Millbrook Development Phase 2

Township of Cavan Monaghan, County of Peterborough

Traffic Impact Study for the Towerhill Developments Ltd.

Type of Document:
Final Report

Project Number:
JDE – 1331

Date Submitted:
October 24th, 2018

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Executive Summary

The Millbrook Development encompasses approximately 97.3 hectares of land, located on the west side of County Road 10 between Brookside Street to Larmer Line. The proposed development will include: residential, institutional and urban employment area lands.

This report summarizes the traffic impact study prepared for Phase 2 of the proposed Millbrook Development [Subject Site] located north of the community of Millbrook, in the Township of Cavan Monaghan [Township], County of Peterborough [County]. The Subject Site includes a 47.8 hectare parcel, north of Fallis Line and west of County Road 10. The report assesses the impact of traffic related to the development on the adjacent roadway and provides recommendations to accommodate the traffic in a safe and efficient manner.

The Subject Site (Phase 2) includes the following:

• Single Detached		360 units
• Townhouse		244 units
• High Density Residential		192 units
	Total	**796 units**

It is anticipated that the proposed development will be fully occupied by 2021.

The proposed development includes one full-movement access onto County Road 10, north of the existing Township of Cavan Monaghan Municipal Office [Street 'B' North]. The development also includes two full-movement road access located directly across the Millbrook Development Phase 1 Street 'A' and Street 'D' [Street 'B' South & Street 'I'].

The scope of this analysis includes a review of the following intersections:

- County Road 10 / Fallis Line;
- County Road 10 / Larmer Line;
- County Road 10 / Municipal Office Driveway;
- County Road 10 / Street 'B';
- Fallis Line / Street 'B' South & Street 'A'; and
- Fallis Line / Street 'I' & Street 'D'.

Conclusions

1. The proposed development of the Subject Site is expected to generate a total of 450 AM, 579 PM and 650 SAT peak hour trips.
2. Background traffic and pedestrian counts were completed for the existing intersections of County Road 10 / Municipal Office Driveway on Tuesday April 25th, 2017 and Saturday August 12th, 2017.
3. An intersection operational analysis was completed at the intersections of County Road 10 / Larmer Line, County Road 10 / Municipal Office Driveway and County Road 10 / Fallis Line, using the existing (2018) and background (2021, 2026 and 2031) traffic volumes. The following improvements are recommended:

Background (2021) Traffic Volumes

- **County Road 10 / Municipal Office Driveway (Millbrook Community Centre)**
  - As part of the Millbrook Community Centre development, construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length.
- **County Road 10 / Larmer Line**
  - Construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length.
- **County Road 10 / Fallis Line**
  - Reduce the posted speed limit from 80 km/h to 60km/h on Fallis Line from County Road 10 to west of Street 'A';
  - Construct a northbound left-turn lane with a 145 metre taper length, 60 metre parallel length and 25 metre storage length; and
  - Construct a southbound right-turn lane with an 80 metre taper length and 85 metre parallel length.

Background (2026) Traffic Volumes

- **County Road 10 / Fallis Line**
  - Install traffic signals.

Background (2031) Traffic Volumes

- **County Road 10 / Larmer Line**
  - Install traffic signals.

4. An estimate of the amount of traffic that would be generated by the Subject Site was prepared and assigned to the study area streets and intersections.

5. An intersection operation analysis was completed under total (2021, 2026 and 2031) traffic volumes with the proposed development operational at the study area intersections. In addition to the improvements recommended as a result of the background traffic noted above, the following additional improvements are recommended:

   Total (2021) Traffic Volumes

   - **County Road 10 / Fallis Line**
     - Install traffic signals.
   - **Street 'I' & Street 'D' / Fallis Line**
     - Construct a westbound left-turn lane with a 115 metre taper length, 40 metre parallel and 15 metre storage.
   - **County Road 10 / Street 'B' North**
     - Construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length; and
     - Construct a southbound right-turn lane with an 80 metre taper length and 85 metre parallel length.

   Conditional Works - Total (2031) Traffic Volumes

   - **County Road 10 / Street 'B' North**
     - Install traffic signals.

6. The sight lines available on Fallis Line for Street 'B' South and Street 'I' and on County Road 10 for Street 'B' North meet the minimum stopping sight distance requirements as identified in the Transportation Association of Canada Guidelines.

7. Some form of pedestrian crossing treatment is recommended on Fallis Line near the west edge of the Millbrook Community Centre property. The specific pedestrian crossing treatment, location and construction timing is beyond the scope of this report.
8. In summary, with the improvements outlined above, the proposed development will not cause any operational issues will not add significant delay or congestion to the local roadway network.

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1 Introduction

1.1 Background

Towerhill Developments Ltd. [the Developer] is proposing to develop a 47.8 hectare parcel of land [Subject Site], located north of Fallis Line and west of County Road 10 in the Township of Cavan Monaghan [Township], County of Peterborough [County]. The Subject Site is Phase 2 of the Millbrook Development, which encompasses 97.3 hectares on the west side of County Road 10, between Brookside Street to Larmer Line.

The proposed development of the Subject Site (Phase 2) will include the following:

• Single Detached		360 units
• Townhouse		244 units
• High Density Residential		192 units
	Total	**796 units**

A traffic impact study was completed by JD Engineering for the proposed Millbrook Development Phase 1 (dated July 2014) [Millbrook TIS], which is located just south of the proposed development, west of County Road 10 [Millbrook Development Phase 1]. Based on correspondence with the Township 240 units are currently built-out and occupancy will occur shortly for Millbrook Development Phase 1.

The proposed development includes one full-movement access onto County Road 10, north of the existing Township of Cavan Monaghan Municipal Office [Street 'B' North]. The development also includes two full-movement road access located directly across the Millbrook Development Phase 1 Street 'A' and Street 'D' [Street 'B' South & Street 'I'].

The Developer has retained **JD Northcote Engineering Inc.** [JD Engineering] to prepare this traffic impact study in support of the Draft Plan of Subdivision Application for the Subject Site.

1.2 Study Area

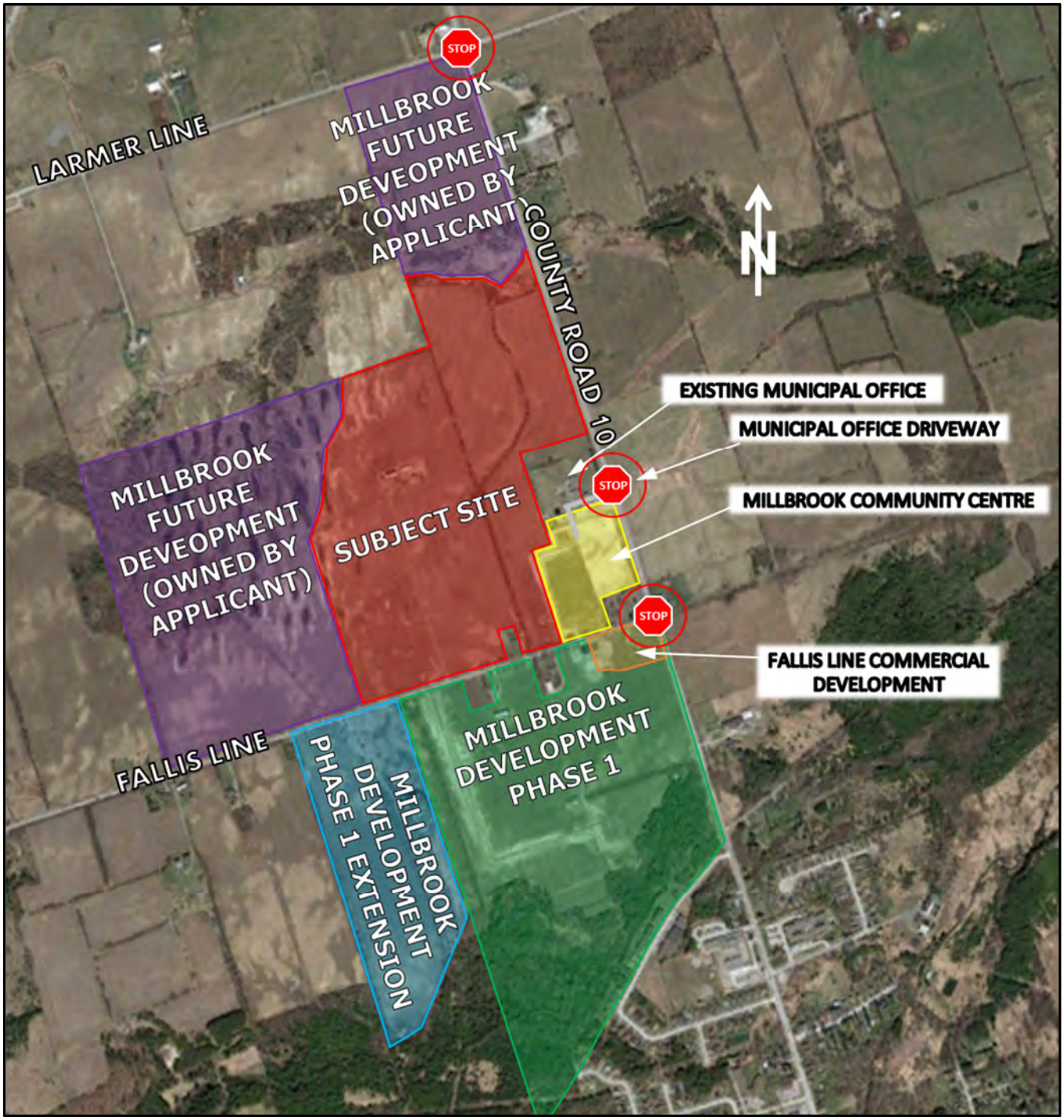
Figure 1 illustrates the location of the Subject Site and study area intersections in relation to the surrounding area. The Site Plan by Innovative Planning Solutions is included in **Appendix A.**

The Subject Site is bound by County Road 10, the existing Township municipal office and the future Millbrook Community Centre to the east, Fallis Line to the south, and Future Millbrook Development lands to the north and west.

Through the consultation with the Township and County, the following intersections are included in the Traffic Impact Analysis:

- County Road 10 / Fallis Line;
- County Road 10 / Larmer Line; and
- County Road 10 / Municipal Office Driveway.
- County Road 10 / Street 'B';
- Fallis Line / Street 'B' South & Street 'A'; and
- Fallis Line / Street 'I' & Street 'D'.

Figure 1 – Proposed Site Location and Study Area



1.3 Study Scope and Objectives

The purpose of this study is to identify the potential impacts to traffic flow at the site access on the surrounding roadway network. The study analysis includes the following tasks:

- Determine existing traffic volumes and circulation patterns;
- Estimate future traffic volumes if the proposed development was not constructed, including the impact of additional proposed developments in the area;
- Estimate the amount of traffic that would be generated by the proposed development and assign to the roadway network;
- Prepare diagrams summarizing the weekday morning [AM], afternoon [PM] and Saturday midday [SAT] peak hour traffic volumes at the study area intersections for the existing and horizon years;
- Complete LOS analysis of horizon year (with the proposed development) traffic conditions and identify additional operational deficiencies;
- Recommend improvements to address operational deficiencies;
- Review the configuration of the site access roads;
- Complete a review and analysis of the existing collision data for County Road 10; and
- Document findings and recommendations in a final report.

1.4 Horizon Year and Analysis Periods

Based on discussions with the Developer, it is anticipated that the proposed residential development within the Subject Site will be completed and fully occupied by 2021. Traffic scenarios for the existing (2018), ultimate build-out year horizon year (2021), 5-year post ultimate build-out horizon year (2026) and 10-year post ultimate build-out horizon year (2031) were selected for analysis of traffic operations in the study area.

The weekday morning [AM], afternoon [PM] and midday Saturday [SAT] peak hours have been selected as the analysis periods for this study.

2 Information Gathering

2.1 Street and Intersection Characteristics

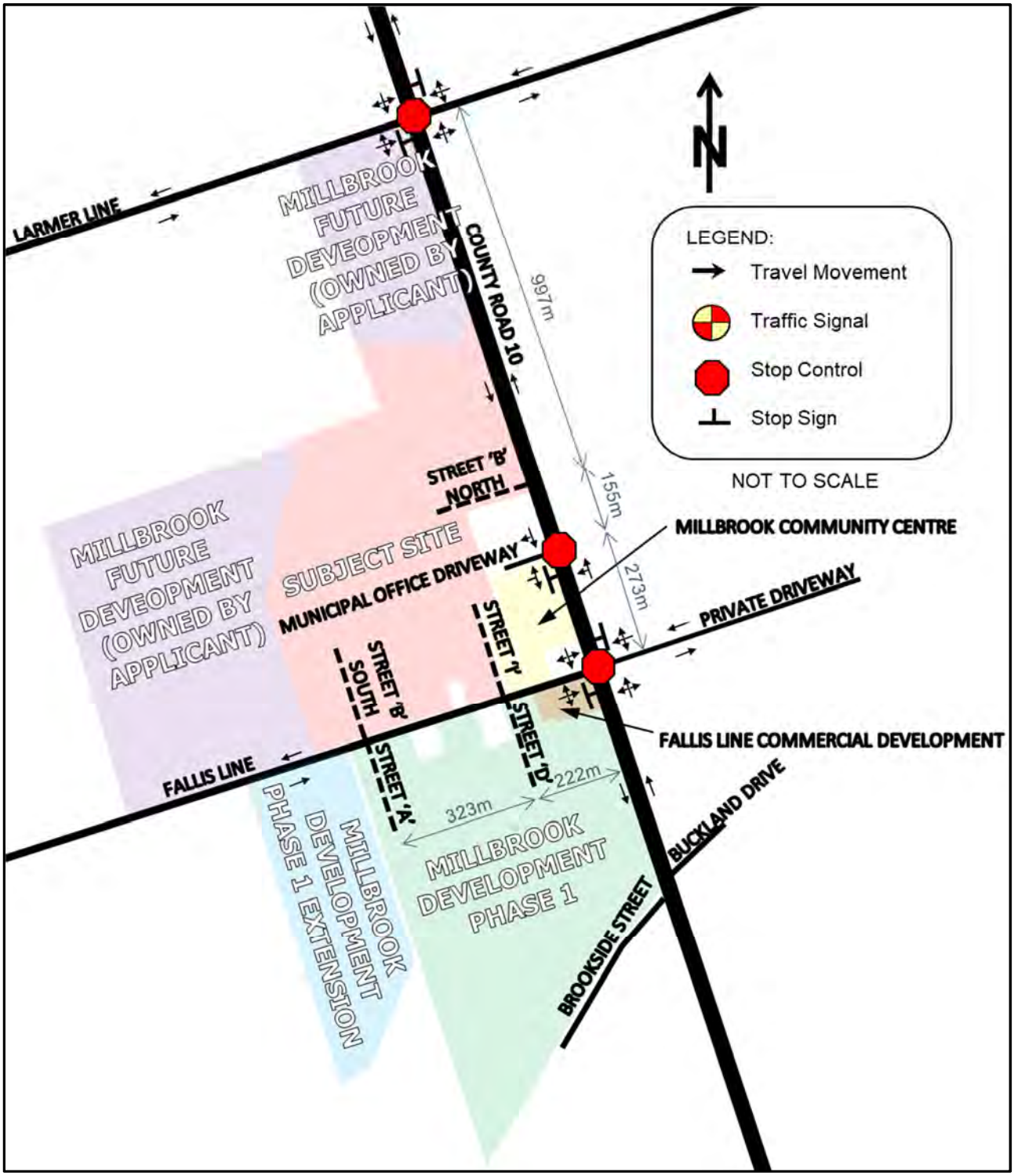
County Road 10 is a two-lane 'Class A' Major County Arterial road with a rural cross-section. Between Fallis Line and Larmer Line, County Road 10 has a 20 metre wide right-of-way, 6.25 metre paved road width and gravel shoulders. There are no sidewalks on County Road 10, in the study area. The posted speed limit on County Road 10 is 80km/h from immediately south of Fallis Line to the north end of the study area. County Road 10 is under the jurisdiction of the County.

Fallis Line is a two-lane local road with a rural cross-section, 6.0 metre paved road width, 0.25 metre wide gravel shoulders and a 20 metre ROW within the study area. There are no sidewalks on Fallis Line. The assumed (unposted) speed limit on Fallis Line is 80km/h. Fallis Line is under the jurisdiction of the Township.

Larmer Line is a two-lane local road with a rural cross-section, 6.0 metre paved road width, 0.25 metre wide gravel shoulders and a 20 metre ROW within the study area. There are no sidewalks on Larmers Line. The assumed (unposted) speed limit on Larmers Line is 80km/h. Larmers Line is under the jurisdiction of the Township.

The existing lane configuration for the study area can be seen in **Figure 2**.

Figure 2 – Existing (2018) Lane Configuration within Study Area



2.2 Transit Access

There is currently no municipal transit system available within the study area. The 2015 Township Official Plan has recommended steps toward implementing a preliminary transit system. Since this process is still in the early phases, we have conservatively assumed that the proposed development will not have access to transit.

2.3 Other Developments within the Study Area

2.3.1 Adjacent Development Description

Based on discussions with the Township, only planned developments within Millbrook will have a notable impact on the traffic volumes in the study area. All other development outside the study area will be accounted for in the background traffic growth rate, as outlined in Section 2.6.

Millbrook Development Phase 1 (by the Developer)
As noted in Section 1.1, 240 units are currently built-out and occupancy will occur shortly for Millbrook Development Phase 1. We have assumed that Millbrook Development Phase 1 will be fully built-out and occupied by 2021. The unit breakdown of the Millbrook Development Phase 1 for the 2021 horizon year is summarized below:

Anticipated (2021) Occupancy of the Millbrook Development Phase 1

• Single Detached		269 units
• Townhouse		65 units
	Total	**334 units**

Millbrook Future Development (by the Developer)
An additional review of the anticipated ultimate development of the future development lands (owned by the Developer) has also been reviewed for long-range planning purposes [Millbrook Future Development]. The following ultimate development statistics have been assumed for the Millbrook Future Development:

Assumed Ultimate Development of the Millbrook Future Development for Horizon Year 2031

• Institutional	9.9 ha.
• Urban Employment	12.13 ha.

Fallis Line Commercial Development (by the Developer)
Towerhill Development Ltd. is also moving ahead with a proposed commercial development on the property municipally known as 919 Fallis Line, located at the southwest corner of the intersection of Fallis Line / County Road 10 [Fallis Line Commercial Development]. The proposed commercial development includes a general office building (13,412sq.ft. GFA) and a fast-food restaurant (5,000sq.ft. GFA). It is anticipated that build-out and occupancy of this development will occur by 2019. JD Engineering prepared a traffic brief (dated September 2017) for the Fallis Line Commercial Development [919 Fallis Line Traffic Brief].

Millbrook Community Centre (by the Township)
The Township is moving ahead with the proposed Millbrook Community Centre on a parcel of land located directly south of the existing Township Municipal Office. The Millbrook Community Centre will have a total gross floor area of 50,130 square feet, that will include an ice rink, community hall, multi-use rooms within the building and a play area with future splash pad directly north of the proposed building. It is anticipated that build-out will occur by 2019. JD Engineering prepared a traffic impact study (dated October 2017) for the Millbrook Community Centre [Community Centre TIS].

Millbrook Development Phase 1 Extension (by Others)
Based on correspondence with the Township there is a proposed residential extension to the Millbrook Development Phase 1 parcel located just west of the Millbrook Development south of Fallis Line [Millbrook Development Phase 1 Extension]. This property is not owned by Towerhill Development Ltd. The proposed residential development includes the construction of 65 single detached units. It is anticipated that build-out and occupancy of this development will occur by 2021. Azsura Engineers prepared a traffic letter (dated September 2017) for the Millbrook Development Phase 1 Extension [Azsura Traffic Letter].

Section 2.3.2 and 2.3.3 outline the methodology applied to account for the additional traffic in the study area, as a result of the Millbrook Development Phase 1, Millbrook Future Development, Fallis Line Commercial Development Millbrook Community Centre, and Millbrook Development Phase 1 Extension. Sections 2.3.4 provides the calculation of the traffic generation for each of the adjacent developments.

2.3.2 Adjacent Development Traffic Generation Methodology

Although traffic impact studies are available for the Fallis Line Commercial Development, Millbrook Development Phase 1 and Millbrook Development Phase 1 Extension, adjustments to the traffic generation for the developments are required to reflect updated information; furthermore, a traffic impact study is not available for the Future Development; consequently the traffic generated for this development has been estimated as part of this analysis. The traffic generation for these proposed developments have been calculated based on the data provided in the Institute of Transportation Engineers [ITE] *Trip Generation Manual* (10th Edition) [ITE Trip Generation Manual]. The following ITE land uses have been applied to estimate the traffic from mentioned adjacent developments:

- ITE land use 210 (Single-Family Detached Housing);
- ITE land use 220 (Multifamily Housing (Low-Rise));
- ITE land use 770 (Business Park); and
- ITE land use 933 (Fast-Food Restaurant without Drive-Through Window).

The AM and PM peak hour traffic generation for the Fallis Line Commercial Development, Millbrook Development Phase 1 and Millbrook Development Phase 1 Extension do not exactly align with the AM, PM and SAT peak hour in the traffic counts; consequently, we have applied the peak hour of adjacent street traffic values provided in the ITE Trip Generation Manual.

For the Millbrook Future Development although the peak hours of traffic generation for the Millbrook Future Development is not anticipated to exactly align with the peak hour of traffic on the adjacent streets, for the purposes of this analysis we have conservatively applied the peak hour of traffic generator rates.

No transportation modal split reduction has been applied to the traffic generation calculations.

2.3.3 Adjacent Development Traffic Assignment Methodology

The traffic assignment for the fast-food and office component of the Fallis Line Commercial Development has been estimated based on the 919 Fallis Line Traffic Brief.

We have assumed the Millbrook Future Development will follow the same traffic assignment as the office component of the Fallis Line Commercial Development as identified in the 919 Fallis Line Traffic Brief. The 919 Fallis Line Traffic Brief assumed 20% of all traffic generated by the office component of the development would be generated within the Millbrook community, with half of this traffic (10%) being generated within the existing Millbrook community and the other half (10%) generated within the proposed Millbrook Development. Excerpts from this study have been included in **Appendix B.**

The Community Centre TIS estimated the traffic assignment for the Millbrook Community Centre, based on the planned residential development in the area for the 2019 build-out year. The Community Centre TIS assumed 25% of the Millbrook Development Phase 1 was built-out and occupied. Since the residential distribution in the Community Centre TIS did not include all residential units in Phase 1 and Phase 2 of the Millbrook Development (assumed for 2021 build-out), the traffic assignment has been adjusted to reflect the ultimate build-out of the Subject Site. Furthermore, it is anticipated an additional driveway from the Millbrook Community Centre onto Street 'I' would be constructed upon the build-out of the Subject Site, which will also impact the traffic distribution in the area.

The revised distribution was selected based on the probable route of travel between the residential areas and the Millbrook Community Centre, assuming that people will select their route primarily based on travel time. **Table 1** illustrates the estimated residential capture for the Millbrook Community Centre with the surrounding residential development.

Table 1 – Millbrook Community Centre Residential Capture Distribution

Travel Direction (to/from)	Percentage of Total Residential Capture
Tapley	13%
Millbrook	25%
Carmel / South Monaghan / Bailieboro	4%
Cavan	4%
Fraserville / Cedar Valley	6%
Millbrook Development Phase 1	19%
Millbrook Development Phase 2	29%
Total	**100%**

Table 2 illustrates the estimated distribution of ingress and egress traffic for the Millbrook Community Centre.

Table 2 – Millbrook Community Centre Trip Distribution

Travel Direction (to/from)	Percentage of Total Traffic Generation
North via CR10	4%
South via CR10	29%
West via Fallis Line	4%
West via Larmer Line	8%
East via Larmer Line	6%
Via Millbrook Development Phase 1 Roadways	19%
Via Millbrook Development Phase 2 Roadways	29%
Total	100%

The traffic assignment used for Millbrook Development Phase 1 in the Millbrook TIS will be applied to both the Millbrook Development Phase 1 and the Millbrook Development Phase 1 Extension (excerpts attached in **Appendix B**). The Millbrook TIS applied 2006 Transportation Tomorrow Survey [TTS] data using the TTS Internet Data Retrieval System [IDRS]. The estimated distribution of trips generated by the Millbrook Development Phase 1 and the Millbrook Development Phase 1 Extension is illustrated in **Table 3**.

Table 3 - Millbrook Development Phase 1 Traffic Distribution

Travel Direction (to/from)	Percentage of Total Traffic Generation
North via County Road 10	59%
Southeast via County Road 10	28%
Southwest via Fallis Line	10%
East via Larmer Line	3%
Total	**100%**

2.3.4 Adjacent Development Traffic Calculation

2.3.4.1 Fallis Line Commercial Development

The traffic generation for the office component of the Fallis Line Commercial Development was obtained from the 919 Fallis Line Traffic Brief (excerpts provided in **Appendix B**).

The statistics and land use for the fast-food restaurant component of the proposed development have been updated since the 919 Fallis Line Traffic Brief. The traffic generation for the fast-food component of the Fallis Line Commercial Development has been calculated based on the data provided in the ITE Trip Generation Manual.

The estimated trip generation of the fast-food component of the Fallis Line Commercial Development is illustrated below in **Table 4.**

Table 4 – Estimated Traffic Generation of the Fallis Line Commercial Development

Development	Size	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
General Office Building ITE Land Use: 710*	13,412 sq.ft.	34	5	39	16	78	94	3	3	6
Fast-Food Restaurant without Drive-Through Window ITE Land Use: 933	5,000 sq.ft.	64	62	126	74	68	142	139	134	273
TOTAL TRIP GENERATION		**98**	**67**	**165**	**90**	**146**	**236**	**142**	**137**	**279**
INTERNAL CAPTURE**		-3	-3	-6	-3	-3	-6	-2	-2	-4
NET GENERATION		**95**	**64**	**159**	**87**	**143**	**230**	**140**	**135**	**275**
PASS-BY TRIPS (ITE Land Use: 932)***		0	0	0	-30	-30	-60	0	0	0
TOTAL SITE		**95**	**64**	**159**	**57**	**113**	**170**	**140**	**135**	**275**

* The traffic generated was estimated in the 919 Fallis Line Traffic Brief (excerpts provided in **Appendix B)**.
** The internal capture rate has been calculated using the methodology outlined in Section 7 of the ITE Trip Generation Handbook (2nd Edition). Calculations are provided in **Appendix I.**
*** Since ITE pass-by data were not available for ITE land use 933, the ITE pass-by data for ITE land use 932 (High-Turnover (Sit-Down) Restaurant were applied. Pass-by trips for the AM, PM and SAT are 0%, 43% and 0% respectively.

Using the traffic distribution pattern noted in Section 2.3.3, the traffic assignment for the Fallis Line Commercial Development for the AM, PM and SAT peak hour and has been illustrated in **Figure 3.**

2.3.4.2 Millbrook Community Centre

For the purposes of this report, the traffic generated for the Millbrook Community Centre was estimated based on the Community Centre TIS (excerpts are provided in **Appendix B**). It is noted the

primary access to the proposed Millbrook Community Centre will be via a proposed connection to the existing driveway for the Township Municipal Office, onto County Road 10 [Municipal Office Driveway].

Using the traffic distribution pattern noted in Section 2.3.3, the traffic assignment for the Millbrook Community Centre for the AM, PM and SAT peak hour was calculated and has been illustrated in **Figure 4.**

2.3.4.3 Millbrook Development Phase 1

The traffic generation for the Millbrook Development Phase 1 has been calculated using the unit count outlined above. The estimated trip generation of the Millbrook Development Phase 1 is illustrated below in **Table 5.**

Table 5 – Estimated Traffic Generation of Millbrook Development Phase 1

Development	Size	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Single-Family Detached Housing ITE Land Use: 210	269 units	50	150	200	168	99	267	136	115	251
Multifamily Housing (Low-Rise) ITE Land Use: 220	65 units	7	25	32	26	15	41	23	23	46
TOTAL TRIP GENERATION	**334 units**	**57**	**175**	**232**	**194**	**114**	**306**	**159**	**138**	**297**

Using the traffic distribution pattern noted in Section 2.3.3, the traffic assignment for the Millbrook Development Phase 1 was calculated for the AM, PM and SAT peak hour and has been illustrated in **Figure 5.**

2.3.4.4 Millbrook Development Phase 1 Extension

The traffic generation for the Millbrook Development Phase 1 Extension is based on the Azsura Traffic Letter for the AM and PM peak hour (excerpts are attached in **Appendix B**). For the purposes of this report, the estimated traffic generation in the SAT peak hour for the Millbrook Development Phase 1 Extension has been calculated based on the data provided in the ITE Trip Generation Manual.

The trip generation for the Millbrook Development Phase 1 Extension from the Azsura Traffic Letter and the estimated traffic generated for the SAT peak hour is illustrated below in **Table 6.**

Table 6 – Estimated Traffic Generation of Millbrook Development Phase 1 Extension

Development	Size	AM Peak Hour*			PM Peak Hour*			SAT Peak Hour**		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Single-Family Detached Housing ITE Land Use: 210	65 units	14	41	55	45	26	71	39	34	73

* The traffic generated was estimated in the Azsura Traffic Brief (excerpts provided in **Appendix B**).
** The traffic generated was estimated based on the ITE Trip Generation Manual.

Using the traffic distribution pattern noted in Section 2.3.3, the traffic assignment for the Millbrook Development Phase 1 Extension was calculated for the AM, PM and SAT peak hour and has been illustrated in **Figure 6.**

2.3.4.5 Millbrook Future Development

The traffic generation for the Millbrook Future Development has been calculated using the statistics outlined above. For the purposes of this report, we have assumed the gross floor area will be 25% of the total area. The estimated trip generation of the Future Millbrook Development is illustrated below in **Table 7.**

Table 7 – Estimated Traffic Generation of Millbrook Future Development

Development	Size	AM Peak Hour			PM Peak Hour			SAT Peak Hour*		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Business Park ITE Land Use: 770	592,822 sq.ft.	679	120	799	191	542	733	24	23	47

*The ITE Trip Generation Manual did not provide a traffic generation rate for the SAT peak hour for this land use; we have assumed that the ratio of SAT to PM peak hour trips for the Business Park will be the same as the ratio of SAT to PM peak hour trips calculated for the General Office Building in Section 2.3.4.1 (6%).

Using the traffic distribution pattern noted in Section 2.3.2, the traffic assignment for the Millbrook Future Development was calculated for the AM, PM and SAT peak hour and has been illustrated in **Figure 7.**

The total adjacent traffic volumes for the 2021, 2026 and 2031 horizon year in the AM and PM peak hour in **Figures 8** and **9.**

Figure 3 – Fallis Line Commercial Development Traffic Volumes (2019)

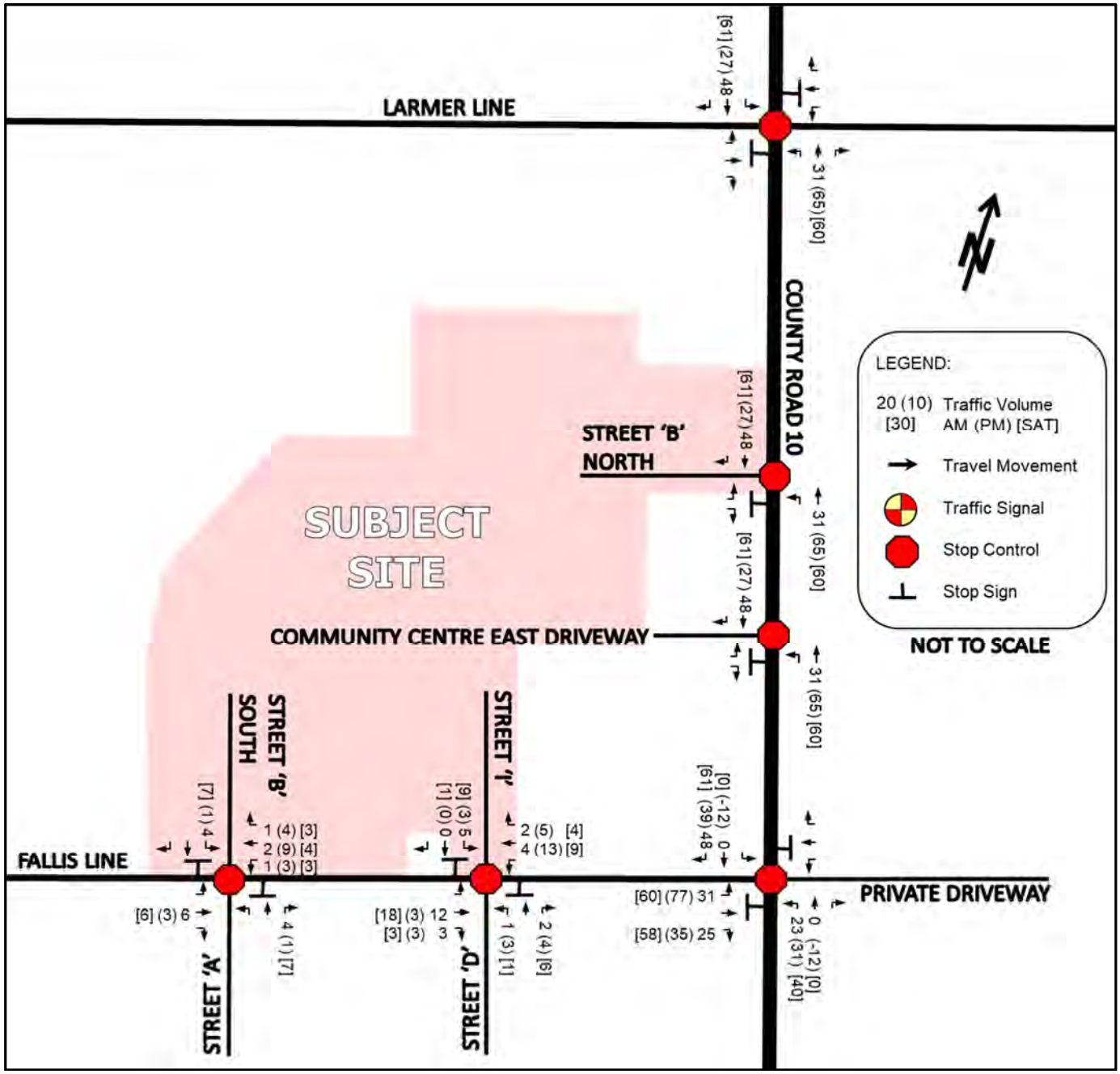


Figure 4 – Millbrook Community Centre (2021)

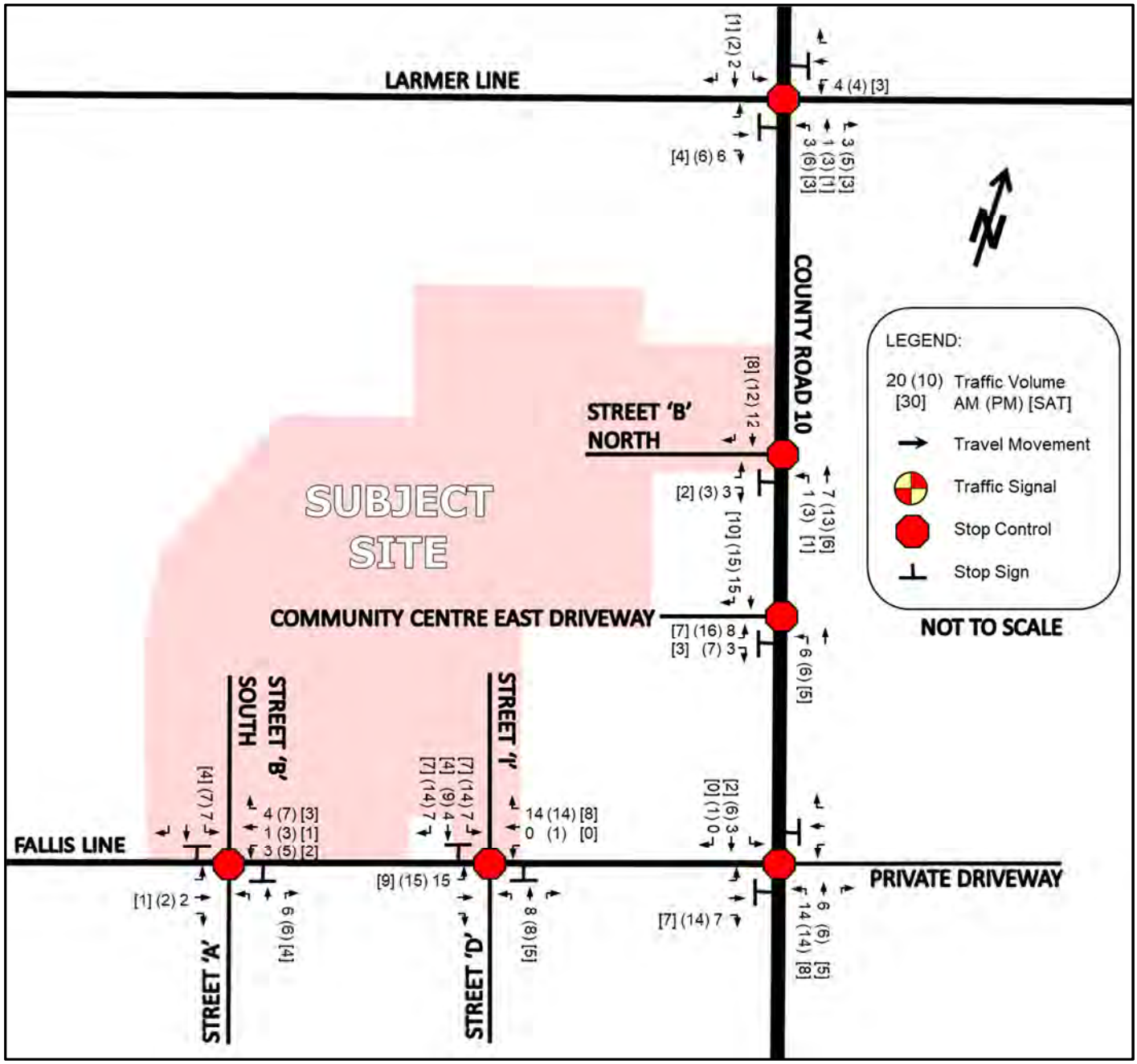


Figure 5 – Millbrook Development Phase 1 Traffic Volumes (2021)

