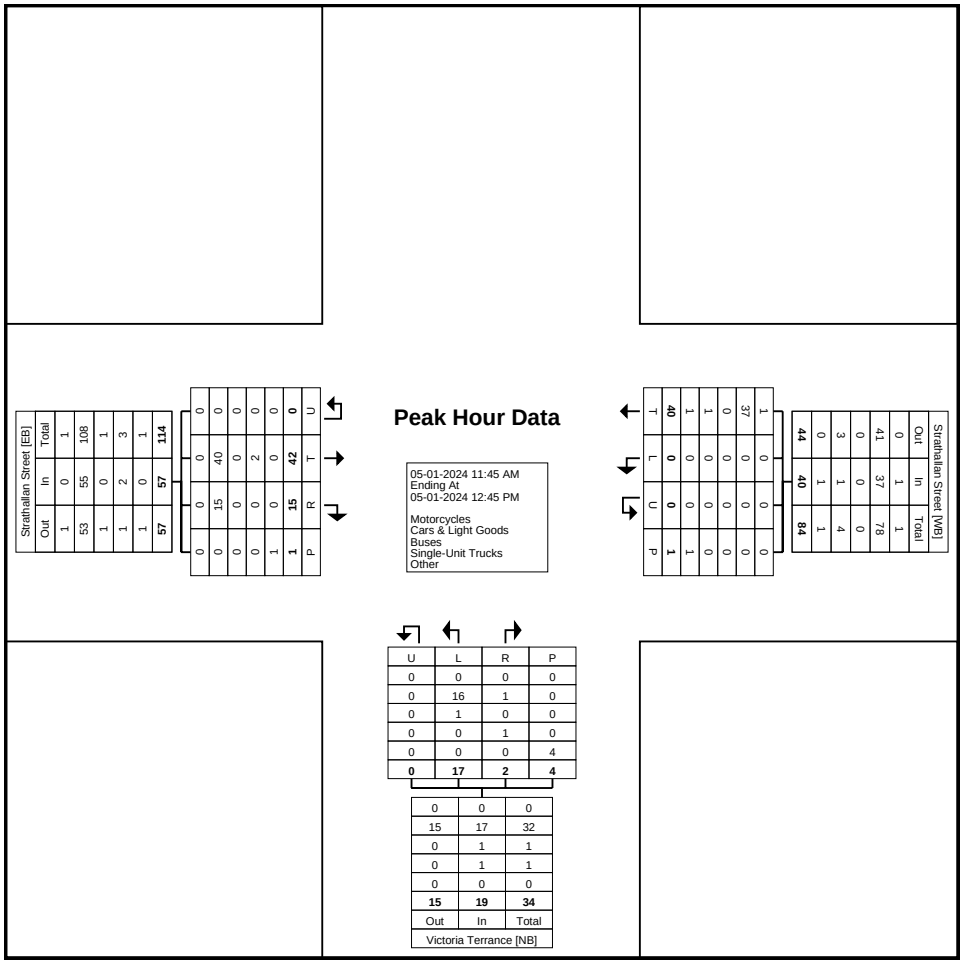

Turning Movement Peak Hour Data Plot (11:45 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
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Count Name: Strathallan Street & Victoria Terrance
Site Code: 240219
Start Date: 05-01-2024

Turning Movement Peak Hour Data (3:15 PM)

Start Time	Strathallan Street Eastbound					Strathallan Street Westbound					Victoria Terrance Northbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
3:15 PM	33	17	0	1	50	2	16	0	0	18	5	2	0	29	7	75
3:30 PM	18	4	0	4	22	2	11	0	0	13	15	1	0	5	16	51
3:45 PM	12	8	0	3	20	2	12	0	0	14	5	1	0	1	6	40
4:00 PM	19	5	0	0	24	1	14	0	0	15	8	6	0	0	14	53
Total	82	34	0	8	116	7	53	0	0	60	33	10	0	35	43	219
Approach %	70.7	29.3	0.0	-	-	11.7	88.3	0.0	-	-	76.7	23.3	0.0	-	-	-
Total %	37.4	15.5	0.0	-	53.0	3.2	24.2	0.0	-	27.4	15.1	4.6	0.0	-	19.6	-
PHF	0.621	0.500	0.000	-	0.580	0.875	0.828	0.000	-	0.833	0.550	0.417	0.000	-	0.672	0.730
Motorcycles	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Motorcycles	0.0	2.9	-	-	0.9	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.5
Cars & Light Goods	79	33	0	-	112	5	49	0	-	54	31	9	0	-	40	206
% Cars & Light Goods	96.3	97.1	-	-	96.6	71.4	92.5	-	-	90.0	93.9	90.0	-	-	93.0	94.1
Buses	3	0	0	-	3	1	3	0	-	4	0	0	0	-	0	7
% Buses	3.7	0.0	-	-	2.6	14.3	5.7	-	-	6.7	0.0	0.0	-	-	0.0	3.2
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	1	1	0	-	2	2
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	3.0	10.0	-	-	4.7	0.9
Articulated Trucks	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
Bicycles on Road	0	0	0	-	0	1	1	0	-	2	1	0	0	-	1	3
% Bicycles on Road	0.0	0.0	-	-	0.0	14.3	1.9	-	-	3.3	3.0	0.0	-	-	2.3	1.4
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	12.5	-	-	-	-	-	-	-	-	-	8.6	-	-
Pedestrians	-	-	-	7	-	-	-	-	0	-	-	-	-	32	-	-
% Pedestrians	-	-	-	87.5	-	-	-	-	-	-	-	-	-	91.4	-	-

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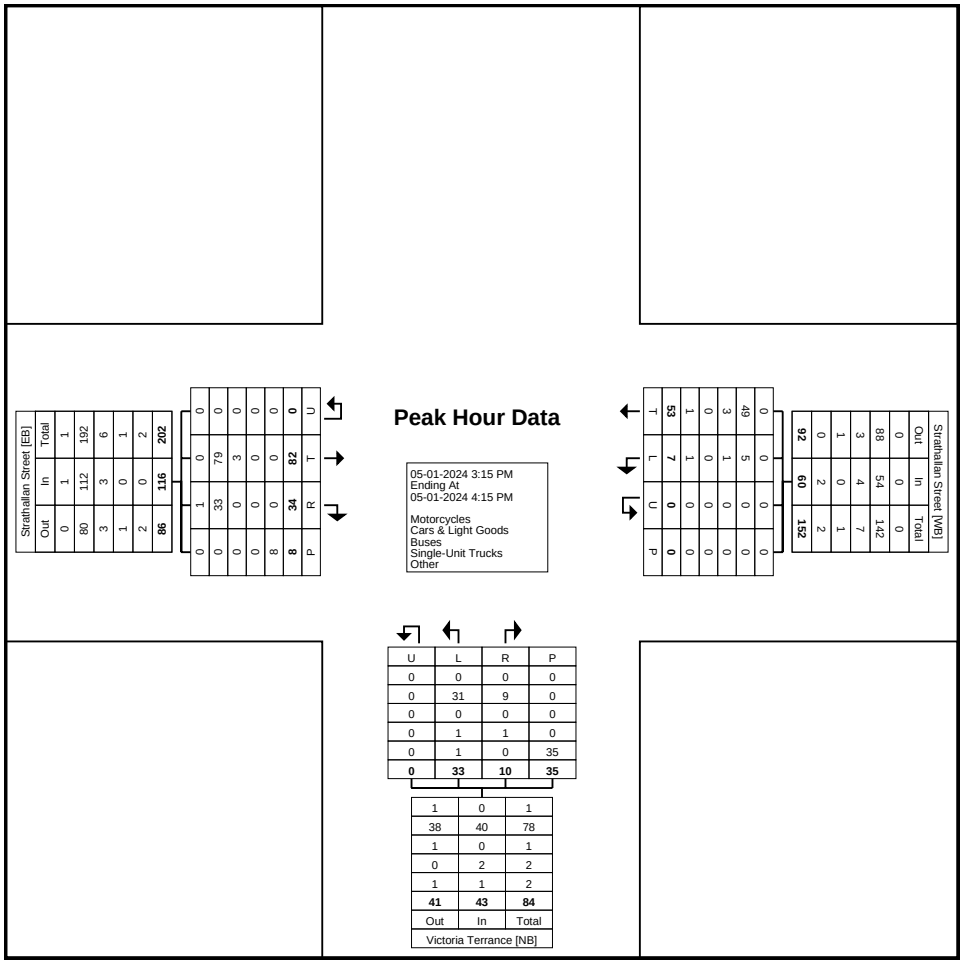
Start Date: 05-01-2024



Turning Movement Peak Hour Data Plot (3:15 PM)

Time Period	Pedestrians (Net Adjusted) Crossing Gartshore Street (Main Street)				Pedestrians (Net Adjusted) Crossing Side Streets			
	North Leg		South Leg		Forfar St		Middleton Ave	
	<10 s	>10 s	<10 s	>10 s	<10 s	>10 s	<10 s	>10 s
7:30 AM to 8:30 AM	0	0	8	0	2	0	2	0
8:30 AM to 9:30 AM	0	0	4	0	0	0	0	0
11:00 AM to 12:00 PM	0	0	1	0	0	0	0	0
12:00 PM to 1:00 PM	0	0	1	0	1	0	1	0
2:00 PM to 3:00 PM	0	0	0	0	1	0	0	1
3:00 PM to 4:00 PM	12	0	0	0	7	0	24	0
4:00 PM to 5:00 PM	0	0	1	0	2	0	0	0
5:00 PM to 6:00 PM	0	0	4	0	0	0	3	0
Total	12	0	19	0	11	0	30	1
	12		19		13		31	
Total Crossing	31				44			
	75							

Time Period	Gartshore St (Main Street)						Side Roads					
	Northbound			Southbound			Eastbound (Middleton Ave)			Westbound (Forfar St)		
	Left	Straight	Right	Left	Straight	Right	Left	Straight	Right	Left	Straight	Right
7:30 AM to 8:30 AM	15	251	3	8	201	6	15	8	18	16	6	23
8:30 AM to 9:30 AM	33	252	16	27	248	9	19	15	40	19	22	23
11:00 AM to 12:00 PM	47	177	10	6	149	6	4	7	23	7	8	3
12:00 PM to 1:00 PM	39	198	9	8	212	10	8	12	41	13	8	9
2:00 PM to 3:00 PM	24	200	11	15	219	8	9	5	34	20	6	21
3:00 PM to 4:00 PM	35	234	23	62	253	29	40	19	29	24	33	61
4:00 PM to 5:00 PM	56	257	15	34	258	13	16	9	24	14	13	31
5:00 PM to 6:00 PM	38	255	20	45	268	13	19	12	36	19	5	43
Total	287	1,824	107	205	1,808	94	130	87	245	132	101	214
Total Entering	2,218			2,107			462			447		
Road Total	4,325						909					

Appendix C

Base Year Operations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	3	4	0	5	12	389	5	4	446	4
Future Volume (vph)	5	0	3	4	0	5	12	389	5	4	446	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	15.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.955			0.919			0.998			0.999	
Flt Protected		0.968			0.980		0.950			0.950		
Satd. Flow (prot)	0	1756	0	0	1711	0	1671	1711	0	1805	1791	0
Flt Permitted		0.968			0.980		0.950			0.950		
Satd. Flow (perm)	0	1756	0	0	1711	0	1671	1711	0	1805	1791	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.6			129.1			112.6			179.5	
Travel Time (s)		8.9			9.3			8.1			16.2	
Confl. Peds. (#/hr)	1					1	2		6	6		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	8%	11%	0%	0%	6%	0%
Adj. Flow (vph)	6	0	3	4	0	6	13	437	6	4	501	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	10	0	13	443	0	4	505	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	3	4	0	5	12	389	5	4	446	4
Future Vol, veh/h	5	0	3	4	0	5	12	389	5	4	446	4
Conflicting Peds, #/hr	1	0	0	0	0	1	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	15	-	-	15	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	8	11	0	0	6	0
Mvmt Flow	6	0	3	4	0	6	13	437	6	4	501	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	979	990	505	983	989	447	508	0	0	449	0	0
Stage 1	514	514	-	473	473	-	-	-	-	-	-	-
Stage 2	465	476	-	510	517	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.18	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	231	248	571	230	249	616	1027	-	-	1122	-	-
Stage 1	547	538	-	576	562	-	-	-	-	-	-	-
Stage 2	581	560	-	550	537	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	224	242	570	223	242	611	1025	-	-	1116	-	-
Mov Cap-2 Maneuver	224	242	-	223	242	-	-	-	-	-	-	-
Stage 1	543	535	-	565	551	-	-	-	-	-	-	-
Stage 2	568	549	-	544	534	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	17.79	15.75	0.25	0.07
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1025	-	-	290	345	1116	-	-
HCM Lane V/C Ratio	0.013	-	-	0.031	0.029	0.004	-	-
HCM Ctrl Dly (s/v)	8.6	-	-	17.8	15.8	8.2	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	39	8	1	0	44	123	6	4	112	4
Future Volume (vph)	4	0	39	8	1	0	44	123	6	4	112	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.878						0.995			0.995	
Flt Protected		0.995			0.957			0.987			0.998	
Satd. Flow (prot)	0	1660	0	0	1818	0	0	1805	0	0	1852	0
Flt Permitted		0.995			0.957			0.987			0.998	
Satd. Flow (perm)	0	1660	0	0	1818	0	0	1805	0	0	1852	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		317.1			131.2			67.6			200.8	
Travel Time (s)		22.8			9.4			6.1			18.1	
Confl. Peds. (#/hr)	2		1	1		2	60		2	2		60
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	2%	0%
Adj. Flow (vph)	5	0	46	9	1	0	52	145	7	5	132	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	10	0	0	204	0	0	142	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	39	8	1	0	44	123	6	4	112	4
Future Vol, veh/h	4	0	39	8	1	0	44	123	6	4	112	4
Conflicting Peds, #/hr	2	0	1	1	0	2	60	0	2	2	0	60
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	2	4	0	0	2	0
Mvmt Flow	5	0	46	9	1	0	52	145	7	5	132	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	454	461	195	396	460	152	196	0	0	154	0	0
Stage 1	204	204	-	254	254	-	-	-	-	-	-	-
Stage 2	251	257	-	142	206	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	519	500	851	568	501	899	1376	-	-	1439	-	-
Stage 1	803	737	-	755	701	-	-	-	-	-	-	-
Stage 2	758	698	-	866	735	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	463	447	799	508	448	896	1292	-	-	1436	-	-
Mov Cap-2 Maneuver	463	447	-	508	448	-	-	-	-	-	-	-
Stage 1	751	689	-	721	669	-	-	-	-	-	-	-
Stage 2	722	667	-	812	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.16	12.35	2.01	0.25
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	454	-	-	748	501	60	-	-
HCM Lane V/C Ratio	0.04	-	-	0.068	0.021	0.003	-	-
HCM Ctrl Dly (s/v)	7.9	0	-	10.2	12.3	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	19	2	7	12	33	6	102	24	26	106	22
Future Volume (vph)	32	19	2	7	12	33	6	102	24	26	106	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.916			0.976			0.981	
Flt Protected		0.970			0.993			0.998			0.992	
Satd. Flow (prot)	0	1706	0	0	1696	0	0	1796	0	0	1824	0
Flt Permitted		0.970			0.993			0.998			0.992	
Satd. Flow (perm)	0	1706	0	0	1696	0	0	1796	0	0	1824	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		219.6			221.0			221.1			87.9	
Travel Time (s)		19.8			19.9			19.9			7.9	
Confl. Peds. (#/hr)	4		65	65		4	72					72
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	16%	0%	0%	8%	0%	0%	3%	4%	0%	2%	0%
Adj. Flow (vph)	39	23	2	9	15	40	7	124	29	32	129	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	64	0	0	160	0	0	188	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	10.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	19	2	7	12	33	6	102	24	26	106	22
Future Vol, veh/h	32	19	2	7	12	33	6	102	24	26	106	22
Conflicting Peds, #/hr	4	0	65	65	0	4	72	0	0	0	0	72
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	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	3	16	0	0	8	0	0	3	4	0	2	0
Mvmt Flow	39	23	2	9	15	40	7	124	29	32	129	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	59	0	0	91	0	0	336	243	89	219	224	111
Stage 1	-	-	-	-	-	-	167	167	-	56	56	-
Stage 2	-	-	-	-	-	-	168	76	-	163	169	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.53	6.24	7.1	6.52	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.53	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.53	-	6.1	5.52	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4.027	3.336	3.5	4.018	3.3
Pot Cap-1 Maneuver	1539	-	-	1517	-	-	622	657	963	741	675	948
Stage 1	-	-	-	-	-	-	839	758	-	961	848	-
Stage 2	-	-	-	-	-	-	838	830	-	843	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1532	-	-	1417	-	-	400	591	899	550	607	875
Mov Cap-2 Maneuver	-	-	-	-	-	-	400	591	-	550	607	-
Stage 1	-	-	-	-	-	-	764	690	-	951	840	-
Stage 2	-	-	-	-	-	-	633	821	-	651	691	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	4.47	1.02	12.89	13.24
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	616	1066	-	-	211	-	-	624
HCM Lane V/C Ratio	0.261	0.025	-	-	0.006	-	-	0.301
HCM Ctrl Dly (s/v)	12.9	7.4	0	-	7.6	0	-	13.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	1.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	47	20	7	45	59	4	39	3	33	69	4
Future Volume (vph)	11	47	20	7	45	59	4	39	3	33	69	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.965			0.929			0.992			0.995	
Flt Protected		0.993			0.997			0.995			0.985	
Satd. Flow (prot)	0	1735	0	0	1654	0	0	1793	0	0	1778	0
Flt Permitted		0.993			0.997			0.995			0.985	
Satd. Flow (perm)	0	1735	0	0	1654	0	0	1793	0	0	1778	0
Link Speed (k/h)		40			50			40			40	
Link Distance (m)		221.0			352.6			215.0			193.8	
Travel Time (s)		19.9			25.4			19.4			17.4	
Confl. Peds. (#/hr)			22	22			1		6	6		1
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles (%)	27%	2%	0%	0%	4%	9%	0%	3%	33%	9%	3%	0%
Adj. Flow (vph)	15	65	28	10	63	82	6	54	4	46	96	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	155	0	0	64	0	0	148	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	47	20	7	45	59	4	39	3	33	69	4
Future Vol, veh/h	11	47	20	7	45	59	4	39	3	33	69	4
Conflicting Peds, #/hr	0	0	22	22	0	0	1	0	6	6	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	27	2	0	0	4	9	0	3	33	9	3	0
Mvmt Flow	15	65	28	10	63	82	6	54	4	46	96	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	115	0	0	263	296	107	252	269	104
Stage 1	-	-	-	-	-	-	132	132	-	123	123	-
Stage 2	-	-	-	-	-	-	131	164	-	129	146	-
Critical Hdwy	4.37	-	-	4.1	-	-	7.1	6.53	6.53	7.19	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.53	-	6.19	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.53	-	6.19	5.53	-
Follow-up Hdwy	2.443	-	-	2.2	-	-	3.5	4.027	3.597	3.581	4.027	3.3
Pot Cap-1 Maneuver	1298	-	-	1486	-	-	694	614	869	687	636	956
Stage 1	-	-	-	-	-	-	877	785	-	865	792	-
Stage 2	-	-	-	-	-	-	878	761	-	858	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1298	-	-	1453	-	-	559	589	844	606	609	955
Mov Cap-2 Maneuver	-	-	-	-	-	-	559	589	-	606	609	-
Stage 1	-	-	-	-	-	-	846	758	-	858	786	-
Stage 2	-	-	-	-	-	-	760	755	-	778	748	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.1	0.47	11.74	12.66
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	598	240	-	-	102	-	-	617
HCM Lane V/C Ratio	0.107	0.012	-	-	0.007	-	-	0.239
HCM Ctrl Dly (s/v)	11.7	7.8	0	-	7.5	0	-	12.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.9

