665 & 720 Erbsville Road Residential Development Transportation Impact Study

Paradigm Transportation Solutions Limited

June 2022
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Project Summary

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665 & 720 Erbsville Road Residential Development Transportation Impact Study

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Executive Summary

Content

Sunvest Group of Companies retained Paradigm Transportation Solutions Limited (Paradigm) to conduct this Transportation Impact Study (TIS) for a proposed residential development located at 720 Erbsville Road in Waterloo, Ontario.

The impact assessment analyses existing traffic conditions, describes the proposed development, forecasts traffic for five years from the completion of the proposed development (2030), and recommends any necessary improvements to accommodate future traffic conditions.

Development Description

The proposed development consists of three areas, Area A, B, and C:

- **Area A:** contains 59 townhouses and 166 stacked townhouses;
- **Area B:** contains 45 bungalow lofts; and
- **Area C:** contains 34 single-detached home.

Access to the areas are provided via:

- **Area A:** two all-moves accesses to Erbsville Road, one directly opposite from Regal Place;
- **Area B:** one all-moves access to Erbsville Road; and
- **Area C:** one all-moves access to Erbsville Road, across from Forest Gate Crescent, and one all-moves accesses to Wideman Road.

Conclusions

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

- **Existing Traffic Conditions:** All study area intersections are currently operating within acceptable levels of service;
- **Background Traffic Conditions:** All study area intersections are forecast to operate at acceptable levels of service under the 2030 background conditions;
- **Proposed Development:** Full build-out of the site is forecast to generate 152 and 186 trips during weekday AM and PM peak hours, respectively;

- **Total Traffic Conditions:** The 2030 total traffic conditions are forecast to operate similarly to the background conditions;
- **Remedial Measures**:
  - **Left-Turn Lane Warrants:** No left-turn lanes are forecast to be warranted; and
  - **Impacts on Non-Auto Transportation Operations:** The proposed development would not cause negative impacts to non-auto transportation modes.

Recommendations

Based on the findings of this study, it is recommended that the proposed development be approved with no conditions related to transportation system improvements.

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1 Introduction

1.1 Overview

Sunvest Group of Companies retained Paradigm Transportation Solutions Limited (Paradigm) to conduct this Transportation Impact Study (TIS) for a proposed residential development located at 665 and 720 Erbsville Road in Waterloo, Ontario.

Figure 1.1 details the location of the subject development.

The scope of the study, developed in consultation with The City of Waterloo (the City) and the Regional Municipality of Waterloo (Region), included:

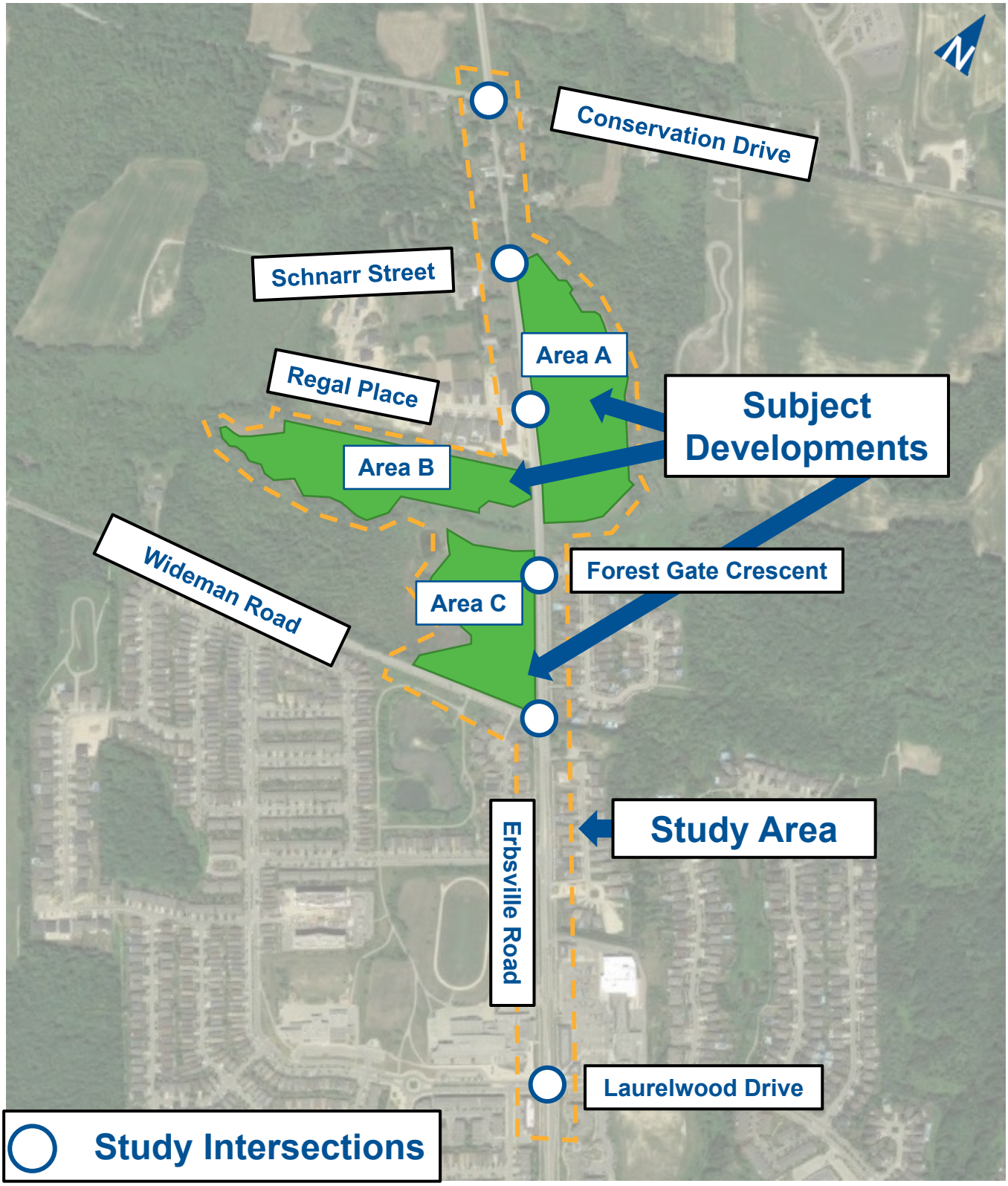
- assessing current traffic and site conditions within the study area;
- forecasting non-site related traffic to a horizon five years from completion of the proposed development (2030);
- forecasting site-generated traffic;
- analysing future traffic impacts (to 2030) on the surrounding road network and new access locations; and
- recommending any necessary mitigation measures.

The impact assessment focussed on the following study area intersections:

- Erbsville Road and Conservation Drive (unsignalized);
- Erbsville Road and Schnarr Street (unsignalized);
- Erbsville Road and Regal Place / Street A2 (unsignalized);
- Erbsville Road and Forest Gate Crescent / Street C1 (unsignalized);
- Erbsville Road and Wideman Road (unsignalized);
- Erbsville Road and Laurelwood Drive (signalized);
- Erbsville Road and Street A1 (proposed unsignalized).
- Erbsville Road and Street B (proposed unsignalized).
- Wideman Road and Street C2 (proposed unsignalized).

The study follows the City and Regional requirements for TIS reports[1]. **Appendix A** contains the pre-study conference form.

[1] Region of Waterloo, Transportation Impact Study Guidelines, 22 July 2014.



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Study Area and Subject Development Location

720 Erbsville Road, TIS
220137

Figure 1.1

2 Existing Conditions

This section documents current traffic conditions, operational deficiencies, and constraints experienced by the public travelling at the intersections within the study area. The operational deficiencies and constraints identified at this stage will be fundamental to the process of defining the required remedial measures.

2.1 Road Network

The study area roadways include:

- **Conservation Drive** is a two-lane major collector road with a speed limit of 50 km/h;
- **Erbsville Road** is a two-lane regional arterial road with a speed limit of 50 km/h north of Forest Gate Crescent, and 60 km/h south of Forest Gate Crescent;
- **Schnarr Street** is a two-lane local road with a speed limit of 50 km/h;
- **Regal Place** is a two-lane local road with a speed limit of 50 km/h;
- **Forest Gate Crescent** is a two-lane local road with a speed limit of 50 km/h;
- **Wideman Road** is a two-lane local road with a speed limit of 50 km/h; and
- **Laurelwood Drive** is a major collector road with two lanes and a speed limit of 50 km/h south of Columbia Street West, and four lanes and a speed limit of 60 km/h north of Columbia Street West.

The study area is primarily bordered by residential and commercial land uses.

Figure 2.1 displays the existing lane configuration and traffic controls of intersections within the study area.

2.2 Transit Network

Currently there is no transit service in the study area, with the nearest stop provided at Erbsville Road and Laurelwood Drive, approximately 700 metres from the southern limit of the proposed developments.

2.3 Cycling and Pedestrian Facilities

Sidewalks are provided on:

- **Regal Place:** along the south side of the road;
- **Forest Gate Crescent:** along both sides of the road;
- **Wideman Road:** along the south side of the road;
- **Erbsville Road:** along;
  - the east side of the road between Forest Gate Crescent and Wideman Road;
  - the west side of the road from Wideman Road to 60 metres south; and
  - both sides of the road starting 60 metres south Wideman Road.
- **Laurelwood Drive:** along both sides of the road.

Bike lanes are provided on both sides of Erbsville Road and Laurelwood Drive within the study area. No off-road trails exist within the study area.

Figure 2.2 illustrates the City of Waterloo cycling and trails map.

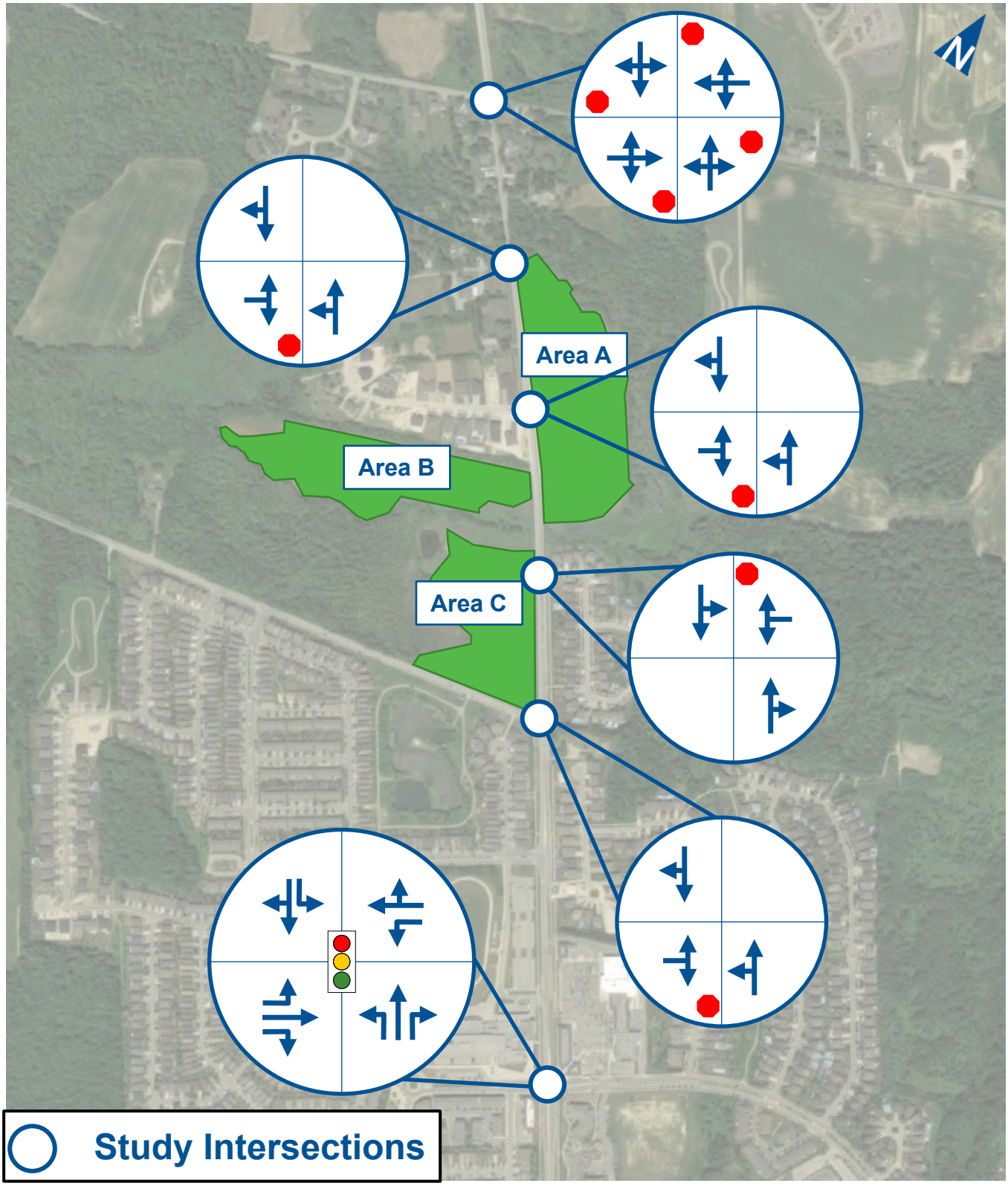
2.4 Traffic Volumes

May 2022 traffic counts collected by Paradigm observed the base year AM and PM peak hours.

Current signal timing and phasing plans were provided by the Region in June 2022.

Figure 2.3 and **Figure 2.4** summarize the existing AM and PM peak hour traffic volumes, respectively.

Appendix B contains the existing count data.



Existing Lane Configuration and Traffic Control

720 Erbsville Road, TIS
220137

Figure 2.1

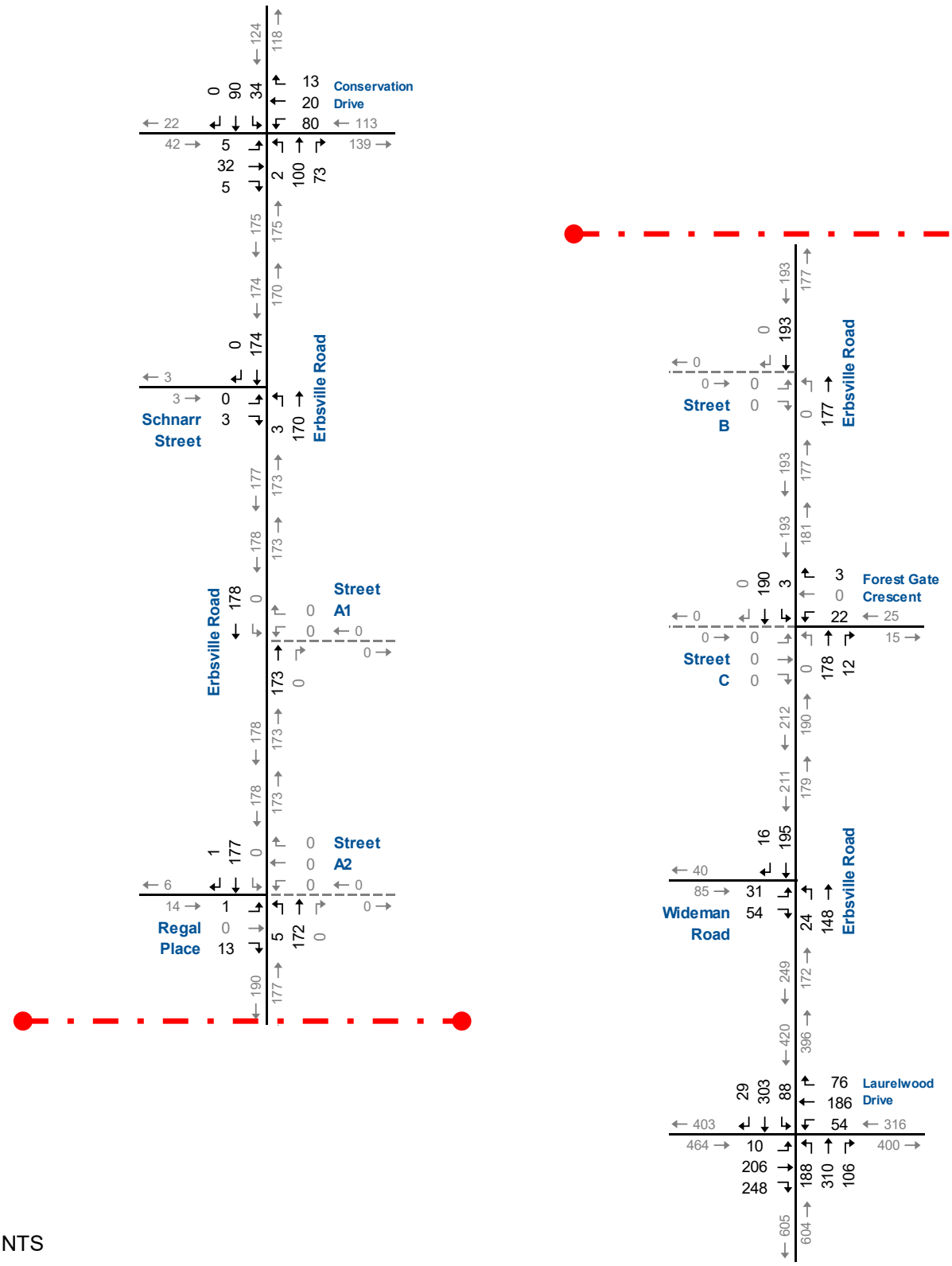


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Region of Waterloo Trails Map

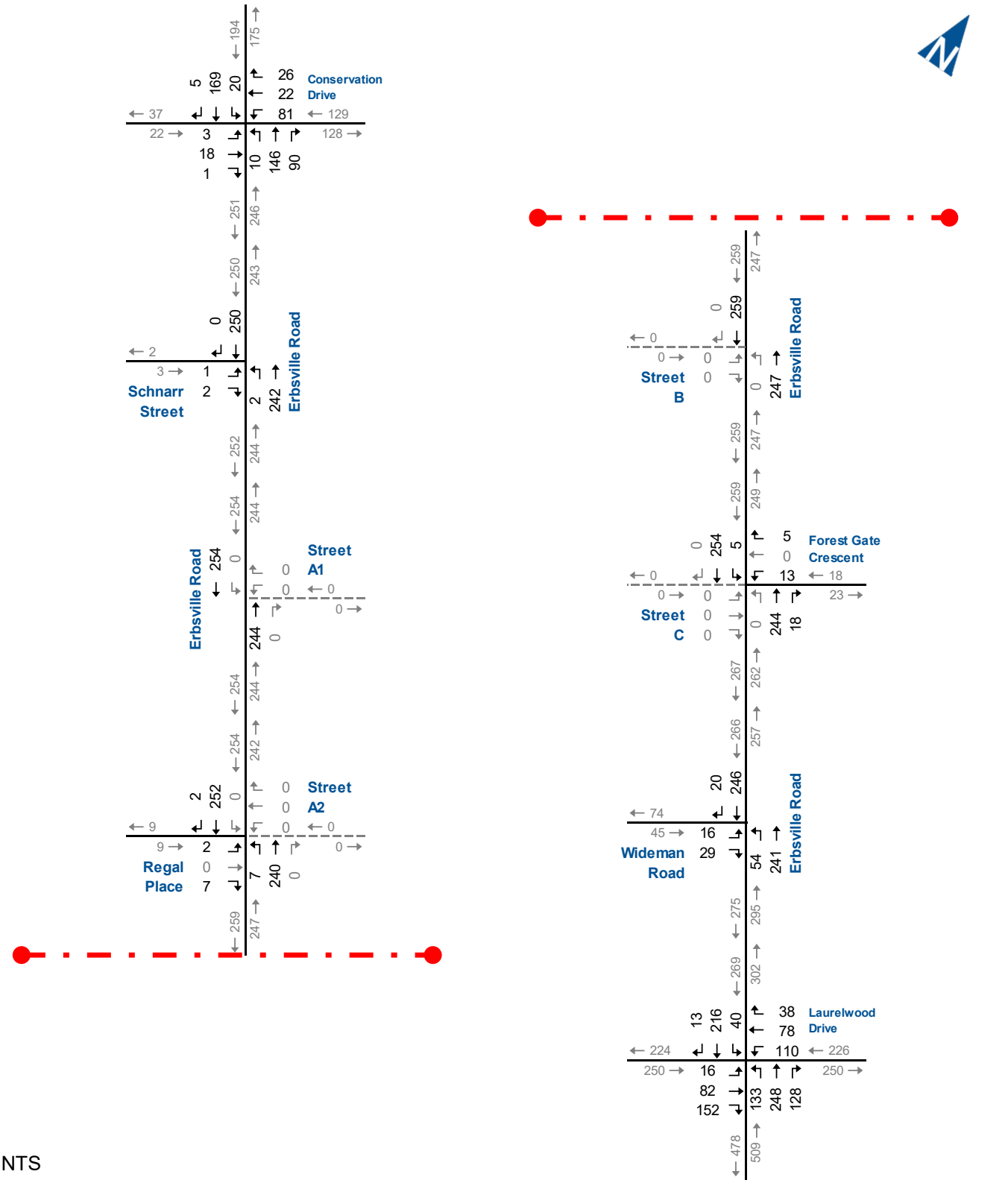
720 Erbsville Road, TIS
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Figure 2.2



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Existing Traffic Volumes – AM Peak Hour



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Existing Traffic Volumes – PM Peak Hour

2.5 Traffic Operations

The operations of the intersections in the study area were evaluated using the existing lane configurations, traffic controls and the existing traffic peak volumes.

Intersection level of service (LOS) is a recognized method of quantifying the efficiency of traffic flow 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 desiring 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. 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 at signalized intersections (50 seconds at unsignalized intersections), the movement is considered to have a LOS F and remedial measures are usually implemented, if they are feasible.

The level of service conditions on the existing road network have been assessed using Synchro 10. The criteria, as defined by the Region, for identifying “critical” intersections are:

The criteria for identifying “critical” intersections are:

- overall Level of Service E or F (i.e. average control delay per vehicle greater than 55 seconds) for signalized intersections; and
- overall Level of Service E or F (i.e. average control delay per vehicle greater than 35 seconds) for unsignalized intersections.

The criteria for identifying “critical” movements are:

- the average control delay for individual movements is greater that 55 seconds;
- estimated 95th percentile queue length for an exclusive movement exceeds the available storage space;
- estimated 95th percentile queue length for an individual movement will block an existing access;
- exclusive turning lanes are inaccessible because of queue lengths in adjacent through lanes; and
- poor quality of service for non-auto.

Table 2.1 summarizes the level of service and other performance measures. The analyses indicate that all intersections and individual

movements within the study area are currently operating at acceptable levels of service.

Appendix C contains the detailed Synchro reports.

TABLE 2.1: EXISTING TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Erbsville Road & Conservation Drive	AWSC	LOS Delay V/C Q	< < < <	A 8 0.06 2	>> >> >> >	**A** **8**	< < < <	A 8 0.15 4	>> >> >> >	**A** **8**	< < < <	A 8 0.20 6	>> >> >> >	**A** **8**	< < < <	A 8 0.16 4	>> >> >> >	**A** **8**	
	Erbsville Road & Schnarr Street	TWSC	LOS Delay V/C Q	A 9 0.00 0		>> >> >> >	**A** **9**					A 8 0.00 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Regal Place	TWSC	LOS Delay V/C Q	A 9 0.02 1		>> >> >> >	**A** **9**					A 8 0.00 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Forest Gate Crescent	TWSC	LOS Delay V/C Q					B 11 0.04 1		>> >> >> >	**B** **11**		A 0 0.00 0	A 0 0.00 0	**A** **0**	A 8 0.00 0	A 0 0.00 0		**A** **0**	
	Erbsville Road & Wideman Road	TWSC	LOS Delay V/C Q	B 10 0.12 3		>> >> >> >	**B** **10**					A 8 0.02 1	A 0 0.00 0		**A** **1**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Laurelwood Drive	TCS	LOS Delay V/C Q	C 24 0.03 1	B 20 0.32 9	C 22 0.50 12	**C** **21**	C 24 0.17 3	A 0 0.00 0	C 21 0.39 12	**C** **21**	B 16 0.43 4	B 19 0.38 10	B 16 0.18 4	**B** **18**	B 17 0.21 2	A 0 0.00 0	C 24 0.53 16	**C** **23**	**C** **20**
PM Peak Hour	Erbsville Road & Conservation Drive	AWSC	LOS Delay V/C Q	< < < <	A 8 0.03 1	>> >> >> >	**A** **8**	< < < <	A 9 0.18 4	>> >> >> >	**A** **9**	< < < <	A 9 0.29 9	>> >> >> >	**A** **9**	< < < <	A 9 0.25 8	>> >> >> >	**A** **9**	
	Erbsville Road & Schnarr Street	TWSC	LOS Delay V/C Q	B 10 0.00 0		>> >> >> >	**B** **10**					A 8 0.00 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Regal Place	TWSC	LOS Delay V/C Q	B 10 0.01 0		>> >> >> >	**B** **10**					A 8 0.01 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Forest Gate Crescent	TWSC	LOS Delay V/C Q					B 12 0.03 1		>> >> >> >	**B** **12**		A 0 0.00 0	A 0 0.00 0	**A** **0**	A 8 0.00 0	A 0 0.00 0		**A** **0**	
	Erbsville Road & Wideman Road	TWSC	LOS Delay V/C Q	B 11 0.07 2		>> >> >> >	**B** **11**					A 8 0.04 1	A 0 0.00 0		**A** **1**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Laurelwood Drive	TCS	LOS Delay V/C Q	B 18 0.03 1	B 16 0.14 2	B 18 0.32 4	**B** **18**	B 20 0.25 4	A 0 0.00 0	B 17 0.18 3	**B** **18**	B 13 0.26 1	B 15 0.30 3	B 14 0.20 2	**B** **14**	B 14 0.09 1	A 0 0.00 0	B 17 0.35 5	**B** **17**	**B** **16**

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)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control

</> - Shared with through movement

3 Development Concept

3.1 Development Description

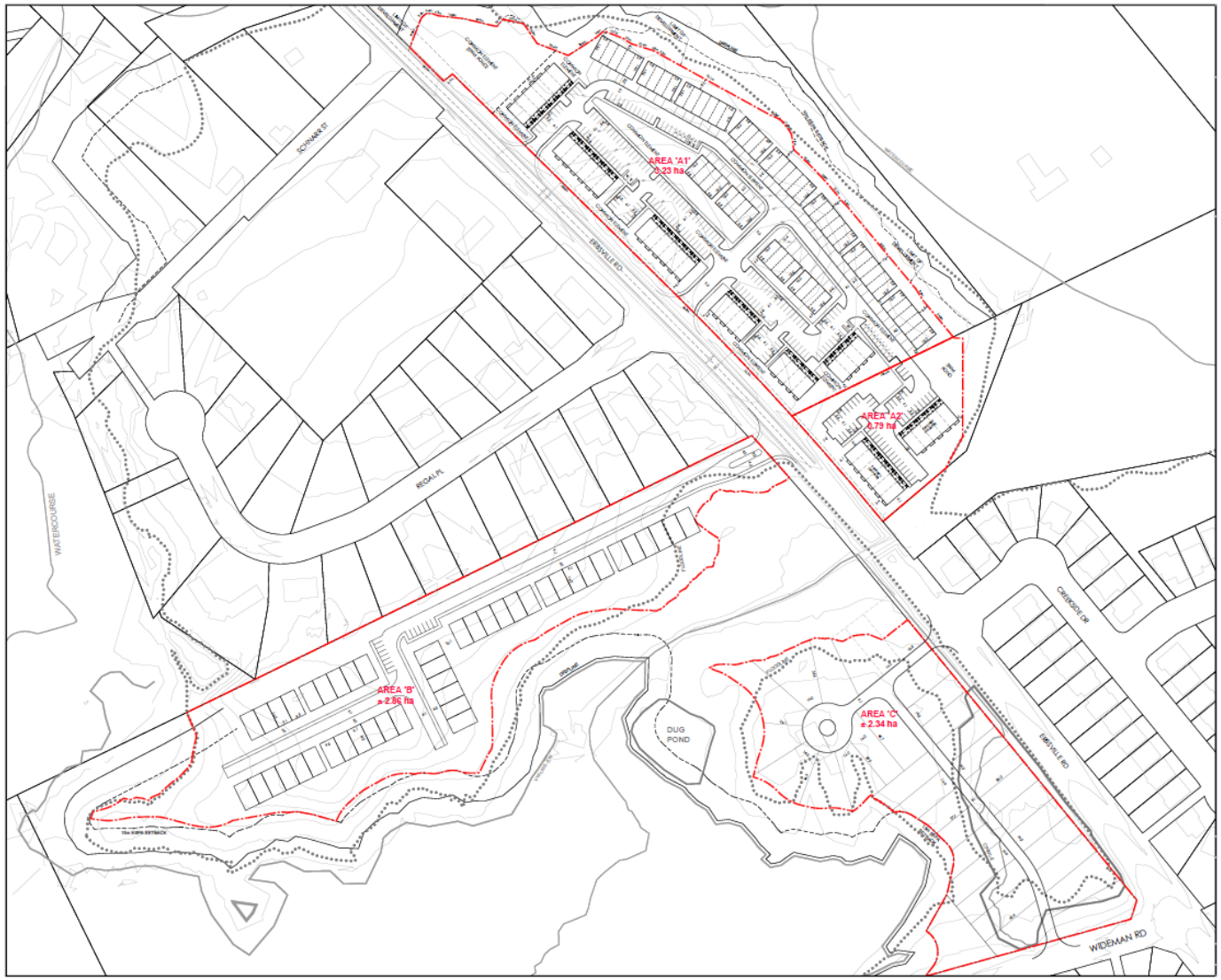
The proposed development consists of three areas:

- **Area A:** 59 townhouses and 166 stacked townhouses;
- **Area B:** 45 bungalow lofts; and
- **Area C:** 34 single-detached home.

Accesses to the areas are provided via:

- **Area A:** two all-moves accesses to Erbsville Road, one of which across from Regal Place;
- **Area B:** one all-moves access to Erbsville Road; and
- **Area C**: one all-moves access to Erbsville Road, across from Forest Gate Crescent, and one all-moves accesses to Wideman Road.

Figure 3.1 shows the proposed site plan.



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Site Plan

720 Erbsville Road, TIS
220137

Figure 3.1

3.2 Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation[2] rates and equations were used to estimate the peak hour site-generate traffic volumes. Land Use Codes (LUC) 210 (Multifamily Housing (High-Rise)), and 220 (Multifamily Housing (Low-Rise)), were used in this study. This results in 152 and 186 new trips forecast to be generated in the AM and PM peaks, respectively.

- **LUC 210 (Single-Family Detached Housing):** Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision; and
- **LUC 220 (Multifamily Housing (Low-Rise)):** Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have one or two levels (floors).

Table 3.1 summarizes the total trip generation for the site including the above-described reductions.

TABLE 3.1: TRIP GENERATION

Land Use Code	Units	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
Area A									
220: Multifamily Housing (Low-Rise)	223 Units	[1]	23	79	102	[2]	76	45	121
Area B									
220: Multifamily Housing (Low-Rise)	45 Units	[1]	5	17	22	[2]	18	11	29
Area C									
210: Single-Family Detached Housing	34 Units	[3]	7	21	28	[4]	23	13	36
Net Total Trips			***35***	***117***	***152***		***117***	***69***	***186***

[1] Ln(T) =0.91Ln(X)+0.12 *[3] Ln(T) =0.95Ln(X)-0.51*

[2] Ln(T) =0.94Ln(X)+0.27 *[4] Ln(T) =0.89Ln(X)-0.02*

3.3 Trip Distribution and Assignment

Table 3.2 displays the breakdown of directional trip distribution and trip assignment used in this study.

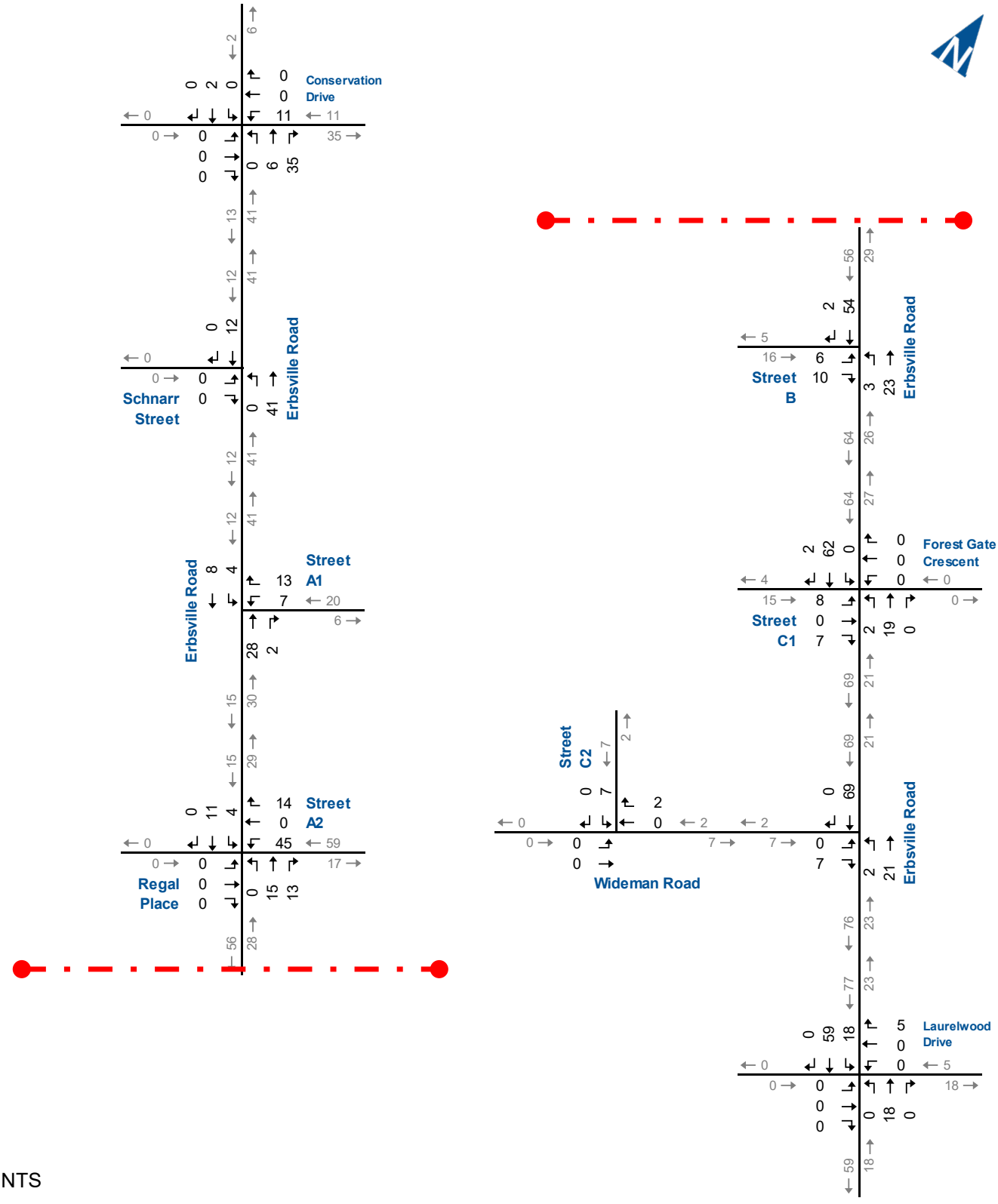
[2] Institute of Transportation Engineers, *Trip Generation Manual, 11th Edition*, 2021.

The trip distribution was determined based on travel to and from the TTS Zones (zone 7246,7247 and 7248 was used), which includes the subject site, and all site uses.

TABLE 3.2: TRIP DISTRIBUTION

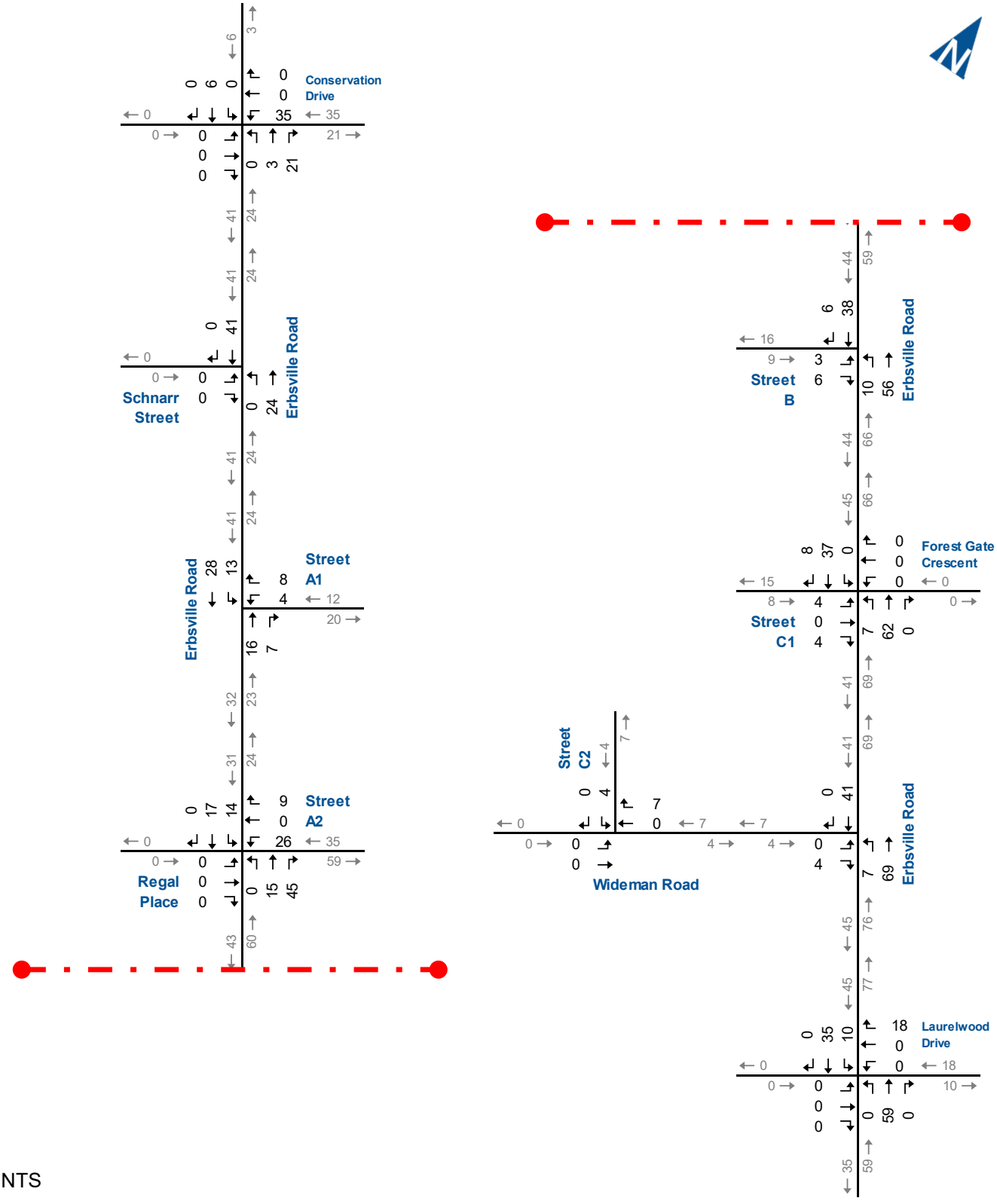
Direction	Distribution
East via Conservation Drive	30%
East via Laurelwood	15%
North via Erbsville	5%
South via Erbsville	50%
Total	***100%***

Figure 3.2 and **Figure 3.3** shows the trip assignment for the trips forecast to be generated by the subject development.