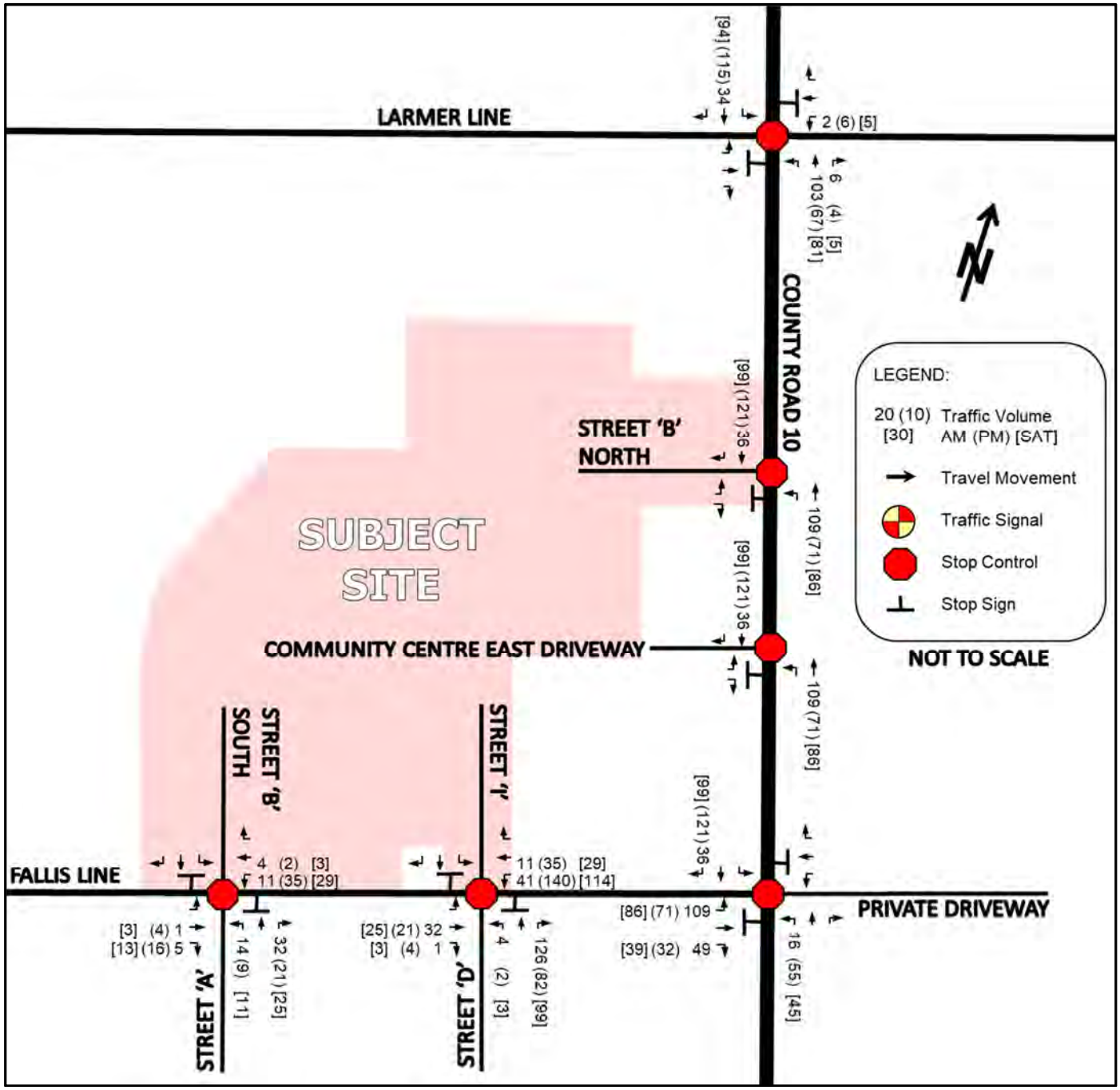


Figure 6 – Millbrook Development Phase 1 Extension Traffic Volumes (2021)

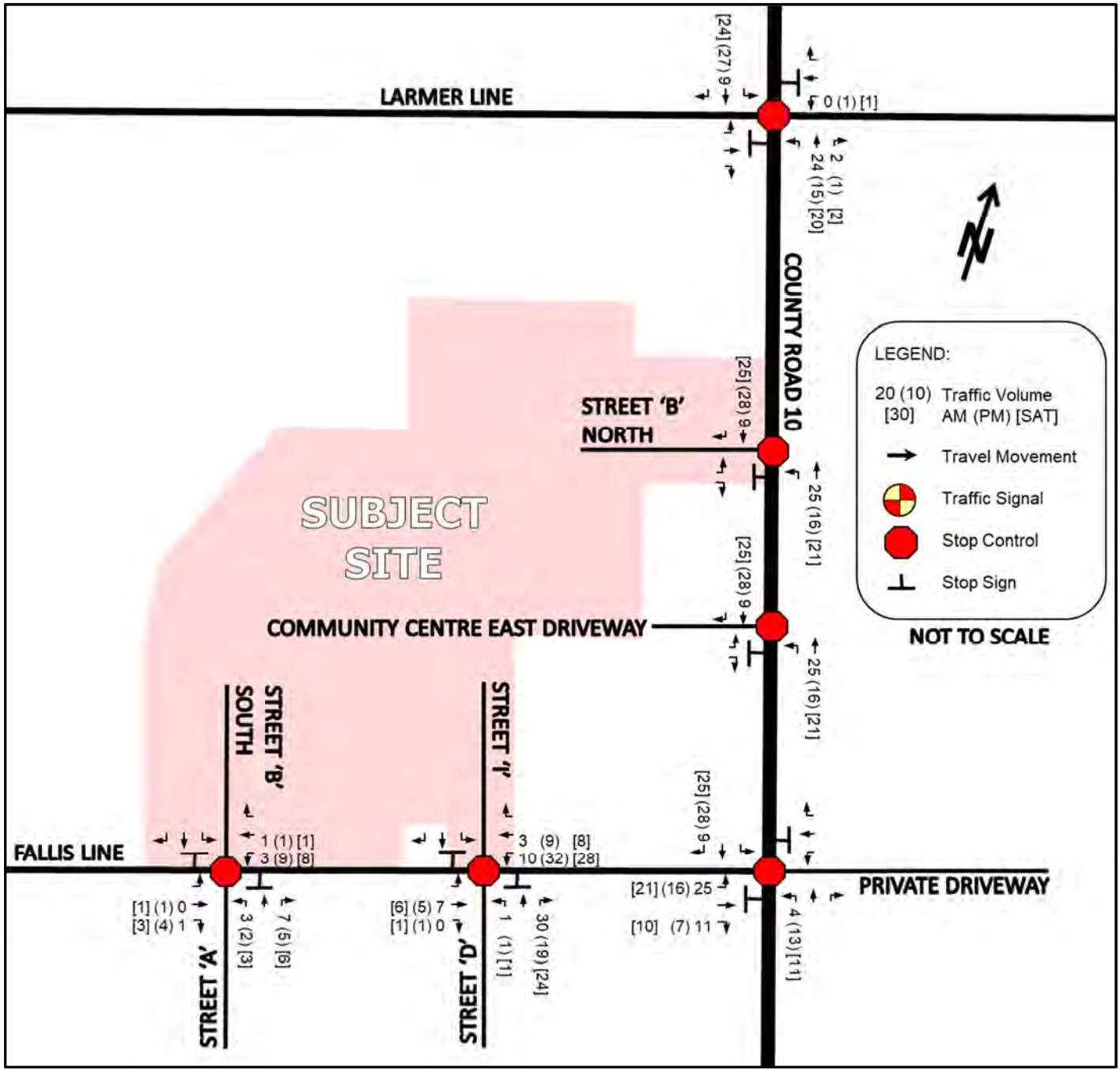


Figure 7 – Millbrook Future Development Traffic Volumes (2031)

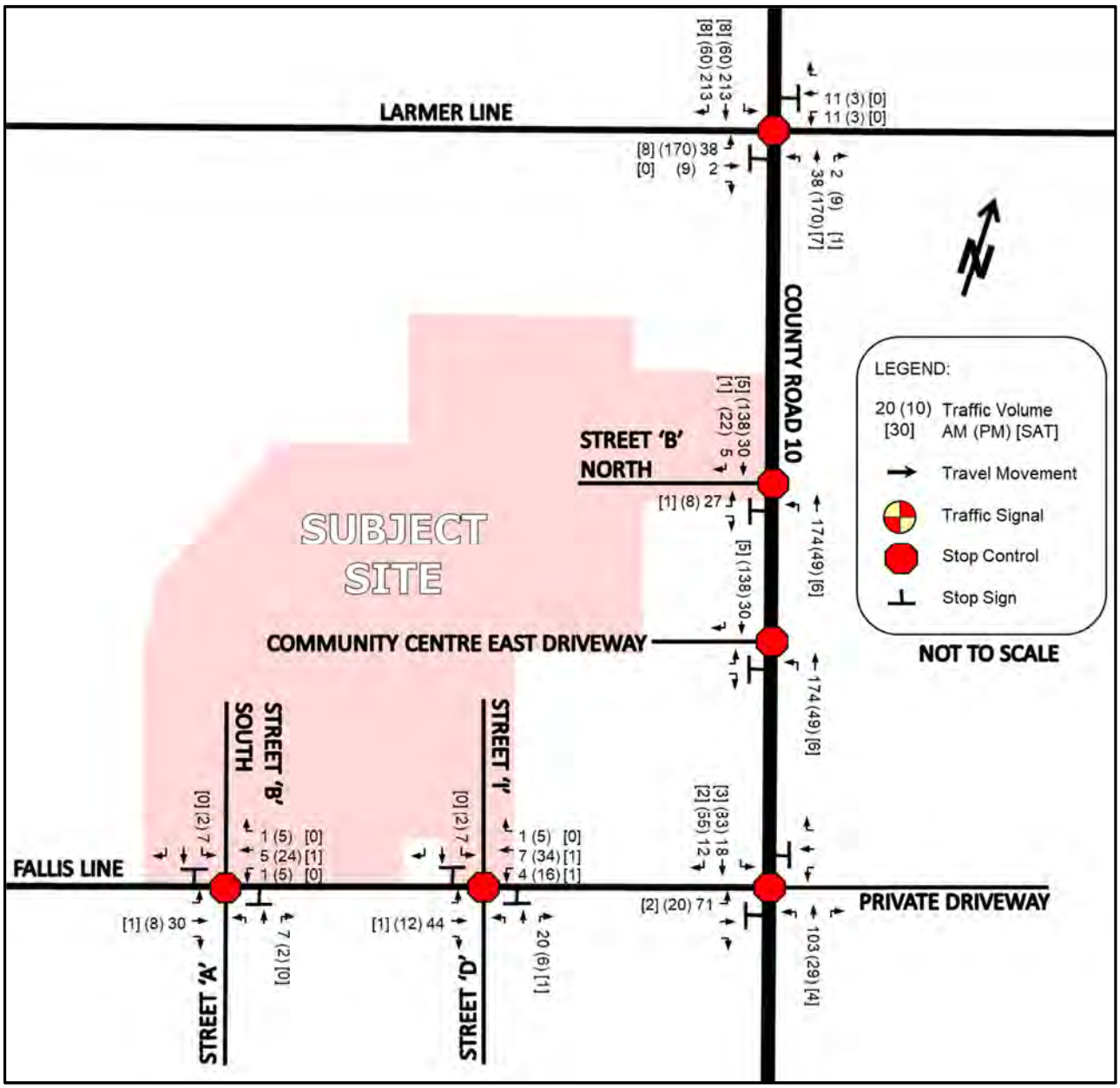


Figure 8 – Total Adjacent Volumes (2021 & 2026)

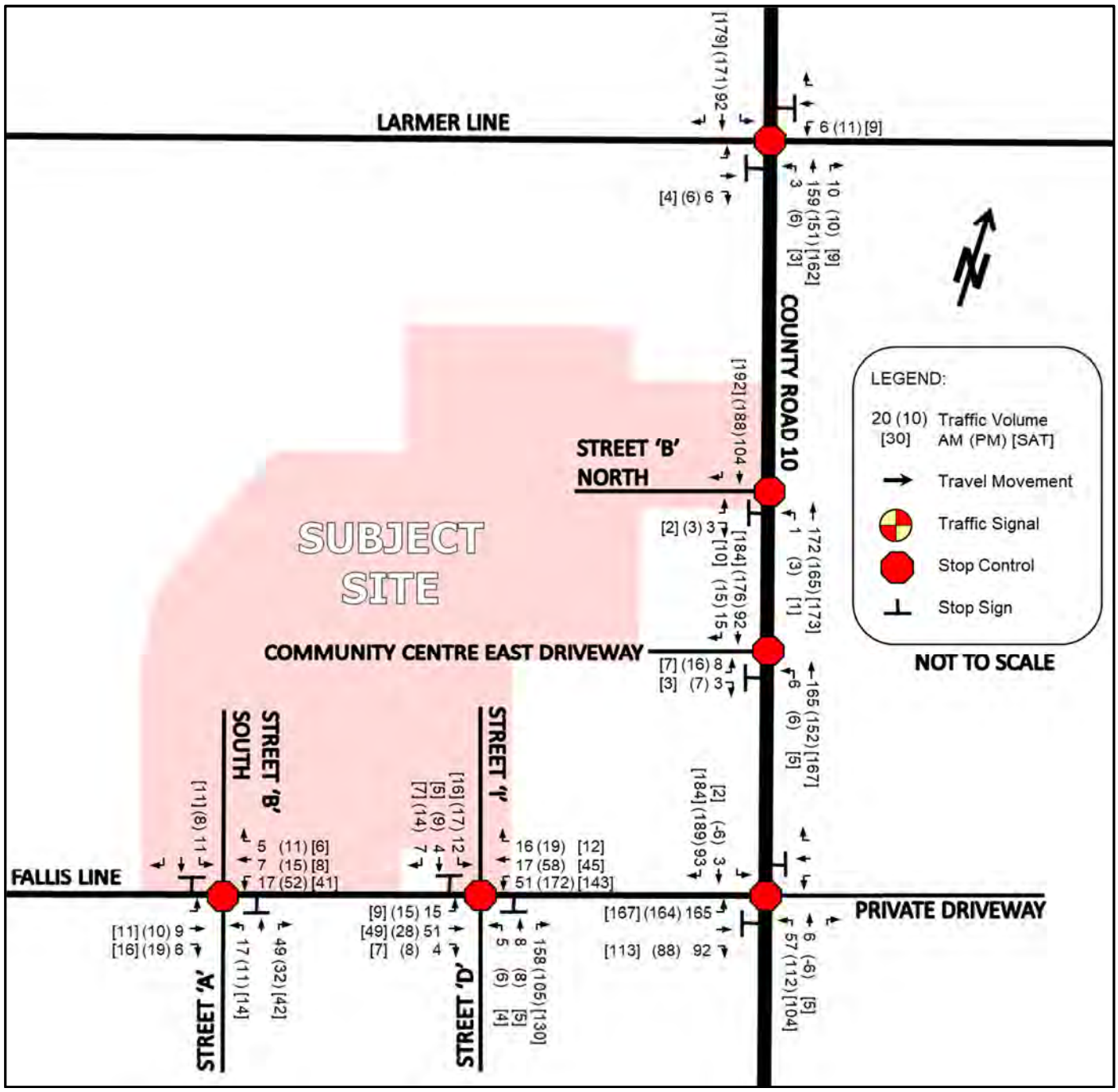
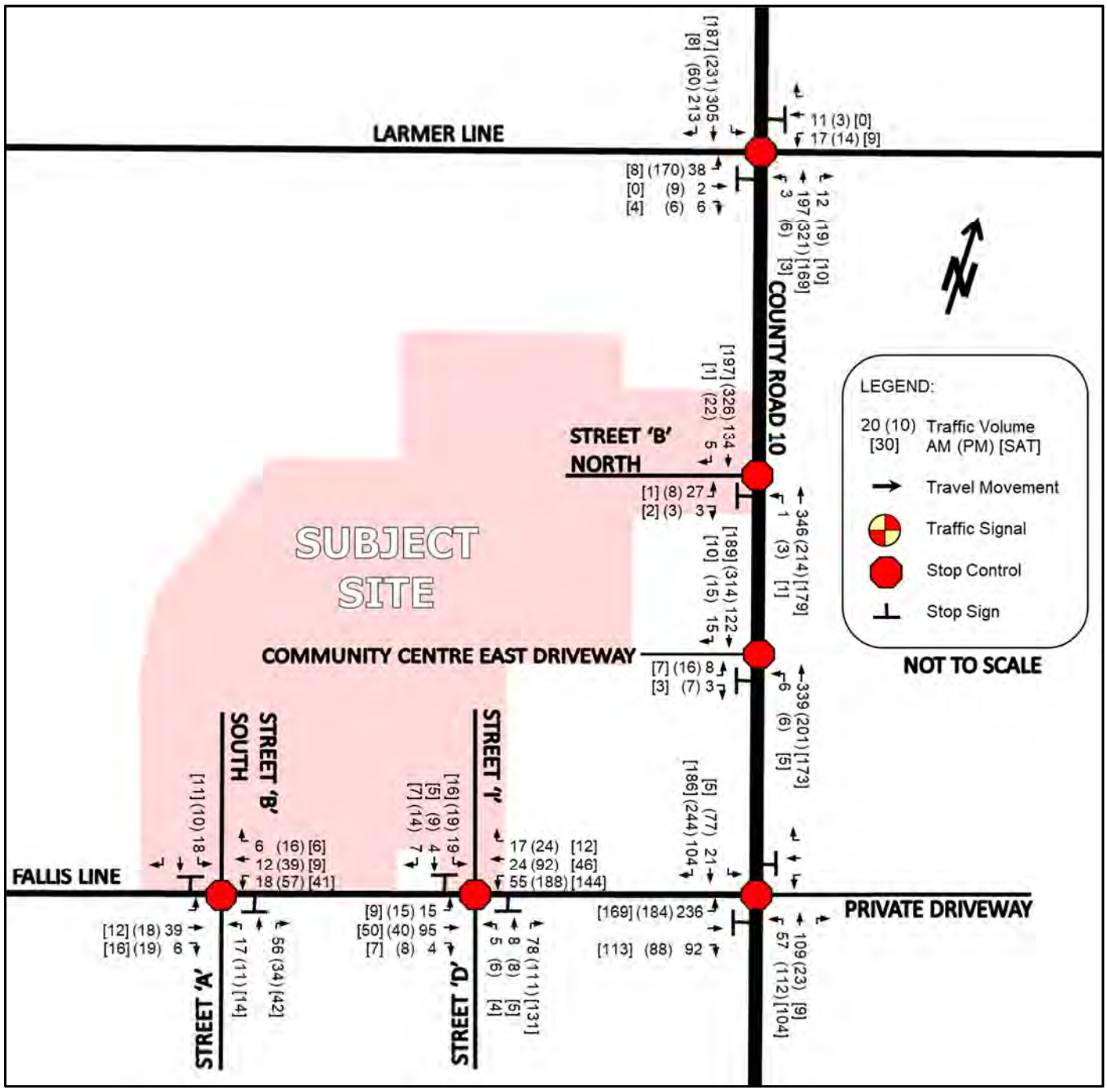


Figure 9 – Total Adjacent Volumes (2031)



2.4 Local Road Improvements

Through our discussions with the Township and County staff, there are no significant local road improvements scheduled in the study area that will impact traffic volumes or traffic patterns within the horizon years included in this analysis.

2.5 Traffic Counts

Detailed turning movement traffic and pedestrian counts were commissioned by JD Engineering at the existing study area intersections.

Table 8 summarizes the traffic count data collection information.

Table 8 - Traffic Count Data

Location	Count Date	AM Peak Hour	PM Peak Hour	SAT Peak Hour
County Road 10 / Larmer Line	Tuesday, April 25th, 2017	07:30 - 08:30	16:30 - 17:30	-
	Saturday, August 12th, 2017	-	-	12:00 – 13:00
County Road 10 / Municipal Office Driveway	Tuesday, April 25th, 2017	07:30 - 08:30	16:30 - 17:30	-
	Saturday, August 12th, 2017	-	-	12:00 – 13:00
County Road 10 / Fallis Line	Tuesday, April 25th, 2017	07:30 - 08:30	16:30 - 17:30	-
	Saturday, August 12th, 2017	-	-	12:00 – 13:00

Detailed traffic count data can be found in **Appendix C.**

The County provided Automatic Traffic Recorder [ATR] data for County Road 10. A review of this data was completed to estimate seasonal variations in traffic volume and the background traffic volume growth in the study area. No seasonal variation was observed in the ATR data.

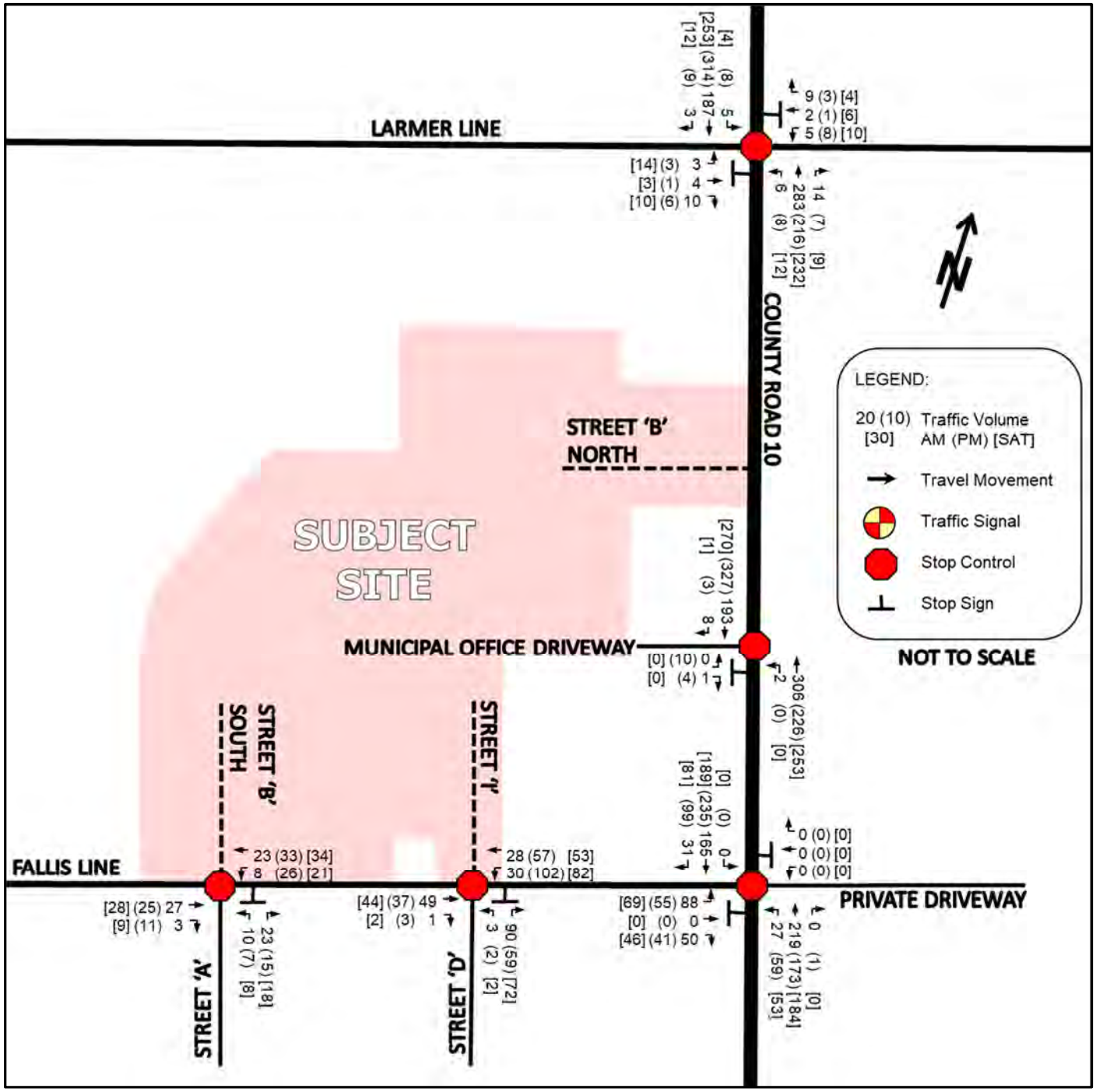
Heavy vehicle percentages from the traffic count data have also been included in the Synchro analysis.

The traffic counts have been factored by the background traffic growth rates noted in Section 2.6 to estimate the existing (2018) traffic volumes.

As noted in Section 1.1, 240 units of the Millbrook Development Phase 1 are currently build-out and are expected to be occupied shortly. For the purposes of this analysis, we have conservatively assumed that all of the 240 units will be occupied by the end of 2018, and consequently we have included the trip generation for these units in the 2018 scenario. For the purpose of our analysis we have assumed 193 units are single-detached residential and 47 units are townhouses.

Figure 10 illustrates the existing (2018) AM, PM and SAT peak hour traffic volumes in the study area.

Figure 10 – Existing (2018) Traffic Volumes



2.6 Horizon Year Traffic Volumes

The County's ATR counts were reviewed in order to estimate the anticipated background traffic growth rate for the study area. The County's ATR data included counts at two locations within the study area. One counter was located north of Larmer Line on County Road 10 [Larmer Count] and the other was

located north of Brookside Street on County Road 10 [Brookside Count]. **Table 9** summarizes the data at the two locations.

Table 9 - County ATR Counts

Location	Year	Season	Day of Week	24-hour Traffic Volume
Brookside Count	2005	Spring	Monday	4,581
		Summer	Tuesday	4,375
	2006	Spring	Monday	3,998
		Summer	Wednesday	4,651
		Fall	Wednesday	4,398
	2009	Spring	Wednesday	3,737
Larmer Count	2005	Spring	Monday	No Data
		Summer	Tuesday	892
	2006	Spring	Monday	1,842
		Summer	Wednesday	4,524
		Fall	Wednesday	3,637
	2009	Spring	Wednesday	No Data
	2016	Spring	Tuesday	4791
		Summer	Wednesday	4397
		Fall	Wednesday	5074

The most recent data set was available only at the Larmer Count location. Comparing the spring, summer and fall traffic counts from 2006 to 2016, the background traffic growth rate was calculated as 10%/year, 0%/year and 3%/year respectively.

The Brookside Count location is closer to the Millbrook community. Based on our review of the study area, this location is expected to have a more significant traffic growth. Comparing the spring traffic counts from 2005 to 2009, the background traffic growth rate was -5.2%/year between 2005-2009 and -2.2%/year between 2006-2009.

Through discussions with the County, future travel demands were based on a historical growth rate of 2.0% for rural areas of the County.

The above analysis is related to County Road 10; however, we have assumed all background traffic volumes in the area will have the same background traffic growth rate.

Figure 11, 12 and 13 illustrates the background (2021, 2026 and 2031) AM, PM and SAT peak hour traffic volumes for the study area.

Figure 11 – Background (2021) Traffic Volume

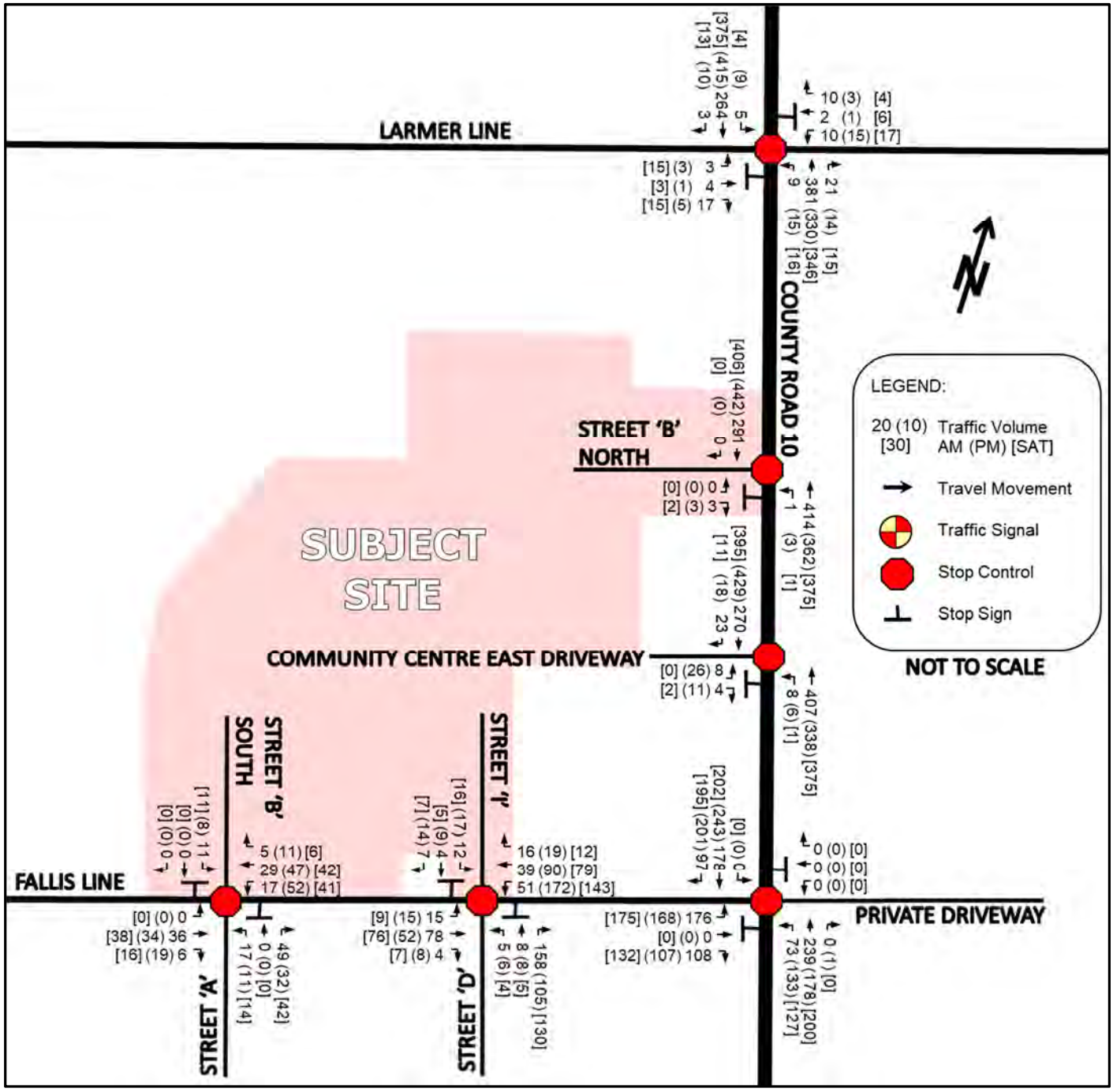


Figure 12 – Background (2026) Traffic Volume

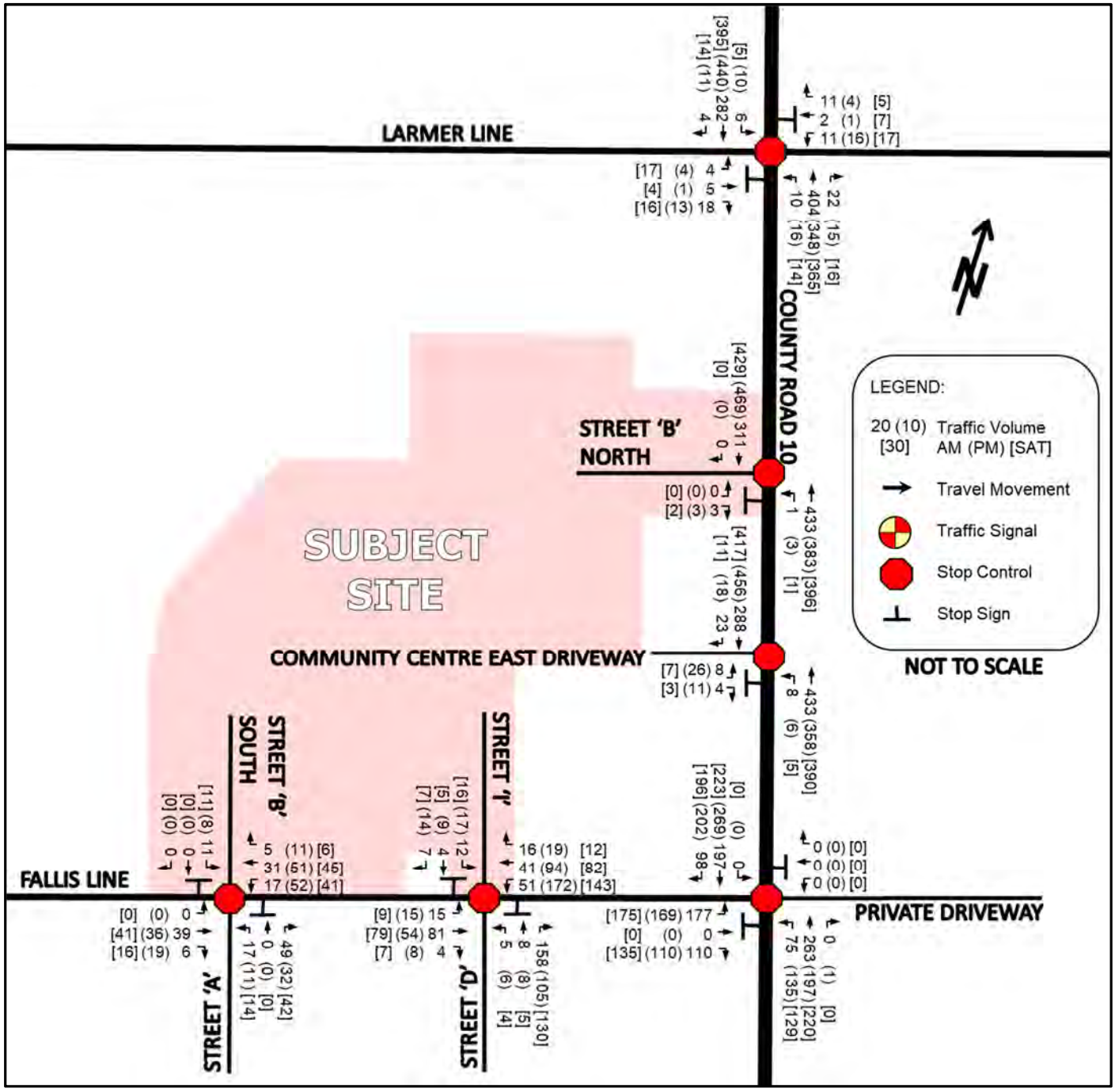
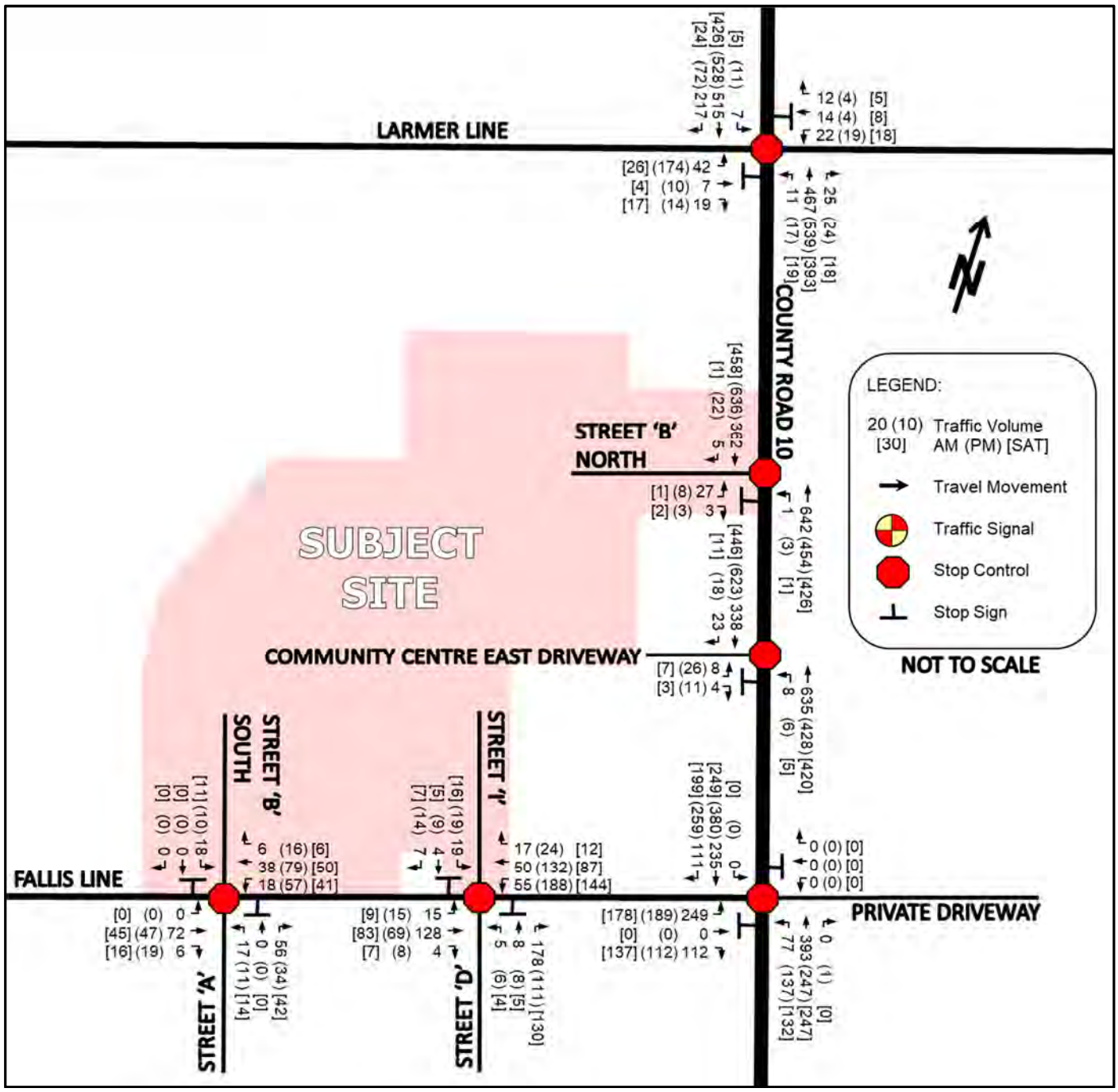


Figure 13 – Background (2031) Traffic Volume



3 Intersection Operation without Proposed Development

3.1 Intersection Capacity Analysis Criteria

Intersection performance was measured using the traffic analysis software, Synchro 10, a deterministic model that employs Highway Capacity Manual and Intersection Capacity Utilization methodologies for analysing intersection operations. These procedures are accepted by provincial and municipal agencies throughout North America.