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	91	35	6	81	32	4
Future Volume (vph)	91	35	6	81	32	4
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	0.962				0.986	
Flt Protected				0.997	0.957	
Satd. Flow (prot)	1764	0	0	1810	1793	0
Flt Permitted				0.997	0.957	
Satd. Flow (perm)	1764	0	0	1810	1793	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	192.3			123.4	200.8	
Travel Time (s)	17.3			11.1	18.1	
Confl. Peds. (#/hr)		20	20		11	3
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	121	47	8	108	43	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	168	0	0	116	48	0
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	35	6	81	32	4
Future Vol, veh/h	91	35	6	81	32	4
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	121	47	8	108	43	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8	7.8	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	89%	0%	7%
Vol Thru, %	0%	72%	93%
Vol Right, %	11%	28%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	36	126	87
LT Vol	32	0	6
Through Vol	0	91	81
RT Vol	4	35	0
Lane Flow Rate	48	168	116
Geometry Grp	1	1	1
Degree of Util (X)	0.062	0.186	0.133
Departure Headway (Hd)	4.618	3.991	4.125
Convergence, Y/N	Yes	Yes	Yes
Cap	780	890	860
Service Time	2.618	2.055	2.196
HCM Lane V/C Ratio	0.062	0.189	0.135
HCM Control Delay, s/veh	7.9	8	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.7	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	15	41	19	22	23	34	257	16	28	253	9
Future Volume (vph)	19	15	41	19	22	23	34	257	16	28	253	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.926			0.952			0.993			0.996	
Flt Protected		0.987			0.985			0.994			0.995	
Satd. Flow (prot)	0	1618	0	0	1704	0	0	1703	0	0	1789	0
Flt Permitted		0.987			0.985			0.994			0.995	
Satd. Flow (perm)	0	1618	0	0	1704	0	0	1703	0	0	1789	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		352.6			137.1			205.0			189.2	
Travel Time (s)		25.4			9.9			14.8			13.6	
Confl. Peds. (#/hr)			4	4								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	2%	0%	0%	4%	9%	8%	11%	0%	0%	6%	0%
Adj. Flow (vph)	21	16	45	21	24	25	37	279	17	30	275	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	70	0	0	333	0	0	315	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	15	41	19	22	23	34	257	16	28	253	9
Future Vol, veh/h	19	15	41	19	22	23	34	257	16	28	253	9
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	27	2	0	0	4	9	8	11	0	0	6	0
Mvmt Flow	21	16	45	21	24	25	37	279	17	30	275	10

Major/Minor	Minor2			Minor1				Major1			Major2	
Conflicting Flow All	706	711	284	710	708	288	285	0	0	297	0	0
Stage 1	341	341	-	362	362	-	-	-	-	-	-	-
Stage 2	365	371	-	348	346	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.52	6.2	7.1	6.54	6.29	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.37	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.018	3.3	3.5	4.036	3.381	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	320	358	760	351	357	735	1244	-	-	1276	-	-
Stage 1	625	639	-	661	622	-	-	-	-	-	-	-
Stage 2	606	620	-	672	632	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	270	335	757	294	335	735	1244	-	-	1276	-	-
Mov Cap-2 Maneuver	270	335	-	294	335	-	-	-	-	-	-	-
Stage 1	607	621	-	637	600	-	-	-	-	-	-	-
Stage 2	542	598	-	596	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.95	16.02	0.88	0.76
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	197	-	-	443	396	173	-	-
HCM Lane V/C Ratio	0.03	-	-	0.184	0.176	0.024	-	-
HCM Ctrl Dly (s/v)	8	0	-	14.9	16	7.9	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.6	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	2	38	7	1	3	62	668	20	13	575	9
Future Volume (vph)	9	2	38	7	1	3	62	668	20	13	575	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	15.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.894			0.966			0.996			0.998	
Flt Protected		0.991			0.968		0.950			0.950		
Satd. Flow (prot)	0	1683	0	0	1777	0	1805	1874	0	1805	1842	0
Flt Permitted		0.991			0.968		0.950			0.950		
Satd. Flow (perm)	0	1683	0	0	1777	0	1805	1874	0	1805	1842	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.6			129.1			112.6			179.5	
Travel Time (s)		8.9			9.3			8.1			16.2	
Confl. Peds. (#/hr)							15		8	8		15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	3%	0%
Adj. Flow (vph)	10	2	43	8	1	3	70	751	22	15	646	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	12	0	70	773	0	15	656	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	2	38	7	1	3	62	668	20	13	575	9
Future Vol, veh/h	9	2	38	7	1	3	62	668	20	13	575	9
Conflicting Peds, #/hr	0	0	0	0	0	0	15	0	8	8	0	15
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	15	-	-	15	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	3	0
Mvmt Flow	10	2	43	8	1	3	70	751	22	15	646	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1586	1616	666	1586	1610	770	671	0	0	781	0	0
Stage 1	695	695	-	909	909	-	-	-	-	-	-	-
Stage 2	890	920	-	676	700	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	88	105	463	88	106	404	929	-	-	845	-	-
Stage 1	436	447	-	332	357	-	-	-	-	-	-	-
Stage 2	340	352	-	446	444	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	93	456	71	94	401	915	-	-	839	-	-
Mov Cap-2 Maneuver	78	93	-	71	94	-	-	-	-	-	-	-
Stage 1	422	432	-	304	327	-	-	-	-	-	-	-
Stage 2	310	323	-	395	430	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	26.52	49.14	0.77	0.2
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	915	-	-	222	94	839	-	-
HCM Lane V/C Ratio	0.076	-	-	0.248	0.132	0.017	-	-
HCM Ctrl Dly (s/v)	9.3	-	-	26.5	49.1	9.4	-	-
HCM Lane LOS	A	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.4	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	4	88	6	0	3	44	157	13	4	93	2
Future Volume (vph)	9	4	88	6	0	3	44	157	13	4	93	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		0.882			0.959			0.992			0.997	
Flt Protected		0.996			0.966			0.990			0.998	
Satd. Flow (prot)	0	1669	0	0	1760	0	0	1866	0	0	1856	0
Flt Permitted		0.996			0.966			0.990			0.998	
Satd. Flow (perm)	0	1669	0	0	1760	0	0	1866	0	0	1856	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		317.1			131.2			67.6			200.8	
Travel Time (s)		22.8			9.4			6.1			18.1	
Confl. Peds. (#/hr)	2					2	2					2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	1%	0%
Adj. Flow (vph)	10	4	97	7	0	3	48	173	14	4	102	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	10	0	0	235	0	0	108	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	4	88	6	0	3	44	157	13	4	93	2
Future Vol, veh/h	9	4	88	6	0	3	44	157	13	4	93	2
Conflicting Peds, #/hr	2	0	0	0	0	2	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	25	1	0
Mvmt Flow	10	4	97	7	0	3	48	173	14	4	102	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	385	398	105	390	392	182	106	0	0	187	0	0
Stage 1	114	114	-	276	276	-	-	-	-	-	-	-
Stage 2	271	284	-	113	115	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.35	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.425	-	-
Pot Cap-1 Maneuver	577	543	955	573	547	866	1497	-	-	1261	-	-
Stage 1	896	805	-	734	685	-	-	-	-	-	-	-
Stage 2	739	680	-	897	804	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	550	520	953	490	525	864	1494	-	-	1261	-	-
Mov Cap-2 Maneuver	550	520	-	490	525	-	-	-	-	-	-	-
Stage 1	891	800	-	708	660	-	-	-	-	-	-	-
Stage 2	708	656	-	798	799	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.76	11.39	1.54	0.32
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	365	-	-	867	573	72	-	-
HCM Lane V/C Ratio	0.032	-	-	0.128	0.017	0.003	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	9.8	11.4	7.9	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	22	0	5	17	38	0	154	6	40	134	14
Future Volume (vph)	25	22	0	5	17	38	0	154	6	40	134	14
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					0.915			0.995			0.990	
Flt Protected		0.974			0.996						0.989	
Satd. Flow (prot)	0	1851	0	0	1732	0	0	1890	0	0	1848	0
Flt Permitted		0.974			0.996						0.989	
Satd. Flow (perm)	0	1851	0	0	1732	0	0	1890	0	0	1848	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		219.6			221.0			221.1			87.9	
Travel Time (s)		19.8			19.9			19.9			7.9	
Confl. Peds. (#/hr)			10	10			7					7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	29	26	0	6	20	44	0	179	7	47	156	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	70	0	0	186	0	0	219	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	22	0	5	17	38	0	154	6	40	134	14
Future Vol, veh/h	25	22	0	5	17	38	0	154	6	40	134	14
Conflicting Peds, #/hr	0	0	10	10	0	0	7	0	0	0	0	7
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	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	3	0	0
Mvmt Flow	29	26	0	6	20	44	0	179	7	47	156	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	36	0	0	210	169	36	227	147	49
Stage 1	-	-	-	-	-	-	94	94	-	53	53	-
Stage 2	-	-	-	-	-	-	116	76	-	173	94	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.13	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.13	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.527	4	3.3
Pot Cap-1 Maneuver	1551	-	-	1589	-	-	752	727	1043	726	748	1025
Stage 1	-	-	-	-	-	-	918	821	-	956	854	-
Stage 2	-	-	-	-	-	-	893	836	-	826	821	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1551	-	-	1572	-	-	560	703	1032	529	723	1018
Mov Cap-2 Maneuver	-	-	-	-	-	-	560	703	-	529	723	-
Stage 1	-	-	-	-	-	-	892	797	-	953	851	-
Stage 2	-	-	-	-	-	-	710	833	-	624	797	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.92	0.61	11.84	12.71
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	712	957	-	-	132	-	-	685
HCM Lane V/C Ratio	0.261	0.019	-	-	0.004	-	-	0.319
HCM Ctrl Dly (s/v)	11.8	7.4	0	-	7.3	0	-	12.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	1.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	45	23	8	55	34	7	53	5	48	77	7
Future Volume (vph)	16	45	23	8	55	34	7	53	5	48	77	7
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		0.963			0.952			0.990			0.993	
Flt Protected		0.991			0.996			0.994			0.982	
Satd. Flow (prot)	0	1813	0	0	1764	0	0	1730	0	0	1798	0
Flt Permitted		0.991			0.996			0.994			0.982	
Satd. Flow (perm)	0	1813	0	0	1764	0	0	1730	0	0	1798	0
Link Speed (k/h)		40			50			40			40	
Link Distance (m)		221.0			352.6			215.0			193.8	
Travel Time (s)		19.9			25.4			19.4			17.4	
Confl. Peds. (#/hr)			28	28			1		4	4		1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	13%	0%	3%	14%	8%	0%	2%	4%	0%
Adj. Flow (vph)	20	56	29	10	69	43	9	66	6	60	96	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	105	0	0	122	0	0	81	0	0	165	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	45	23	8	55	34	7	53	5	48	77	7
Future Vol, veh/h	16	45	23	8	55	34	7	53	5	48	77	7
Conflicting Peds, #/hr	0	0	28	28	0	0	1	0	4	4	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	13	0	3	14	8	0	2	4	0
Mvmt Flow	20	56	29	10	69	43	9	66	6	60	96	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	111	0	0	113	0	0	277	270	103	243	263	91
Stage 1	-	-	-	-	-	-	139	139	-	110	110	-
Stage 2	-	-	-	-	-	-	138	131	-	133	153	-
Critical Hdwy	4.1	-	-	4.23	-	-	7.24	6.58	6.2	7.12	6.54	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.58	-	6.12	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.58	-	6.12	5.54	-
Follow-up Hdwy	2.2	-	-	2.317	-	-	3.626	4.072	3.3	3.518	4.036	3.3
Pot Cap-1 Maneuver	1491	-	-	1411	-	-	652	626	958	711	639	972
Stage 1	-	-	-	-	-	-	837	771	-	895	800	-
Stage 2	-	-	-	-	-	-	837	776	-	870	767	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1491	-	-	1370	-	-	518	595	927	613	607	971
Mov Cap-2 Maneuver	-	-	-	-	-	-	518	595	-	613	607	-
Stage 1	-	-	-	-	-	-	801	738	-	888	794	-
Stage 2	-	-	-	-	-	-	723	770	-	772	735	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.42	0.63	11.91	12.87
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	602	321	-	-	138	-	-	621
HCM Lane V/C Ratio	0.135	0.013	-	-	0.007	-	-	0.266
HCM Ctrl Dly (s/v)	11.9	7.4	0	-	7.6	0	-	12.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	1.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	84	35	7	54	34	10
Future Volume (vph)	84	35	7	54	34	10
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	0.960				0.969	
Flt Protected				0.994	0.963	
Satd. Flow (prot)	1774	0	0	1766	1695	0
Flt Permitted				0.994	0.963	
Satd. Flow (perm)	1774	0	0	1766	1695	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	192.3			123.4	200.8	
Travel Time (s)	17.3			11.1	18.1	
Confl. Peds. (#/hr)		35	35		8	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	4%	0%	14%	6%	3%	10%
Adj. Flow (vph)	115	48	10	74	47	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	163	0	0	84	61	0
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	84	35	7	54	34	10
Future Vol, veh/h	84	35	7	54	34	10
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	4	0	14	6	3	10
Mvmt Flow	115	48	10	74	47	14
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.9	8	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	77%	0%	11%
Vol Thru, %	0%	71%	89%
Vol Right, %	23%	29%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	44	119	61
LT Vol	34	0	7
Through Vol	0	84	54
RT Vol	10	35	0
Lane Flow Rate	60	163	84
Geometry Grp	1	1	1
Degree of Util (X)	0.075	0.179	0.102
Departure Headway (Hd)	4.506	3.961	4.392
Convergence, Y/N	Yes	Yes	Yes
Cap	800	897	808
Service Time	2.506	2.027	2.464
HCM Lane V/C Ratio	0.075	0.182	0.104
HCM Control Delay, s/veh	7.9	7.9	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.6	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	19	30	24	34	62	36	239	23	63	258	30
Future Volume (vph)	41	19	30	24	34	62	36	239	23	63	258	30
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		0.955			0.930			0.990			0.988	
Flt Protected		0.978			0.990			0.994			0.991	
Satd. Flow (prot)	0	1775	0	0	1680	0	0	1855	0	0	1820	0
Flt Permitted		0.978			0.990			0.994			0.991	
Satd. Flow (perm)	0	1775	0	0	1680	0	0	1855	0	0	1820	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		352.6			137.1			205.0			189.2	
Travel Time (s)		25.4			9.9			14.8			13.6	
Confl. Peds. (#/hr)	12					12	7		24	24		7
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%	0%	0%	13%	0%	3%	0%	1%	0%	0%	3%	0%
Adj. Flow (vph)	45	21	33	26	37	67	39	260	25	68	280	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	99	0	0	130	0	0	324	0	0	381	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	19	30	24	34	62	36	239	23	63	258	30
Future Vol, veh/h	41	19	30	24	34	62	36	239	23	63	258	30
Conflicting Peds, #/hr	12	0	0	0	0	12	7	0	24	24	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	13	0	3	0	1	0	0	3	0
Mvmt Flow	45	21	33	26	37	67	39	260	25	68	280	33

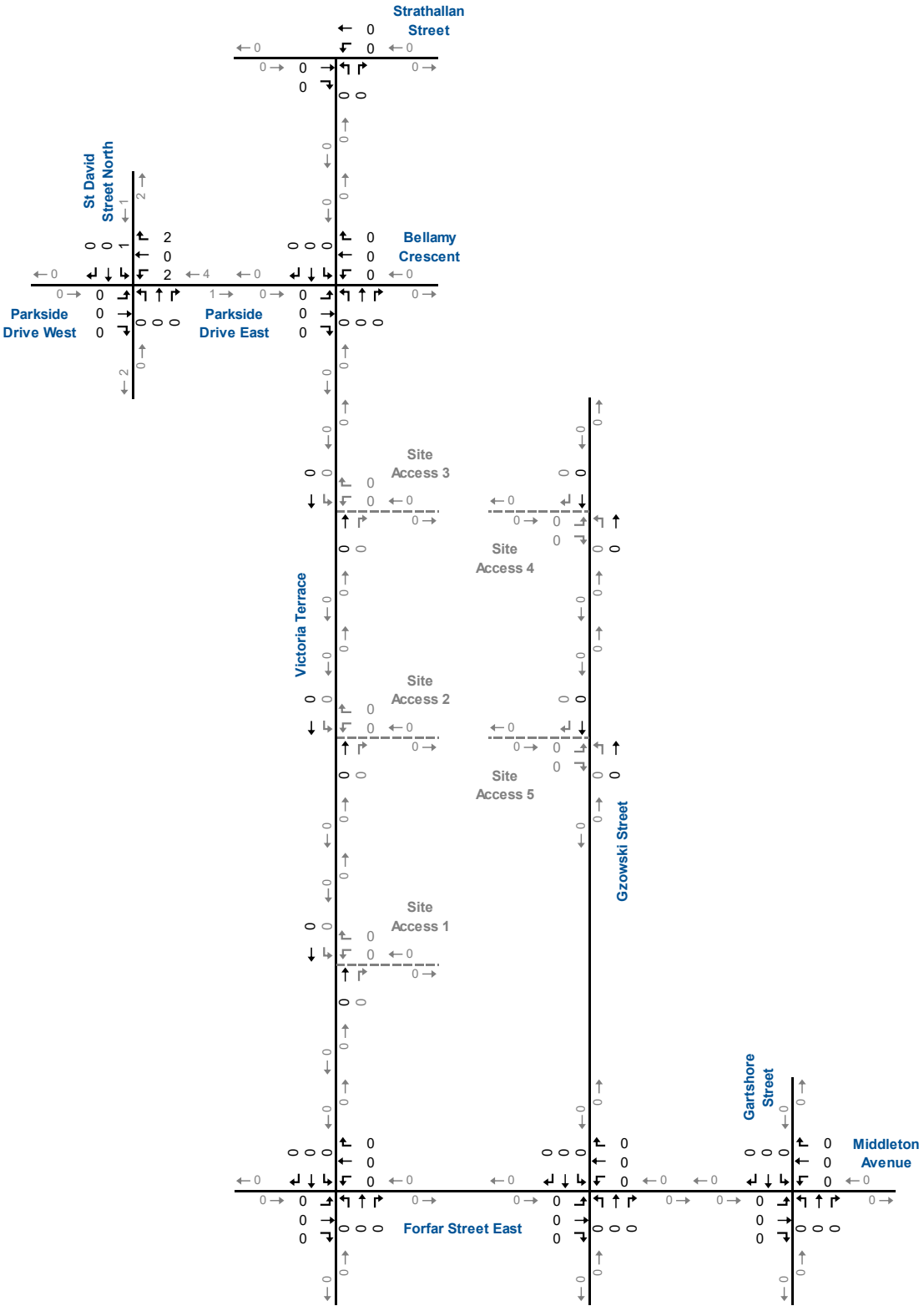
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	809	828	304	802	832	308	320	0	0	309	0	0
Stage 1	441	441	-	375	375	-	-	-	-	-	-	-
Stage 2	369	387	-	428	457	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.23	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.327	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	301	309	741	289	307	729	1251	-	-	1263	-	-
Stage 1	599	581	-	625	621	-	-	-	-	-	-	-
Stage 2	655	613	-	584	571	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	268	735	225	267	703	1242	-	-	1232	-	-
Mov Cap-2 Maneuver	209	268	-	225	267	-	-	-	-	-	-	-
Stage 1	555	537	-	587	583	-	-	-	-	-	-	-
Stage 2	528	576	-	500	529	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	23.33	19.77	0.97	1.45
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	214	-	-	293	373	316	-	-
HCM Lane V/C Ratio	0.031	-	-	0.334	0.35	0.056	-	-
HCM Ctrl Dly (s/v)	8	0	-	23.3	19.8	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	1.5	0.2	-	-