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Site Generated Traffic Volumes – AM Peak Hour



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Site Generated Traffic Volumes – PM Peak Hour

720 Erbsville Road, TIS
220137

Figure 3.3

4 Evaluation of Future Traffic Conditions

Future traffic conditions assessed include estimates of future background and total traffic analysis for the 2030 horizon. The future traffic volumes near the development will likely consist of increased non-site traffic volumes (background traffic), and the traffic forecast to be generated by the proposed development.

4.0.1 Background Growth Rate

City and Regional staff established at the pre-Study consultation that annualized growth rate for the generalized traffic increases in the study area would be 1.5% to 2030.

4.1 2030 Horizon

4.1.1 Background Traffic Operations

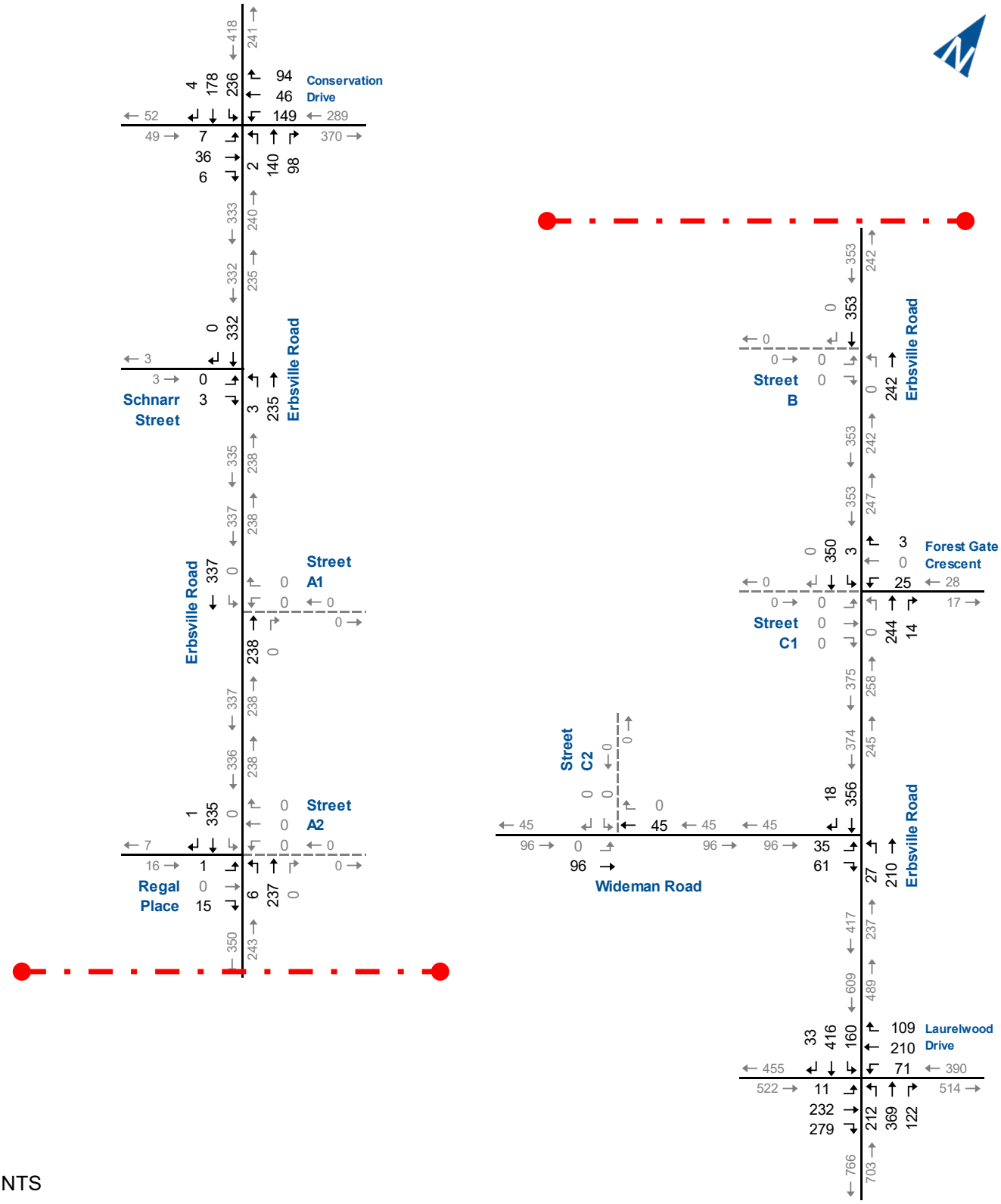
Based on the 2030 background traffic volume forecasts, Level of Service analyses have been conducted using Synchro 10, for the weekday AM and PM peak hour conditions for the intersections in the study area.

Figure 4.1 and **Figure 4.2** displays the 2030 background traffic volumes for the weekday AM and PM peak hours.

Table 4.1 summarizes the analysis results, indicating the levels of service (LOS), volume to capacity ratios (V/C) and 95th percentile queues experienced at the study area intersections.

All study area intersections and movements have acceptable operational values under 2030 background conditions.

Appendix D includes the detailed Synchro 10 reports.

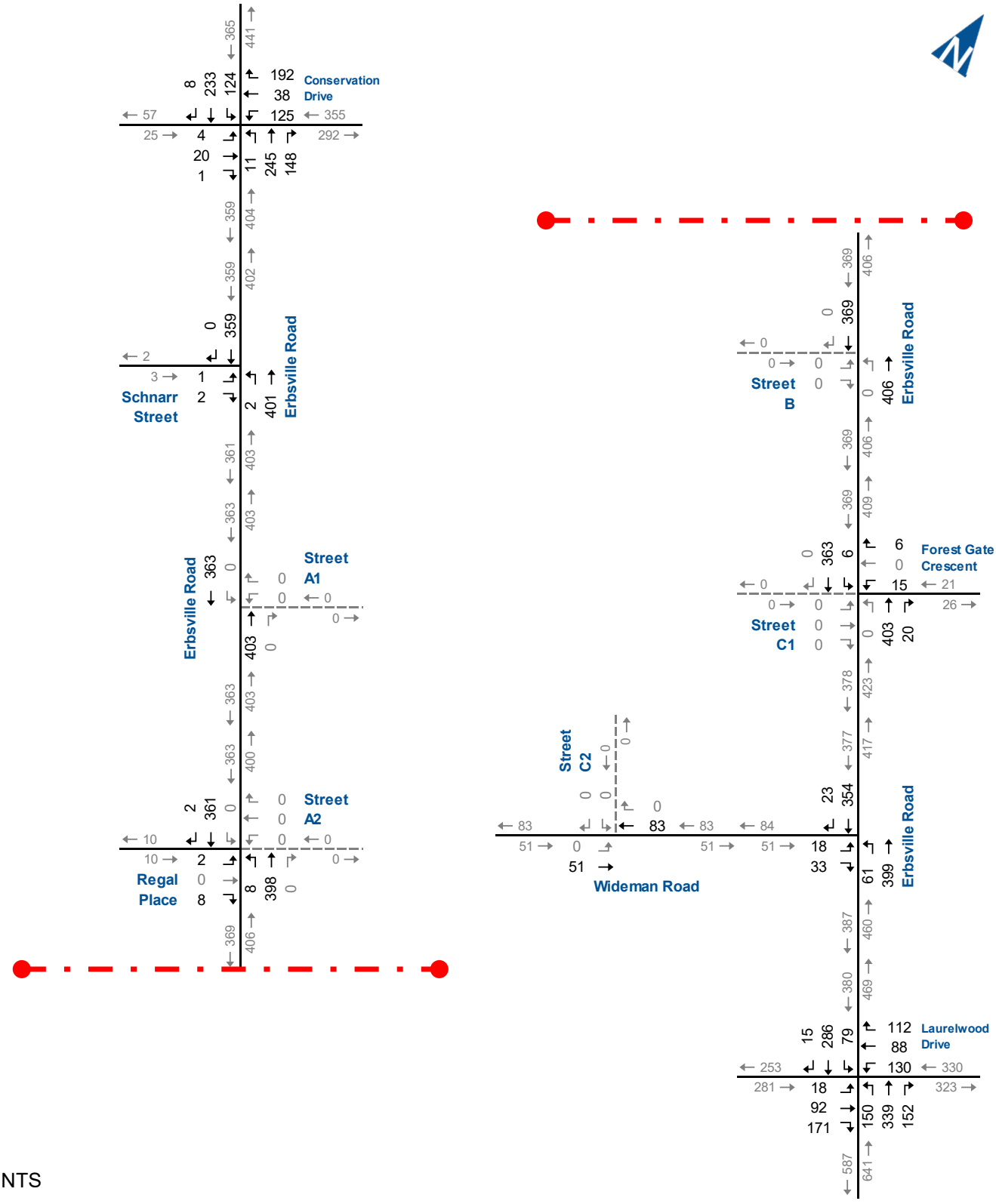


NTS

2030 Background Traffic Volumes – AM Peak Hour

720 Erbsville Road, TIS
220137

Figure 4.1



NTS

2030 Background Traffic Volumes – PM Peak Hour

720 Erbsville Road, TIS
220137

Figure 4.2

TABLE 4.1: 2030 BACKGROUND TRAFFIC OPERATION

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	Erbsville Road & Conservation Drive	AWSC	LOS Delay V/C Q	< < < <	A 10 0.08 2	>> >> >> >	**A** **10**	< < < <	B 13 0.45 17	>> >> >> >	**B** **13**	< < < <	B 11 0.35 12	>> >> >> >	**B** **11**	< < < <	C 17 0.63 34	>> >> >> >	**C** **17**	
	Erbsville Road & Schnarr Street	TWSC	LOS Delay V/C Q	B 10 0.00 0		>> >> >> >	**B** **10**					A 8 0.00 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Regal Place	TWSC	LOS Delay V/C Q	B 10 0.02 1		>> >> >> >	**B** **10**					A 8 0.00 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Forest Gate Crescent	TWSC	LOS Delay V/C Q					B 13 0.06 2		>> >> >> >	**B** **13**		A 0 0.00 0	A 0 0.00 0	**A** **0**	A 8 0.00 0	A 0 0.00 0		**A** **0**	
	Erbsville Road & Wideman Road	TWSC	LOS Delay V/C Q	B 13 0.17 4		>> >> >> >	**B** **13**					A 8 0.02 1	A 0 0.00 0		**A** **1**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Laurelwood Drive	TCS	LOS Delay V/C Q	C 28 0.04 1	C 21 0.37 12	C 24 0.58 16	**C** **23**	C 27 0.24 5	A 0 0.00 0	C 23 0.49 17	**C** **24**	B 20 0.58 6	C 22 0.47 17	B 18 0.21 5	**C** **21**	B 17 0.38 4	A 0 0.00 0	C 31 0.71 30	**C** **27**	**C** **24**
PM Peak Hour	Erbsville Road & Conservation Drive	AWSC	LOS Delay V/C Q	< < < <	B 10 0.05 2	>> >> >> >	**B** **10**	< < < <	C 16 0.56 26	>> >> >> >	**C** **16**	< < < <	C 17 0.61 32	>> >> >> >	**C** **17**	< < < <	C 16 0.58 28	>> >> >> >	**C** **16**	
	Erbsville Road & Schnarr Street	TWSC	LOS Delay V/C Q	B 12 0.01 0		>> >> >> >	**B** **12**					A 8 0.00 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Regal Place	TWSC	LOS Delay V/C Q	B 11 0.02 0		>> >> >> >	**B** **11**					A 8 0.01 0	A 0 0.00 0		**A** **0**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Forest Gate Crescent	TWSC	LOS Delay V/C Q					B 14 0.05 1		>> >> >> >	**B** **14**		A 0 0.00 0	A 0 0.00 0	**A** **0**	A 8 0.00 0	A 0 0.00 0		**A** **0**	
	Erbsville Road & Wideman Road	TWSC	LOS Delay V/C Q	B 14 0.11 3		>> >> >> >	**B** **14**					A 8 0.05 2	A 0 0.00 0		**A** **1**		A 0 0.00 0	A 0 0.00 0	**A** **0**	
	Erbsville Road & Laurelwood Drive	TCS	LOS Delay V/C Q	C 21 0.05 1	B 17 0.15 2	B 18 0.35 5	**B** **18**	C 21 0.30 5	A 0 0.00 0	B 19 0.32 6	**B** **19**	B 14 0.33 2	B 18 0.42 8	B 16 0.25 3	**B** **16**	B 14 0.19 1	A 0 0.00 0	C 20 0.47 9	**B** **19**	**B** **18**

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)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control

</> - Shared with through movement

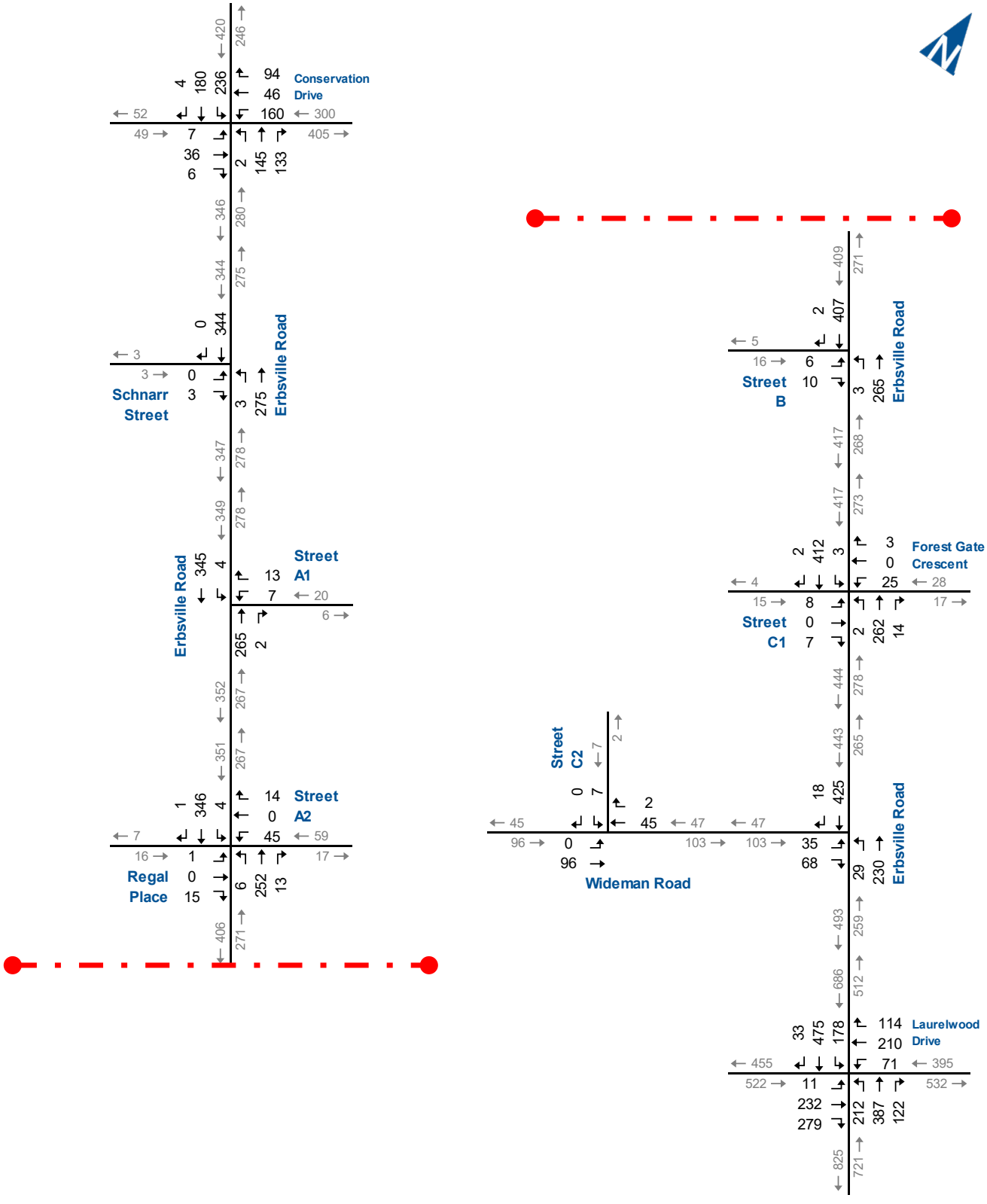
4.1.2 Total Traffic Operations

Figure 4.3 and **Figure 4.4** illustrate the 2030 total traffic volume forecasts, including both background traffic and development traffic, for the AM and PM peaks.

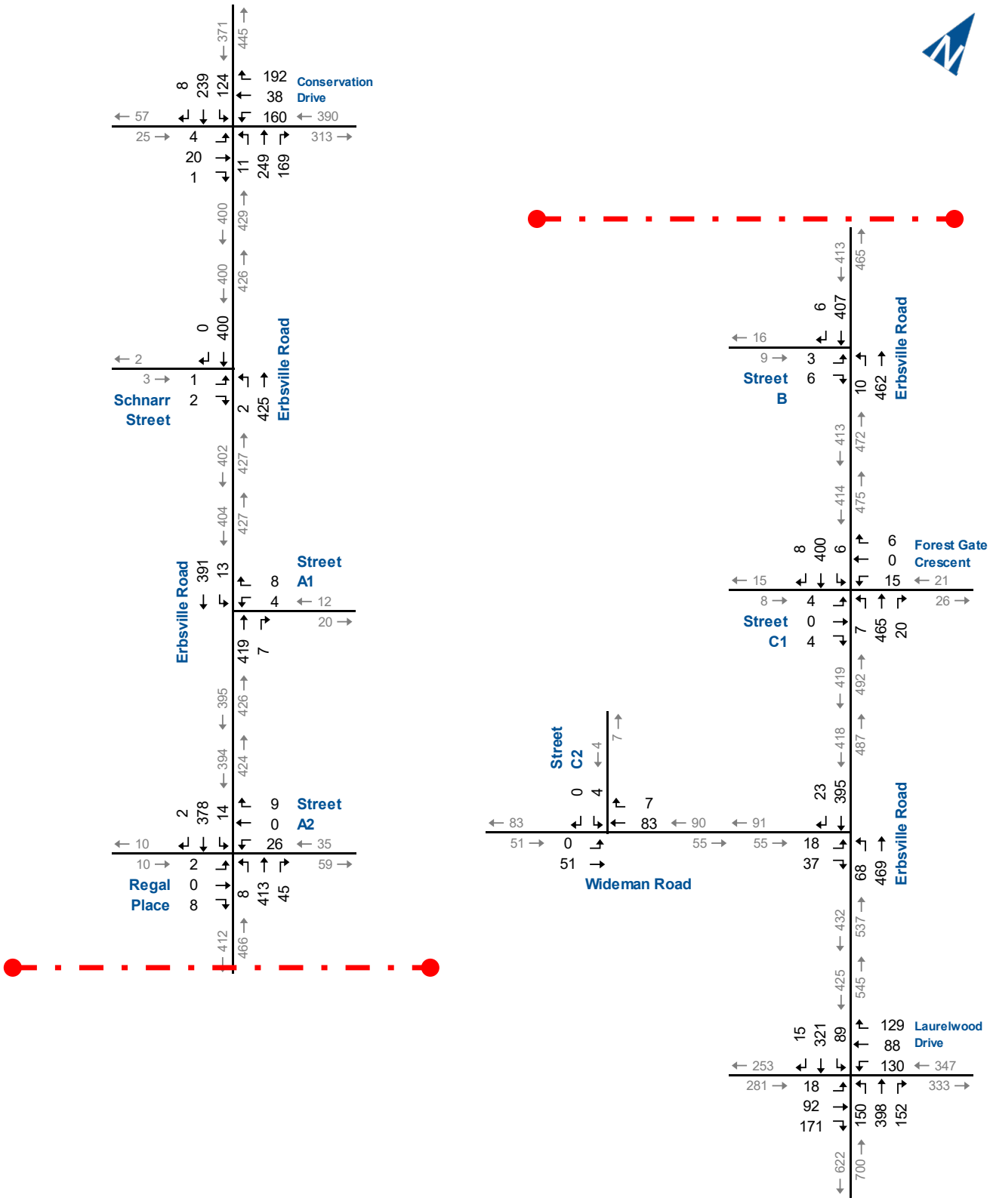
Table 4.2 summarizes the Level of Service analysis for the 2030 total traffic conditions.

All intersections and movements in the study area forecast to have acceptable operational values.

Appendix E includes the detailed Synchro 10 reports.



2030 Total Traffic Volumes – AM Peak Hour



2030 Total Traffic Volumes – PM Peak Hour

TABLE 4.2: 2030 TOTAL TRAFFIC OPERATIONS

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	
AM Peak Hour	Erbsville Road & Conservation Drive	AWSC	LOS	<	B	>	**B**	<	B	>	**B**	<	B	>	**B**	<	C	>	**C**	
			Delay	<	10	>	**10**	<	14	>	**14**	<	12	>	**12**	<	18	>	**18**	
			V/C	<	0.09	>		<	0.48	>		<	0.42	>		<	0.65	>		
			Q	<	2	>		<	20	>		<	16	>		<	35	>		
	Erbsville Road & Schnarr Street	TWSC	LOS	B		>	**B**					A	A		**A**		A	A	**A**	
			Delay	10		>	**10**					8	0		**0**		0	0	**0**	
			V/C	0.00		>						0.00	0.00				0.00	0.00		
			Q	0		>						0	0				0	0		
	Erbsville Road & Regal Place	TWSC	LOS	<	B	>	**B**	<	B	>	**B**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	11	>	**11**	<	14	>	**14**	8	0	0	**0**	8	0	0	**0**	
			V/C	<	0.02	>		<	0.13	>		0.00	0.00	0.00		0.00	0.00	0.00		
			Q	<	1	>		<	4	>		0	0	0		0	0	0		
	Erbsville Road & Forest Gate Crescent	TWSC	LOS	<	B	>	**B**	<	C	>	**C**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	13	>	**13**	<	15	>	**15**	8	0	0	**0**	8	0	0	**0**	
			V/C	<	0.03	>		<	0.07	>		0.00	0.00	0.00		0.00	0.00	0.00		
			Q	<	1	>		<	2	>		0	0	0		0	0	0		
	Erbsville Road & Wideman Road	TWSC	LOS	B		>	**B**					A	A		**A**		A	A	**A**	
			Delay	14		>	**14**					8	0		**1**		0	0	**0**	
			V/C	0.20		>						0.03	0.00				0.00	0.00		
			Q	5		>						1	0				0	0		
	Erbsville Road & Laurelwood Drive	TCS	LOS	C	C	C	**C**	C	A	C	**C**	C	C	B	**C**	B	A	C	**C**	**C**
			Delay	28	22	25	**23**	28	0	24	**24**	23	23	19	**22**	17	0	35	**30**	**25**
			V/C	0.04	0.37	0.58		0.24	0.00	0.50		0.65	0.50	0.21		0.43	0.00	0.79		
			Q	1	12	16		5	0	18		7	19	5		5	0	38		
	Erbsville Road	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					11		>	**11**		0	0	**0**	8	0		**0**	
			V/C					0.03		>			0.00	0.00		0.00	0.00			
			Q					1		>			0	0		0	0			
	Erbsville Road	TWSC	LOS	B		>	**B**					A	A		**A**		A	A	**A**	
			Delay	12		>	**12**					8	0		**0**		0	0	**0**	
			V/C	0.03		>						0.00	0.00				0.00	0.00		
			Q	1		>						0	0				0	0		
	Wideman Road	TWSC	LOS	A	A		**A**		A	A	**A**					A		>	**A**	
			Delay	0	0		**0**		0	0	**0**					9		>	**9**	
			V/C	0.00	0.00				0.00	0.00						0.01		>		
			Q	0	0				0	0						0		>		
PM Peak Hour	Erbsville Road & Conservation Drive	AWSC	LOS	<	B	>	**B**	<	C	>	**C**	<	C	>	**C**	<	C	>	**C**	
			Delay	<	11	>	**11**	<	19	>	**19**	<	19	>	**19**	<	18	>	**18**	
			V/C	<	0.05	>		<	0.64	>		<	0.67	>		<	0.61	>		
			Q	<	2	>		<	34	>		<	38	>		<	32	>		
	Erbsville Road & Schnarr Street	TWSC	LOS	B		>	**B**					A	A		**A**		A	A	**A**	
			Delay	12		>	**12**					8	0		**0**		0	0	**0**	
			V/C	0.01		>						0.00	0.00				0.00	0.00		
			Q	0		>						0	0				0	0		
	Erbsville Road & Regal Place	TWSC	LOS	<	B	>	**B**	<	C	>	**C**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	12	>	**12**	<	18	>	**18**	8	0	0	**0**	8	0	0	**0**	
			V/C	<	0.02	>		<	0.11	>		0.01	0.00	0.00		0.01	0.00	0.00		
			Q	<	1	>		<	3	>		0	0	0		0	0	0		
	Erbsville Road & Forest Gate Crescent	TWSC	LOS	<	B	>	**B**	<	C	>	**C**	A	A	A	**A**	A	A	A	**A**	
			Delay	<	15	>	**15**	<	18	>	**18**	8	0	0	**0**	8	0	0	**0**	
			V/C	<	0.02	>		<	0.06	>		0.01	0.00	0.00		0.01	0.00	0.00		
			Q	<	1	>		<	2	>		0	0	0		0	0	0		
	Erbsville Road & Wideman Road	TWSC	LOS	B		>	**B**					A	A		**A**		A	A	**A**	
			Delay	15		>	**15**					8	0		**1**		0	0	**0**	
			V/C	0.13		>						0.06	0.00				0.00	0.00		
			Q	3		>						2	0				0	0		
	Erbsville Road & Laurelwood Drive	TCS	LOS	C	B	C	**C**	C	A	C	**C**	B	B	B	**B**	B	A	C	**B**	**B**
			Delay	24	19	21	**20**	23	0	21	**22**	15	19	16	**17**	15	0	21	**20**	**19**
			V/C	0.05	0.15	0.36		0.31	0.00	0.36		0.33	0.47	0.24		0.23	0.00	0.49		
			Q	1	4	8		7	0	10		2	11	4		2	0	12		
	Erbsville Road	TWSC	LOS					B		>	**B**		A	A	**A**	A	A		**A**	
			Delay					13		>	**13**		0	0	**0**	8	0		**0**	
			V/C					0.02		>			0.00	0.00		0.01	0.00			
			Q					1		>			0	0		0	0			
	Erbsville Road	TWSC	LOS	B		>	**B**					A	A		**A**		A	A	**A**	
			Delay	13		>	**13**					8	0		**0**		0	0	**0**	
			V/C	0.02		>						0.01	0.00				0.00	0.00		
			Q	1		>						0	0				0	0		
	Wideman Road	TWSC	LOS	A	A		**A**		A	A	**A**					A		>	**A**	
			Delay	0	0		**0**		0	0	**0**					9		>	**9**	
			V/C	0.00	0.00				0.00	0.00						0.01		>		
			Q	0	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)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared with through movement

5 Remedial Measures

5.1 Left-Turn Lane Warrants

The need for designated left-turning lanes at unsignalized intersections within the study area was assessed using MTO procedures detailed in the Geometric Design Manual[3]. With the posted speed limit of 50 km/h and 60 km/h, standard practice in the Region of Waterloo considers a design speed of 60 km/h and 70 km/h, respectively, considering the urban characteristics of the immediate area and the restricted flow of traffic.

Turn lane warrants were assessed under the 2030 total traffic conditions indicated that:

- **Erbsville Road at Regal Place/Street A2:** a southbound left-turn lane would not be warranted;
- **Erbsville Road at Forest Gate Crescent/Street C1:** a northbound left-turn lane would not be warranted due to low forecast left turning volumes, so a nomograph is not applicable;
- **Erbsville Road at Street A1:** a southbound left-turn lane would not be warranted;
- **Erbsville Road at Street B:** a northbound left-turn lane would not be warranted due to low forecast left turning volumes; and
- **Wideman Road at Street C2:** an eastbound left-turn lane would not be warranted due to low forecast left turning volumes.

Figure 5.1 and **Figure 5.2** illustrate the left-turn lane warrants.

5.2 Impacts on Non-Auto Transportation Operations

In addition to the forecast future traffic operations, the impacts to the surrounding non-auto modes have been assessed, including:

- Pedestrian facilities; and
- Cycling facilities.

5.2.1 Pedestrian Facilities

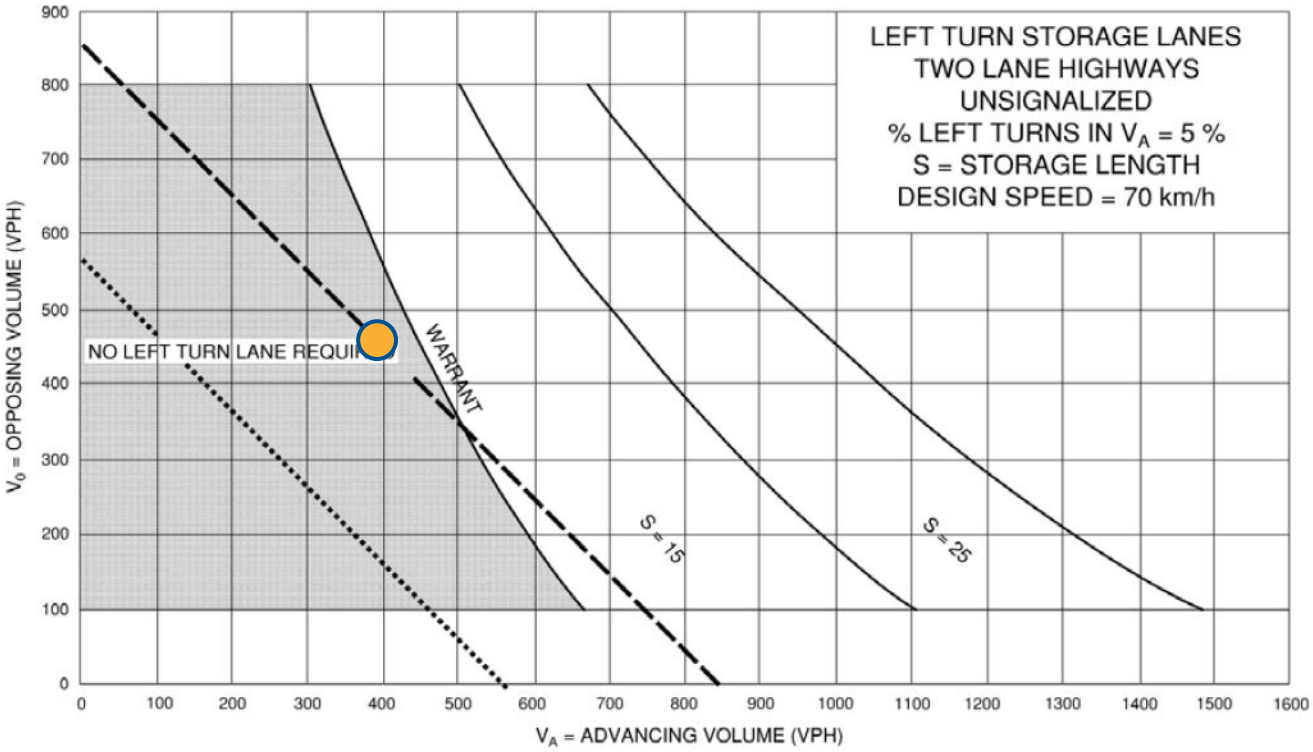
As the cycle lengths and split timings of the signalized intersections in the study area are coordinated, they have not been affected by the proposed development, causing no impact to pedestrians. Additionally,

[3] Ministry of Transportation of Ontario, *Geometric Design Standards for Ontario Highways*,1986.

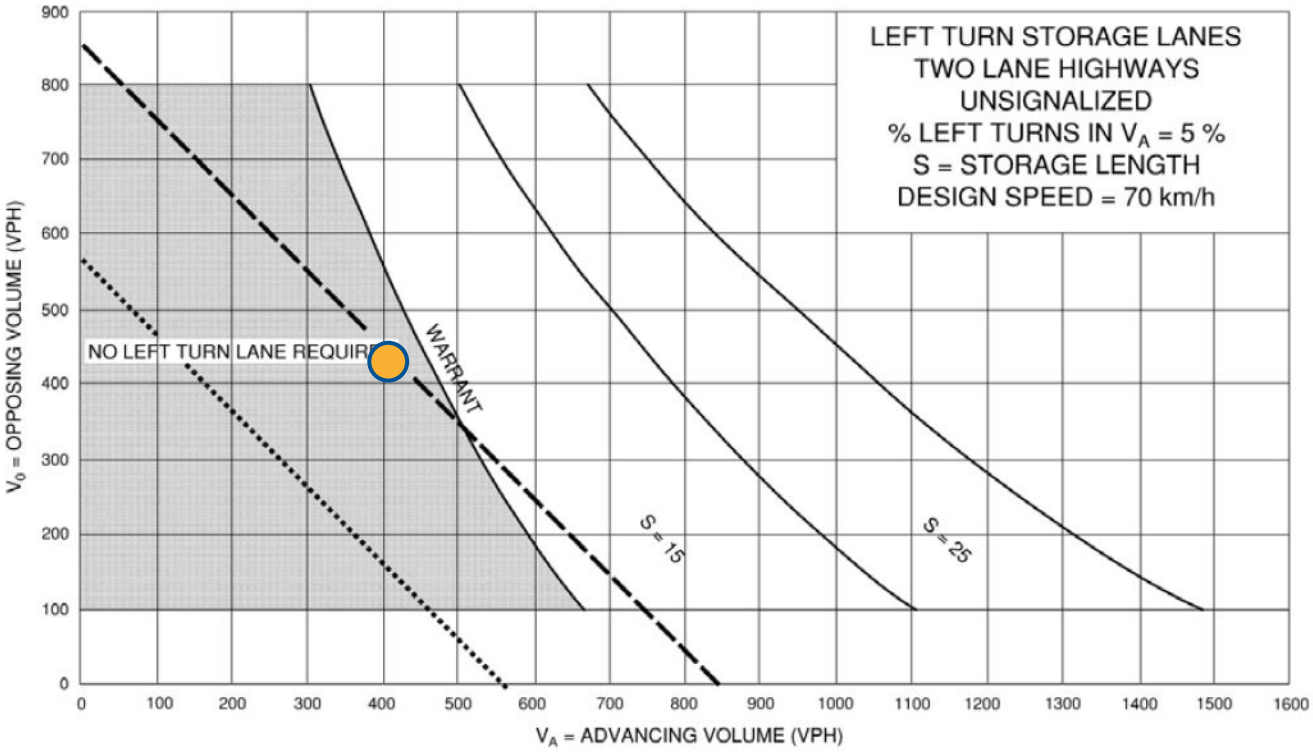
there are adequate pedestrian crossing facilities provided in the area to prevent unprotected mid block crossings.

5.2.2 Cycling Facilities

Similar to the pedestrian crossing facilities, since the cycle lengths and split timings of the signalized intersections are not affected, the travel of the protected cycle lanes are not impacted by the proposed development.



Southbound Left-turn Lane Warrant on Erbsville Road at Regal Place/Street A2 – 2030 Total Traffic PM Peak Hour



Southbound Left-turn Lane Warrant on Erbsville Road at Street A1 – 2030 Total Traffic PM Peak Hour

6 Conclusions and Recommendations

6.1 Conclusions

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

- **Existing Traffic Conditions:** All study area intersections are currently operating within acceptable levels of service;
- **Background Traffic Conditions:** All study area intersections are forecast to operate at acceptable levels of service under the 2030 background conditions;
- **Proposed Development:** Full build-out of the site is forecast to generate 152 and 186 trips during weekday AM and PM peak hours, respectively;
- **Total Traffic Conditions:** The 2030 total traffic conditions are forecast to operate similarly to the background conditions;
- **Remedial Measures:**
  - **Left-Turn Lane Warrants:** No left-turn lanes are forecast to be warranted; and
  - **Impacts on Non-Auto Transportation Operations:** The proposed development would not cause negative impacts to non-auto transportation modes.

6.2 Recommendations

Based on the findings of this study, it is recommended that the proposed development be approved with no conditions related to transportation system improvements.