Synchro 10 enables the study area to be graphically defined in terms of streets and intersections, along with their geometric and traffic control characteristics. The user is able to evaluate both signalized and unsignalized intersections in relation to each other, thus not only providing level of service for the individual intersections, but also enabling an assessment of the impact the various intersections in a network have on each other in terms of spacing, traffic congestion, delay, and queuing.

For the purpose of our analysis, turning movements with a volume-to-capacity [V/C] ratio of 0.85 or greater are considered to be critical movements. Values approaching this threshold have been highlighted in the LOS tables.

The intersection operations were also evaluated in terms of the LOS. LOS is a common measure of the quality of performance at an intersection and is defined in terms of vehicular delay. This delay includes deceleration delay, queue move-up time, stopped delay, and acceleration delay. LOS is expressed on a scale of A through F, where LOS A represents very little delay (i.e. less than 10 seconds per vehicle) and LOS F represents very high delay (i.e. greater than 50 seconds per vehicle for a stop sign controlled intersection and greater than 80 seconds per vehicle for a signalized intersection).

The LOS criteria for signalized and stop sign controlled intersections are shown in **Table 10.** A description of traffic performance characteristics is included for each LOS.

Table 10 - Level of Service Criteria for Intersections

LOS	LOS Description	Control Delay (seconds per vehicle)	
		Signalized Intersections	Stop Controlled Intersections
A	Very low delay; most vehicles do not stop (**Excellent**)	less than 10.0	less than 10.0
B	Higher delay; more vehicles stop (**Very Good**)	between 10.0 and 20.0	between 10.0 and 15.0
C	Higher level of congestion; number of vehicles stopping is significant, although many still pass through intersection without stopping **(Good**)	between 20.0 and 35.0	between 15.0 and 25.0
D	Congestion becomes noticeable; vehicles must sometimes wait through more than one red light; many vehicles stop (**Satisfactory**)	between 35.0 and 55.0	between 25.0 and 35.0
E	Vehicles must often wait through more than one red light; considered by many agencies to be the limit of **acceptable** delay	between 55.0 and 80.0	between 35.0 and 50.0
F	This level is considered to be unacceptable to most drivers; occurs when arrival flow rates exceed the capacity of the intersection (**Unacceptable**)	greater than 80.0	greater than 50.0

3.2 Existing (2018) Intersection Operation

The results of the LOS analysis under existing (2018) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 11.** Existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix D.**

Table 11 – Existing (2018) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	1.0	A	-	0.8	A	-	1.3	A
EB	0.04	11.7	B	0.02	11.9	B	0.05	12.3	B
WB	0.04	12.0	B	0.03	14.5	B	0.04	12.9	B
County Road 10 / Fallis Line (unsignalized)	-	3.7	A	-	3.0	A	-	3.2	A
EB	0.28	13.7	B	0.24	14.7	B	0.21	13.0	B
County Road 10 / Municipal Office Driveway (unsignalized)	-	0.1	A	-	0.3	A	-	0.0	A
EB	0.00	9.4	A	0.03	12.6	B	0.00	0.0	A

The results of the LOS analysis indicate that all intersections in the study area are operating within the typical design limits noted in Section 3.1.

An analysis was completed for left turn movements at all unsignalized intersections in the study area, based on the criteria outlined in Appendix 9A of the Ontario Ministry of Transportation [MTO] Design Supplement for TAC Geometric Design Guide for Canadian Roads (dated June 2017) [MTO DS]. Based on the above noted criteria, a left turn lane is warranted in the northbound direction at the County Road 10 / Fallis Line intersection (results provided in **Appendix G**); however, left turn lanes

are not recommended as this intersection is operating with excellent LOS. Based on the above noted criteria, a left turn lane is not warranted at any of the other unsignalized intersections in the study area.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Section E.7 of the MTO GDSOH were applied (60 vph minimum right turn volume warrant). The number of southbound right turn movements at the intersection of County Road 10 / Fallis Line, in the PM and SAT peak hour exceed this threshold; however, the volume of thru traffic at this intersection is relatively low and the intersection is operating with an excellent LOS; consequently a right turn lane is not recommended

Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at any of the unsignalized intersections in the study area (results are provided in **Appendix H**).

No infrastructure improvements are recommended within the study area for the existing (2018) scenario.

3.3 Background (2021) Intersection Operation

The results of the LOS analysis under background (2021) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 12.**

The Community Centre TIS recommended the construction of a northbound left turn at the County Road Municipal Office Driveway upon the build-out of the Millbrook Community Centre in 2019, with a 160 metre taper length, a 70 metre parallel length and a 15 metre storage length.

The Millbrook TIS recommended that the existing speed limit be reduced from 80km/h to 60km/h on Fallis Line from County Road 10 to west of Street A.

With the above-noted exception, the existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix E.**

Table 12 – Background (2021) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	1.1	A	-	1.1	A	-	1.4	A
EB	0.06	12.9	B	0.04	13.2	B	0.08	15.0	B
WB	0.07	15.5	C	0.09	21.4	C	0.09	17.5	C
County Road 10 / Fallis Line (unsignalized)	-	11.1	B	-	23.7	C	-	12.8	C
EB	0.73	31.5	D	0.99	83.5	F	0.78	38.7	E
County Road 10 / Municipal Office Driveway (unsignalized)	-	0.3	A	-	0.8	A	-	0.2	A
EB	0.03	13.9	B	0.12	16.6	C	0.02	14.1	B

The results of the LOS analysis indicate that the eastbound movements at the County Road 10 / Fallis Line intersection are operating outside the typical design limits in the PM peak hour, as noted in Section 3.1.

An analysis was completed for left turn movements at all unsignalized intersections in the study area based on the criteria outlined in Appendix 9A of the MTO DS. Based on the above noted criteria, a left

turn lane is warranted in the northbound direction of the County Road 10 / Fallis Line intersection (results provided in **Appendix G**). It is recommended a northbound left-turn lane be installed with a 145 metre taper length, 60 metre parallel length and 25 metre storage length.

Based on the above noted criteria a left turn is warranted in the northbound direction of the County Road 10 / Larmer Line intersection (results provided in **Appendix G**). It is recommended a northbound left turn lane be installed with a 160 metre taper length, 70 metre parallel length and 15 metre storage length.

Based on the above noted criteria a left turn is warranted in the southbound direction of the County Road 10 / Larmer Line intersection (results provided in **Appendix G**); however, based on low left turning volumes a southbound left turn is not recommended.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Section E.7 of the MTO GDSOH were applied (60 vph minimum right turn volume warrant). Based on the above-noted criteria, a right turn lane is warranted in the southbound direction of the County Road 10 / Fallis Line intersection in the PM and SAT peak hour. It is recommended a right turn lane be installed with an 80 metre taper length and 85 metre parallel length.

A summary of the results of the Synchro analysis with above-noted improvements, during the PM peak hour, can be found below in **Table 13**. Detailed output of the Synchro analysis can be found in **Appendix E**.

Table 13 – Background (2021) LOS with Improvements

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Fallis Line (unsignalized)	-	-	-	-	14.0	A	-	-	-
EB	-	-	-	0.84	48.1	E	-	-	-

The results of the LOS analysis indicate that all intersections in the study area are operating within the typical design limits noted in Section 3.1.

Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at any of the unsignalized intersections in the study area (results are provided in **Appendix H**).

The anticipated 95th percentile queue can be accommodated for all proposed storage lanes in the study area.

3.4 Background (2026) Intersection Operation

The results of the LOS analysis under background (2026) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 14.** The recommendations noted in Section 3.3 have been applied in this scenario. Detailed output of the Synchro analysis can be found in **Appendix E.**

Table 14 – Background (2026) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	1.2	A	-	1.1	A	-	1.5	A
EB	0.07	13.7	B	0.05	14.4	B	0.10	16.1	C
WB	0.08	16.5	C	0.10	22.4	C	0.10	18.4	C
County Road 10 / Fallis Line (unsignalized)	-	10.4	A	-	17.7	A	-	10.1	A
EB	0.73	0.07	31.0	0.92	64.4	F	0.73	31.6	D
County Road 10 / Municipal Office Driveway (unsignalized)	-	0.3	A	-	0.8	A	-	0.2	A
EB	0.04	14.5	B	0.13	17.6	C	0.03	14.6	B

The results of the LOS analysis indicate that the eastbound movements at the County Road 10 / Fallis Line intersection are operating outside the typical design limits in the PM peak hour, as noted in Section 3.1. Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at any of the unsignalized intersections in the study area (results are provided in **Appendix H**); however, based on the control delay for the eastbound movement, it is recommended that traffic signals are installed at the County Road 10 / Fallis Line intersection.

A summary of the results of the Synchro analysis with above-noted improvements, during the PM and peak hour, can be found below in **Table 15**. Detailed output of the Synchro analysis can be found in **Appendix E**.

Table 15 – Background (2026) LOS with Improvements

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Fallis Line (signalized)	-	-	-	0.43	11.9	B	-	-	-
EB	-	-	-	0.67	23.7	C	-	-	-
NBL	-	-	-	0.28	8.4	A	-	-	-
NBT	-	-	-	0.23	7.5	A	-	-	-
SBT	-	-	-	0.32	8.2	A	-	-	-
SBR	-	-	-	0.15	7.0	A	-	-	-

The results of the LOS analysis indicate that all intersections in the study area are operating within the typical design limits noted in Section 3.1.

An analysis was completed for left turn movements at all unsignalized intersections in the study area based on the criteria outlined in Appendix 9A of the MTO DS.

Based on the above noted criteria a left turn is warranted in the southbound direction of the County Road 10 / Larmer Line intersection (results provided in **Appendix G**); however, based on low left turning volumes a southbound left turn is not recommended. Left turn lanes are not warranted at the other unsignalized intersections.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Section E.7 of the MTO GDSOH were applied (60 vph minimum right turn volume warrant). Based on

the above-noted criteria, additional right turn lanes are not warranted at any of the unsignalized intersections.

The anticipated 95th percentile queue can be accommodated for all proposed storage lanes in the study area.

3.5 Background (2031) Intersection Operation

The results of the LOS analysis under background (2031) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 16.** The recommendations noted in Section 3.4 have been applied in this scenario. Detailed output of the Synchro analysis can be found in **Appendix E.**

Table 16 – Background (2031) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	4.9	B	-	56.5	B	-	1.8	A
EB	0.58	61.1	F	1.68	396.2	F	0.16	18.5	C
WB	0.41	47.0	E	0.27	45.3	E	0.12	20.4	C
County Road 10 / Fallis Line (signalized)	0.62	16.0	B	0.54	12.6	B	0.39	11.9	B
EB	0.77	26.3	C	0.70	24.0	C	0.67	23.7	C
NBL	0.16	9.4	A	0.37	10.4	B	0.23	7.8	A
NBT	0.52	13.1	B	0.30	8.5	A	0.26	7.6	A
SBT	0.31	10.4	B	0.46	10.3	B	0.26	7.7	A
SBR	0.10	8.8	A	0.19	7.8	A	0.13	6.8	A
County Road 10 / Municipal Office Driveway (unsignalized)	-	0.3	A	-	0.9	A	-	0.2	A
EB	0.05	18.6	C	0.19	24.2	C	0.03	15.4	C

The results of the LOS analysis indicate that the eastbound movements at the County Road 10 / Larmer Line intersection are operating outside the typical design limits in the PM peak hour, as noted in Section 3.1. Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at any of the unsignalized intersections in the study area (results are provided in **Appendix H**); however, based on the control delay for the eastbound movement, it is recommended that traffic signals are installed at the County Road 10 / Larmer Line intersection.

A summary of the results of the Synchro analysis with above-noted improvements, during the PM and peak hour, can be found below in **Table 17**. Detailed output of the Synchro analysis can be found in **Appendix E**.

Table 17 – Background (2031) LOS with Improvements

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (signalized)	0.75	11.1	B	0.43	11.9	B	-	-	-
EB	0.48	37.5	D	0.67	23.7	C	-	-	-
NBL	0.29	35.2	D	0.28	8.4	A	-	-	-
NBT	0.03	2.6	A	0.23	7.5	A	-	-	-
SBT	0.44	4.7	A	0.32	8.2	A	-	-	-
SBR	0.78	11.5	B	0.15	7.0	A	-	-	-

The results of the LOS analysis indicate that all intersections in the study area are operating within the typical design limits noted in Section 3.1.

An analysis was completed for left turn movements at all unsignalized intersections in the study area based on the criteria outlined in Appendix 9A of the MTO DS.

Based on the above noted criteria a left turn is warranted in the southbound direction of the County Road 10 / Larmer Line intersection (results provided in **Appendix G**); however, based on low left turning volumes a southbound left turn is not recommended. Left turn lanes are not warranted at the other unsignalized intersections.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Section E.7 of the MTO GDSOH were applied (60 vph minimum right turn volume warrant). Based on the above-noted criteria, additional right turn lanes are not warranted at any of the unsignalized intersections.

The anticipated 95th percentile queue can be accommodated for all proposed storage lanes in the study area.

4 Proposed Development Traffic Generation and Assignment

4.1 Traffic Generation for Subject Site

The traffic generation for the Subject Site has been calculated based on the data provided in the ITE Trip Generation Manual. The following ITE land uses have been applied to estimate the traffic from the proposed development:

- ITE land use 210 (Single-Family Detached Housing);
- ITE land use 220 (Multifamily Housing (Low-Rise)); and
- ITE land use 221 (Multifamily Housing (Mid-Rise));

The estimated trip generation of the proposed development is illustrated below in **Table 18**. The AM, PM and SAT peak hour traffic generation for the proposed development does not exactly align with the AM, PM and SAT peak hour in the traffic counts; consequently, we have applied the peak hour of adjacent street traffic values provided in the ITE Trip Generation Manual.

Table 18 - Estimated Traffic Generation of Proposed Development

Development	Size	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Single-Family Detached Housing ITE Land Use: 210	360 units	67	200	267	225	132	357	181	154	335
Multifamily Housing (Low-Rise) ITE Land Use: 220	244 units	26	87	113	86	51	137	115	11	230
Multifamily Housing (Mid-Rise) ITE Land Use: 221	192 units	18	52	70	52	33	85	42	43	85
TOTAL TRIP GENERATION	**796 units**	**111**	**339**	**450**	**363**	**216**	**579**	**338**	**312**	**650**

No transportation modal split reduction has been applied to the above-noted traffic generation calculation.

4.2 Traffic Assignment for Subject Site

The traffic assignment used for the proposed development in the Millbrook TIS will be applied to the proposed development (excerpts attached in **Appendix B**). The Millbrook TIS applied 2006 TTS data using the TTS IDRS. The estimated distribution of trips generated by the proposed development is illustrated in **Table 19**.

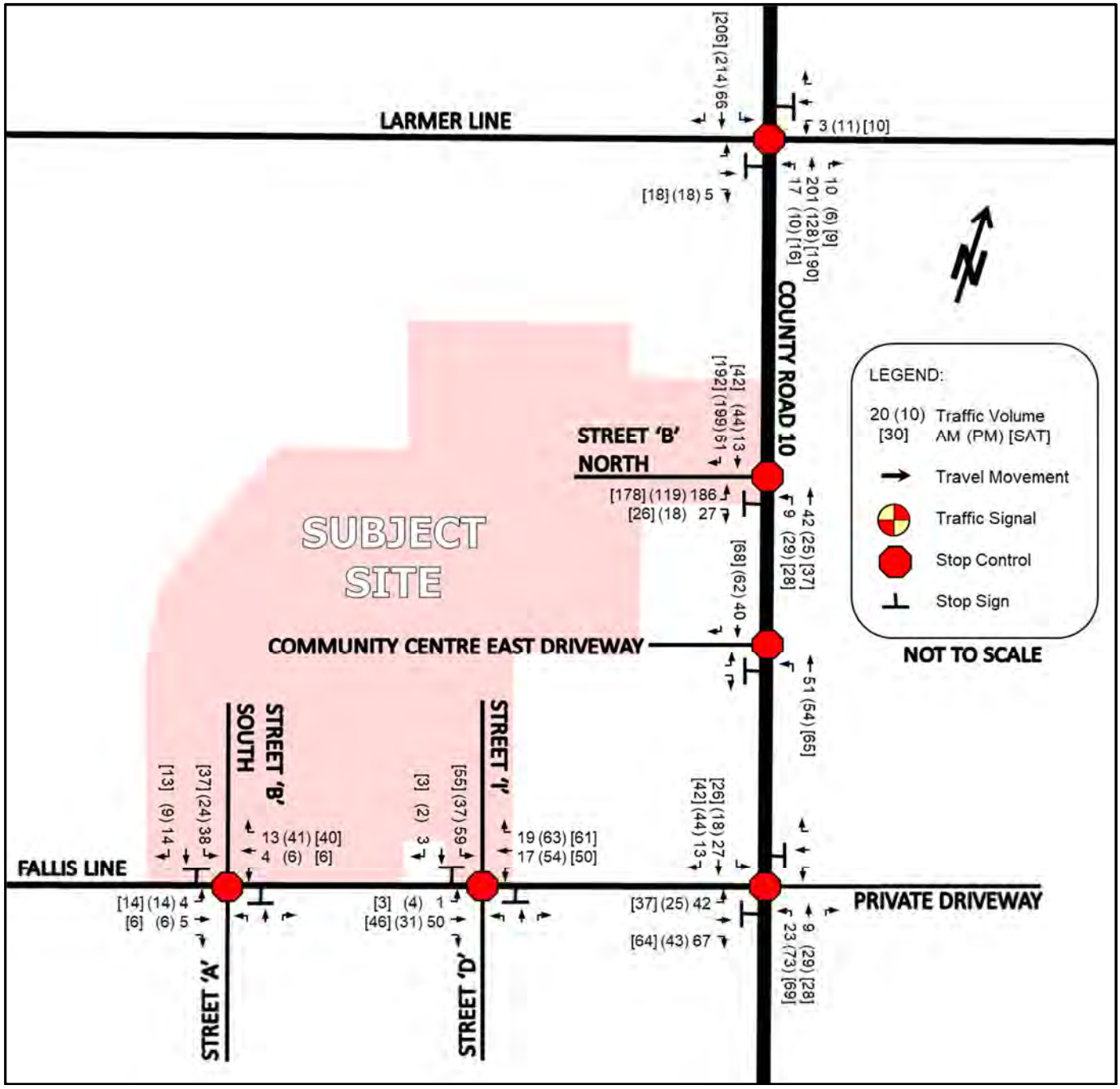
Table 19 - Millbrook Development Phase 2 Traffic Distribution

Travel Direction (to/from)	Percentage of Total Traffic Generation
North via County Road 10	59%
Southeast via County Road 10	28%
Southwest via Fallis Line	5%
Southwest via Larmer Line	5%
East via Larmer Line	3%
Total	**100%**

There are 22 single-detached residential units with frontage on Fallis Line (7 units just west of Street 'B' South and 15 units just east of Street 'B' South). The distribution of traffic has been adjusted to reflect the trips generated from these residential units directly onto Fallis Line.

Using the above noted traffic distribution, the traffic assignment for the proposed development was calculated for the AM, PM and SAT peak hour and has been illustrated in **Figure 14.**

Figure 14 – Proposed Development Traffic Assignment



4.3 Total Horizon Year Traffic Volumes with the Proposed Development

For the total (2021, 2026 and 2031) horizon years with development traffic volumes, the proposed development traffic was added to the background (2021, 2026 and 2031) traffic volumes. The resulting

total (2021, 2026 and 2031) horizon years with proposed traffic volume for the AM, PM and SAT peak hour are illustrated in **Figure 15, 16** and **17.**

Figure 15 – Total (2021) Traffic Volumes

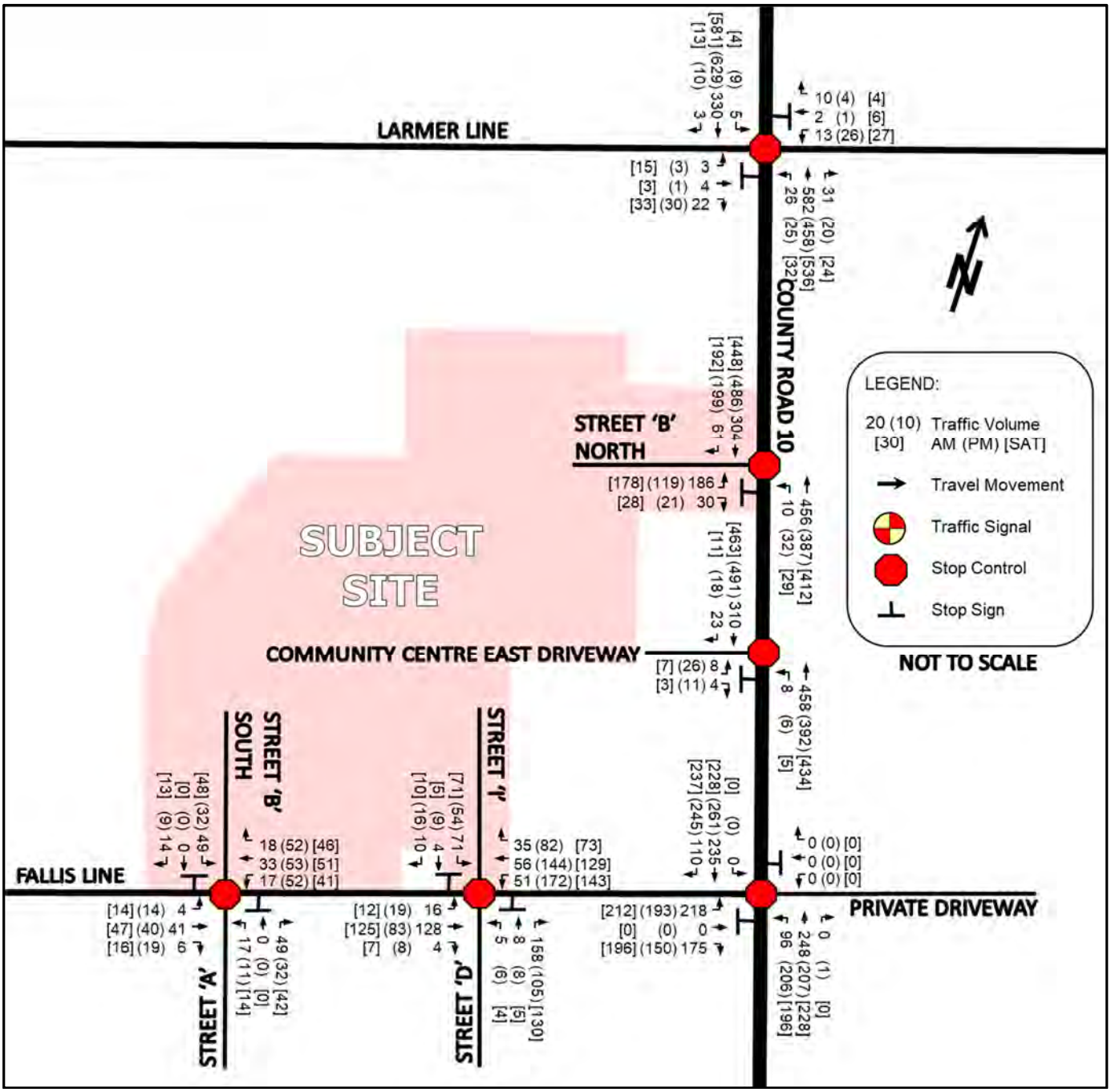


Figure 16 – Total (2026) Traffic Volumes

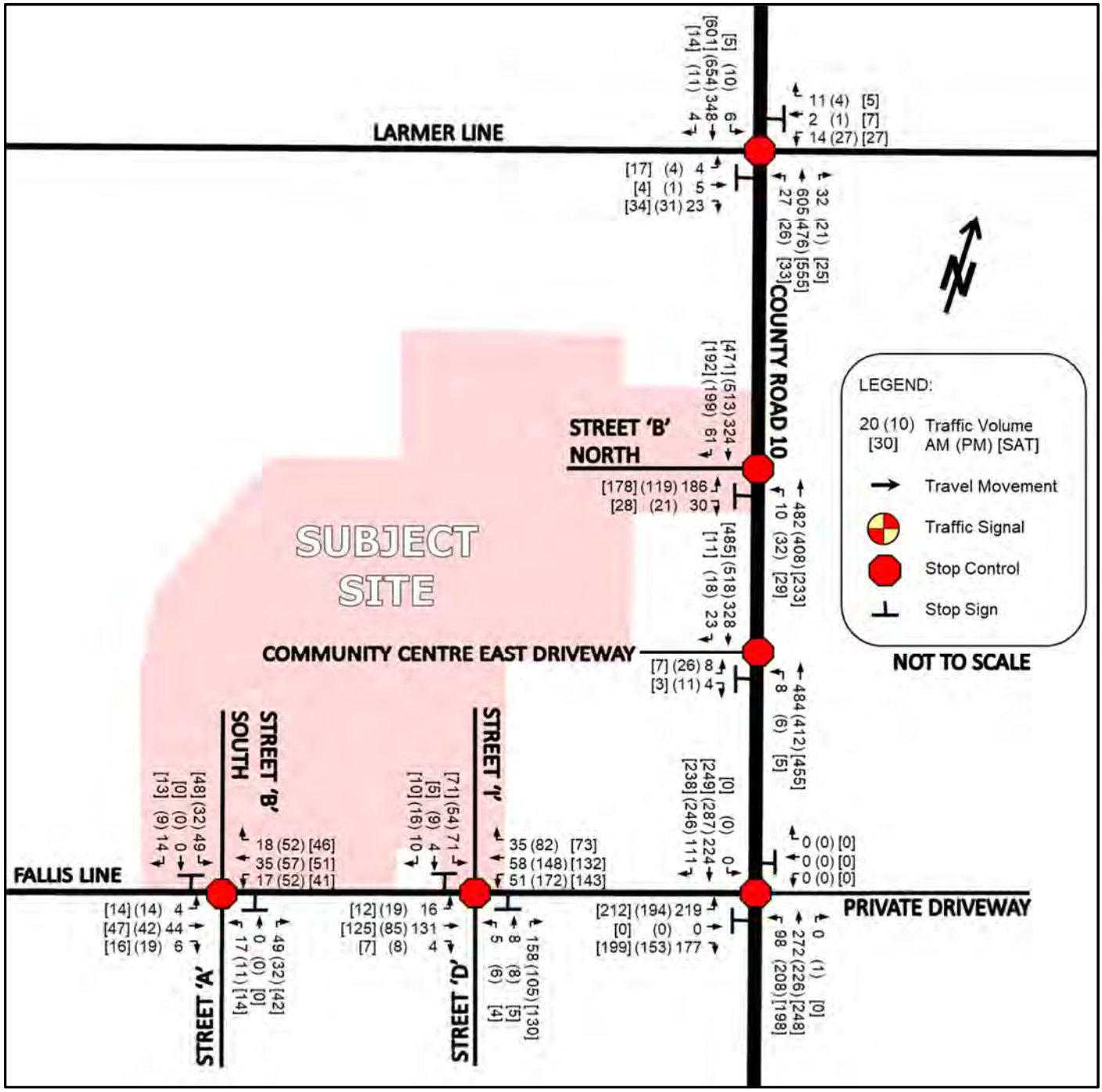
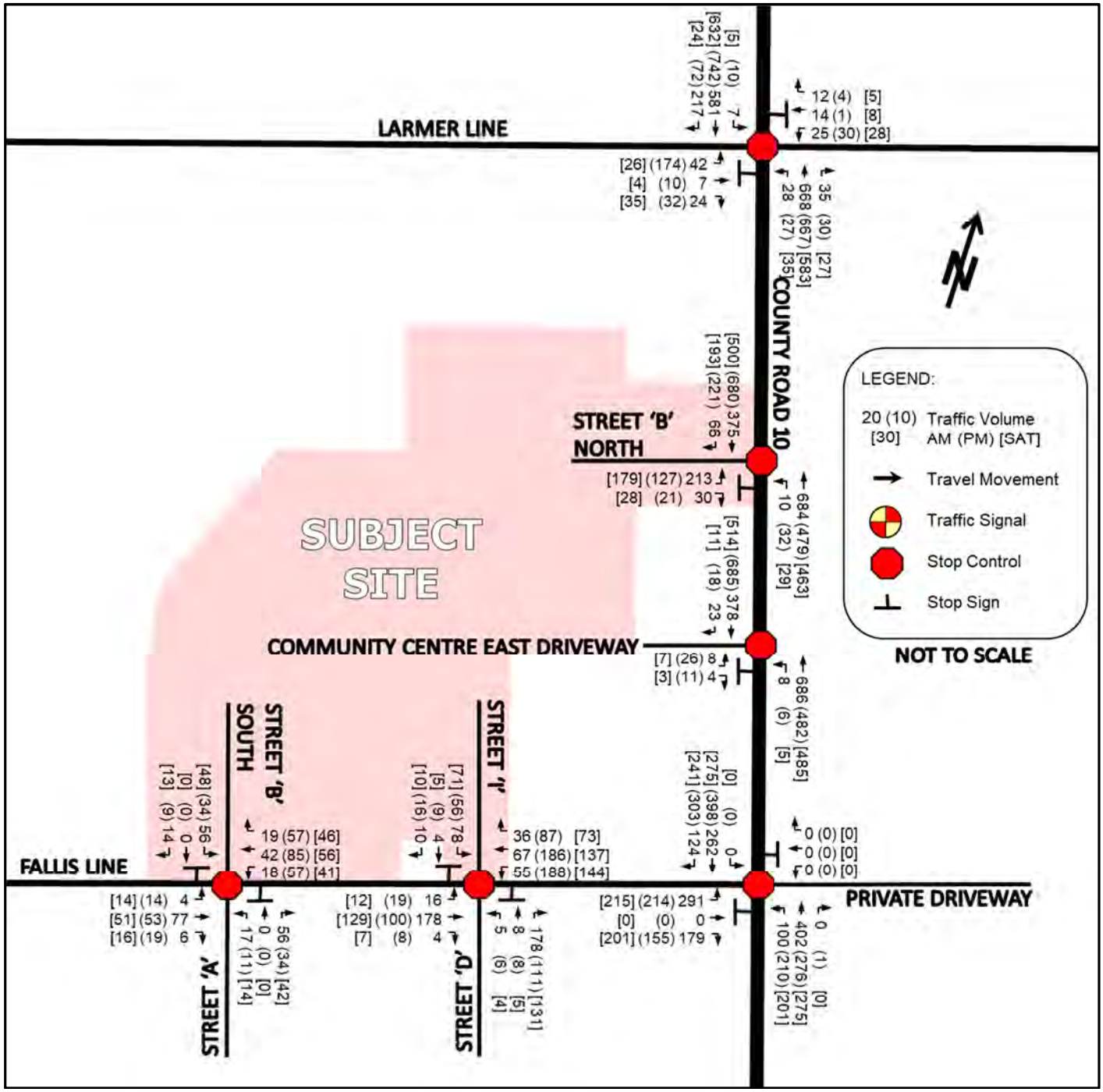


Figure 17 – Total (2031) Traffic Volumes



5 Intersection Operation with Proposed Development

5.1 Total (2021) Intersection Operation

The results of the LOS analysis under total (2021) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 20.** The recommendations noted in Section 3.3 have been applied in this scenario. Detailed output of the Synchro analysis can be found in **Appendix F.**

Table 20 – Total (2021) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	1.3	A	-	2.1	B	-	2.2	A
EB	0.09	15.8	C	0.11	16.6	C	0.19	21.3	C
WB	0.14	25.2	D	0.32	53.1	F	0.26	38.8	E
County Road 10 / Fallis Line (unsignalized)	-	29.0	A	-	70.5	B	-	43.8	B
EB	1.01	75.7	F	1.45	253.3	F	1.17	134.9	F
County Road 10 / Community Centre East Driveway (unsignalized)	-	0.3	A	-	0.8	A	-	0.2	A
EB	0.04	15.2	C	0.14	19.1	C	0.03	15.9	C
Street 'B' South & Street 'A' / Fallis Line (unsignalized)	-	5.6	A	-	4.4	A	-	5.0	A
NB	0.07	9.1	A	0.05	9.3	A	0.07	9.3	A
SB	0.09	10.1	B	0.07	10.9	B	0.10	11.0	B
Street 'I' & Street 'D' / Fallis Line (unsignalized)	-	6.9	A	-	7.0	A	-	7.1	A
NB	0.21	10.3	B	0.17	10.8	B	0.18	10.3	B
SB	0.24	17.2	C	0.32	24.4	C	0.36	26.2	D
County Road 10 / Street 'B' North (unsignalized)	-	7.5	A	-	5.3	B	-	12.9	B
EB	0.69	35.6	E	0.64	43.2	E	0.91	78.8	F

The results of the LOS analysis indicate that the westbound movements at the County Road 10 / Larmer Line intersection are operating outside the typical design limits in the PM peak hour, as noted in Section 3.1; however, as the delay is only marginally outside of the design standards, improvements are not recommended. It is recommended the Township observe traffic at this intersection closer to the build-out of the proposed development.

The results of the LOS analysis indicate that eastbound movements at the County Road 10 / Fallis Line intersection are operating outside the typical design limits in the all scenarios, as noted in Section 3.1. Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at all the intersections in the study area (results are provided in **Appendix H**); however, based on the control delay for the eastbound movement, it is recommended that traffic signals are installed at the County Road 10 / Fallis Line intersection.

The results of the LOS analysis indicate that eastbound movements at the County Road 10 / Street 'B' North intersection are operating outside the typical design limits in the SAT peak hour, as noted in Section 3.1. Based on the criteria outlined for left turn movements Appendix 9A of the MTO DS a northbound left turn lane is recommended at this intersection with a 160 metre taper length, 70 metre parallel length and 15 metre storage length. Based on the criteria outlined for right turn movements outlined in Section E.7 of the MTO GDSOH, a southbound right turn lane is recommended at this intersection with an 80 metre taper length and 85 metre parallel length.

A summary of the results of the Synchro analysis with above-noted improvements, during the PM peak hour, can be found below in **Table 21**. Detailed output of the Synchro analysis can be found in **Appendix F**.

Table 21 – Total (2021) LOS with Improvements

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Fallis Line (signalized)	0.51	16.5	B	0.55	13.8	B	0.51	14.5	B
EB	0.78	26.7	C	0.73	25.0	C	0.75	25.3	C
NBL	0.20	10.1	B	0.45	11.9	B	0.37	11.0	B
NBT	0.33	11.1	B	0.25	8.9	A	0.26	9.3	A
SBT	0.27	10.4	B	0.33	9.6	A	0.26	9.3	A
SBR	0.10	9.1	A	0.18	8.4	A	0.16	8.6	A
County Road 10 / Street 'B' North (unsignalized)	-	-	-	-	-	-	-	8.5	A
EB	-	-	-	-	-	-	0.79	52.1	F

The results of the LOS analysis indicate that the eastbound movements at the County Road 10 / Street 'B' North intersection are operating marginally outside the design limits, as noted in Section 3.1; however, as the delay is only marginally outside of the design standards, additional geometric and traffic signal improvements are not recommended. It is recommended the County monitor traffic at this intersection closer to the build-out of the Subject Site to confirm the exact timing for installation of traffic signals at this intersection.

Based on the left turn lane criteria outlined above a left turn lane is warranted in the westbound direction at the Street 'I' & Street 'D' / Fallis Line intersection (results provided in **Appendix G**). It is recommended a westbound left turn lane be installed with a 115 metre taper, 40 metre parallel and 15 metre storage at this intersection.

Based on the left turn lane criteria outlined above a left turn is warranted in the southbound direction of the County Road 10 / Larmer Line intersection (results provided in **Appendix G**); however, based on low left turning volumes a southbound left turn is not recommended. Additional left turn lanes are not warranted at the other unsignalized intersections.

Based on the right turn lane criteria outlined above a right turn lane is warranted in the westbound direction at the Street 'I' & Street 'D' / Fallis Line intersection; however, based on low thru volumes and low intersection delay a westbound right turn lane is not recommended. Additional right turn lanes are not warranted at any other intersections for this horizon year.

The anticipated 95th percentile queue can be accommodated for all proposed storage lanes in the study area.