Appendix D

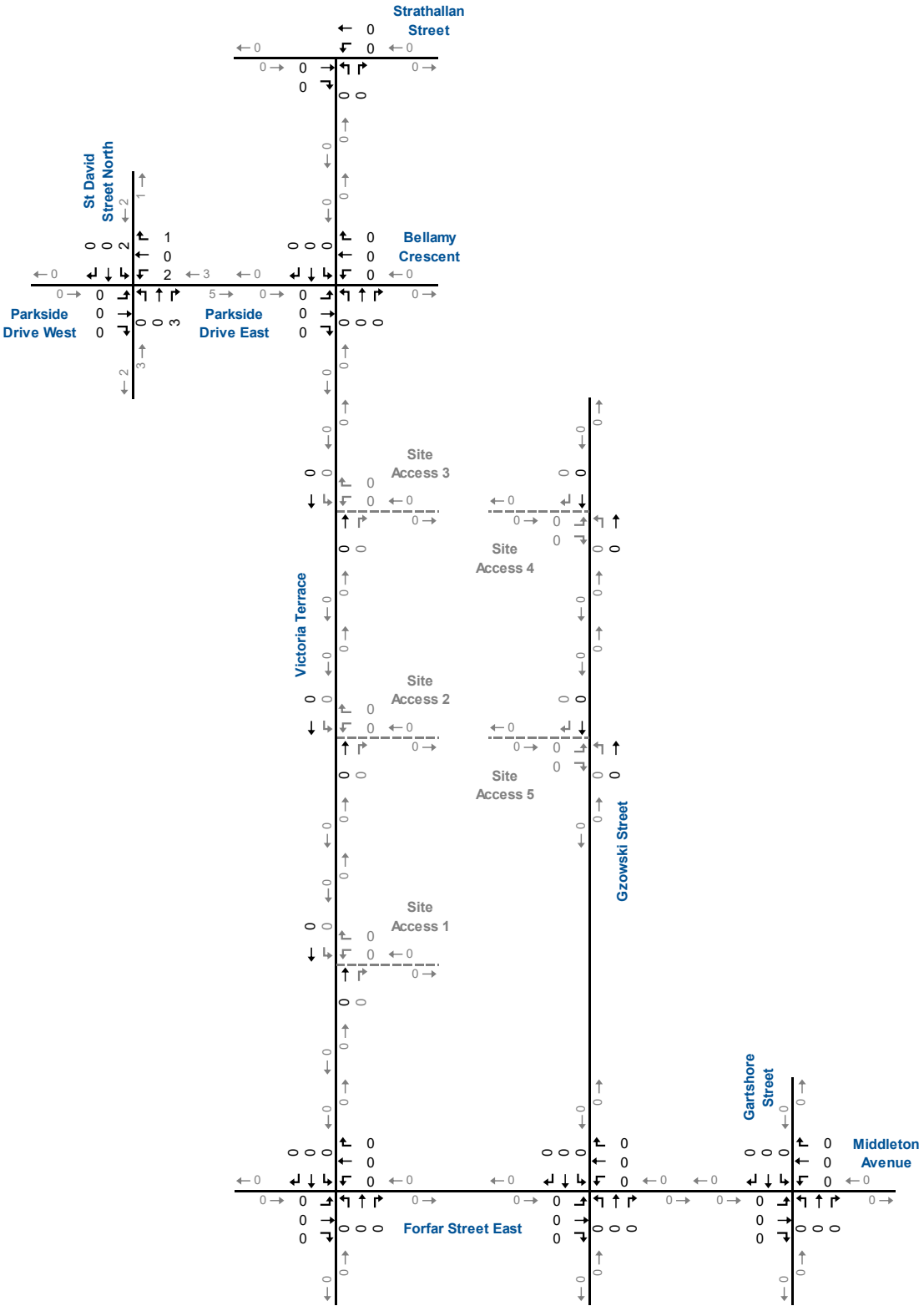
Background Development Traffic Volumes



Background Development Traffic Volumes (AM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

750 St David Street North



Background Development Traffic Volumes (PM Peak Hour)

650 Victoria Terrace, Fergus TIS
250272

750 St David Street North

Appendix E

Background Operations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	0	4	7	0	8	14	465	6	6	533	5
Future Volume (vph)	6	0	4	7	0	8	14	465	6	6	533	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	15.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.951			0.929			0.998			0.999	
Flt Protected		0.969			0.977		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1725	0	1671	1711	0	1805	1792	0
Flt Permitted		0.969			0.977		0.950			0.950		
Satd. Flow (perm)	0	1751	0	0	1725	0	1671	1711	0	1805	1792	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.6			129.1			112.6			179.5	
Travel Time (s)		8.9			9.3			8.1			16.2	
Confl. Peds. (#/hr)	1					1	2		6	6		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	8%	11%	0%	0%	6%	0%
Adj. Flow (vph)	7	0	4	8	0	9	16	522	7	7	599	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	17	0	16	529	0	7	605	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	4	7	0	8	14	465	6	6	533	5
Future Vol, veh/h	6	0	4	7	0	8	14	465	6	6	533	5
Conflicting Peds, #/hr	1	0	0	0	0	1	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	15	-	-	15	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	8	11	0	0	6	0
Mvmt Flow	7	0	4	8	0	9	16	522	7	7	599	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1172	1184	604	1176	1183	533	606	0	0	535	0	0
Stage 1	617	617	-	563	563	-	-	-	-	-	-	-
Stage 2	555	567	-	612	620	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.18	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	171	191	502	170	191	551	943	-	-	1043	-	-
Stage 1	481	484	-	514	512	-	-	-	-	-	-	-
Stage 2	520	510	-	484	483	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	164	185	501	163	185	547	941	-	-	1037	-	-
Mov Cap-2 Maneuver	164	185	-	163	185	-	-	-	-	-	-	-
Stage 1	477	480	-	503	500	-	-	-	-	-	-	-
Stage 2	502	499	-	476	479	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	21.92	19.74	0.26	0.09
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	941	-	-	224	261	1037	-	-
HCM Lane V/C Ratio	0.017	-	-	0.05	0.065	0.007	-	-
HCM Ctrl Dly (s/v)	8.9	-	-	21.9	19.7	8.5	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	0	47	10	1	0	53	147	7	5	134	5
Future Volume (vph)	5	0	47	10	1	0	53	147	7	5	134	5
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		0.878						0.996			0.995	
Flt Protected		0.995			0.956			0.987			0.998	
Satd. Flow (prot)	0	1660	0	0	1816	0	0	1807	0	0	1852	0
Flt Permitted		0.995			0.956			0.987			0.998	
Satd. Flow (perm)	0	1660	0	0	1816	0	0	1807	0	0	1852	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		317.1			131.2			67.6			200.8	
Travel Time (s)		22.8			9.4			6.1			18.1	
Confl. Peds. (#/hr)	2		1	1		2	60		2	2		60
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	2%	0%
Adj. Flow (vph)	6	0	55	12	1	0	62	173	8	6	158	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	13	0	0	243	0	0	170	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	47	10	1	0	53	147	7	5	134	5
Future Vol, veh/h	5	0	47	10	1	0	53	147	7	5	134	5
Conflicting Peds, #/hr	2	0	1	1	0	2	60	0	2	2	0	60
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	2	4	0	0	2	0
Mvmt Flow	6	0	55	12	1	0	62	173	8	6	158	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	533	540	222	474	539	181	224	0	0	183	0	0
Stage 1	232	232	-	304	304	-	-	-	-	-	-	-
Stage 2	300	308	-	170	235	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	461	451	823	504	452	867	1345	-	-	1404	-	-
Stage 1	775	716	-	710	667	-	-	-	-	-	-	-
Stage 2	713	664	-	836	714	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	405	398	772	439	398	863	1263	-	-	1401	-	-
Mov Cap-2 Maneuver	405	398	-	439	398	-	-	-	-	-	-	-
Stage 1	725	669	-	670	629	-	-	-	-	-	-	-
Stage 2	671	626	-	772	667	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.55	13.53	2.05	0.26
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	457	-	-	710	435	62	-	-
HCM Lane V/C Ratio	0.049	-	-	0.086	0.03	0.004	-	-
HCM Ctrl Dly (s/v)	8	0	-	10.5	13.5	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	23	2	8	14	39	7	122	29	31	127	26
Future Volume (vph)	38	23	2	8	14	39	7	122	29	31	127	26
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			0.914			0.976			0.981	
Flt Protected		0.971			0.993			0.998			0.992	
Satd. Flow (prot)	0	1706	0	0	1694	0	0	1796	0	0	1824	0
Flt Permitted		0.971			0.993			0.998			0.992	
Satd. Flow (perm)	0	1706	0	0	1694	0	0	1796	0	0	1824	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		219.6			221.0			221.1			87.9	
Travel Time (s)		19.8			19.9			19.9			7.9	
Confl. Peds. (#/hr)	4		65	65		4	72					72
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	16%	0%	0%	8%	0%	0%	3%	4%	0%	2%	0%
Adj. Flow (vph)	46	28	2	10	17	48	9	149	35	38	155	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	0	75	0	0	193	0	0	225	0
Sign Control		Free			Free			Stop			Stop	

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

Intersection	
Int Delay, s/veh	11.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	23	2	8	14	39	7	122	29	31	127	26
Future Vol, veh/h	38	23	2	8	14	39	7	122	29	31	127	26
Conflicting Peds, #/hr	4	0	65	65	0	4	72	0	0	0	0	72
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	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	3	16	0	0	8	0	0	3	4	0	2	0
Mvmt Flow	46	28	2	10	17	48	9	149	35	38	155	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	69	0	0	95	0	0	373	275	94	259	253	117
Stage 1	-	-	-	-	-	-	187	187	-	64	64	-
Stage 2	-	-	-	-	-	-	186	88	-	195	188	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.53	6.24	7.1	6.52	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.53	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.53	-	6.1	5.52	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4.027	3.336	3.5	4.018	3.3
Pot Cap-1 Maneuver	1526	-	-	1511	-	-	588	631	957	698	651	941
Stage 1	-	-	-	-	-	-	819	743	-	951	841	-
Stage 2	-	-	-	-	-	-	820	820	-	811	744	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1520	-	-	1411	-	-	350	564	894	477	582	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	350	564	-	477	582	-
Stage 1	-	-	-	-	-	-	742	673	-	941	832	-
Stage 2	-	-	-	-	-	-	592	811	-	588	674	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	4.49	0.99	14.08	14.85
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	588	1069	-	-	206	-	-	588
HCM Lane V/C Ratio	0.328	0.03	-	-	0.007	-	-	0.382
HCM Ctrl Dly (s/v)	14.1	7.4	0	-	7.6	0	-	14.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	1.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	56	24	8	54	71	5	47	4	39	82	5
Future Volume (vph)	13	56	24	8	54	71	5	47	4	39	82	5
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		0.965			0.928			0.990			0.995	
Flt Protected		0.993			0.997			0.996			0.985	
Satd. Flow (prot)	0	1734	0	0	1652	0	0	1784	0	0	1778	0
Flt Permitted		0.993			0.997			0.996			0.985	
Satd. Flow (perm)	0	1734	0	0	1652	0	0	1784	0	0	1778	0
Link Speed (k/h)		40			50			40			40	
Link Distance (m)		221.0			352.6			215.0			193.8	
Travel Time (s)		19.9			25.4			19.4			17.4	
Confl. Peds. (#/hr)			22	22			1		6	6		1
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles (%)	27%	2%	0%	0%	4%	9%	0%	3%	33%	9%	3%	0%
Adj. Flow (vph)	18	78	33	11	75	99	7	65	6	54	114	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	185	0	0	78	0	0	175	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	56	24	8	54	71	5	47	4	39	82	5
Future Vol, veh/h	13	56	24	8	54	71	5	47	4	39	82	5
Conflicting Peds, #/hr	0	0	22	22	0	0	1	0	6	6	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	27	2	0	0	4	9	0	3	33	9	3	0
Mvmt Flow	18	78	33	11	75	99	7	65	6	54	114	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	174	0	0	133	0	0	308	348	122	299	316	125
Stage 1	-	-	-	-	-	-	153	153	-	147	147	-
Stage 2	-	-	-	-	-	-	155	196	-	153	169	-
Critical Hdwy	4.37	-	-	4.1	-	-	7.1	6.53	6.53	7.19	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.53	-	6.19	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.53	-	6.19	5.53	-
Follow-up Hdwy	2.443	-	-	2.2	-	-	3.5	4.027	3.597	3.581	4.027	3.3
Pot Cap-1 Maneuver	1265	-	-	1464	-	-	649	574	852	640	598	931
Stage 1	-	-	-	-	-	-	855	769	-	840	774	-
Stage 2	-	-	-	-	-	-	852	737	-	834	757	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1265	-	-	1431	-	-	494	548	827	544	571	930
Mov Cap-2 Maneuver	-	-	-	-	-	-	494	548	-	544	571	-
Stage 1	-	-	-	-	-	-	823	741	-	832	767	-
Stage 2	-	-	-	-	-	-	713	730	-	739	728	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.1	0.45	12.53	14.06
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	556	237	-	-	97	-	-	571
HCM Lane V/C Ratio	0.14	0.014	-	-	0.008	-	-	0.306
HCM Ctrl Dly (s/v)	12.5	7.9	0	-	7.5	0	-	14.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	1.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	109	42	7	97	38	5
Future Volume (vph)	109	42	7	97	38	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.962				0.984	
Flt Protected				0.997	0.958	
Satd. Flow (prot)	1764	0	0	1810	1791	0
Flt Permitted				0.997	0.958	
Satd. Flow (perm)	1764	0	0	1810	1791	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	192.3			123.4	200.8	
Travel Time (s)	17.3			11.1	18.1	
Confl. Peds. (#/hr)		20	20		11	3
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	145	56	9	129	51	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	201	0	0	138	58	0
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	109	42	7	97	38	5
Future Vol, veh/h	109	42	7	97	38	5
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	145	56	9	129	51	7
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.3	8.1	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	88%	0%	7%
Vol Thru, %	0%	72%	93%
Vol Right, %	12%	28%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	43	151	104
LT Vol	38	0	7
Through Vol	0	109	97
RT Vol	5	42	0
Lane Flow Rate	57	201	139
Geometry Grp	1	1	1
Degree of Util (X)	0.075	0.225	0.161
Departure Headway (Hd)	4.737	4.024	4.167
Convergence, Y/N	Yes	Yes	Yes
Cap	761	880	847
Service Time	2.737	2.105	2.256
HCM Lane V/C Ratio	0.075	0.228	0.164
HCM Control Delay, s/veh	8.1	8.3	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.9	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	18	49	23	26	27	41	307	19	33	302	11
Future Volume (vph)	23	18	49	23	26	27	41	307	19	33	302	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.927			0.952			0.993			0.996	
Flt Protected		0.987			0.985			0.994			0.995	
Satd. Flow (prot)	0	1620	0	0	1704	0	0	1704	0	0	1789	0
Flt Permitted		0.987			0.985			0.994			0.995	
Satd. Flow (perm)	0	1620	0	0	1704	0	0	1704	0	0	1789	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		352.6			137.1			205.0			189.2	
Travel Time (s)		25.4			9.9			14.8			13.6	
Confl. Peds. (#/hr)			4	4								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	2%	0%	0%	4%	9%	8%	11%	0%	0%	6%	0%
Adj. Flow (vph)	25	20	53	25	28	29	45	334	21	36	328	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	82	0	0	400	0	0	376	0
Sign Control		Stop			Stop			Free			Free	

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

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	18	49	23	26	27	41	307	19	33	302	11
Future Vol, veh/h	23	18	49	23	26	27	41	307	19	33	302	11
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	27	2	0	0	4	9	8	11	0	0	6	0
Mvmt Flow	25	20	53	25	28	29	45	334	21	36	328	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	843	849	338	847	845	344	340	0	0	354	0	0
Stage 1	406	406	-	433	433	-	-	-	-	-	-	-
Stage 2	437	443	-	414	412	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.52	6.2	7.1	6.54	6.29	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.37	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.018	3.3	3.5	4.036	3.381	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	257	298	709	284	297	683	1186	-	-	1216	-	-
Stage 1	575	598	-	605	578	-	-	-	-	-	-	-
Stage 2	552	575	-	620	591	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	204	273	706	224	273	683	1186	-	-	1216	-	-
Mov Cap-2 Maneuver	204	273	-	224	273	-	-	-	-	-	-	-
Stage 1	554	576	-	577	551	-	-	-	-	-	-	-
Stage 2	478	548	-	531	569	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.53	20.1	0.91	0.77
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	199	-	-	363	320	170	-	-
HCM Lane V/C Ratio	0.038	-	-	0.269	0.258	0.03	-	-
HCM Ctrl Dly (s/v)	8.2	0	-	18.5	20.1	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.1	1	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2	45	10	1	5	74	798	27	18	687	11
Future Volume (vph)	11	2	45	10	1	5	74	798	27	18	687	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	15.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.894			0.955			0.995			0.998	
Flt Protected		0.991			0.970		0.950			0.950		
Satd. Flow (prot)	0	1683	0	0	1760	0	1805	1872	0	1805	1842	0
Flt Permitted		0.991			0.970		0.950			0.950		
Satd. Flow (perm)	0	1683	0	0	1760	0	1805	1872	0	1805	1842	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.6			129.1			112.6			179.5	
Travel Time (s)		8.9			9.3			8.1			16.2	
Confl. Peds. (#/hr)							15		8	8		15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	3%	0%
Adj. Flow (vph)	12	2	51	11	1	6	83	897	30	20	772	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	0	18	0	83	927	0	20	784	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	2	45	10	1	5	74	798	27	18	687	11
Future Vol, veh/h	11	2	45	10	1	5	74	798	27	18	687	11
Conflicting Peds, #/hr	0	0	0	0	0	0	15	0	8	8	0	15
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	15	-	-	15	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	3	0
Mvmt Flow	12	2	51	11	1	6	83	897	30	20	772	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1897	1935	793	1900	1926	920	799	0	0	935	0	0
Stage 1	834	834	-	1086	1086	-	-	-	-	-	-	-
Stage 2	1063	1101	-	813	840	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	53	67	392	53	67	331	832	-	-	741	-	-
Stage 1	366	386	-	264	295	-	-	-	-	-	-	-
Stage 2	272	290	-	375	384	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	57	386	39	58	329	820	-	-	735	-	-
Mov Cap-2 Maneuver	44	57	-	39	58	-	-	-	-	-	-	-
Stage 1	350	370	-	236	263	-	-	-	-	-	-	-
Stage 2	239	259	-	315	367	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	48.55	99.51	0.81	0.25
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	820	-	-	145	55	735	-	-
HCM Lane V/C Ratio	0.101	-	-	0.449	0.327	0.028	-	-
HCM Ctrl Dly (s/v)	9.9	-	-	48.6	99.5	10	-	-
HCM Lane LOS	A	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2	1.2	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	5	105	7	0	4	53	188	16	5	111	2
Future Volume (vph)	11	5	105	7	0	4	53	188	16	5	111	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		0.882			0.955			0.991			0.998	
Flt Protected		0.995			0.968			0.990			0.998	
Satd. Flow (prot)	0	1667	0	0	1756	0	0	1864	0	0	1857	0
Flt Permitted		0.995			0.968			0.990			0.998	
Satd. Flow (perm)	0	1667	0	0	1756	0	0	1864	0	0	1857	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		317.1			131.2			67.6			200.8	
Travel Time (s)		22.8			9.4			6.1			18.1	
Confl. Peds. (#/hr)	2					2	2					2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	1%	0%
Adj. Flow (vph)	12	5	115	8	0	4	58	207	18	5	122	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	132	0	0	12	0	0	283	0	0	129	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	5	105	7	0	4	53	188	16	5	111	2
Future Vol, veh/h	11	5	105	7	0	4	53	188	16	5	111	2
Conflicting Peds, #/hr	2	0	0	0	0	2	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	25	1	0
Mvmt Flow	12	5	115	8	0	4	58	207	18	5	122	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	461	477	125	468	469	217	126	0	0	224	0	0
Stage 1	136	136	-	332	332	-	-	-	-	-	-	-
Stage 2	325	341	-	136	137	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.35	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.425	-	-
Pot Cap-1 Maneuver	514	490	931	509	495	827	1473	-	-	1220	-	-
Stage 1	872	788	-	686	648	-	-	-	-	-	-	-
Stage 2	692	642	-	872	787	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	484	465	929	419	469	826	1470	-	-	1220	-	-
Mov Cap-2 Maneuver	484	465	-	419	469	-	-	-	-	-	-	-
Stage 1	866	782	-	655	619	-	-	-	-	-	-	-
Stage 2	655	613	-	755	781	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.19	12.23	1.56	0.34
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	365	-	-	826	510	76	-	-
HCM Lane V/C Ratio	0.04	-	-	0.161	0.024	0.005	-	-
HCM Ctrl Dly (s/v)	7.6	0	-	10.2	12.2	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	26	0	6	20	45	0	184	7	48	160	17
Future Volume (vph)	30	26	0	6	20	45	0	184	7	48	160	17
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					0.914			0.995			0.990	
Flt Protected		0.974			0.996						0.989	
Satd. Flow (prot)	0	1851	0	0	1730	0	0	1890	0	0	1848	0
Flt Permitted		0.974			0.996						0.989	
Satd. Flow (perm)	0	1851	0	0	1730	0	0	1890	0	0	1848	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		219.6			221.0			221.1			87.9	
Travel Time (s)		19.8			19.9			19.9			7.9	
Confl. Peds. (#/hr)			10	10			7					7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	35	30	0	7	23	52	0	214	8	56	186	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	0	82	0	0	222	0	0	262	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	11