Appendix A

Pre-Study Conference Notes

Appendix A: Pre-Study Conference Form – June 2022
(220137) Proposed Residential Developments, 720 Erbsville Road, Waterloo

Item	Description	Details
ISSUES		
1	List any issues expected that may impact the content or recommendations of the subject Transportation Impact Study.	o
INTRODUCTION		
2	Nature of application (Attach a drawing)	o Official Plan Amendment o Zoning Amendment o Site Plan Control Application
3	TIS process, and relevant policies, procedures and approvals	o Guidelines for the preparation of Transportation Impact Studies in Support of Development Applications o Transportation Impact Studies Requirements for Capacity Analysis, Roundabouts, Turn Lanes o Safety Analysis Checklist o Policy and Procedures for Access onto Regional Roads
4	Public Meeting	o Required o Not Required
CONTEXT		
5	Study intersections (Intersections to be analyzed) Note: the consultant is responsible to identify any further intersections impacted as the study progresses.	o Erbsville Road and Conservation Drive (unsignalized);
		o Schnarr Street and Erbsville Road (unsignalized); and
		o Area 'A' North Site Driveway and Erbsville Road (unsignalized); and
		o Regal Place/Area 'A' South Site Driveway and Erbsville Road (unsignalized);
		o Area 'B' Site Driveway and Erbsville Road (unsignalized);
		o Area 'C' Site Driveway/Forest Gate Crescent and Erbsville Road (unsignalized);
		o Erbsville Road and Wideman Road (unsignalized); and
		o Erbsville Road and Laurelwood Drive (signalized).
6	Size and number of phases of development	o Area 'A' – 223 townhouse units;
		o Area 'B' – 45 bungalow lofts; and
		o Area 'C' – 34 single detached homes.
7	Approved and pending approval development applications	o Northgate / Beaver Creek Residential Development
8	Planned transportation system improvements	
TRAVEL DEMAND		
9	Horizon years	o 5 years after full build-out

Item	Description	Details
10	Peak hour determination	o AM weekday peak hour of adjacent roadway PM weekday peak hour of adjacent roadway
11	Background	o Historical traffic/transit counts o Background Growth Rate – 1.5% o Approved and pending approval development applications
12	Trip generation	o ITE average rates o ITE fitted equation
13	Trip reductions (TDM, internal, pass-by)	o None
14	Trip distribution	o ITE trip distribution IN/OUT split o Regional travel demand o TTS travel pattern
15	Trip assignment	o Local traffic pattern o Site layout and access design
EVALUATION OF IMPACTS		
16	Traffic impact analysis (Use approved software)	o Unsignalized intersections o left turn warrant analysis o signal warrant analysis o Signalized intersections o LOS, v/c, delay, queuing o ROW saturation flow rates o Existing signal timings for existing conditions o Optimize signal timings for future conditions o Use existing cycle length to respect coordinated corridor o Queuing analysis o Roundabouts o Other…

Item	Description	Details
17	Roundabout feasibility (Use approved software)	o Initial screening o Intersection control study (10 year horizon)
18	Transit assessment	o Frequency and hours of service o Presence of bus stops o Reliability of service
19	Pedestrian assessment	o Pedestrian flow and safety study (PS) o Presence, connectivity, and width of sidewalks o Barriers and buffers from traffic o Crossing opportunities at intersections o Delay at intersections o Number of driveways and traffic volumes at the driveways o Presence of illumination o Future needs (desire lines / policy / accessibility / demand) o Other
20	Cycling assessment	o Presence of a dedicated facility o Network connectivity o Number and width of travel lanes adjacent the route o Volume and speed of traffic o Percentage of trucks and buses encountered o Pavement condition o Presence of parking /showers/change rooms o Future needs (desire lines / policy / demand) o Other
21	Safety analysis	o Road safety review o Collision risk analysis o Access conflict evaluation
22	Site access and circulation	o Access and Circulation Review (ACR) o Review sight distances at all new access points o Internal traffic controls o Loading facilities and access o Service/maintenance vehicle access o Emergency vehicle access
23	Submission format	o Three hard copies of main report including appendices o (other than analysis results/output e.g. Synchro reports) o Minimum one original hard copy must be sealed by a professional engineer o Electronic copy of complete report and all appendices o Electronic copy of operational analysis files (e.g. Synchro, o Arcady o Electronic copy of all signal warrant calculation files o Other

Appendix B

Traffic Count and Signal Timing Data

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Conservation Drive
Site Code: 220137
Start Date: 04/21/2022

Turning Movement Data

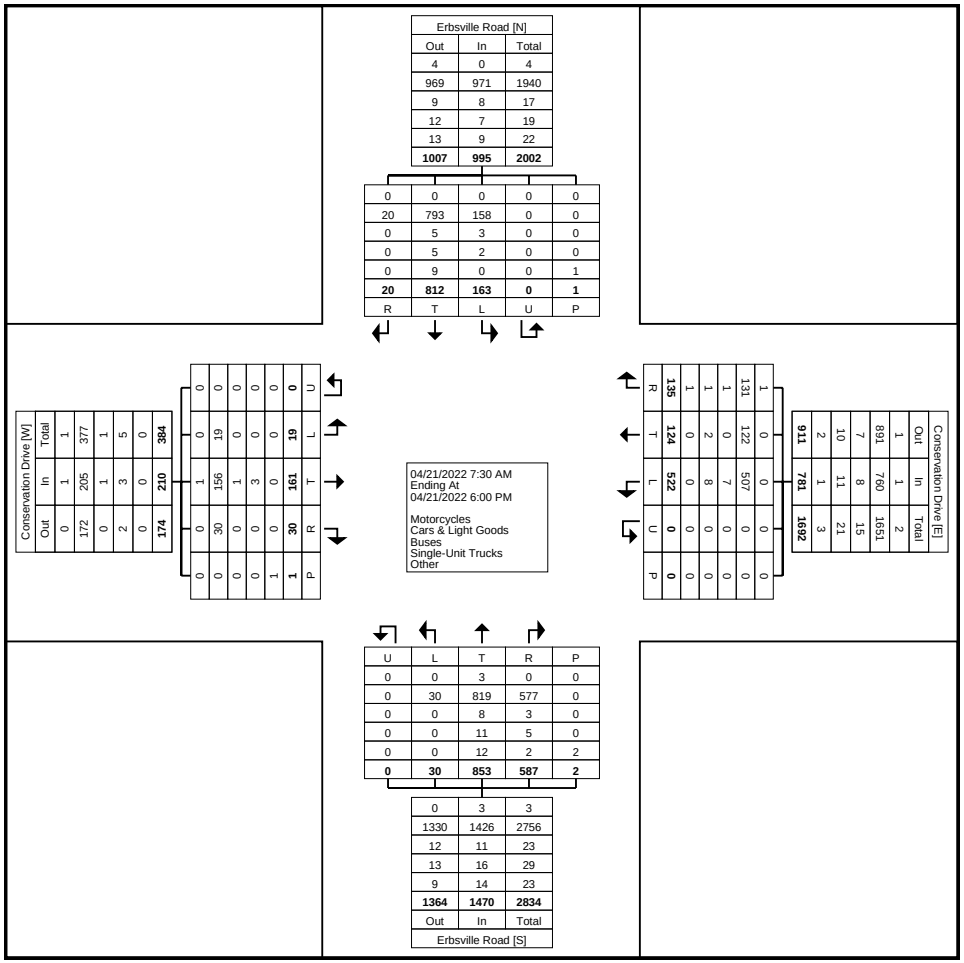
Start Time	Conservation Drive Eastbound						Conservation Drive Westbound						Erbsville Road Northbound						Erbsville Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	1	5	0	0	0	6	10	2	2	0	0	14	1	18	16	0	0	35	6	15	0	0	0	21	76
7:45 AM	3	6	2	0	0	11	20	4	3	0	0	27	0	28	20	0	0	48	8	28	0	0	0	36	122
Hourly Total	4	11	2	0	0	17	30	6	5	0	0	41	1	46	36	0	0	83	14	43	0	0	0	57	198
8:00 AM	1	7	1	0	0	9	22	6	3	0	0	31	1	25	19	0	0	45	8	14	0	0	0	22	107
8:15 AM	1	10	1	0	0	12	23	6	2	0	0	31	0	21	17	0	0	38	7	28	0	0	0	35	116
8:30 AM	0	9	1	0	0	10	15	4	5	0	0	24	1	26	17	0	0	44	11	20	0	0	0	31	109
8:45 AM	0	6	0	0	0	6	20	4	2	0	0	26	0	23	15	0	0	38	11	28	0	0	0	39	109
Hourly Total	2	32	3	0	0	37	80	20	12	0	0	112	2	95	68	0	0	165	37	90	0	0	0	127	441
9:00 AM	0	6	4	0	0	10	11	2	4	0	0	17	0	13	11	0	0	24	5	16	0	0	0	21	72
9:15 AM	1	4	1	0	0	6	14	1	2	0	0	17	2	16	18	0	0	36	5	21	0	0	0	26	85
9:30 AM	2	2	3	0	0	7	9	2	1	0	0	12	0	23	23	0	0	46	7	28	1	0	0	36	101
9:45 AM	1	4	0	0	0	5	13	0	1	0	0	14	0	13	17	0	0	30	3	19	0	0	0	22	71
Hourly Total	4	16	8	0	0	28	47	5	8	0	0	60	2	65	69	0	0	136	20	84	1	0	0	105	329
10:00 AM	2	4	0	0	0	6	11	2	1	0	0	14	0	19	13	0	0	32	5	12	1	0	0	18	70
10:15 AM	0	3	0	0	0	3	3	3	1	0	0	7	2	18	13	0	0	33	3	28	0	0	0	31	74
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	2	7	0	0	0	9	14	5	2	0	0	21	2	37	26	0	0	65	8	40	1	0	0	49	144
12:00 PM	2	4	0	0	0	6	14	3	5	0	0	22	1	18	17	0	0	36	3	16	1	0	0	20	84
12:15 PM	0	3	1	0	0	4	16	3	4	0	0	23	0	23	11	0	0	34	3	18	0	0	0	21	82
12:30 PM	0	5	1	0	0	6	6	4	4	0	0	14	0	26	25	0	0	51	5	23	0	0	0	28	99
12:45 PM	0	1	1	0	0	2	10	2	4	0	0	16	2	24	10	0	0	36	3	24	0	0	0	27	81
Hourly Total	2	13	3	0	0	18	46	12	17	0	0	75	3	91	63	0	0	157	14	81	1	0	0	96	346
1:00 PM	0	5	0	0	0	5	16	1	2	0	0	19	2	21	14	0	0	37	10	31	0	0	0	41	102
1:15 PM	0	2	0	0	0	2	9	1	4	0	0	14	0	27	19	0	0	46	3	19	2	0	0	24	86
1:30 PM	1	1	2	0	0	4	8	3	6	0	0	17	1	23	15	0	0	39	4	32	1	0	0	37	97
1:45 PM	0	4	0	0	0	4	15	6	4	0	0	25	3	19	9	0	0	31	3	20	2	0	0	25	85
Hourly Total	1	12	2	0	0	15	48	11	16	0	0	75	6	90	57	0	0	153	20	102	5	0	0	127	370
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	6	1	0	0	7	26	3	7	0	0	36	1	40	22	0	0	63	6	24	0	0	0	30	136
3:15 PM	0	3	1	0	0	4	15	3	6	0	0	24	0	32	22	0	0	54	2	25	0	0	0	27	109
3:30 PM	0	10	0	0	0	10	21	5	4	0	0	30	0	33	22	0	0	55	1	29	3	0	0	33	128
3:45 PM	0	10	1	0	1	11	22	6	7	0	0	35	2	46	26	0	0	74	4	29	0	0	1	33	153
Hourly Total	0	29	3	0	1	32	84	17	24	0	0	125	3	151	92	0	0	246	13	107	3	0	1	123	526
4:00 PM	0	5	1	0	0	6	21	7	9	0	0	37	0	36	22	0	0	58	4	22	1	0	0	27	128
4:15 PM	0	5	3	0	0	8	21	8	5	0	0	34	1	30	21	0	0	52	3	24	1	0	0	28	122

4:30 PM	0	2	0	0	0	2	25	5	15	0	0	45	6	40	23	0	0	69	10	46	0	0	0	56	172
4:45 PM	1	7	0	0	0	8	22	4	4	0	0	30	0	37	22	0	0	59	7	41	4	0	0	52	149
Hourly Total	1	19	4	0	0	24	89	24	33	0	0	146	7	143	88	0	0	238	24	133	6	0	0	163	571
5:00 PM	0	3	1	0	0	4	17	6	1	0	0	24	3	36	23	0	0	62	2	40	0	0	0	42	132
5:15 PM	2	6	0	0	0	8	17	7	6	0	0	30	1	33	22	0	0	56	1	42	1	0	0	44	138
5:30 PM	0	5	4	0	0	9	29	8	5	0	0	42	0	31	24	0	2	55	9	31	0	0	0	40	146
5:45 PM	1	8	0	0	0	9	21	3	6	0	0	30	0	35	19	0	0	54	1	19	2	0	0	22	115
Hourly Total	3	22	5	0	0	30	84	24	18	0	0	126	4	135	88	0	2	227	13	132	3	0	0	148	531
Grand Total	19	161	30	0	1	210	522	124	135	0	0	781	30	853	587	0	2	1470	163	812	20	0	1	995	3456
Approach %	9.0	76.7	14.3	0.0	-	-	66.8	15.9	17.3	0.0	-	-	2.0	58.0	39.9	0.0	-	-	16.4	81.6	2.0	0.0	-	-	-
Total %	0.5	4.7	0.9	0.0	-	6.1	15.1	3.6	3.9	0.0	-	22.6	0.9	24.7	17.0	0.0	-	42.5	4.7	23.5	0.6	0.0	-	28.8	-
Motorcycles	0	1	0	0	-	1	0	0	1	0	-	1	0	3	0	0	-	3	0	0	0	0	-	0	5
% Motorcycles	0.0	0.6	0.0	-	-	0.5	0.0	0.0	0.7	-	-	0.1	0.0	0.4	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	19	156	30	0	-	205	507	122	131	0	-	760	30	819	577	0	-	1426	158	793	20	0	-	971	3362
% Cars & Light Goods	100.0	96.9	100.0	-	-	97.6	97.1	98.4	97.0	-	-	97.3	100.0	96.0	98.3	-	-	97.0	96.9	97.7	100.0	-	-	97.6	97.3
Buses	0	1	0	0	-	1	7	0	1	0	-	8	0	8	3	0	-	11	3	5	0	0	-	8	28
% Buses	0.0	0.6	0.0	-	-	0.5	1.3	0.0	0.7	-	-	1.0	0.0	0.9	0.5	-	-	0.7	1.8	0.6	0.0	-	-	0.8	0.8
Single-Unit Trucks	0	3	0	0	-	3	8	2	1	0	-	11	0	11	5	0	-	16	2	5	0	0	-	7	37
% Single-Unit Trucks	0.0	1.9	0.0	-	-	1.4	1.5	1.6	0.7	-	-	1.4	0.0	1.3	0.9	-	-	1.1	1.2	0.6	0.0	-	-	0.7	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	4	1	0	-	5	0	6	0	0	-	6	11
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.2	-	-	0.3	0.0	0.7	0.0	-	-	0.6	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	1	0	-	1	0	8	1	0	-	9	0	3	0	0	-	3	13
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.7	-	-	0.1	0.0	0.9	0.2	-	-	0.6	0.0	0.4	0.0	-	-	0.3	0.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	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: Erbsville Road & Conservation Drive
Site Code: 220137
Start Date: 04/21/2022



Turning Movement Data Plot

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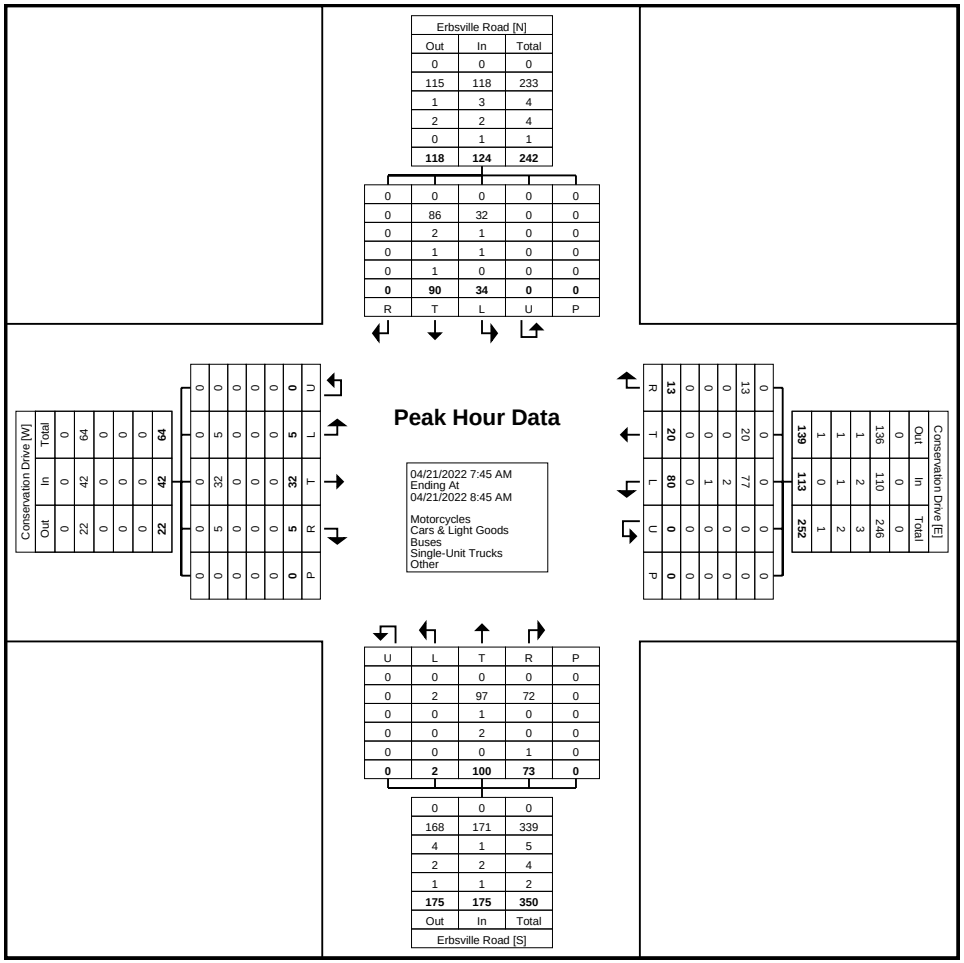
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Conservation Drive Eastbound						Conservation Drive Westbound						Erbsville Road Northbound						Erbsville Road 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	
7:45 AM	3	6	2	0	0	11	20	4	3	0	0	27	0	28	20	0	0	48	8	28	0	0	0	36	122
8:00 AM	1	7	1	0	0	9	22	6	3	0	0	31	1	25	19	0	0	45	8	14	0	0	0	22	107
8:15 AM	1	10	1	0	0	12	23	6	2	0	0	31	0	21	17	0	0	38	7	28	0	0	0	35	116
8:30 AM	0	9	1	0	0	10	15	4	5	0	0	24	1	26	17	0	0	44	11	20	0	0	0	31	109
Total	5	32	5	0	0	42	80	20	13	0	0	113	2	100	73	0	0	175	34	90	0	0	0	124	454
Approach %	11.9	76.2	11.9	0.0	-	-	70.8	17.7	11.5	0.0	-	-	1.1	57.1	41.7	0.0	-	-	27.4	72.6	0.0	0.0	-	-	-
Total %	1.1	7.0	1.1	0.0	-	9.3	17.6	4.4	2.9	0.0	-	24.9	0.4	22.0	16.1	0.0	-	38.5	7.5	19.8	0.0	0.0	-	27.3	-
PHF	0.417	0.800	0.625	0.000	-	0.875	0.870	0.833	0.650	0.000	-	0.911	0.500	0.893	0.913	0.000	-	0.911	0.773	0.804	0.000	0.000	-	0.861	0.930
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0
Cars & Light Goods	5	32	5	0	-	42	77	20	13	0	-	110	2	97	72	0	-	171	32	86	0	0	-	118	441
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	96.3	100.0	100.0	-	-	97.3	100.0	97.0	98.6	-	-	97.7	94.1	95.6	-	-	-	95.2	97.1
Buses	0	0	0	0	-	0	2	0	0	0	-	2	0	1	0	0	-	1	1	2	0	0	-	3	6
% Buses	0.0	0.0	0.0	-	-	0.0	2.5	0.0	0.0	-	-	1.8	0.0	1.0	0.0	-	-	0.6	2.9	2.2	-	-	-	2.4	1.3
Single-Unit Trucks	0	0	0	0	-	0	1	0	0	0	-	1	0	2	0	0	-	2	1	1	0	0	-	2	5
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	1.3	0.0	0.0	-	-	0.9	0.0	2.0	0.0	-	-	1.1	2.9	1.1	-	-	-	1.6	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	1	0	0	-	1	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	1.4	-	-	0.6	0.0	1.1	-	-	-	0.8	0.4
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
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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Start Date: 04/21/2022



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

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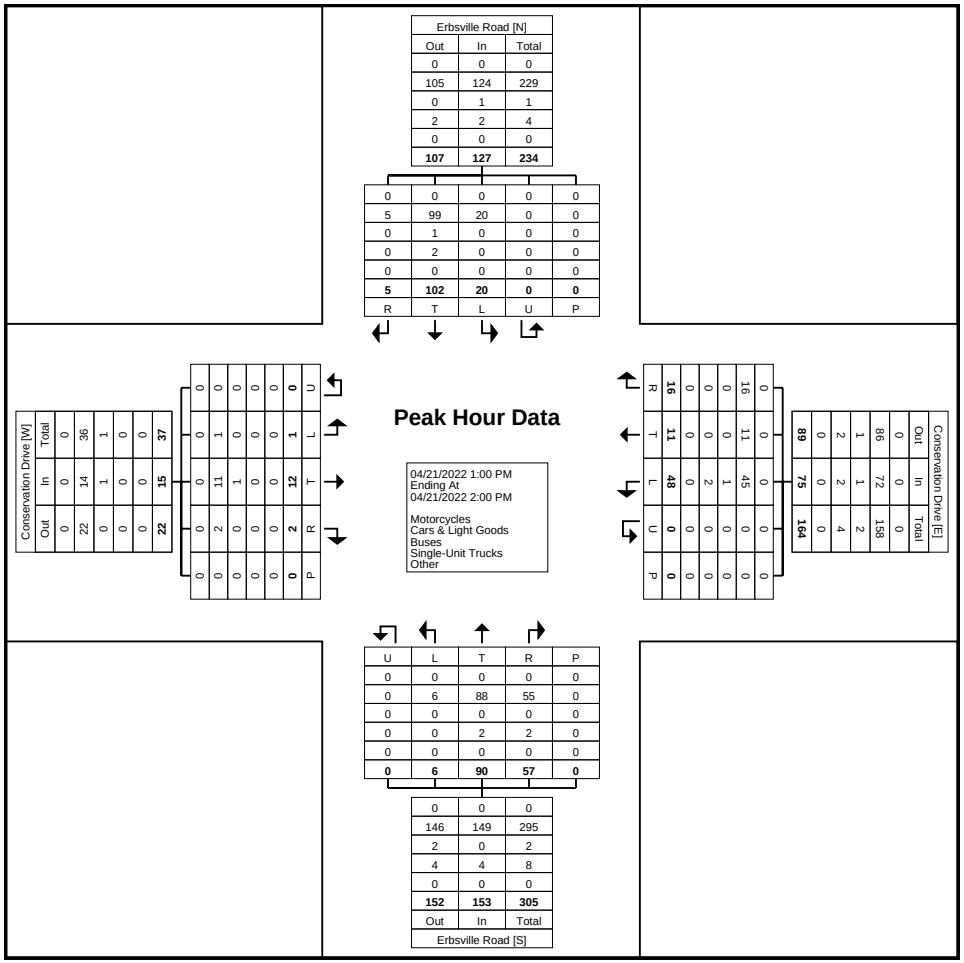
Turning Movement Peak Hour Data (1:00 PM)

Start Time	Conservation Drive Eastbound						Conservation Drive Westbound						Erbsville Road Northbound						Erbsville Road 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	
1:00 PM	0	5	0	0	0	5	16	1	2	0	0	19	2	21	14	0	0	37	10	31	0	0	0	41	102
1:15 PM	0	2	0	0	0	2	9	1	4	0	0	14	0	27	19	0	0	46	3	19	2	0	0	24	86
1:30 PM	1	1	2	0	0	4	8	3	6	0	0	17	1	23	15	0	0	39	4	32	1	0	0	37	97
1:45 PM	0	4	0	0	0	4	15	6	4	0	0	25	3	19	9	0	0	31	3	20	2	0	0	25	85
Total	1	12	2	0	0	15	48	11	16	0	0	75	6	90	57	0	0	153	20	102	5	0	0	127	370
Approach %	6.7	80.0	13.3	0.0	-	-	64.0	14.7	21.3	0.0	-	-	3.9	58.8	37.3	0.0	-	-	15.7	80.3	3.9	0.0	-	-	-
Total %	0.3	3.2	0.5	0.0	-	4.1	13.0	3.0	4.3	0.0	-	20.3	1.6	24.3	15.4	0.0	-	41.4	5.4	27.6	1.4	0.0	-	34.3	-
PHF	0.250	0.600	0.250	0.000	-	0.750	0.750	0.458	0.667	0.000	-	0.750	0.500	0.833	0.750	0.000	-	0.832	0.500	0.797	0.625	0.000	-	0.774	0.907
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	1	11	2	0	-	14	45	11	16	0	-	72	6	88	55	0	-	149	20	99	5	0	-	124	359
% Cars & Light Goods	100.0	91.7	100.0	-	-	93.3	93.8	100.0	100.0	-	-	96.0	100.0	97.8	96.5	-	-	97.4	100.0	97.1	100.0	-	-	97.6	97.0
Buses	0	1	0	0	-	1	1	0	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	3
% Buses	0.0	8.3	0.0	-	-	6.7	2.1	0.0	0.0	-	-	1.3	0.0	0.0	0.0	-	-	0.0	0.0	1.0	0.0	-	-	0.8	0.8
Single-Unit Trucks	0	0	0	0	-	0	2	0	0	0	-	2	0	2	2	0	-	4	0	2	0	0	-	2	8
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	4.2	0.0	0.0	-	-	2.7	0.0	2.2	3.5	-	-	2.6	0.0	2.0	0.0	-	-	1.6	2.2
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	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Turning Movement Peak Hour Data Plot (1:00 PM)

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Count Name: Erbsville Road & Conservation Drive
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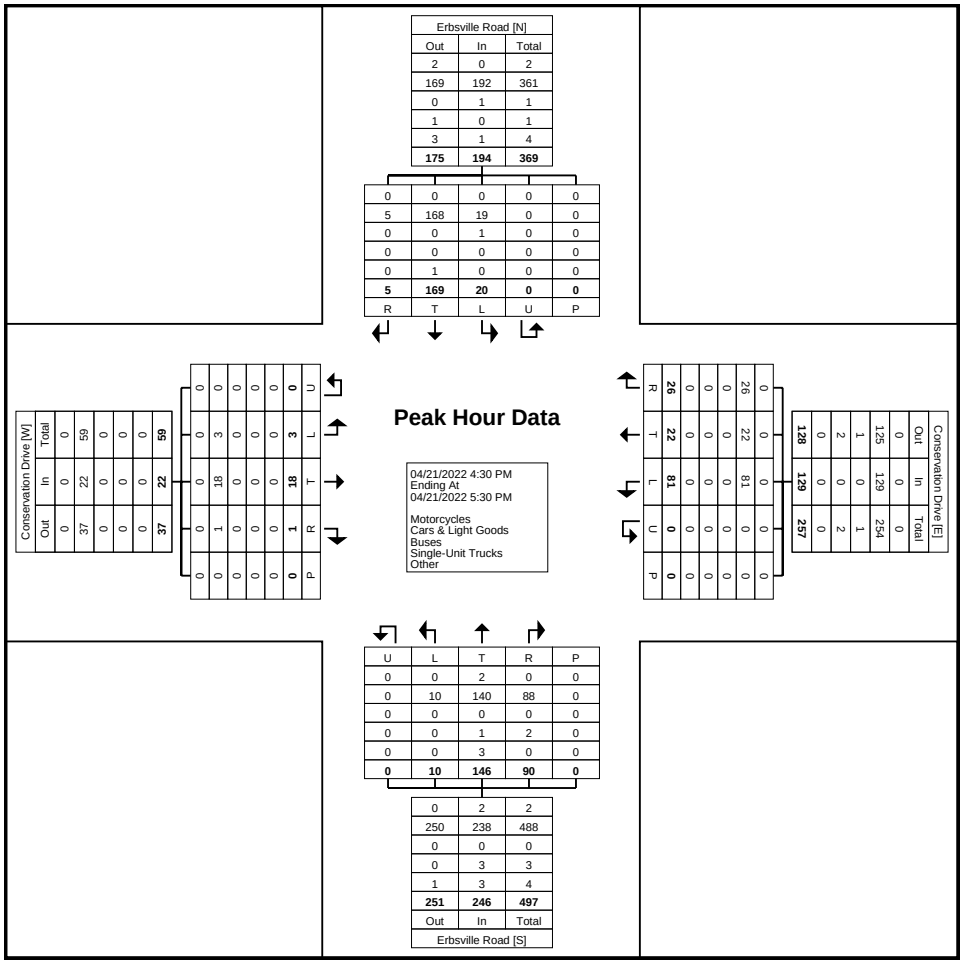
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Conservation Drive Eastbound						Conservation Drive Westbound						Erbsville Road Northbound						Erbsville Road 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	
4:30 PM	0	2	0	0	0	2	25	5	15	0	0	45	6	40	23	0	0	69	10	46	0	0	0	56	172
4:45 PM	1	7	0	0	0	8	22	4	4	0	0	30	0	37	22	0	0	59	7	41	4	0	0	52	149
5:00 PM	0	3	1	0	0	4	17	6	1	0	0	24	3	36	23	0	0	62	2	40	0	0	0	42	132
5:15 PM	2	6	0	0	0	8	17	7	6	0	0	30	1	33	22	0	0	56	1	42	1	0	0	44	138
Total	3	18	1	0	0	22	81	22	26	0	0	129	10	146	90	0	0	246	20	169	5	0	0	194	591
Approach %	13.6	81.8	4.5	0.0	-	-	62.8	17.1	20.2	0.0	-	-	4.1	59.3	36.6	0.0	-	-	10.3	87.1	2.6	0.0	-	-	-
Total %	0.5	3.0	0.2	0.0	-	3.7	13.7	3.7	4.4	0.0	-	21.8	1.7	24.7	15.2	0.0	-	41.6	3.4	28.6	0.8	0.0	-	32.8	-
PHF	0.375	0.643	0.250	0.000	-	0.688	0.810	0.786	0.433	0.000	-	0.717	0.417	0.913	0.978	0.000	-	0.891	0.500	0.918	0.313	0.000	-	0.866	0.859
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	2
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.4	0.0	-	-	0.8	0.0	0.0	0.0	-	-	0.0	0.3
Cars & Light Goods	3	18	1	0	-	22	81	22	26	0	-	129	10	140	88	0	-	238	19	168	5	0	-	192	581
% Cars & Light Goods	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	95.9	97.8	-	-	96.7	95.0	99.4	100.0	-	-	99.0	98.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	1
% 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	5.0	0.0	0.0	-	-	0.5	0.2
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	2	0	-	3	0	0	0	0	-	0	3
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.7	2.2	-	-	1.2	0.0	0.0	0.0	-	-	0.0	0.5
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	-	-	0.0	0.0	0.7	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	0	1	0	0	-	1	3
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.4	0.0	-	-	0.8	0.0	0.6	0.0	-	-	0.5	0.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Conservation Drive
Site Code: 220137
Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022

Turning Movement Data

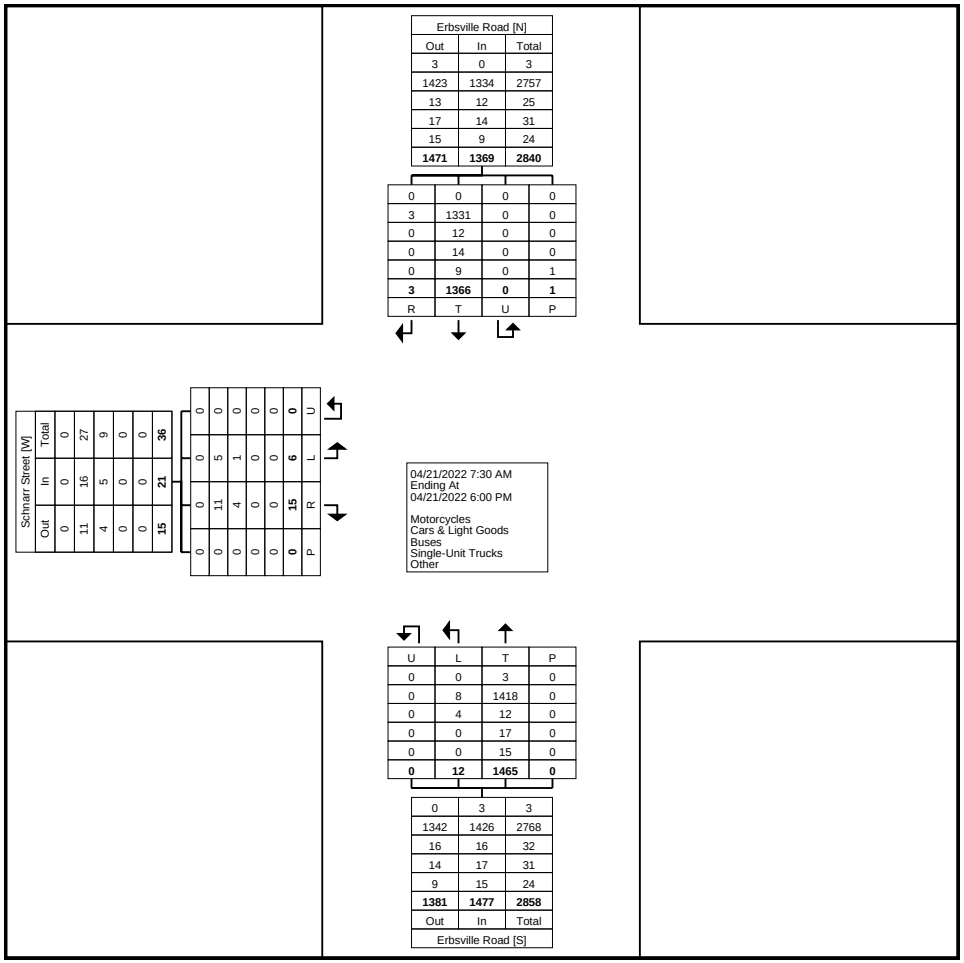
Start Time	Schnarr Street Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:30 AM	0	0	0	0	0	0	38	0	0	38	25	0	0	0	25	63
7:45 AM	0	1	0	0	1	0	45	0	0	45	47	0	0	0	47	93
Hourly Total	0	1	0	0	1	0	83	0	0	83	72	0	0	0	72	156
8:00 AM	0	0	0	0	0	0	47	0	0	47	40	0	0	0	40	87
8:15 AM	0	1	0	0	1	1	37	0	0	38	52	0	0	0	52	91
8:30 AM	0	1	0	0	1	2	41	0	0	43	35	0	0	0	35	79
8:45 AM	0	1	0	0	1	0	39	0	0	39	48	0	0	0	48	88
Hourly Total	0	3	0	0	3	3	164	0	0	167	175	0	0	0	175	345
9:00 AM	0	1	0	0	1	2	24	0	0	26	32	0	0	0	32	59
9:15 AM	1	1	0	0	2	1	35	0	0	36	37	0	0	0	37	75
9:30 AM	0	0	0	0	0	0	45	0	0	45	39	0	0	0	39	84
9:45 AM	0	0	0	0	0	0	30	0	0	30	33	0	0	1	33	63
Hourly Total	1	2	0	0	3	3	134	0	0	137	141	0	0	1	141	281
10:00 AM	0	0	0	0	0	0	34	0	0	34	24	0	0	0	24	58
10:15 AM	0	1	0	0	1	1	35	0	0	36	32	0	0	0	32	69
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	0	0	1	1	69	0	0	70	56	0	0	0	56	127
12:00 PM	0	0	0	0	0	0	37	0	0	37	31	0	0	0	31	68
12:15 PM	2	1	0	0	3	0	29	0	0	29	36	0	0	0	36	68
12:30 PM	0	0	0	0	0	0	50	0	0	50	31	0	0	0	31	81
12:45 PM	0	0	0	0	0	0	37	0	0	37	35	0	0	0	35	72
Hourly Total	2	1	0	0	3	0	153	0	0	153	133	0	0	0	133	289
1:00 PM	0	0	0	0	0	0	37	0	0	37	46	0	0	0	46	83
1:15 PM	1	0	0	0	1	1	46	0	0	47	28	0	0	0	28	76
1:30 PM	0	1	0	0	1	0	41	0	0	41	40	2	0	0	42	84
1:45 PM	0	0	0	0	0	0	31	0	0	31	36	0	0	0	36	67
Hourly Total	1	1	0	0	2	1	155	0	0	156	150	2	0	0	152	310
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	0	0	0	1	0	55	0	0	55	47	1	0	0	48	104
3:15 PM	0	1	0	0	1	1	58	0	0	59	41	0	0	0	41	101
3:30 PM	0	1	0	0	1	0	55	0	0	55	51	0	0	0	51	107
3:45 PM	0	1	0	0	1	1	72	0	0	73	54	0	0	0	54	128
Hourly Total	1	3	0	0	4	2	240	0	0	242	193	1	0	0	194	440
4:00 PM	0	0	0	0	0	0	58	0	0	58	45	0	0	0	45	103
4:15 PM	0	0	0	0	0	0	53	0	0	53	46	0	0	0	46	99
4:30 PM	1	0	0	0	1	1	68	0	0	69	69	0	0	0	69	139