5.2 Total (2026) Intersection Operation

The results of the LOS analysis under total (2026) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 22.** The recommendations noted in Section 3.4 and 5.1 have been applied in this scenario. Detailed output of the Synchro analysis can be found in **Appendix F.**

Table 22 – Total (2026) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	1.5	A	-	2.4	B	-	2.5	A
EB	0.12	17.3	C	0.12	17.3	C	0.23	24.3	C
WB	0.17	28.0	D	0.36	59.6	F	0.29	42.3	E
County Road 10 / Fallis Line (signalized)	0.53	16.6	B	0.57	14.0	B	0.51	14.5	B
EB	0.78	27.0	C	0.74	25.1	C	0.75	25.5	C
NBL	0.21	10.3	B	0.48	12.7	B	0.37	11.1	B
NBT	0.37	11.5	B	0.28	9.1	A	0.28	9.5	A
SBT	0.30	10.8	B	0.36	9.9	A	0.28	9.5	A
SBR	0.10	9.2	A	0.18	8.4	A	0.16	8.6	A
County Road 10 / Community Centre East Driveway (unsignalized)	-	0.3	A	-	0.8	A	-	0.2	A
EB	0.04	15.8	C	0.15	20.3	C	0.03	16.5	C
Street 'B' South & Street 'A' / Fallis Line (unsignalized)	-	5.5	A	-	4.3	A	-	4.9	A
NB	0.07	9.1	A	0.05	9.3	A	0.07	9.3	A
SB	0.09	10.1	B	0.07	11.0	B	0.10	11.1	B
Street 'I' & Street 'D' / Fallis Line (unsignalized)	-	6.8	A	-	6.6	A	-	6.9	A
NB	0.22	10.3	B	0.17	10.7	B	0.18	10.3	B
SB	0.24	17.3	C	0.32	24.4	C	0.36	26.5	D
County Road 10 / Street 'B' North (unsignalized)	-	7.5	A	-	4.3	A	-	9.8	A
EB	0.70	37.3	E	0.59	37.1	E	0.84	62.4	F

The results of the LOS analysis indicate that the westbound movements at the County Road 10 / Larmer Line intersection are operating outside the typical design limits in the PM peak hour and eastbound movements at the County Road 10 / Street 'B' North intersection are operating outside the typical design limits in the SAT peak hour, as noted in Section 3.1; however, as the delay is only marginally outside the design standards, additional geometric and traffic signal improvements are not recommended. It is recommended the County monitor traffic at this intersection to confirm the exact timing for installation of traffic signals. The results of the LOS analysis indicate that all other intersections in the study area are operating within the typical design limits.

An analysis was completed for left turn movements at all unsignalized intersections in the study area based on the criteria outlined in Appendix 9A of the MTO DS.

Based on the left turn lane criteria outlined above a left turn is warranted in the southbound direction of the County Road 10 / Larmer Line intersection (results provided in **Appendix G**); however, based on

low left turning volumes a southbound left turn is not recommended. Left turn lanes are not warranted at the other unsignalized intersections.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Section E.7 of the MTO GDSOH were applied (60 vph minimum right turn volume warrant). Based on the above-noted criteria, additional right turn lanes are not warranted at any of the unsignalized intersections in the study area.

Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at any of the unsignalized intersections in the study area (results are provided in **Appendix H**).

No additional improvements are recommended within the study area for the total (2026) scenario.

5.3 Total (2031) Intersection Operation

The results of the LOS analysis under total (2031) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 23.** The recommendations noted in Section 3.5 and 5.2 have been applied in this scenario. Detailed output of the Synchro analysis can be found in **Appendix F.**

Table 23 – Total (2031) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (signalized)	0.75	11.1	B	0.63	15.4	B	5.8	0.32	A
EB	0.48	37.5	D	0.77	44.2	44.2	0.38	39.8	D
WB	0.29	35.2	D	0.11	27.8	27.8	0.32	39.0	D
NBL	0.03	2.6	A	0.04	5.7	5.7	0.03	1.9	A
NBTR	0.44	4.7	A	0.53	9.9	9.9	0.29	2.7	A
SB	0.78	11.5	B	0.59	10.8	10.8	0.32	2.9	A
County Road 10 / Fallis Line (signalized)	0.70	20.0	C	0.69	15.6	B	0.52	14.6	B
EB	0.83	29.0	C	0.75	25.6	C	0.75	25.6	C
NBL	0.25	13.4	B	0.65	19.6	B	0.39	11.6	B
NBT	0.59	17.6	B	0.35	10.4	B	0.31	9.9	A
SBT	0.38	14.1	B	0.51	12.5	B	0.31	9.9	A
SBR	0.11	11.6	B	0.23	9.4	A	0.16	8.7	A
County Road 10 / Community Centre East Driveway (unsignalized)	-	0.3	A	-	0.9	A	-	0.2	A
EB	0.06	20.7	C	0.22	28.9	D	0.03	17.4	C
Street 'B' South & Street 'A' / Fallis Line (unsignalized)	-	5.2	A	-	4.1	A	-	4.8	A
NB	0.09	9.3	A	0.06	9.5	A	0.07	9.4	A
SB	0.11	10.7	B	0.08	11.6	B	0.10	11.2	B
Street 'I' & Street 'D' / Fallis Line (unsignalized)	-	7.3	A	-	7.0	A	-	6.9	A
NB	0.26	11.0	B	0.19	11.2	B	0.18	10.4	B
SB	0.32	21.6	C	0.39	30.7	D	0.37	27.4	D
County Road 10 / Street 'B' North (unsignalized)	-	26.3	B	-	9.2	A	-	12.4	A
EB	1.14	148.4	F	0.90	94.8	F	0.92	82.3	F

The results of the LOS analysis indicate that the eastbound movements at the County Road 10 / Street 'B' North intersection are operating outside the typical design limits in the all scenarios, as noted in Section 3.1. Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at any of the unsignalized intersections in the study area (results are provided in **Appendix H**); however, traffic signals should be considered at this intersection for long-range infrastructure planning purposes. It is recommended the County observe traffic at this intersection closer to the 2031 horizon year to determine the exact timing for traffic signal installation.

A summary of the results of the Synchro analysis with traffic signals installed at the Street 'B' North / County Road 10 intersection, can be found below in **Table 24**. Detailed output of the Synchro analysis can be found in **Appendix F**.

Table 24 – Total (2031) LOS with Improvements

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Street 'B' North (signalized)	0.66	15.2	B	0.56	9.5	A	0.49	11.3	B
EB	0.75	42.2	D	0.61	40.5	D	0.67	36.3	D
NBL	0.02	4.9	A	0.08	4.1	A	0.06	4.9	A
NBT	0.63	10.8	B	0.38	5.6	A	0.40	7.1	A
SBT	0.38	7.6	A	0.55	7.5	A	0.44	7.5	A
SBR	0.05	5.1	A	0.15	4.2	A	0.13	5.2	A

The results of the LOS analysis indicate that all other intersections in the study area are operating within the typical design limits noted in Section 3.1.

An analysis was completed for left turn movements at all unsignalized intersections in the study area based on the criteria outlined in Appendix 9A of the MTO DS.

Based on the left turn lane criteria outlined above a left turn is warranted in the southbound direction of the County Road 10 / Larmer Line intersection (results provided in **Appendix G**); however, based on low left turning volumes a southbound left turn is not recommended. Left turn lanes are not warranted at the other unsignalized intersections.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Section E.7 of the MTO GDSOH were applied (60 vph minimum right turn volume warrant). Based on the above-noted criteria, additional right turn lanes are not warranted at any of the intersections in the study area.

Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at the intersections in the study area (results are provided in **Appendix H**).

5.4 Sight Distance Review

A review of the available sight distance for the proposed site access was completed as part of this analysis.

Street 'B' South
The sight distance east and west of the Street 'B' South is significantly greater than the minimum stopping sight distance requirements as identified in the Transportation Association of Canada *Design Guide for Canadian Roads* (2017) [TAC Guidelines] for a design speed of 100km/h (185 metres).

There are no issues with the sight distance available for the proposed Street 'B' South.

Street 'I'
The sight distance east and west of the Street 'I' driveway is significantly greater than the minimum stopping sight distance requirements as identified in the TAC Guidelines for a design speed of 100km/h (185 metres).

There are no issues with the sight distance available for the proposed Street 'I' driveway.

Street 'B' North
The sight distance north and south of the Street 'B' North is significantly greater than the minimum stopping sight distance requirements as identified in the TAC Guidelines for a design speed of 100km/h (185 metres).

There are no issues with the sight distance available for the proposed Street 'B' North.

5.5 Site Access

Street 'B' South will operate efficiently as a full-movement access, with two-way stop control for southbound and northbound movement. No lane improvements are recommended on Fallis Line at Street 'B' South. A single southbound and northbound lane on Street 'B' South at Fallis Line will provide the necessary capacity to service the proposed development.

Street 'I' will operate efficiently as a full-movement access, with two-way stop control for southbound and northbound movement. A westbound left turn lane is recommended on Fallis Line at Street 'I' with a 115 metre taper, 45 metre parallel and 15 metre storage. A single southbound and northbound lane on Street 'I' at Fallis Line will provide the necessary capacity to service the proposed development.

Street 'B' North will operate efficiently as a full-movement access, with two-way stop control for southbound and northbound movement. A southbound right turn lane with an 80 metre taper length and 85 metre parallel length and a northbound left turn lane with a 160 metre taper, 70 metre parallel and 15 metre storage is recommended. Signalization may be required at this intersection around 2031, subject to monitoring and confirmation by the County. A single eastbound and westbound lane on Street 'B' North at County Road 10 will provide the necessary capacity to service the proposed development.

The proposed spacing between Street 'B' South and Street 'I' on Fallis Line is in excess of 300 metres (measured edge of road to edge of road), which is well in excess of the suggested minimum intersection spacing as identified in the TAC Guidelines for local roads (60 metres).

The proposed spacing between Street 'I' and the Fallis Line Commercial North driveway is in excess of 100 metres (measured edge to edge of driveways), which is well in excess of the suggested minimum corner clearance requirements as identified in the TAC Guidelines – Figure 8.8.2 - 15 metre for the unsignalized condition.

The proposed spacing between Street 'B' North and the Community Centre East Access is in excess of 115 metres (measured edge of road to edge of driveway), which is well in excess of the suggested minimum corner clearance requirements as identified in the TAC Guidelines – Figure 8.8.2 - 35 metre for the unsignalized and 70 metre for signalized condition.

The proposed spacing between Street 'B' North and Larmer Line is in excess of 980 metres (measured edge of road to edge of road), which is well in excess of the suggested intersection spacing along an arterial road as identified in the TAC Guidelines (400 metres preferred).

5.6 Active Transportation Review

There is currently no formal active transportation infrastructure in the study area.

The 2010 Township Trail Master Plan identifies a proposed trail on the unopened portion of Fallis Line East from County Road 10 to Cedar Valley Road. The Trail Master Plan also identifies an option for a trail connection between the Victoria Rail Trail and Millbrook along Fallis Line and an off-street portion east of the Subject Site.

The County's Active Transportation Master Plan (June 2017) proposes fully paved shoulders along County Road 10 in the study area as one of the initial projects with a multi-use pathway as the ultimate design. The County's current capital budget does not identify any funds specifically for the above-noted improvements.

A gravel multi-use path is proposed along the west edge of the Millbrook Community Centre property, connecting into Fallis Line. A sidewalk is also proposed along the west side of County Road 10 and the north side of Fallis Line adjacent to the Millbrook Community Centre property, which will connect into the proposed sidewalk within the Subject Site. A sidewalk extension from the Millbrook Community Centre, through the Township Municipal Office property, to Street 'B' North should also be considered to provide additional access between the residential and institutional lands. The Subject Site includes an internal sidewalk network along all proposed roads with connections to the Millbrook Community Centre via Street 'I'.

Pedestrian crossing treatment is recommended on Fallis Line near the west edge of the Millbrook Community Centre property to accommodate trips to / from the existing Millbrook Community. The specific pedestrian crossing treatment, location and construction timing is beyond the scope of this report.

6 Collision Data Review

The County has provided collision reports for County Road 10 within the study area. A review of the collision reports was completed as part of our analysis. The following summarizes our collision data analysis.

Collision reports on County Road 10 were provided by the County in the Millbrook TIS. A total of four collisions occurred in 2009. Updated collision reports have been provided by the Peterborough Police Service [PPS]. The collision reports cover the study area from 2015 to 2018. Three of the collisions occurred as a result of drivers losing control of their vehicle during the winter. **Table 25** summarizes our review of the accidents.

Table 25 – Collision Data Analysis

Accident Description	Result of Analysis
2009 - Vehicle lost control while travelling northbound on County Road 10 attempting to make a right turn onto Larmer Line.	The sightlines for northbound traffic on County Road 10 approaching Larmer Line are excellent and the necessary intersection signage is provided. This accident occurred during the winter and it is our expectation that weather and road conditions played a significant role. No additional measures are recommended as a result of this accident.
2009 - Vehicle lost control while travelling northbound on County Road 10, north of Brookside Street.	There are no significant vertical or horizontal curves in County Road 10 and Larmer Line near the scene of both accidents. Both accidents occurred during the winter and it is our expectation that weather and road conditions played a significant role. No additional measures are recommended as a result of these accidents.
2017 - Vehicle lost control near the CR 10 / Larmer Line intersection and slid in to a ditch.	
2009 - Vehicle struck a deer on County Road 10 near Fallis Line.	Collisions with wildlife should continue to be monitored to determine if signage or additional measures need to be taken to make drivers aware of the increased risk for the area. Since there was only two collisions reported, no additional measures are recommended at this time.
2017 - Vehicle struck a deer on County Road 10 just south of Larmer Line.	
2009 - Vehicle travelling on CR 10 southbound signaled to turn right then changed and turned left into vehicle passing from behind.	This type of collision has a low probability of reoccurrence and it is unlikely that signage, pavement marking or infrastructure improvements would prevent future collisions of this nature.
2016 - Motorcycle vehicle travelling southbound at the CR 10 / Larmer Line intersection tries to avoid eastbound vehicle that failed to stop at the stop sign.	The sightlines for eastbound traffic on Larmer Line approaching County Road 10 are excellent. This type of collision has a low probability of reoccurrence and it is unlikely that signage, pavement marking or infrastructure improvements would prevent future collisions of this nature.

7 Summary

The **Township of Cavan Monaghan** retained **JD Engineering** to prepare this traffic impact study in support of the proposed Phase 2 of the Millbrook Development that includes the development of the 86.7 hectare parcel north and south of Fallis Line and west of County Road 10 in the Township of Cavan Monaghan, County of Peterborough. The proposed site plan is included in **Appendix A**. This chapter summarizes the conclusions and recommendations from the study.

The proposed development will include 360 single-detached, 244 townhouse and 192 high-density residential units.

1. The proposed development of the Subject Site is expected to generate a total of 450 AM, 579 PM and 650 SAT peak hour trips.

2. Background traffic and pedestrian counts were completed for the existing intersections of County Road 10 / Municipal Office Driveway on Tuesday April 25th, 2017 and Saturday August 12th, 2017.

3. An intersection operational analysis was completed at the intersections of County Road 10 / Larmer Line, County Road 10 / Municipal Office Driveway and County Road 10 / Fallis Line, using the existing (2018) and background (2021, 2026 and 2031) traffic volumes. The following improvements are recommended:

Background (2021) Traffic Volumes

- **County Road 10 / Municipal Office Driveway (Millbrook Community Centre)**
  - As part of the Millbrook Community Centre development, construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length.
- **County Road 10 / Larmer Line**
  - Construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length.
- **County Road 10 / Fallis Line**
  - Reduce the posted speed limit from 80 km/h to 60km/h on Fallis Line from County Road 10 to west of Street 'A';
  - Construct a northbound left-turn lane with a 145 metre taper length, 60 metre parallel length and 25 metre storage length; and
  - Construct a southbound right-turn lane with an 80 metre taper length and 85 metre parallel length.

Background (2026) Traffic Volumes

- **County Road 10 / Fallis Line**
  - Install traffic signals.

Background (2031) Traffic Volumes

- **County Road 10 / Larmer Line**
  - Install traffic signals.

4. An estimate of the amount of traffic that would be generated by the Subject Site was prepared and assigned to the study area streets and intersections.

5. An intersection operation analysis was completed under total (2021, 2026 and 2031) traffic volumes with the proposed development operational at the study area intersections. In addition to the improvements recommended as a result of the background traffic noted above, the following additional improvements are recommended:

Total (2021) Traffic Volumes

- **County Road 10 / Fallis Line**
  - Install traffic signals.
- **Street 'I' & Street 'D' / Fallis Line**
  - Construct a westbound left-turn lane with a 115 metre taper length, 40 metre parallel and 15 metre storage.
- **County Road 10 / Street 'B' North**
  - Construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length; and
  - Construct a southbound right-turn lane with an 80 metre taper length and 85 metre parallel length.

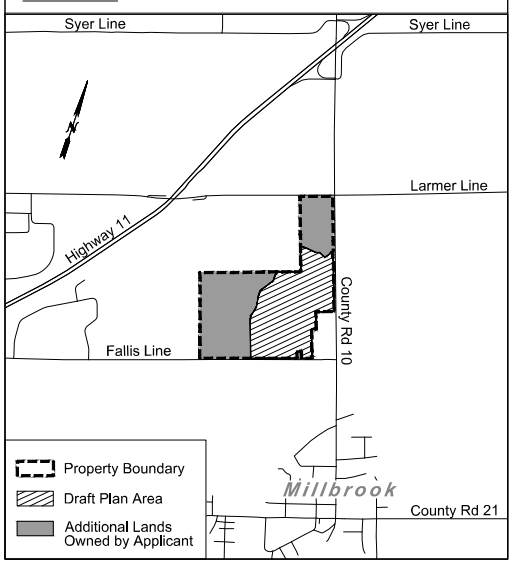
Conditional Works - Total (2031) Traffic Volumes

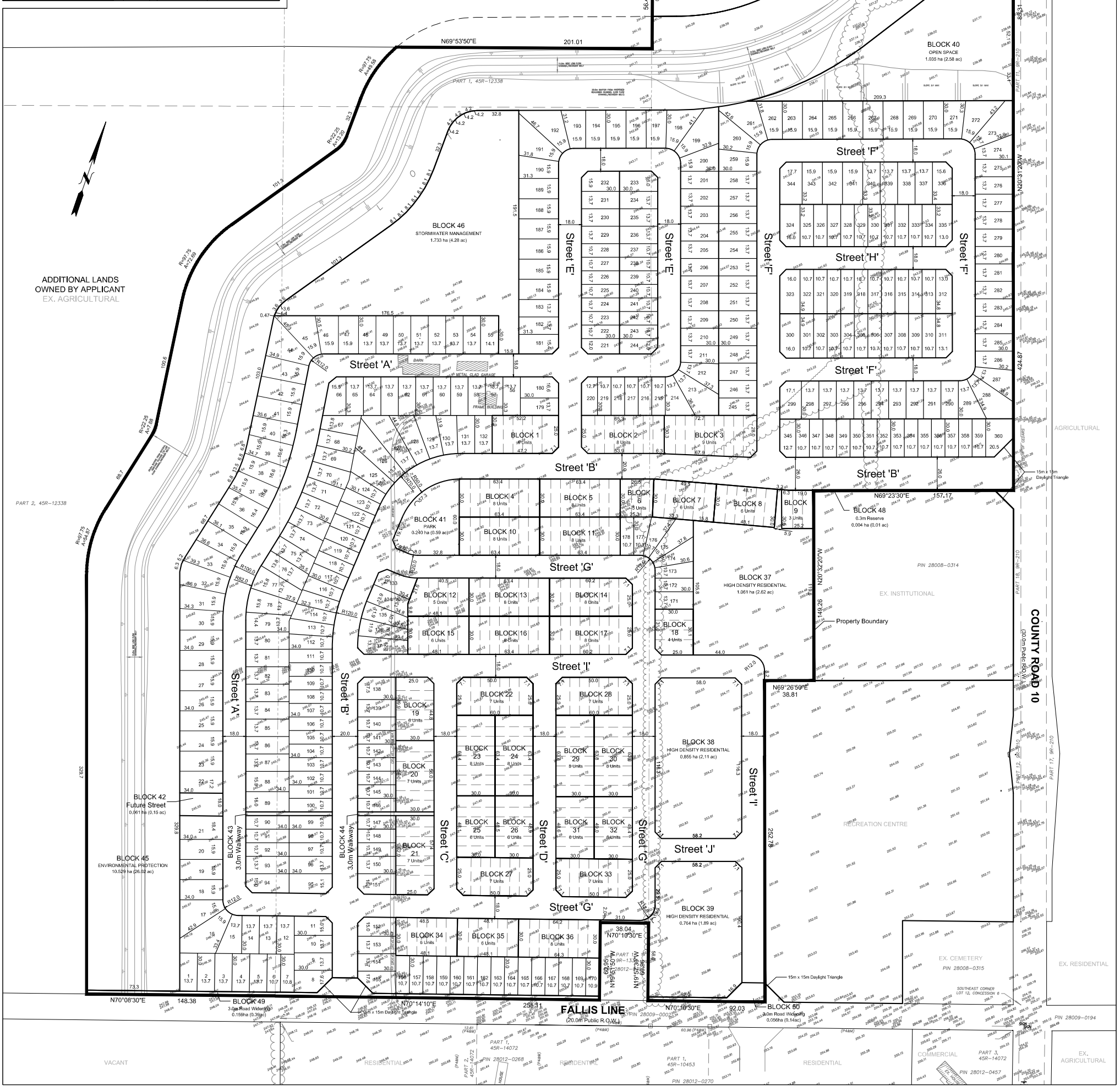
- **County Road 10 / Street 'B' North**
  - Install traffic signals.

6. The sight lines available on Fallis Line for Street 'B' South and Street 'I' and on County Road 10 for Street 'B' North meet the minimum stopping sight distance requirements as identified in the Transportation Association of Canada Guidelines.
7. Some form of pedestrian crossing treatment is recommended on Fallis Line near the west edge of the Millbrook Community Centre property. The specific pedestrian crossing treatment, location and construction timing is beyond the scope of this report.
8. In summary, with the improvements outlined above, the proposed development will not cause any operational issues will not add significant delay or congestion to the local roadway network.

Appendix A – Site Plan

KEY MAP 1:30,000





OWNER'S CERTIFICATE

I HEREBY AUTHORIZE INNOVATIVE PLANNING SOLUTIONS TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION FOR APPROVAL.

DATE

TOWERHILL DEVELOPMENTS

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE

DWAYNE CUMMINGS, OLS

LAND USE STATISTICS

LAND USE	LOT / BLOCK	UNITS	AREA (ha)	%
RESIDENTIAL LOTS (52')	8, 16-47, 88, 89, 138, 155, 184-200, 259-272, 299, 341-344, 360	74	4.034	8.44
RESIDENTIAL LOTS (45')	1-5, 9-15, 48-87, 93-96, 125-134, 139, 150-154, 171, 179-183, 201-214, 229-236, 245-258, 273-298, 300, 323, 324, 336-340	148	6.560	13.73
RESIDENTIAL LOTS (35')	6, 7, 90-92, 97-124, 135-137, 140-149, 156-170, 172-178, 215-228, 237-244, 301-322, 325-335, 245-359	138	4.773	9.99
RESIDENTIAL LOTS (TOWNHOMES - 25')	BLOCKS 1-36	244	5.983	12.52
RESIDENTIAL APARTMENTS	BLOCKS 37-39	192	2.680	5.61
PARK, OPEN SPACE, & WALKWAYS	BLOCKS 40, 41, 43, 44		1.313	2.75
ENVIRONMENTAL PROTECTION	BLOCK 45		10.529	22.04
STORMWATER MANAGEMENT	BLOCK 46		1.733	3.63
AGRICULTURAL	BLOCK 47		1.222	2.56
0.3m RESERVE	BLOCK 48		0.004	0.01
ROAD WIDENING	BLOCKS 49 & 50		0.216	0.45
FUTURE STREET	BLOCK 42		0.061	0.13
STREETS	STREET 'A' - STREET 'J'		8.663	18.13
TOTAL		**796**	**47.771**	**100**

ADDITIONAL INFORMATION REQUIRED UNDER **SECTION 51(17)** OF THE PLANNING ACT

a) SHOWN ON PLAN
b) SHOWN ON PLAN
c) SHOWN ON PLAN
d) SHOWN ON LANE USE SCHEDULE
e) SHOWN ON PLAN
f) SHOWN ON PLAN
f1) NONE
g) SHOWN ON PLAN
h) MUNICIPAL WATER
i) OTONABEE LOAM
j) SHOWN ON PLAN
k) ALL MUNICIPAL SERVICES
l) NONE

DRAFT PLAN OF SUBDIVISION

(NORTH RESIDENTIAL DETAIL)

PART OF LOTS 11 & 12, CONCESSION 6
AND PART OF LOT 12, CONCESSION 5
GEOGRAPHIC TOWNSHIP OF CAVAN
IN THE
TOWNSHIP OF CAVAN-MILLBROOK-NORTH MONAGHAN
COUNTY OF PETERBOROUGH

0 25 50 75 100 125 150m

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FILE:	18-783	SCALE:	1 : 1,500
DATE :	August 29, 2018	DRAWN BY:	AM

Appendix B –
Adjacent Development TIS Excerpts

Millbrook TIS Excerpts

Millbrook Development

Township of Cavan Monaghan, County of Peterborough

Traffic Impact Study for

Towerhill Developments Ltd.

Type of Document:
Final Report

Project Number:
JDE – 1331

Date Submitted:
July 3rd, 2014

John Northcote, P.Eng.
Professional License #: 100124071

ENGINEERING

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condition traffic. During the interim condition, vehicles will access the site via Fallis Line through the extension of Street A. **Table 10** illustrates the distribution of egress trips generated by the Future Site for the interim condition.

Table 17 – Future Site Interim Development Trip Distribution

Direction	East via Larmer Line	South / East via Millbrook	South / West via Hwy 115	North Via CR 10
Egress	3%	28%	10%	59%

The distribution for the traffic generated during the ultimate condition for the Future Site was based on 2006 Transportation Tomorrow Survey [TTS] data as outlined in Section 4.2. In order to simplify the calculation, all traffic generated during the interim condition is assumed to access the Future Site via Fallis Line and the additional traffic generated during the ultimate condition will access the Future Site via County Road 10, between Fallis Line and Larmer Line. The distribution of the additional traffic for the ultimate condition is slightly different than the distribution of traffic for the interim condition, because southbound and westbound traffic will travel along County Road 10 to either Fallis Line or Larmer Line. **Table 11** illustrates the distribution of the additional egress trips generated by the Future Site during the ultimate condition.

Table 18 –Future Site Ultimate Development Trip Distribution

Direction	East via Larmer Line	South / East via Millbrook	South / West via Larmer Line	South / West via Fallis Line	North Via CR 10
Egress	3%	28%	5%	5%	59%

Using the above-noted traffic generation and distribution methodology, the Future Site traffic assignment for the interim and ultimate condition during the AM and PM peak hour was calculated and has been illustrated in **Figure 7 & 8**.

919 Fallis Line Traffic Brief Excerpts

919 Fallis Line

Township of Cavan Monaghan, County of Peterborough

Traffic Brief for

Cortel Group

Type of Document:
Final Report

Project Number:
JDE – 1331

Date Submitted:
October 2nd, 2017

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2.3 Other Developments within the Study Area

Based on discussions with the Township, the Millbrook development and the Millbrook Recreation Centre outlined in Section 1.1 are the only proposed developments within the study area that will have a significant impact on local traffic volumes in the study area.

2.4 Local Road Improvements

Through our discussion with the Township and County staff, there are no significant local road improvements scheduled in the study area that will impact traffic volumes or traffic patterns within the short-term.

3 Proposed Development Traffic Generation and Assignment

3.1 Traffic Generation

The traffic generation for the subject site has been calculated based on the data provided in the Institute of Transportation Engineers [ITE] *Trip Generation Manual* (9th Edition) [ITE Trip Generation Manual]. The following ITE land uses have been applied to estimate the traffic from the proposed development:

- ITE land use 710 (General Office Building).
- ITE land use 934 (Fast-Food Restaurant with Drive-Through Window);

The estimated trip generation of the proposed development is illustrated below in **Table 1**. The AM, PM and SAT peak hour traffic generation for the subject site generally align with the anticipated AM, PM and SAT peak hour of the adjacent road network.

Table 1 - Estimated Traffic Generation of Proposed Development

Development	Size	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Fast-Food Restaurant with Drive-Thru Window ITE Land Use: 934	2,476 sq. ft.	58	55	113	42	39	81	74	72	146
General Office Building ITE Land Use: 710	13,412 sq. ft.	34	5	39	16	78	94	3	3	6
TOTAL TRIP GENERATION		**92**	**60**	**152**	**58**	**117**	**175**	**77**	**75**	**152**
INTERNAL CAPTURE*		-3	-3	-6	-2	-2	-4	-2	-2	-4
NET GENERATION		**89**	**57**	**146**	**56**	**115**	**171**	**75**	**73**	**148**
PASS-BY TRIPS (ITE Land Use: 934)**		-28	-28	-56	-20	-20	-40	-36	-36	-72
TOTAL SITE		**61**	**29**	**90**	**36**	**95**	**131**	**39**	**37**	**76**

* The internal capture rate has been calculated using the methodology outlined in Section 7 of the ITE Trip Generation Handbook (2nd Addition). Calculations are provided in **Appendix B**.
** The ITE data provides a pass-by rate for weekday AM and PM peak hour (49% and 50% respectively). For the purpose of this report we have decided to use a pass-by rate of 50% for the Fast-Food Restaurant component of the development for all scenarios.

No transportation modal split reduction has been applied to the above-noted traffic generation calculation.

3.2 Traffic Assignment

The ITE data provides the anticipated percentage of new traffic entering and exiting during the peak hour. The distribution of office traffic beyond the local area has been calculated based on the 2011 Transportation Tomorrow Survey [TTS] data for planning district 104, retrieved using the TTS Internet Data Retrieval System [IDRS] (output attached in **Appendix C**). TTS data provides historical origin and destination trip data for specific areas within the County and the Greater Toronto and Hamilton Area [GTHA].

Traffic distribution for the trips generated by the subject site during the AM, PM and SAT peak hour is expected to generally follow commuter travel patterns. Our analysis is based on all work-based ingress traffic during the AM peak hour. Generally, the distribution of egress traffic is expected to follow the inverse of the ingress traffic distribution. For each of the individual areas identified in the TTS data, we have selected the probable route of travel, assuming that people will select their route primarily based on travel time.

In order to account for the interaction between the office component of the proposed development and the community of Millbrook, we have assumed that 20% of all traffic generated by the subject site will be generated within the Millbrook community. Half of this traffic has been attributed to the existing Millbrook community and the other half is attributed to the future build-out of the Millbrook Development. This value has been based our review of the number, type and location of businesses and facilities within the community of Millbrook. An adjustment has also been made to account for the impact of future development in Fraserville. Traffic distribution along Larmer Line is expected to increase as this development proceeds.

The estimated distribution of trips generated by the subject site for the office component of the proposed development is illustrated in **Table 2**, which was calculated using the methodology outlined above.

Table 2 – Proposed Office Traffic Distribution

Travel Direction (to/from)	Percentage of Total Traffic Generation
South / East via Millbrook	15%
South / West via Hwy 115	19%
North via CR10	66%
Total	**100%**

The distribution of traffic for the fast food restaurant component of the development is assumed to follow the distribution of the future traffic volumes within the study area[1]. **Table 3** illustrates the calculation of the distribution of ingress and egress traffic for the fast food restaurant component of the proposed development.

[1] The future traffic volumes in the area are based on the Total 2031 traffic volumes at the intersection of Fallis Line / County Road 10 from the Millbrook TIS.

Table 3 - Proposed Fast-Food Restaurant Traffic Distribution

Scenario	Direction	Ingress / Egress Traffic Direction		
		Northbound via County Road 10	**Southbound** via County Road 10	**Eastbound** via Fallis Line
AM	In	44%	28%	28%
	Out	43%	43%	13%
PM	In	43%	39%	19%
	Out	41%	30%	28%
SAT	In	44%	24%	28%
	Out	43%	43%	13%

The distribution of traffic entering at each site access location is based on our review of the internal parking and building layout, in conjunction with the external traffic distribution.

Using the traffic distribution patterns noted above, the traffic assignment for the proposed development was calculated. The assignment of the fast food restaurant primary traffic, fast food restaurant pass-by traffic, office traffic and total site traffic is illustrated in **Figures 3, 4, 5 and 6** respectively for the AM, PM and SAT peak hours.