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	26	0	6	20	45	0	184	7	48	160	17
Future Vol, veh/h	30	26	0	6	20	45	0	184	7	48	160	17
Conflicting Peds, #/hr	0	0	10	10	0	0	7	0	0	0	0	7
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	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	3	0	0
Mvmt Flow	35	30	0	7	23	52	0	214	8	56	186	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	40	0	0	247	200	40	270	173	56
Stage 1	-	-	-	-	-	-	110	110	-	63	63	-
Stage 2	-	-	-	-	-	-	137	90	-	207	110	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.13	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.13	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.527	4	3.3
Pot Cap-1 Maneuver	1536	-	-	1582	-	-	711	700	1037	680	724	1016
Stage 1	-	-	-	-	-	-	900	808	-	945	846	-
Stage 2	-	-	-	-	-	-	871	825	-	793	808	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1536	-	-	1566	-	-	492	674	1026	452	696	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	492	674	-	452	696	-
Stage 1	-	-	-	-	-	-	870	782	-	941	842	-
Stage 2	-	-	-	-	-	-	657	821	-	558	782	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.96	0.62	12.8	14.52
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	682	964	-	-	134	-	-	638
HCM Lane V/C Ratio	0.326	0.023	-	-	0.004	-	-	0.41
HCM Ctrl Dly (s/v)	12.8	7.4	0	-	7.3	0	-	14.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	54	27	10	66	41	8	63	6	57	92	8
Future Volume (vph)	19	54	27	10	66	41	8	63	6	57	92	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.964			0.953			0.989			0.993	
Flt Protected		0.991			0.996			0.995			0.982	
Satd. Flow (prot)	0	1815	0	0	1765	0	0	1732	0	0	1798	0
Flt Permitted		0.991			0.996			0.995			0.982	
Satd. Flow (perm)	0	1815	0	0	1765	0	0	1732	0	0	1798	0
Link Speed (k/h)		40			50			40			40	
Link Distance (m)		221.0			352.6			215.0			193.8	
Travel Time (s)		19.9			25.4			19.4			17.4	
Confl. Peds. (#/hr)			28	28			1		4	4		1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	13%	0%	3%	14%	8%	0%	2%	4%	0%
Adj. Flow (vph)	24	68	34	13	83	51	10	79	8	71	115	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	126	0	0	147	0	0	97	0	0	196	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

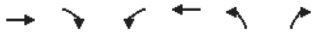
Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	54	27	10	66	41	8	63	6	57	92	8
Future Vol, veh/h	19	54	27	10	66	41	8	63	6	57	92	8
Conflicting Peds, #/hr	0	0	28	28	0	0	1	0	4	4	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	13	0	3	14	8	0	2	4	0
Mvmt Flow	24	68	34	13	83	51	10	79	8	71	115	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	134	0	0	129	0	0	326	319	116	292	310	109
Stage 1	-	-	-	-	-	-	160	160	-	133	133	-
Stage 2	-	-	-	-	-	-	166	159	-	158	177	-
Critical Hdwy	4.1	-	-	4.23	-	-	7.24	6.58	6.2	7.12	6.54	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.58	-	6.12	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.58	-	6.12	5.54	-
Follow-up Hdwy	2.2	-	-	2.317	-	-	3.626	4.072	3.3	3.518	4.036	3.3
Pot Cap-1 Maneuver	1463	-	-	1391	-	-	605	588	941	661	601	950
Stage 1	-	-	-	-	-	-	815	754	-	870	782	-
Stage 2	-	-	-	-	-	-	809	755	-	844	749	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1463	-	-	1352	-	-	453	556	911	547	568	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	453	556	-	547	568	-
Stage 1	-	-	-	-	-	-	778	720	-	862	774	-
Stage 2	-	-	-	-	-	-	674	748	-	730	715	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.43	0.66	12.76	14.55
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	560	321	-	-	143	-	-	572
HCM Lane V/C Ratio	0.172	0.016	-	-	0.009	-	-	0.343
HCM Ctrl Dly (s/v)	12.8	7.5	0	-	7.7	0	-	14.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	1.5



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	100	42	8	65	41	12
Future Volume (vph)	100	42	8	65	41	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
Ped Bike Factor						
Frt	0.960				0.970	
Flt Protected				0.995	0.963	
Satd. Flow (prot)	1774	0	0	1769	1697	0
Flt Permitted				0.995	0.963	
Satd. Flow (perm)	1774	0	0	1769	1697	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	192.3			123.4	200.8	
Travel Time (s)	17.3			11.1	18.1	
Confl. Peds. (#/hr)		35	35		8	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	4%	0%	14%	6%	3%	10%
Adj. Flow (vph)	137	58	11	89	56	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	195	0	0	100	72	0
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	100	42	8	65	41	12
Future Vol, veh/h	100	42	8	65	41	12
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	4	0	14	6	3	10
Mvmt Flow	137	58	11	89	56	16
Number of Lanes	1	0	0	1	1	0

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

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	77%	0%	11%
Vol Thru, %	0%	70%	89%
Vol Right, %	23%	30%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	53	142	73
LT Vol	41	0	8
Through Vol	0	100	65
RT Vol	12	42	0
Lane Flow Rate	73	195	100
Geometry Grp	1	1	1
Degree of Util (X)	0.093	0.216	0.123
Departure Headway (Hd)	4.614	3.995	4.438
Convergence, Y/N	Yes	Yes	Yes
Cap	781	885	796
Service Time	2.614	2.081	2.533
HCM Lane V/C Ratio	0.093	0.22	0.126
HCM Control Delay, s/veh	8.1	8.2	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.8	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	23	36	29	41	74	43	286	27	75	308	36
Future Volume (vph)	49	23	36	29	41	74	43	286	27	75	308	36
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		0.955			0.931			0.990			0.988	
Flt Protected		0.978			0.990			0.994			0.991	
Satd. Flow (prot)	0	1775	0	0	1681	0	0	1855	0	0	1820	0
Flt Permitted		0.978			0.990			0.994			0.991	
Satd. Flow (perm)	0	1775	0	0	1681	0	0	1855	0	0	1820	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		352.6			137.1			205.0			189.2	
Travel Time (s)		25.4			9.9			14.8			13.6	
Confl. Peds. (#/hr)	12					12	7		24	24		7
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%	0%	0%	13%	0%	3%	0%	1%	0%	0%	3%	0%
Adj. Flow (vph)	53	25	39	32	45	80	47	311	29	82	335	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	0	0	157	0	0	387	0	0	456	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	9.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	23	36	29	41	74	43	286	27	75	308	36
Future Vol, veh/h	49	23	36	29	41	74	43	286	27	75	308	36
Conflicting Peds, #/hr	12	0	0	0	0	12	7	0	24	24	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	13	0	3	0	1	0	0	3	0
Mvmt Flow	53	25	39	32	45	80	47	311	29	82	335	39

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	963	982	361	953	987	362	381	0	0	364	0	0
Stage 1	524	524	-	443	443	-	-	-	-	-	-	-
Stage 2	439	458	-	510	544	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.23	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.327	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	237	251	688	228	249	681	1189	-	-	1206	-	-
Stage 1	540	533	-	573	579	-	-	-	-	-	-	-
Stage 2	601	571	-	526	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	143	211	683	163	210	656	1180	-	-	1176	-	-
Mov Cap-2 Maneuver	143	211	-	163	210	-	-	-	-	-	-	-
Stage 1	489	483	-	532	537	-	-	-	-	-	-	-
Stage 2	454	529	-	429	473	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	40.38	30.03	0.99	1.48
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	214	-	-	214	296	316	-	-
HCM Lane V/C Ratio	0.04	-	-	0.547	0.529	0.069	-	-
HCM Ctrl Dly (s/v)	8.2	0	-	40.4	30	8.3	0	-
HCM Lane LOS	A	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.9	2.9	0.2	-	-

Appendix F

Total Operations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	0	4	9	0	8	14	467	6	7	535	5
Future Volume (vph)	6	0	4	9	0	8	14	467	6	7	535	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	15.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.951			0.936			0.998			0.999	
Flt Protected		0.969			0.974		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1732	0	1671	1711	0	1805	1792	0
Flt Permitted		0.969			0.974		0.950			0.950		
Satd. Flow (perm)	0	1751	0	0	1732	0	1671	1711	0	1805	1792	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.6			129.1			112.6			179.5	
Travel Time (s)		8.9			9.3			8.1			16.2	
Confl. Peds. (#/hr)	1					1	2		6	6		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	8%	11%	0%	0%	6%	0%
Adj. Flow (vph)	7	0	4	10	0	9	16	525	7	8	601	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	19	0	16	532	0	8	607	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	4	9	0	8	14	467	6	7	535	5
Future Vol, veh/h	6	0	4	9	0	8	14	467	6	7	535	5
Conflicting Peds, #/hr	1	0	0	0	0	1	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	15	-	-	15	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	8	11	0	0	6	0
Mvmt Flow	7	0	4	10	0	9	16	525	7	8	601	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1179	1191	606	1182	1190	535	609	0	0	537	0	0
Stage 1	622	622	-	566	566	-	-	-	-	-	-	-
Stage 2	557	569	-	617	624	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.18	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	169	189	501	168	189	549	941	-	-	1041	-	-
Stage 1	478	482	-	513	511	-	-	-	-	-	-	-
Stage 2	518	509	-	481	481	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	162	183	500	162	183	545	939	-	-	1035	-	-
Mov Cap-2 Maneuver	162	183	-	162	183	-	-	-	-	-	-	-
Stage 1	473	477	-	501	499	-	-	-	-	-	-	-
Stage 2	501	498	-	473	476	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	22.11	21.18	0.26	0.11
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	939	-	-	222	242	1035	-	-
HCM Lane V/C Ratio	0.017	-	-	0.051	0.079	0.008	-	-
HCM Ctrl Dly (s/v)	8.9	-	-	22.1	21.2	8.5	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	48	10	1	0	55	149	7	5	135	5
Future Volume (vph)	5	0	48	10	1	0	55	149	7	5	135	5
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		0.878						0.996			0.995	
Flt Protected		0.995			0.956			0.987			0.998	
Satd. Flow (prot)	0	1660	0	0	1816	0	0	1807	0	0	1852	0
Flt Permitted		0.995			0.956			0.987			0.998	
Satd. Flow (perm)	0	1660	0	0	1816	0	0	1807	0	0	1852	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		317.1			131.2			67.6			200.8	
Travel Time (s)		22.8			9.4			6.1			18.1	
Confl. Peds. (#/hr)	2		1	1		2	60		2	2		60
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	2%	0%
Adj. Flow (vph)	6	0	56	12	1	0	65	175	8	6	159	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	13	0	0	248	0	0	171	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	48	10	1	0	55	149	7	5	135	5
Future Vol, veh/h	5	0	48	10	1	0	55	149	7	5	135	5
Conflicting Peds, #/hr	2	0	1	1	0	2	60	0	2	2	0	60
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	2	4	0	0	2	0
Mvmt Flow	6	0	56	12	1	0	65	175	8	6	159	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	541	548	223	482	547	183	225	0	0	186	0	0
Stage 1	234	234	-	311	311	-	-	-	-	-	-	-
Stage 2	307	315	-	172	236	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	455	446	822	498	447	864	1344	-	-	1401	-	-
Stage 1	774	715	-	704	662	-	-	-	-	-	-	-
Stage 2	707	659	-	835	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	399	393	771	431	393	861	1262	-	-	1398	-	-
Mov Cap-2 Maneuver	399	393	-	431	393	-	-	-	-	-	-	-
Stage 1	723	668	-	662	623	-	-	-	-	-	-	-
Stage 2	664	620	-	769	667	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.57	13.68	2.09	0.26
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	465	-	-	709	428	62	-	-
HCM Lane V/C Ratio	0.051	-	-	0.088	0.03	0.004	-	-
HCM Ctrl Dly (s/v)	8	0	-	10.6	13.7	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	25	2	16	18	43	7	132	32	35	148	33
Future Volume (vph)	44	25	2	16	18	43	7	132	32	35	148	33
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		0.997			0.925			0.975			0.979	
Flt Protected		0.970			0.989			0.998			0.992	
Satd. Flow (prot)	0	1710	0	0	1706	0	0	1794	0	0	1820	0
Flt Permitted		0.970			0.989			0.998			0.992	
Satd. Flow (perm)	0	1710	0	0	1706	0	0	1794	0	0	1820	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		219.6			221.0			221.1			87.9	
Travel Time (s)		19.8			19.9			19.9			7.9	
Confl. Peds. (#/hr)	4		65	65		4	72					72
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	16%	0%	0%	8%	0%	0%	3%	4%	0%	2%	0%
Adj. Flow (vph)	54	30	2	20	22	52	9	161	39	43	180	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	94	0	0	209	0	0	263	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	12.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	25	2	16	18	43	7	132	32	35	148	33
Future Vol, veh/h	44	25	2	16	18	43	7	132	32	35	148	33
Conflicting Peds, #/hr	4	0	65	65	0	4	72	0	0	0	0	72
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	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	3	16	0	0	8	0	0	3	4	0	2	0
Mvmt Flow	54	30	2	20	22	52	9	161	39	43	180	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	98	0	0	427	321	97	309	296	124
Stage 1	-	-	-	-	-	-	204	204	-	91	91	-
Stage 2	-	-	-	-	-	-	223	117	-	218	205	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.53	6.24	7.1	6.52	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.53	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.53	-	6.1	5.52	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4.027	3.336	3.5	4.018	3.3
Pot Cap-1 Maneuver	1514	-	-	1508	-	-	541	594	954	647	615	932
Stage 1	-	-	-	-	-	-	803	731	-	921	819	-
Stage 2	-	-	-	-	-	-	784	797	-	789	732	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1507	-	-	1408	-	-	288	525	891	412	543	860
Mov Cap-2 Maneuver	-	-	-	-	-	-	288	525	-	412	543	-
Stage 1	-	-	-	-	-	-	722	658	-	904	804	-
Stage 2	-	-	-	-	-	-	529	782	-	549	659	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	4.63	1.58	15.53	17.59
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	549	1099	-	-	328	-	-	546
HCM Lane V/C Ratio	0.38	0.036	-	-	0.014	-	-	0.483
HCM Ctrl Dly (s/v)	15.5	7.5	0	-	7.6	0	-	17.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0	-	-	2.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	58	26	8	55	72	8	54	4	42	95	17
Future Volume (vph)	18	58	26	8	55	72	8	54	4	42	95	17
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		0.966			0.928			0.991			0.985	
Flt Protected		0.991			0.997			0.994			0.987	
Satd. Flow (prot)	0	1718	0	0	1652	0	0	1789	0	0	1771	0
Flt Permitted		0.991			0.997			0.994			0.987	
Satd. Flow (perm)	0	1718	0	0	1652	0	0	1789	0	0	1771	0
Link Speed (k/h)		40			50			40			40	
Link Distance (m)		221.0			352.6			215.0			193.8	
Travel Time (s)		19.9			25.4			19.4			17.4	
Confl. Peds. (#/hr)			22	22			1		6	6		1
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles (%)	27%	2%	0%	0%	4%	9%	0%	3%	33%	9%	3%	0%
Adj. Flow (vph)	25	81	36	11	76	100	11	75	6	58	132	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	0	0	187	0	0	92	0	0	214	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	58	26	8	55	72	8	54	4	42	95	17
Future Vol, veh/h	18	58	26	8	55	72	8	54	4	42	95	17
Conflicting Peds, #/hr	0	0	22	22	0	0	1	0	6	6	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	27	2	0	0	4	9	0	3	33	9	3	0
Mvmt Flow	25	81	36	11	76	100	11	75	6	58	132	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	176	0	0	139	0	0	336	369	127	323	337	127
Stage 1	-	-	-	-	-	-	171	171	-	149	149	-
Stage 2	-	-	-	-	-	-	166	199	-	174	189	-
Critical Hdwy	4.37	-	-	4.1	-	-	7.1	6.53	6.53	7.19	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.53	-	6.19	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.53	-	6.19	5.53	-
Follow-up Hdwy	2.443	-	-	2.2	-	-	3.5	4.027	3.597	3.581	4.027	3.3
Pot Cap-1 Maneuver	1262	-	-	1457	-	-	621	559	847	617	582	928
Stage 1	-	-	-	-	-	-	836	756	-	838	772	-
Stage 2	-	-	-	-	-	-	841	735	-	812	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1262	-	-	1425	-	-	440	530	823	509	552	927
Mov Cap-2 Maneuver	-	-	-	-	-	-	440	530	-	509	552	-
Stage 1	-	-	-	-	-	-	800	723	-	830	766	-
Stage 2	-	-	-	-	-	-	672	728	-	703	710	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.4	0.45	13.24	15.22
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	528	299	-	-	96	-	-	564
HCM Lane V/C Ratio	0.174	0.02	-	-	0.008	-	-	0.379
HCM Ctrl Dly (s/v)	13.2	7.9	0	-	7.5	0	-	15.2
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-	-	1.8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	110	43	7	100	40	5
Future Volume (vph)	110	43	7	100	40	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.962				0.984	
Flt Protected				0.997	0.958	
Satd. Flow (prot)	1764	0	0	1810	1791	0
Flt Permitted				0.997	0.958	
Satd. Flow (perm)	1764	0	0	1810	1791	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	192.3			123.4	200.8	
Travel Time (s)	17.3			11.1	18.1	
Confl. Peds. (#/hr)		20	20		11	3
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	5%	0%	0%	5%	0%	0%
Adj. Flow (vph)	147	57	9	133	53	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	0	0	142	60	0
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	43	7	100	40	5
Future Vol, veh/h	110	43	7	100	40	5
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	5	0	0	5	0	0
Mvmt Flow	147	57	9	133	53	7
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.3	8.1	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	89%	0%	7%
Vol Thru, %	0%	72%	93%
Vol Right, %	11%	28%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	45	153	107
LT Vol	40	0	7
Through Vol	0	110	100
RT Vol	5	43	0
Lane Flow Rate	60	204	143
Geometry Grp	1	1	1
Degree of Util (X)	0.079	0.228	0.165
Departure Headway (Hd)	4.754	4.029	4.172
Convergence, Y/N	Yes	Yes	Yes
Cap	758	877	846
Service Time	2.754	2.115	2.266
HCM Lane V/C Ratio	0.079	0.233	0.169
HCM Control Delay, s/veh	8.2	8.3	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.9	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	18	54	23	26	27	43	307	19	33	302	11
Future Volume (vph)	23	18	54	23	26	27	43	307	19	33	302	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.923			0.952			0.993			0.996	
Flt Protected		0.988			0.985			0.994			0.995	
Satd. Flow (prot)	0	1621	0	0	1704	0	0	1704	0	0	1789	0
Flt Permitted		0.988			0.985			0.994			0.995	
Satd. Flow (perm)	0	1621	0	0	1704	0	0	1704	0	0	1789	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		352.6			137.1			205.0			189.2	
Travel Time (s)		25.4			9.9			14.8			13.6	
Confl. Peds. (#/hr)			4	4								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	2%	0%	0%	4%	9%	8%	11%	0%	0%	6%	0%
Adj. Flow (vph)	25	20	59	25	28	29	47	334	21	36	328	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	104	0	0	82	0	0	402	0	0	376	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	18	54	23	26	27	43	307	19	33	302	11
Future Vol, veh/h	23	18	54	23	26	27	43	307	19	33	302	11
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	27	2	0	0	4	9	8	11	0	0	6	0
Mvmt Flow	25	20	59	25	28	29	47	334	21	36	328	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	847	854	338	851	849	344	340	0	0	354	0	0
Stage 1	406	406	-	438	438	-	-	-	-	-	-	-
Stage 2	441	448	-	414	412	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.52	6.2	7.1	6.54	6.29	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.37	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.52	-	6.1	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.743	4.018	3.3	3.5	4.036	3.381	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	255	296	709	282	296	683	1186	-	-	1216	-	-
Stage 1	575	598	-	602	576	-	-	-	-	-	-	-
Stage 2	549	573	-	620	591	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	202	271	706	220	271	683	1186	-	-	1216	-	-
Mov Cap-2 Maneuver	202	271	-	220	271	-	-	-	-	-	-	-
Stage 1	554	576	-	572	547	-	-	-	-	-	-	-
Stage 2	474	545	-	527	569	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.44	20.33	0.95	0.77
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	207	-	-	370	317	170	-	-
HCM Lane V/C Ratio	0.039	-	-	0.279	0.261	0.03	-	-
HCM Ctrl Dly (s/v)	8.2	0	-	18.4	20.3	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.1	1	0.1	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	1	210	17	2	206
Future Volume (vph)	16	1	210	17	2	206
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	0.992		0.990			
Flt Protected	0.955					
Satd. Flow (prot)	1765	0	1828	0	0	1881
Flt Permitted	0.955					
Satd. Flow (perm)	1765	0	1828	0	0	1881
Link Speed (k/h)	40		40			40
Link Distance (m)	50.4		87.9			106.0
Travel Time (s)	4.5		7.9			9.5
Confl. Peds. (#/hr)				2	2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	2%	2%	1%
Adj. Flow (vph)	17	1	228	18	2	224
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	246	0	0	226
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	1	210	17	2	206
Future Vol, veh/h	16	1	210	17	2	206
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	2	2	1
Mvmt Flow	17	1	228	18	2	224