4:45 PM	0	1	0	0	1	0	58	0	0	58	64	0	0	0	64	123
Hourly Total	1	1	0	0	2	1	237	0	0	238	224	0	0	0	224	464
5:00 PM	0	1	0	0	1	1	60	0	0	61	60	0	0	0	60	122
5:15 PM	0	0	0	0	0	0	56	0	0	56	57	0	0	0	57	113
5:30 PM	0	1	0	0	1	0	56	0	0	56	64	0	0	0	64	121
5:45 PM	0	0	0	0	0	0	58	0	0	58	41	0	0	0	41	99
Hourly Total	0	2	0	0	2	1	230	0	0	231	222	0	0	0	222	455
Grand Total	6	15	0	0	21	12	1465	0	0	1477	1366	3	0	1	1369	2867
Approach %	28.6	71.4	0.0	-	-	0.8	99.2	0.0	-	-	99.8	0.2	0.0	-	-	-
Total %	0.2	0.5	0.0	-	0.7	0.4	51.1	0.0	-	51.5	47.6	0.1	0.0	-	47.8	-
Motorcycles	0	0	0	-	0	0	3	0	-	3	0	0	0	-	0	3
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.2	-	-	0.2	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	5	11	0	-	16	8	1418	0	-	1426	1331	3	0	-	1334	2776
% Cars & Light Goods	83.3	73.3	-	-	76.2	66.7	96.8	-	-	96.5	97.4	100.0	-	-	97.4	96.8
Buses	1	4	0	-	5	4	12	0	-	16	12	0	0	-	12	33
% Buses	16.7	26.7	-	-	23.8	33.3	0.8	-	-	1.1	0.9	0.0	-	-	0.9	1.2
Single-Unit Trucks	0	0	0	-	0	0	17	0	-	17	14	0	0	-	14	31
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.2	-	-	1.2	1.0	0.0	-	-	1.0	1.1
Articulated Trucks	0	0	0	-	0	0	5	0	-	5	6	0	0	-	6	11
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.3	-	-	0.3	0.4	0.0	-	-	0.4	0.4
Bicycles on Road	0	0	0	-	0	0	10	0	-	10	3	0	0	-	3	13
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.7	-	-	0.7	0.2	0.0	-	-	0.2	0.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022



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: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022

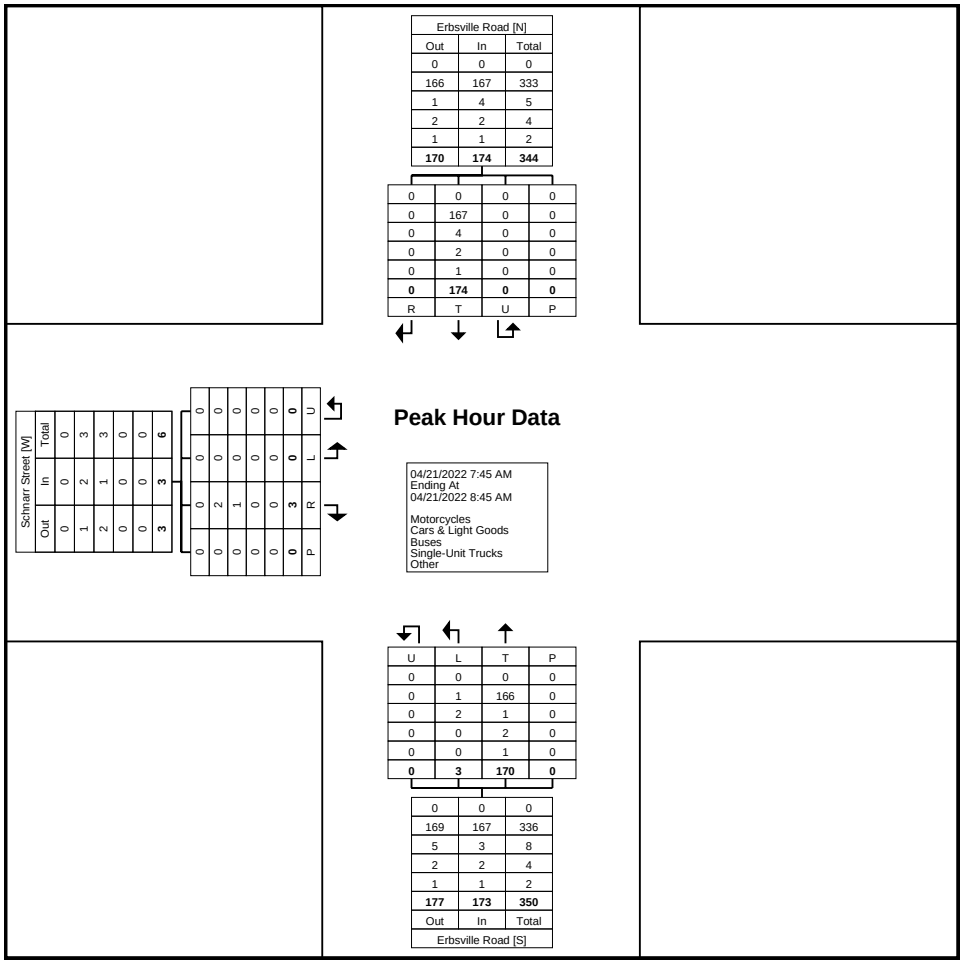
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Schnarr Street Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:45 AM	0	1	0	0	1	0	45	0	0	45	47	0	0	0	47	93
8:00 AM	0	0	0	0	0	0	47	0	0	47	40	0	0	0	40	87
8:15 AM	0	1	0	0	1	1	37	0	0	38	52	0	0	0	52	91
8:30 AM	0	1	0	0	1	2	41	0	0	43	35	0	0	0	35	79
Total	0	3	0	0	3	3	170	0	0	173	174	0	0	0	174	350
Approach %	0.0	100.0	0.0	-	-	1.7	98.3	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	0.9	0.0	-	0.9	0.9	48.6	0.0	-	49.4	49.7	0.0	0.0	-	49.7	-
PHF	0.000	0.750	0.000	-	0.750	0.375	0.904	0.000	-	0.920	0.837	0.000	0.000	-	0.837	0.941
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
Cars & Light Goods	0	2	0	-	2	1	166	0	-	167	167	0	0	-	167	336
% Cars & Light Goods	-	66.7	-	-	66.7	33.3	97.6	-	-	96.5	96.0	-	-	-	96.0	96.0
Buses	0	1	0	-	1	2	1	0	-	3	4	0	0	-	4	8
% Buses	-	33.3	-	-	33.3	66.7	0.6	-	-	1.7	2.3	-	-	-	2.3	2.3
Single-Unit Trucks	0	0	0	-	0	0	2	0	-	2	2	0	0	-	2	4
% Single-Unit Trucks	-	0.0	-	-	0.0	0.0	1.2	-	-	1.2	1.1	-	-	-	1.1	1.1
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	1	0	0	-	1	2
% Articulated Trucks	-	0.0	-	-	0.0	0.0	0.6	-	-	0.6	0.6	-	-	-	0.6	0.6
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	-	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022

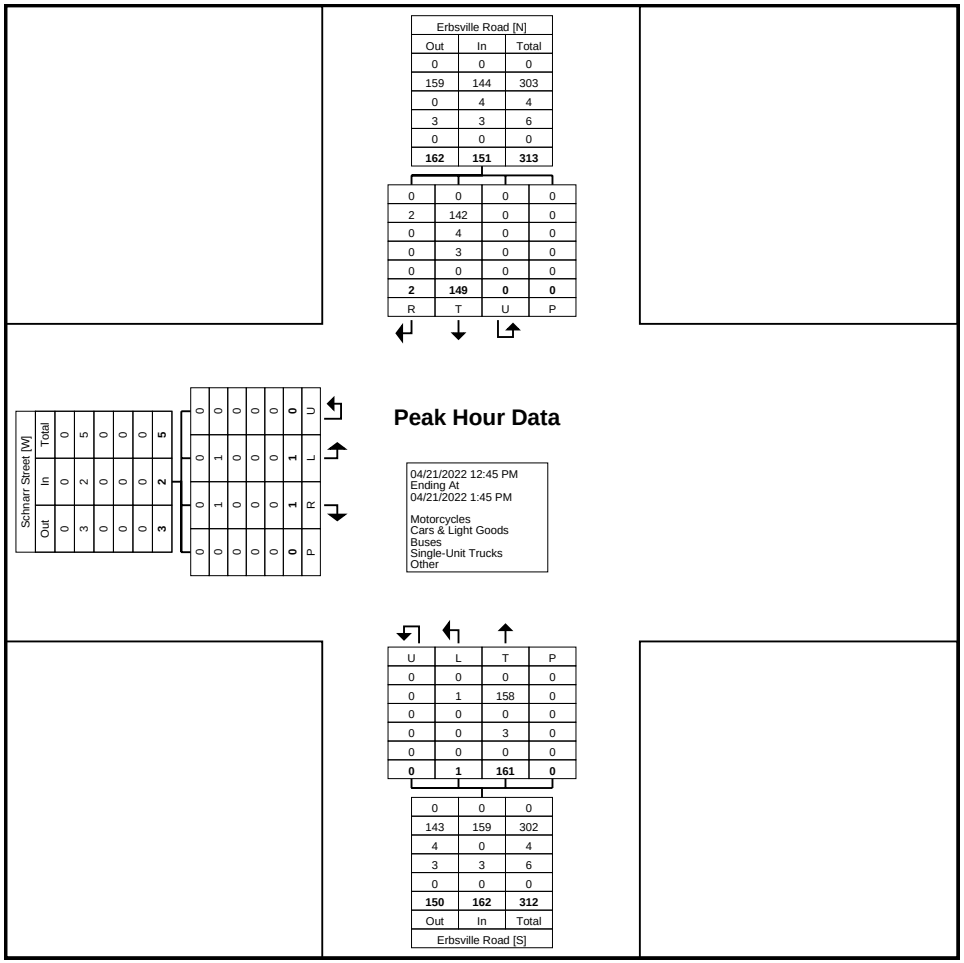
Turning Movement Peak Hour Data (12:45 PM)

Start Time	Schnarr Street Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
12:45 PM	0	0	0	0	0	0	37	0	0	37	35	0	0	0	35	72
1:00 PM	0	0	0	0	0	0	37	0	0	37	46	0	0	0	46	83
1:15 PM	1	0	0	0	1	1	46	0	0	47	28	0	0	0	28	76
1:30 PM	0	1	0	0	1	0	41	0	0	41	40	2	0	0	42	84
Total	1	1	0	0	2	1	161	0	0	162	149	2	0	0	151	315
Approach %	50.0	50.0	0.0	-	-	0.6	99.4	0.0	-	-	98.7	1.3	0.0	-	-	-
Total %	0.3	0.3	0.0	-	0.6	0.3	51.1	0.0	-	51.4	47.3	0.6	0.0	-	47.9	-
PHF	0.250	0.250	0.000	-	0.500	0.250	0.875	0.000	-	0.862	0.810	0.250	0.000	-	0.821	0.938
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	1	1	0	-	2	1	158	0	-	159	142	2	0	-	144	305
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	98.1	-	-	98.1	95.3	100.0	-	-	95.4	96.8
Buses	0	0	0	-	0	0	0	0	-	0	4	0	0	-	4	4
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	2.7	0.0	-	-	2.6	1.3
Single-Unit Trucks	0	0	0	-	0	0	3	0	-	3	3	0	0	-	3	6
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.9	-	-	1.9	2.0	0.0	-	-	2.0	1.9
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	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022

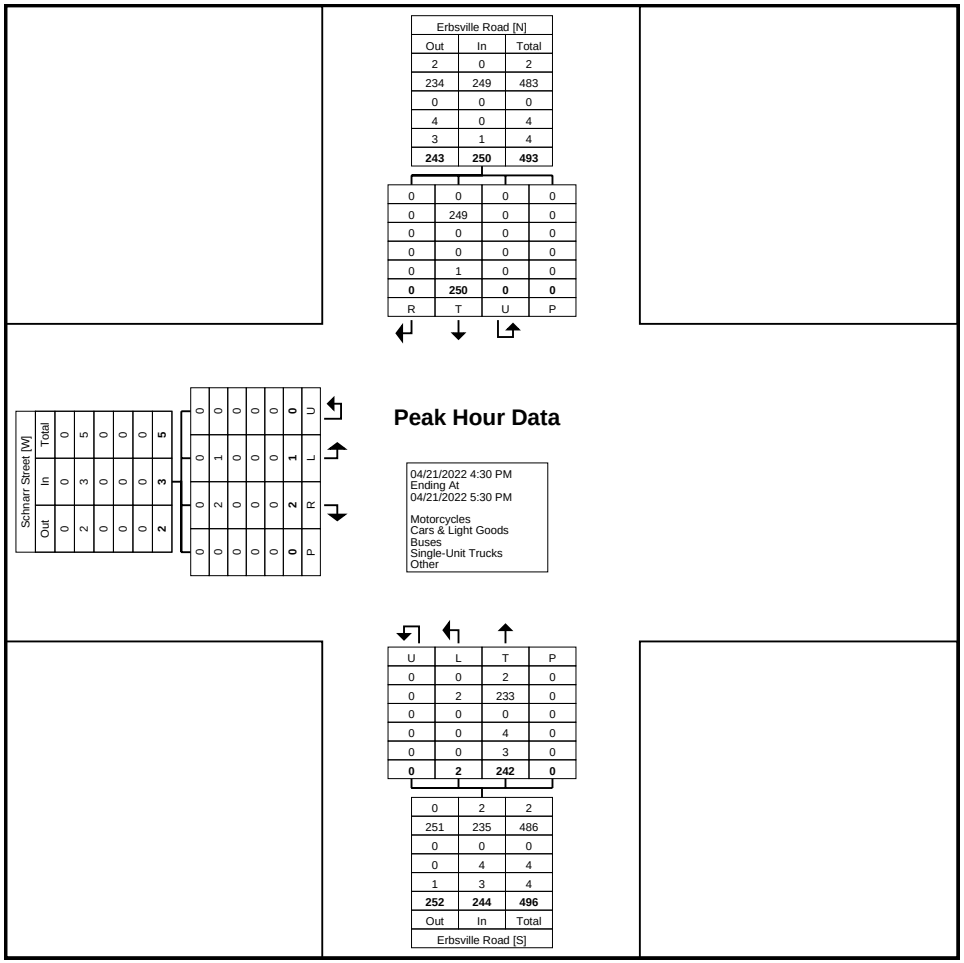
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Schnarr Street Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	1	0	0	0	1	1	68	0	0	69	69	0	0	0	69	139
4:45 PM	0	1	0	0	1	0	58	0	0	58	64	0	0	0	64	123
5:00 PM	0	1	0	0	1	1	60	0	0	61	60	0	0	0	60	122
5:15 PM	0	0	0	0	0	0	56	0	0	56	57	0	0	0	57	113
Total	1	2	0	0	3	2	242	0	0	244	250	0	0	0	250	497
Approach %	33.3	66.7	0.0	-	-	0.8	99.2	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.2	0.4	0.0	-	0.6	0.4	48.7	0.0	-	49.1	50.3	0.0	0.0	-	50.3	-
PHF	0.250	0.500	0.000	-	0.750	0.500	0.890	0.000	-	0.884	0.906	0.000	0.000	-	0.906	0.894
Motorcycles	0	0	0	-	0	0	2	0	-	2	0	0	0	-	0	2
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.8	-	-	0.8	0.0	-	-	-	0.0	0.4
Cars & Light Goods	1	2	0	-	3	2	233	0	-	235	249	0	0	-	249	487
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	96.3	-	-	96.3	99.6	-	-	-	99.6	98.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	-	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	4	0	-	4	0	0	0	-	0	4
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.7	-	-	1.6	0.0	-	-	-	0.0	0.8
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.4	-	-	0.4	0.0	-	-	-	0.0	0.2
Bicycles on Road	0	0	0	-	0	0	2	0	-	2	1	0	0	-	1	3
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.8	-	-	0.8	0.4	-	-	-	0.4	0.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Schnarr Street
Site Code: 220137
Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Regal Place
Site Code: 220137
Start Date: 04/21/2022

Turning Movement Data

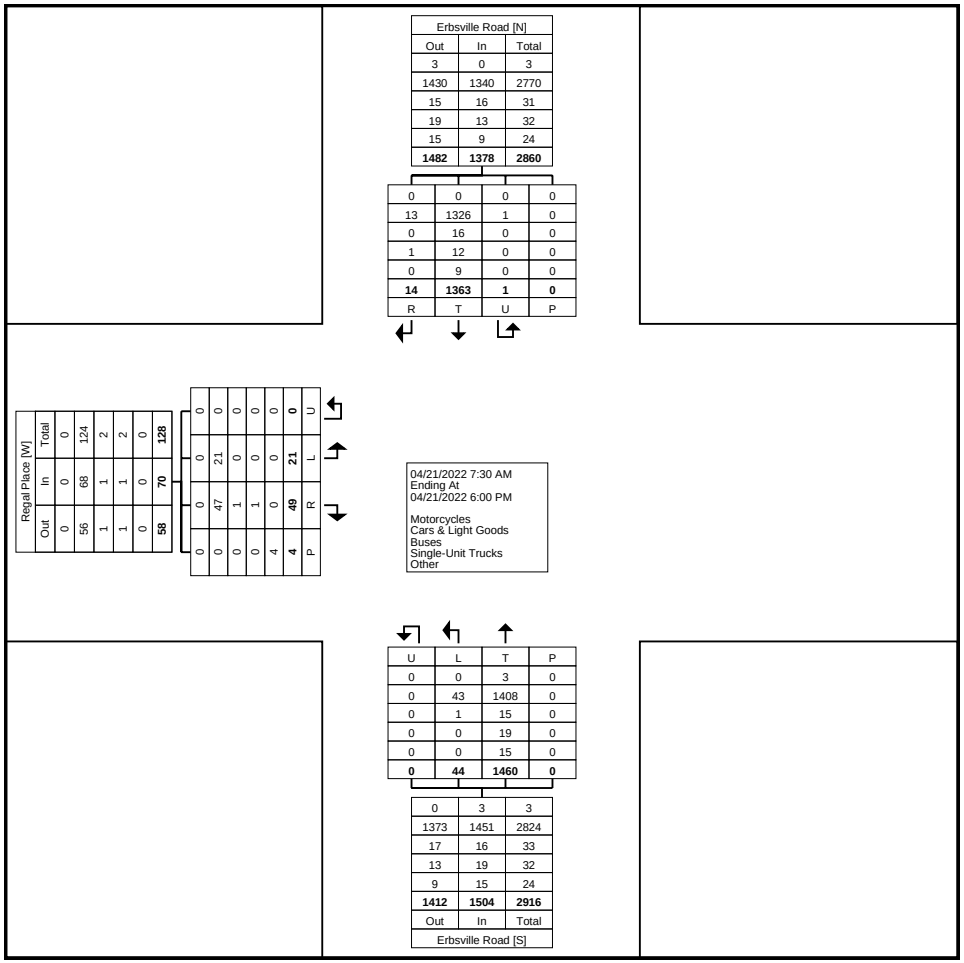
Start Time	Regal Place Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					Int. Total
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	2	1	0	0	3	0	37	0	0	37	25	0	0	0	25	65
7:45 AM	0	2	0	0	2	1	45	0	0	46	47	0	0	0	47	95
Hourly Total	2	3	0	0	5	1	82	0	0	83	72	0	0	0	72	160
8:00 AM	0	2	0	2	2	2	48	0	0	50	41	0	0	0	41	93
8:15 AM	0	4	0	0	4	0	37	0	0	37	52	0	0	0	52	93
8:30 AM	1	5	0	0	6	2	42	0	0	44	37	1	0	0	38	88
8:45 AM	0	2	0	0	2	3	38	0	0	41	49	0	0	0	49	92
Hourly Total	1	13	0	2	14	7	165	0	0	172	179	1	0	0	180	366
9:00 AM	1	1	0	0	2	0	26	0	0	26	30	2	1	0	33	61
9:15 AM	0	1	0	0	1	1	35	0	0	36	37	0	0	0	37	74
9:30 AM	0	0	0	0	0	2	45	0	0	47	39	0	0	0	39	86
9:45 AM	0	5	0	0	5	1	30	0	0	31	31	0	0	0	31	67
Hourly Total	1	7	0	0	8	4	136	0	0	140	137	2	1	0	140	288
10:00 AM	0	0	0	0	0	2	35	0	0	37	26	0	0	0	26	63
10:15 AM	1	0	0	0	1	0	35	0	0	35	30	1	0	0	31	67
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	0	0	0	1	2	70	0	0	72	56	1	0	0	57	130
12:00 PM	0	1	0	0	1	0	38	0	0	38	29	2	0	0	31	70
12:15 PM	0	0	0	0	0	0	29	0	0	29	36	1	0	0	37	66
12:30 PM	1	0	0	0	1	0	50	0	0	50	32	0	0	0	32	83
12:45 PM	0	0	0	0	0	0	37	0	0	37	34	1	0	0	35	72
Hourly Total	1	1	0	0	2	0	154	0	0	154	131	4	0	0	135	291
1:00 PM	2	1	0	0	3	2	36	0	0	38	46	0	0	0	46	87
1:15 PM	3	0	0	0	3	2	44	0	0	46	29	0	0	0	29	78
1:30 PM	0	4	0	0	4	2	42	0	0	44	40	1	0	0	41	89
1:45 PM	0	1	0	0	1	2	30	0	0	32	35	0	0	0	35	68
Hourly Total	5	6	0	0	11	8	152	0	0	160	150	1	0	0	151	322
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	0	0	0	3	56	0	0	59	46	0	0	0	46	105
3:15 PM	1	2	0	0	3	2	59	0	0	61	41	0	0	0	41	105
3:30 PM	0	0	0	0	0	0	55	0	0	55	51	1	0	0	52	107
3:45 PM	0	2	0	2	2	6	71	0	0	77	53	0	0	0	53	132
Hourly Total	1	4	0	2	5	11	241	0	0	252	191	1	0	0	192	449
4:00 PM	1	2	0	0	3	0	57	0	0	57	43	1	0	0	44	104
4:15 PM	1	1	0	0	2	1	52	0	0	53	47	0	0	0	47	102
4:30 PM	0	2	0	0	2	4	69	0	0	73	68	1	0	0	69	144

4:45 PM	1	0	0	0	1	2	56	0	0	58	68	0	0	0	68	127
Hourly Total	3	5	0	0	8	7	234	0	0	241	226	2	0	0	228	477
5:00 PM	0	2	0	0	2	0	60	0	0	60	60	0	0	0	60	122
5:15 PM	1	3	0	0	4	1	55	0	0	56	56	1	0	0	57	117
5:30 PM	2	2	0	0	4	2	55	0	0	57	65	1	0	0	66	127
5:45 PM	3	3	0	0	6	1	56	0	0	57	40	0	0	0	40	103
Hourly Total	6	10	0	0	16	4	226	0	0	230	221	2	0	0	223	469
Grand Total	21	49	0	4	70	44	1460	0	0	1504	1363	14	1	0	1378	2952
Approach %	30.0	70.0	0.0	-	-	2.9	97.1	0.0	-	-	98.9	1.0	0.1	-	-	-
Total %	0.7	1.7	0.0	-	2.4	1.5	49.5	0.0	-	50.9	46.2	0.5	0.0	-	46.7	-
Motorcycles	0	0	0	-	0	0	3	0	-	3	0	0	0	-	0	3
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.2	-	-	0.2	0.0	0.0	0.0	-	0.0	0.1
Cars & Light Goods	21	47	0	-	68	43	1408	0	-	1451	1326	13	1	-	1340	2859
% Cars & Light Goods	100.0	95.9	-	-	97.1	97.7	96.4	-	-	96.5	97.3	92.9	100.0	-	97.2	96.8
Buses	0	1	0	-	1	1	15	0	-	16	16	0	0	-	16	33
% Buses	0.0	2.0	-	-	1.4	2.3	1.0	-	-	1.1	1.2	0.0	0.0	-	1.2	1.1
Single-Unit Trucks	0	1	0	-	1	0	19	0	-	19	12	1	0	-	13	33
% Single-Unit Trucks	0.0	2.0	-	-	1.4	0.0	1.3	-	-	1.3	0.9	7.1	0.0	-	0.9	1.1
Articulated Trucks	0	0	0	-	0	0	5	0	-	5	6	0	0	-	6	11
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.3	-	-	0.3	0.4	0.0	0.0	-	0.4	0.4
Bicycles on Road	0	0	0	-	0	0	10	0	-	10	3	0	0	-	3	13
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.7	-	-	0.7	0.2	0.0	0.0	-	0.2	0.4
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	4	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Erbsville Road & Regal Place
Site Code: 220137
Start Date: 04/21/2022



Turning Movement Data Plot

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Count Name: Erbsville Road & Regal Place
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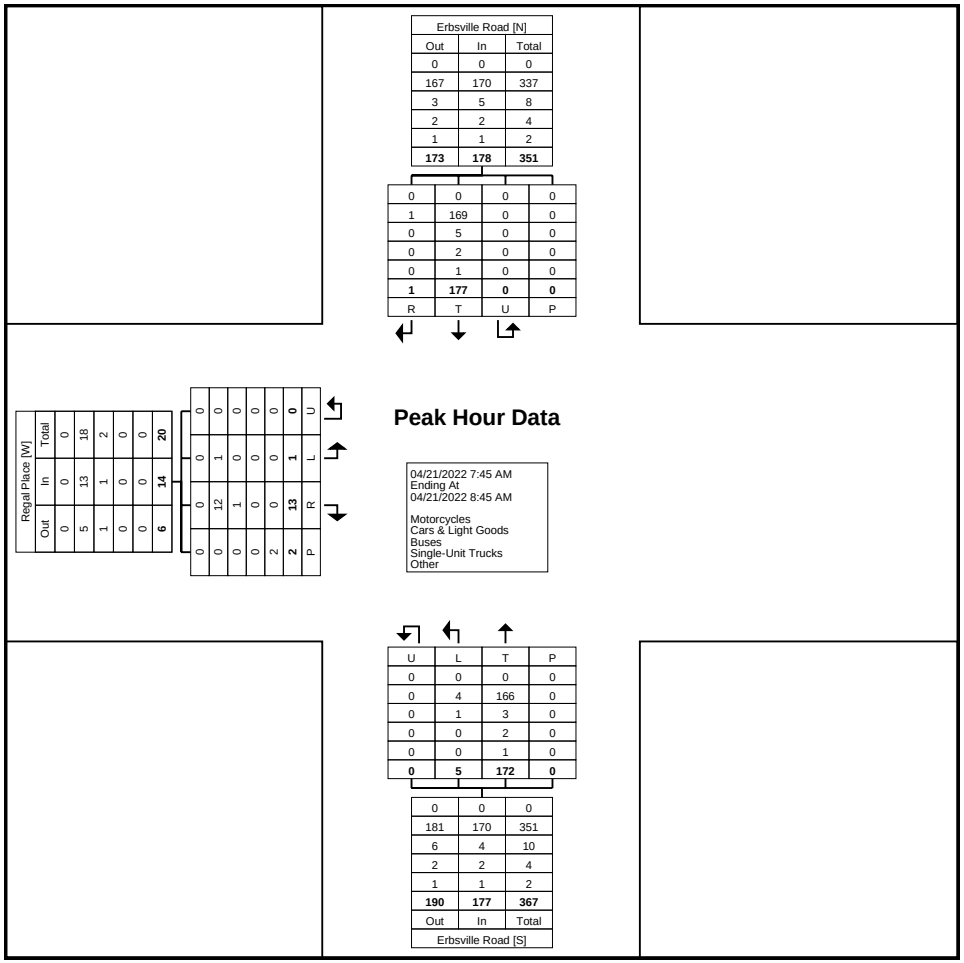
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Regal Place Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:45 AM	0	2	0	0	2	1	45	0	0	46	47	0	0	0	47	95
8:00 AM	0	2	0	2	2	2	48	0	0	50	41	0	0	0	41	93
8:15 AM	0	4	0	0	4	0	37	0	0	37	52	0	0	0	52	93
8:30 AM	1	5	0	0	6	2	42	0	0	44	37	1	0	0	38	88
Total	1	13	0	2	14	5	172	0	0	177	177	1	0	0	178	369
Approach %	7.1	92.9	0.0	-	-	2.8	97.2	0.0	-	-	99.4	0.6	0.0	-	-	-
Total %	0.3	3.5	0.0	-	3.8	1.4	46.6	0.0	-	48.0	48.0	0.3	0.0	-	48.2	-
PHF	0.250	0.650	0.000	-	0.583	0.625	0.896	0.000	-	0.885	0.851	0.250	0.000	-	0.856	0.971
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	1	12	0	-	13	4	166	0	-	170	169	1	0	-	170	353
% Cars & Light Goods	100.0	92.3	-	-	92.9	80.0	96.5	-	-	96.0	95.5	100.0	-	-	95.5	95.7
Buses	0	1	0	-	1	1	3	0	-	4	5	0	0	-	5	10
% Buses	0.0	7.7	-	-	7.1	20.0	1.7	-	-	2.3	2.8	0.0	-	-	2.8	2.7
Single-Unit Trucks	0	0	0	-	0	0	2	0	-	2	2	0	0	-	2	4
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.2	-	-	1.1	1.1	0.0	-	-	1.1	1.1
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	1	0	0	-	1	2
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.6	-	-	0.6	0.6	0.0	-	-	0.6	0.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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5A-150 Pinebush Rd

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Count Name: Erbsville Road & Regal Place
Site Code: 220137
Start Date: 04/21/2022



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

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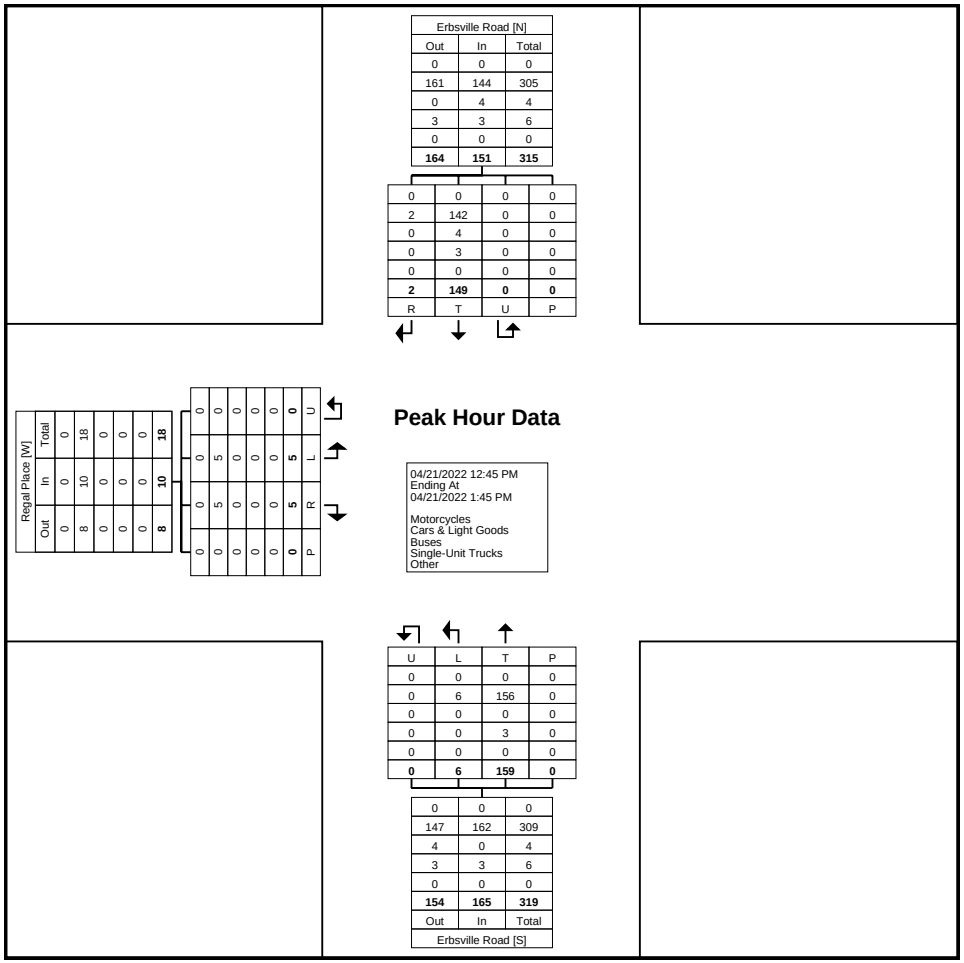
Turning Movement Peak Hour Data (12:45 PM)

Start Time	Regal Place Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
12:45 PM	0	0	0	0	0	0	37	0	0	37	34	1	0	0	35	72
1:00 PM	2	1	0	0	3	2	36	0	0	38	46	0	0	0	46	87
1:15 PM	3	0	0	0	3	2	44	0	0	46	29	0	0	0	29	78
1:30 PM	0	4	0	0	4	2	42	0	0	44	40	1	0	0	41	89
Total	5	5	0	0	10	6	159	0	0	165	149	2	0	0	151	326
Approach %	50.0	50.0	0.0	-	-	3.6	96.4	0.0	-	-	98.7	1.3	0.0	-	-	-
Total %	1.5	1.5	0.0	-	3.1	1.8	48.8	0.0	-	50.6	45.7	0.6	0.0	-	46.3	-
PHF	0.417	0.313	0.000	-	0.625	0.750	0.903	0.000	-	0.897	0.810	0.500	0.000	-	0.821	0.916
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	5	5	0	-	10	6	156	0	-	162	142	2	0	-	144	316
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	98.1	-	-	98.2	95.3	100.0	-	-	95.4	96.9
Buses	0	0	0	-	0	0	0	0	-	0	4	0	0	-	4	4
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	2.7	0.0	-	-	2.6	1.2
Single-Unit Trucks	0	0	0	-	0	0	3	0	-	3	3	0	0	-	3	6
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.9	-	-	1.8	2.0	0.0	-	-	2.0	1.8
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	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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Count Name: Erbsville Road & Regal Place
Site Code: 220137
Start Date: 04/21/2022



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

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Count Name: Erbsville Road & Regal Place
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Start Date: 04/21/2022

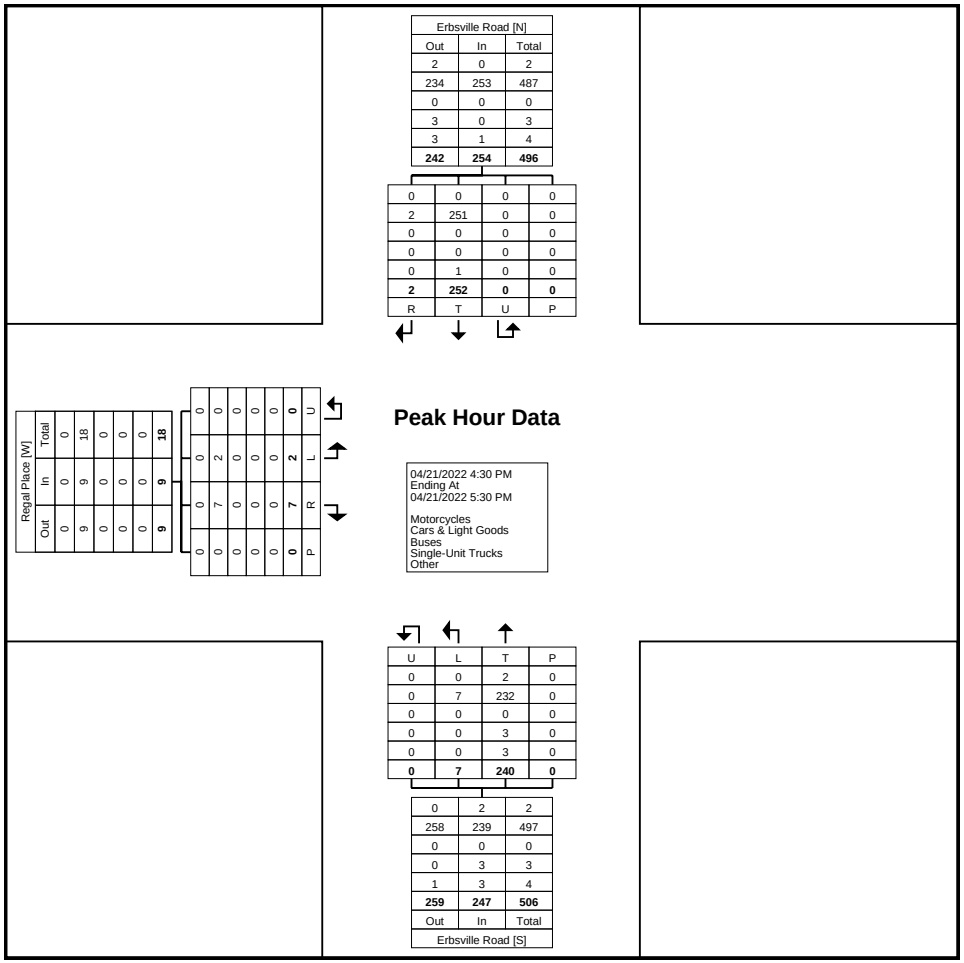
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Regal Place Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	0	2	0	0	2	4	69	0	0	73	68	1	0	0	69	144
4:45 PM	1	0	0	0	1	2	56	0	0	58	68	0	0	0	68	127
5:00 PM	0	2	0	0	2	0	60	0	0	60	60	0	0	0	60	122
5:15 PM	1	3	0	0	4	1	55	0	0	56	56	1	0	0	57	117
Total	2	7	0	0	9	7	240	0	0	247	252	2	0	0	254	510
Approach %	22.2	77.8	0.0	-	-	2.8	97.2	0.0	-	-	99.2	0.8	0.0	-	-	-
Total %	0.4	1.4	0.0	-	1.8	1.4	47.1	0.0	-	48.4	49.4	0.4	0.0	-	49.8	-
PHF	0.500	0.583	0.000	-	0.563	0.438	0.870	0.000	-	0.846	0.926	0.500	0.000	-	0.920	0.885
Motorcycles	0	0	0	-	0	0	2	0	-	2	0	0	0	-	0	2
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.8	-	-	0.8	0.0	0.0	-	-	0.0	0.4
Cars & Light Goods	2	7	0	-	9	7	232	0	-	239	251	2	0	-	253	501
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	96.7	-	-	96.8	99.6	100.0	-	-	99.6	98.2
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	3	0	-	3	0	0	0	-	0	3
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.3	-	-	1.2	0.0	0.0	-	-	0.0	0.6
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.4	-	-	0.4	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	-	0	0	2	0	-	2	1	0	0	-	1	3
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.8	-	-	0.8	0.4	0.0	-	-	0.4	0.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Erbsville Road & Regal Place
Site Code: 220137
Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Forest Gate Cres
Site Code: 220137
Start Date: 04/21/2022