Figure 3 - Fast-Food Restaurant Traffic Assignment – Primary Trips

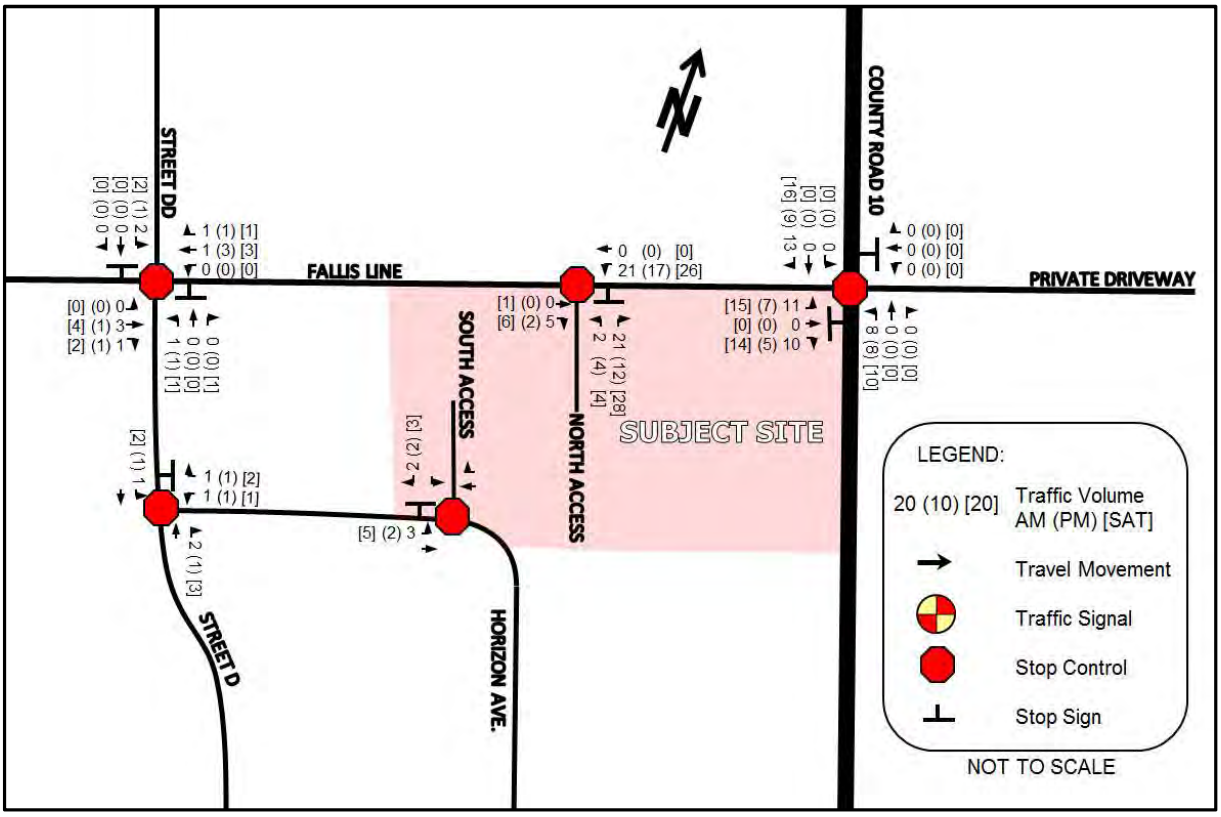


Figure 4 - Fast-Food Restaurant Traffic Assignment – Pass-by Trips

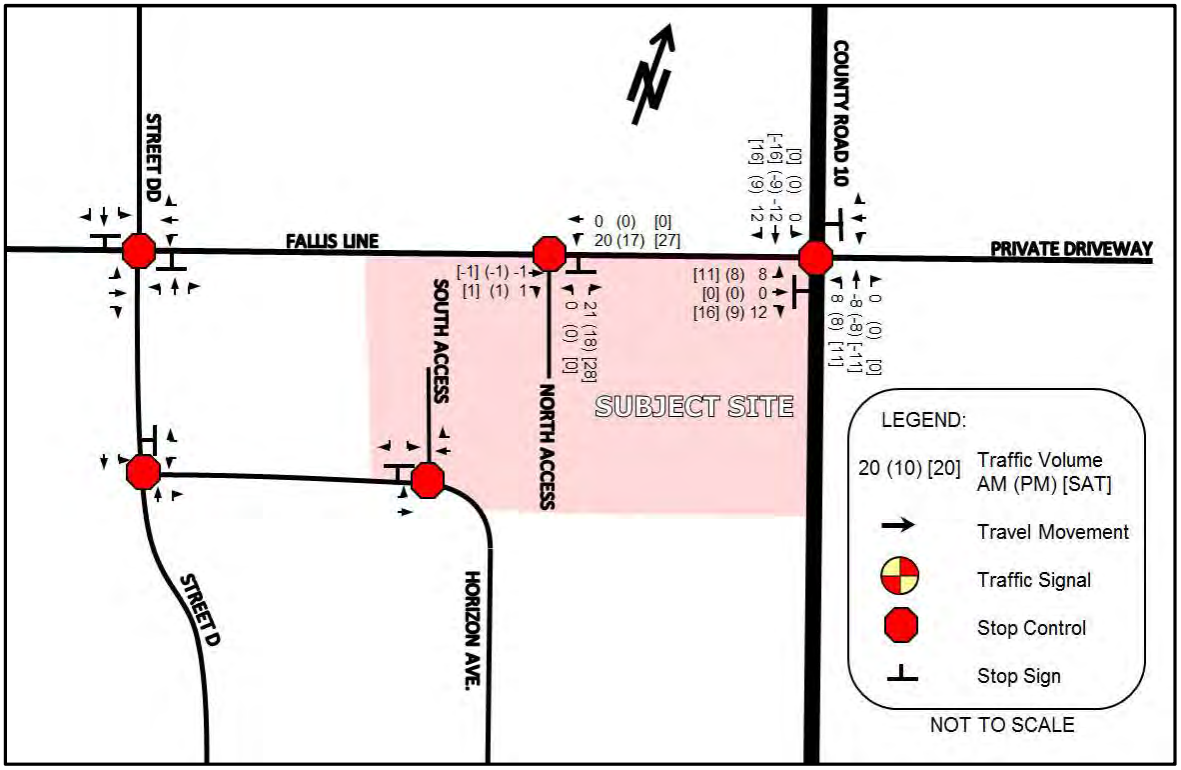


Figure 5 - Office Traffic Assignment

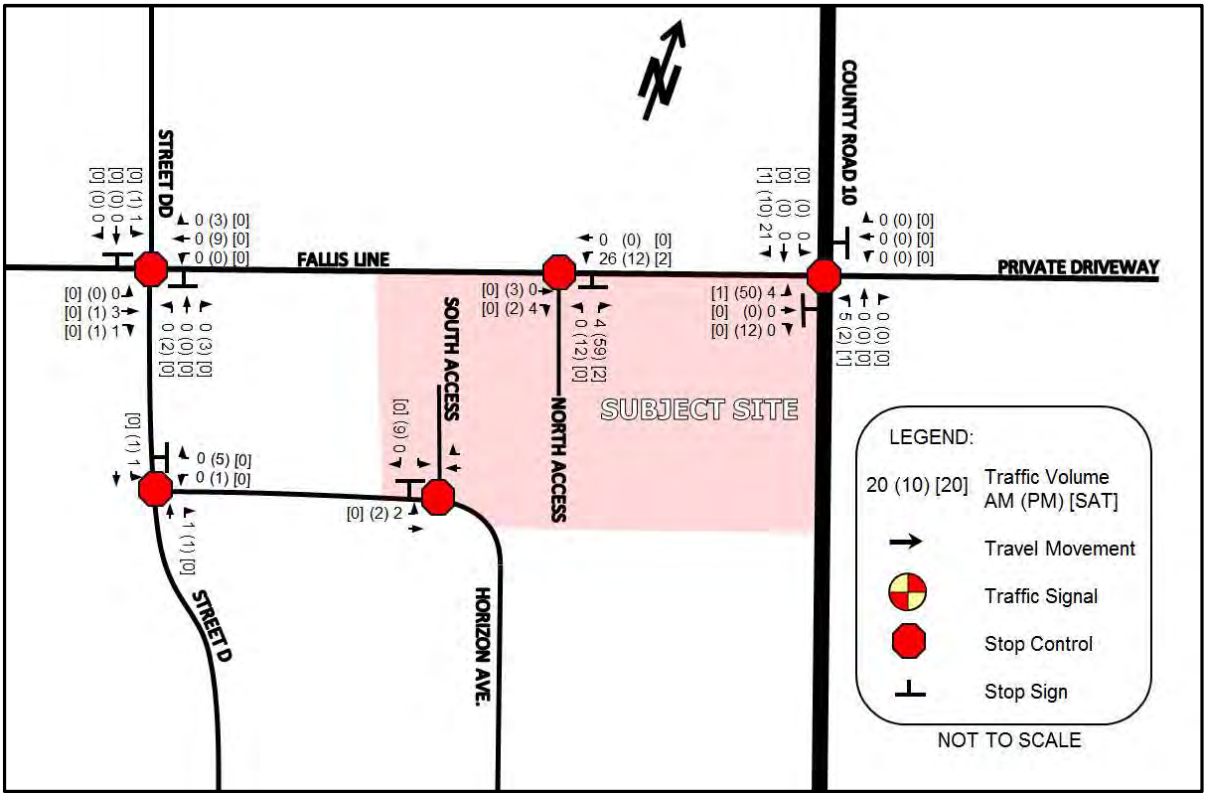
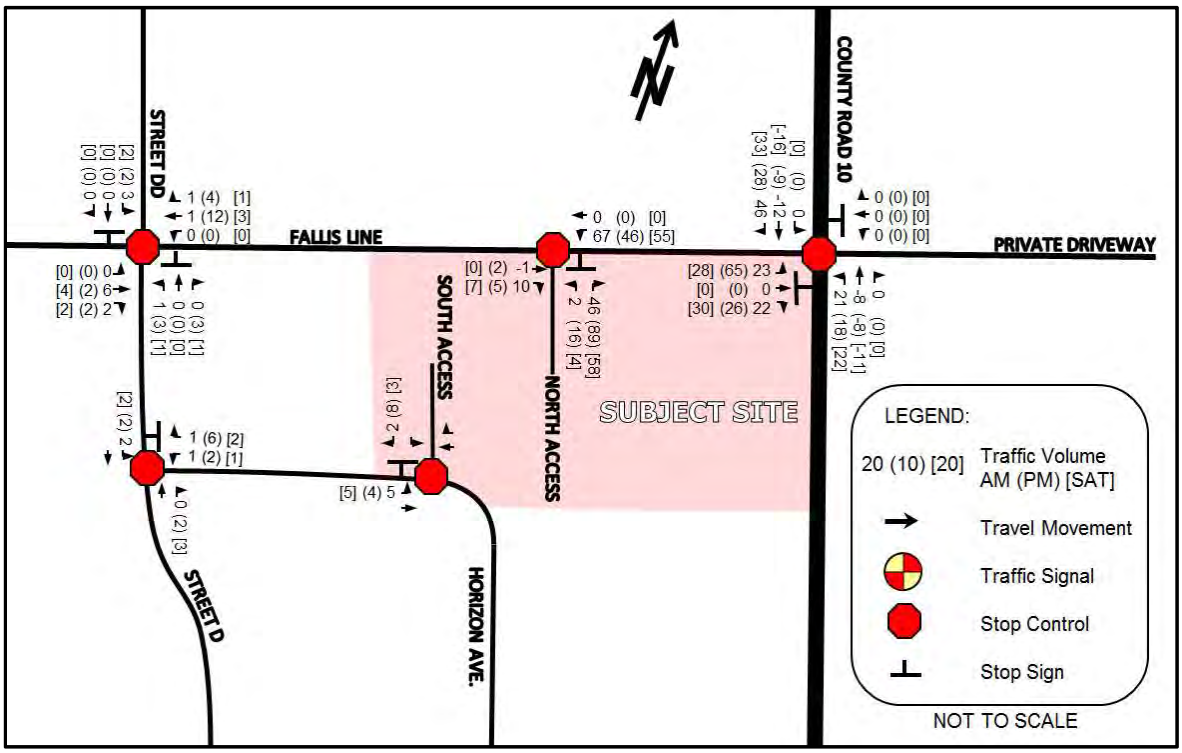


Figure 6 - Total Site Traffic Assignment



4 Site Access

4.1 Sight Distance Review

A review of the available sight distance for the proposed North Access and South Access was completed as part of this analysis.

North Access
The sight distance west of the North Access is significantly greater than the minimum stopping sight distance requirements as identified in the Transportation Association of Canada *Design Guide for Canadian Roads* (2011) [TAC Guidelines] for a design speed of 100km/h (185 meters).

The sight distance east of the North Access ends at the County Road 10 / Fallis Line intersection (102 metres) and is less than the minimum stopping sight distance requirements as identified in the TAC Guidelines for a design speed of 100km/h (185 meters); however, there are no concerns with the sight distance as vehicles turning onto Fallis Line will be turning at much slower speeds.

There are no issues with the sight distance available for the proposed North Access.

South Access
The sight distance west of the South Access ends at the Street D / Horizon Avenue intersection (77 metres) and is less than the minimum stopping sight distance requirements as identified in the TAC Guidelines for a design speed of 60km/h (85 meters); however, there are no concerns with the sight distance as vehicles turning onto Horizon Avenue will be turning at much slower speeds.

Community Centre TIS Excerpts

Millbrook Community Centre

Township of Cavan Monaghan, County of Peterborough

Traffic Impact Study for the Township of Cavan Monaghan

Type of Document:
Final Report

Project Number:
JDE – 1784

Date Submitted:
October 10th, 2017

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Professional License #: 100124071

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very low volume of left turn movements from County Road 10 into the Municipal Office Driveway, a northbound left turn lane is not recommended on County Road 10 at the Municipal Office Driveway.

For right turn movements at the Municipal Office Driveway, the criteria outlined in Section E.7 of the MTO GDSOH were applied (60 vph minimum right turn volume warrant). Based on the above-noted criteria, a right turn lane is not warranted on County Road 10 at the Municipal Office Driveway.

Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted on County Road 10 at the Municipal Office Driveway (results are provided in **Appendix G**).

No infrastructure improvements are recommended within the study area for the existing (2017) scenario.

4 Proposed Development Traffic Generation and Assignment

4.1 Traffic Generation for Subject Site

The traffic generation for the subject site has been calculated based on the data provided in the Institute of Transportation Engineers [ITE] *Trip Generation Manual* (9th Edition) [ITE Trip Generation Manual]. The following ITE land uses have been applied to estimate the traffic from the proposed development:

- ITE land use 495 (Recreational Community Centre).

The estimated trip generation of the proposed development is illustrated below in **Table 7**. Although the peak hours of traffic generation for the proposed development are not anticipated to exactly align with the peak hour of traffic on the adjacent streets, for the purpose of this analysis we have conservatively assumed that the peak periods are concurrent. For the purpose of our analysis we have applied the ITE traffic generation rate for the Sunday peak hour for the community centre, since the rate is marginally higher than the Saturday peak hour rate. Since the traffic counts are based on the Saturday peak hour, which is the critical weekend period for the adjacent road network, we have still listed the peak period as the SAT peak hour below.

Table 7 - Estimated Traffic Generation of Proposed Development

Development	Size	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Recreational Community Centre ITE Land Use: 495	50,130 sq. ft.	68	35	103	68	70	138	42	33	75

No transportation modal split reduction has been applied to the above-noted traffic generation calculation.

4.2 Traffic Assignment for Subject Site

For the purposes of this study, it has been assumed that all traffic generated by the proposed development will be new traffic and would not be in the study area if the development was not constructed.

Traffic distribution for the trips generated by the subject site during the AM, PM and SAT peak hour is expected to be related to the location of existing and planned residential development in the area surrounding the Millbrook Community Centre. The distribution was selected based on the probable route of travel between the residential areas and the Millbrook Community Centre, assuming that people will select their route primarily based on travel time. **Table 8** illustrates the estimated distribution of traffic generated by the Millbrook Community Centre, as it relates to the surrounding residential development.

Table 8 – Subject Site Residential Capture Distribution

Travel Direction (to/from)	Percentage of Total Residential Capture
Tapley	22%
Millbrook	46%
Carmel / South Monaghan / Bailieboro	7%
Cavan	8%
Fraserville / Cedar Valley	11%
Millbrook Development Phase 1	6%
Total	**100%**

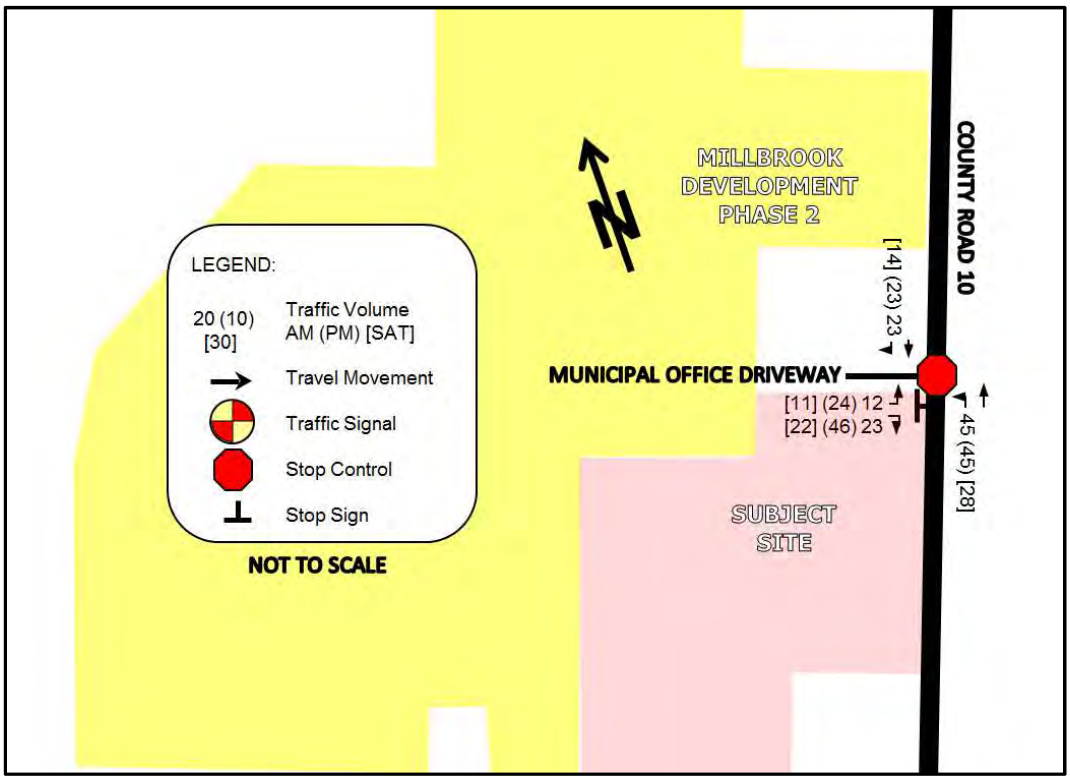
Table 9 illustrates the estimated distribution of ingress and egress traffic for the proposed development, based on the above-noted assumptions.

Table 9 – Subject Site Trip Distribution

Travel Direction (to/from)	Percentage of Total Traffic Generation
South via CR10	81%
North via CR10	19%
Total	100%

Using the above-noted traffic distribution pattern, the development traffic assignment for the AM, PM and SAT peak hour was calculated and has been illustrated in **Figure 8.**

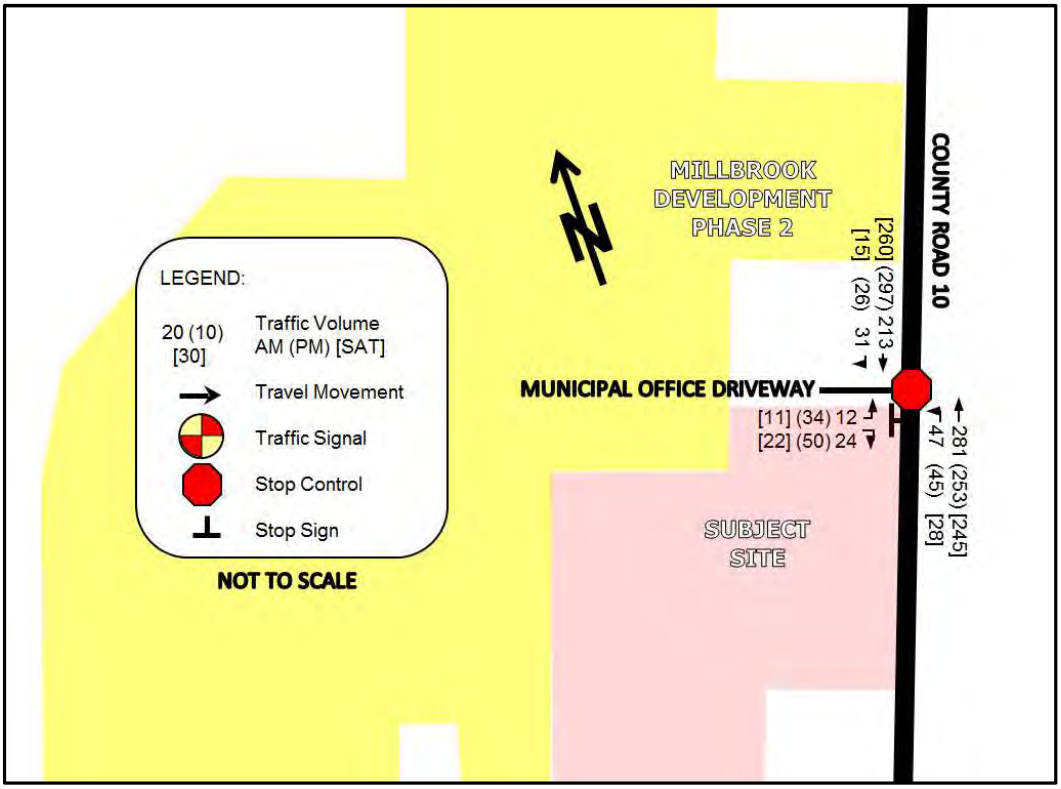
Figure 8 – Traffic Assignment for Proposed Development



4.3 Total Horizon Year Traffic Volumes with the Proposed Development

For the total (2019) horizon year with development traffic volumes, the proposed development traffic was added to the total background (2019) traffic volumes. The resulting total (2019) horizon year with proposed traffic volume for the AM, PM and SAT peak hour can be found in **Figure 9.**

Figure 9 – Total (2019) Traffic Volumes



5 Intersection Operation with Proposed Development

5.1 Total (2019) Intersection Operation

The results of the LOS analysis under total (2019) traffic volumes during the AM, PM and SAT peak hour can be found below in **Table 10.** Existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix E.**

Table 10 – Total (2019) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour		
	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Municipal Office Driveway (unsignalized)	-	1.5	A	-	2.3	A	-	1.1	A
EB	0.07	11.7	B	0.19	13.9	B	0.05	11.0	B

The results of the LOS analysis indicate that all intersections are operating within the typical design limits noted in Section 3.1.

An analysis was completed for left turn movements at the Municipal Office Driveway / County Road 10 intersection, based on the criteria outlined in Section E.9.1 of the MTO GDSOH. Our analysis

Azsura Traffic Letter Excerpts

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September 14, 2017

Mr. Saverio Montemarano
Bromont Group
457 Jevian Drive, Suite 8
Woodbridge, ON
L4L 7Z9

Dear Mr. Montemarano,

Reference: Residential Development
Township of Cavan Monaghan
Traffic Impact Technical Letter – 65 units addition
Project Nº 2022-16

Asurza Engineers Ltd. was retained by Saverio Montemarano (the Applicant or Developer) to undertake a traffic impact analysis for the proposed addition of 65 single family detached housing units in the Village of Millbrook.

1. Background

The developer has an application for a residential development south of Fallis Line and west of County Road 10 in Millbrook. One of the documents for this application is the traffic impact study completed by JD Northcote Engineering Inc. (JD Engineering) in July 2014. The document addresses the future traffic conditions on the adjacent roads including the new traffic volumes generated by the proposed development.

The developer has recently acquired a 4.4 hectare parcel of land, part of this land is intended to include an additional 65 single detached home units which were not considered as part of the traffic impact study done by JD Engineering. In this regard, a traffic analysis to supplement de original traffic study is

ASURZA ENGINEERS

4. Traffic Generation

Estimation of trips generated by the proposed 65 residential units was derived from the Trip Generation Manual, 9th Edition, published by the Institute of Transportation Engineers (ITE). The land use which most closely describes the proposed new 65 residential units is Land Use 210 Single-Family Detached Housing; the trip rates and estimated number of additional trips related to the proposed Single-Family Detached House units are shown in ***Table 1***.

TRIP GENERATION RATES BY LAND USE								
ITE Code	ITE Land Use	Unit of Measure	AM Peak Hour of Adj. Street			PM Peak Hour of Adj. Street		
			Rate	In	Out	Rate	In	Out
210	Single-Family Detached House	Units	Eq.	25%	75%	Eq.	63%	37%

ESTIMATED NUMBER OF TRIPS BY LAND USE								
ITE Code	ITE Land Use	Total Units	AM Peak Hour of Adj. Street			PM Peak Hour of Adj. Street		
			Trips	In	Out	Trips	In	Out
210	Single-Family Detached House	65	55	14	41	71	45	26

Table 1: *Estimated Number of New Trips.*

As shown in the above table, the estimated number of new trips generated by the 65 additional residential units is 55 trips for the morning peak hour and 71 trips for the afternoon peak hour.

5. Trip Distribution and Assignment

The additional trips generated by the proposed 65 residential units is distributed in the same proportion as noted in the original traffic impact study report completed by JD Engineering 2014. The distribution of trips was estimated based on the 2006 Transportation Tomorrow Survey (TTS) data. TTS data provides historical origin and destination work trip percentages for specific areas within the County and the Greater Toronto and Hamilton Area (GTHA). After the trips were distributed according the work trip destination percentages, the resulting trips are assigned to the road network thus the trips generated by

the proposed 65 residential units for the morning and afternoon peak hour are as shown in ***Exhibit 2***.

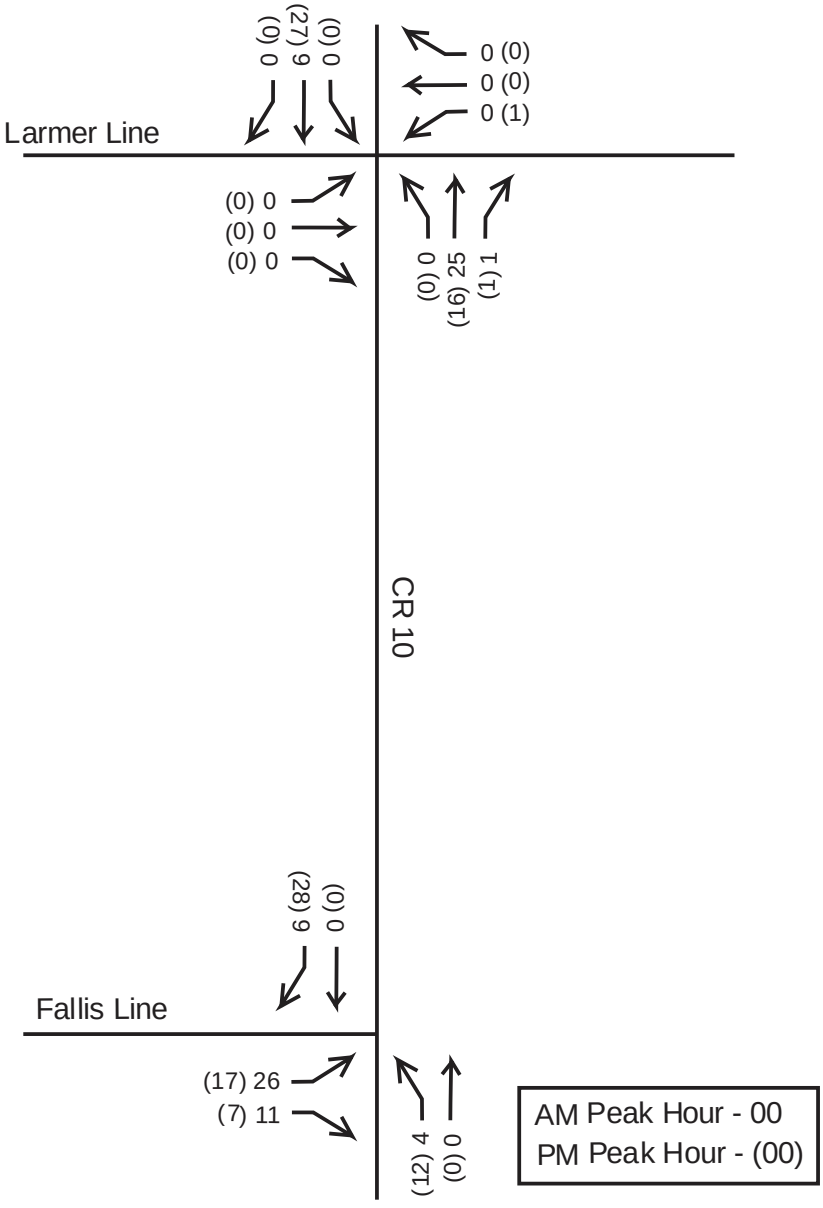


Exhibit 2: *Trips Generated by the 65 Residential Units.*

Appendix C –
Traffic Count Data

Ontario Traffic Inc

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:30:00
To: 8:30:00

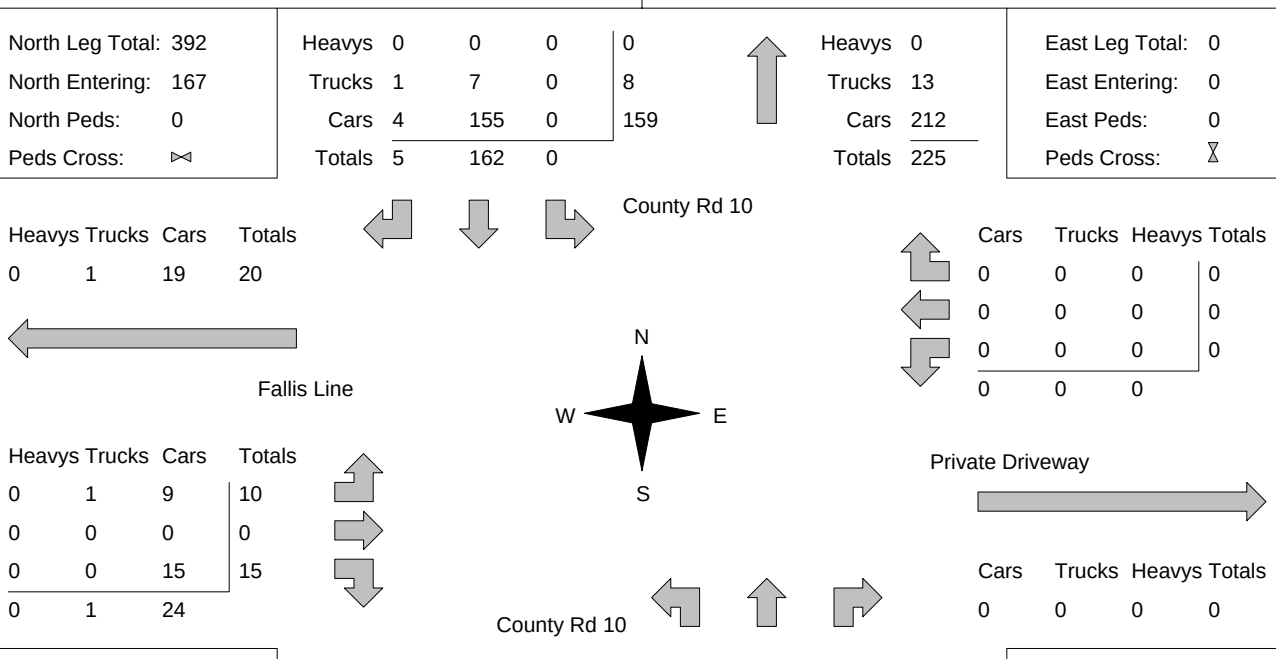
Municipality: Millbrook
Site #: 1710800001
Intersection: County Rd 10 & Fallis Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

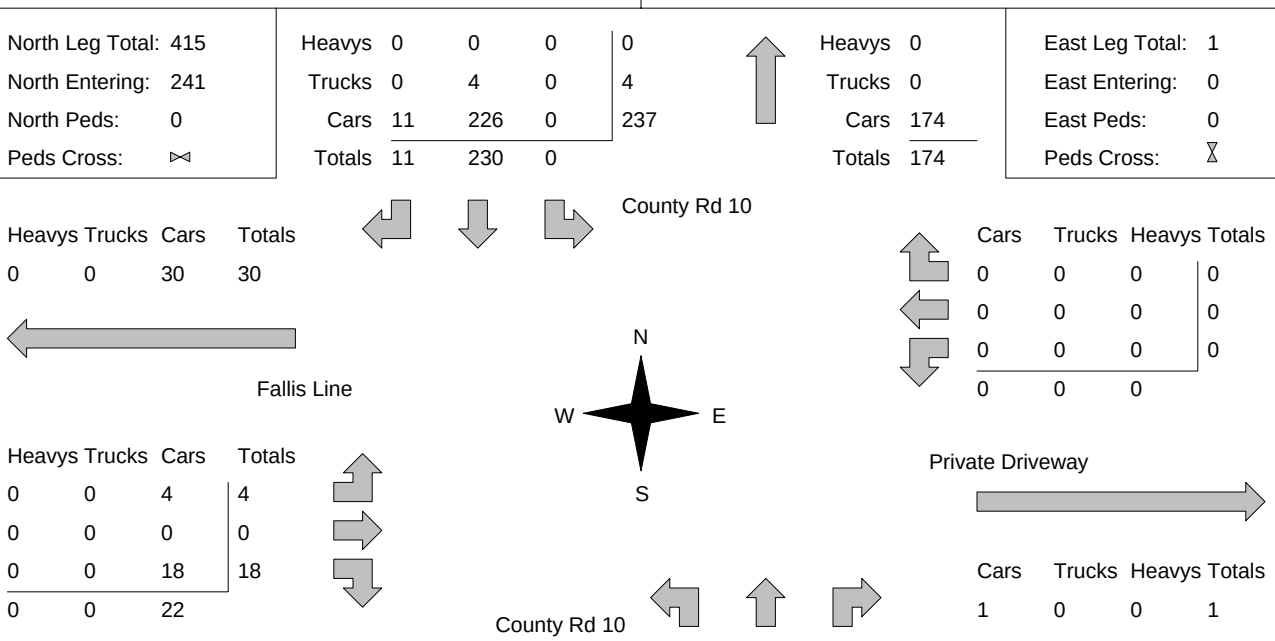
Municipality: Millbrook
Site #: 1710800001
Intersection: County Rd 10 & Fallis Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc

Total Count Diagram

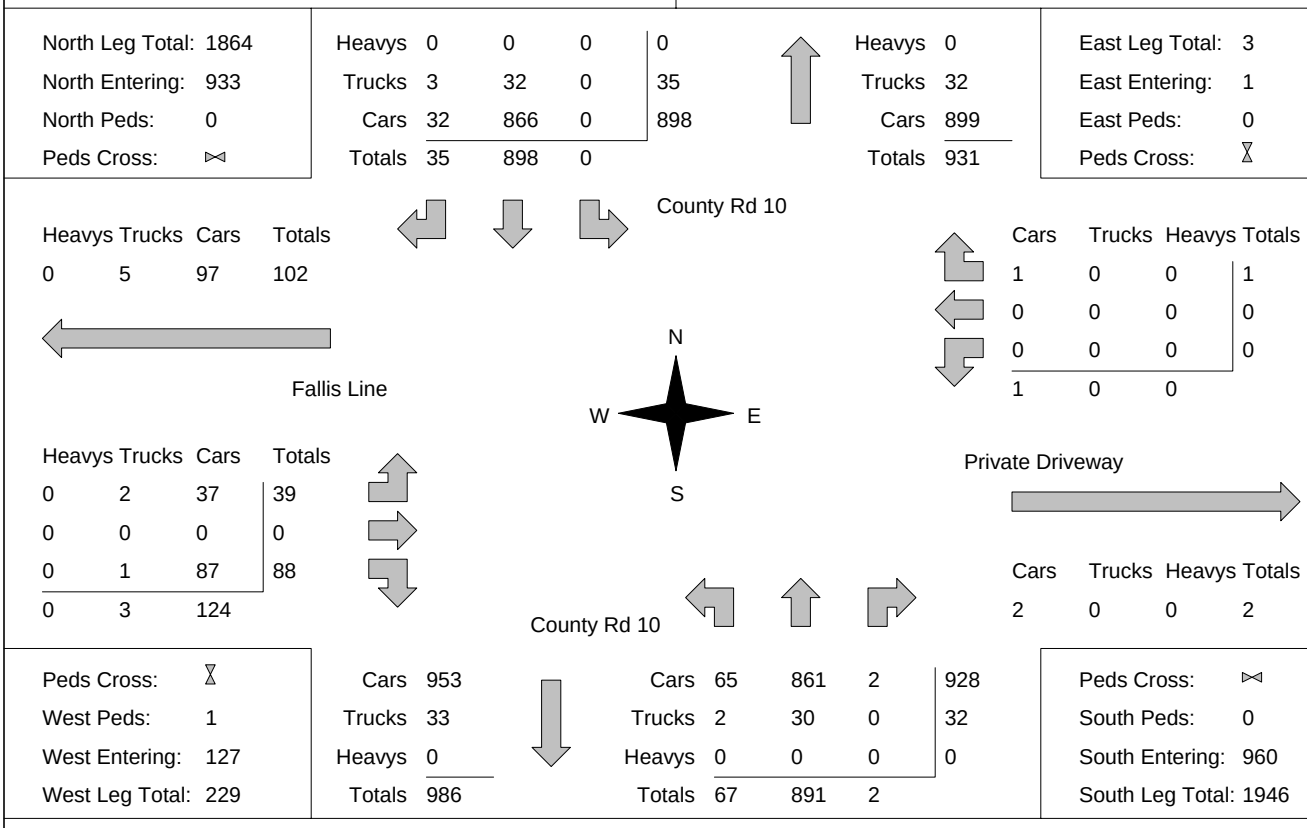
Municipality: Millbrook
Site #: 1710800001
Intersection: County Rd 10 & Fallis Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc
Traffic Count Summary

Intersection: County Rd 10 & Fallis Line | **Count Date:** 25-Apr-17 | **Municipality:** Millbrook

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	0	138	3	141	0	318
9:00:00	0	128	5	133	0	329
10:00:00	0	106	5	111	0	259
16:00:00	0	0	0	0	0	0
17:00:00	0	191	7	198	0	374
18:00:00	0	215	10	225	0	390
19:00:00	0	120	5	125	0	223
Totals:	0	898	35	933	0	1893

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	13	164	0	177	0
9:00:00	12	184	0	196	0
10:00:00	8	139	1	148	0
16:00:00	0	0	0	0	0
17:00:00	16	159	1	176	0
18:00:00	13	152	0	165	0
19:00:00	5	93	0	98	0
Totals:	67	891	2	960	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	0	0	0	0	0	20
9:00:00	0	0	0	0	0	23
10:00:00	0	0	1	1	0	20
16:00:00	0	0	0	0	0	0
17:00:00	0	0	0	0	0	17
18:00:00	0	0	0	0	0	28
19:00:00	0	0	0	0	0	20
Totals:	0	0	1	1	0	128

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	7	0	13	20	0
9:00:00	12	0	11	23	0
10:00:00	7	0	12	19	0
16:00:00	0	0	0	0	0
17:00:00	2	0	15	17	0
18:00:00	5	0	23	28	0
19:00:00	6	0	14	20	1
Totals:	39	0	88	127	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	16:00	17:00	18:00	19:00
Crossing Values:	0	7	12	7	0	2	5	6

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	16	16	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	42	26	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	75	33	0	0	0	0	6	3	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	130	55	2	2	0	0	8	2	1	1	0	0	0	0	0	0	0	0
8:15:00	0	0	164	34	3	1	0	0	10	2	1	0	0	0	0	0	0	0	0	0
8:30:00	0	0	197	33	4	1	0	0	10	0	1	0	0	0	0	0	0	0	0	0
8:45:00	0	0	219	22	4	0	0	0	11	1	1	0	0	0	0	0	0	0	0	0
9:00:00	0	0	252	33	7	3	0	0	14	3	1	0	0	0	0	0	0	0	0	0
9:15:00	0	0	275	23	8	1	0	0	17	3	1	0	0	0	0	0	0	0	0	0
9:30:00	0	0	286	11	9	1	0	0	18	1	1	0	0	0	0	0	0	0	0	0
9:45:00	0	0	314	28	10	1	0	0	21	3	2	1	0	0	0	0	0	0	0	0
10:00:00	0	0	348	34	11	1	0	0	24	3	2	0	0	0	0	0	0	0	0	0
10:00:03	0	0	348	0	11	0	0	0	24	0	2	0	0	0	0	0	0	0	0	0
16:00:00	0	0	348	0	11	0	0	0	24	0	2	0	0	0	0	0	0	0	0	0
16:15:00	0	0	392	44	13	2	0	0	25	1	2	0	0	0	0	0	0	0	0	0
16:30:00	0	0	424	32	15	2	0	0	27	2	2	0	0	0	0	0	0	0	0	0
16:45:00	0	0	477	53	17	2	0	0	28	1	2	0	0	0	0	0	0	0	0	0
17:00:00	0	0	534	57	18	1	0	0	29	1	2	0	0	0	0	0	0	0	0	0
17:15:00	0	0	587	53	24	6	0	0	30	1	2	0	0	0	0	0	0	0	0	0
17:30:00	0	0	650	63	26	2	0	0	31	1	2	0	0	0	0	0	0	0	0	0
17:45:00	0	0	702	52	28	2	0	0	31	0	2	0	0	0	0	0	0	0	0	0
18:00:00	0	0	747	45	28	0	0	0	31	0	2	0	0	0	0	0	0	0	0	0
18:15:00	0	0	781	34	28	0	0	0	31	0	3	1	0	0	0	0	0	0	0	0
18:30:00	0	0	819	38	30	2	0	0	31	0	3	0	0	0	0	0	0	0	0	0
18:45:00	0	0	846	27	32	2	0	0	32	1	3	0	0	0	0	0	0	0	0	0
19:00:00	0	0	866	20	32	0	0	0	32	0	3	0	0	0	0	0	0	0	0	0
19:00:02	0	0	866	0	32	0	0	0	32	0	3	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:03	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:02	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	23	23	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
7:30:00	7	5	52	29	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0
7:45:00	10	3	102	50	0	0	1	0	6	3	0	0	0	0	0	0	0	0	0	0
8:00:00	12	2	156	54	0	0	1	0	8	2	0	0	0	0	0	0	0	0	0	0
8:15:00	17	5	204	48	0	0	1	0	13	5	0	0	0	0	0	0	0	0	0	0
8:30:00	22	5	255	51	0	0	1	0	15	2	0	0	0	0	0	0	0	0	0	0
8:45:00	22	0	301	46	0	0	1	0	16	1	0	0	0	0	0	0	0	0	0	0
9:00:00	24	2	330	29	0	0	1	0	18	2	0	0	0	0	0	0	0	0	0	0
9:15:00	25	1	358	28	1	1	1	0	18	0	0	0	0	0	0	0	0	0	0	0
9:30:00	26	1	384	26	1	0	1	0	20	2	0	0	0	0	0	0	0	0	0	0
9:45:00	29	3	419	35	1	0	1	0	23	3	0	0	0	0	0	0	0	0	0	0
10:00:00	32	3	459	40	1	0	1	0	28	5	0	0	0	0	0	0	0	0	0	0
10:00:03	32	0	459	0	1	0	1	0	28	0	0	0	0	0	0	0	0	0	0	0
16:00:00	32	0	459	0	1	0	1	0	28	0	0	0	0	0	0	0	0	0	0	0
16:15:00	36	4	495	36	1	0	1	0	30	2	0	0	0	0	0	0	0	0	0	0
16:30:00	37	1	539	44	1	0	2	1	30	0	0	0	0	0	0	0	0	0	0	0
16:45:00	42	5	587	48	1	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
17:00:00	47	5	616	29	2	1	2	0	30	0	0	0	0	0	0	0	0	0	0	0
17:15:00	51	4	679	63	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
17:30:00	56	5	709	30	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
17:45:00	58	2	737	28	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
18:00:00	60	2	768	31	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
18:15:00	64	4	799	31	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
18:30:00	65	1	827	28	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
18:45:00	65	0	846	19	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
19:00:00	65	0	861	15	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0
19:00:02	65	0	861	0	2	0	2	0	30	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	3	2	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	3	0	0	0	11	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	6	3	0	0	13	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	9	3	0	0	18	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	12	3	0	0	21	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	15	3	0	0	21	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	17	2	0	0	24	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	18	1	0	0	24	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	19	1	0	0	28	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00	21	2	0	0	32	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00	24	3	0	0	36	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:03	24	0	0	0	36	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	24	0	0	0	36	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	25	1	0	0	43	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	26	1	0	0	45	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	26	0	0	0	48	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	26	0	0	0	51	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	28	2	0	0	57	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	30	2	0	0	63	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	30	0	0	0	68	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	31	1	0	0	74	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	33	2	0	0	77	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30:00	34	1	0	0	81	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	36	2	0	0	82	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1
19:00:00	37	1	0	0	87	5	2	0	0	0	1	1	0	0	0	0	0	0	1	0
19:00:02	37	0	0	0	87	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:00:00
To: 17:00:00

One Hour Peak
From: 12:00:00
To: 13:00:00

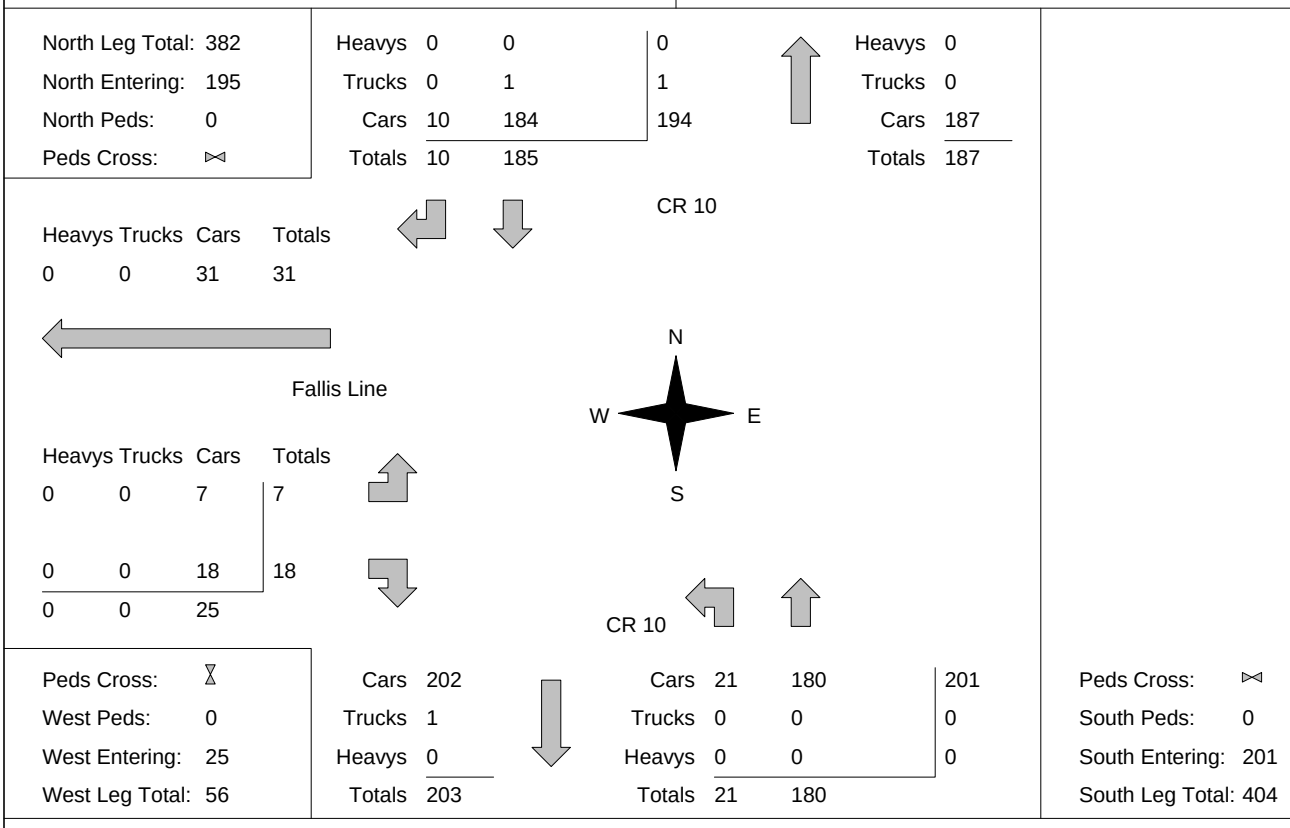
Municipality: Millbrook
Site #: 1722900001
Intersection: CR 10 & Fallis Line
TFR File #: 18
Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S



Comments

Ontario Traffic Inc.