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	468	239	0	0	249	0
Stage 1	239	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	554	799	-	-	1317	-
Stage 1	800	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	551	798	-	-	1314	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	808	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.63	0	0.07
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	562	17	-
HCM Lane V/C Ratio	-	-	0.033	0.002	-
HCM Ctrl Dly (s/v)	-	-	11.6	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	3	208	3	0	195
Future Volume (vph)	13	3	208	3	0	195
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	0.976		0.998			
Flt Protected	0.960					
Satd. Flow (prot)	1745	0	1841	0	0	1881
Flt Permitted	0.960					
Satd. Flow (perm)	1745	0	1841	0	0	1881
Link Speed (k/h)	40		40			40
Link Distance (m)	63.3		106.0			61.5
Travel Time (s)	5.7		9.5			5.5
Confl. Peds. (#/hr)				2	2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	2%	2%	1%
Adj. Flow (vph)	14	3	226	3	0	212
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	229	0	0	212
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	3	208	3	0	195
Future Vol, veh/h	13	3	208	3	0	195
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	2	2	1
Mvmt Flow	14	3	226	3	0	212

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	442	230	0	0	231	0
Stage 1	230	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	573	810	-	-	1336	-
Stage 1	808	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	572	808	-	-	1334	-
Mov Cap-2 Maneuver	572	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	605	1334	-
HCM Lane V/C Ratio	-	-	0.029	-	-
HCM Ctrl Dly (s/v)	-	-	11.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	211	0	0	192
Future Volume (vph)	3	0	211	0	0	192
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						
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	1845	0	0	1881
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	1845	0	0	1881
Link Speed (k/h)	40		40			40
Link Distance (m)	64.1		61.5			67.6
Travel Time (s)	5.8		5.5			6.1
Confl. Peds. (#/hr)				2	2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	2%	2%	1%
Adj. Flow (vph)	3	0	229	0	0	209
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	229	0	0	209
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	211	0	0	192
Future Vol, veh/h	3	0	211	0	0	192
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	2	2	1
Mvmt Flow	3	0	229	0	0	209

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	440	231	0	0	231	0
Stage 1	231	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	574	808	-	-	1336	-
Stage 1	807	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	573	806	-	-	1334	-
Mov Cap-2 Maneuver	573	-	-	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.32	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1334	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Ctrl Dly (s/v)	-	-	11.3	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	4	1	136	129	0
Future Volume (vph)	1	4	1	136	129	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.892					
Flt Protected	0.990					
Satd. Flow (prot)	1645	0	0	1760	1810	0
Flt Permitted	0.990					
Satd. Flow (perm)	1645	0	0	1760	1810	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	61.9			64.4	205.3	
Travel Time (s)	5.6			5.8	18.5	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	8%	5%	2%
Adj. Flow (vph)	1	4	1	148	140	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	149	140	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	1	136	129	0
Future Vol, veh/h	1	4	1	136	129	0
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	8	5	2
Mvmt Flow	1	4	1	148	140	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	291	141	141	0	-	0
Stage 1	141	-	-	-	-	-
Stage 2	150	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	700	907	1442	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	698	906	1440	-	-	-
Mov Cap-2 Maneuver	698	-	-	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	877	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.24	0.05	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	13	-	855	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Ctrl Dly (s/v)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	24	12	131	131	2
Future Volume (vph)	6	24	12	131	131	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	0.894				0.998	
Flt Protected	0.990			0.996		
Satd. Flow (prot)	1649	0	0	1760	1807	0
Flt Permitted	0.990			0.996		
Satd. Flow (perm)	1649	0	0	1760	1807	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	72.1			193.8	64.4	
Travel Time (s)	6.5			17.4	5.8	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	8%	5%	2%
Adj. Flow (vph)	7	26	13	142	142	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	0	155	144	0
Sign Control	Stop			Free	Free	

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	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	24	12	131	131	2
Future Vol, veh/h	6	24	12	131	131	2
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	8	5	2
Mvmt Flow	7	26	13	142	142	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	313	144	146	0	-	0
Stage 1	144	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	680	903	1437	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	672	902	1435	-	-	-
Mov Cap-2 Maneuver	672	-	-	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	860	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.44	0.63	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	151	-	844	-	-
HCM Lane V/C Ratio	0.009	-	0.039	-	-
HCM Ctrl Dly (s/v)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2	45	12	1	7	74	800	30	19	688	11
Future Volume (vph)	11	2	45	12	1	7	74	800	30	19	688	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	15.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.894			0.951			0.995			0.998	
Flt Protected		0.991			0.971		0.950			0.950		
Satd. Flow (prot)	0	1683	0	0	1754	0	1805	1872	0	1805	1842	0
Flt Permitted		0.991			0.971		0.950			0.950		
Satd. Flow (perm)	0	1683	0	0	1754	0	1805	1872	0	1805	1842	0
Link Speed (k/h)		50			50			50			40	
Link Distance (m)		123.6			129.1			112.6			179.5	
Travel Time (s)		8.9			9.3			8.1			16.2	
Confl. Peds. (#/hr)							15		8	8		15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	3%	0%
Adj. Flow (vph)	12	2	51	13	1	8	83	899	34	21	773	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	0	22	0	83	933	0	21	785	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	2	45	12	1	7	74	800	30	19	688	11
Future Vol, veh/h	11	2	45	12	1	7	74	800	30	19	688	11
Conflicting Peds, #/hr	0	0	0	0	0	0	15	0	8	8	0	15
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	15	-	-	15	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	3	0
Mvmt Flow	12	2	51	13	1	8	83	899	34	21	773	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1903	1944	794	1907	1933	924	800	0	0	941	0	0
Stage 1	837	837	-	1090	1090	-	-	-	-	-	-	-
Stage 2	1066	1107	-	817	843	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	53	66	391	53	67	329	832	-	-	737	-	-
Stage 1	364	385	-	263	294	-	-	-	-	-	-	-
Stage 2	271	288	-	373	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	56	385	38	57	327	819	-	-	731	-	-
Mov Cap-2 Maneuver	44	56	-	38	57	-	-	-	-	-	-	-
Stage 1	348	368	-	234	262	-	-	-	-	-	-	-
Stage 2	237	257	-	313	366	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	49.52	105.58	0.81	0.27
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	819	-	-	143	57	731	-	-
HCM Lane V/C Ratio	0.102	-	-	0.455	0.397	0.029	-	-
HCM Ctrl Dly (s/v)	9.9	-	-	49.5	105.6	10.1	-	-
HCM Lane LOS	A	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.1	1.5	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	11	5	109	7	0	4	57	190	16	5	113	2
Future Volume (vph)	11	5	109	7	0	4	57	190	16	5	113	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		0.882			0.955			0.992			0.998	
Flt Protected		0.996			0.968			0.989			0.998	
Satd. Flow (prot)	0	1669	0	0	1756	0	0	1864	0	0	1857	0
Flt Permitted		0.996			0.968			0.989			0.998	
Satd. Flow (perm)	0	1669	0	0	1756	0	0	1864	0	0	1857	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		317.1			131.2			67.6			200.8	
Travel Time (s)		22.8			9.4			6.1			18.1	
Confl. Peds. (#/hr)	2					2	2					2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	1%	0%
Adj. Flow (vph)	12	5	120	8	0	4	63	209	18	5	124	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	137	0	0	12	0	0	290	0	0	131	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	5	109	7	0	4	57	190	16	5	113	2
Future Vol, veh/h	11	5	109	7	0	4	57	190	16	5	113	2
Conflicting Peds, #/hr	2	0	0	0	0	2	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	25	1	0
Mvmt Flow	12	5	120	8	0	4	63	209	18	5	124	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	474	490	127	481	482	220	128	0	0	226	0	0
Stage 1	138	138	-	343	343	-	-	-	-	-	-	-
Stage 2	336	352	-	138	139	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.35	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.425	-	-
Pot Cap-1 Maneuver	504	482	928	499	487	825	1470	-	-	1218	-	-
Stage 1	870	786	-	677	641	-	-	-	-	-	-	-
Stage 2	682	635	-	870	785	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	472	455	926	406	460	823	1467	-	-	1218	-	-
Mov Cap-2 Maneuver	472	455	-	406	460	-	-	-	-	-	-	-
Stage 1	864	781	-	643	610	-	-	-	-	-	-	-
Stage 2	644	604	-	749	780	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.25	12.41	1.64	0.33
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	384	-	-	823	498	75	-	-
HCM Lane V/C Ratio	0.043	-	-	0.167	0.024	0.005	-	-
HCM Ctrl Dly (s/v)	7.6	0	-	10.3	12.4	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	28	0	12	22	49	0	204	15	53	177	23
Future Volume (vph)	36	28	0	12	22	49	0	204	15	53	177	23
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					0.921			0.991			0.988	
Flt Protected		0.973			0.993						0.990	
Satd. Flow (prot)	0	1849	0	0	1738	0	0	1883	0	0	1847	0
Flt Permitted		0.973			0.993						0.990	
Satd. Flow (perm)	0	1849	0	0	1738	0	0	1883	0	0	1847	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		219.6			221.0			221.1			87.9	
Travel Time (s)		19.8			19.9			19.9			7.9	
Confl. Peds. (#/hr)			10	10			7					7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	42	33	0	14	26	57	0	237	17	62	206	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	97	0	0	254	0	0	295	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	12.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	28	0	12	22	49	0	204	15	53	177	23
Future Vol, veh/h	36	28	0	12	22	49	0	204	15	53	177	23
Conflicting Peds, #/hr	0	0	10	10	0	0	7	0	0	0	0	7
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	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	3	0	0
Mvmt Flow	42	33	0	14	26	57	0	237	17	62	206	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	43	0	0	290	237	43	317	208	61
Stage 1	-	-	-	-	-	-	126	126	-	82	82	-
Stage 2	-	-	-	-	-	-	163	110	-	235	126	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.13	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.13	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.527	4	3.3
Pot Cap-1 Maneuver	1527	-	-	1579	-	-	667	668	1034	634	692	1010
Stage 1	-	-	-	-	-	-	882	795	-	924	831	-
Stage 2	-	-	-	-	-	-	843	808	-	766	795	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1527	-	-	1563	-	-	427	636	1023	382	660	1003
Mov Cap-2 Maneuver	-	-	-	-	-	-	427	636	-	382	660	-
Stage 1	-	-	-	-	-	-	849	765	-	915	823	-
Stage 2	-	-	-	-	-	-	605	800	-	505	765	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	4.18	1.06	13.99	17.09
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	653	1012	-	-	229	-	-	588
HCM Lane V/C Ratio	0.39	0.027	-	-	0.009	-	-	0.5
HCM Ctrl Dly (s/v)	14	7.4	0	-	7.3	0	-	17.1
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0	-	-	2.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	57	29	10	68	44	10	76	6	59	101	16
Future Volume (vph)	29	57	29	10	68	44	10	76	6	59	101	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.966			0.951			0.991			0.988	
Flt Protected		0.988			0.996			0.994			0.983	
Satd. Flow (prot)	0	1813	0	0	1761	0	0	1731	0	0	1792	0
Flt Permitted		0.988			0.996			0.994			0.983	
Satd. Flow (perm)	0	1813	0	0	1761	0	0	1731	0	0	1792	0
Link Speed (k/h)		40			50			40			40	
Link Distance (m)		221.0			352.6			215.0			193.8	
Travel Time (s)		19.9			25.4			19.4			17.4	
Confl. Peds. (#/hr)			28	28			1		4	4		1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	13%	0%	3%	14%	8%	0%	2%	4%	0%
Adj. Flow (vph)	36	71	36	13	85	55	13	95	8	74	126	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	0	0	153	0	0	116	0	0	220	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	57	29	10	68	44	10	76	6	59	101	16
Future Vol, veh/h	29	57	29	10	68	44	10	76	6	59	101	16
Conflicting Peds, #/hr	0	0	28	28	0	0	1	0	4	4	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	13	0	3	14	8	0	2	4	0
Mvmt Flow	36	71	36	13	85	55	13	95	8	74	126	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	140	0	0	136	0	0	364	355	121	333	346	114
Stage 1	-	-	-	-	-	-	190	190	-	138	138	-
Stage 2	-	-	-	-	-	-	174	165	-	195	208	-
Critical Hdwy	4.1	-	-	4.23	-	-	7.24	6.58	6.2	7.12	6.54	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.58	-	6.12	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.58	-	6.12	5.54	-
Follow-up Hdwy	2.2	-	-	2.317	-	-	3.626	4.072	3.3	3.518	4.036	3.3
Pot Cap-1 Maneuver	1456	-	-	1384	-	-	570	561	935	621	574	945
Stage 1	-	-	-	-	-	-	785	732	-	866	779	-
Stage 2	-	-	-	-	-	-	800	750	-	807	726	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1456	-	-	1344	-	-	403	525	905	487	538	944
Mov Cap-2 Maneuver	-	-	-	-	-	-	403	525	-	487	538	-
Stage 1	-	-	-	-	-	-	742	692	-	857	771	-
Stage 2	-	-	-	-	-	-	648	743	-	669	687	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.9	0.63	13.83	16.17
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	522	425	-	-	137	-	-	540
HCM Lane V/C Ratio	0.22	0.025	-	-	0.009	-	-	0.407
HCM Ctrl Dly (s/v)	13.8	7.5	0	-	7.7	0	-	16.2
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	102	44	8	66	43	12
Future Volume (vph)	102	44	8	66	43	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
Ped Bike Factor						
Frt	0.959				0.971	
Flt Protected				0.995	0.962	
Satd. Flow (prot)	1772	0	0	1769	1698	0
Flt Permitted				0.995	0.962	
Satd. Flow (perm)	1772	0	0	1769	1698	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	192.3			123.4	200.8	
Travel Time (s)	17.3			11.1	18.1	
Confl. Peds. (#/hr)		35	35		8	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	4%	0%	14%	6%	3%	10%
Adj. Flow (vph)	140	60	11	90	59	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	0	0	101	75	0
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	102	44	8	66	43	12
Future Vol, veh/h	102	44	8	66	43	12
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	4	0	14	6	3	10
Mvmt Flow	140	60	11	90	59	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.3	8.2	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	78%	0%	11%
Vol Thru, %	0%	70%	89%
Vol Right, %	22%	30%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	55	146	74
LT Vol	43	0	8
Through Vol	0	102	66
RT Vol	12	44	0
Lane Flow Rate	75	200	101
Geometry Grp	1	1	1
Degree of Util (X)	0.097	0.222	0.128
Departure Headway (Hd)	4.636	3.997	4.546
Convergence, Y/N	Yes	Yes	Yes
Cap	777	884	794
Service Time	2.641	2.09	2.546
HCM Lane V/C Ratio	0.097	0.226	0.127
HCM Control Delay, s/veh	8.1	8.3	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.8	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	49	23	41	29	41	74	48	286	27	75	308	36
Future Volume (vph)	49	23	41	29	41	74	48	286	27	75	308	36
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		0.951			0.931			0.990			0.988	
Flt Protected		0.979			0.990			0.993			0.991	
Satd. Flow (prot)	0	1769	0	0	1681	0	0	1853	0	0	1820	0
Flt Permitted		0.979			0.990			0.993			0.991	
Satd. Flow (perm)	0	1769	0	0	1681	0	0	1853	0	0	1820	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		352.6			137.1			205.0			189.2	
Travel Time (s)		25.4			9.9			14.8			13.6	
Confl. Peds. (#/hr)	12					12	7		24	24		7
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%	0%	0%	13%	0%	3%	0%	1%	0%	0%	3%	0%
Adj. Flow (vph)	53	25	45	32	45	80	52	311	29	82	335	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	0	0	157	0	0	392	0	0	456	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	23	41	29	41	74	48	286	27	75	308	36
Future Vol, veh/h	49	23	41	29	41	74	48	286	27	75	308	36
Conflicting Peds, #/hr	12	0	0	0	0	12	7	0	24	24	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	13	0	3	0	1	0	0	3	0
Mvmt Flow	53	25	45	32	45	80	52	311	29	82	335	39