Turning Movement Data

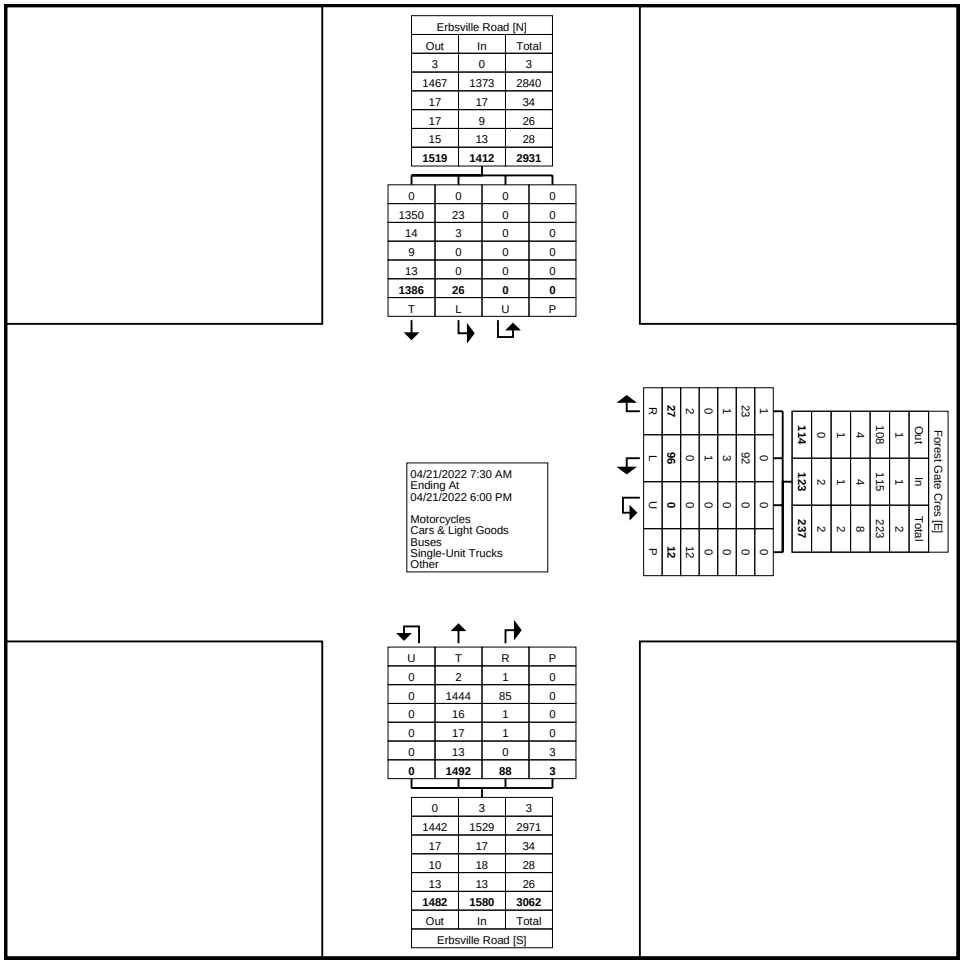
Start Time	Forest Gate Cres Westbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	6	1	0	0	7	37	4	0	0	41	0	25	0	0	25	73
7:45 AM	2	1	0	0	3	50	0	0	0	50	0	51	0	0	51	104
Hourly Total	8	2	0	0	10	87	4	0	0	91	0	76	0	0	76	177
8:00 AM	3	1	0	0	4	48	0	0	0	48	1	42	0	0	43	95
8:15 AM	11	1	0	0	12	36	5	0	0	41	2	55	0	0	57	110
8:30 AM	6	0	0	0	6	44	7	0	0	51	0	42	0	0	42	99
8:45 AM	5	0	0	0	5	41	3	0	0	44	2	50	0	0	52	101
Hourly Total	25	2	0	0	27	169	15	0	0	184	5	189	0	0	194	405
9:00 AM	4	1	0	0	5	26	2	0	0	28	0	30	0	0	30	63
9:15 AM	1	0	0	0	1	37	2	0	0	39	0	38	0	0	38	78
9:30 AM	2	2	0	0	4	43	0	0	0	43	0	40	0	0	40	87
9:45 AM	1	0	0	0	1	31	2	0	0	33	0	37	0	0	37	71
Hourly Total	8	3	0	0	11	137	6	0	0	143	0	145	0	0	145	299
10:00 AM	3	1	0	0	4	35	1	0	0	36	0	26	0	0	26	66
10:15 AM	1	0	0	0	1	35	0	0	0	35	0	30	0	0	30	66
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	4	1	0	0	5	70	1	0	0	71	0	56	0	0	56	132
12:00 PM	3	0	0	0	3	37	2	0	0	39	0	30	0	0	30	72
12:15 PM	2	1	0	0	3	28	3	0	0	31	0	36	0	0	36	70
12:30 PM	2	2	0	0	4	48	1	0	0	49	0	32	0	0	32	85
12:45 PM	1	0	0	0	1	36	3	0	0	39	0	34	0	0	34	74
Hourly Total	8	3	0	0	11	149	9	0	0	158	0	132	0	0	132	301
1:00 PM	1	1	0	0	2	38	3	0	0	41	1	46	0	0	47	90
1:15 PM	3	0	0	1	3	47	2	0	0	49	0	28	0	0	28	80
1:30 PM	0	0	0	0	0	46	2	0	0	48	1	42	0	0	43	91
1:45 PM	6	0	0	1	6	32	2	0	0	34	0	35	0	0	35	75
Hourly Total	10	1	0	2	11	163	9	0	0	172	2	151	0	0	153	336
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	0	0	0	1	61	2	0	0	63	1	44	0	0	45	109
3:15 PM	2	2	0	0	4	58	1	0	3	59	2	42	0	0	44	107
3:30 PM	4	1	0	0	5	54	4	0	0	58	1	50	0	0	51	114
3:45 PM	3	1	0	0	4	79	3	0	0	82	2	51	0	0	53	139
Hourly Total	10	4	0	0	14	252	10	0	3	262	6	187	0	0	193	469
4:00 PM	2	0	0	1	2	59	0	0	0	59	1	46	0	0	47	108
4:15 PM	2	0	0	0	2	53	4	0	0	57	1	46	0	0	47	106
4:30 PM	4	2	0	3	6	72	2	0	0	74	2	67	0	0	69	149

4:45 PM	5	0	0	3	5	58	4	0	0	62	1	66	0	0	67	134
Hourly Total	13	2	0	7	15	242	10	0	0	252	5	225	0	0	230	497
5:00 PM	2	1	0	1	3	58	6	0	0	64	1	63	0	0	64	131
5:15 PM	2	2	0	0	4	56	6	0	0	62	1	58	0	0	59	125
5:30 PM	3	3	0	0	6	54	5	0	0	59	4	62	0	0	66	131
5:45 PM	3	3	0	2	6	55	7	0	0	62	2	42	0	0	44	112
Hourly Total	10	9	0	3	19	223	24	0	0	247	8	225	0	0	233	499
Grand Total	96	27	0	12	123	1492	88	0	3	1580	26	1386	0	0	1412	3115
Approach %	78.0	22.0	0.0	-	-	94.4	5.6	0.0	-	-	1.8	98.2	0.0	-	-	-
Total %	3.1	0.9	0.0	-	3.9	47.9	2.8	0.0	-	50.7	0.8	44.5	0.0	-	45.3	-
Motorcycles	0	1	0	-	1	2	1	0	-	3	0	0	0	-	0	4
% Motorcycles	0.0	3.7	-	-	0.8	0.1	1.1	-	-	0.2	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	92	23	0	-	115	1444	85	0	-	1529	23	1350	0	-	1373	3017
% Cars & Light Goods	95.8	85.2	-	-	93.5	96.8	96.6	-	-	96.8	88.5	97.4	-	-	97.2	96.9
Buses	3	1	0	-	4	16	1	0	-	17	3	14	0	-	17	38
% Buses	3.1	3.7	-	-	3.3	1.1	1.1	-	-	1.1	11.5	1.0	-	-	1.2	1.2
Single-Unit Trucks	1	0	0	-	1	17	1	0	-	18	0	9	0	-	9	28
% Single-Unit Trucks	1.0	0.0	-	-	0.8	1.1	1.1	-	-	1.1	0.0	0.6	-	-	0.6	0.9
Articulated Trucks	0	0	0	-	0	5	0	0	-	5	0	10	0	-	10	15
% Articulated Trucks	0.0	0.0	-	-	0.0	0.3	0.0	-	-	0.3	0.0	0.7	-	-	0.7	0.5
Bicycles on Road	0	2	0	-	2	8	0	0	-	8	0	3	0	-	3	13
% Bicycles on Road	0.0	7.4	-	-	1.6	0.5	0.0	-	-	0.5	0.0	0.2	-	-	0.2	0.4
Bicycles on Crosswalk	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	16.7	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	10	-	-	-	-	3	-	-	-	-	0	-	-
% Pedestrians	-	-	-	83.3	-	-	-	-	100.0	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Forest Gate Cres
Site Code: 220137
Start Date: 04/21/2022



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: Erbsville Road & Forest Gate Cres
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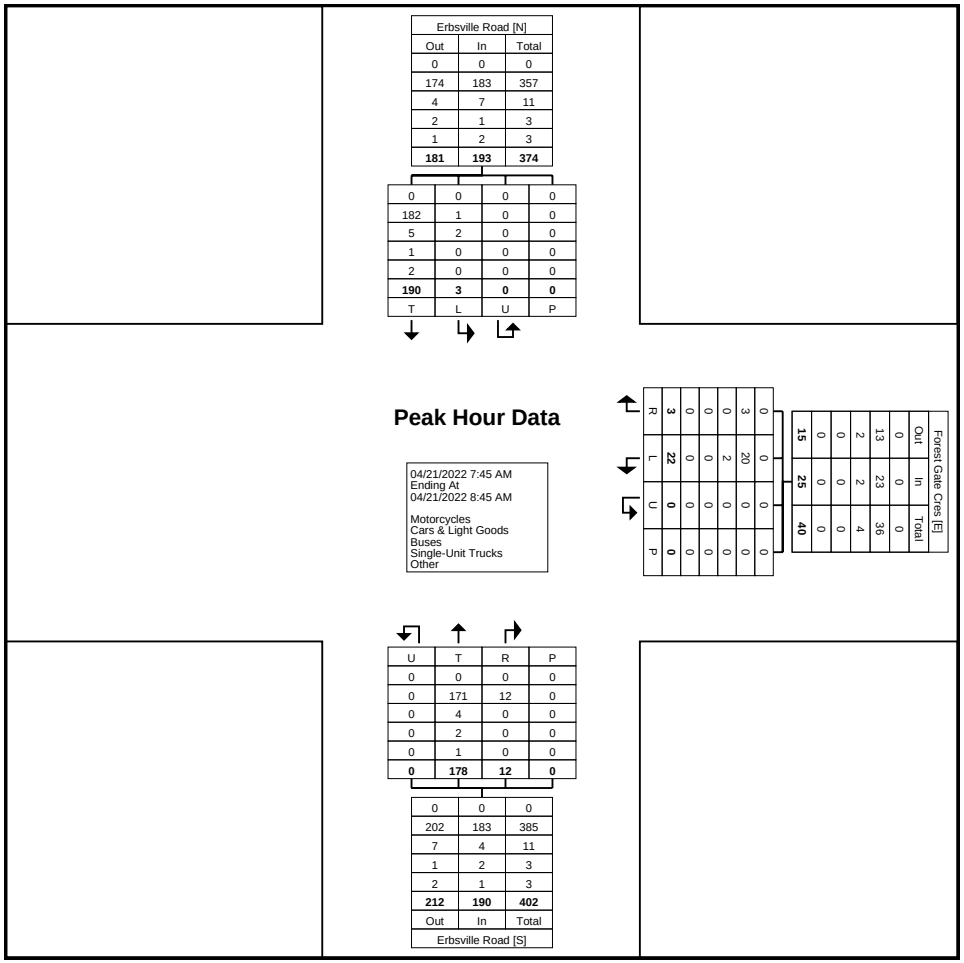
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Forest Gate Cres Westbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:45 AM	2	1	0	0	3	50	0	0	0	50	0	51	0	0	51	104
8:00 AM	3	1	0	0	4	48	0	0	0	48	1	42	0	0	43	95
8:15 AM	11	1	0	0	12	36	5	0	0	41	2	55	0	0	57	110
8:30 AM	6	0	0	0	6	44	7	0	0	51	0	42	0	0	42	99
Total	22	3	0	0	25	178	12	0	0	190	3	190	0	0	193	408
Approach %	88.0	12.0	0.0	-	-	93.7	6.3	0.0	-	-	1.6	98.4	0.0	-	-	-
Total %	5.4	0.7	0.0	-	6.1	43.6	2.9	0.0	-	46.6	0.7	46.6	0.0	-	47.3	-
PHF	0.500	0.750	0.000	-	0.521	0.890	0.429	0.000	-	0.931	0.375	0.864	0.000	-	0.846	0.927
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	20	3	0	-	23	171	12	0	-	183	1	182	0	-	183	389
% Cars & Light Goods	90.9	100.0	-	-	92.0	96.1	100.0	-	-	96.3	33.3	95.8	-	-	94.8	95.3
Buses	2	0	0	-	2	4	0	0	-	4	2	5	0	-	7	13
% Buses	9.1	0.0	-	-	8.0	2.2	0.0	-	-	2.1	66.7	2.6	-	-	3.6	3.2
Single-Unit Trucks	0	0	0	-	0	2	0	0	-	2	0	1	0	-	1	3
% Single-Unit Trucks	0.0	0.0	-	-	0.0	1.1	0.0	-	-	1.1	0.0	0.5	-	-	0.5	0.7
Articulated Trucks	0	0	0	-	0	1	0	0	-	1	0	2	0	-	2	3
% Articulated Trucks	0.0	0.0	-	-	0.0	0.6	0.0	-	-	0.5	0.0	1.1	-	-	1.0	0.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Forest Gate Cres
Site Code: 220137
Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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Count Name: Erbsville Road & Forest Gate Cres
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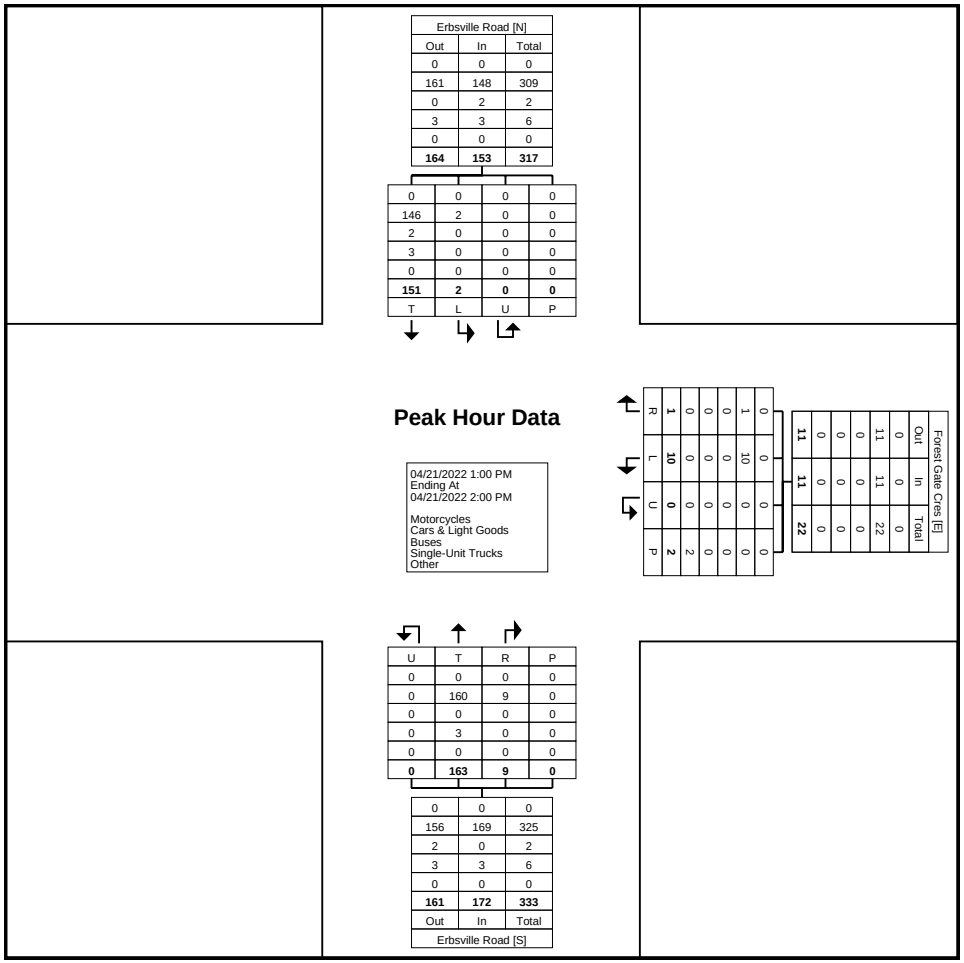
Turning Movement Peak Hour Data (1:00 PM)

Start Time	Forest Gate Cres Westbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
1:00 PM	1	1	0	0	2	38	3	0	0	41	1	46	0	0	47	90
1:15 PM	3	0	0	1	3	47	2	0	0	49	0	28	0	0	28	80
1:30 PM	0	0	0	0	0	46	2	0	0	48	1	42	0	0	43	91
1:45 PM	6	0	0	1	6	32	2	0	0	34	0	35	0	0	35	75
Total	10	1	0	2	11	163	9	0	0	172	2	151	0	0	153	336
Approach %	90.9	9.1	0.0	-	-	94.8	5.2	0.0	-	-	1.3	98.7	0.0	-	-	-
Total %	3.0	0.3	0.0	-	3.3	48.5	2.7	0.0	-	51.2	0.6	44.9	0.0	-	45.5	-
PHF	0.417	0.250	0.000	-	0.458	0.867	0.750	0.000	-	0.878	0.500	0.821	0.000	-	0.814	0.923
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	10	1	0	-	11	160	9	0	-	169	2	146	0	-	148	328
% Cars & Light Goods	100.0	100.0	-	-	100.0	98.2	100.0	-	-	98.3	100.0	96.7	-	-	96.7	97.6
Buses	0	0	0	-	0	0	0	0	-	0	0	2	0	-	2	2
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	1.3	-	-	1.3	0.6
Single-Unit Trucks	0	0	0	-	0	3	0	0	-	3	0	3	0	-	3	6
% Single-Unit Trucks	0.0	0.0	-	-	0.0	1.8	0.0	-	-	1.7	0.0	2.0	-	-	2.0	1.8
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	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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Count Name: Erbsville Road & Forest Gate Cres
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Start Date: 04/21/2022



Turning Movement Peak Hour Data Plot (1:00 PM)

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Count Name: Erbsville Road & Forest Gate Cres
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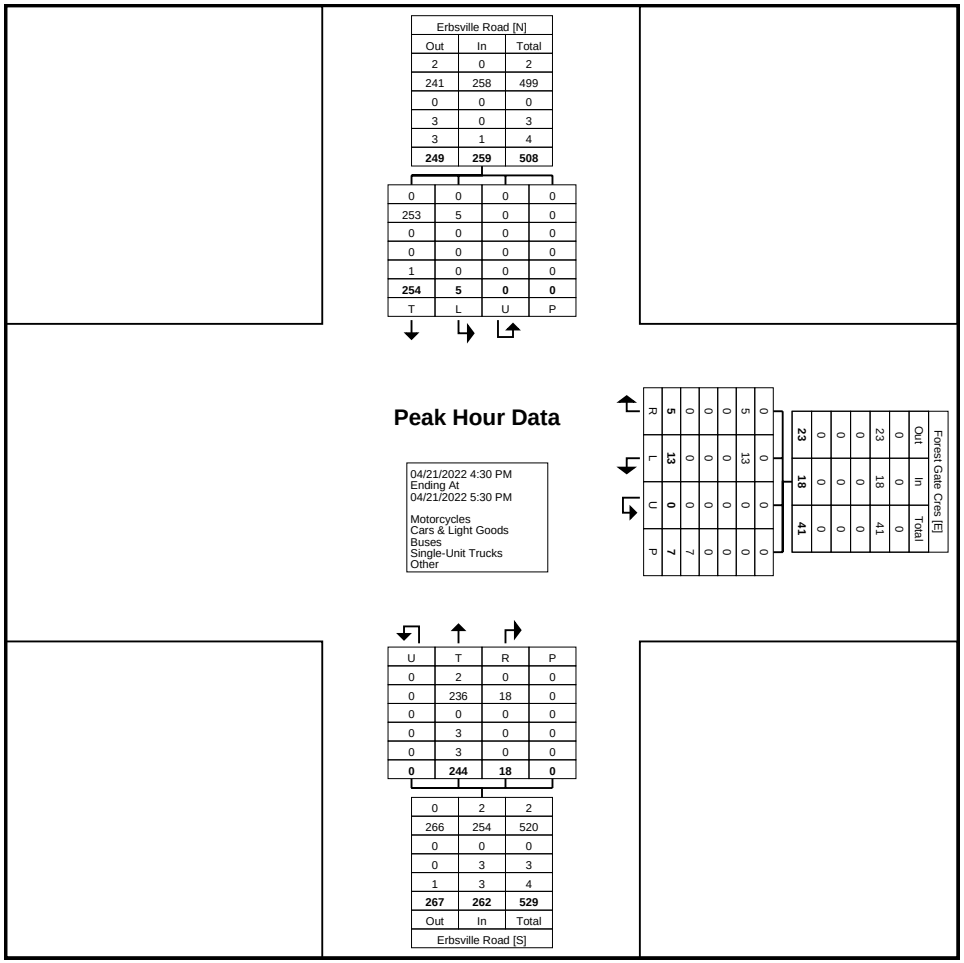
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Forest Gate Cres Westbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
4:30 PM	4	2	0	3	6	72	2	0	0	74	2	67	0	0	69	149
4:45 PM	5	0	0	3	5	58	4	0	0	62	1	66	0	0	67	134
5:00 PM	2	1	0	1	3	58	6	0	0	64	1	63	0	0	64	131
5:15 PM	2	2	0	0	4	56	6	0	0	62	1	58	0	0	59	125
Total	13	5	0	7	18	244	18	0	0	262	5	254	0	0	259	539
Approach %	72.2	27.8	0.0	-	-	93.1	6.9	0.0	-	-	1.9	98.1	0.0	-	-	-
Total %	2.4	0.9	0.0	-	3.3	45.3	3.3	0.0	-	48.6	0.9	47.1	0.0	-	48.1	-
PHF	0.650	0.625	0.000	-	0.750	0.847	0.750	0.000	-	0.885	0.625	0.948	0.000	-	0.938	0.904
Motorcycles	0	0	0	-	0	2	0	0	-	2	0	0	0	-	0	2
% Motorcycles	0.0	0.0	-	-	0.0	0.8	0.0	-	-	0.8	0.0	0.0	-	-	0.0	0.4
Cars & Light Goods	13	5	0	-	18	236	18	0	-	254	5	253	0	-	258	530
% Cars & Light Goods	100.0	100.0	-	-	100.0	96.7	100.0	-	-	96.9	100.0	99.6	-	-	99.6	98.3
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	3	0	0	-	3	0	0	0	-	0	3
% Single-Unit Trucks	0.0	0.0	-	-	0.0	1.2	0.0	-	-	1.1	0.0	0.0	-	-	0.0	0.6
Articulated Trucks	0	0	0	-	0	1	0	0	-	1	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	-	-	0.0	0.4	0.0	-	-	0.4	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	-	0	2	0	0	-	2	0	1	0	-	1	3
% Bicycles on Road	0.0	0.0	-	-	0.0	0.8	0.0	-	-	0.8	0.0	0.4	-	-	0.4	0.6
Bicycles on Crosswalk	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	28.6	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	5	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	71.4	-	-	-	-	-	-	-	-	-	-	-	-

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Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Wideman Road
Site Code: 220137
Start Date: 04/21/2022

Turning Movement Data

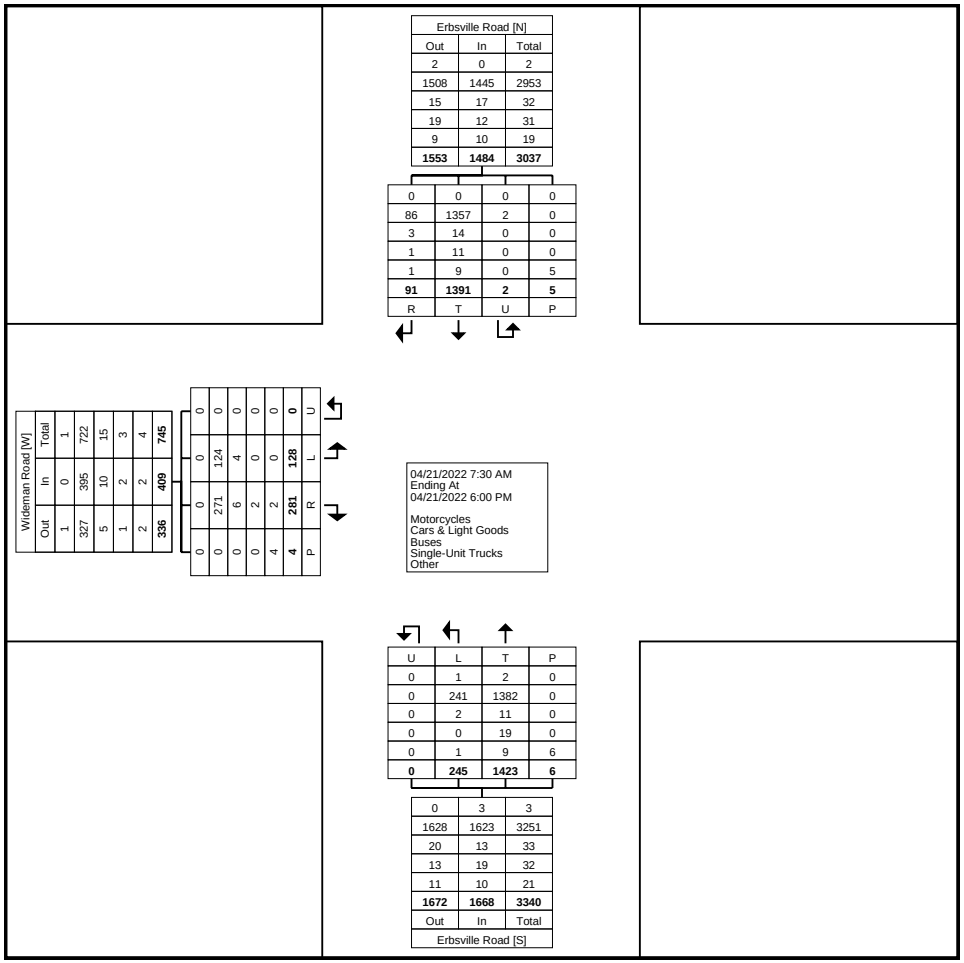
Start Time	Wideman Road Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:30 AM	1	10	0	0	11	1	37	0	0	38	30	1	0	0	31	80
7:45 AM	8	8	0	0	16	1	42	0	0	43	50	1	0	1	51	110
Hourly Total	9	18	0	0	27	2	79	0	0	81	80	2	0	1	82	190
8:00 AM	5	19	0	0	24	3	40	0	0	43	43	2	0	0	45	112
8:15 AM	13	13	0	0	26	5	29	0	0	34	58	6	0	0	64	124
8:30 AM	9	12	0	0	21	9	43	0	0	52	44	4	0	0	48	121
8:45 AM	4	10	0	0	14	7	36	0	0	43	50	4	0	0	54	111
Hourly Total	31	54	0	0	85	24	148	0	0	172	195	16	0	0	211	468
9:00 AM	4	9	0	0	13	4	25	0	0	29	34	1	0	0	35	77
9:15 AM	7	9	0	0	16	3	32	0	0	35	36	2	0	1	38	89
9:30 AM	8	8	0	0	16	7	35	0	0	42	41	1	0	0	42	100
9:45 AM	3	7	0	0	10	4	31	0	0	35	37	2	0	1	39	84
Hourly Total	22	33	0	0	55	18	123	0	0	141	148	6	0	2	154	350
10:00 AM	0	10	0	0	10	7	36	0	0	43	27	3	0	0	30	83
10:15 AM	1	3	0	0	4	4	28	0	0	32	31	0	0	0	31	67
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	13	0	0	14	11	64	0	0	75	58	3	0	0	61	150
12:00 PM	5	13	0	0	18	3	34	0	0	37	29	5	0	0	34	89
12:15 PM	1	7	0	0	8	2	30	0	0	32	36	2	0	0	38	78
12:30 PM	3	8	0	0	11	6	47	0	0	53	30	3	0	0	33	97
12:45 PM	4	7	0	0	11	8	35	0	0	43	33	2	0	0	35	89
Hourly Total	13	35	0	0	48	19	146	0	0	165	128	12	0	0	140	353
1:00 PM	2	4	0	0	6	3	40	0	0	43	44	2	0	0	46	95
1:15 PM	0	4	0	0	4	3	45	0	0	48	31	0	0	0	31	83
1:30 PM	3	8	0	0	11	9	44	0	0	53	40	0	0	0	40	104
1:45 PM	3	8	0	0	11	7	31	0	0	38	42	3	0	0	45	94
Hourly Total	8	24	0	0	32	22	160	0	0	182	157	5	0	0	162	376
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	2	6	0	1	8	9	60	0	0	69	41	3	1	0	45	122
3:15 PM	3	16	0	0	19	12	56	0	1	68	43	3	0	0	46	133
3:30 PM	2	11	0	0	13	10	53	0	1	63	53	2	0	0	55	131
3:45 PM	2	3	0	0	5	18	79	0	0	97	51	3	0	1	54	156
Hourly Total	9	36	0	1	45	49	248	0	2	297	188	11	1	1	200	542
4:00 PM	3	8	0	2	11	7	54	0	0	61	46	2	0	0	48	120
4:15 PM	6	10	0	0	16	16	51	0	0	67	43	4	0	0	47	130
4:30 PM	6	12	0	0	18	21	68	0	0	89	65	8	0	0	73	180

4:45 PM	3	2	0	1	5	13	57	0	0	70	63	7	0	0	70	145
Hourly Total	18	32	0	3	50	57	230	0	0	287	217	21	0	0	238	575
5:00 PM	1	11	0	0	12	6	63	0	0	69	62	4	0	1	66	147
5:15 PM	6	4	0	0	10	14	53	0	1	67	56	1	0	0	57	134
5:30 PM	6	12	0	0	18	12	52	0	0	64	60	8	0	0	68	150
5:45 PM	4	9	0	0	13	11	57	0	3	68	42	2	1	0	45	126
Hourly Total	17	36	0	0	53	43	225	0	4	268	220	15	1	1	236	557
Grand Total	128	281	0	4	409	245	1423	0	6	1668	1391	91	2	5	1484	3561
Approach %	31.3	68.7	0.0	-	-	14.7	85.3	0.0	-	-	93.7	6.1	0.1	-	-	-
Total %	3.6	7.9	0.0	-	11.5	6.9	40.0	0.0	-	46.8	39.1	2.6	0.1	-	41.7	-
Motorcycles	0	0	0	-	0	1	2	0	-	3	0	0	0	-	0	3
% Motorcycles	0.0	0.0	-	-	0.0	0.4	0.1	-	-	0.2	0.0	0.0	0.0	-	0.0	0.1
Cars & Light Goods	124	271	0	-	395	241	1382	0	-	1623	1357	86	2	-	1445	3463
% Cars & Light Goods	96.9	96.4	-	-	96.6	98.4	97.1	-	-	97.3	97.6	94.5	100.0	-	97.4	97.2
Buses	4	6	0	-	10	2	11	0	-	13	14	3	0	-	17	40
% Buses	3.1	2.1	-	-	2.4	0.8	0.8	-	-	0.8	1.0	3.3	0.0	-	1.1	1.1
Single-Unit Trucks	0	2	0	-	2	0	19	0	-	19	11	1	0	-	12	33
% Single-Unit Trucks	0.0	0.7	-	-	0.5	0.0	1.3	-	-	1.1	0.8	1.1	0.0	-	0.8	0.9
Articulated Trucks	0	0	0	-	0	0	4	0	-	4	6	0	0	-	6	10
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.3	-	-	0.2	0.4	0.0	0.0	-	0.4	0.3
Bicycles on Road	0	2	0	-	2	1	5	0	-	6	3	1	0	-	4	12
% Bicycles on Road	0.0	0.7	-	-	0.5	0.4	0.4	-	-	0.4	0.2	1.1	0.0	-	0.3	0.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	4	-	-	-	-	6	-	-	-	-	5	-	-
% 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: Erbsville Road & Wideman Road
Site Code: 220137
Start Date: 04/21/2022



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: Erbsville Road & Wideman Road
Site Code: 220137
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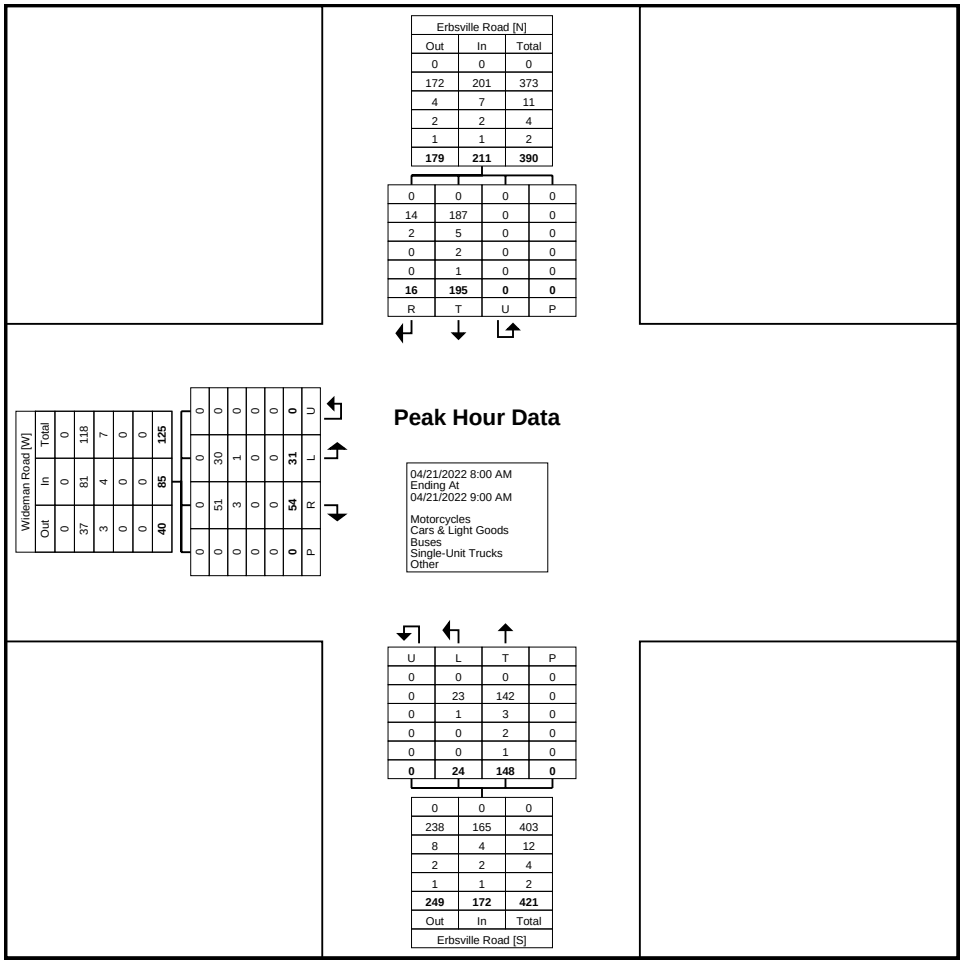
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Wideman Road Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:00 AM	5	19	0	0	24	3	40	0	0	43	43	2	0	0	45	112
8:15 AM	13	13	0	0	26	5	29	0	0	34	58	6	0	0	64	124
8:30 AM	9	12	0	0	21	9	43	0	0	52	44	4	0	0	48	121
8:45 AM	4	10	0	0	14	7	36	0	0	43	50	4	0	0	54	111
Total	31	54	0	0	85	24	148	0	0	172	195	16	0	0	211	468
Approach %	36.5	63.5	0.0	-	-	14.0	86.0	0.0	-	-	92.4	7.6	0.0	-	-	-
Total %	6.6	11.5	0.0	-	18.2	5.1	31.6	0.0	-	36.8	41.7	3.4	0.0	-	45.1	-
PHF	0.596	0.711	0.000	-	0.817	0.667	0.860	0.000	-	0.827	0.841	0.667	0.000	-	0.824	0.944
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	30	51	0	-	81	23	142	0	-	165	187	14	0	-	201	447
% Cars & Light Goods	96.8	94.4	-	-	95.3	95.8	95.9	-	-	95.9	95.9	87.5	-	-	95.3	95.5
Buses	1	3	0	-	4	1	3	0	-	4	5	2	0	-	7	15
% Buses	3.2	5.6	-	-	4.7	4.2	2.0	-	-	2.3	2.6	12.5	-	-	3.3	3.2
Single-Unit Trucks	0	0	0	-	0	0	2	0	-	2	2	0	0	-	2	4
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.4	-	-	1.2	1.0	0.0	-	-	0.9	0.9
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	1	0	0	-	1	2
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.7	-	-	0.6	0.5	0.0	-	-	0.5	0.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Wideman Road
Site Code: 220137
Start Date: 04/21/2022