Total Count Diagram

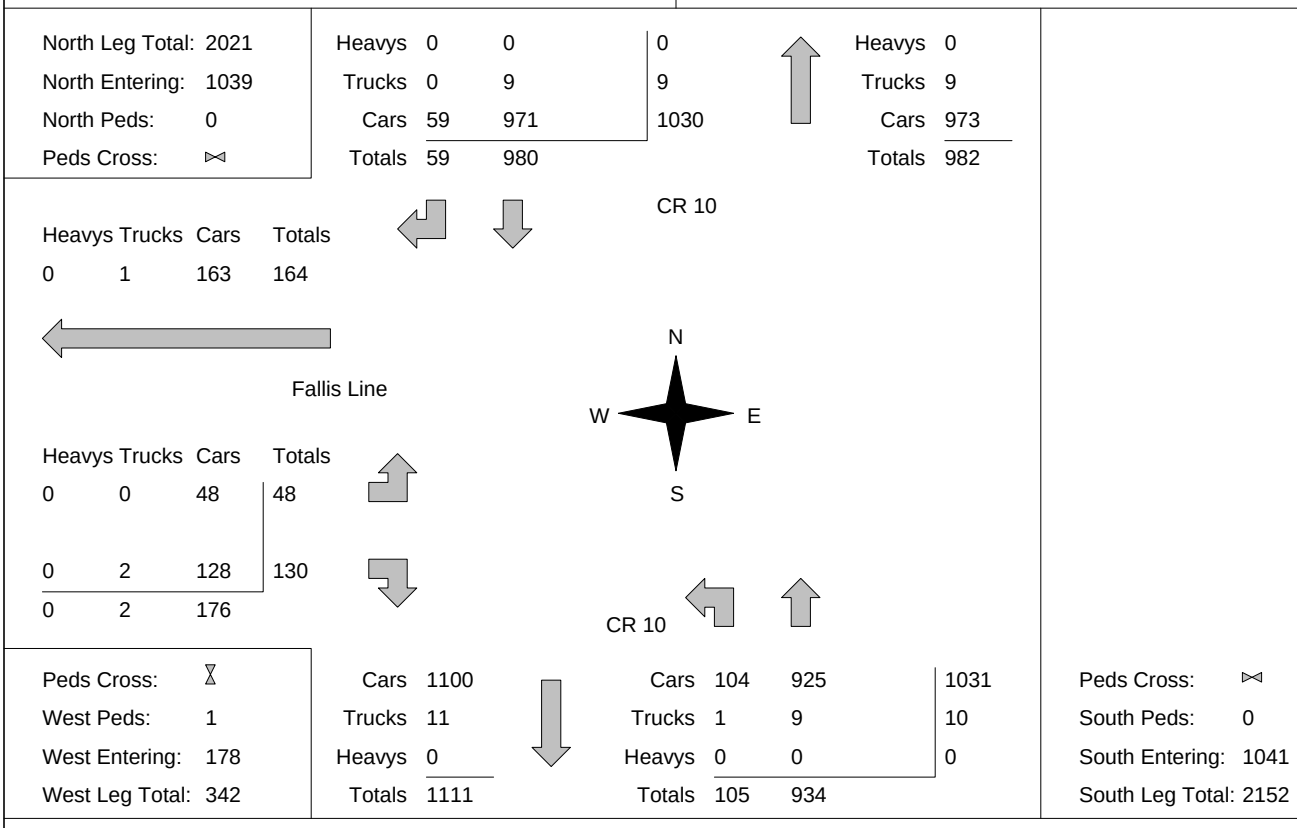
Municipality: Millbrook
Site #: 1722900001
Intersection: CR 10 & Fallis Line
TFR File #: 18
Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S



Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: CR 10 & Fallis Line | **Count Date:** 12-Aug-17 | **Municipality:** Millbrook

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
11:00:00	0	0	0	0	0	0
12:00:00	0	158	7	165	0	378
13:00:00	0	185	10	195	0	396
14:00:00	0	175	12	187	0	340
15:00:00	0	146	12	158	0	332
16:00:00	0	166	7	173	0	329
17:00:00	0	150	11	161	0	305
Totals:	0	980	59	1039	0	2080

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0
12:00:00	24	188	1	213	0
13:00:00	21	180	0	201	0
14:00:00	13	140	0	153	0
15:00:00	16	157	1	174	0
16:00:00	13	143	0	156	0
17:00:00	18	126	0	144	0
Totals:	105	934	2	1041	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
11:00:00	0	0	0	0	0	0
12:00:00	0	0	0	0	0	33
13:00:00	0	0	0	0	5	25
14:00:00	0	0	0	0	0	20
15:00:00	1	0	0	1	0	43
16:00:00	0	0	0	0	0	26
17:00:00	0	0	0	0	0	31
Totals:	1	0	0	1	5	178

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0
12:00:00	9	0	24	33	1
13:00:00	7	0	18	25	0
14:00:00	10	0	10	20	0
15:00:00	10	0	32	42	0
16:00:00	6	0	20	26	0
17:00:00	6	0	25	31	0
Totals:	48	0	129	177	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	11:00	12:00	13:00	14:00	15:00	16:00	17:00	17:00
Crossing Values:	0	9	7	10	11	6	6	6

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	47	47	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	83	36	3	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	119	36	5	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	157	38	7	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	201	44	12	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	252	51	14	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	0	297	45	16	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13:00:00	0	0	341	44	17	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0
13:15:00	0	0	384	43	24	7	0	0	2	0	0	0	0	0	0	0	0	0	0	0
13:30:00	0	0	439	55	24	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
13:45:00	0	0	477	38	26	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:00:00	0	0	515	38	29	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:15:00	0	0	549	34	32	3	0	0	4	1	0	0	0	0	0	0	0	0	0	0
14:30:00	0	0	581	32	33	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	629	48	36	3	0	0	5	1	0	0	0	0	0	0	0	0	0	0
15:00:00	0	0	659	30	41	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	694	35	43	2	0	0	6	1	0	0	0	0	0	0	0	0	0	0
15:30:00	0	0	749	55	44	1	0	0	7	1	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	787	38	47	3	0	0	9	2	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	821	34	48	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	857	36	48	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	890	33	52	4	0	0	9	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	928	38	56	4	0	0	9	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	971	43	59	3	0	0	9	0	0	0	0	0	0	0	0	0	0	0
17:00:18	0	0	971	0	59	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
12:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
12:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:30:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
17:00:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
17:00:18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	6	6	44	44	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	13	7	95	51	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0
11:45:00	21	8	150	55	1	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0
12:00:00	23	2	186	36	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
12:15:00	27	4	234	48	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
12:30:00	34	7	279	45	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
12:45:00	37	3	323	44	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:00:00	44	7	366	43	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:15:00	48	4	402	36	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:30:00	53	5	446	44	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:45:00	56	3	481	35	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
14:00:00	57	1	506	25	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
14:15:00	59	2	539	33	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
14:30:00	66	7	581	42	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
14:45:00	69	3	611	30	1	0	1	0	4	2	0	0	0	0	0	0	0	0	0	0
15:00:00	73	4	660	49	2	1	1	0	5	1	0	0	0	0	0	0	0	0	0	0
15:15:00	75	2	697	37	2	0	1	0	7	2	0	0	0	0	0	0	0	0	0	0
15:30:00	77	2	730	33	2	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0
15:45:00	86	9	759	29	2	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0
16:00:00	86	0	800	41	2	0	1	0	8	1	0	0	0	0	0	0	0	0	0	0
16:15:00	92	6	829	29	2	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0
16:30:00	95	3	867	38	2	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0
16:45:00	100	5	896	29	2	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0
17:00:00	104	4	925	29	2	0	1	0	9	1	0	0	0	0	0	0	0	0	0	0
17:00:18	104	0	925	0	2	0	1	0	9	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	4	4	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	5	1	0	0	11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	8	3	0	0	16	5	0	0	0	0	0	0	0	0	0	0	0	0	1	1
12:00:00	9	1	0	0	23	7	0	0	0	0	1	1	0	0	0	0	0	0	1	0
12:15:00	11	2	0	0	31	8	0	0	0	0	1	0	0	0	0	0	0	0	1	0
12:30:00	14	3	0	0	35	4	0	0	0	0	1	0	0	0	0	0	0	0	1	0
12:45:00	15	1	0	0	36	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0
13:00:00	16	1	0	0	41	5	0	0	0	0	1	0	0	0	0	0	0	0	1	0
13:15:00	17	1	0	0	46	5	0	0	0	0	1	0	0	0	0	0	0	0	1	0
13:30:00	20	3	0	0	48	2	0	0	0	0	1	0	0	0	0	0	0	0	1	0
13:45:00	22	2	0	0	50	2	0	0	0	0	1	0	0	0	0	0	0	0	1	0
14:00:00	26	4	0	0	51	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0
14:15:00	28	2	0	0	56	5	0	0	0	0	1	0	0	0	0	0	0	0	1	0
14:30:00	29	1	0	0	63	7	0	0	0	0	1	0	0	0	0	0	0	0	1	0
14:45:00	32	3	0	0	68	5	0	0	0	0	1	0	0	0	0	0	0	0	1	0
15:00:00	36	4	0	0	83	15	0	0	0	0	1	0	0	0	0	0	0	0	1	0
15:15:00	39	3	0	0	87	4	0	0	0	0	1	0	0	0	0	0	0	0	1	0
15:30:00	40	1	0	0	93	6	0	0	0	0	1	0	0	0	0	0	0	0	1	0
15:45:00	42	2	0	0	96	3	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:00:00	42	0	0	0	103	7	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:15:00	46	4	0	0	110	7	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:30:00	47	1	0	0	115	5	0	0	0	0	2	1	0	0	0	0	0	0	1	0
16:45:00	48	1	0	0	124	9	0	0	0	0	2	0	0	0	0	0	0	0	1	0
17:00:00	48	0	0	0	127	3	0	0	0	0	2	0	0	0	0	0	0	0	1	0
17:00:18	48	0	0	0	128	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0

Ontario Traffic Inc

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:30:00
To: 8:30:00

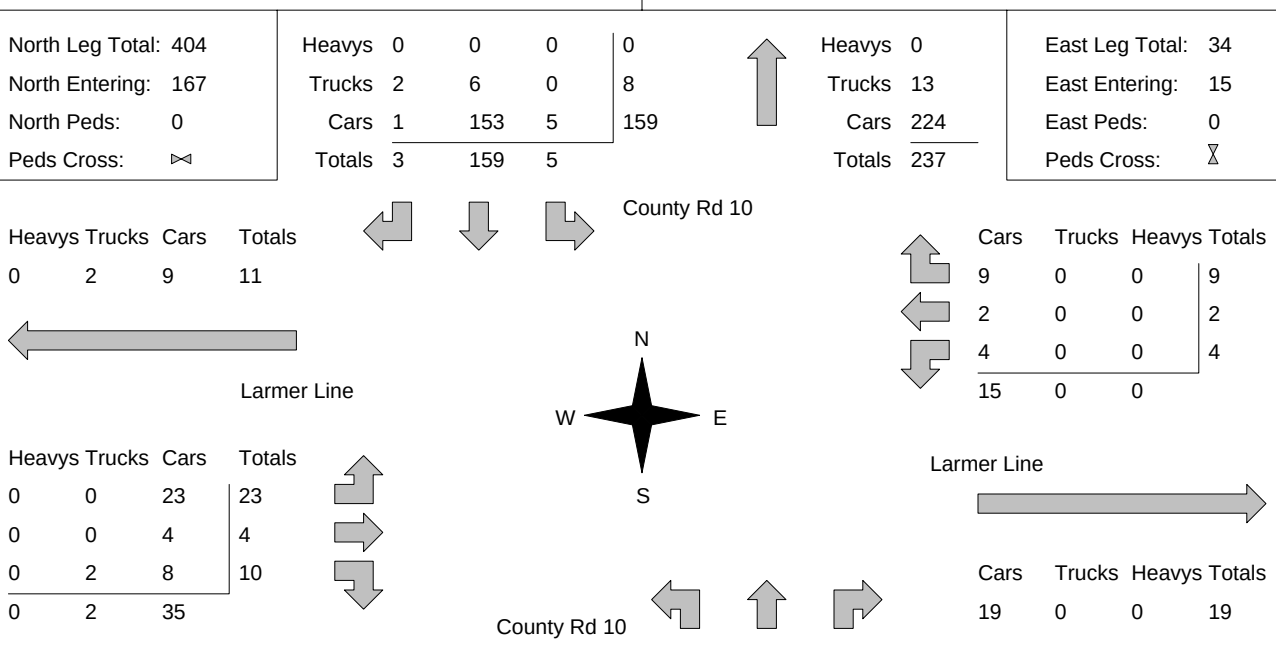
Municipality: Millbrook
Site #: 1710800002
Intersection: County Rd 10 & Larmer Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Millbrook
Site #: 1710800002
Intersection: County Rd 10 & Larmer Line
TFR File #: 1
Count date: 25-Apr-17

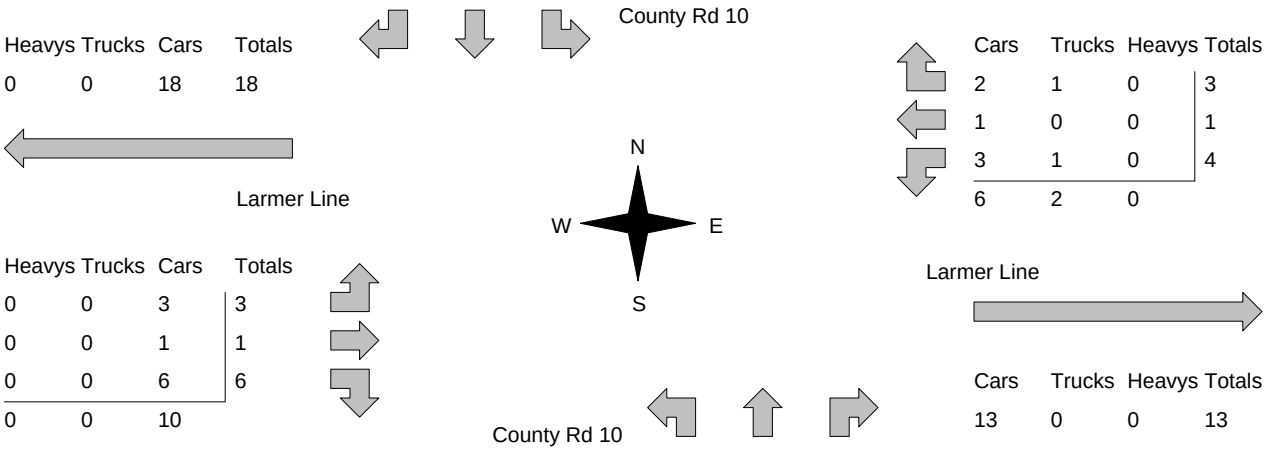
Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S

North Leg Total:	413			
North Entering:	242			
North Peds:	0			
Peds Cross:	⋈			
Heavys	0	0	0	0
Trucks	0	3	0	3
Cars	9	222	8	239
Totals	9	225	8	
Heavys	0			
Trucks	2			
Cars	169			
Totals	171			
East Leg Total:	21			
East Entering:	8			
East Peds:	0			
Peds Cross:	⧖			



Peds Cross:	⧖			
West Peds:	0			
West Entering:	10			
West Leg Total:	28			
Cars	231			
Trucks	4			
Heavys	0			
Totals	235			
Cars	8	164	4	176
Trucks	0	1	0	1
Heavys	0	0	0	0
Totals	8	165	4	
Peds Cross:	⋈			
South Peds:	0			
South Entering:	177			
South Leg Total:	412			

Comments

Ontario Traffic Inc

Total Count Diagram

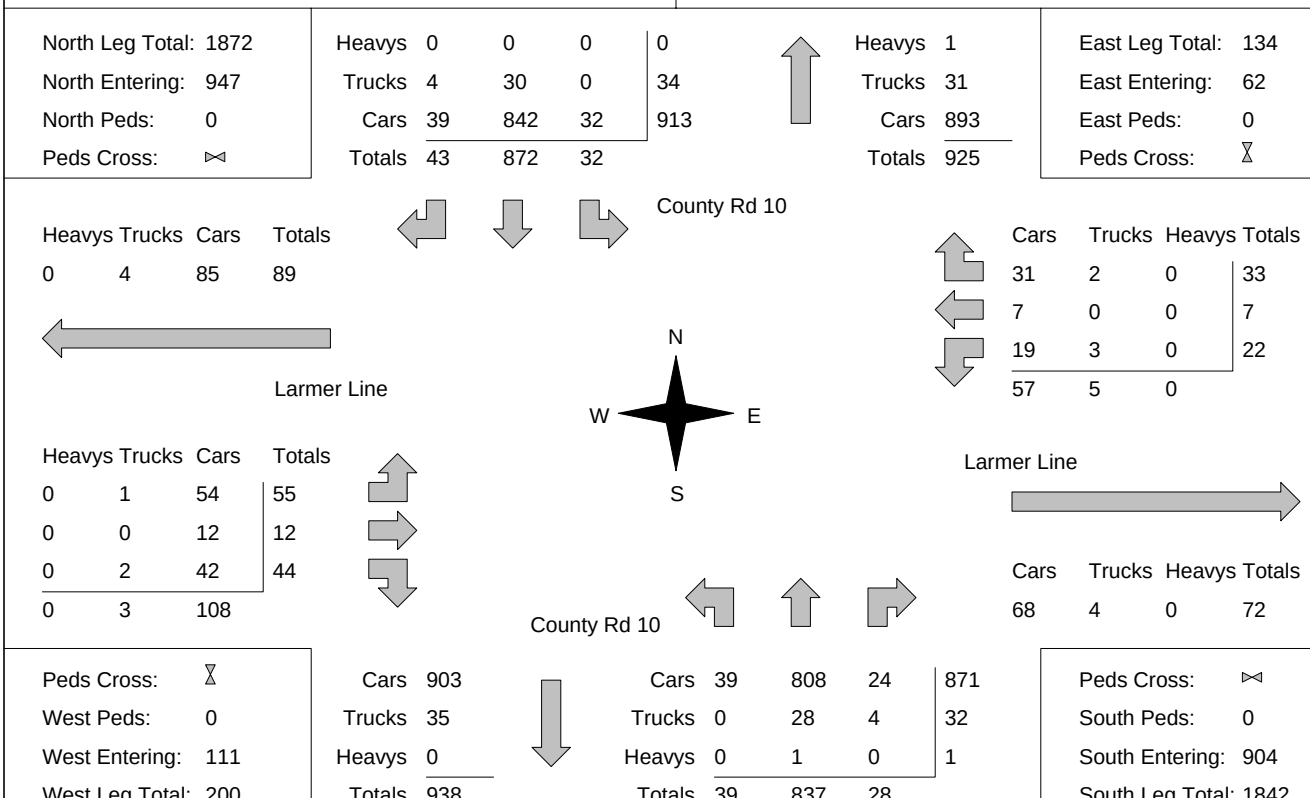
Municipality: Millbrook
Site #: 1710800002
Intersection: County Rd 10 & Larmer Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc
Traffic Count Summary

Intersection: County Rd 10 & Larmer Line | **Count Date:** 25-Apr-17 | **Municipality:** Millbrook

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	1	125	5	131	0	300
9:00:00	6	129	3	138	0	325
10:00:00	2	113	3	118	0	254
16:00:00	0	0	0	0	0	0
17:00:00	7	180	6	193	0	358
18:00:00	8	209	11	228	0	377
19:00:00	8	116	15	139	0	237
Totals:	32	872	43	947	0	1851

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	3	162	4	169	0
9:00:00	6	171	10	187	0
10:00:00	8	124	4	136	0
16:00:00	0	0	0	0	0
17:00:00	7	152	6	165	0
18:00:00	7	140	2	149	0
19:00:00	8	88	2	98	0
Totals:	39	837	28	904	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	4	1	16	21	0	53
9:00:00	2	1	3	6	0	36
10:00:00	1	1	6	8	0	20
16:00:00	0	0	0	0	0	0
17:00:00	7	0	5	12	0	26
18:00:00	2	1	1	4	0	13
19:00:00	6	3	2	11	0	25
Totals:	22	7	33	62	0	173

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	22	2	8	32	0
9:00:00	16	4	10	30	0
10:00:00	4	1	7	12	0
16:00:00	0	0	0	0	0
17:00:00	2	2	10	14	0
18:00:00	2	3	4	9	0
19:00:00	9	0	5	14	0
Totals:	55	12	44	111	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	16:00	17:00	18:00	19:00
Crossing Values:	0	28	22	6	0	11	7	18

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	11	11	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
7:30:00	0	0	34	23	2	2	0	0	2	1	1	0	0	0	0	0	0	0	0	0
7:45:00	1	1	66	32	3	1	0	0	4	2	1	0	0	0	0	0	0	0	0	0
8:00:00	1	0	119	53	3	0	0	0	6	2	2	1	0	0	0	0	0	0	0	0
8:15:00	4	3	151	32	3	0	0	0	8	2	3	1	0	0	0	0	0	0	0	0
8:30:00	5	1	187	36	3	0	0	0	8	0	3	0	0	0	0	0	0	0	0	0
8:45:00	6	1	210	23	3	0	0	0	9	1	3	0	0	0	0	0	0	0	0	0
9:00:00	7	1	242	32	5	2	0	0	12	3	3	0	0	0	0	0	0	0	0	0
9:15:00	7	0	268	26	6	1	0	0	15	3	4	1	0	0	0	0	0	0	0	0
9:30:00	7	0	280	12	6	0	0	0	15	0	4	0	0	0	0	0	0	0	0	0
9:45:00	7	0	305	25	6	0	0	0	19	4	4	0	0	0	0	0	0	0	0	0
10:00:00	9	2	345	40	7	1	0	0	22	3	4	0	0	0	0	0	0	0	0	0
10:05:45	9	0	345	0	7	0	0	0	22	0	4	0	0	0	0	0	0	0	0	0
16:00:00	9	0	345	0	7	0	0	0	22	0	4	0	0	0	0	0	0	0	0	0
16:15:00	10	1	382	37	7	0	0	0	24	2	4	0	0	0	0	0	0	0	0	0
16:30:00	12	2	411	29	9	2	0	0	25	1	4	0	0	0	0	0	0	0	0	0
16:45:00	14	2	458	47	12	3	0	0	25	0	4	0	0	0	0	0	0	0	0	0
17:00:00	16	2	521	63	13	1	0	0	26	1	4	0	0	0	0	0	0	0	0	0
17:15:00	18	2	572	51	16	3	0	0	27	1	4	0	0	0	0	0	0	0	0	0
17:30:00	20	2	633	61	18	2	0	0	28	1	4	0	0	0	0	0	0	0	0	0
17:45:00	21	1	681	48	21	3	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:00:00	24	3	728	47	24	3	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:15:00	27	3	758	30	32	8	0	0	29	1	4	0	0	0	0	0	0	0	0	0
18:30:00	28	1	795	37	33	1	0	0	29	0	4	0	0	0	0	0	0	0	0	0
18:45:00	31	3	820	25	37	4	0	0	30	1	4	0	0	0	0	0	0	0	0	0
19:00:00	32	1	842	22	39	2	0	0	30	0	4	0	0	0	0	0	0	0	0	0
19:05:10	32	0	842	0	39	0	0	0	30	0	4	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	2	0	0	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	3	1	1	1	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	4	1	1	0	16	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	4	0	1	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	6	2	2	1	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	6	0	2	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	6	0	2	0	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	6	0	2	0	21	2	1	1	0	0	1	1	0	0	0	0	0	0	0	0
9:30:00	6	0	3	1	22	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
9:45:00	6	0	3	0	23	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
10:00:00	6	0	3	0	24	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
10:05:45	6	0	3	0	24	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
16:00:00	6	0	3	0	24	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
16:15:00	8	2	3	0	26	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0
16:30:00	9	1	3	0	27	1	2	1	0	0	1	0	0	0	0	0	0	0	0	0
16:45:00	10	1	3	0	27	0	3	1	0	0	2	1	0	0	0	0	0	0	0	0
17:00:00	11	1	3	0	28	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0
17:15:00	12	1	3	0	29	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0
17:30:00	12	0	4	1	29	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0
17:45:00	12	0	4	0	29	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0
18:00:00	13	1	4	0	29	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0
18:15:00	17	4	6	2	30	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0
18:30:00	17	0	6	0	30	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0
18:45:00	19	2	6	0	30	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0
19:00:00	19	0	7	1	31	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0
19:05:10	19	0	7	0	31	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	24	24	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
7:30:00	1	1	54	30	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
7:45:00	1	0	102	48	1	1	0	0	4	4	2	0	0	0	0	0	0	0	0	0
8:00:00	3	2	155	53	2	1	0	0	7	3	2	0	0	0	0	0	0	0	0	0
8:15:00	5	2	199	44	5	3	0	0	11	4	2	0	0	0	0	0	0	0	0	0
8:30:00	7	2	246	47	10	5	0	0	13	2	2	0	0	0	0	0	0	0	0	0
8:45:00	9	2	286	40	11	1	0	0	15	2	2	0	0	0	0	0	0	0	0	0
9:00:00	9	0	315	29	11	0	0	0	18	3	3	1	0	0	0	0	0	0	0	0
9:15:00	10	1	340	25	12	1	0	0	18	0	3	0	0	0	0	0	0	0	0	0
9:30:00	12	2	364	24	12	0	0	0	21	3	3	0	0	0	0	0	0	0	0	0
9:45:00	14	2	398	34	13	1	0	0	23	2	4	1	0	0	0	0	0	0	0	0
10:00:00	17	3	431	33	14	1	0	0	26	3	4	0	0	0	0	0	0	0	0	0
10:05:45	17	0	431	0	14	0	0	0	26	0	4	0	0	0	0	0	0	0	0	0
16:00:00	17	0	431	0	14	0	0	0	26	0	4	0	0	0	0	0	0	0	0	0
16:15:00	19	2	465	34	14	0	0	0	27	1	4	0	0	0	0	0	0	0	0	0
16:30:00	20	1	504	39	16	2	0	0	27	0	4	0	0	0	0	0	0	0	0	0
16:45:00	23	3	550	46	17	1	0	0	27	0	4	0	0	0	0	0	0	0	0	0
17:00:00	24	1	581	31	20	3	0	0	28	1	4	0	0	0	0	0	0	0	0	0
17:15:00	27	3	640	59	20	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
17:30:00	28	1	668	28	20	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
17:45:00	30	2	691	23	22	2	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:00:00	31	1	721	30	22	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:15:00	32	1	755	34	22	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:30:00	36	4	776	21	23	1	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:45:00	38	2	793	17	24	1	0	0	28	0	4	0	0	0	1	1	0	0	0	0
19:00:00	39	1	808	15	24	0	0	0	28	0	4	0	0	0	1	0	0	0	0	0
19:05:10	39	0	808	0	24	0	0	0	28	0	4	0	0	0	1	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	6	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	8	2	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	16	8	0	0	5	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
8:00:00	22	6	2	2	7	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:15:00	28	6	2	0	11	4	0	0	0	0	2	1	0	0	0	0	0	0	0	0
8:30:00	31	3	4	2	12	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
8:45:00	35	4	5	1	13	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
9:00:00	38	3	6	1	16	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0
9:15:00	38	0	7	1	18	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
9:30:00	39	1	7	0	18	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
9:45:00	41	2	7	0	20	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
10:00:00	42	1	7	0	23	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0
10:05:45	42	0	7	0	23	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
16:00:00	42	0	7	0	23	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
16:15:00	42	0	8	1	28	5	0	0	0	0	2	0	0	0	0	0	0	0	0	0
16:30:00	42	0	9	1	30	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
16:45:00	44	2	9	0	33	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0
17:00:00	44	0	9	0	33	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
17:15:00	44	0	9	0	36	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0
17:30:00	45	1	10	1	36	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
17:45:00	46	1	11	1	37	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
18:00:00	46	0	12	1	37	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
18:15:00	52	6	12	0	39	2	1	1	0	0	2	0	0	0	0	0	0	0	0	0
18:30:00	54	2	12	0	41	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0
18:45:00	54	0	12	0	42	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0
19:00:00	54	0	12	0	42	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
19:05:10	54	0	12	0	42	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:00:00
To: 17:00:00

One Hour Peak
From: 12:00:00
To: 13:00:00

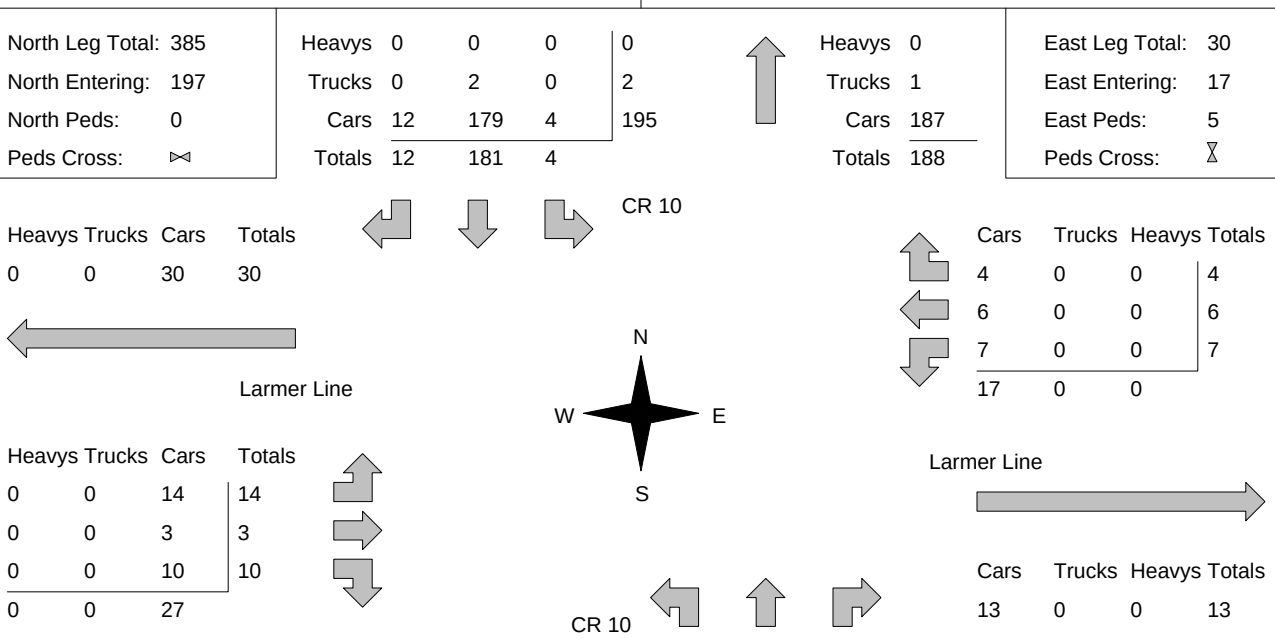
Municipality: Millbrook
Site #: 1722900002
Intersection: CR 10 & Larmer Line
TFR File #: 1
Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S



Comments

Ontario Traffic Inc.