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	974	993	361	964	998	362	381	0	0	364	0	0
Stage 1	524	524	-	454	454	-	-	-	-	-	-	-
Stage 2	450	469	-	510	544	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.23	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.327	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	233	247	688	224	246	681	1189	-	-	1206	-	-
Stage 1	540	533	-	565	573	-	-	-	-	-	-	-
Stage 2	593	564	-	526	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	140	207	683	158	205	656	1180	-	-	1176	-	-
Mov Cap-2 Maneuver	140	207	-	158	205	-	-	-	-	-	-	-
Stage 1	489	483	-	521	528	-	-	-	-	-	-	-
Stage 2	445	520	-	425	473	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	41.49	31.08	1.09	1.48
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	235	-	-	216	290	316	-	-
HCM Lane V/C Ratio	0.044	-	-	0.568	0.54	0.069	-	-
HCM Ctrl Dly (s/v)	8.2	0	-	41.5	31.1	8.3	0	-
HCM Lane LOS	A	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.1	3	0.2	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	2	273	16	1	234
Future Volume (vph)	19	2	273	16	1	234
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	0.988		0.993			
Flt Protected	0.956					
Satd. Flow (prot)	1759	0	1885	0	0	1881
Flt Permitted	0.956					
Satd. Flow (perm)	1759	0	1885	0	0	1881
Link Speed (k/h)	40		40			40
Link Distance (m)	50.4		87.9			106.0
Travel Time (s)	4.5		7.9			9.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	1%
Adj. Flow (vph)	21	2	297	17	1	254
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	314	0	0	255
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	2	273	16	1	234
Future Vol, veh/h	19	2	273	16	1	234
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	1
Mvmt Flow	21	2	297	17	1	254

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	562	305	0	0	314	0
Stage 1	305	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	488	734	-	-	1246	-
Stage 1	747	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	488	734	-	-	1246	-
Mov Cap-2 Maneuver	488	-	-	-	-	-
Stage 1	747	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.48	0	0.03
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	504	8	-
HCM Lane V/C Ratio	-	-	0.045	0.001	-
HCM Ctrl Dly (s/v)	-	-	12.5	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	4	264	11	5	229
Future Volume (vph)	6	4	264	11	5	229
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	0.951		0.995			
Flt Protected	0.969					0.999
Satd. Flow (prot)	1717	0	1889	0	0	1879
Flt Permitted	0.969					0.999
Satd. Flow (perm)	1717	0	1889	0	0	1879
Link Speed (k/h)	40		40			40
Link Distance (m)	63.3		106.0			61.5
Travel Time (s)	5.7		9.5			5.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	1%
Adj. Flow (vph)	7	4	287	12	5	249
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	299	0	0	254
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	4	264	11	5	229
Future Vol, veh/h	6	4	264	11	5	229
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	1
Mvmt Flow	7	4	287	12	5	249

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	553	293	0	0	299	0
Stage 1	293	-	-	-	-	-
Stage 2	260	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	494	746	-	-	1262	-
Stage 1	757	-	-	-	-	-
Stage 2	784	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	492	746	-	-	1262	-
Mov Cap-2 Maneuver	492	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	780	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.44	0	0.17
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	569	38	-
HCM Lane V/C Ratio	-	-	0.019	0.004	-
HCM Ctrl Dly (s/v)	-	-	11.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	265	3	0	231
Future Volume (vph)	3	0	265	3	0	231
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			0.999			
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	1898	0	0	1881
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	1898	0	0	1881
Link Speed (k/h)	40		40			40
Link Distance (m)	64.1		61.5			67.6
Travel Time (s)	5.8		5.5			6.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	1%
Adj. Flow (vph)	3	0	288	3	0	251
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	291	0	0	251
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	265	3	0	231
Future Vol, veh/h	3	0	265	3	0	231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	1
Mvmt Flow	3	0	288	3	0	251

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	541	290	0	0	291	0
Stage 1	290	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	502	749	-	-	1270	-
Stage 1	760	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	502	749	-	-	1270	-
Mov Cap-2 Maneuver	502	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.21	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	502	1270	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Ctrl Dly (s/v)	-	-	12.2	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	4	4	126	163	1
Future Volume (vph)	0	4	4	126	163	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865				0.999	
Flt Protected				0.999		
Satd. Flow (prot)	1611	0	0	1809	1843	0
Flt Permitted				0.999		
Satd. Flow (perm)	1611	0	0	1809	1843	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	61.9			64.4	205.3	
Travel Time (s)	5.6			5.8	18.5	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	5%	3%	2%
Adj. Flow (vph)	0	4	4	137	177	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	141	178	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	4	126	163	1
Future Vol, veh/h	0	4	4	126	163	1
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	5	3	2
Mvmt Flow	0	4	4	137	177	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	324	179	179	0	-	0
Stage 1	179	-	-	-	-	-
Stage 2	146	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	670	864	1396	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	666	863	1395	-	-	-
Mov Cap-2 Maneuver	666	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	881	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.19	0.23	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	55	-	863	-	-
HCM Lane V/C Ratio	0.003	-	0.005	-	-
HCM Ctrl Dly (s/v)	7.6	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	15	22	127	162	5
Future Volume (vph)	3	15	22	127	162	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.886				0.996	
Flt Protected	0.992			0.993		
Satd. Flow (prot)	1637	0	0	1804	1838	0
Flt Permitted	0.992			0.993		
Satd. Flow (perm)	1637	0	0	1804	1838	0
Link Speed (k/h)	40			40	40	
Link Distance (m)	72.1			193.8	64.4	
Travel Time (s)	6.5			17.4	5.8	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	5%	3%	2%
Adj. Flow (vph)	3	16	24	138	176	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	0	162	181	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	15	22	127	162	5
Future Vol, veh/h	3	15	22	127	162	5
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	5	3	2
Mvmt Flow	3	16	24	138	176	5

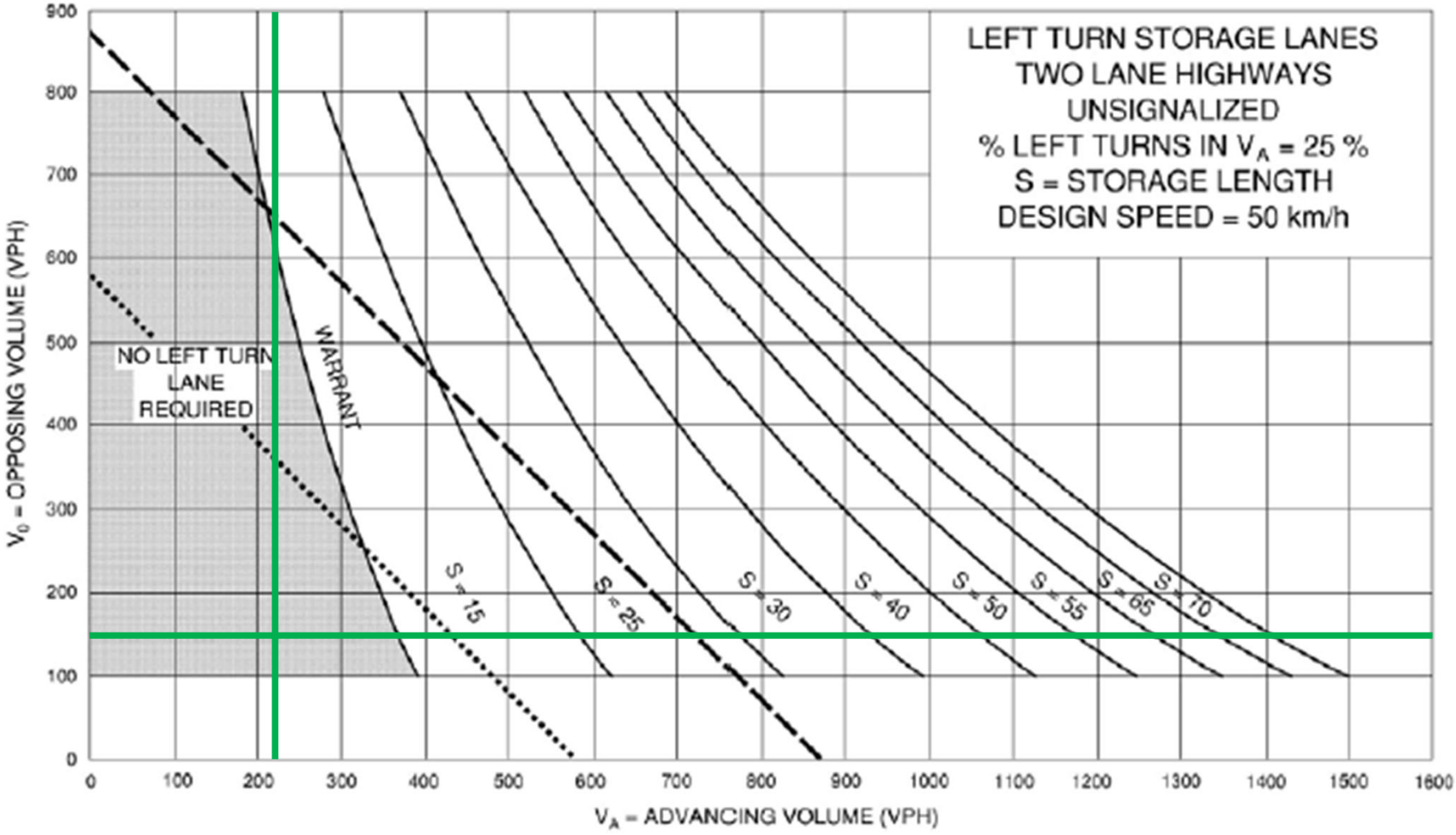
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	366	180	183	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	634	863	1393	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	621	862	1391	-	-	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	845	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.56	1.13	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	266	-	810	-	-
HCM Lane V/C Ratio	0.017	-	0.024	-	-
HCM Ctrl Dly (s/v)	7.6	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

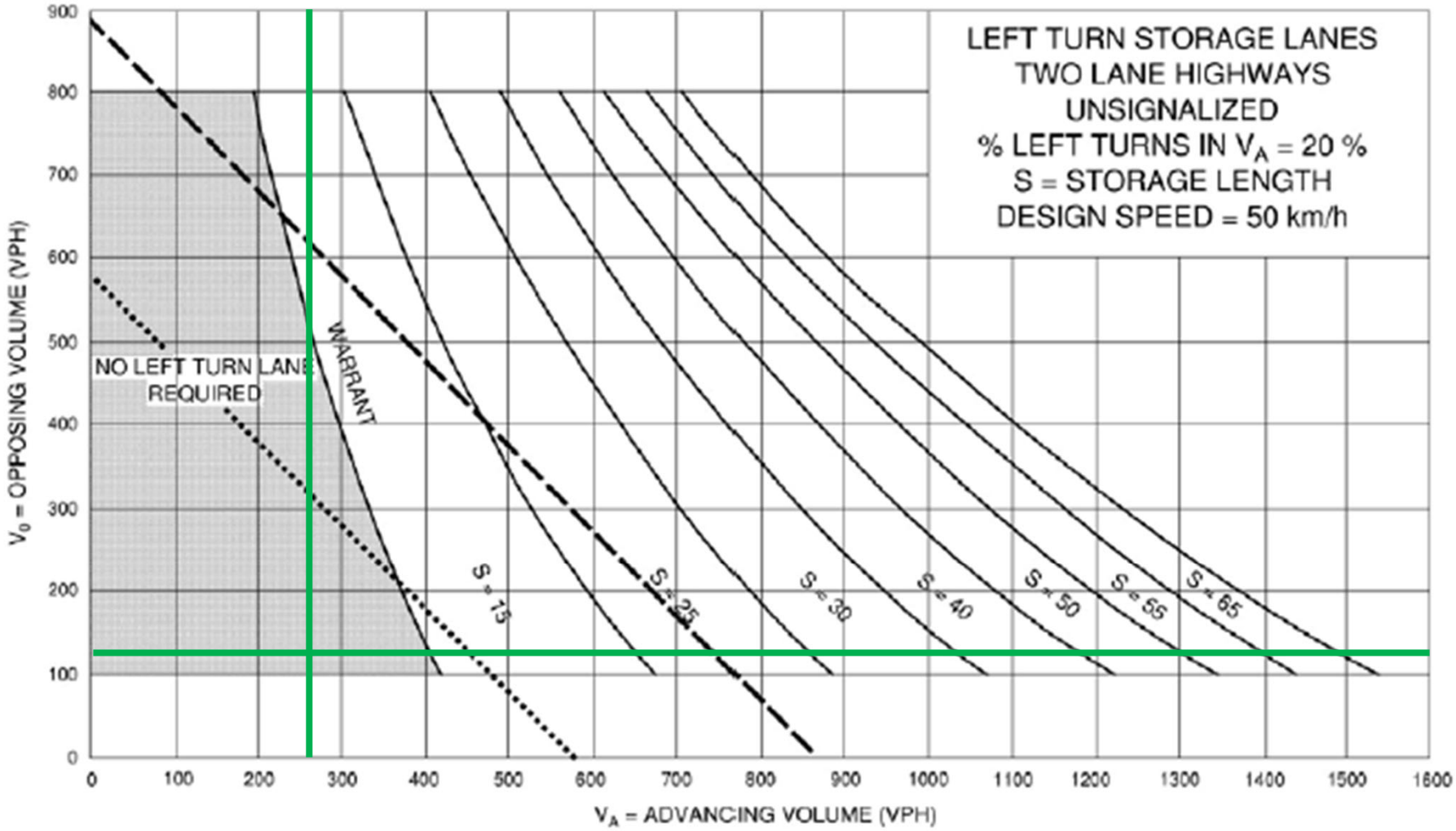
Appendix G

Left-Turn Lane Warrant



Victoria Terrace at Parkside Drive East
Left-Turn Lane Warrant

Total 2034 – AM Peak Hour



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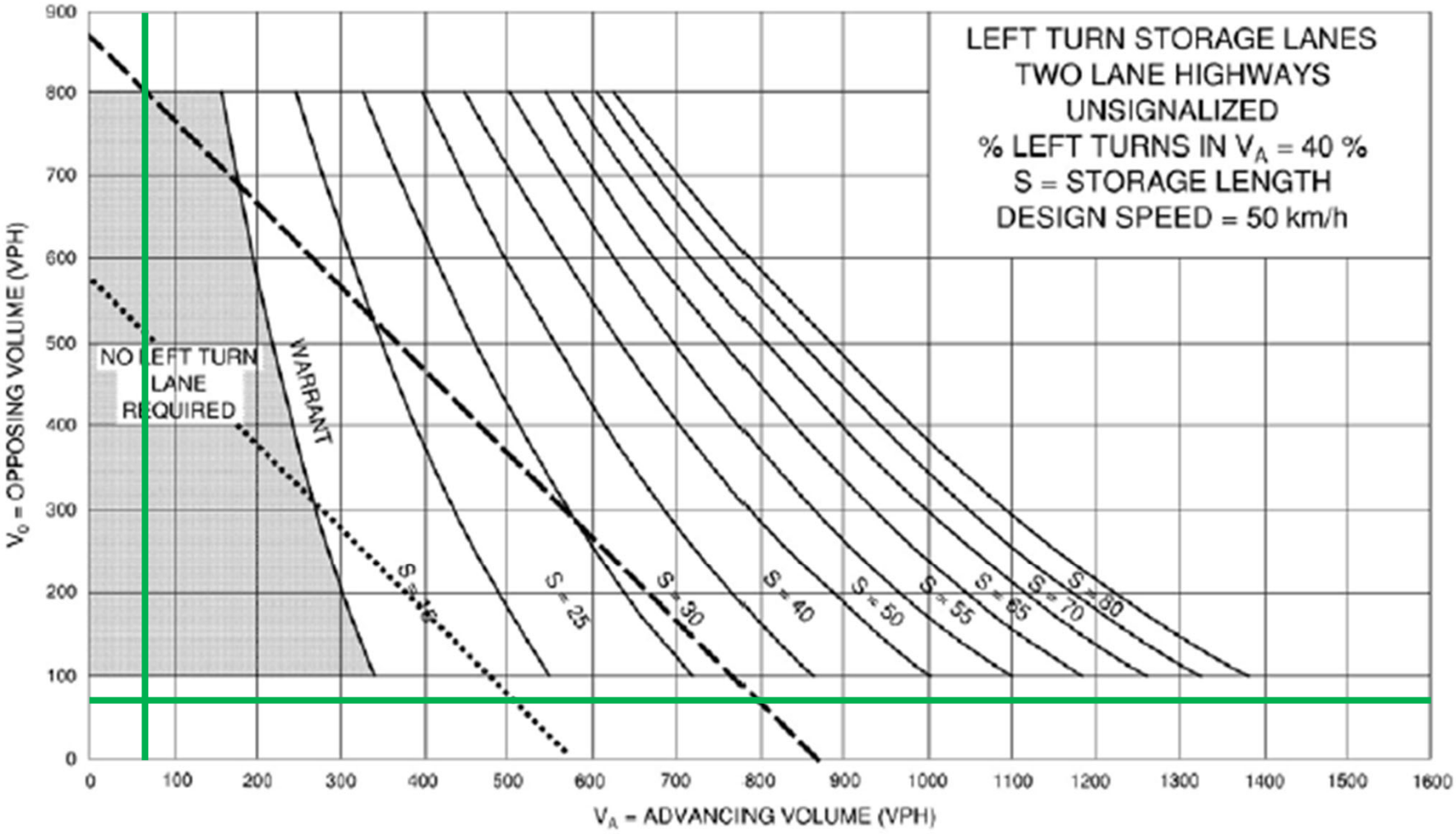
Victoria Terrace at Parkside Drive East
Left-Turn Lane Warrant

650 Victoria Terrace, Fergus TIS
250272

Total 2034 – PM Peak Hour



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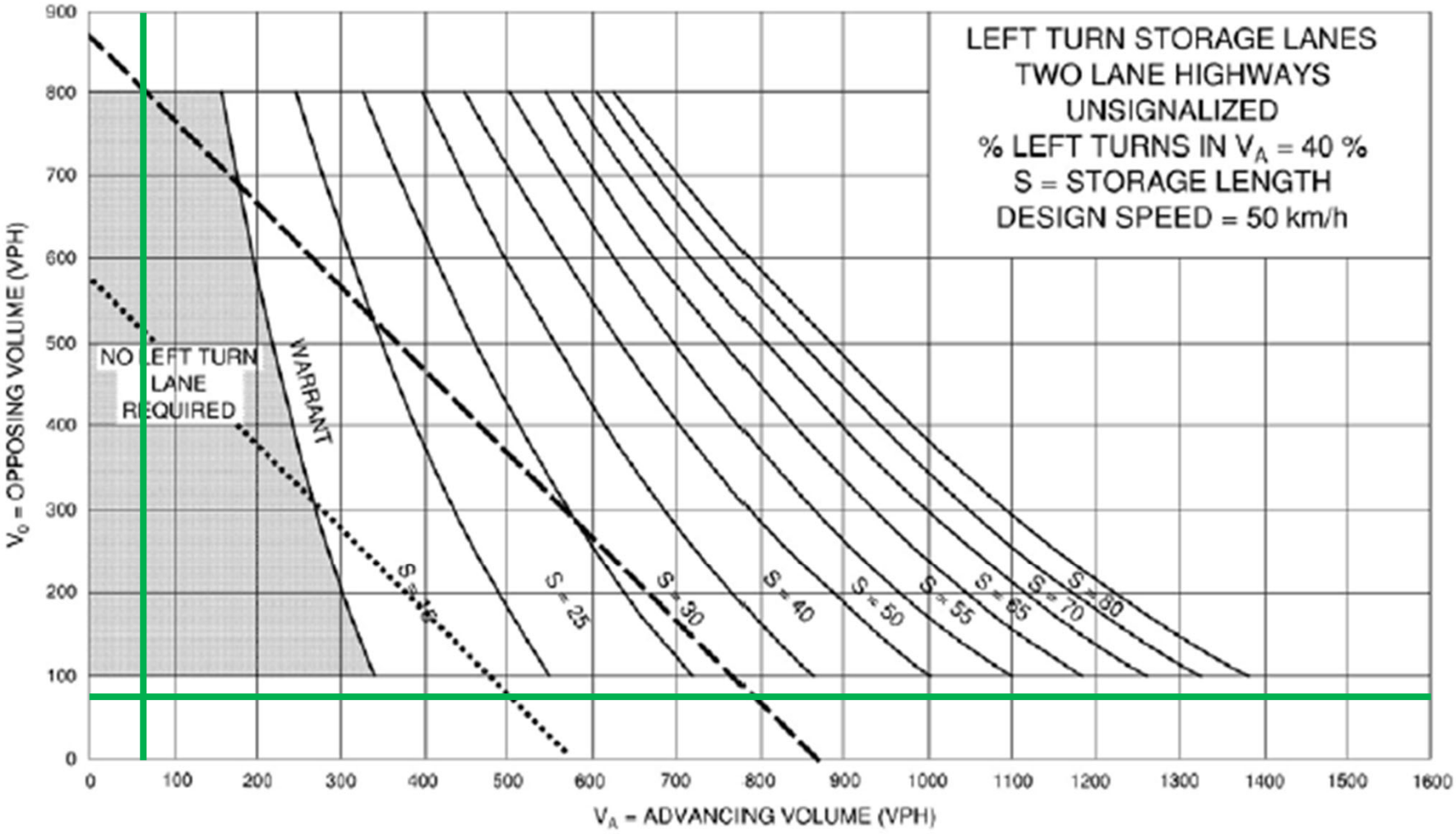
Forfar Street East at Victoria Terrace
Left-Turn Lane Warrant