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: Erbsville Road & Wideman Road
Site Code: 220137
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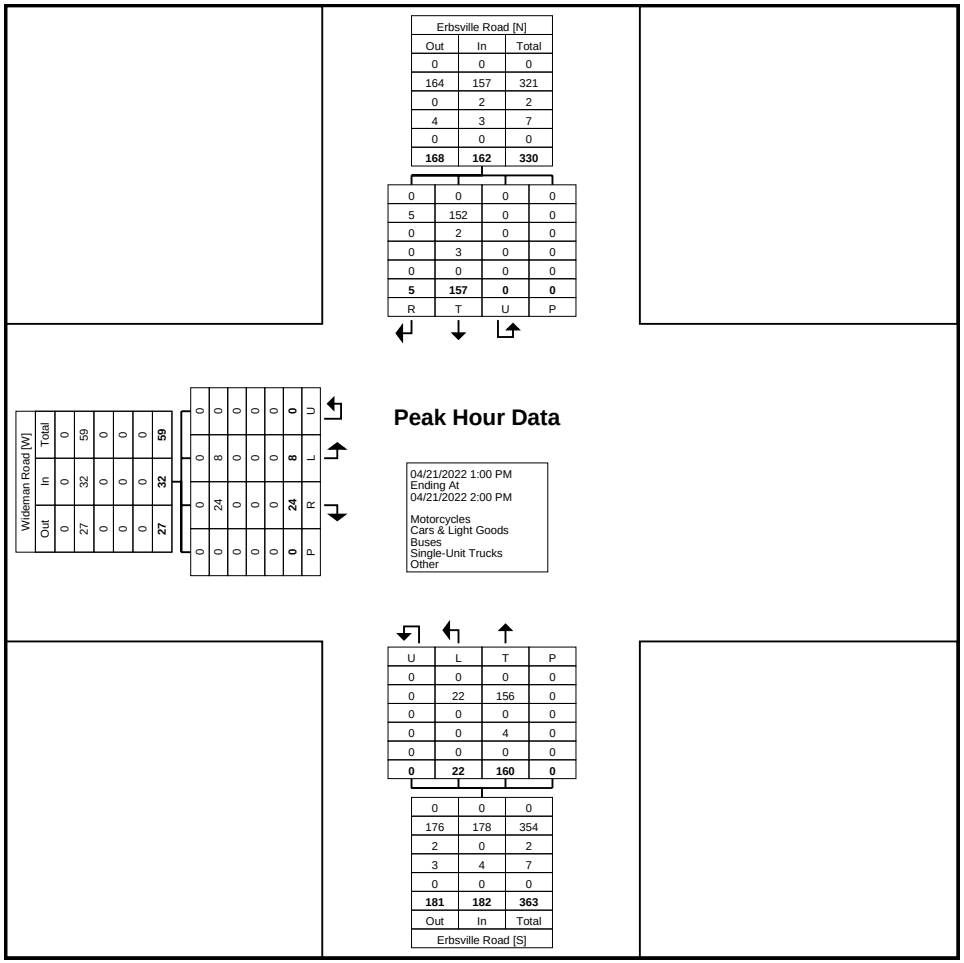
Turning Movement Peak Hour Data (1:00 PM)

Start Time	Wideman Road Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
1:00 PM	2	4	0	0	6	3	40	0	0	43	44	2	0	0	46	95
1:15 PM	0	4	0	0	4	3	45	0	0	48	31	0	0	0	31	83
1:30 PM	3	8	0	0	11	9	44	0	0	53	40	0	0	0	40	104
1:45 PM	3	8	0	0	11	7	31	0	0	38	42	3	0	0	45	94
Total	8	24	0	0	32	22	160	0	0	182	157	5	0	0	162	376
Approach %	25.0	75.0	0.0	-	-	12.1	87.9	0.0	-	-	96.9	3.1	0.0	-	-	-
Total %	2.1	6.4	0.0	-	8.5	5.9	42.6	0.0	-	48.4	41.8	1.3	0.0	-	43.1	-
PHF	0.667	0.750	0.000	-	0.727	0.611	0.889	0.000	-	0.858	0.892	0.417	0.000	-	0.880	0.904
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	8	24	0	-	32	22	156	0	-	178	152	5	0	-	157	367
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	97.5	-	-	97.8	96.8	100.0	-	-	96.9	97.6
Buses	0	0	0	-	0	0	0	0	-	0	2	0	0	-	2	2
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	1.3	0.0	-	-	1.2	0.5
Single-Unit Trucks	0	0	0	-	0	0	4	0	-	4	3	0	0	-	3	7
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	2.5	-	-	2.2	1.9	0.0	-	-	1.9	1.9
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	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Wideman Road
Site Code: 220137
Start Date: 04/21/2022



Turning Movement Peak Hour Data Plot (1:00 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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519-896-3163 cbowness@ptsl.com

Count Name: Erbsville Road & Wideman Road
Site Code: 220137
Start Date: 04/21/2022

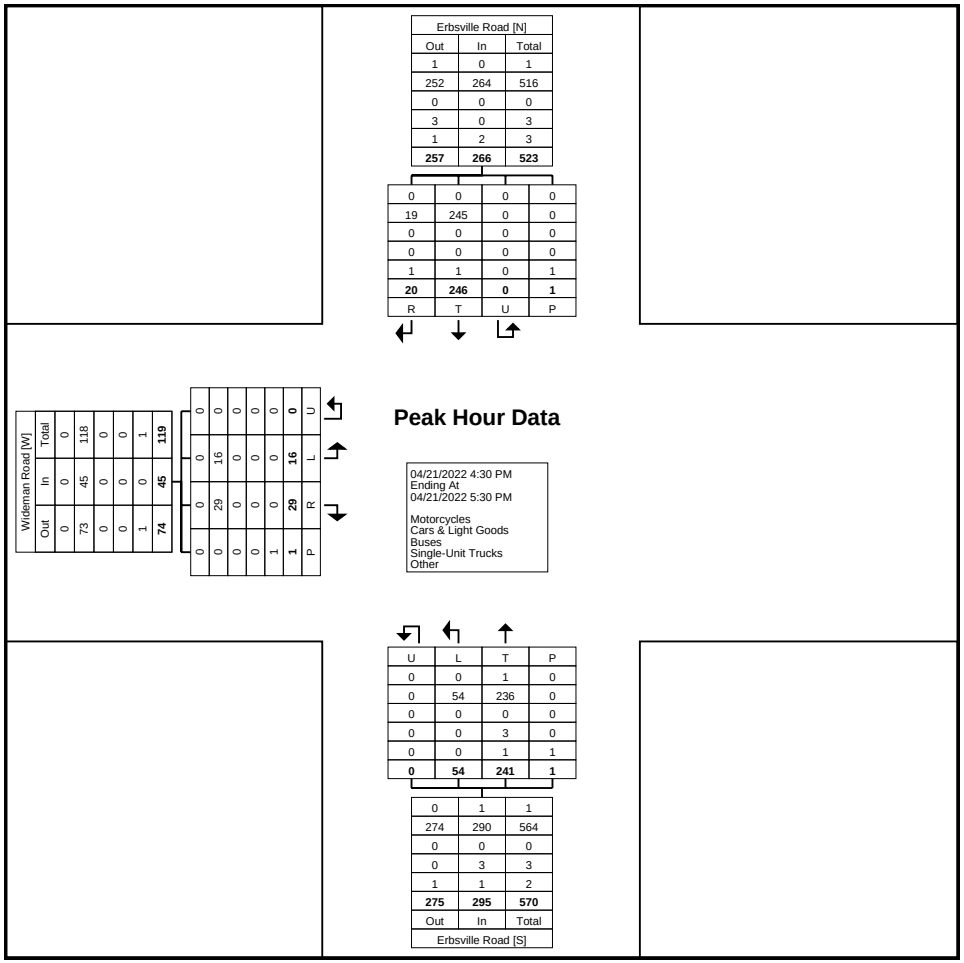
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Wideman Road Eastbound					Erbsville Road Northbound					Erbsville Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	6	12	0	0	18	21	68	0	0	89	65	8	0	0	73	180
4:45 PM	3	2	0	1	5	13	57	0	0	70	63	7	0	0	70	145
5:00 PM	1	11	0	0	12	6	63	0	0	69	62	4	0	1	66	147
5:15 PM	6	4	0	0	10	14	53	0	1	67	56	1	0	0	57	134
Total	16	29	0	1	45	54	241	0	1	295	246	20	0	1	266	606
Approach %	35.6	64.4	0.0	-	-	18.3	81.7	0.0	-	-	92.5	7.5	0.0	-	-	-
Total %	2.6	4.8	0.0	-	7.4	8.9	39.8	0.0	-	48.7	40.6	3.3	0.0	-	43.9	-
PHF	0.667	0.604	0.000	-	0.625	0.643	0.886	0.000	-	0.829	0.946	0.625	0.000	-	0.911	0.842
Motorcycles	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Motorcycles	0.0	0.0	-	-	0.0	0.0	0.4	-	-	0.3	0.0	0.0	-	-	0.0	0.2
Cars & Light Goods	16	29	0	-	45	54	236	0	-	290	245	19	0	-	264	599
% Cars & Light Goods	100.0	100.0	-	-	100.0	100.0	97.9	-	-	98.3	99.6	95.0	-	-	99.2	98.8
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	3	0	-	3	0	0	0	-	0	3
% Single-Unit Trucks	0.0	0.0	-	-	0.0	0.0	1.2	-	-	1.0	0.0	0.0	-	-	0.0	0.5
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.4	-	-	0.3	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	1	1	0	-	2	2
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.4	5.0	-	-	0.8	0.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
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Count Name: Erbsville Road & Wideman Road
Site Code: 220137
Start Date: 04/21/2022



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

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Laurelwood Drive
Site Code: 220137
Start Date: 04/21/2022

Turning Movement Data

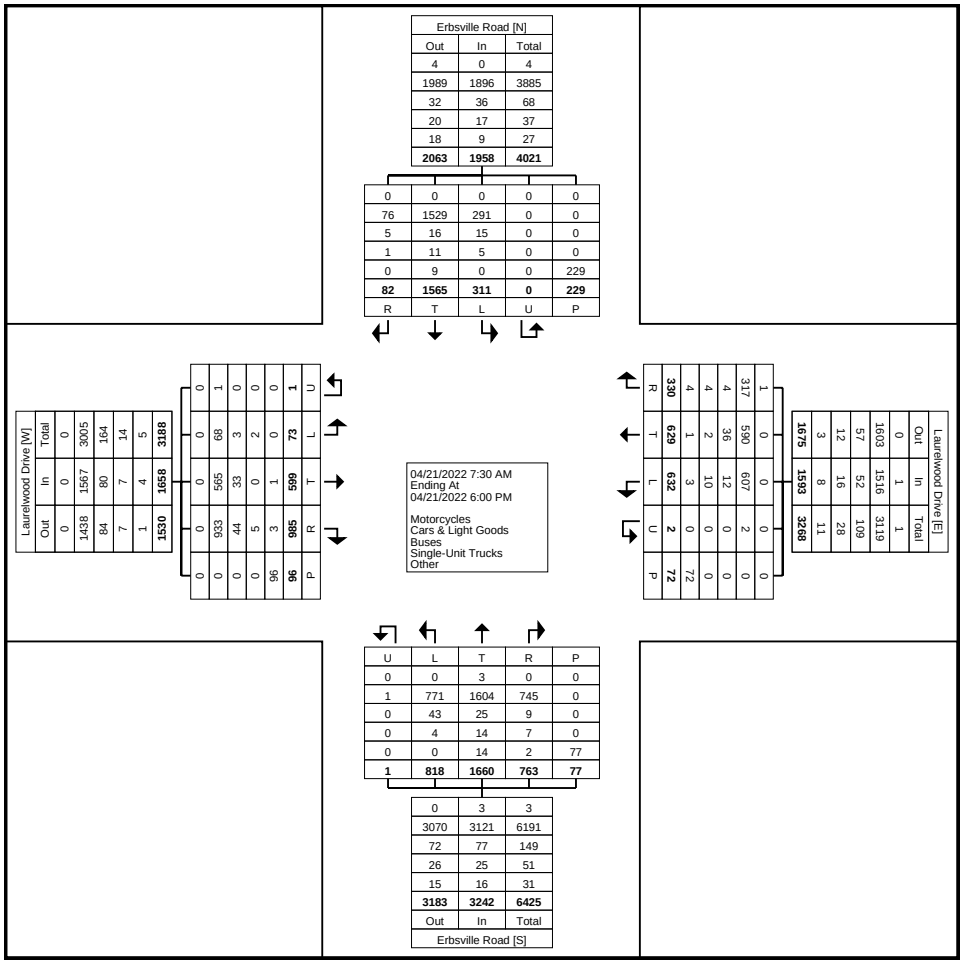
Start Time	Laurelwood Drive Eastbound						Laurelwood Drive Westbound						Erbsville Road Northbound						Erbsville Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	2	15	18	0	1	35	4	11	6	0	0	21	10	41	4	0	1	55	10	32	0	0	0	42	153
7:45 AM	2	15	22	0	0	39	11	10	9	0	0	30	12	63	10	0	0	85	5	42	2	0	0	49	203
Hourly Total	4	30	40	0	1	74	15	21	15	0	0	51	22	104	14	0	1	140	15	74	2	0	0	91	356
8:00 AM	4	34	67	0	8	105	9	38	27	0	7	74	58	94	17	0	5	169	17	54	3	0	17	74	422
8:15 AM	4	71	83	0	24	158	14	72	30	0	22	116	55	126	42	0	14	223	28	110	12	0	46	150	647
8:30 AM	1	75	62	0	3	138	14	50	10	1	3	75	45	56	20	0	2	121	28	87	9	0	5	124	458
8:45 AM	1	26	36	0	0	63	17	26	9	0	1	52	30	34	27	0	2	91	15	52	5	0	2	72	278
Hourly Total	10	206	248	0	35	464	54	186	76	1	33	317	188	310	106	0	23	604	88	303	29	0	70	420	1805
9:00 AM	4	37	43	0	0	84	39	29	7	0	0	75	37	33	49	0	3	119	16	34	5	0	1	55	333
9:15 AM	3	20	33	0	0	56	30	11	5	0	1	46	13	29	10	0	0	52	8	42	1	0	1	51	205
9:30 AM	0	12	20	0	0	32	13	11	8	0	1	32	22	47	13	0	0	82	6	44	1	0	0	51	197
9:45 AM	1	15	30	0	3	46	10	10	5	0	1	25	23	27	17	0	1	67	10	34	2	0	2	46	184
Hourly Total	8	84	126	0	3	218	92	61	25	0	3	178	95	136	89	0	4	320	40	154	9	0	4	203	919
10:00 AM	2	7	20	0	1	29	10	6	5	0	0	21	12	44	17	0	0	73	4	26	2	0	1	32	155
10:15 AM	2	9	21	0	0	32	12	13	6	0	1	31	13	27	15	0	1	55	4	33	1	0	0	38	156
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	4	16	41	0	1	61	22	19	11	0	1	52	25	71	32	0	1	128	8	59	3	0	1	70	311
12:00 PM	1	6	20	0	1	27	19	12	3	0	3	34	12	34	15	0	0	61	5	28	1	0	1	34	156
12:15 PM	0	8	14	0	1	22	12	4	2	0	0	18	17	24	21	0	0	62	6	38	0	0	1	44	146
12:30 PM	2	8	21	0	0	31	13	10	11	0	3	34	9	42	15	0	3	66	6	30	0	0	4	36	167
12:45 PM	0	7	17	0	1	24	23	8	9	0	0	40	20	38	16	0	0	74	4	41	0	0	0	45	183
Hourly Total	3	29	72	0	3	104	67	34	25	0	6	126	58	138	67	0	3	263	21	137	1	0	6	159	652
1:00 PM	5	17	19	0	3	41	16	15	9	0	0	40	26	37	19	1	1	83	13	49	3	0	14	65	229
1:15 PM	5	9	24	0	1	38	11	9	7	0	1	27	22	48	21	0	0	91	6	36	2	0	4	44	200
1:30 PM	2	10	14	0	2	26	21	14	8	0	1	43	18	43	31	0	1	92	9	41	1	0	3	51	212
1:45 PM	1	9	26	0	3	36	15	11	5	0	0	31	19	40	19	0	0	78	7	47	0	0	4	54	199
Hourly Total	13	45	83	0	9	141	63	49	29	0	2	141	85	168	90	1	2	344	35	173	6	0	25	214	840
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	12	22	0	0	35	24	27	15	0	1	66	23	58	24	0	1	105	4	42	3	0	6	49	255
3:15 PM	4	14	37	0	8	55	20	19	9	0	0	48	48	62	28	0	2	138	10	51	2	0	5	63	304
3:30 PM	5	28	47	0	4	80	21	29	4	0	2	54	30	53	35	0	2	118	13	69	6	0	11	88	340
3:45 PM	5	20	36	0	5	61	39	16	15	0	1	70	36	76	34	0	0	146	7	51	1	0	24	59	336
Hourly Total	15	74	142	0	17	231	104	91	43	0	4	238	137	249	121	0	5	507	34	213	12	0	46	259	1235
4:00 PM	2	20	32	0	5	54	30	14	10	1	4	55	19	57	31	0	4	107	10	45	4	0	6	59	275
4:15 PM	2	9	29	1	7	41	17	21	7	0	2	45	20	57	33	0	3	110	7	53	1	0	19	61	257

4:30 PM	2	5	35	0	2	42	32	21	16	0	2	69	32	66	20	0	4	118	9	75	1	0	19	85	314
4:45 PM	0	14	28	0	2	42	27	17	17	0	3	61	25	67	35	0	4	127	10	58	3	0	4	71	301
Hourly Total	6	48	124	1	16	179	106	73	50	1	11	230	96	247	119	0	15	462	36	231	9	0	48	276	1147
5:00 PM	4	18	29	0	1	51	27	26	15	0	2	68	17	57	27	0	7	101	8	65	2	0	8	75	295
5:15 PM	0	13	30	0	0	43	28	27	10	0	1	65	31	62	40	0	2	133	7	51	4	0	4	62	303
5:30 PM	6	23	29	0	5	58	26	21	17	0	0	64	33	53	32	0	4	118	12	63	2	0	7	77	317
5:45 PM	0	13	21	0	5	34	28	21	14	0	9	63	31	65	26	0	10	122	7	42	3	0	10	52	271
Hourly Total	10	67	109	0	11	186	109	95	56	0	12	260	112	237	125	0	23	474	34	221	11	0	29	266	1186
Grand Total	73	599	985	1	96	1658	632	629	330	2	72	1593	818	1660	763	1	77	3242	311	1565	82	0	229	1958	8451
Approach %	4.4	36.1	59.4	0.1	-	-	39.7	39.5	20.7	0.1	-	-	25.2	51.2	23.5	0.0	-	-	15.9	79.9	4.2	0.0	-	-	-
Total %	0.9	7.1	11.7	0.0	-	19.6	7.5	7.4	3.9	0.0	-	18.8	9.7	19.6	9.0	0.0	-	38.4	3.7	18.5	1.0	0.0	-	23.2	-
Motorcycles	0	0	0	0	-	0	0	0	1	0	-	1	0	3	0	0	-	3	0	0	0	0	-	0	4
% Motorcycles	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.3	0.0	-	0.1	0.0	0.2	0.0	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	68	565	933	1	-	1567	607	590	317	2	-	1516	771	1604	745	1	-	3121	291	1529	76	0	-	1896	8100
% Cars & Light Goods	93.2	94.3	94.7	100.0	-	94.5	96.0	93.8	96.1	100.0	-	95.2	94.3	96.6	97.6	100.0	-	96.3	93.6	97.7	92.7	-	-	96.8	95.8
Buses	3	33	44	0	-	80	12	36	4	0	-	52	43	25	9	0	-	77	15	16	5	0	-	36	245
% Buses	4.1	5.5	4.5	0.0	-	4.8	1.9	5.7	1.2	0.0	-	3.3	5.3	1.5	1.2	0.0	-	2.4	4.8	1.0	6.1	-	-	1.8	2.9
Single-Unit Trucks	2	0	5	0	-	7	10	2	4	0	-	16	4	14	7	0	-	25	5	11	1	0	-	17	65
% Single-Unit Trucks	2.7	0.0	0.5	0.0	-	0.4	1.6	0.3	1.2	0.0	-	1.0	0.5	0.8	0.9	0.0	-	0.8	1.6	0.7	1.2	-	-	0.9	0.8
Articulated Trucks	0	0	1	0	-	1	3	0	1	0	-	4	0	6	1	0	-	7	0	6	0	0	-	6	18
% Articulated Trucks	0.0	0.0	0.1	0.0	-	0.1	0.5	0.0	0.3	0.0	-	0.3	0.0	0.4	0.1	0.0	-	0.2	0.0	0.4	0.0	-	-	0.3	0.2
Bicycles on Road	0	1	2	0	-	3	0	1	3	0	-	4	0	8	1	0	-	9	0	3	0	0	-	3	19
% Bicycles on Road	0.0	0.2	0.2	0.0	-	0.2	0.0	0.2	0.9	0.0	-	0.3	0.0	0.5	0.1	0.0	-	0.3	0.0	0.2	0.0	-	-	0.2	0.2
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	8	-	-
% Bicycles on Crosswalk	-	-	-	-	2.1	-	-	-	-	-	0.0	-	-	-	-	-	5.2	-	-	-	-	-	3.5	-	-
Pedestrians	-	-	-	-	94	-	-	-	-	-	72	-	-	-	-	-	73	-	-	-	-	-	221	-	-
% Pedestrians	-	-	-	-	97.9	-	-	-	-	-	100.0	-	-	-	-	-	94.8	-	-	-	-	-	96.5	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Laurelwood Drive
Site Code: 220137
Start Date: 04/21/2022



Turning Movement Data Plot

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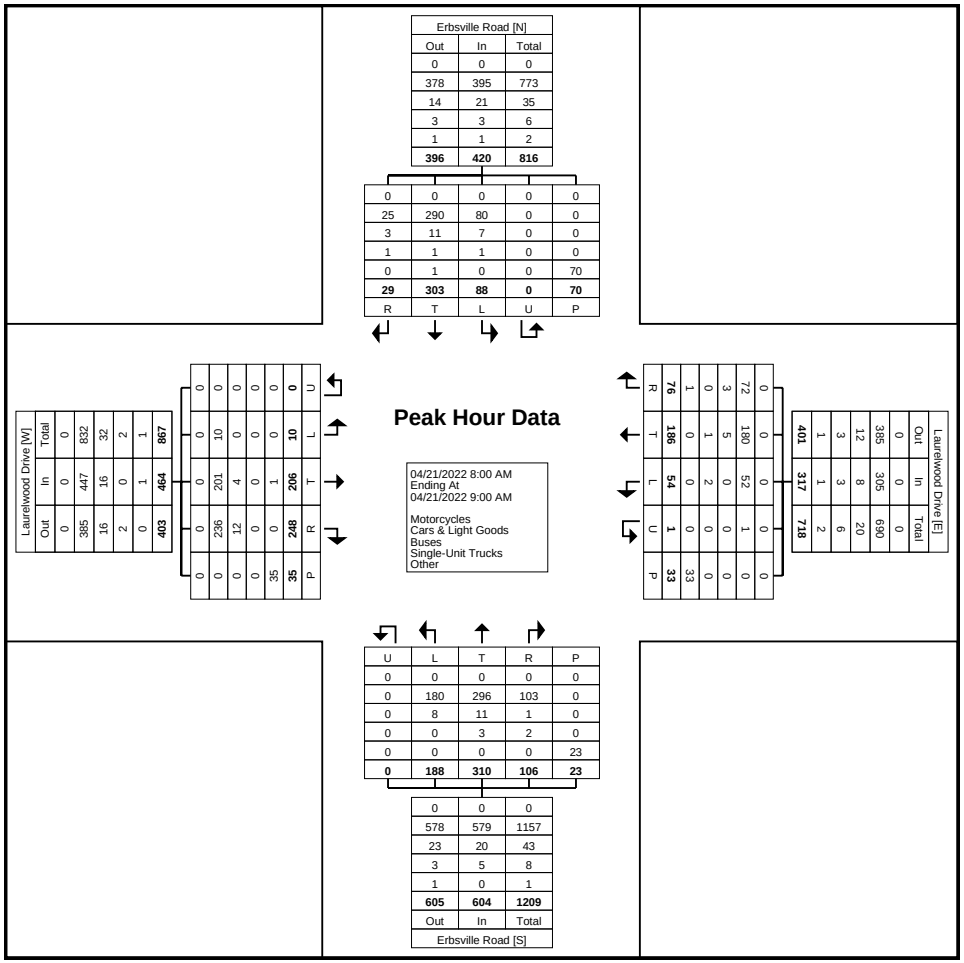
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Laurelwood Drive Eastbound						Laurelwood Drive Westbound						Erbsville Road Northbound						Erbsville Road 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	34	67	0	8	105	9	38	27	0	7	74	58	94	17	0	5	169	17	54	3	0	17	74	422
8:15 AM	4	71	83	0	24	158	14	72	30	0	22	116	55	126	42	0	14	223	28	110	12	0	46	150	647
8:30 AM	1	75	62	0	3	138	14	50	10	1	3	75	45	56	20	0	2	121	28	87	9	0	5	124	458
8:45 AM	1	26	36	0	0	63	17	26	9	0	1	52	30	34	27	0	2	91	15	52	5	0	2	72	278
Total	10	206	248	0	35	464	54	186	76	1	33	317	188	310	106	0	23	604	88	303	29	0	70	420	1805
Approach %	2.2	44.4	53.4	0.0	-	-	17.0	58.7	24.0	0.3	-	-	31.1	51.3	17.5	0.0	-	-	21.0	72.1	6.9	0.0	-	-	-
Total %	0.6	11.4	13.7	0.0	-	25.7	3.0	10.3	4.2	0.1	-	17.6	10.4	17.2	5.9	0.0	-	33.5	4.9	16.8	1.6	0.0	-	23.3	-
PHF	0.625	0.687	0.747	0.000	-	0.734	0.794	0.646	0.633	0.250	-	0.683	0.810	0.615	0.631	0.000	-	0.677	0.786	0.689	0.604	0.000	-	0.700	0.697
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	0.0
Cars & Light Goods	10	201	236	0	-	447	52	180	72	1	-	305	180	296	103	0	-	579	80	290	25	0	-	395	1726
% Cars & Light Goods	100.0	97.6	95.2	-	-	96.3	96.3	96.8	94.7	100.0	-	96.2	95.7	95.5	97.2	-	-	95.9	90.9	95.7	86.2	-	-	94.0	95.6
Buses	0	4	12	0	-	16	0	5	3	0	-	8	8	11	1	0	-	20	7	11	3	0	-	21	65
% Buses	0.0	1.9	4.8	-	-	3.4	0.0	2.7	3.9	0.0	-	2.5	4.3	3.5	0.9	-	-	3.3	8.0	3.6	10.3	-	-	5.0	3.6
Single-Unit Trucks	0	0	0	0	-	0	2	1	0	0	-	3	0	3	2	0	-	5	1	1	1	0	-	3	11
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	3.7	0.5	0.0	0.0	-	0.9	0.0	1.0	1.9	-	-	0.8	1.1	0.3	3.4	-	-	0.7	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	1.3	0.0	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.2	0.1
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.5	0.0	-	-	0.2	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	35	-	-	-	-	-	33	-	-	-	-	-	23	-	-	-	-	-	70	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Start Date: 04/21/2022



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

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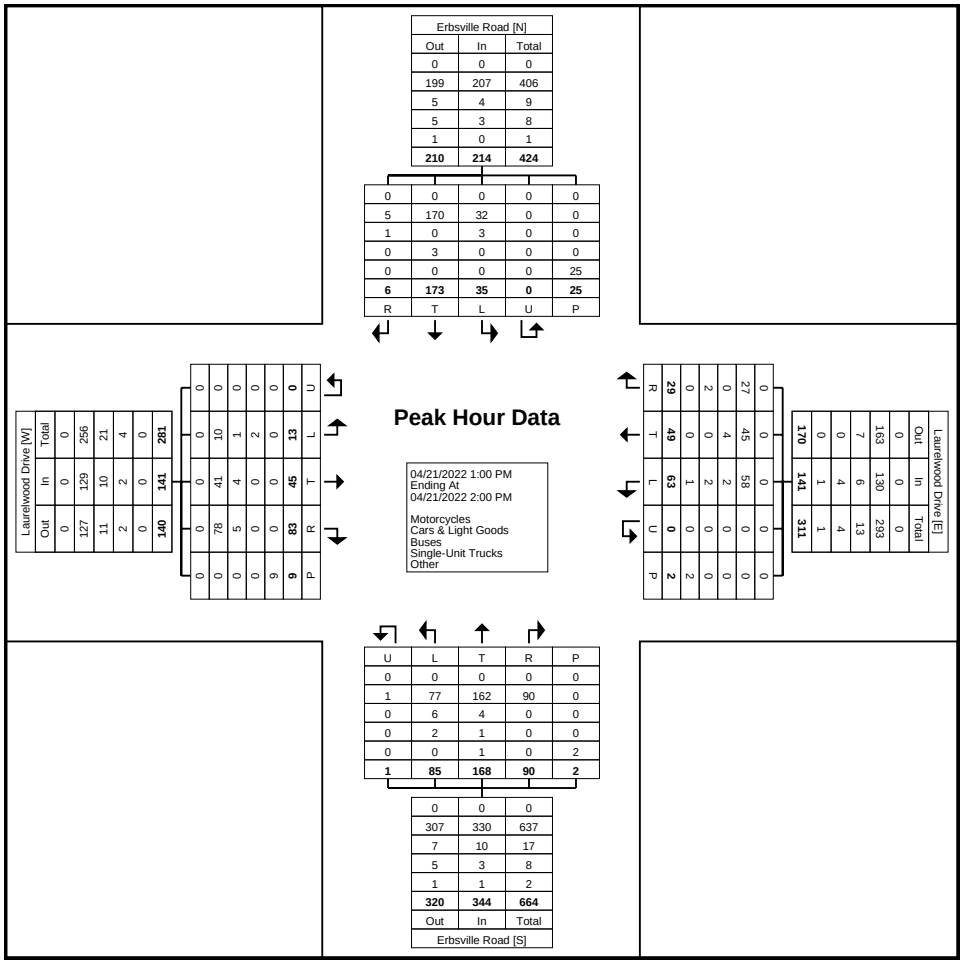
Turning Movement Peak Hour Data (1:00 PM)

Start Time	Laurelwood Drive Eastbound						Laurelwood Drive Westbound						Erbsville Road Northbound						Erbsville Road 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	
1:00 PM	5	17	19	0	3	41	16	15	9	0	0	40	26	37	19	1	1	83	13	49	3	0	14	65	229
1:15 PM	5	9	24	0	1	38	11	9	7	0	1	27	22	48	21	0	0	91	6	36	2	0	4	44	200
1:30 PM	2	10	14	0	2	26	21	14	8	0	1	43	18	43	31	0	1	92	9	41	1	0	3	51	212
1:45 PM	1	9	26	0	3	36	15	11	5	0	0	31	19	40	19	0	0	78	7	47	0	0	4	54	199
Total	13	45	83	0	9	141	63	49	29	0	2	141	85	168	90	1	2	344	35	173	6	0	25	214	840
Approach %	9.2	31.9	58.9	0.0	-	-	44.7	34.8	20.6	0.0	-	-	24.7	48.8	26.2	0.3	-	-	16.4	80.8	2.8	0.0	-	-	-
Total %	1.5	5.4	9.9	0.0	-	16.8	7.5	5.8	3.5	0.0	-	16.8	10.1	20.0	10.7	0.1	-	41.0	4.2	20.6	0.7	0.0	-	25.5	-
PHF	0.650	0.662	0.798	0.000	-	0.860	0.750	0.817	0.806	0.000	-	0.820	0.817	0.875	0.726	0.250	-	0.935	0.673	0.883	0.500	0.000	-	0.823	0.917
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	0.0
Cars & Light Goods	10	41	78	0	-	129	58	45	27	0	-	130	77	162	90	1	-	330	32	170	5	0	-	207	796
% Cars & Light Goods	76.9	91.1	94.0	-	-	91.5	92.1	91.8	93.1	-	-	92.2	90.6	96.4	100.0	100.0	-	95.9	91.4	98.3	83.3	-	-	96.7	94.8
Buses	1	4	5	0	-	10	2	4	0	0	-	6	6	4	0	0	-	10	3	0	1	0	-	4	30
% Buses	7.7	8.9	6.0	-	-	7.1	3.2	8.2	0.0	-	-	4.3	7.1	2.4	0.0	0.0	-	2.9	8.6	0.0	16.7	-	-	1.9	3.6
Single-Unit Trucks	2	0	0	0	-	2	2	0	2	0	-	4	2	1	0	0	-	3	0	3	0	0	-	3	12
% Single-Unit Trucks	15.4	0.0	0.0	-	-	1.4	3.2	0.0	6.9	-	-	2.8	2.4	0.6	0.0	0.0	-	0.9	0.0	1.7	0.0	-	-	1.4	1.4
Articulated Trucks	0	0	0	0	-	0	1	0	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	1.6	0.0	0.0	-	-	0.7	0.0	0.6	0.0	0.0	-	0.3	0.0	0.0	0.0	-	-	0.0	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	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	9	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	25	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Start Date: 04/21/2022



Turning Movement Peak Hour Data Plot (1:00 PM)

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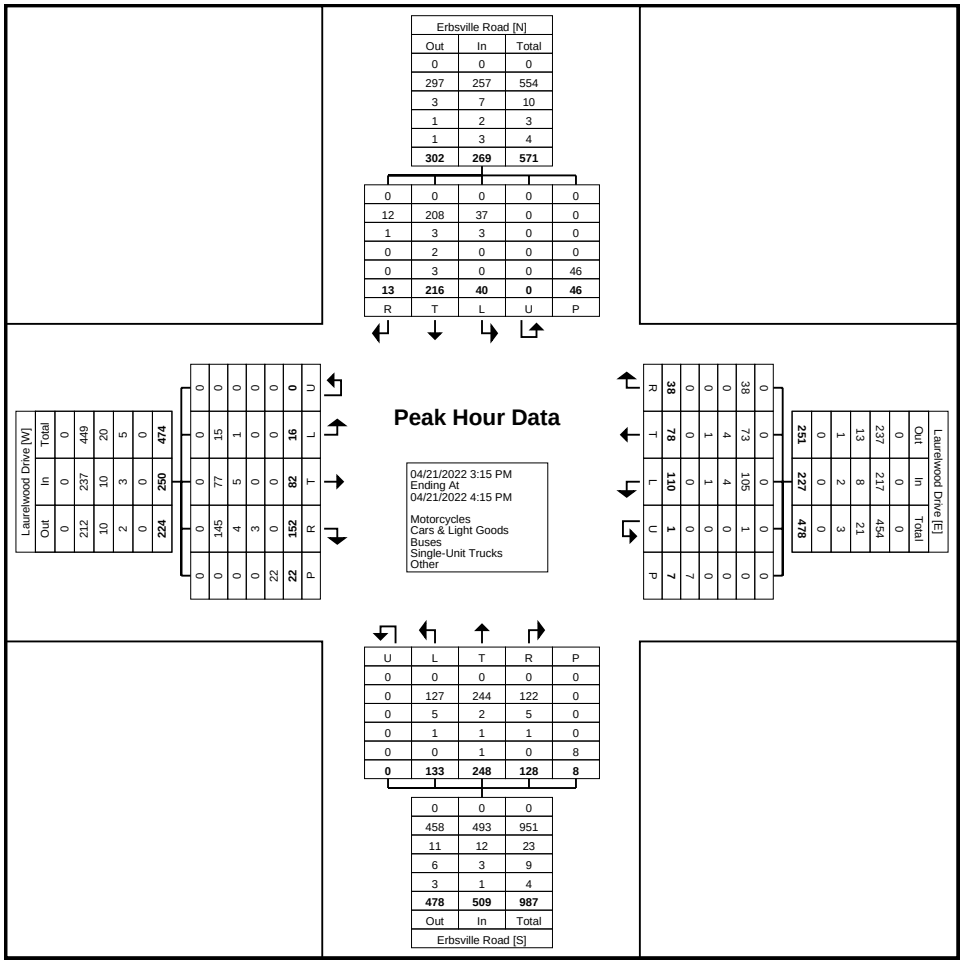
Turning Movement Peak Hour Data (3:15 PM)

Start Time	Laurelwood Drive Eastbound						Laurelwood Drive Westbound						Erbsville Road Northbound						Erbsville Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
3:15 PM	4	14	37	0	8	55	20	19	9	0	0	48	48	62	28	0	2	138	10	51	2	0	5	63	304
3:30 PM	5	28	47	0	4	80	21	29	4	0	2	54	30	53	35	0	2	118	13	69	6	0	11	88	340
3:45 PM	5	20	36	0	5	61	39	16	15	0	1	70	36	76	34	0	0	146	7	51	1	0	24	59	336
4:00 PM	2	20	32	0	5	54	30	14	10	1	4	55	19	57	31	0	4	107	10	45	4	0	6	59	275
Total	16	82	152	0	22	250	110	78	38	1	7	227	133	248	128	0	8	509	40	216	13	0	46	269	1255
Approach %	6.4	32.8	60.8	0.0	-	-	48.5	34.4	16.7	0.4	-	-	26.1	48.7	25.1	0.0	-	-	14.9	80.3	4.8	0.0	-	-	-
Total %	1.3	6.5	12.1	0.0	-	19.9	8.8	6.2	3.0	0.1	-	18.1	10.6	19.8	10.2	0.0	-	40.6	3.2	17.2	1.0	0.0	-	21.4	-
PHF	0.800	0.732	0.809	0.000	-	0.781	0.705	0.672	0.633	0.250	-	0.811	0.693	0.816	0.914	0.000	-	0.872	0.769	0.783	0.542	0.000	-	0.764	0.923
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	0.0
Cars & Light Goods	15	77	145	0	-	237	105	73	38	1	-	217	127	244	122	0	-	493	37	208	12	0	-	257	1204
% Cars & Light Goods	93.8	93.9	95.4	-	-	94.8	95.5	93.6	100.0	100.0	-	95.6	95.5	98.4	95.3	-	-	96.9	92.5	96.3	92.3	-	-	95.5	95.9
Buses	1	5	4	0	-	10	4	4	0	0	-	8	5	2	5	0	-	12	3	3	1	0	-	7	37
% Buses	6.3	6.1	2.6	-	-	4.0	3.6	5.1	0.0	0.0	-	3.5	3.8	0.8	3.9	-	-	2.4	7.5	1.4	7.7	-	-	2.6	2.9
Single-Unit Trucks	0	0	3	0	-	3	1	1	0	0	-	2	1	1	1	0	-	3	0	2	0	0	-	2	10
% Single-Unit Trucks	0.0	0.0	2.0	-	-	1.2	0.9	1.3	0.0	0.0	-	0.9	0.8	0.4	0.8	-	-	0.6	0.0	0.9	0.0	-	-	0.7	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	2
% 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	0.9	0.0	-	-	0.7	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	2
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.4	0.0	-	-	0.2	0.0	0.5	0.0	-	-	0.4	0.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	12.5	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	22	-	-	-	-	-	7	-	-	-	-	-	7	-	-	-	-	-	46	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	87.5	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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

Count Name: Erbsville Road & Laurelwood Drive
Site Code: 220137
Start Date: 04/21/2022