Total Count Diagram

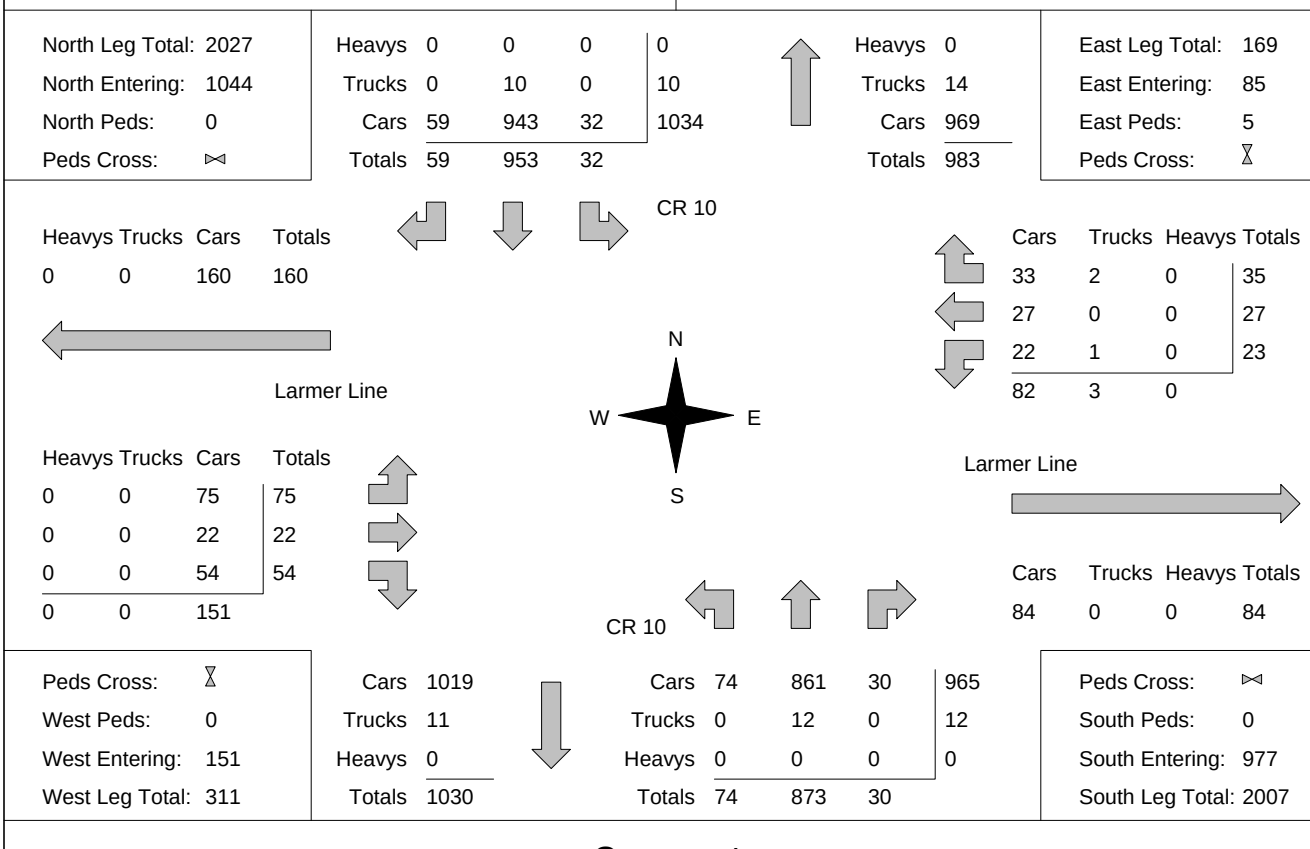
Municipality: Millbrook
Site #: 1722900002
Intersection: CR 10 & Larmer Line
TFR File #: 1
Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S



Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: CR 10 & Larmer Line | **Count Date:** 12-Aug-17 | **Municipality:** Millbrook

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
11:00:00	0	0	0	0	0	0
12:00:00	2	152	7	161	0	357
13:00:00	4	181	12	197	0	385
14:00:00	5	177	9	191	0	336
15:00:00	8	149	7	164	0	330
16:00:00	10	154	11	175	0	322
17:00:00	3	140	13	156	0	289
Totals:	32	953	59	1044	0	2019

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0
12:00:00	7	185	4	196	0
13:00:00	12	170	6	188	0
14:00:00	14	124	7	145	0
15:00:00	15	146	5	166	0
16:00:00	11	128	8	147	0
17:00:00	15	118	0	133	0
Totals:	74	871	30	975	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
11:00:00	0	0	0	0	0	0
12:00:00	0	3	6	9	0	39
13:00:00	7	6	4	17	5	44
14:00:00	2	5	7	14	0	41
15:00:00	4	6	9	19	0	30
16:00:00	8	4	3	15	0	34
17:00:00	2	3	6	11	0	46
Totals:	23	27	35	85	5	234

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0
12:00:00	17	4	9	30	0
13:00:00	14	3	10	27	0
14:00:00	14	4	9	27	0
15:00:00	5	2	4	11	0
16:00:00	9	1	9	19	0
17:00:00	14	8	13	35	0
Totals:	73	22	54	149	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	11:00	12:00	13:00	14:00	15:00	16:00	17:00	17:00
Crossing Values:	0	21	27	21	15	21	24	24

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	1	1	45	45	3	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	1	0	78	33	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:45:00	1	0	113	35	7	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:00:00	2	1	151	38	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:15:00	2	0	198	47	11	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:30:00	3	1	244	46	15	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:45:00	4	1	287	43	16	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0
13:00:00	6	2	330	43	19	3	0	0	3	1	0	0	0	0	0	0	0	0	0	0
13:15:00	7	1	377	47	20	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0
13:30:00	9	2	429	52	24	4	0	0	4	1	0	0	0	0	0	0	0	0	0	0
13:45:00	10	1	467	38	26	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0
14:00:00	11	1	506	39	28	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0
14:15:00	13	2	542	36	28	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0
14:30:00	16	3	572	30	30	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0
14:45:00	18	2	620	48	32	2	0	0	6	1	0	0	0	0	0	0	0	0	0	0
15:00:00	19	1	653	33	35	3	0	0	6	0	0	0	0	0	0	0	0	0	0	0
15:15:00	23	4	684	31	40	5	0	0	7	1	0	0	0	0	0	0	0	0	0	0
15:30:00	26	3	737	53	42	2	0	0	8	1	0	0	0	0	0	0	0	0	0	0
15:45:00	27	1	773	36	44	2	0	0	10	2	0	0	0	0	0	0	0	0	0	0
16:00:00	29	2	803	30	46	2	0	0	10	0	0	0	0	0	0	0	0	0	0	0
16:15:00	29	0	834	31	49	3	0	0	10	0	0	0	0	0	0	0	0	0	0	0
16:30:00	32	3	866	32	51	2	0	0	10	0	0	0	0	0	0	0	0	0	0	0
16:45:00	32	0	903	37	56	5	0	0	10	0	0	0	0	0	0	0	0	0	0	0
17:00:00	32	0	943	40	59	3	0	0	10	0	0	0	0	0	0	0	0	0	0	0
17:00:51	32	0	943	0	59	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	2	2	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	3	1	5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
12:15:00	2	2	4	1	5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
12:30:00	3	1	5	1	8	3	0	0	0	0	1	0	0	0	0	0	0	0	5	5
12:45:00	3	0	7	2	9	1	0	0	0	0	1	0	0	0	0	0	0	0	5	0
13:00:00	7	4	9	2	9	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0
13:15:00	7	0	10	1	12	3	0	0	0	0	2	1	0	0	0	0	0	0	5	0
13:30:00	8	1	12	2	12	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0
13:45:00	9	1	13	1	14	2	0	0	0	0	2	0	0	0	0	0	0	0	5	0
14:00:00	9	0	14	1	15	1	0	0	0	0	2	0	0	0	0	0	0	0	5	0
14:15:00	10	1	16	2	17	2	0	0	0	0	2	0	0	0	0	0	0	0	5	0
14:30:00	11	1	17	1	18	1	0	0	0	0	2	0	0	0	0	0	0	0	5	0
14:45:00	12	1	19	2	22	4	0	0	0	0	2	0	0	0	0	0	0	0	5	0
15:00:00	13	1	20	1	24	2	0	0	0	0	2	0	0	0	0	0	0	0	5	0
15:15:00	15	2	21	1	26	2	0	0	0	0	2	0	0	0	0	0	0	0	5	0
15:30:00	19	4	22	1	27	1	0	0	0	0	2	0	0	0	0	0	0	0	5	0
15:45:00	21	2	24	2	27	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0
16:00:00	21	0	24	0	27	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0
16:15:00	21	0	24	0	29	2	1	1	0	0	2	0	0	0	0	0	0	0	5	0
16:30:00	22	1	25	1	29	0	1	0	0	0	2	0	0	0	0	0	0	0	5	0
16:45:00	22	0	27	2	32	3	1	0	0	0	2	0	0	0	0	0	0	0	5	0
17:00:00	22	0	27	0	33	1	1	0	0	0	2	0	0	0	0	0	0	0	5	0
17:00:51	22	0	27	0	33	0	1	0	0	0	2	0	0	0	0	0	0	0	5	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	46	46	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	2	2	96	50	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
11:45:00	6	4	148	52	3	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:00:00	7	1	183	35	4	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:15:00	10	3	228	45	6	2	0	0	3	1	0	0	0	0	0	0	0	0	0	0
12:30:00	12	2	272	44	7	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0
12:45:00	16	4	314	42	8	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0
13:00:00	19	3	352	38	10	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
13:15:00	22	3	384	32	12	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
13:30:00	27	5	421	37	14	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
13:45:00	31	4	451	30	15	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:00:00	33	2	476	25	17	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:15:00	37	4	505	29	19	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:30:00	40	3	543	38	21	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:45:00	41	1	575	32	22	1	0	0	5	2	0	0	0	0	0	0	0	0	0	0
15:00:00	48	7	619	44	22	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0
15:15:00	51	3	652	33	25	3	0	0	8	2	0	0	0	0	0	0	0	0	0	0
15:30:00	54	3	682	30	27	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0
15:45:00	55	1	710	28	29	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0
16:00:00	59	4	744	34	30	1	0	0	9	1	0	0	0	0	0	0	0	0	0	0
16:15:00	63	4	774	30	30	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
16:30:00	69	6	806	32	30	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0
16:45:00	71	2	832	26	30	0	0	0	11	1	0	0	0	0	0	0	0	0	0	0
17:00:00	74	3	859	27	30	0	0	0	12	1	0	0	0	0	0	0	0	0	0	0
17:00:51	74	0	861	2	30	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	6	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	8	2	3	1	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	10	2	3	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	17	7	4	1	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	21	4	4	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	23	2	6	2	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00	26	3	7	1	18	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00:00	31	5	7	0	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15:00	36	5	8	1	22	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30:00	38	2	8	0	25	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45:00	41	3	9	1	26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00:00	45	4	11	2	28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15:00	46	1	13	2	29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30:00	47	1	13	0	31	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45:00	49	2	13	0	32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00:00	50	1	13	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15:00	52	2	13	0	34	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30:00	53	1	14	1	35	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45:00	57	4	14	0	38	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	59	2	14	0	41	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	64	5	15	1	45	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	67	3	19	4	47	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	71	4	22	3	50	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	73	2	22	0	54	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:51	75	2	22	0	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:30:00
To: 8:30:00

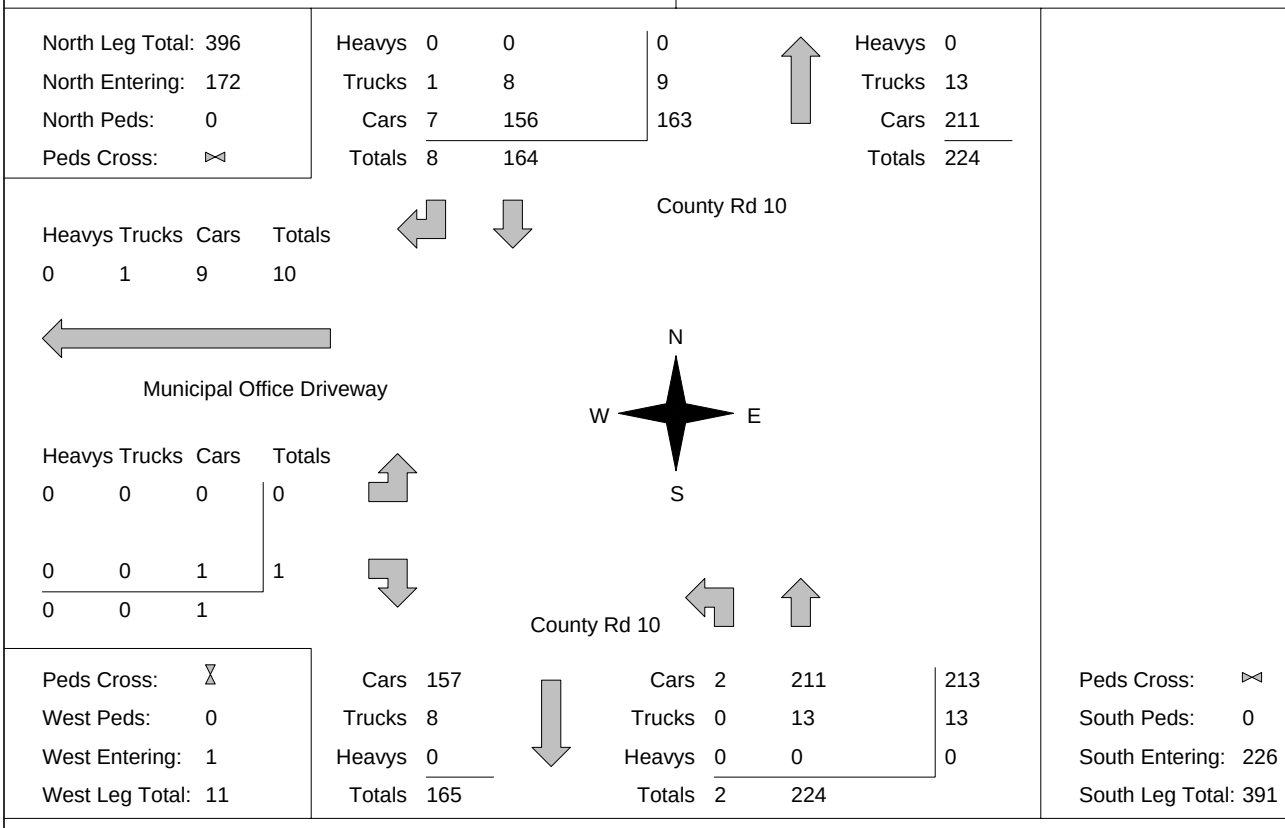
Municipality: Millbrook
Site #: 1710800003
Intersection: County Rd 10 & Municipal Office Dr
TFR File #: 16
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

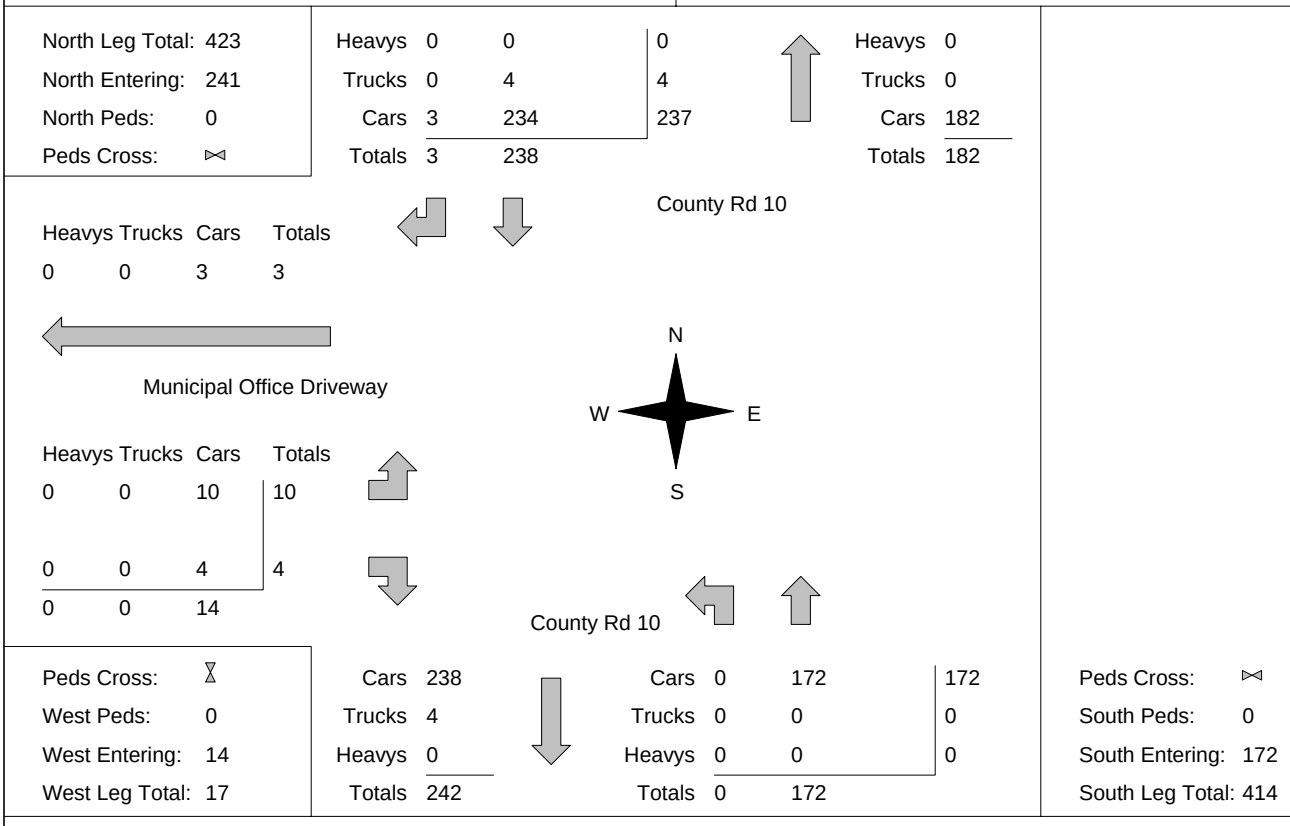
Municipality: Millbrook
Site #: 1710800003
Intersection: County Rd 10 & Municipal Office Dr
TFR File #: 16
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc

Total Count Diagram

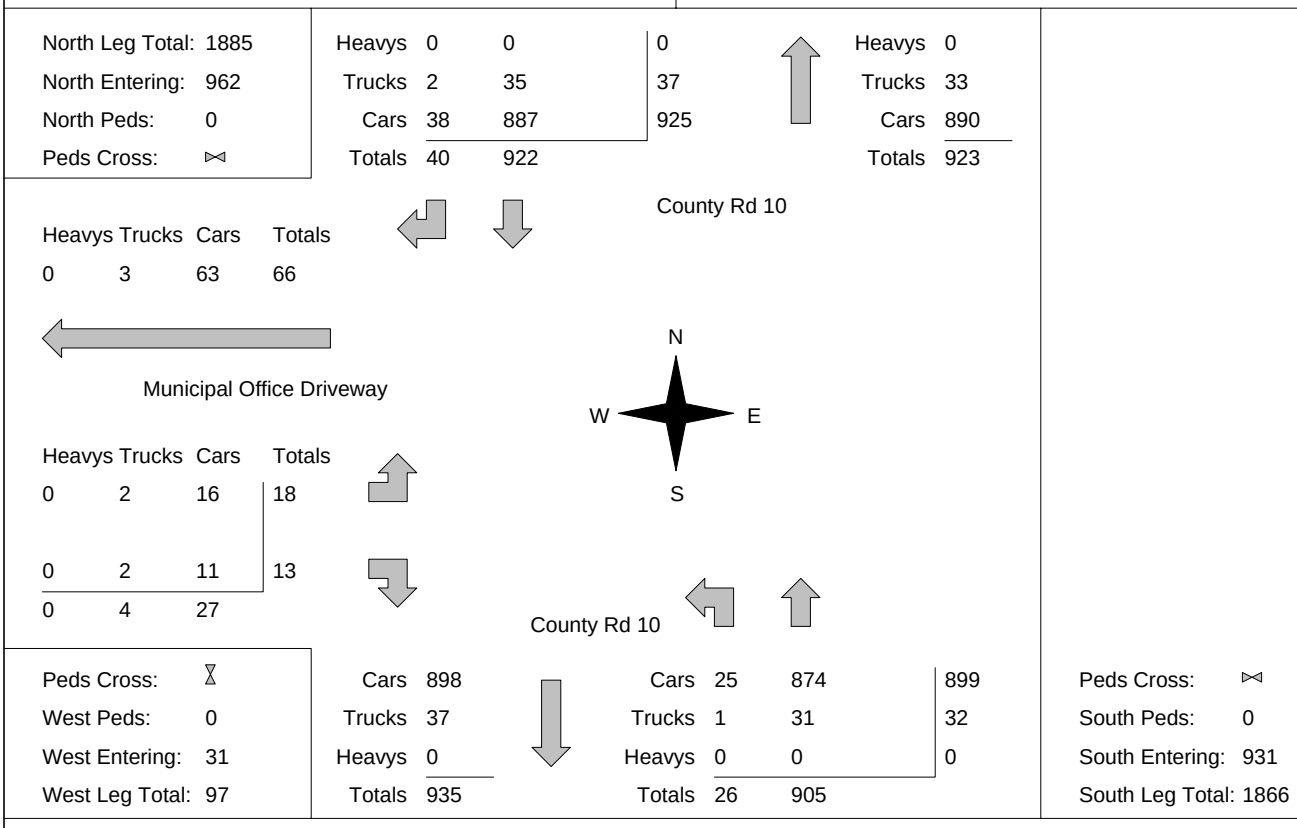
Municipality: Millbrook
Site #: 1710800003
Intersection: County Rd 10 & Municipal Office Dr
TFR File #: 16
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S



Comments

Ontario Traffic Inc
Traffic Count Summary

Intersection: County Rd 10 & Municipal Office D | **Count Date:** 25-Apr-17 | **Municipality:** Millbrook

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	1
8:00:00	0	137	0	137	0	309
9:00:00	0	131	11	142	0	338
10:00:00	0	109	17	126	0	272
16:00:00	0	3	0	3	0	6
17:00:00	0	195	6	201	0	361
18:00:00	0	220	3	223	0	377
19:00:00	0	125	3	128	0	226
Totals:	0	920	40	960	0	1890

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	1	0	1	0
8:00:00	2	170	0	172	0
9:00:00	7	189	0	196	0
10:00:00	13	133	0	146	0
16:00:00	0	3	0	3	0
17:00:00	0	160	0	160	0
18:00:00	1	153	0	154	0
19:00:00	3	95	0	98	0
Totals:	26	904	0	930	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	0	0	0	0	0	1
9:00:00	0	0	0	0	0	3
10:00:00	0	0	0	0	0	9
16:00:00	0	0	0	0	0	0
17:00:00	0	0	0	0	0	13
18:00:00	0	0	0	0	0	2
19:00:00	0	0	0	0	0	3
Totals:	0	0	0	0	0	31

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	0	1	1	0
9:00:00	1	0	2	3	0
10:00:00	5	0	4	9	0
16:00:00	0	0	0	0	0
17:00:00	10	0	3	13	0
18:00:00	0	0	2	2	0
19:00:00	2	0	1	3	0
Totals:	18	0	13	31	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	16:00	17:00	18:00	19:00
Crossing Values:	0	0	1	5	0	10	0	2

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	16	16	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	41	25	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	74	33	0	0	0	0	5	3	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	129	55	0	0	0	0	8	3	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	163	34	3	3	0	0	10	2	1	1	0	0	0	0	0	0	0	0
8:30:00	0	0	197	34	7	4	0	0	10	0	1	0	0	0	0	0	0	0	0	0
8:45:00	0	0	219	22	9	2	0	0	11	1	1	0	0	0	0	0	0	0	0	0
9:00:00	0	0	254	35	10	1	0	0	14	3	1	0	0	0	0	0	0	0	0	0
9:15:00	0	0	277	23	15	5	0	0	17	3	2	1	0	0	0	0	0	0	0	0
9:30:00	0	0	288	11	16	1	0	0	17	0	2	0	0	0	0	0	0	0	0	0
9:45:00	0	0	316	28	17	1	0	0	21	4	2	0	0	0	0	0	0	0	0	0
10:00:00	0	0	351	35	26	9	0	0	26	5	2	0	0	0	0	0	0	0	0	0
10:01:43	0	0	353	2	26	0	0	0	26	0	2	0	0	0	0	0	0	0	0	0
16:00:00	0	0	354	1	26	0	0	0	26	0	2	0	0	0	0	0	0	0	0	0
16:15:00	0	0	399	45	27	1	0	0	27	1	2	0	0	0	0	0	0	0	0	0
16:30:00	0	0	432	33	29	2	0	0	29	2	2	0	0	0	0	0	0	0	0	0
16:45:00	0	0	485	53	30	1	0	0	30	1	2	0	0	0	0	0	0	0	0	0
17:00:00	0	0	544	59	32	2	0	0	31	1	2	0	0	0	0	0	0	0	0	0
17:15:00	0	0	602	58	32	0	0	0	32	1	2	0	0	0	0	0	0	0	0	0
17:30:00	0	0	666	64	32	0	0	0	33	1	2	0	0	0	0	0	0	0	0	0
17:45:00	0	0	718	52	33	1	0	0	33	0	2	0	0	0	0	0	0	0	0	0
18:00:00	0	0	762	44	35	2	0	0	33	0	2	0	0	0	0	0	0	0	0	0
18:15:00	0	0	797	35	35	0	0	0	34	1	2	0	0	0	0	0	0	0	0	0
18:30:00	0	0	836	39	37	2	0	0	34	0	2	0	0	0	0	0	0	0	0	0
18:45:00	0	0	865	29	37	0	0	0	35	1	2	0	0	0	0	0	0	0	0	0
19:00:00	0	0	885	20	38	1	0	0	35	0	2	0	0	0	0	0	0	0	0	0
19:00:53	0	0	887	2	38	0	0	0	35	0	2	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:01:43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800003

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	24	23	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
7:30:00	1	0	56	32	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0
7:45:00	1	0	106	50	0	0	1	0	6	4	0	0	0	0	0	0	0	0	0	0
8:00:00	1	0	163	57	0	0	1	0	8	2	0	0	0	0	0	0	0	0	0	0
8:15:00	1	0	214	51	0	0	1	0	13	5	0	0	0	0	0	0	0	0	0	0
8:30:00	3	2	267	53	0	0	1	0	15	2	0	0	0	0	0	0	0	0	0	0
8:45:00	8	5	311	44	0	0	1	0	16	1	0	0	0	0	0	0	0	0	0	0
9:00:00	8	0	341	30	0	0	1	0	19	3	0	0	0	0	0	0	0	0	0	0
9:15:00	10	2	367	26	0	0	1	0	19	0	0	0	0	0	0	0	0	0	0	0
9:30:00	11	1	393	26	0	0	1	0	21	2	0	0	0	0	0	0	0	0	0	0
9:45:00	12	1	430	37	0	0	1	0	24	3	0	0	0	0	0	0	0	0	0	0
10:00:00	21	9	464	34	0	0	1	0	29	5	0	0	0	0	0	0	0	0	0	0
10:01:43	21	0	467	3	0	0	1	0	29	0	0	0	0	0	0	0	0	0	0	0
16:00:00	21	0	467	0	0	0	1	0	29	0	0	0	0	0	0	0	0	0	0	0
16:15:00	21	0	504	37	0	0	1	0	31	2	0	0	0	0	0	0	0	0	0	0
16:30:00	21	0	549	45	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
16:45:00	21	0	597	48	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
17:00:00	21	0	625	28	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
17:15:00	21	0	689	64	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
17:30:00	21	0	721	32	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
17:45:00	22	1	747	26	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
18:00:00	22	0	778	31	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
18:15:00	23	1	810	32	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
18:30:00	25	2	837	27	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
18:45:00	25	0	857	20	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
19:00:00	25	0	873	16	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0
19:00:53	25	0	874	1	0	0	1	0	31	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
9:15:00	1	1	0	0	3	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
9:30:00	1	0	0	0	4	1	2	1	0	0	2	1	0	0	0	0	0	0	0	0
9:45:00	2	1	0	0	5	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
10:00:00	4	2	0	0	5	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
10:01:43	4	0	0	0	5	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
16:00:00	4	0	0	0	5	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
16:15:00	4	0	0	0	5	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
16:30:00	4	0	0	0	6	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
16:45:00	8	4	0	0	7	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
17:00:00	14	6	0	0	8	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
17:15:00	14	0	0	0	9	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
17:30:00	14	0	0	0	10	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
17:45:00	14	0	0	0	10	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
18:00:00	14	0	0	0	10	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
18:15:00	16	2	0	0	10	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
18:30:00	16	0	0	0	11	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
18:45:00	16	0	0	0	11	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
19:00:00	16	0	0	0	11	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
19:00:53	16	0	0	0	11	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:00:00
To: 17:00:00

One Hour Peak
From: 12:00:00
To: 13:00:00

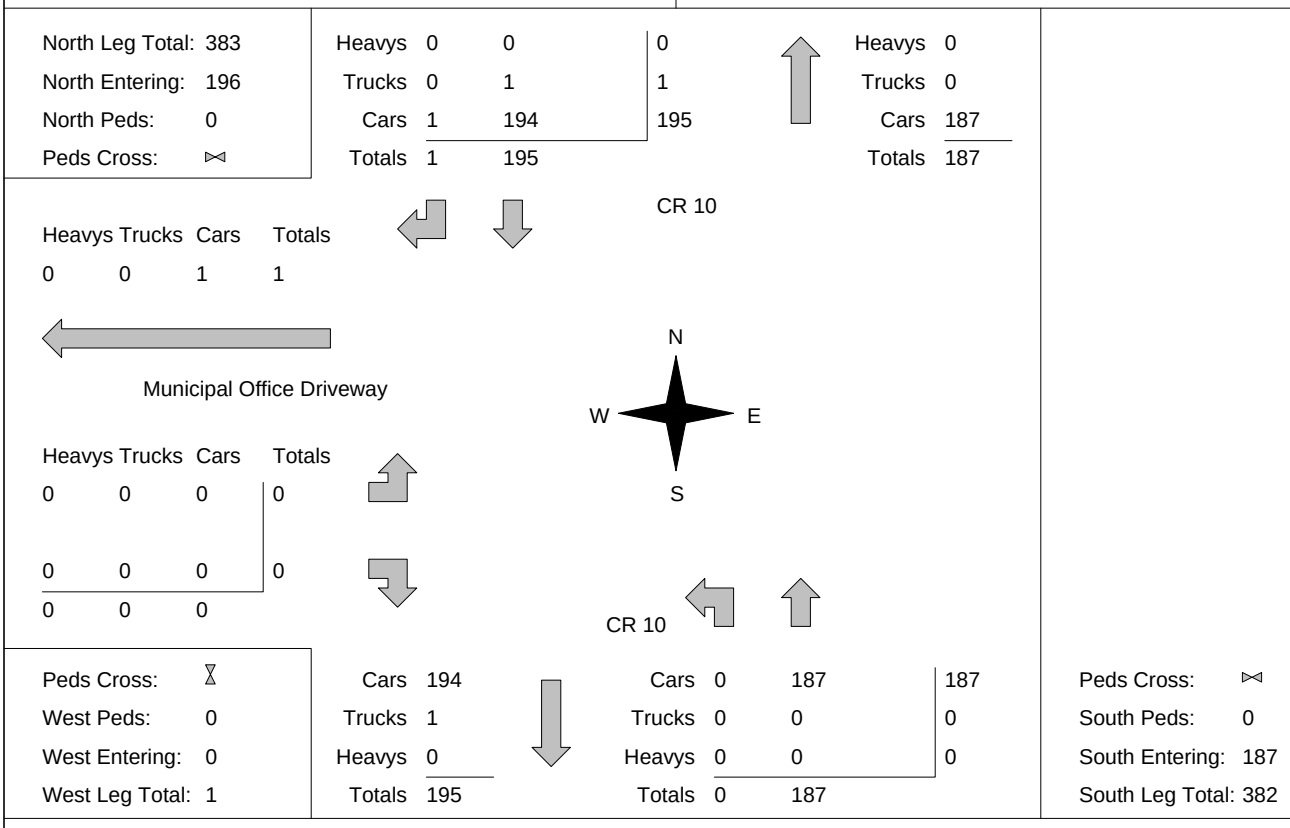
Municipality: Millbrook
Site #: 1722900003
Intersection: CR 10 & Municipal Office Driveway
TFR File #: 1
Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S



Comments

Ontario Traffic Inc.

Total Count Diagram

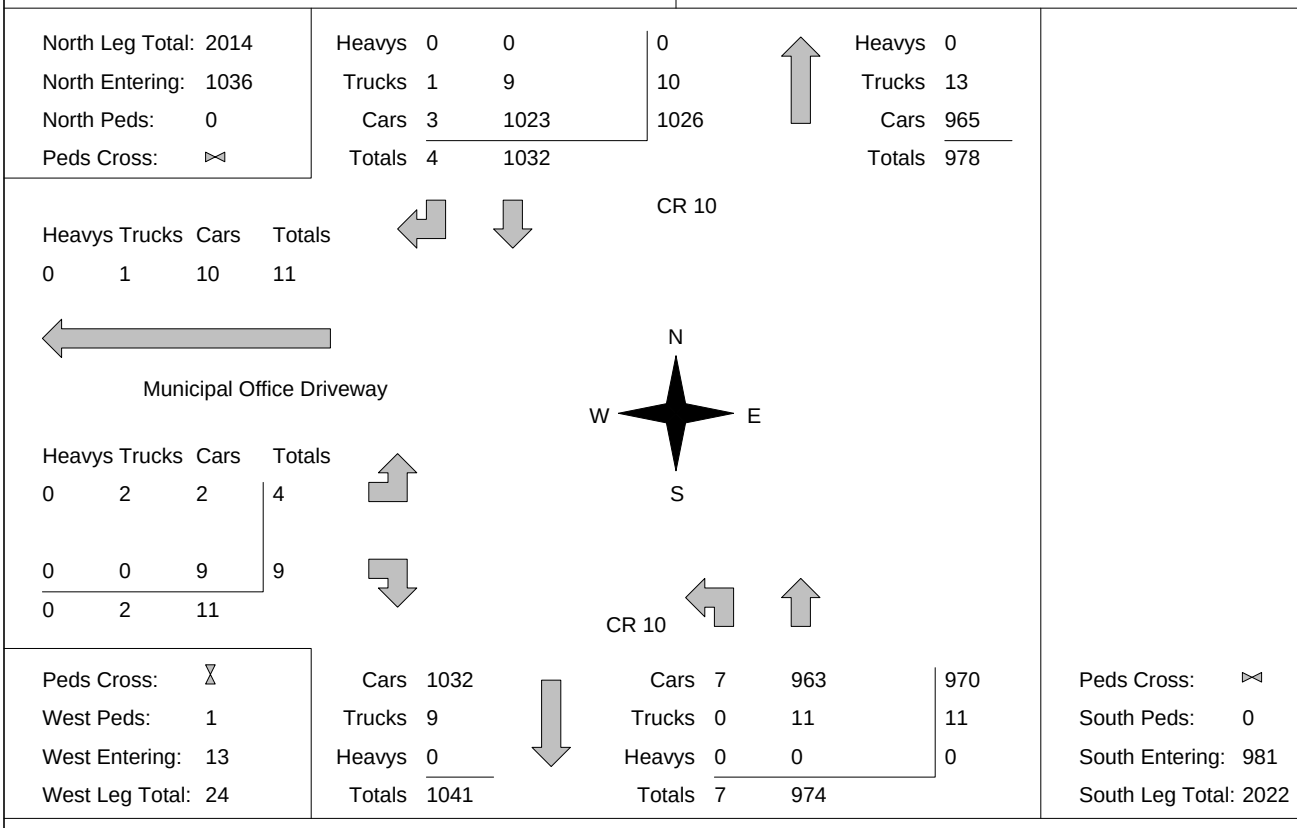
Municipality: Millbrook
Site #: 1722900003
Intersection: CR 10 & Municipal Office Driveway
TFR File #: 1
Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S



Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: CR 10 & Municipal Office Driveway | **Count Date:** 12-Aug-17 | **Municipality:** Millbrook

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
11:00:00	0	0	0	0	0	0
12:00:00	0	161	1	162	0	358
13:00:00	0	195	1	196	0	383
14:00:00	0	187	0	187	0	335
15:00:00	0	157	0	157	0	326
16:00:00	0	173	0	173	0	321
17:00:00	0	159	2	161	0	294
Totals:	0	1032	4	1036	0	2017

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0
12:00:00	2	194	0	196	0
13:00:00	0	187	0	187	0
14:00:00	2	146	0	148	0
15:00:00	1	168	0	169	0
16:00:00	1	147	0	148	0
17:00:00	1	132	0	133	0
Totals:	7	974	0	981	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
11:00:00	0	0	0	0	0	0
12:00:00	0	0	0	0	0	3
13:00:00	0	0	0	0	5	0
14:00:00	0	0	0	0	0	1
15:00:00	0	0	0	0	0	3
16:00:00	0	0	0	0	0	3
17:00:00	0	0	0	0	0	3
Totals:	0	0	0	0	5	13

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0
12:00:00	0	0	3	3	1
13:00:00	0	0	0	0	0
14:00:00	0	0	1	1	0
15:00:00	1	0	2	3	0
16:00:00	2	0	1	3	0
17:00:00	1	0	2	3	0
Totals:	4	0	9	13	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	11:00	12:00	13:00	14:00	15:00	16:00	17:00	17:00
Crossing Values:	0	0	0	0	1	2	1	1

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	46	46	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	84	38	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	121	37	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	160	39	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	210	50	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	262	52	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	0	309	47	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13:00:00	0	0	354	45	2	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0
13:15:00	0	0	404	50	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
13:30:00	0	0	459	55	2	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
13:45:00	0	0	500	41	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:00:00	0	0	540	40	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:15:00	0	0	577	37	2	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0
14:30:00	0	0	610	33	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	661	51	2	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0
15:00:00	0	0	695	34	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	731	36	2	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0
15:30:00	0	0	788	57	2	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	829	41	2	0	0	0	9	2	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	864	35	2	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	899	35	2	0	0	0	9	0	1	1	0	0	0	0	0	0	0	0
16:30:00	0	0	936	37	2	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0
16:45:00	0	0	977	41	3	1	0	0	9	0	1	0	0	0	0	0	0	0	0	0
17:00:00	0	0	1023	46	3	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0
17:00:02	0	0	1023	0	3	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
12:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
13:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
14:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
15:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
17:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
17:00:02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900003