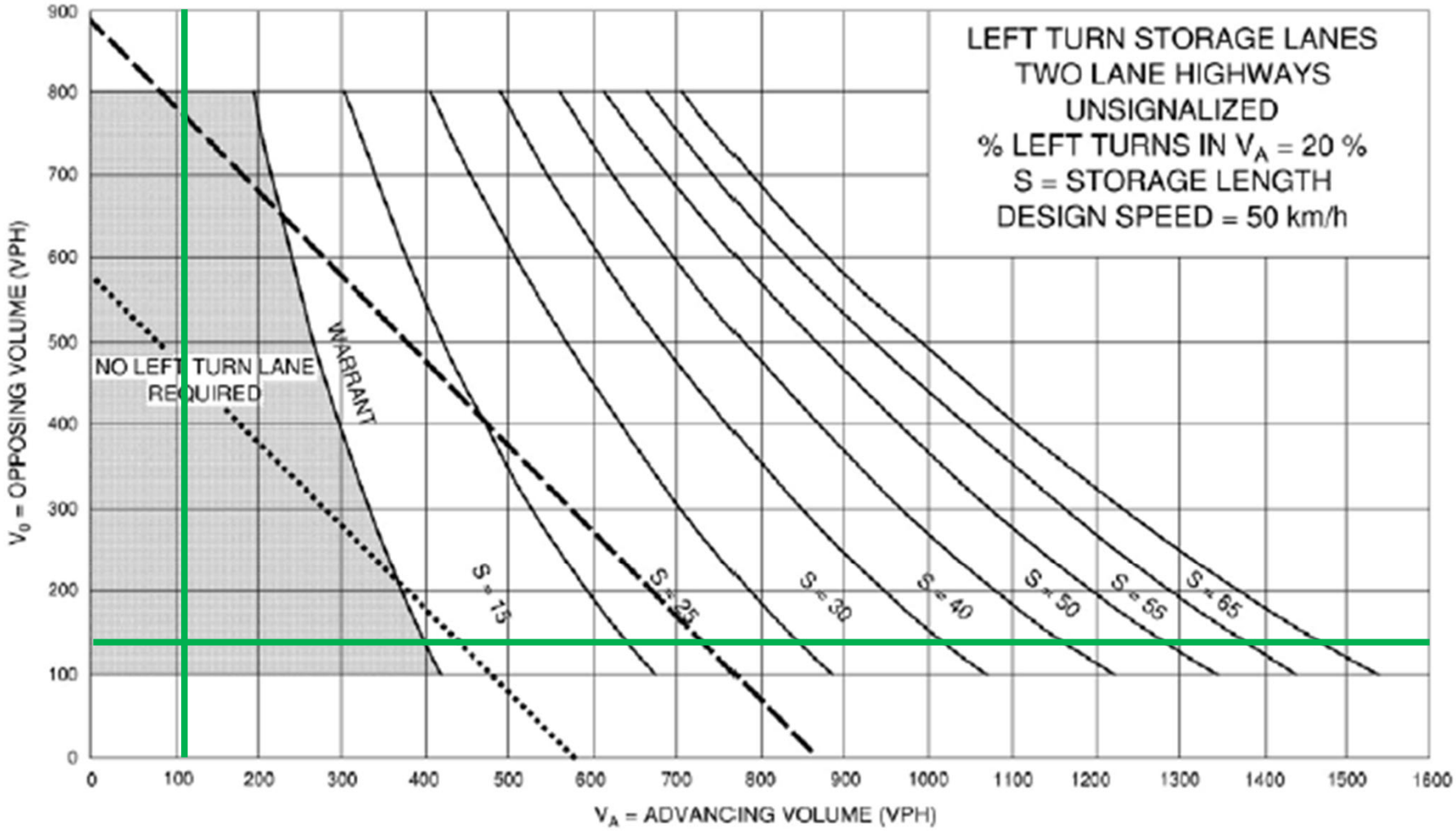
650 Victoria Terrace, Fergus TIS
250272

Total 2034 – AM Peak Hour



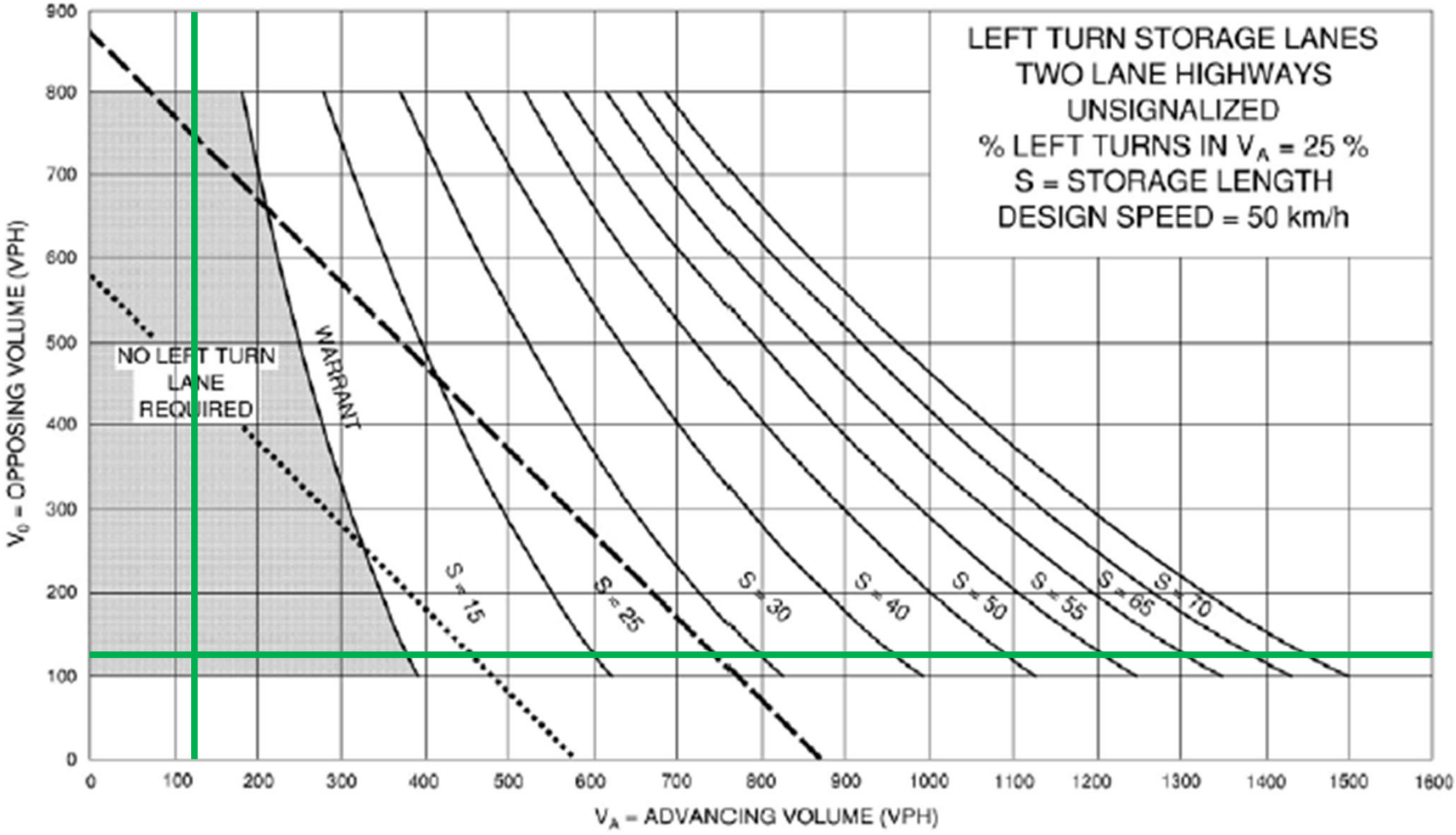
Forfar Street East at Victoria Terrace
Left-Turn Lane Warrant

Total 2034 – PM Peak Hour



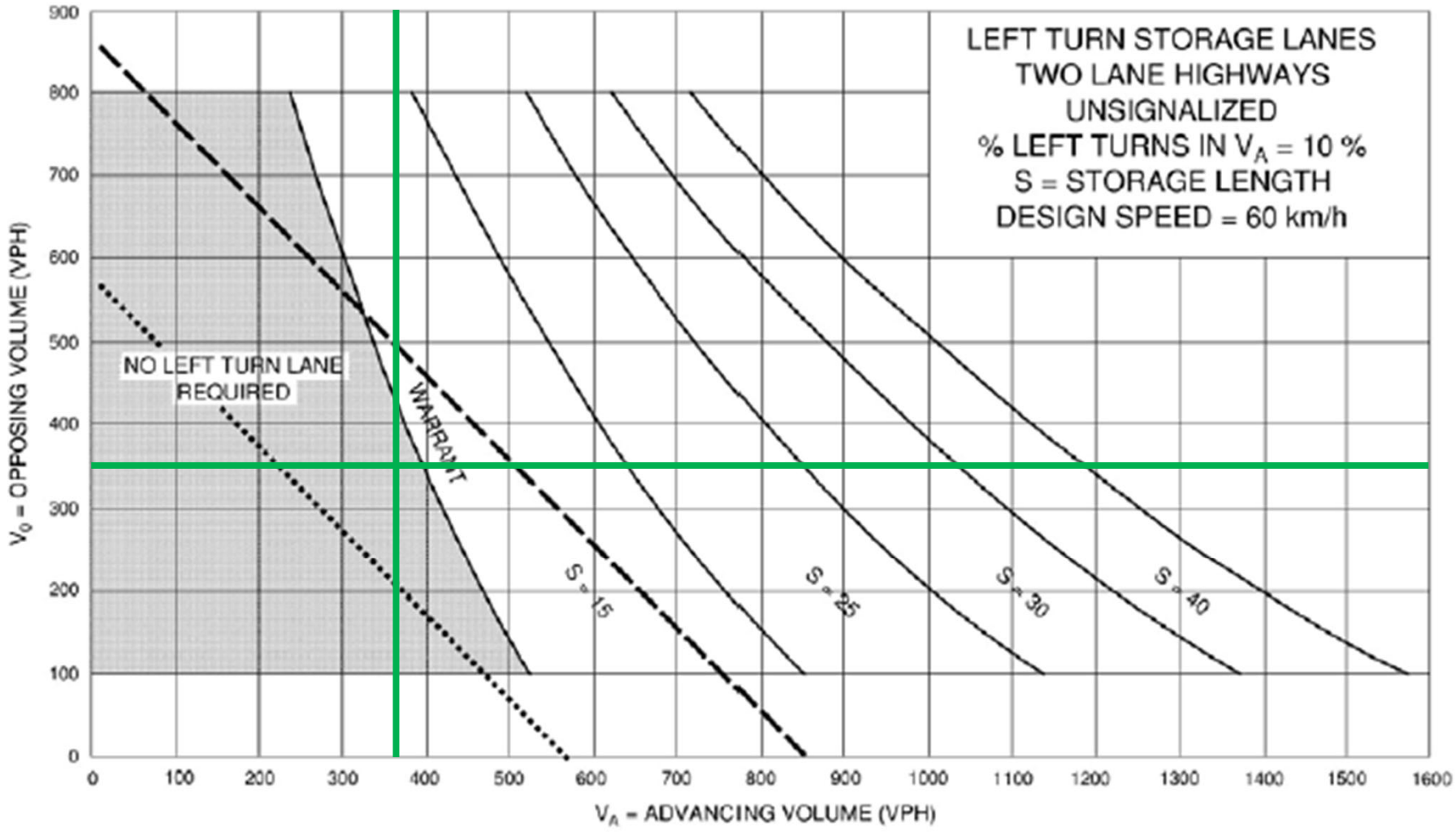
Forfar Street East at Gzowski Street
Left-Turn Lane Warrant

Total 2034 – AM Peak Hour



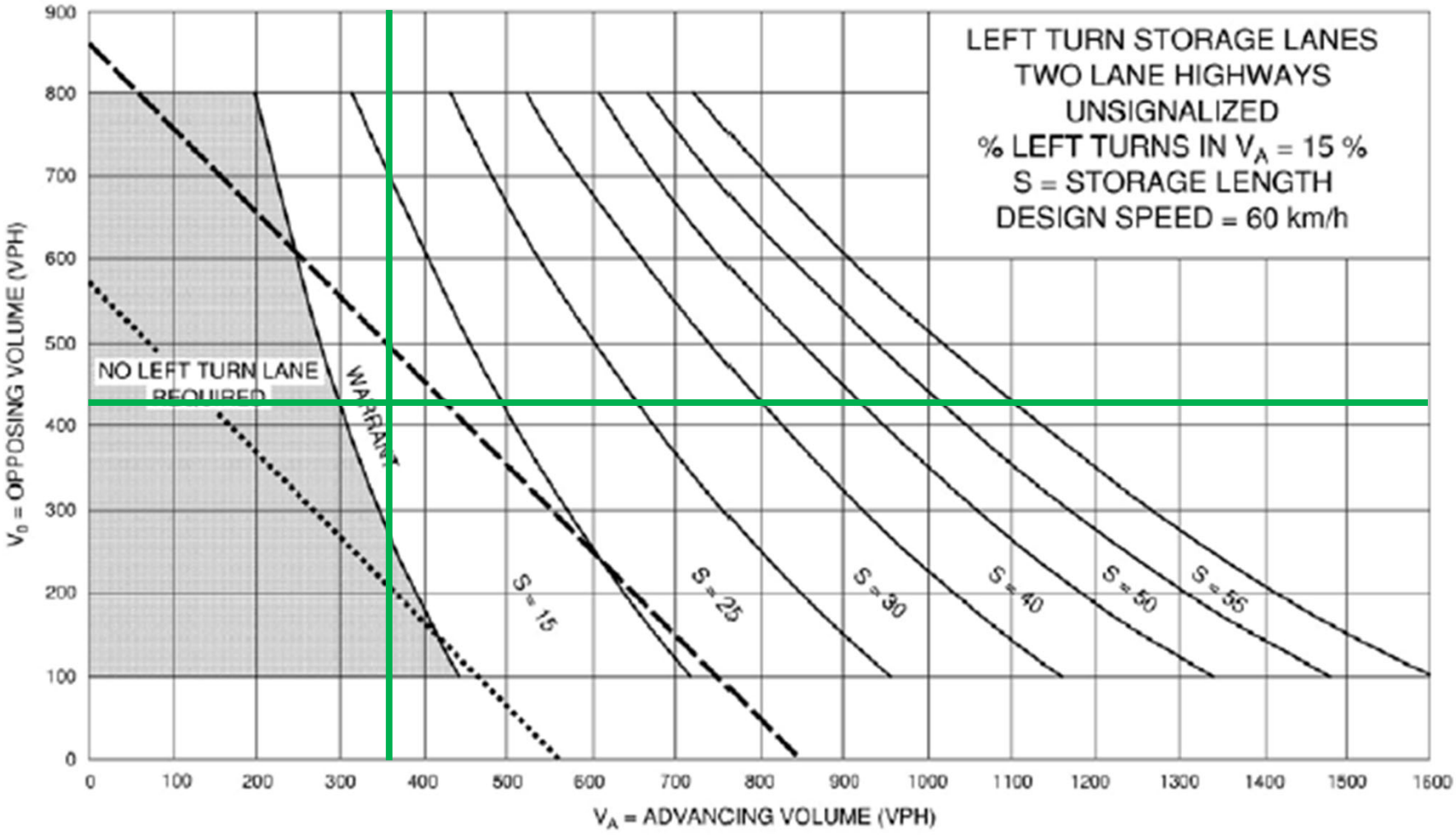
Forfar Street East at Gzowski Street
Left-Turn Lane Warrant

Total 2034 – PM Peak Hour



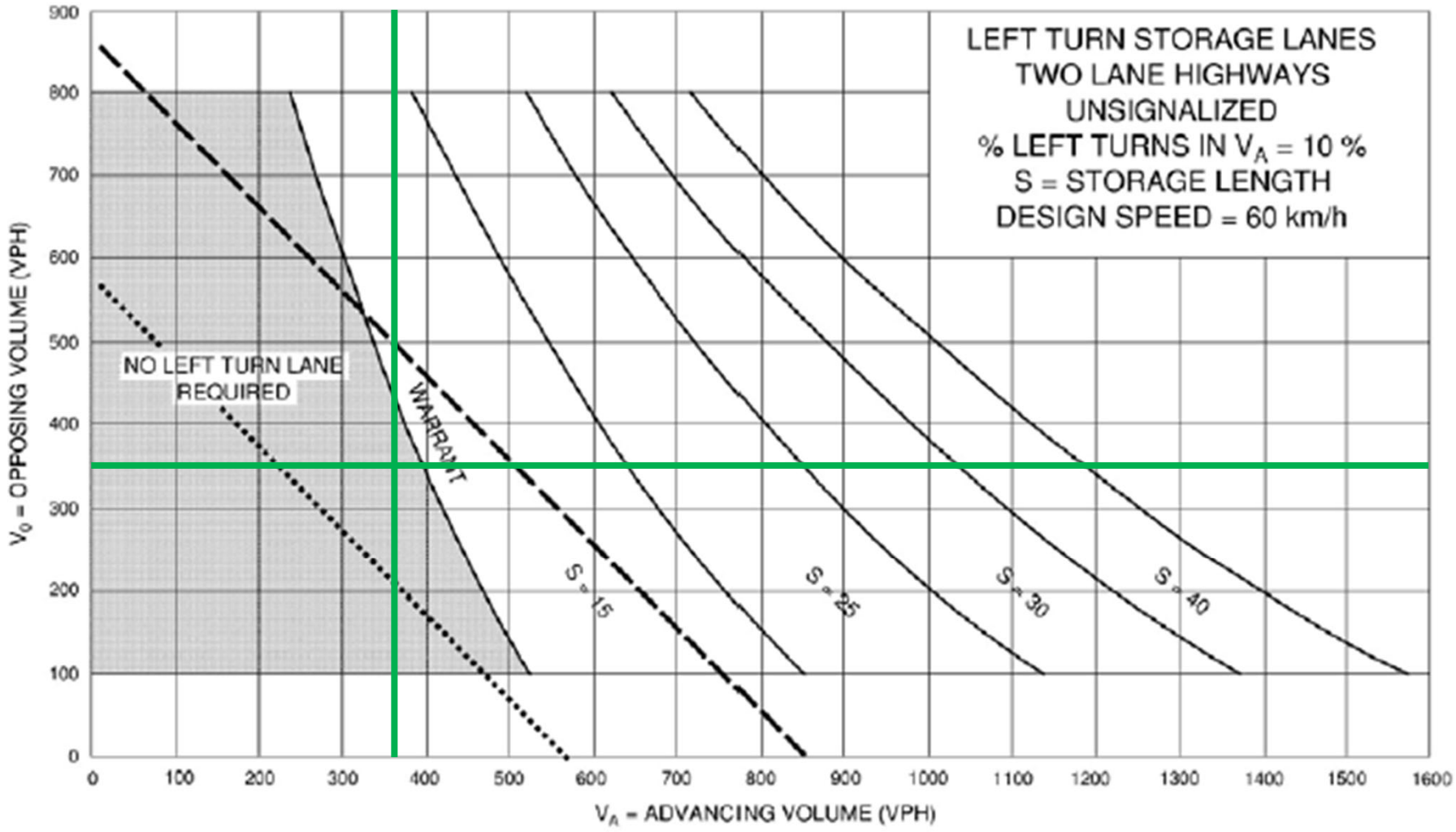
Gartshore Street at Forfar Street East
Left-Turn Lane Warrant