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

Appendix C

Existing Synchro Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	32	5	80	20	13	2	100	73	34	90	0
Future Volume (vph)	5	32	5	80	20	13	2	100	73	34	90	0
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.984			0.944				
Flt Protected		0.994			0.966			0.999			0.986	
Satd. Flow (prot)	0	1516	0	0	1463	0	0	1439	0	0	1494	0
Flt Permitted		0.994			0.966			0.999			0.986	
Satd. Flow (perm)	0	1516	0	0	1463	0	0	1439	0	0	1494	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		96.0			125.8			260.0			122.5	
Travel Time (s)		6.9			9.1			18.7			8.8	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	2%	1%	3%	2%	0%
Adj. Flow (vph)	5	32	5	80	20	13	2	100	73	34	90	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	113	0	0	175	0	0	124	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	32	5	80	20	13	2	100	73	34	90	0
Future Vol, veh/h	5	32	5	80	20	13	2	100	73	34	90	0
Peak Hour 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
Heavy Vehicles, %	0	0	0	1	0	0	0	2	1	3	2	0
Mvmt Flow	5	32	5	80	20	13	2	100	73	34	90	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.5	8.3	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	12%	71%	27%
Vol Thru, %	57%	76%	18%	73%
Vol Right, %	42%	12%	12%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	42	113	124
LT Vol	2	5	80	34
Through Vol	100	32	20	90
RT Vol	73	5	13	0
Lane Flow Rate	175	42	113	124
Geometry Grp	1	1	1	1
Degree of Util (X)	0.203	0.054	0.148	0.157
Departure Headway (Hd)	4.166	4.655	4.702	4.562
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	863	769	763	787
Service Time	2.187	2.687	2.729	2.585
HCM Lane V/C Ratio	0.203	0.055	0.148	0.158
HCM Control Delay	8.3	8	8.5	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.2	0.5	0.6



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	3	170	174	0
Future Volume (vph)	0	3	3	170	174	0
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.999		
Satd. Flow (prot)	1527	0	0	1617	1618	0
Flt Permitted				0.999		
Satd. Flow (perm)	1527	0	0	1617	1618	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	183.6			228.6	260.0	
Travel Time (s)	13.2			16.5	18.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	0	3	3	170	174	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	173	174	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	3	170	174	0
Future Vol, veh/h	0	3	3	170	174	0
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	3	3	170	174	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	350	174	174	0	-	0
Stage 1	174	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	651	875	1415	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	859	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	650	875	1415	-	-	-
Mov Cap-2 Maneuver	650	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	859	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1415	-	875	-	-
HCM Lane V/C Ratio	0.002	-	0.003	-	-
HCM Control Delay (s)	7.5	0	9.1	-	-
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)	1	13	5	172	177	1
Future Volume (vph)	1	13	5	172	177	1
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.875				0.999	
Flt Protected	0.996			0.999		
Satd. Flow (prot)	1538	0	0	1617	1616	0
Flt Permitted	0.996			0.999		
Satd. Flow (perm)	1538	0	0	1617	1616	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	138.6			250.9	228.6	
Travel Time (s)	10.0			18.1	16.5	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	1	13	5	172	177	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	177	178	0
Sign Control	Stop			Free	Free	

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	13	5	172	177	1
Future Vol, veh/h	1	13	5	172	177	1
Conflicting Peds, #/hr	0	0	2	0	0	2
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	1	13	5	172	177	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	362	180	180	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	182	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	641	868	1408	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	636	867	1406	-	-	-
Mov Cap-2 Maneuver	636	-	-	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	852	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1406	-	845	-	-
HCM Lane V/C Ratio	0.004	-	0.017	-	-
HCM Control Delay (s)	7.6	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	3	178	12	3	190
Future Volume (vph)	22	3	178	12	3	190
Ideal Flow (vphpl)	1765	1765	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984		0.991			
Flt Protected	0.958					0.999
Satd. Flow (prot)	1664	0	1605	0	0	1617
Flt Permitted	0.958					0.999
Satd. Flow (perm)	1664	0	1605	0	0	1617
Link Speed (k/h)	50		60			50
Link Distance (m)	88.0		236.3			250.9
Travel Time (s)	6.3		14.2			18.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	2%
Adj. Flow (vph)	22	3	178	12	3	190
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	0	190	0	0	193
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	3	178	12	3	190
Future Vol, veh/h	22	3	178	12	3	190
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	22	3	178	12	3	190

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	380	184	0	0	190	0
Stage 1	184	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	626	864	-	-	1396	-
Stage 1	852	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	625	864	-	-	1396	-
Mov Cap-2 Maneuver	625	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	646	1396	-
HCM Lane V/C Ratio	-	-	0.039	0.002	-
HCM Control Delay (s)	-	-	10.8	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	31	54	24	148	195	16
Future Volume (vph)	31	54	24	148	195	16
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914				0.990	
Flt Protected	0.982			0.993		
Satd. Flow (prot)	1584	0	0	1611	1604	0
Flt Permitted	0.982			0.993		
Satd. Flow (perm)	1584	0	0	1611	1604	0
Link Speed (k/h)	50			60	60	
Link Distance (m)	175.4			560.0	236.3	
Travel Time (s)	12.6			33.6	14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	31	54	24	148	195	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	85	0	0	172	211	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	54	24	148	195	16
Future Vol, veh/h	31	54	24	148	195	16
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	31	54	24	148	195	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	399	203	211	0	-	0
Stage 1	203	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	611	843	1372	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	599	843	1372	-	-	-
Mov Cap-2 Maneuver	599	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	842	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	1.1	0
HCM LOS	B		

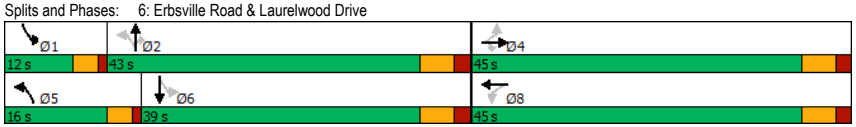
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1372	-	734	-	-
HCM Lane V/C Ratio	0.017	-	0.116	-	-
HCM Control Delay (s)	7.7	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

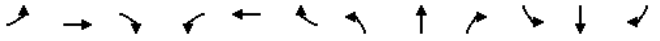
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	206	248	54	186	76	188	310	106	88	303	29
Future Volume (vph)	10	206	248	54	186	76	188	310	106	88	303	29
Ideal Flow (vphpl)	1775	1650	1650	1775	1900	1750	1775	1900	1750	1775	1650	1650
Storage Length (m)	30.0		25.0	10.0		0.0	60.0		30.0	15.0		0.0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (m)	40.0			22.5			82.5			52.5		
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	0.94		0.95	0.98	0.97		0.97		0.93	0.97	0.99	
Frt			0.850		0.956				0.850		0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1650	1402	1621	1738	0	1686	1881	1458	1670	1600	0
Flt Permitted	0.396			0.502			0.443			0.572		
Satd. Flow (perm)	659	1650	1331	837	1738	0	766	1881	1358	975	1600	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			248		25				96		5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		179.3			219.1			165.5			560.0	
Travel Time (s)		12.9			15.8			9.9			33.6	
Confl. Peds. (#/hr)	70		23	23		70	35		33	33		35
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	4%	1%	1%	0%	1%	2%	1%	1%	3%
Adj. Flow (vph)	10	206	248	54	186	76	188	310	106	88	303	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	206	248	54	262	0	188	310	106	88	332	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		5.0	33.0	33.0	5.0	33.0	
Minimum Split (s)	42.0	42.0	42.0	42.0	42.0		9.0	39.0	39.0	9.0	39.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		16.0	43.0	43.0	12.0	39.0	
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%		16.0%	43.0%	43.0%	12.0%	39.0%	
Maximum Green (s)	39.0	39.0	39.0	39.0	39.0		12.0	37.0	37.0	8.0	33.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0		0.0	-2.0	-2.0	0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0			15.0	15.0		15.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			18.0	18.0		18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effct Green (s)	17.6	17.6	17.6	17.6	17.6		48.3	40.9	40.9	43.4	36.5	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.64	0.54	0.54	0.58	0.49	
v/c Ratio	0.06	0.53	0.50	0.28	0.62		0.31	0.30	0.14	0.14	0.43	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	23.1	30.7	7.1	27.4	29.9		7.2	12.4	3.9	6.5	16.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	23.1	30.7	7.1	27.4	29.9		7.2	12.4	3.9	6.5	16.0	
LOS	C	C	A	C	C		A	B	A	A	B	
Approach Delay		17.9			29.5			9.3			14.0	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	1.2	27.2	0.0	6.7	31.8		9.3	25.2	0.7	4.1	29.6	
Queue Length 95th (m)	5.0	47.7	16.7	16.5	55.6		21.7	50.6	9.1	11.1	63.3	
Internal Link Dist (m)		155.3			195.1			141.5			536.0	
Turn Bay Length (m)	30.0		25.0	10.0			60.0		30.0	15.0		
Base Capacity (vph)	361	906	842	459	966		652	1022	781	652	779	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.03	0.23	0.29	0.12	0.27		0.29	0.30	0.14	0.13	0.43	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 75.2			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 87.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 6: Erbsville Road & Laurelwood Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	206	248	54	186	76	188	310	106	88	303	29
Future Volume (veh/h)	10	206	248	54	186	76	188	310	106	88	303	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.96		0.90	0.98		0.96	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1775	1650	1650	1720	1885	1736	1775	1885	1723	1761	1637	1611
Adj Flow Rate, veh/h	10	206	248	54	186	76	188	310	106	88	303	29
Peak Hour 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
Percent Heavy Veh, %	0	0	0	4	1	1	0	1	2	1	1	3
Cap, veh/h	358	639	493	327	476	195	435	812	603	427	571	55
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.37	0.09	0.43	0.43	0.05	0.39	0.37
Sat Flow, veh/h	1003	1650	1272	825	1230	502	1690	1885	1401	1677	1464	140
Grp Volume(v), veh/h	10	206	248	54	0	262	188	310	106	88	0	332
Grp Sat Flow(s),veh/h/ln	1003	1650	1272	825	0	1732	1690	1885	1401	1677	0	1604
Q Serve(g_s), s	0.7	7.9	13.4	4.4	0.0	10.0	5.9	10.1	4.2	2.9	0.0	14.4
Cycle Q Clear(g_c), s	10.6	7.9	13.4	12.4	0.0	10.0	5.9	10.1	4.2	2.9	0.0	14.4
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	358	639	493	327	0	671	435	812	603	427	0	626
V/C Ratio(X)	0.03	0.32	0.50	0.17	0.00	0.39	0.43	0.38	0.18	0.21	0.00	0.53
Avail Cap(c_a), veh/h	424	747	576	381	0	784	507	812	603	492	0	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.9	19.4	21.1	23.7	0.0	20.2	15.7	17.5	15.9	16.5	0.0	21.3
Incr Delay (d2), s/veh	0.0	0.3	0.8	0.2	0.0	0.4	0.7	1.4	0.6	0.2	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.2	1.6	0.4	0.0	1.6	0.5	1.4	0.5	0.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	19.7	21.9	24.0	0.0	20.6	16.4	18.9	16.5	16.7	0.0	24.5
LnGrp LOS	C	B	C	C	A	C	B	B	B	B	A	C
Approach Vol, veh/h		464			316			604			420	
Approach Delay, s/veh		21.0			21.2			17.7			22.9	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	43.0		39.1	12.1	39.3		39.1				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	37.0		39.0	12.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	4.9	12.1		15.4	7.9	16.4		14.4				
Green Ext Time (p_c), s	0.1	2.7		2.9	0.3	2.0		2.4				
Intersection Summary												
HCM 6th Ctrl Delay			20.4									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	18	1	81	22	26	10	146	90	20	169	5
Future Volume (vph)	3	18	1	81	22	26	10	146	90	20	169	5
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.973			0.951			0.997	
Flt Protected		0.993			0.970			0.998			0.995	
Satd. Flow (prot)	0	1530	0	0	1463	0	0	1452	0	0	1538	0
Flt Permitted		0.993			0.970			0.998			0.995	
Satd. Flow (perm)	0	1530	0	0	1463	0	0	1452	0	0	1538	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		96.0			125.8			260.0			122.5	
Travel Time (s)		6.9			9.1			18.7			8.8	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%
Adj. Flow (vph)	3	18	1	81	22	26	10	146	90	20	169	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	129	0	0	246	0	0	194	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	18	1	81	22	26	10	146	90	20	169	5
Future Vol, veh/h	3	18	1	81	22	26	10	146	90	20	169	5
Peak Hour 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
Heavy Vehicles, %	0	0	0	0	0	0	0	1	2	0	0	0
Mvmt Flow	3	18	1	81	22	26	10	146	90	20	169	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	9	9.1	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	14%	63%	10%
Vol Thru, %	59%	82%	17%	87%
Vol Right, %	37%	5%	20%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	22	129	194
LT Vol	10	3	81	20
Through Vol	146	18	22	169
RT Vol	90	1	26	5
Lane Flow Rate	246	22	129	194
Geometry Grp	1	1	1	1
Degree of Util (X)	0.293	0.031	0.176	0.245
Departure Headway (Hd)	4.285	5.051	4.901	4.544
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	836	706	730	790
Service Time	2.317	3.105	2.945	2.579
HCM Lane V/C Ratio	0.294	0.031	0.177	0.246
HCM Control Delay	9.1	8.3	9	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.1	0.6	1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	2	2	242	250	0
Future Volume (vph)	1	2	2	242	250	0
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910					
Flt Protected	0.984					
Satd. Flow (prot)	1580	0	0	1618	1650	0
Flt Permitted	0.984					
Satd. Flow (perm)	1580	0	0	1618	1650	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	183.6			228.6	260.0	
Travel Time (s)	13.2			16.5	18.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	1	2	2	242	250	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	244	250	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	2	242	250	0
Future Vol, veh/h	1	2	2	242	250	0
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	1	2	2	242	250	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	496	250	250	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	537	794	1327	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	536	794	1327	-	-	-
Mov Cap-2 Maneuver	536	-	-	-	-	-
Stage 1	794	-	-	-	-	-
Stage 2	800	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1327	-	684	-	-
HCM Lane V/C Ratio	0.002	-	0.004	-	-
HCM Control Delay (s)	7.7	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	7	7	240	252	2
Future Volume (vph)	2	7	7	240	252	2
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.999	
Flt Protected	0.989			0.999		
Satd. Flow (prot)	1562	0	0	1617	1648	0
Flt Permitted	0.989			0.999		
Satd. Flow (perm)	1562	0	0	1617	1648	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	138.6			250.9	228.6	
Travel Time (s)	10.0			18.1	16.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	2	7	7	240	252	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	247	254	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	7	7	240	252	2
Future Vol, veh/h	2	7	7	240	252	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	2	7	7	240	252	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	507	253	254	0	-	0
Stage 1	253	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	529	791	1323	-	-	-
Stage 1	794	-	-	-	-	-
Stage 2	793	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	526	791	1323	-	-	-
Mov Cap-2 Maneuver	526	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1323	-	711	-	-
HCM Lane V/C Ratio	0.005	-	0.013	-	-
HCM Control Delay (s)	7.7	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	5	244	18	5	254
Future Volume (vph)	13	5	244	18	5	254
Ideal Flow (vphpl)	1765	1765	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.962		0.991			
Flt Protected	0.965					0.999
Satd. Flow (prot)	1639	0	1605	0	0	1648
Flt Permitted	0.965					0.999
Satd. Flow (perm)	1639	0	1605	0	0	1648
Link Speed (k/h)	50		60			50
Link Distance (m)	88.0		236.3			250.9
Travel Time (s)	6.3		14.2			18.1
Confl. Peds. (#/hr)				7	7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	13	5	244	18	5	254
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	262	0	0	259
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		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	13	5	244	18	5	254
Future Vol, veh/h	13	5	244	18	5	254
Conflicting Peds, #/hr	0	0	0	7	7	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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	13	5	244	18	5	254

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	524	260	0	0	269	0
Stage 1	260	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	517	784	-	-	1306	-
Stage 1	788	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	779	-	-	1298	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	566	1298	-
HCM Lane V/C Ratio	-	-	0.032	0.004	-
HCM Control Delay (s)	-	-	11.6	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	29	54	241	246	20
Future Volume (vph)	16	29	54	241	246	20
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.913				0.990	
Flt Protected	0.983			0.991		
Satd. Flow (prot)	1584	0	0	1609	1634	0
Flt Permitted	0.983			0.991		
Satd. Flow (perm)	1584	0	0	1609	1634	0
Link Speed (k/h)	50			60	60	
Link Distance (m)	175.4			560.0	236.3	
Travel Time (s)	12.6			33.6	14.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	16	29	54	241	246	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	295	266	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	29	54	241	246	20
Future Vol, veh/h	16	29	54	241	246	20
Conflicting Peds, #/hr	1	1	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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	16	29	54	241	246	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	607	258	267	0	-	0
Stage 1	257	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	463	786	1308	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	440	785	1307	-	-	-
Mov Cap-2 Maneuver	440	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	717	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	1.4	0
HCM LOS	B		

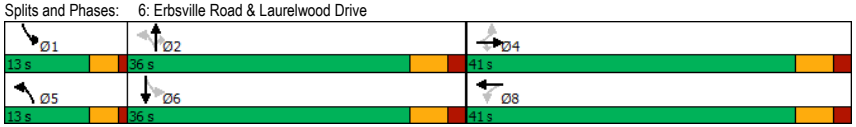
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1307	-	614	-	-
HCM Lane V/C Ratio	0.041	-	0.073	-	-
HCM Control Delay (s)	7.9	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

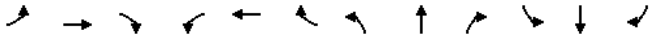
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	82	152	110	78	38	133	248	128	40	216	13
Future Volume (vph)	16	82	152	110	78	38	133	248	128	40	216	13
Ideal Flow (vphpl)	1775	1650	1650	1775	1900	1750	1775	1900	1750	1775	1650	1650
Storage Length (m)	30.0		25.0	10.0		0.0	60.0		30.0	15.0		0.0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (m)	40.0			22.5			82.5			52.5		
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	0.95		0.97	0.99	0.97		0.98		0.97	0.99	1.00	
Frt			0.850		0.951				0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1650	1375	1670	1749	0	1670	1900	1473	1686	1600	0
Flt Permitted	0.682			0.704			0.538			0.605		
Satd. Flow (perm)	1150	1650	1334	1226	1749	0	924	1900	1428	1067	1600	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152		33				128		4	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		179.3			219.1			165.5			560.0	
Travel Time (s)		12.9			15.8			9.9			33.6	
Confl. Peds. (#/hr)	46		8	8		46	22		7	7		22
Peak Hour 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
Heavy Vehicles (%)	0%	0%	2%	1%	1%	0%	1%	0%	1%	0%	2%	0%
Adj. Flow (vph)	16	82	152	110	78	38	133	248	128	40	216	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	82	152	110	116	0	133	248	128	40	229	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		5.0	30.0	30.0	5.0	30.0	
Minimum Split (s)	41.0	41.0	41.0	41.0	41.0		9.0	36.0	36.0	9.0	36.0	
Total Split (s)	41.0	41.0	41.0	41.0	41.0		13.0	36.0	36.0	13.0	36.0	
Total Split (%)	45.6%	45.6%	45.6%	45.6%	45.6%		14.4%	40.0%	40.0%	14.4%	40.0%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		9.0	30.0	30.0	9.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0		0.0	-2.0	-2.0	0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0			12.0	12.0		12.0	
Flash Dont Walk (s)	20.0	20.0	20.0	20.0	20.0			18.0	18.0		18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effct Green (s)	13.4	13.4	13.4	13.4	13.4		41.1	38.0	38.0	37.3	32.5	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.65	0.60	0.60	0.59	0.51	
v/c Ratio	0.07	0.23	0.38	0.42	0.29		0.19	0.22	0.14	0.06	0.28	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	21.3	23.4	7.4	28.2	18.6		5.2	8.4	2.7	4.8	11.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	21.3	23.4	7.4	28.2	18.6		5.2	8.4	2.7	4.8	11.7	
LOS	C	C	A	C	B		A	A	A	A	B	
Approach Delay		13.5			23.3			6.1			10.7	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	1.7	8.9	0.0	12.5	9.0		4.9	9.6	0.0	1.4	16.0	
Queue Length 95th (m)	6.3	19.7	13.0	26.5	21.7		12.7	34.1	8.0	5.0	34.6	
Internal Link Dist (m)		155.3			195.1			141.5			536.0	
Turn Bay Length (m)	30.0		25.0	10.0			60.0		30.0	15.0		
Base Capacity (vph)	681	978	852	726	1050		708	1137	906	751	822	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.02	0.08	0.18	0.15	0.11		0.19	0.22	0.14	0.05	0.28	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 63.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 68.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Erbsville Road & Laurelwood Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	82	152	110	78	38	133	248	128	40	216	13
Future Volume (veh/h)	16	82	152	110	78	38	133	248	128	40	216	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.94	0.96		0.93	0.98		0.98	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1775	1650	1624	1761	1885	1750	1761	1900	1736	1775	1624	1650
Adj Flow Rate, veh/h	16	82	152	110	78	38	133	248	128	40	216	13
Peak Hour 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
Percent Heavy Veh, %	0	0	2	1	1	0	1	0	1	0	2	0
Cap, veh/h	463	607	475	438	429	209	512	839	633	467	619	37
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.34	0.07	0.44	0.44	0.04	0.41	0.38
Sat Flow, veh/h	1151	1650	1290	1033	1166	568	1677	1900	1435	1690	1514	91
Grp Volume(v), veh/h	16	82	152	110	0	116	133	248	128	40	0	229
Grp Sat Flow(s),veh/h/ln	1151	1650	1290	1033	0	1735	1677	1900	1435	1690	0	1605
Q Serve(g_s), s	0.7	2.6	6.6	6.2	0.0	3.6	3.6	6.6	4.3	1.1	0.0	7.7
Cycle Q Clear(g_c), s	4.3	2.6	6.6	8.8	0.0	3.6	3.6	6.6	4.3	1.1	0.0	7.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	463	607	475	438	0	638	512	839	633	467	0	656
V/C Ratio(X)	0.03	0.14	0.32	0.25	0.00	0.18	0.26	0.30	0.20	0.09	0.00	0.35
Avail Cap(c_a), veh/h	583	780	610	546	0	820	588	839	633	599	0	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.2	16.4	17.7	19.4	0.0	17.0	12.9	14.0	13.4	13.6	0.0	16.0
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.3	0.0	0.1	0.3	0.9	0.7	0.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.6	0.5	0.0	0.4	0.1	0.4	0.2	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	16.5	18.1	19.7	0.0	17.1	13.2	14.9	14.1	13.6	0.0	17.4
LnGrp LOS	B	B	B	B	A	B	B	B	B	B	A	B
Approach Vol, veh/h		250			226			509			269	
Approach Delay, s/veh		17.6			18.4			14.3			16.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	38.5		32.8	9.4	36.0		32.8				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	30.0		35.0	9.0	30.0		35.0				
Max Q Clear Time (g_c+I1), s	3.1	8.6		8.6	5.6	9.7		10.8				
Green Ext Time (p_c), s	0.0	2.2		1.4	0.1	1.4		1.5				
Intersection Summary												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									

Appendix D

2030 Background Conditions Synchro Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	36	5	149	45	93	2	139	98	236	178	4
Future Volume (vph)	6	36	5	149	45	93	2	139	98	236	178	4
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.956			0.945			0.999	
Flt Protected		0.994			0.975						0.973	
Satd. Flow (prot)	0	1519	0	0	1437	0	0	1442	0	0	1469	0
Flt Permitted		0.994			0.975						0.973	
Satd. Flow (perm)	0	1519	0	0	1437	0	0	1442	0	0	1469	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		96.0			125.8			260.0			122.5	
Travel Time (s)		6.9			9.1			18.7			8.8	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	2%	1%	3%	2%	0%
Adj. Flow (vph)	6	36	5	149	45	93	2	139	98	236	178	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	287	0	0	239	0	0	418	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 80.9%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	36	5	149	45	93	2	139	98	236	178	4
Future Vol, veh/h	6	36	5	149	45	93	2	139	98	236	178	4
Peak Hour 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
Heavy Vehicles, %	0	0	0	1	0	0	0	2	1	3	2	0
Mvmt Flow	6	36	5	149	45	93	2	139	98	236	178	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	13.3	11.3	17.3
HCM LOS	A	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	13%	52%	56%
Vol Thru, %	58%	77%	16%	43%
Vol Right, %	41%	11%	32%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	47	287	418
LT Vol	2	6	149	236
Through Vol	139	36	45	178
RT Vol	98	5	93	4
Lane Flow Rate	239	47	287	418
Geometry Grp	1	1	1	1
Degree of Util (X)	0.353	0.081	0.452	0.63
Departure Headway (Hd)	5.31	6.223	5.664	5.422
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	674	572	634	665
Service Time	3.364	4.301	3.718	3.468
HCM Lane V/C Ratio	0.355	0.082	0.453	0.629
HCM Control Delay	11.3	9.9	13.3	17.3
HCM Lane LOS	B	A	B	C
HCM 95th-tile Q	1.6	0.3	2.3	4.5

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	3	234	332	0
Future Volume (vph)	0	3	3	234	332	0
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.999		
Satd. Flow (prot)	1527	0	0	1616	1618	0
Flt Permitted				0.999		
Satd. Flow (perm)	1527	0	0	1616	1618	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	183.6			228.6	260.0	
Travel Time (s)	13.2			16.5	18.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	0	3	3	234	332	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	237	332	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	3	234	332	0
Future Vol, veh/h	0	3	3	234	332	0
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	3	3	234	332	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	572	332	332	0	-	0
Stage 1	332	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	485	714	1239	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	484	714	1239	-	-	-
Mov Cap-2 Maneuver	484	-	-	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	805	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1239	-	714	-	-
HCM Lane V/C Ratio	0.002	-	0.004	-	-
HCM Control Delay (s)	7.9	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	14	5	236	335	1
Future Volume (vph)	1	14	5	236	335	1
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.874					
Flt Protected	0.997			0.999		
Satd. Flow (prot)	1538	0	0	1617	1618	0
Flt Permitted	0.997			0.999		
Satd. Flow (perm)	1538	0	0	1617	1618	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	138.6			250.9	228.6	
Travel Time (s)	10.0			18.1	16.5	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	1	14	5	236	335	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	241	336	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	14	5	236	335	1
Future Vol, veh/h	1	14	5	236	335	1
Conflicting Peds, #/hr	0	0	2	0	0	2
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	1	14	5	236	335	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	584	338	338	0	-	0
Stage 1	338	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	477	709	1232	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	473	708	1230	-	-	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	798	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1230	-	685	-	-
HCM Lane V/C Ratio	0.004	-	0.022	-	-
HCM Control Delay (s)	7.9	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	24	3	243	13	3	350
Future Volume (vph)	24	3	243	13	3	350
Ideal Flow (vphpl)	1765	1765	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985		0.993			
Flt Protected	0.957					
Satd. Flow (prot)	1664	0	1608	0	0	1618
Flt Permitted	0.957					
Satd. Flow (perm)	1664	0	1608	0	0	1618
Link Speed (k/h)	50		60			50
Link Distance (m)	88.0		236.3			250.9
Travel Time (s)	6.3		14.2			18.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	2%
Adj. Flow (vph)	24	3	243	13	3	350
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	256	0	0	353
Sign Control	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	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	3	243	13	3	350
Future Vol, veh/h	24	3	243	13	3	350
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	24	3	243	13	3	350

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	606	250	0	0	256	0
Stage 1	250	-	-	-	-	-
Stage 2	356	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	463	794	-	-	1321	-
Stage 1	796	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	462	794	-	-	1321	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	711	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	485	1321	-
HCM Lane V/C Ratio	-	-	0.056	0.002	-
HCM Control Delay (s)	-	-	12.9	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	60	27	209	355	18
Future Volume (vph)	34	60	27	209	355	18
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914				0.993	
Flt Protected	0.982			0.994		
Satd. Flow (prot)	1584	0	0	1612	1608	0
Flt Permitted	0.982			0.994		
Satd. Flow (perm)	1584	0	0	1612	1608	0
Link Speed (k/h)	50			60	60	
Link Distance (m)	175.4			560.0	236.3	
Travel Time (s)	12.6			33.6	14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	34	60	27	209	355	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	0	236	373	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	60	27	209	355	18
Future Vol, veh/h	34	60	27	209	355	18
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	34	60	27	209	355	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	627	364	373	0	-	0
Stage 1	364	-	-	-	-	-
Stage 2	263	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	451	685	1197	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	439	685	1197	-	-	-
Mov Cap-2 Maneuver	439	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.9	0
HCM LOS	B		

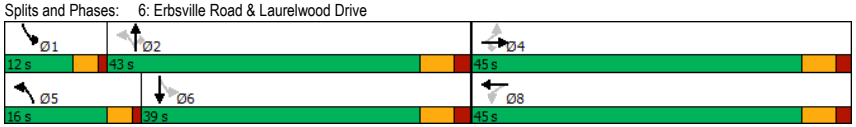
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1197	-	570	-	-
HCM Lane V/C Ratio	0.023	-	0.165	-	-
HCM Control Delay (s)	8.1	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	232	279	70	209	108	211	369	122	160	416	32
Future Volume (vph)	11	232	279	70	209	108	211	369	122	160	416	32
Ideal Flow (vphpl)	1775	1650	1650	1775	1900	1750	1775	1900	1750	1775	1650	1650
Storage Length (m)	30.0		25.0	10.0		0.0	60.0		30.0	15.0		0.0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (m)	40.0			22.5			82.5			52.5		
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	0.94		0.95	0.98	0.96		0.98		0.93	0.97	0.99	
Frt			0.850		0.949				0.850		0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1650	1402	1621	1715	0	1686	1881	1458	1670	1605	0
Flt Permitted	0.331			0.473			0.343			0.475		
Satd. Flow (perm)	554	1650	1331	790	1715	0	597	1881	1358	813	1605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			279		32				93		4	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		179.3			219.1			165.5			560.0	
Travel Time (s)		12.9			15.8			9.9			33.6	
Confl. Peds. (#/hr)	70		23	23		70	35		33	33		35
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	4%	1%	1%	0%	1%	2%	1%	1%	3%
Adj. Flow (vph)	11	232	279	70	209	108	211	369	122	160	416	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	232	279	70	317	0	211	369	122	160	448	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		5.0	33.0	33.0	5.0	33.0	
Minimum Split (s)	42.0	42.0	42.0	42.0	42.0		9.0	39.0	39.0	9.0	39.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		16.0	43.0	43.0	12.0	39.0	
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%		16.0%	43.0%	43.0%	12.0%	39.0%	
Maximum Green (s)	39.0	39.0	39.0	39.0	39.0		12.0	37.0	37.0	8.0	33.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0		0.0	-2.0	-2.0	0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0			15.0	15.0		15.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			18.0	18.0		18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effct Green (s)	20.5	20.5	20.5	20.5	20.5		48.7	39.2	39.2	44.8	37.3	
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26		0.61	0.49	0.49	0.56	0.47	
v/c Ratio	0.08	0.55	0.51	0.34	0.68		0.43	0.40	0.17	0.30	0.59	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	22.7	30.2	6.5	28.6	31.4		9.7	15.4	5.4	8.6	21.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	22.7	30.2	6.5	28.6	31.4		9.7	15.4	5.4	8.6	21.2	
LOS	C	C	A	C	C		A	B	A	A	C	
Approach Delay		17.4			30.9			12.0			17.9	
Approach LOS		B			C			B			B	
Queue Length 50th (m)	1.3	31.8	0.0	9.1	40.7		12.0	35.1	2.3	8.9	49.1	
Queue Length 95th (m)	5.2	53.1	17.1	20.4	67.3		27.8	67.2	12.6	21.4	99.7	
Internal Link Dist (m)		155.3			195.1			141.5			536.0	
Turn Bay Length (m)	30.0		25.0	10.0			60.0		30.0	15.0		
Base Capacity (vph)	287	858	826	410	907		548	930	718	551	756	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.27	0.34	0.17	0.35		0.39	0.40	0.17	0.29	0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 79.3			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 89.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 6: Erbsville Road & Laurelwood Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	232	279	70	209	108	211	369	122	160	416	32
Future Volume (veh/h)	11	232	279	70	209	108	211	369	122	160	416	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.96		0.90	0.98		0.96	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1775	1650	1650	1720	1885	1736	1775	1885	1723	1761	1637	1611
Adj Flow Rate, veh/h	11	232	279	70	209	108	211	369	122	160	416	32
Peak Hour 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
Percent Heavy Veh, %	0	0	0	4	1	1	0	1	2	1	1	3
Cap, veh/h	305	627	483	295	428	221	365	781	579	417	589	45
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.36	0.10	0.41	0.41	0.08	0.39	0.37
Sat Flow, veh/h	960	1650	1270	785	1125	581	1690	1885	1398	1677	1495	115
Grp Volume(v), veh/h	11	232	279	70	0	317	211	369	122	160	0	448
Grp Sat Flow(s),veh/h/ln	960	1650	1270	785	0	1706	1690	1885	1398	1677	0	1610
Q Serve(g_s), s	0.8	9.5	16.4	6.6	0.0	13.4	7.1	13.4	5.3	5.5	0.0	22.0
Cycle Q Clear(g_c), s	14.2	9.5	16.4	16.2	0.0	13.4	7.1	13.4	5.3	5.5	0.0	22.0
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	305	627	483	295	0	649	365	781	579	417	0	634
V/C Ratio(X)	0.04	0.37	0.58	0.24	0.00	0.49	0.58	0.47	0.21	0.38	0.00	0.71
Avail Cap(c_a), veh/h	358	718	553	339	0	743	414	781	579	428	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.7	21.1	23.2	26.9	0.0	22.5	18.4	20.1	17.7	16.6	0.0	24.0
Incr Delay (d2), s/veh	0.0	0.4	1.1	0.4	0.0	0.6	1.5	2.0	0.8	0.6	0.0	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.6	2.2	0.7	0.0	2.3	0.8	2.3	0.7	0.6	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	21.4	24.3	27.3	0.0	23.1	20.0	22.1	18.5	17.1	0.0	30.6
LnGrp LOS	C	C	C	C	A	C	B	C	B	B	A	C
Approach Vol, veh/h		522			387			702			608	
Approach Delay, s/veh		23.1			23.8			20.9			27.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	43.0		39.8	13.3	41.1		39.8				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	37.0		39.0	12.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	7.5	15.4		18.4	9.1	24.0		18.2				
Green Ext Time (p_c), s	0.0	3.2		3.2	0.2	2.1		3.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.6	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	20	1	125	37	192	11	245	148	123	233	7
Future Volume (vph)	4	20	1	125	37	192	11	245	148	123	233	7
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.927			0.951			0.997	
Flt Protected		0.992			0.983			0.999			0.983	
Satd. Flow (prot)	0	1530	0	0	1412	0	0	1453	0	0	1519	0
Flt Permitted		0.992			0.983			0.999			0.983	
Satd. Flow (perm)	0	1530	0	0	1412	0	0	1453	0	0	1519	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		96.0			125.8			260.0			122.5	
Travel Time (s)		6.9			9.1			18.7			8.8	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%
Adj. Flow (vph)	4	20	1	125	37	192	11	245	148	123	233	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	354	0	0	404	0	0	363	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	20	1	125	37	192	11	245	148	123	233	7
Future Vol, veh/h	4	20	1	125	37	192	11	245	148	123	233	7
Peak Hour 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
Heavy Vehicles, %	0	0	0	0	0	0	0	1	2	0	0	0
Mvmt Flow	4	20	1	125	37	192	11	245	148	123	233	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	16.1	16.8	16.5
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	16%	35%	34%
Vol Thru, %	61%	80%	10%	64%
Vol Right, %	37%	4%	54%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	404	25	354	363
LT Vol	11	4	125	123
Through Vol	245	20	37	233
RT Vol	148	1	192	7
Lane Flow Rate	404	25	354	363
Geometry Grp	1	1	1	1
Degree of Util (X)	0.61	0.048	0.564	0.579
Departure Headway (Hd)	5.439	6.948	5.732	5.746
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	659	519	627	624
Service Time	3.515	4.948	3.808	3.825
HCM Lane V/C Ratio	0.613	0.048	0.565	0.582
HCM Control Delay	16.8	10.3	16.1	16.5
HCM Lane LOS	C	B	C	C
HCM 95th-tile Q	4.2	0.2	3.5	3.7



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	2	2	400	358	0
Future Volume (vph)	1	2	2	400	358	0
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910					
Flt Protected	0.984					
Satd. Flow (prot)	1580	0	0	1618	1650	0
Flt Permitted	0.984					
Satd. Flow (perm)	1580	0	0	1618	1650	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	183.6			228.6	260.0	
Travel Time (s)	13.2			16.5	18.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	1	2	2	400	358	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	402	358	0
Sign Control	Stop			Free	Free	

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	2	400	358	0
Future Vol, veh/h	1	2	2	400	358	0
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	1	2	2	400	358	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	762	358	358	0	-	0
Stage 1	358	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	376	691	1212	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	375	691	1212	-	-	-
Mov Cap-2 Maneuver	375	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	679	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1212	-	539	-	-
HCM Lane V/C Ratio	0.002	-	0.006	-	-
HCM Control Delay (s)	8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	7	7	398	360	2
Future Volume (vph)	2	7	7	398	360	2
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.999	
Flt Protected	0.989			0.999		
Satd. Flow (prot)	1562	0	0	1617	1648	0
Flt Permitted	0.989			0.999		
Satd. Flow (perm)	1562	0	0	1617	1648	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	138.6			250.9	228.6	
Travel Time (s)	10.0			18.1	16.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	2	7	7	398	360	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	405	362	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.6%		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	2	7	7	398	360	2
Future Vol, veh/h	2	7	7	398	360	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	2	7	7	398	360	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	773	361	362	0	-	0
Stage 1	361	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	370	688	1208	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	367	688	1208	-	-	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	673	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1208	-	576	-	-
HCM Lane V/C Ratio	0.006	-	0.016	-	-
HCM Control Delay (s)	8	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	5	402	20	5	363
Future Volume (vph)	14	5	402	20	5	363
Ideal Flow (vphpl)	1765	1765	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.964		0.994			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1640	0	1609	0	0	1648
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1640	0	1609	0	0	1648
Link Speed (k/h)	50		60			50
Link Distance (m)	88.0		236.3			250.9
Travel Time (s)	6.3		14.2			18.1
Confl. Peds. (#/hr)				7	7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	14	5	402	20	5	363
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	422	0	0	368
Sign Control	Stop		Free			Free

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	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	5	402	20	5	363
Future Vol, veh/h	14	5	402	20	5	363
Conflicting Peds, #/hr	0	0	0	7	7	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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	14	5	402	20	5	363

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	792	419	0	0	429	0
Stage 1	419	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	361	638	-	-	1141	-
Stage 1	668	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	357	634	-	-	1134	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	403	1134	-
HCM Lane V/C Ratio	-	-	0.047	0.004	-
HCM Control Delay (s)	-	-	14.4	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	32	60	399	354	22
Future Volume (vph)	18	32	60	399	354	22
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.914				0.992	
Flt Protected	0.982			0.994		
Satd. Flow (prot)	1584	0	0	1612	1637	0
Flt Permitted	0.982			0.994		
Satd. Flow (perm)	1584	0	0	1612	1637	0
Link Speed (k/h)	50			60	60	
Link Distance (m)	175.4			560.0	236.3	
Travel Time (s)	12.6			33.6	14.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	18	32	60	399	354	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	0	459	376	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.7%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	32	60	399	354	22
Future Vol, veh/h	18	32	60	399	354	22
Conflicting Peds, #/hr	1	1	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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	18	32	60	399	354	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	886	367	377	0	-	0
Stage 1	366	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	318	683	1193	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	297	682	1192	-	-	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	600	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	1.1	0
HCM LOS	B		

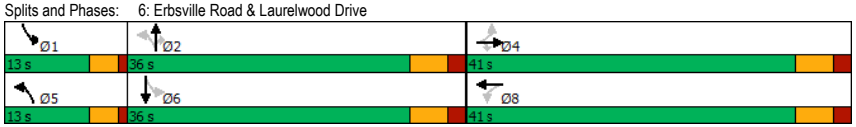
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1192	-	465	-	-
HCM Lane V/C Ratio	0.05	-	0.108	-	-
HCM Control Delay (s)	8.2	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	92	171	129	87	111	149	339	152	79	286	14
Future Volume (vph)	18	92	171	129	87	111	149	339	152	79	286	14
Ideal Flow (vphpl)	1775	1650	1650	1775	1900	1750	1775	1900	1750	1775	1650	1650
Storage Length (m)	30.0		25.0	10.0		0.0	60.0		30.0	15.0		0.0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (m)	40.0			22.5			82.5			52.5		
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	0.96		0.97	0.99	0.96		0.98		0.97	0.99	1.00	
Frt			0.850		0.916				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1650	1375	1670	1657	0	1670	1900	1473	1686	1604	0
Flt Permitted	0.523			0.697			0.488			0.537		
Satd. Flow (perm)	888	1650	1334	1214	1657	0	841	1900	1428	948	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			171		87				132		3	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		179.3			219.1			165.5			560.0	
Travel Time (s)		12.9			15.8			9.9			33.6	
Confl. Peds. (#/hr)	46		8	8		46	22		7	7		22
Peak Hour 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
Heavy Vehicles (%)	0%	0%	2%	1%	1%	0%	1%	0%	1%	0%	2%	0%
Adj. Flow (vph)	18	92	171	129	87	111	149	339	152	79	286	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	92	171	129	198	0	149	339	152	79	300	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		5.0	30.0	30.0	5.0	30.0	
Minimum Split (s)	41.0	41.0	41.0	41.0	41.0		9.0	36.0	36.0	9.0	36.0	
Total Split (s)	41.0	41.0	41.0	41.0	41.0		13.0	36.0	36.0	13.0	36.0	
Total Split (%)	45.6%	45.6%	45.6%	45.6%	45.6%		14.4%	40.0%	40.0%	14.4%	40.0%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		9.0	30.0	30.0	9.0	30.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0		0.0	-2.0	-2.0	0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0			12.0	12.0		12.0	
Flash Dont Walk (s)	20.0	20.0	20.0	20.0	20.0			18.0	18.0		18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effct Green (s)	14.5	14.5	14.5	14.5	14.5		41.7	35.3	35.3	38.8	32.1	
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22		0.63	0.53	0.53	0.58	0.48	
v/c Ratio	0.09	0.26	0.40	0.49	0.46		0.24	0.34	0.19	0.13	0.39	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	21.6	23.3	7.1	29.5	16.5		6.0	11.9	3.8	5.5	13.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	21.6	23.3	7.1	29.5	16.5		6.0	11.9	3.8	5.5	13.7	
LOS	C	C	A	C	B		A	B	A	A	B	
Approach Delay		13.3			21.6			8.6			12.0	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	1.9	10.0	0.0	14.7	12.2		5.9	24.6	1.2	3.0	22.8	
Queue Length 95th (m)	6.7	21.5	13.7	30.3	29.4		15.3	51.3	11.2	9.0	48.6	
Internal Link Dist (m)		155.3			195.1			141.5			536.0	
Turn Bay Length (m)	30.0		25.0	10.0			60.0		30.0	15.0		
Base Capacity (vph)	496	923	821	679	965		649	1010	821	688	777	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.10	0.21	0.19	0.21		0.23	0.34	0.19	0.11	0.39	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 66.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 69.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Erbsville Road & Laurelwood Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	92	171	129	87	111	149	339	152	79	286	14
Future Volume (veh/h)	18	92	171	129	87	111	149	339	152	79	286	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.94	0.96		0.93	0.98		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1775	1650	1624	1761	1885	1750	1761	1900	1736	1775	1624	1650
Adj Flow Rate, veh/h	18	92	171	129	87	111	149	339	152	79	286	14
Peak Hour 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
Percent Heavy Veh, %	0	0	2	1	1	0	1	0	1	0	2	0
Cap, veh/h	399	617	483	430	270	344	455	807	609	410	612	30
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.35	0.08	0.42	0.42	0.05	0.40	0.37
Sat Flow, veh/h	1078	1650	1292	1009	722	921	1677	1900	1433	1690	1533	75
Grp Volume(v), veh/h	18	92	171	129	0	198	149	339	152	79	0	300
Grp Sat Flow(s),veh/h/ln	1078	1650	1292	1009	0	1643	1677	1900	1433	1690	0	1608
Q Serve(g_s), s	1.0	3.0	7.7	7.8	0.0	7.0	4.3	10.0	5.5	2.3	0.0	11.1
Cycle Q Clear(g_c), s	8.0	3.0	7.7	10.8	0.0	7.0	4.3	10.0	5.5	2.3	0.0	11.1
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	399	617	483	430	0	614	455	807	609	410	0	642
V/C Ratio(X)	0.05	0.15	0.35	0.30	0.00	0.32	0.33	0.42	0.25	0.19	0.00	0.47
Avail Cap(c_a), veh/h	493	762	596	518	0	758	514	807	609	513	0	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	16.6	18.1	20.2	0.0	18.3	14.1	16.1	14.8	14.3	0.0	17.8
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.4	0.0	0.3	0.4	1.6	1.0	0.2	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.7	0.7	0.0	0.8	0.2	1.0	0.4	0.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	16.7	18.5	20.6	0.0	18.6	14.5	17.8	15.8	14.5	0.0	20.3
LnGrp LOS	C	B	B	C	A	B	B	B	B	B	A	C
Approach Vol, veh/h		281			327			640			379	
Approach Delay, s/veh		18.1			19.4			16.5			19.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	38.0		34.0	10.2	36.0		34.0				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	30.0		35.0	9.0	30.0		35.0				
Max Q Clear Time (g_c+I1), s	4.3	12.0		10.0	6.3	13.1		12.8				
Green Ext Time (p_c), s	0.1	2.9		1.6	0.1	1.8		2.3				

Intersection Summary			
HCM 6th Ctrl Delay			18.0
HCM 6th LOS			B

Appendix E

2030 Total Synchro Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	36	5	163	45	93	2	147	143	236	180	4
Future Volume (vph)	6	36	5	163	45	93	2	147	143	236	180	4
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.958			0.934			0.999	
Flt Protected		0.994			0.974						0.973	
Satd. Flow (prot)	0	1519	0	0	1439	0	0	1426	0	0	1469	0
Flt Permitted		0.994			0.974						0.973	
Satd. Flow (perm)	0	1519	0	0	1439	0	0	1426	0	0	1469	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		96.0			125.8			260.0			122.5	
Travel Time (s)		6.9			9.1			18.7			8.8	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	2%	1%	3%	2%	0%
Adj. Flow (vph)	6	36	5	163	45	93	2	147	143	236	180	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	301	0	0	292	0	0	420	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 85.9%		ICU Level of Service E	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	36	5	163	45	93	2	147	143	236	180	4
Future Vol, veh/h	6	36	5	163	45	93	2	147	143	236	180	4
Peak Hour 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
Heavy Vehicles, %	0	0	0	1	0	0	0	2	1	3	2	0
Mvmt Flow	6	36	5	163	45	93	2	147	143	236	180	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	14.4	12.5	18.5
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	13%	54%	56%
Vol Thru, %	50%	77%	15%	43%
Vol Right, %	49%	11%	31%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	47	301	420
LT Vol	2	6	163	236
Through Vol	147	36	45	180
RT Vol	143	5	93	4
Lane Flow Rate	292	47	301	420
Geometry Grp	1	1	1	1
Degree of Util (X)	0.435	0.084	0.488	0.651
Departure Headway (Hd)	5.361	6.465	5.839	5.583
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	669	549	614	643
Service Time	3.425	4.564	3.904	3.641
HCM Lane V/C Ratio	0.436	0.086	0.49	0.653
HCM Control Delay	12.5	10.2	14.4	18.5
HCM Lane LOS	B	B	B	C
HCM 95th-tile Q	2.2	0.3	2.7	4.8



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	3	287	348	0
Future Volume (vph)	0	3	3	287	348	0
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.999		
Satd. Flow (prot)	1527	0	0	1616	1618	0
Flt Permitted				0.999		
Satd. Flow (perm)	1527	0	0	1616	1618	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	183.6			112.7	260.0	
Travel Time (s)	13.2			8.1	18.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	0	3	3	287	348	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	290	348	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	3	287	348	0
Future Vol, veh/h	0	3	3	287	348	0
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	3	3	287	348	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	641	348	348	0	-	0
Stage 1	348	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	442	700	1222	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	441	700	1222	-	-	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1222	-	700	-	-
HCM Lane V/C Ratio	0.002	-	0.004	-	-
HCM Control Delay (s)	8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	14	45	0	14	5	263	14	4	350	1
Future Volume (vph)	1	0	14	45	0	14	5	263	14	4	350	1
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
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		0.874			0.968			0.993				
Flt Protected		0.997			0.963			0.999			0.999	
Satd. Flow (prot)	0	1351	0	0	1445	0	0	1509	0	0	1519	0
Flt Permitted		0.997			0.963			0.999			0.999	
Satd. Flow (perm)	0	1351	0	0	1445	0	0	1509	0	0	1519	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		138.6			57.1			124.4			115.9	
Travel Time (s)		10.0			4.1			9.0			8.3	
Confl. Peds. (#/hr)							2					2
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	1	0	14	45	0	14	5	263	14	4	350	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	59	0	0	282	0	0	355	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.7%		ICU Level of Service A	
Analysis Period (min) 15			

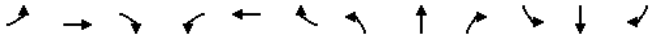
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	14	45	0	14	5	263	14	4	350	1
Future Vol, veh/h	1	0	14	45	0	14	5	263	14	4	350	1
Conflicting Peds, #/hr	0	0	0	0	0	0	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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	1	0	14	45	0	14	5	263	14	4	350	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	648	648	353	646	641	270	353	0	0	277	0	0
Stage 1	361	361	-	280	280	-	-	-	-	-	-	-
Stage 2	287	287	-	366	361	-	-	-	-	-	-	-
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	386	392	695	387	395	774	1217	-	-	1298	-	-
Stage 1	662	629	-	731	683	-	-	-	-	-	-	-
Stage 2	725	678	-	657	629	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	376	388	694	377	391	774	1215	-	-	1298	-	-
Mov Cap-2 Maneuver	376	388	-	377	391	-	-	-	-	-	-	-
Stage 1	657	625	-	727	680	-	-	-	-	-	-	-
Stage 2	708	675	-	641	625	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	14.7	0.1	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1215	-	-	657	429	1298	-	-
HCM Lane V/C Ratio	0.004	-	-	0.023	0.138	0.003	-	-
HCM Control Delay (s)	8	0	-	10.6	14.7	7.8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	0	33	24	0	3	10	263	13	3	413	5
Future Volume (vph)	18	0	33	24	0	3	10	263	13	3	413	5
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.913			0.985			0.994			0.998	
Flt Protected		0.983			0.957			0.998				
Satd. Flow (prot)	0	1391	0	0	1461	0	0	1510	0	0	1517	0
Flt Permitted		0.983			0.957			0.998				
Satd. Flow (perm)	0	1391	0	0	1461	0	0	1510	0	0	1517	0
Link Speed (k/h)		50			50			60			50	
Link Distance (m)		54.0			88.0			236.3			126.3	
Travel Time (s)		3.9			6.3			14.2			9.1	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	18	0	33	24	0	3	10	263	13	3	413	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	27	0	0	286	0	0	421	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	0	33	24	0	3	10	263	13	3	413	5
Future Vol, veh/h	18	0	33	24	0	3	10	263	13	3	413	5
Conflicting Peds, #/hr	0	0	0	0	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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	18	0	33	24	0	3	10	263	13	3	413	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	713	718	416	728	714	270	418	0	0	276	0	0
Stage 1	422	422	-	290	290	-	-	-	-	-	-	-
Stage 2	291	296	-	438	424	-	-	-	-	-	-	-
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	349	357	641	341	359	774	1152	-	-	1299	-	-
Stage 1	613	592	-	722	676	-	-	-	-	-	-	-
Stage 2	721	672	-	601	590	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	344	352	641	320	354	774	1152	-	-	1299	-	-
Mov Cap-2 Maneuver	344	352	-	320	354	-	-	-	-	-	-	-
Stage 1	607	590	-	715	669	-	-	-	-	-	-	-
Stage 2	711	665	-	568	588	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	16.4	0.3	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	491	342	1299	-	-
HCM Lane V/C Ratio	0.009	-	-	0.104	0.079	0.002	-	-
HCM Control Delay (s)	8.2	0	-	13.2	16.4	7.8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	60	27	240	453	18
Future Volume (vph)	34	60	27	240	453	18
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914				0.995	
Flt Protected	0.982			0.995		
Satd. Flow (prot)	1584	0	0	1613	1611	0
Flt Permitted	0.982			0.995		
Satd. Flow (perm)	1584	0	0	1613	1611	0
Link Speed (k/h)	50			60	60	
Link Distance (m)	82.0			560.0	236.3	
Travel Time (s)	5.9			33.6	14.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	34	60	27	240	453	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	0	267	471	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	60	27	240	453	18
Future Vol, veh/h	34	60	27	240	453	18
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	34	60	27	240	453	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	756	462	471	0	-	0
Stage 1	462	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	379	604	1101	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	368	604	1101	-	-	-
Mov Cap-2 Maneuver	368	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	761	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1101	-	490	-	-
HCM Lane V/C Ratio	0.025	-	0.192	-	-
HCM Control Delay (s)	8.4	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

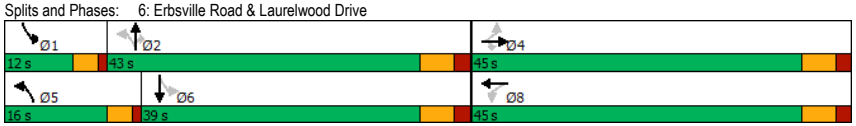
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	232	279	70	209	115	211	393	122	182	491	32
Future Volume (vph)	11	232	279	70	209	115	211	393	122	182	491	32
Ideal Flow (vphpl)	1775	1650	1650	1775	1900	1750	1775	1900	1750	1775	1650	1650
Storage Length (m)	30.0		25.0	10.0		0.0	60.0		30.0	15.0		0.0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (m)	40.0			22.5			82.5			52.5		
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	0.95		0.95	0.98	0.96		0.98		0.93	0.97	1.00	
Frt			0.850		0.947				0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1650	1402	1621	1709	0	1686	1881	1458	1670	1610	0
Flt Permitted	0.322			0.475			0.270			0.454		
Satd. Flow (perm)	541	1650	1331	793	1709	0	472	1881	1358	778	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			279		34				87		4	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		179.3			219.1			165.5			560.0	
Travel Time (s)		12.9			15.8			9.9			33.6	
Confl. Peds. (#/hr)	70		23	23		70	35		33	33		35
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	4%	1%	1%	0%	1%	2%	1%	1%	3%
Adj. Flow (vph)	11	232	279	70	209	115	211	393	122	182	491	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	232	279	70	324	0	211	393	122	182	523	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		5.0	33.0	33.0	5.0	33.0	
Minimum Split (s)	42.0	42.0	42.0	42.0	42.0		9.0	39.0	39.0	9.0	39.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		16.0	43.0	43.0	12.0	39.0	
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%		16.0%	43.0%	43.0%	12.0%	39.0%	
Maximum Green (s)	39.0	39.0	39.0	39.0	39.0		12.0	37.0	37.0	8.0	33.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0		0.0	-2.0	-2.0	0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0			15.0	15.0		15.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			18.0	18.0		18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effct Green (s)	20.8	20.8	20.8	20.8	20.8		49.2	39.2	39.2	44.5	36.9	
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26		0.62	0.49	0.49	0.56	0.46	
v/c Ratio	0.08	0.54	0.50	0.34	0.69		0.48	0.43	0.17	0.35	0.70	

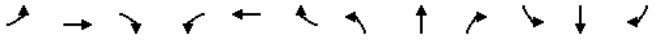
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	22.6	30.0	6.5	28.3	31.5		10.8	16.0	5.8	9.3	25.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	22.6	30.0	6.5	28.3	31.5		10.8	16.0	5.8	9.3	25.4	
LOS	C	C	A	C	C		B	B	A	A	C	
Approach Delay		17.3			31.0			12.8			21.3	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.3	31.8	0.0	9.1	41.6		12.2	38.3	2.8	10.3	62.8	
Queue Length 95th (m)	5.2	52.9	17.1	20.4	68.5		28.2	72.9	13.5	24.6	#137.1	
Internal Link Dist (m)		155.3			195.1			141.5			536.0	
Turn Bay Length (m)	30.0		25.0	10.0			60.0		30.0	15.0		
Base Capacity (vph)	279	852	822	409	899		484	924	711	528	746	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.27	0.34	0.17	0.36		0.44	0.43	0.17	0.34	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 79.7
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 19.4 Intersection LOS: B
Intersection Capacity Utilization 93.7% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Erbsville Road & Laurelwood Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	232	279	70	209	115	211	393	122	182	491	32
Future Volume (veh/h)	11	232	279	70	209	115	211	393	122	182	491	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.96		0.90	0.99		0.96	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1775	1650	1650	1720	1885	1736	1775	1885	1723	1761	1637	1611
Adj Flow Rate, veh/h	11	232	279	70	209	115	211	393	122	182	491	32
Peak Hour 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
Percent Heavy Veh, %	0	0	0	4	1	1	0	1	2	1	1	3
Cap, veh/h	296	624	480	293	414	228	314	775	575	410	602	39
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.36	0.10	0.41	0.41	0.08	0.40	0.38
Sat Flow, veh/h	954	1650	1269	785	1096	603	1690	1885	1398	1677	1515	99
Grp Volume(v), veh/h	11	232	279	70	0	324	211	393	122	182	0	523
Grp Sat Flow(s),veh/h/ln	954	1650	1269	785	0	1699	1690	1885	1398	1677	0	1614
Q Serve(g_s), s	0.9	9.7	16.6	6.7	0.0	14.0	7.1	14.7	5.3	6.2	0.0	27.4
Cycle Q Clear(g_c), s	14.9	9.7	16.6	16.4	0.0	14.0	7.1	14.7	5.3	6.2	0.0	27.4
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	296	624	480	293	0	642	314	775	575	410	0	641
V/C Ratio(X)	0.04	0.37	0.58	0.24	0.00	0.50	0.67	0.51	0.21	0.44	0.00	0.82
Avail Cap(c_a), veh/h	348	713	548	335	0	735	362	775	575	410	0	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.4	21.4	23.5	27.3	0.0	23.0	20.3	20.8	18.0	16.7	0.0	25.5
Incr Delay (d2), s/veh	0.1	0.4	1.2	0.4	0.0	0.6	4.0	2.4	0.8	0.8	0.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.6	2.2	0.7	0.0	2.5	0.9	2.6	0.7	0.7	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	21.7	24.7	27.7	0.0	23.6	24.2	23.1	18.9	17.4	0.0	36.5
LnGrp LOS	C	C	C	C	A	C	C	C	B	B	A	D
Approach Vol, veh/h		522			394			726			705	
Approach Delay, s/veh		23.5			24.3			22.7			31.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	43.0		39.8	13.3	41.7		39.8				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	37.0		39.0	12.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	8.2	16.7		18.6	9.1	29.4		18.4				
Green Ext Time (p_c), s	0.0	3.3		3.2	0.2	1.2		3.0				

Intersection Summary			
HCM 6th Ctrl Delay		25.8	
HCM 6th LOS		C	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	13	277	2	4	349
Future Volume (vph)	6	13	277	2	4	349
Ideal Flow (vphpl)	1765	1765	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.908		0.999			
Flt Protected	0.984					0.999
Satd. Flow (prot)	1546	0	1616	0	0	1616
Flt Permitted	0.984					0.999
Satd. Flow (perm)	1546	0	1616	0	0	1616
Link Speed (k/h)	50		50			50
Link Distance (m)	60.5		115.9			112.7
Travel Time (s)	4.4		8.3			8.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	13	277	2	4	349
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	279	0	0	353
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.8%		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	6	13	277	2	4	349
Future Vol, veh/h	6	13	277	2	4	349
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	13	277	2	4	349

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	635	278	0	0	279	0
Stage 1	278	-	-	-	-	-
Stage 2	357	-	-	-	-	-
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	443	761	-	-	1284	-
Stage 1	769	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	441	761	-	-	1284	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	619	1284	-
HCM Lane V/C Ratio	-	-	0.031	0.003	-
HCM Control Delay (s)	-	-	11	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	11	3	277	411	1
Future Volume (vph)	6	11	3	277	411	1
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.913					
Flt Protected	0.983			0.999		
Satd. Flow (prot)	1553	0	0	1616	1618	0
Flt Permitted	0.983			0.999		
Satd. Flow (perm)	1553	0	0	1616	1618	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	68.9			126.3	124.4	
Travel Time (s)	5.0			9.1	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	11	3	277	411	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	280	412	0
Sign Control	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	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	3	277	411	1
Future Vol, veh/h	6	11	3	277	411	1
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	11	3	277	411	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	695	412	412	0	-	0
Stage 1	412	-	-	-	-	-
Stage 2	283	-	-	-	-	-
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	408	640	1147	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	407	640	1147	-	-	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	765	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1147	-	532	-	-
HCM Lane V/C Ratio	0.003	-	0.032	-	-
HCM Control Delay (s)	8.1	0	12	-	-
HCM Lane LOS	A	A	B	-	-
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)	4	20	1	170	37	192	11	250	175	123	240	7
Future Volume (vph)	4	20	1	170	37	192	11	250	175	123	240	7
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.935			0.946			0.997	
Flt Protected		0.992			0.979			0.999			0.984	
Satd. Flow (prot)	0	1530	0	0	1419	0	0	1445	0	0	1521	0
Flt Permitted		0.992			0.979			0.999			0.984	
Satd. Flow (perm)	0	1530	0	0	1419	0	0	1445	0	0	1521	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		96.0			125.8			260.0			122.5	
Travel Time (s)		6.9			9.1			18.7			8.8	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%
Adj. Flow (vph)	4	20	1	170	37	192	11	250	175	123	240	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	399	0	0	436	0	0	370	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 99.3%		ICU Level of Service F	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	20.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	20	1	170	37	192	11	250	175	123	240	7
Future Vol, veh/h	4	20	1	170	37	192	11	250	175	123	240	7
Peak Hour 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
Heavy Vehicles, %	0	0	0	0	0	0	0	1	2	0	0	0
Mvmt Flow	4	20	1	170	37	192	11	250	175	123	240	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	20.7	21	19.1
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	16%	43%	33%
Vol Thru, %	57%	80%	9%	65%
Vol Right, %	40%	4%	48%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	436	25	399	370
LT Vol	11	4	170	123
Through Vol	250	20	37	240
RT Vol	175	1	192	7
Lane Flow Rate	436	25	399	370
Geometry Grp	1	1	1	1
Degree of Util (X)	0.697	0.051	0.674	0.63
Departure Headway (Hd)	5.753	7.363	6.083	6.127
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	628	484	599	588
Service Time	3.802	5.441	4.083	4.178
HCM Lane V/C Ratio	0.694	0.052	0.666	0.629
HCM Control Delay	21	10.8	20.7	19.1
HCM Lane LOS	C	B	C	C
HCM 95th-tile Q	5.6	0.2	5.1	4.4



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	2	2	432	411	0
Future Volume (vph)	1	2	2	432	411	0
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910					
Flt Protected	0.984					
Satd. Flow (prot)	1580	0	0	1618	1650	0
Flt Permitted	0.984					
Satd. Flow (perm)	1580	0	0	1618	1650	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	183.6			112.7	260.0	
Travel Time (s)	13.2			8.1	18.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	1	2	2	432	411	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	434	411	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	2	432	411	0
Future Vol, veh/h	1	2	2	432	411	0
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	1	2	2	432	411	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	847	411	411	0	-	0
Stage 1	411	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	335	645	1159	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	334	645	1159	-	-	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	656	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1159	-	492	-	-
HCM Lane V/C Ratio	0.002	-	0.006	-	-
HCM Control Delay (s)	8.1	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	7	27	0	9	7	420	45	14	389	2
Future Volume (vph)	2	0	7	27	0	9	7	420	45	14	389	2
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.895			0.966			0.987			0.999	
Flt Protected		0.989			0.964			0.999			0.998	
Satd. Flow (prot)	0	1372	0	0	1443	0	0	1502	0	0	1545	0
Flt Permitted		0.989			0.964			0.999			0.998	
Satd. Flow (perm)	0	1372	0	0	1443	0	0	1502	0	0	1545	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		138.6			57.1			124.4			115.9	
Travel Time (s)		10.0			4.1			9.0			8.3	
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	2	0	7	27	0	9	7	420	45	14	389	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	36	0	0	472	0	0	405	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	7	27	0	9	7	420	45	14	389	2
Future Vol, veh/h	2	0	7	27	0	9	7	420	45	14	389	2
Conflicting Peds, #/hr	0	0	0	0	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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	0	0
Mvmt Flow	2	0	7	27	0	9	7	420	45	14	389	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	879	897	390	879	876	443	391	0	0	465	0	0
Stage 1	418	418	-	457	457	-	-	-	-	-	-	-
Stage 2	461	479	-	422	419	-	-	-	-	-	-	-
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	270	281	663	270	290	619	1179	-	-	1107	-	-
Stage 1	616	594	-	587	571	-	-	-	-	-	-	-
Stage 2	584	558	-	613	593	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	261	274	663	262	283	619	1179	-	-	1107	-	-
Mov Cap-2 Maneuver	261	274	-	262	283	-	-	-	-	-	-	-
Stage 1	611	584	-	582	566	-	-	-	-	-	-	-
Stage 2	571	554	-	597	584	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	18.3	0.1	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1179	-	-	494	306	1107	-	-
HCM Lane V/C Ratio	0.006	-	-	0.018	0.118	0.013	-	-
HCM Control Delay (s)	8.1	0	-	12.4	18.3	8.3	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	20	14	0	5	33	466	20	5	402	18
Future Volume (vph)	11	0	20	14	0	5	33	466	20	5	402	18
Ideal Flow (vphpl)	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
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		0.913			0.964			0.995			0.994	
Flt Protected		0.983			0.964			0.997			0.999	
Satd. Flow (prot)	0	1391	0	0	1440	0	0	1510	0	0	1539	0
Flt Permitted		0.983			0.964			0.997			0.999	
Satd. Flow (perm)	0	1391	0	0	1440	0	0	1510	0	0	1539	0
Link Speed (k/h)		50			50			60			50	
Link Distance (m)		54.0			88.0			236.3			126.3	
Travel Time (s)		3.9			6.3			14.2			9.1	
Confl. Peds. (#/hr)									7	7		
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	11	0	20	14	0	5	33	466	20	5	402	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	19	0	0	519	0	0	425	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	20	14	0	5	33	466	20	5	402	18
Future Vol, veh/h	11	0	20	14	0	5	33	466	20	5	402	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	7	7	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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	0	0
Mvmt Flow	11	0	20	14	0	5	33	466	20	5	402	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	966	980	411	980	979	483	420	0	0	493	0	0
Stage 1	421	421	-	549	549	-	-	-	-	-	-	-
Stage 2	545	559	-	431	430	-	-	-	-	-	-	-
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	236	252	645	231	252	588	1150	-	-	1081	-	-
Stage 1	614	592	-	524	520	-	-	-	-	-	-	-
Stage 2	526	514	-	607	587	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	226	239	645	215	239	585	1150	-	-	1075	-	-
Mov Cap-2 Maneuver	226	239	-	215	239	-	-	-	-	-	-	-
Stage 1	590	588	-	500	497	-	-	-	-	-	-	-
Stage 2	501	491	-	585	583	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	20.1	0.5	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1150	-	-	389	258	1075	-	-
HCM Lane V/C Ratio	0.029	-	-	0.08	0.074	0.005	-	-
HCM Control Delay (s)	8.2	0	-	15.1	20.1	8.4	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	32	60	496	413	22
Future Volume (vph)	18	32	60	496	413	22
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.914				0.993	
Flt Protected	0.982			0.995		
Satd. Flow (prot)	1584	0	0	1613	1638	0
Flt Permitted	0.982			0.995		
Satd. Flow (perm)	1584	0	0	1613	1638	0
Link Speed (k/h)	50			60	60	
Link Distance (m)	82.0			560.0	236.3	
Travel Time (s)	5.9			33.6	14.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	18	32	60	496	413	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	0	556	435	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.1%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	32	60	496	413	22
Future Vol, veh/h	18	32	60	496	413	22
Conflicting Peds, #/hr	1	1	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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	18	32	60	496	413	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1042	426	436	0	-	0
Stage 1	425	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	257	633	1134	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	238	632	1133	-	-	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	541	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.4	0.9	0
HCM LOS	C		

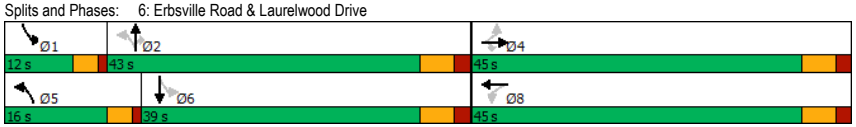
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1133	-	396	-	-
HCM Lane V/C Ratio	0.053	-	0.126	-	-
HCM Control Delay (s)	8.4	0	15.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	92	171	129	87	134	149	414	152	92	332	14
Future Volume (vph)	18	92	171	129	87	134	149	414	152	92	332	14
Ideal Flow (vphpl)	1775	1650	1650	1775	1900	1750	1775	1900	1750	1775	1650	1650
Storage Length (m)	30.0		25.0	10.0		0.0	60.0		30.0	15.0		0.0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (m)	40.0			22.5			82.5			52.5		
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	0.96		0.97	0.99	0.95		0.98		0.97	0.99	1.00	
Frt			0.850		0.909				0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1686	1650	1375	1670	1634	0	1670	1900	1473	1686	1606	0
Flt Permitted	0.449			0.697			0.456			0.474		
Satd. Flow (perm)	762	1650	1333	1213	1634	0	789	1900	1428	837	1606	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			171		94				103		2	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		179.3			219.1			165.5			560.0	
Travel Time (s)		12.9			15.8			9.9			33.6	
Confl. Peds. (#/hr)	46		8	8		46	22		7	7		22
Peak Hour 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
Heavy Vehicles (%)	0%	0%	2%	1%	1%	0%	1%	0%	1%	0%	2%	0%
Adj. Flow (vph)	18	92	171	129	87	134	149	414	152	92	332	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	92	171	129	221	0	149	414	152	92	346	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		5.0	33.0	33.0	5.0	33.0	
Minimum Split (s)	42.0	42.0	42.0	42.0	42.0		9.0	39.0	39.0	9.0	39.0	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		16.0	43.0	43.0	12.0	39.0	
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%		16.0%	43.0%	43.0%	12.0%	39.0%	
Maximum Green (s)	39.0	39.0	39.0	39.0	39.0		12.0	37.0	37.0	8.0	33.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0		0.0	-2.0	-2.0	0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0			15.0	15.0		15.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			18.0	18.0		18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effct Green (s)	15.1	15.1	15.1	15.1	15.1		47.2	40.7	40.7	44.1	37.3	
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.65	0.56	0.56	0.61	0.52	
v/c Ratio	0.11	0.27	0.42	0.51	0.53		0.24	0.39	0.18	0.16	0.42	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	24.9	26.2	7.6	33.3	19.7		5.8	12.1	4.7	5.6	13.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	24.9	26.2	7.6	33.3	19.7		5.8	12.1	4.7	5.6	13.9	
LOS	C	C	A	C	B		A	B	A	A	B	
Approach Delay		14.8			24.7			9.2			12.2	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	2.1	11.2	0.0	16.6	15.9		6.2	32.7	3.2	3.7	28.1	
Queue Length 95th (m)	7.5	23.5	14.6	33.3	36.2		15.6	64.4	13.7	10.3	59.8	
Internal Link Dist (m)		155.3			195.1			141.5			536.0	
Turn Bay Length (m)	30.0		25.0	10.0			60.0		30.0	15.0		
Base Capacity (vph)	434	940	833	691	971		684	1067	847	618	828	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.10	0.21	0.19	0.23		0.22	0.39	0.18	0.15	0.42	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 72.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 6: Erbsville Road & Laurelwood Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	92	171	129	87	134	149	414	152	92	332	14
Future Volume (veh/h)	18	92	171	129	87	134	149	414	152	92	332	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.94	0.96		0.93	0.99		0.98	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1775	1650	1624	1761	1885	1750	1761	1900	1736	1775	1624	1650
Adj Flow Rate, veh/h	18	92	171	129	87	134	149	414	152	92	332	14
Peak Hour 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
Percent Heavy Veh, %	0	0	2	1	1	0	1	0	1	0	2	0
Cap, veh/h	360	601	469	411	233	358	441	850	642	384	655	28
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.34	0.07	0.45	0.45	0.05	0.42	0.40
Sat Flow, veh/h	1057	1650	1290	1007	639	985	1677	1900	1435	1690	1545	65
Grp Volume(v), veh/h	18	92	171	129	0	221	149	414	152	92	0	346
Grp Sat Flow(s),veh/h/ln	1057	1650	1290	1007	0	1624	1677	1900	1435	1690	0	1610
Q Serve(g_s), s	1.1	3.3	8.5	8.6	0.0	8.9	4.5	13.4	5.7	2.8	0.0	13.8
Cycle Q Clear(g_c), s	10.0	3.3	8.5	11.9	0.0	8.9	4.5	13.4	5.7	2.8	0.0	13.8
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	360	601	469	411	0	591	441	850	642	384	0	682
V/C Ratio(X)	0.05	0.15	0.36	0.31	0.00	0.37	0.34	0.49	0.24	0.24	0.00	0.51
Avail Cap(c_a), veh/h	472	776	606	518	0	764	547	850	642	452	0	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	18.7	20.3	22.7	0.0	20.9	14.4	17.0	14.9	14.7	0.0	18.5
Incr Delay (d2), s/veh	0.1	0.1	0.5	0.4	0.0	0.4	0.4	2.0	0.9	0.3	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	1.0	0.9	0.0	1.3	0.3	1.6	0.5	0.2	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	18.8	20.8	23.1	0.0	21.3	14.9	19.0	15.8	15.0	0.0	21.2
LnGrp LOS	C	B	C	C	A	C	B	B	B	B	A	C
Approach Vol, veh/h		281			350			715			438	
Approach Delay, s/veh		20.4			22.0			17.5			19.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	43.0		35.7	10.5	41.0		35.7				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	37.0		39.0	12.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	4.8	15.4		12.0	6.5	15.8		13.9				
Green Ext Time (p_c), s	0.1	3.7		1.6	0.2	2.2		2.6				

Intersection Summary		
HCM 6th Ctrl Delay		19.4
HCM 6th LOS		B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	8	426	6	13	402
Future Volume (vph)	4	8	426	6	13	402
Ideal Flow (vphpl)	1765	1765	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.998			
Flt Protected	0.984					0.998
Satd. Flow (prot)	1549	0	1614	0	0	1614
Flt Permitted	0.984					0.998
Satd. Flow (perm)	1549	0	1614	0	0	1614
Link Speed (k/h)	50		50			50
Link Distance (m)	60.5		115.9			112.7
Travel Time (s)	4.4		8.3			8.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	8	426	6	13	402
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	432	0	0	415
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.4%	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	4	8	426	6	13	402
Future Vol, veh/h	4	8	426	6	13	402
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	8	426	6	13	402

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	857	429	0	0	432	0
Stage 1	429	-	-	-	-	-
Stage 2	428	-	-	-	-	-
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	328	626	-	-	1128	-
Stage 1	657	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	323	626	-	-	1128	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	647	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	477	1128	-
HCM Lane V/C Ratio	-	-	0.025	0.012	-
HCM Control Delay (s)	-	-	12.7	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	7	11	469	418	6
Future Volume (vph)	3	7	11	469	418	6
Ideal Flow (vphpl)	1765	176	1650	1650	1650	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.905				0.998	
Flt Protected	0.985			0.999		
Satd. Flow (prot)	1543	0	0	1616	1614	0
Flt Permitted	0.985			0.999		
Satd. Flow (perm)	1543	0	0	1616	1614	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	68.9			126.3	124.4	
Travel Time (s)	5.0			9.1	9.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	7	11	469	418	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	480	424	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	48.6%	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	3	7	11	469	418	6
Future Vol, veh/h	3	7	11	469	418	6
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	7	11	469	418	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	912	421	424	0	-	0
Stage 1	421	-	-	-	-	-
Stage 2	491	-	-	-	-	-
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	304	632	1135	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	300	632	1135	-	-	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	615	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1135	-	474	-	-
HCM Lane V/C Ratio	0.01	-	0.021	-	-
HCM Control Delay (s)	8.2	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-