Total 2034 – AM Peak Hour



Gartshore Street at Forfar Street East
Left-Turn Lane Warrant

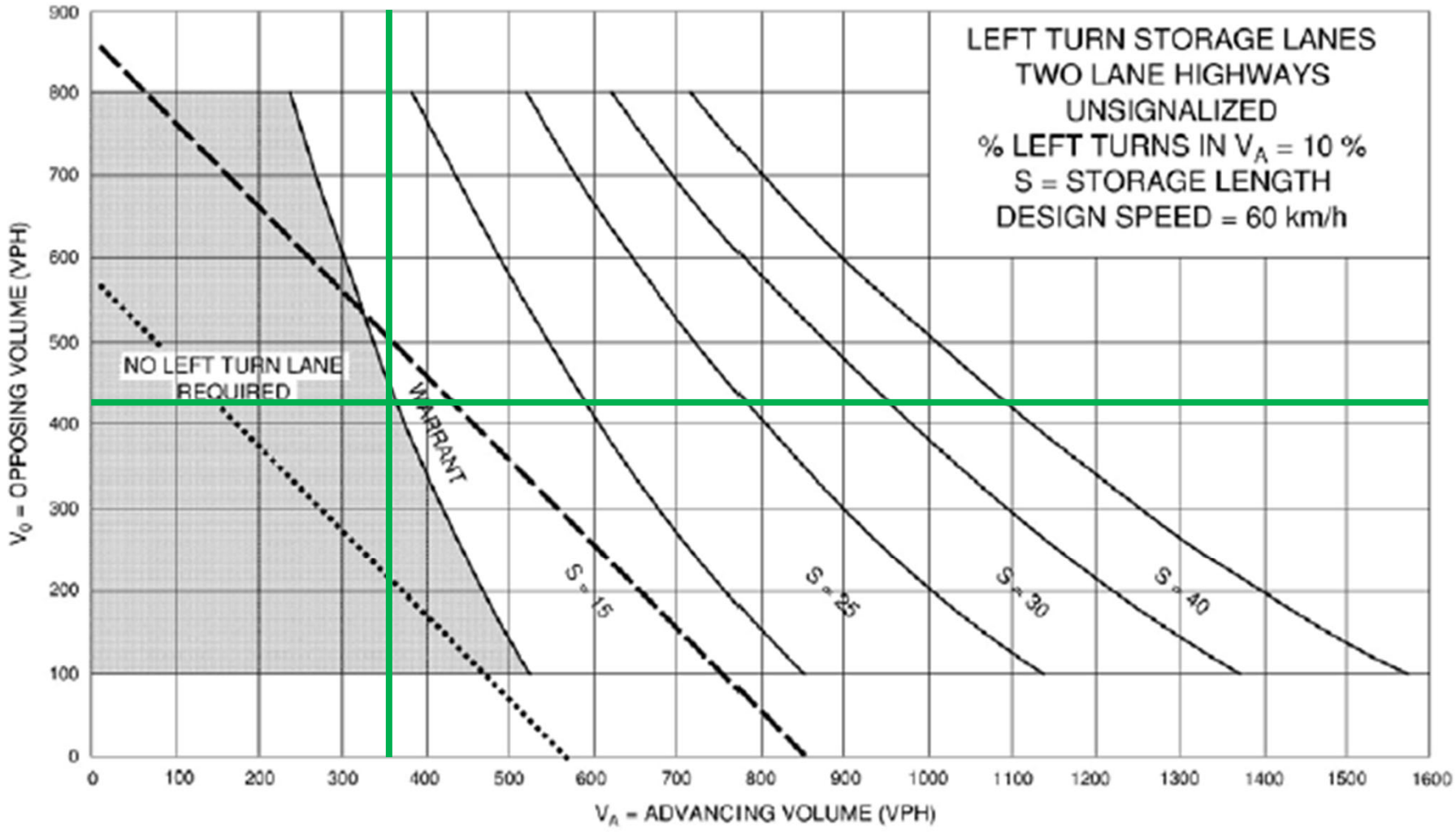
Total 2034 – PM Peak Hour



Gartshore Street at Forfar Street East
Left-Turn Lane Warrant

650 Victoria Terrace, Fergus TIS
250272

Background 2034 – AM Peak Hour



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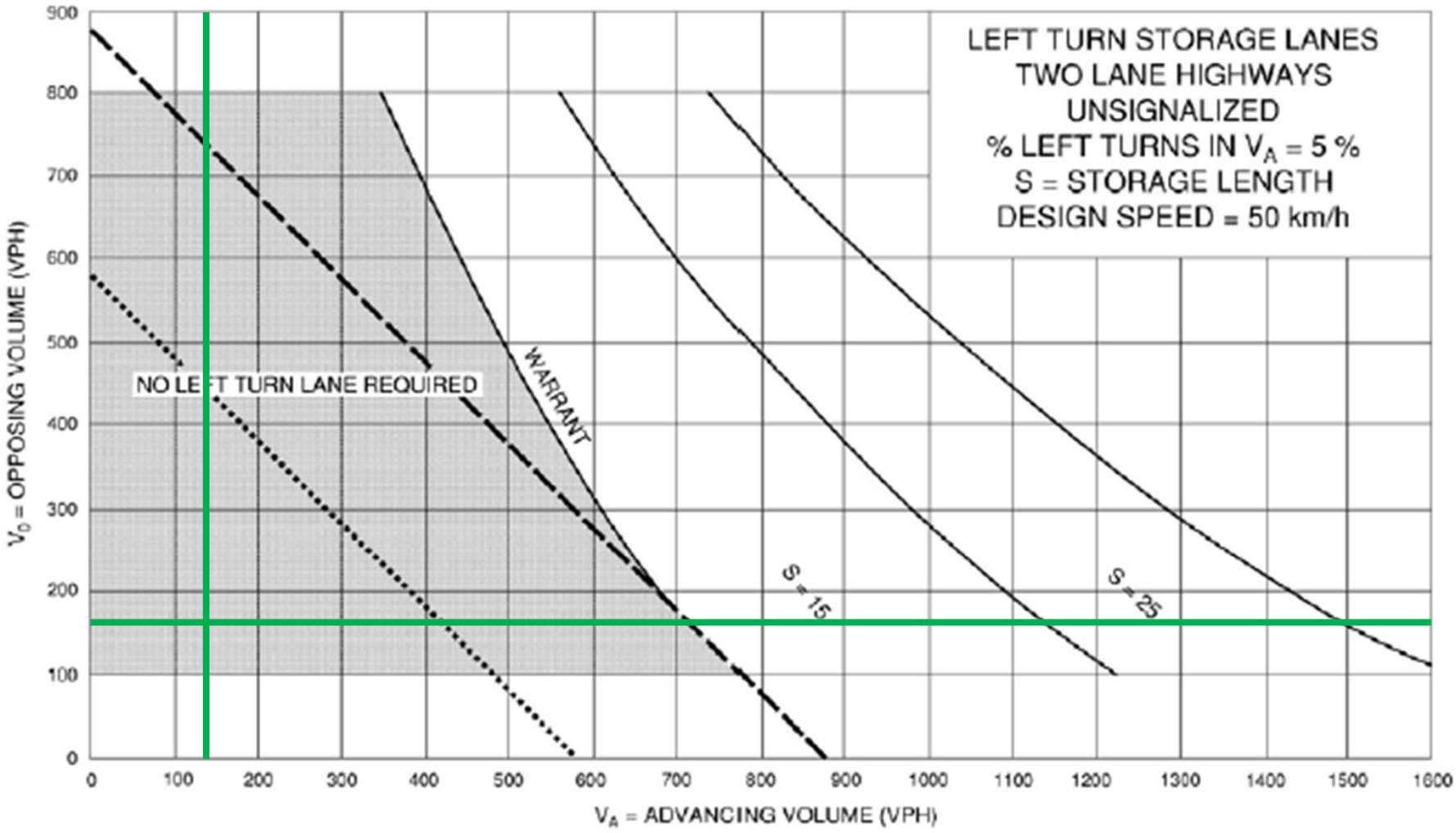
Gartshore Street at Forfar Street East
Left-Turn Lane Warrant

650 Victoria Terrace, Fergus TIS
250272

Background 2034 – PM Peak Hour



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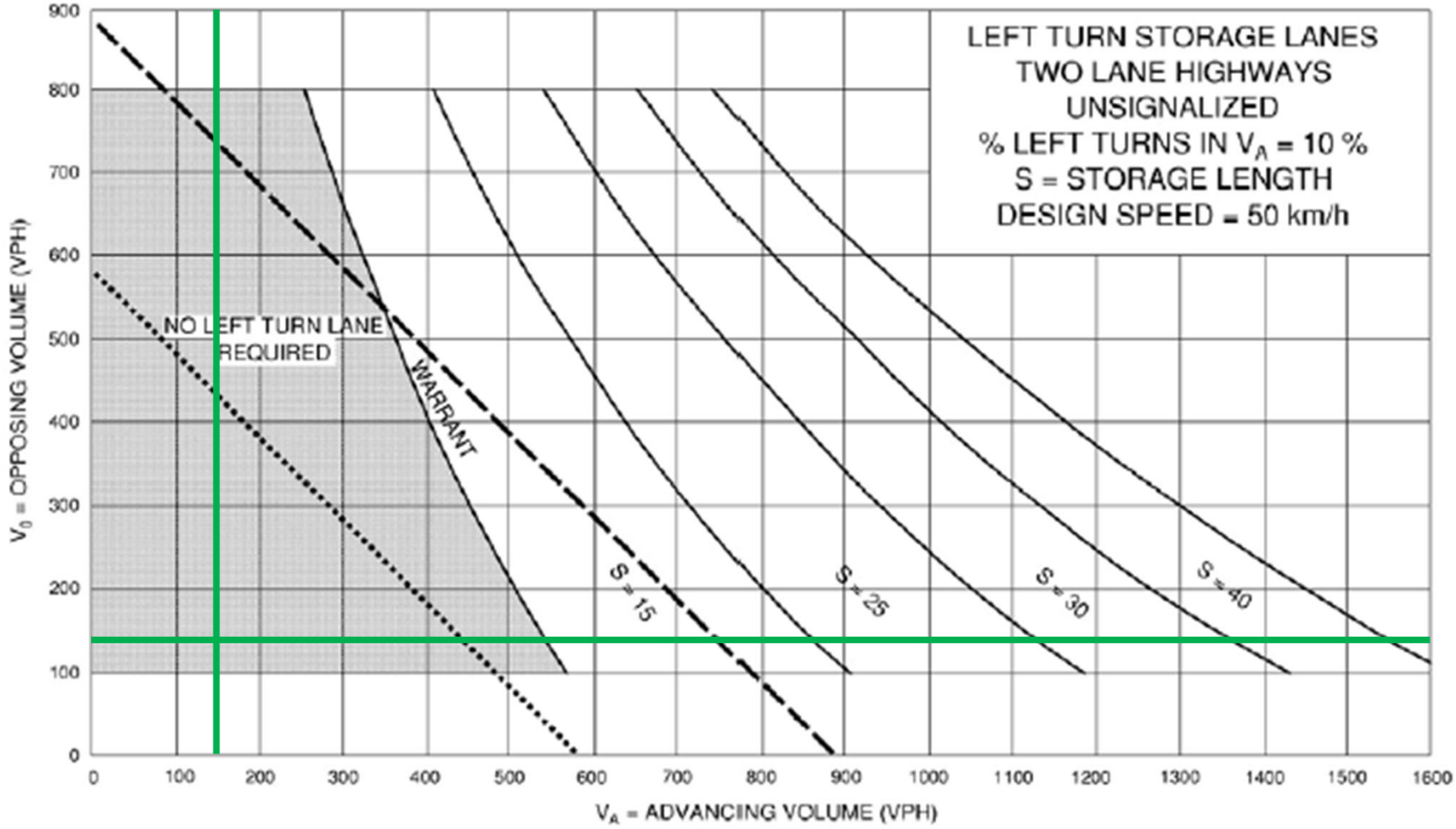
Gzowski Street at Site Access 4
Left-Turn Lane Warrant

650 Victoria Terrace, Fergus TIS
250272

Total 2034 – PM Peak Hour

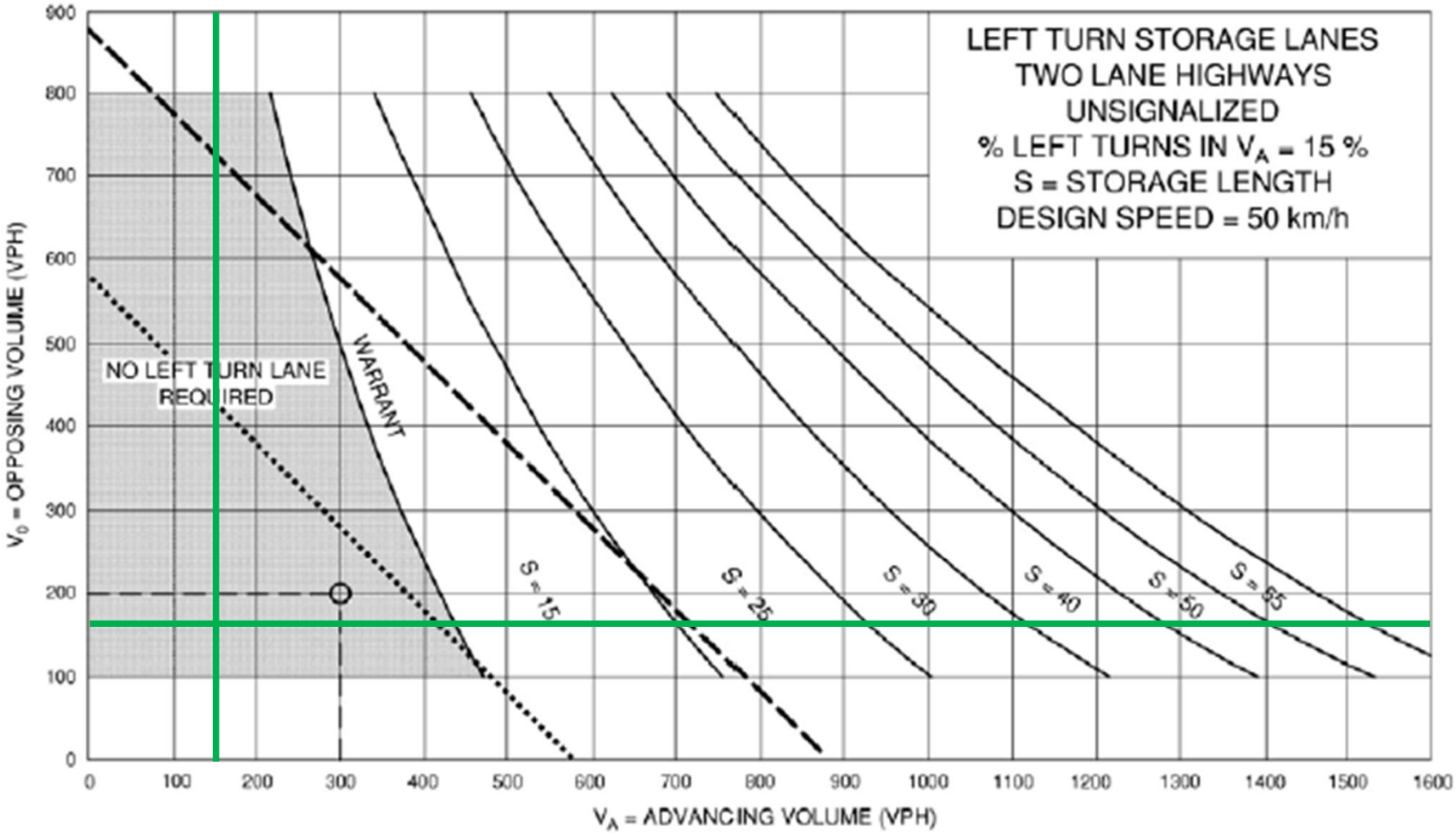


paradigm TRANSPORTATION SOLUTIONS LIMITED

Gzowski Street at Site Access 5
Left-Turn Lane Warrant

650 Victoria Terrace, Fergus TIS
250272

Total 2034 – AM Peak Hour



Gzowski Street at Site Access 5
Left-Turn Lane Warrant

Total 2034 – PM Peak Hour

Appendix H

Traffic Control Signal Warrant

Signal Justification Calculation for Forecasted Volumes
(OTM Book 12 - Justification 7)

Horizon Year: 2034 Total
Region/City/Township: Fergus

Major Street: St David Street North
Minor Street: Parkside Drive East/West

North/South?: Y

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	No	Justification for new intersections with forecast traffic
120% Satisfied	No	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						
	St David Street North						Parkside Drive East/West						
	Northbound			Southbound			Eastbound			Westbound			Peds
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	Crossing
AM Peak Hour	14	467	6	7	535	5	6	0	4	9	0	8	1
PM Peak Hour	74	800	30	19	688	11	11	2	45	12	1	7	0
Avg. Hourly Volume	22	317	9	7	306	4	4	1	12	5	0	4	0

Warrant	AHV
1A - All	690
1B - Minor	26
2A - Major	664
2B - Cross	10

Warrant 1 - Minimum Vehicular Volume

	Approach Lanes	1		2 or more		Average Hourly Volume
1A	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	690
					% Fulfilled	96%

	Approach Lanes	1		2 or more		Average Hourly Volume
1B	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	120	170	120	170	26
					% Fulfilled	15%

Warrant 2 - Delay To Cross Traffic

	Approach Lanes	1		2 or more		Average Hourly Volume
2A	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	664
					% Fulfilled	92%

	Approach Lanes	1		2 or more		Average Hourly Volume
2B	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	10
					% Fulfilled	14%

Signal Justification Calculation for Forecasted Volumes
(OTM Book 12 - Justification 7)

Horizon Year: 2034 Total
Region/City/Township: Fergus

Major Street: Gartshore Street
Minor Street: Forfar Street East/Middleton Avenue
North/South?: Y

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	No	Justification for new intersections with forecast traffic
120% Satisfied	No	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						
	Gartshore Street						Forfar Street East/Middleton Avenue						
	Northbound			Southbound			Eastbound			Westbound			Peds
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	Crossing
AM Peak Hour	43	307	19	33	302	11	23	18	54	23	26	27	4
PM Peak Hour	48	286	27	75	308	36	49	23	41	29	41	74	12
Avg. Hourly Volume	23	148	12	27	153	12	18	10	24	13	17	25	4

Warrant	AHV
1A - All	481
1B - Minor	107
2A - Major	374
2B - Cross	52

Warrant 1 - Minimum Vehicular Volume

	Approach Lanes	1		2 or more		Average Hourly Volume
1A	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	481
					% Fulfilled	67%

	Approach Lanes	1		2 or more		Average Hourly Volume
1B	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	120	170	120	170	107
					% Fulfilled	63%

Warrant 2 - Delay To Cross Traffic

	Approach Lanes	1		2 or more		Average Hourly Volume
2A	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	374
					% Fulfilled	52%

	Approach Lanes	1		2 or more		Average Hourly Volume
2B	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	52
					% Fulfilled	69%