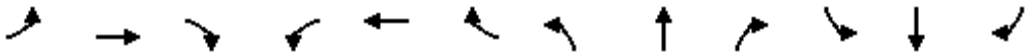
Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	1	1	46	46	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
11:30:00	1	0	98	52	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
11:45:00	2	1	155	57	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:00:00	2	0	192	37	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:15:00	2	0	241	49	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:30:00	2	0	289	48	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:45:00	2	0	335	46	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
13:00:00	2	0	379	44	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
13:15:00	2	0	416	37	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
13:30:00	3	1	461	45	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
13:45:00	4	1	497	36	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
14:00:00	4	0	525	28	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
14:15:00	4	0	561	36	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
14:30:00	4	0	604	43	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
14:45:00	4	0	637	33	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0
15:00:00	5	1	689	52	0	0	0	0	6	2	0	0	0	0	0	0	0	0	0	0
15:15:00	6	1	728	39	0	0	0	0	8	2	0	0	0	0	0	0	0	0	0	0
15:30:00	6	0	762	34	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
15:45:00	6	0	793	31	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
16:00:00	6	0	833	40	0	0	0	0	9	1	0	0	0	0	0	0	0	0	0	0
16:15:00	7	1	865	32	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
16:30:00	7	0	904	39	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
16:45:00	7	0	934	30	0	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0
17:00:00	7	0	963	29	0	0	0	0	11	1	0	0	0	0	0	0	0	0	0	0
17:00:02	7	0	963	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 12-Aug-17 Site #: 1722900003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:45:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:00:00	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:15:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:30:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:00:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:15:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:30:00	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:45:00	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:00:00	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:15:00	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:30:00	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:45:00	1	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
15:00:00	1	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
15:15:00	1	0	0	0	7	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0
15:30:00	1	0	0	0	7	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
15:45:00	1	0	0	0	7	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
16:00:00	2	1	0	0	7	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15:00	2	0	0	0	8	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30:00	2	0	0	0	8	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0
16:45:00	2	0	0	0	9	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0
17:00:00	2	0	0	0	9	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0
17:00:02	2	0	0	0	9	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0

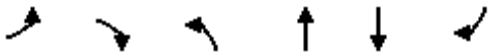
Appendix D – Synchro Analysis Output – Existing Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4	10	5	2	9	6	283	14	5	187	3
Future Volume (Veh/h)	3	4	10	5	2	9	6	283	14	5	187	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	4	5	12	6	2	11	7	337	17	6	223	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	608	605	225	611	598	346	227			354		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	608	605	225	611	598	346	227			354		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	98	98	100	98	99			100		
cM capacity (veh/h)	399	410	772	396	414	702	1353			1216		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	19	361	233
Volume Left	4	6	7	6
Volume Right	12	11	17	4
cSH	556	533	1353	1216
Volume to Capacity	0.04	0.04	0.01	0.00
Queue Length 95th (m)	0.9	0.8	0.1	0.1
Control Delay (s)	11.7	12.0	0.2	0.2
Lane LOS	B	B	A	A
Approach Delay (s)	11.7	12.0	0.2	0.2
Approach LOS	B	B		

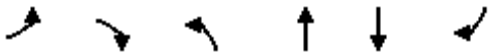
Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	28.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	88	50	27	219	165	31
Future Volume (Veh/h)	88	50	27	219	165	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	102	58	31	255	192	36
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	527	210	228			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	527	210	228			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	79	93	98			
cM capacity (veh/h)	486	835	1352			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	160	286	228
Volume Left	102	31	0
Volume Right	58	0	36
cSH	573	1352	1700
Volume to Capacity	0.28	0.02	0.13
Queue Length 95th (m)	8.6	0.5	0.0
Control Delay (s)	13.7	1.0	0.0
Lane LOS	B	A	
Approach Delay (s)	13.7	1.0	0.0
Approach LOS	B		

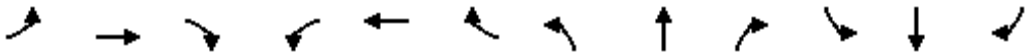
Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1	2	306	193	8
Future Volume (Veh/h)	0	1	2	306	193	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	2	360	227	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	596	232	236			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	596	232	236			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	469	813	1343			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	1	362	236
Volume Left	0	2	0
Volume Right	1	0	9
cSH	813	1343	1700
Volume to Capacity	0.00	0.00	0.14
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	9.4	0.1	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	0.1	0.0
Approach LOS	A		

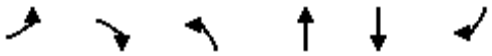
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	6	8	1	3	8	216	7	8	314	9
Future Volume (Veh/h)	3	1	6	8	1	3	8	216	7	8	314	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	1	7	9	1	3	9	245	8	9	357	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	650	651	362	654	652	249	367			253		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	650	651	362	654	652	249	367			253		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.6	2.2			2.2		
p0 queue free %	99	100	99	97	100	100	99			99		
cM capacity (veh/h)	378	385	687	342	384	720	1203			1324		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	13	262	376
Volume Left	3	9	9	9
Volume Right	7	3	8	10
cSH	531	393	1203	1324
Volume to Capacity	0.02	0.03	0.01	0.01
Queue Length 95th (m)	0.5	0.8	0.2	0.2
Control Delay (s)	11.9	14.5	0.3	0.3
Lane LOS	B	B	A	A
Approach Delay (s)	11.9	14.5	0.3	0.3
Approach LOS	B	B		

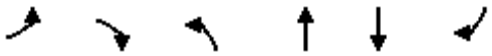
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	30.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	41	59	173	235	99
Future Volume (Veh/h)	55	41	59	173	235	99
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	65	49	70	206	280	118
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	685	339	398			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	685	339	398			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	83	93	94			
cM capacity (veh/h)	392	708	1172			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	114	276	398
Volume Left	65	70	0
Volume Right	49	0	118
cSH	485	1172	1700
Volume to Capacity	0.24	0.06	0.23
Queue Length 95th (m)	6.9	1.4	0.0
Control Delay (s)	14.7	2.5	0.0
Lane LOS	B	A	
Approach Delay (s)	14.7	2.5	0.0
Approach LOS	B		

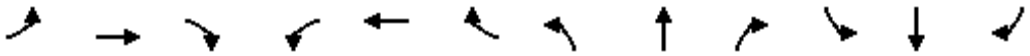
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	4	0	226	327	3
Future Volume (Veh/h)	10	4	0	226	327	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	12	5	0	263	380	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	644	382	383			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	644	382	383			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	440	670	1187			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	17	263	383
Volume Left	12	0	0
Volume Right	5	0	3
cSH	490	1187	1700
Volume to Capacity	0.03	0.00	0.23
Queue Length 95th (m)	0.8	0.0	0.0
Control Delay (s)	12.6	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.6	0.0	0.0
Approach LOS	B		

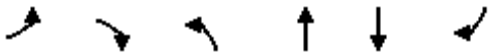
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	3	10	10	6	4	12	232	9	4	253	12
Future Volume (Veh/h)	14	3	10	10	6	4	12	232	9	4	253	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	14	3	10	10	6	4	12	239	9	4	261	12
Pedestrians								5				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.2				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	550	547	272	559	548	244	273			248		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	550	547	272	559	548	244	273			248		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	99	99	98	99	100	99			100		
cM capacity (veh/h)	438	442	768	429	441	800	1302			1330		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	27	20	260	277
Volume Left	14	10	12	4
Volume Right	10	4	9	12
cSH	522	477	1302	1330
Volume to Capacity	0.05	0.04	0.01	0.00
Queue Length 95th (m)	1.2	1.0	0.2	0.1
Control Delay (s)	12.3	12.9	0.4	0.1
Lane LOS	B	B	A	A
Approach Delay (s)	12.3	12.9	0.4	0.1
Approach LOS	B	B		

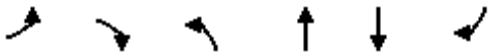
Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	31.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	46	53	184	189	81
Future Volume (Veh/h)	69	46	53	184	189	81
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	73	49	56	196	201	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	552	244	287			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	552	244	287			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	85	94	96			
cM capacity (veh/h)	476	800	1287			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	122	252	287
Volume Left	73	56	0
Volume Right	49	0	86
cSH	569	1287	1700
Volume to Capacity	0.21	0.04	0.17
Queue Length 95th (m)	6.1	1.0	0.0
Control Delay (s)	13.0	2.1	0.0
Lane LOS	B	A	
Approach Delay (s)	13.0	2.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

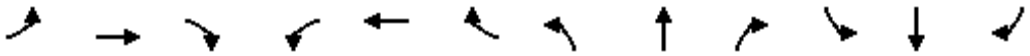


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	253	270	1
Future Volume (Veh/h)	0	0	0	253	270	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	0	264	281	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	546	282	282			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	546	282	282			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	503	762	1292			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	264	282
Volume Left	0	0	0
Volume Right	0	0	1
cSH	1700	1292	1700
Volume to Capacity	0.00	0.00	0.17
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	17.6%	ICU Level of Service	A
Analysis Period (min)	15		

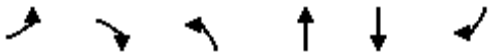
Appendix E –
Synchro Analysis Output –
Background Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4	17	10	2	10	9	381	21	5	264	3
Future Volume (Veh/h)	3	4	17	10	2	10	9	381	21	5	264	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	4	5	20	12	2	12	11	454	25	6	314	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	830	829	316	839	818	466	318			479		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	830	829	316	839	818	466	318			479		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	98	97	96	99	98	99			99		
cM capacity (veh/h)	282	304	685	273	308	600	1253			1094		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	29	26	490	324
Volume Left	4	12	11	6
Volume Right	20	12	25	4
cSH	484	369	1253	1094
Volume to Capacity	0.06	0.07	0.01	0.01
Queue Length 95th (m)	1.4	1.7	0.2	0.1
Control Delay (s)	12.9	15.5	0.3	0.2
Lane LOS	B	C	A	A
Approach Delay (s)	12.9	15.5	0.3	0.2
Approach LOS	B	C		

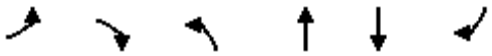
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	36.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	176	108	73	239	178	97
Future Volume (Veh/h)	176	108	73	239	178	97
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	205	126	85	278	207	113
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	712	264	320			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	712	264	320			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	43	84	93			
cM capacity (veh/h)	361	780	1251			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	331	363	320
Volume Left	205	85	0
Volume Right	126	0	113
cSH	454	1251	1700
Volume to Capacity	0.73	0.07	0.19
Queue Length 95th (m)	44.5	1.7	0.0
Control Delay (s)	31.5	2.4	0.0
Lane LOS	D	A	
Approach Delay (s)	31.5	2.4	0.0
Approach LOS	D		

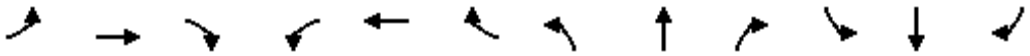
Intersection Summary			
Average Delay	11.1		
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	407	270	23
Future Volume (Veh/h)	8	4	8	407	270	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	5	9	479	318	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	828	332	345			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	828	332	345			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	341	715	1225			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	14	9	479	345
Volume Left	9	9	0	0
Volume Right	5	0	0	27
cSH	419	1225	1700	1700
Volume to Capacity	0.03	0.01	0.28	0.20
Queue Length 95th (m)	0.8	0.2	0.0	0.0
Control Delay (s)	13.9	8.0	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	13.9	0.1		0.0
Approach LOS	B			

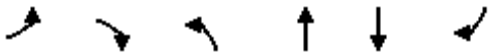
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	12	15	1	3	15	330	14	9	415	10
Future Volume (Veh/h)	3	1	12	15	1	3	15	330	14	9	415	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	1	14	17	1	3	17	375	16	10	472	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	918	922	478	929	920	383	483			391		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	918	922	478	929	920	383	483			391		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.6	2.2			2.2		
p0 queue free %	99	100	98	92	100	100	98			99		
cM capacity (veh/h)	248	266	592	216	266	601	1090			1179		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	21	408	493
Volume Left	3	17	17	10
Volume Right	14	3	16	11
cSH	455	240	1090	1179
Volume to Capacity	0.04	0.09	0.02	0.01
Queue Length 95th (m)	0.9	2.2	0.4	0.2
Control Delay (s)	13.2	21.4	0.5	0.3
Lane LOS	B	C	A	A
Approach Delay (s)	13.2	21.4	0.5	0.3
Approach LOS	B	C		

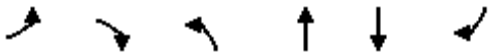
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	36.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	168	107	133	178	243	201
Future Volume (Veh/h)	168	107	133	178	243	201
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	200	127	158	212	289	239
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	936	408	528			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	936	408	528			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	21	80	85			
cM capacity (veh/h)	252	647	1049			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	327	370	528
Volume Left	200	158	0
Volume Right	127	0	239
cSH	330	1049	1700
Volume to Capacity	0.99	0.15	0.31
Queue Length 95th (m)	82.7	4.0	0.0
Control Delay (s)	83.5	4.8	0.0
Lane LOS	F	A	
Approach Delay (s)	83.5	4.8	0.0
Approach LOS	F		

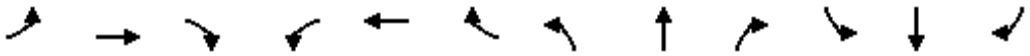
Intersection Summary			
Average Delay	23.7		
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	11	6	338	429	18
Future Volume (Veh/h)	26	11	6	338	429	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	13	7	393	499	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	916	510	520			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	916	510	520			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	98	99			
cM capacity (veh/h)	303	568	1056			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	43	7	393	520
Volume Left	30	7	0	0
Volume Right	13	0	0	21
cSH	352	1056	1700	1700
Volume to Capacity	0.12	0.01	0.23	0.31
Queue Length 95th (m)	3.1	0.2	0.0	0.0
Control Delay (s)	16.6	8.4	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	16.6	0.1		0.0
Approach LOS	C			

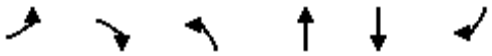
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	3	15	17	6	4	16	346	15	4	375	13
Future Volume (Veh/h)	15	3	15	17	6	4	16	346	15	4	375	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	15	3	15	18	6	4	16	357	15	4	387	13
Pedestrians								5				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.2				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	805	806	398	820	804	364	400			372		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	805	806	398	820	804	364	400			372		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	98	94	98	99	99			100		
cM capacity (veh/h)	293	313	653	283	313	685	1170			1198		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	28	388	404
Volume Left	15	18	16	4
Volume Right	15	4	15	13
cSH	394	316	1170	1198
Volume to Capacity	0.08	0.09	0.01	0.00
Queue Length 95th (m)	2.1	2.2	0.3	0.1
Control Delay (s)	15.0	17.5	0.5	0.1
Lane LOS	B	C	A	A
Approach Delay (s)	15.0	17.5	0.5	0.1
Approach LOS	B	C		

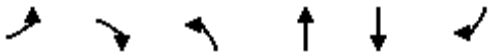
Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	175	132	127	200	202	195
Future Volume (Veh/h)	175	132	127	200	202	195
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	186	140	135	213	215	207
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	802	318	422			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	802	318	422			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	41	81	88			
cM capacity (veh/h)	314	727	1148			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	326	348	422
Volume Left	186	135	0
Volume Right	140	0	207
cSH	416	1148	1700
Volume to Capacity	0.78	0.12	0.25
Queue Length 95th (m)	51.6	3.0	0.0
Control Delay (s)	38.7	4.0	0.0
Lane LOS	E	A	
Approach Delay (s)	38.7	4.0	0.0
Approach LOS	E		

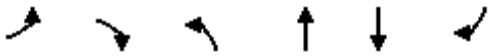
Intersection Summary			
Average Delay	12.8		
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	3	5	369	395	11
Future Volume (Veh/h)	7	3	5	369	395	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	7	3	5	384	411	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	810	416	422			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	810	416	422			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	350	641	1148			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	10	5	384	422
Volume Left	7	5	0	0
Volume Right	3	0	0	11
cSH	405	1148	1700	1700
Volume to Capacity	0.02	0.00	0.23	0.25
Queue Length 95th (m)	0.6	0.1	0.0	0.0
Control Delay (s)	14.1	8.1	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.1	0.1		0.0
Approach LOS	B			

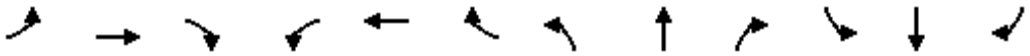
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	168	107	133	178	243	201
Future Volume (Veh/h)	168	107	133	178	243	201
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	200	127	158	212	289	239
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	817	289	528			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	817	289	528			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	32	83	85			
cM capacity (veh/h)	296	755	1049			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	327	158	212	289	239
Volume Left	200	158	0	0	0
Volume Right	127	0	0	0	239
cSH	388	1049	1700	1700	1700
Volume to Capacity	0.84	0.15	0.12	0.17	0.14
Queue Length 95th (m)	60.1	4.0	0.0	0.0	0.0
Control Delay (s)	48.1	9.0	0.0	0.0	0.0
Lane LOS	E	A			
Approach Delay (s)	48.1	3.9		0.0	
Approach LOS	E				

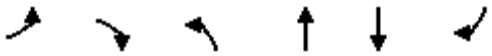
Intersection Summary				
Average Delay	14.0			
Intersection Capacity Utilization	46.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	18	11	2	11	10	404	22	6	282	4
Future Volume (Veh/h)	4	5	18	11	2	11	10	404	22	6	282	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	5	6	21	13	2	13	12	481	26	7	336	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	872	884	338	894	873	494	341			507		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	872	884	338	894	873	494	341			507		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	98	97	95	99	98	99			99		
cM capacity (veh/h)	263	282	664	248	286	579	1229			1068		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	32	28	12	507	348
Volume Left	5	13	12	0	7
Volume Right	21	13	0	26	5
cSH	445	342	1229	1700	1068
Volume to Capacity	0.07	0.08	0.01	0.30	0.01
Queue Length 95th (m)	1.8	2.0	0.2	0.0	0.2
Control Delay (s)	13.7	16.5	8.0	0.0	0.2
Lane LOS	B	C	A		A
Approach Delay (s)	13.7	16.5	0.2		0.2
Approach LOS	B	C			

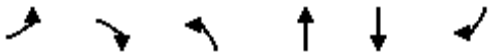
Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	32.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	177	110	75	263	197	98
Future Volume (Veh/h)	177	110	75	263	197	98
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	206	128	87	306	229	114
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	709	229	343			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	709	229	343			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	43	84	93			
cM capacity (veh/h)	361	815	1227			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	334	87	306	229	114
Volume Left	206	87	0	0	0
Volume Right	128	0	0	0	114
cSH	459	1227	1700	1700	1700
Volume to Capacity	0.73	0.07	0.18	0.13	0.07
Queue Length 95th (m)	44.3	1.7	0.0	0.0	0.0
Control Delay (s)	31.0	8.2	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	31.0	1.8		0.0	
Approach LOS	D				

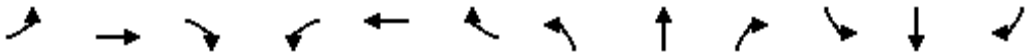
Intersection Summary			
Average Delay	10.4		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	433	288	23
Future Volume (Veh/h)	8	4	8	433	288	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	5	9	509	339	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	880	352	366			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	880	352	366			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	318	696	1204			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	14	9	509	366
Volume Left	9	9	0	0
Volume Right	5	0	0	27
cSH	395	1204	1700	1700
Volume to Capacity	0.04	0.01	0.30	0.22
Queue Length 95th (m)	0.8	0.2	0.0	0.0
Control Delay (s)	14.5	8.0	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.5	0.1		0.0
Approach LOS	B			

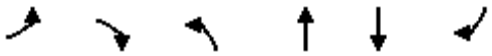
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1	13	16	1	4	16	348	15	10	440	11
Future Volume (Veh/h)	4	1	13	16	1	4	16	348	15	10	440	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	5	1	15	18	1	5	18	395	17	11	500	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	965	976	506	984	974	404	513			412		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	965	976	506	984	974	404	513			412		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.6	2.2			2.2		
p0 queue free %	98	100	97	91	100	99	98			99		
cM capacity (veh/h)	229	246	570	197	247	585	1063			1158		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	21	24	18	412	524
Volume Left	5	18	18	0	11
Volume Right	15	5	0	17	13
cSH	402	231	1063	1700	1158
Volume to Capacity	0.05	0.10	0.02	0.24	0.01
Queue Length 95th (m)	1.3	2.6	0.4	0.0	0.2
Control Delay (s)	14.4	22.4	8.4	0.0	0.3
Lane LOS	B	C	A		A
Approach Delay (s)	14.4	22.4	0.4		0.3
Approach LOS	B	C			

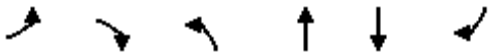
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	41.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	169	110	135	197	269	202
Future Volume (Veh/h)	169	110	135	197	269	202
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	201	131	161	235	320	240
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	877	320	560			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	877	320	560			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	26	82	84			
cM capacity (veh/h)	271	725	1021			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	332	161	235	320	240
Volume Left	201	161	0	0	0
Volume Right	131	0	0	0	240
cSH	360	1021	1700	1700	1700
Volume to Capacity	0.92	0.16	0.14	0.19	0.14
Queue Length 95th (m)	72.6	4.2	0.0	0.0	0.0
Control Delay (s)	64.4	9.2	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	64.4	3.7		0.0	
Approach LOS	F				

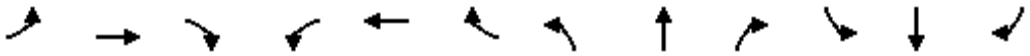
Intersection Summary			
Average Delay	17.7		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	11	6	358	456	18
Future Volume (Veh/h)	26	11	6	358	456	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	13	7	416	530	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	970	540	551			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	970	540	551			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	98	99			
cM capacity (veh/h)	281	545	1029			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	43	7	416	551
Volume Left	30	7	0	0
Volume Right	13	0	0	21
cSH	329	1029	1700	1700
Volume to Capacity	0.13	0.01	0.24	0.32
Queue Length 95th (m)	3.4	0.2	0.0	0.0
Control Delay (s)	17.6	8.5	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	17.6	0.1		0.0
Approach LOS	C			

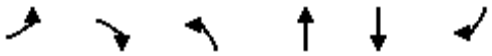
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	4	16	17	7	5	17	365	16	5	395	14
Future Volume (Veh/h)	17	4	16	17	7	5	17	365	16	5	395	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	18	4	16	18	7	5	18	376	16	5	407	14
Pedestrians								5				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.2				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	844	852	419	867	851	384	421			392		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	844	852	419	867	851	384	421			392		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	97	93	98	99	98			100		
cM capacity (veh/h)	274	293	636	261	293	668	1149			1178		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	38	30	18	392	426
Volume Left	18	18	18	0	5
Volume Right	16	5	0	16	14
cSH	363	299	1149	1700	1178
Volume to Capacity	0.10	0.10	0.02	0.23	0.00
Queue Length 95th (m)	2.6	2.5	0.4	0.0	0.1
Control Delay (s)	16.1	18.4	8.2	0.0	0.1
Lane LOS	C	C	A		A
Approach Delay (s)	16.1	18.4	0.4		0.1
Approach LOS	C	C			

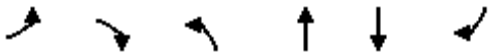
Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	37.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	175	135	129	220	223	196
Future Volume (Veh/h)	175	135	129	220	223	196
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	186	144	137	234	237	209
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	745	237	446			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	745	237	446			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	45	82	88			
cM capacity (veh/h)	338	807	1125			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	330	137	234	237	209
Volume Left	186	137	0	0	0
Volume Right	144	0	0	0	209
cSH	452	1125	1700	1700	1700
Volume to Capacity	0.73	0.12	0.14	0.14	0.12
Queue Length 95th (m)	44.5	3.2	0.0	0.0	0.0
Control Delay (s)	31.6	8.6	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	31.6	3.2		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	10.1		
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	3	5	390	417	11
Future Volume (Veh/h)	7	3	5	390	417	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	7	3	5	406	434	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	856	440	445			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	856	440	445			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	330	622	1126			

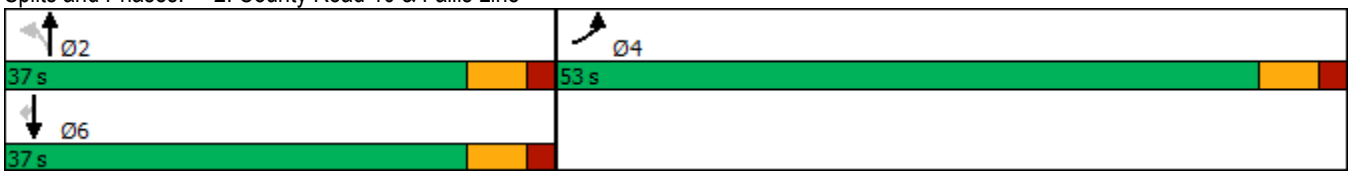
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	10	5	406	445
Volume Left	7	5	0	0
Volume Right	3	0	0	11
cSH	384	1126	1700	1700
Volume to Capacity	0.03	0.00	0.24	0.26
Queue Length 95th (m)	0.6	0.1	0.0	0.0
Control Delay (s)	14.6	8.2	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.6	0.1		0.0
Approach LOS	B			

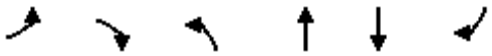
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	169	135	197	269	202
Future Volume (vph)	169	135	197	269	202
Lane Group Flow (vph)	332	161	235	320	240
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.70	0.28	0.23	0.32	0.25
Control Delay	24.5	10.1	8.7	9.5	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	10.1	8.7	9.5	2.2
Queue Length 50th (m)	26.0	8.3	11.6	16.8	0.0
Queue Length 95th (m)	43.3	20.3	24.9	34.3	7.5
Internal Link Dist (m)	1075.5		460.0	547.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1409	577	1018	998	975
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.28	0.23	0.32	0.25

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 58.2
Natural Cycle: 45
Control Type: Semi Act-Uncoord

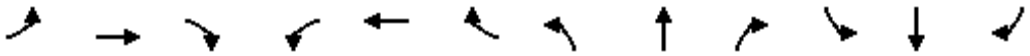
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	169	110	135	197	269	202
Future Volume (vph)	169	110	135	197	269	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1727		1785	1879	1842	1597
Flt Permitted	0.97		0.57	1.00	1.00	1.00
Satd. Flow (perm)	1727		1065	1879	1842	1597
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	201	131	161	235	320	240
RTOR Reduction (vph)	41	0	0	0	0	110
Lane Group Flow (vph)	291	0	161	235	320	130
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	14.6		31.6	31.6	31.6	31.6
Effective Green, g (s)	14.6		31.6	31.6	31.6	31.6
Actuated g/C Ratio	0.25		0.54	0.54	0.54	0.54
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	433		578	1020	1000	867
v/s Ratio Prot	c0.17			0.13	c0.17	
v/s Ratio Perm			0.15			0.08
v/c Ratio	0.67		0.28	0.23	0.32	0.15
Uniform Delay, d1	19.6		7.2	6.9	7.4	6.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1		1.2	0.5	0.8	0.4
Delay (s)	23.7		8.4	7.5	8.2	7.0
Level of Service	C		A	A	A	A
Approach Delay (s)	23.7			7.8	7.7	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	7	19	22	14	12	11	467	25	7	515	217
Future Volume (Veh/h)	42	7	19	22	14	12	11	467	25	7	515	217
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	50	8	23	26	17	14	13	556	30	8	613	258
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1362	1370	742	1382	1484	571	871			586		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1362	1370	742	1382	1484	571	871			586		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	54	94	94	76	86	97	98			99		
cM capacity (veh/h)	108	144	388	108	123	524	783			999		

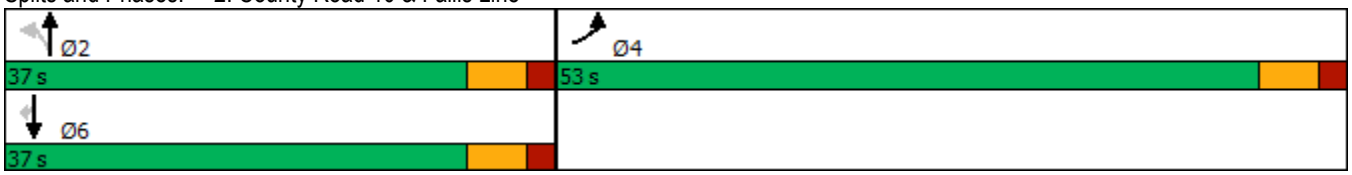
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	81	57	13	586	879
Volume Left	50	26	13	0	8
Volume Right	23	14	0	30	258
cSH	140	141	783	1700	999
Volume to Capacity	0.58	0.41	0.02	0.34	0.01
Queue Length 95th (m)	22.4	13.3	0.4	0.0	0.2
Control Delay (s)	61.1	47.0	9.7	0.0	0.2
Lane LOS	F	E	A		A
Approach Delay (s)	61.1	47.0	0.2		0.2
Approach LOS	F	E			

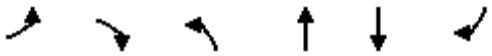
Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	58.4%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	249	77	393	235	111
Future Volume (vph)	249	77	393	235	111
Lane Group Flow (vph)	420	90	457	273	129
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.78	0.16	0.52	0.31	0.18
Control Delay	28.2	11.9	15.1	12.2	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	11.9	15.1	12.2	3.3
Queue Length 50th (m)	39.6	5.3	33.5	17.6	0.0
Queue Length 95th (m)	62.5	15.2	68.8	38.4	7.7
Internal Link Dist (m)	333.1		460.0	687.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1227	547	874	891	722
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.16	0.52	0.31	0.18

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 63.4
Natural Cycle: 50
Control Type: Semi Act-Uncoord

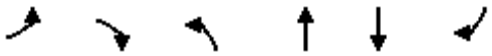
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	249	112	77	393	235	111
Future Volume (vph)	249	112	77	393	235	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1628		1785	1773	1807	1331
Flt Permitted	0.97		0.59	1.00	1.00	1.00
Satd. Flow (perm)	1628		1111	1773	1807	1331
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	290	130	90	457	273	129
RTOR Reduction (vph)	26	0	0	0	0	65
Lane Group Flow (vph)	394	0	90	457	273	64
Heavy Vehicles (%)	10%	0%	0%	6%	4%	20%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	20.0		31.3	31.3	31.3	31.3
Effective Green, g (s)	20.0		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.32		0.49	0.49	0.49	0.49
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	514		549	876	893	658
v/s Ratio Prot	c0.24			c0.26	0.15	
v/s Ratio Perm			0.08			0.05
v/c Ratio	0.77		0.16	0.52	0.31	0.10
Uniform Delay, d1	19.5		8.8	10.9	9.5	8.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	6.7		0.6	2.2	0.9	0.3
Delay (s)	26.3		9.4	13.1	10.4	8.8
Level of Service	C		A	B	B	A
Approach Delay (s)	26.3			12.5	9.9	
Approach LOS	C			B	A	

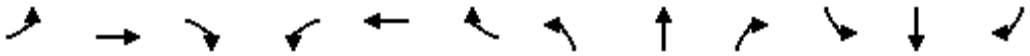
Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	63.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	635	338	23
Future Volume (Veh/h)	8	4	8	635	338	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	5	9	747	398	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1176	412	425			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1176	412	425			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	99			
cM capacity (veh/h)	212	645	1145			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	14	9	747	425
Volume Left	9	9	0	0
Volume Right	5	0	0	27
cSH	278	1145	1700	1700
Volume to Capacity	0.05	0.01	0.44	0.25
Queue Length 95th (m)	1.2	0.2	0.0	0.0
Control Delay (s)	18.6	8.2	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	18.6	0.1		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	10	14	19	4	4	17	539	24	11	528	72
Future Volume (Veh/h)	174	10	14	19	4	4	17	539	24	11	528	72
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	198	11	16	22	5	5	19	613	27	13	600	82
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1326	1345	641	1353	1372	626	682			640		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1326	1345	641	1353	1372	626	682			640		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.6	2.2			2.2		
p0 queue free %	0	93	97	78	96	99	98			99		
cM capacity (veh/h)	126	148	478	101	142	432	920			954		

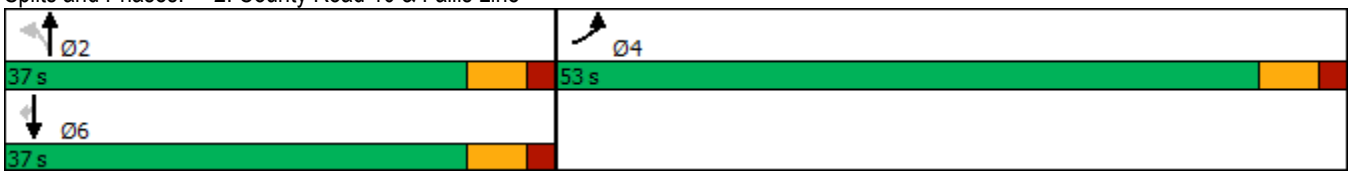
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	225	32	19	640	695
Volume Left	198	22	19	0	13
Volume Right	16	5	0	27	82
cSH	134	121	920	1700	954
Volume to Capacity	1.68	0.27	0.02	0.38	0.01
Queue Length 95th (m)	125.7	7.6	0.5	0.0	0.3
Control Delay (s)	396.2	45.3	9.0	0.0	0.4
Lane LOS	F	E	A		A
Approach Delay (s)	396.2	45.3	0.3		0.4
Approach LOS	F	E			

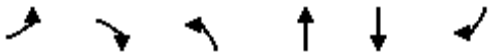
Intersection Summary				
Average Delay	56.5			
Intersection Capacity Utilization	61.4%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	189	137	247	380	259
Future Volume (vph)	189	137	247	380	259
Lane Group Flow (vph)	358	163	294	452	308
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.72	0.37	0.30	0.46	0.31
Control Delay	25.4	12.6	9.8	11.7	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	12.6	9.8	11.7	2.3
Queue Length 50th (m)	29.7	9.3	16.0	27.5	0.0
Queue Length 95th (m)	47.8	23.7	33.1	53.6	8.6
Internal Link Dist (m)	333.1		460.0	699.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1390	446	994	974	990
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.37	0.30	0.46	0.31

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 59.2
Natural Cycle: 45
Control Type: Semi Act-Uncoord

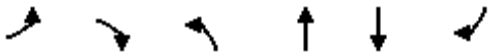
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	189	112	137	247	380	259
Future Volume (vph)	189	112	137	247	380	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1730		1785	1879	1842	1597
Flt Permitted	0.97		0.45	1.00	1.00	1.00
Satd. Flow (perm)	1730		843	1879	1842	1597
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	225	133	163	294	452	308
RTOR Reduction (vph)	36	0	0	0	0	145
Lane Group Flow (vph)	322	0	163	294	452	163
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	15.8		31.3	31.3	31.3	31.3
Effective Green, g (s)	15.8		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.27		0.53	0.53	0.53	0.53
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	462		446	995	975	845
v/s Ratio Prot	c0.19			0.16	c0.25	
v/s Ratio Perm			0.19			0.10
v/c Ratio	0.70		0.37	0.30	0.46	0.19
Uniform Delay, d1	19.5		8.1	7.8	8.7	7.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	4.5		2.3	0.8	1.6	0.5
Delay (s)	24.0		10.4	8.5	10.3	7.8
Level of Service	C		B	A	B	A
Approach Delay (s)	24.0			9.2	9.3	
Approach LOS	C			A	A	

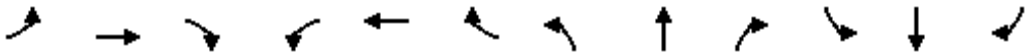
Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	11	6	428	623	18
Future Volume (Veh/h)	26	11	6	428	623	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	13	7	498	724	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1246	734	745			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1246	734	745			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	84	97	99			
cM capacity (veh/h)	192	423	872			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	43	7	498	745
Volume Left	30	7	0	0
Volume Right	13	0	0	21
cSH	230	872	1700	1700
Volume to Capacity	0.19	0.01	0.29	0.44
Queue Length 95th (m)	5.1	0.2	0.0	0.0
Control Delay (s)	24.2	9.2	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	24.2	0.1		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	4	17	18	8	5	19	393	18	5	426	24
Future Volume (Veh/h)	26	4	17	18	8	5	19	393	18	5	426	24
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	27	4	18	19	8	5	20	405	19	5	439	25
Pedestrians								5				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.2				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	916	926	456	941	928	414	464			424		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	916	926	456	941	928	414	464			424		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	98	97	92	97	99	98			100		
cM capacity (veh/h)	243	265	606	230	264	642	1108			1146		

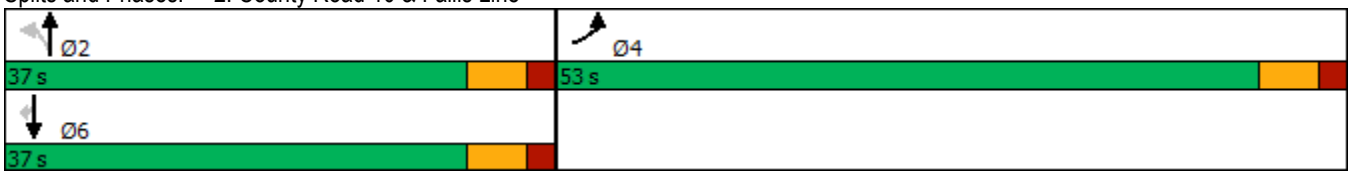
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	49	32	20	424	469
Volume Left	27	19	20	0	5
Volume Right	18	5	0	19	25
cSH	315	265	1108	1700	1146
Volume to Capacity	0.16	0.12	0.02	0.25	0.00
Queue Length 95th (m)	4.1	3.1	0.4	0.0	0.1
Control Delay (s)	18.5	20.4	8.3	0.0	0.1
Lane LOS	C	C	A		A
Approach Delay (s)	18.5	20.4	0.4		0.1
Approach LOS	C	C			

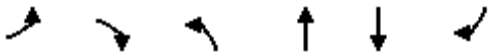
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	39.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	178	132	247	249	199
Future Volume (vph)	178	132	247	249	199
Lane Group Flow (vph)	335	140	263	265	212
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
Act Effct Green (s)	14.4	31.5	31.5	31.5	31.5
Actuated g/C Ratio	0.25	0.54	0.54	0.54	0.54
v/c Ratio	0.70	0.23	0.26	0.26	0.22
Control Delay	24.1	9.4	8.8	8.9	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	9.4	8.8	8.9	2.2
LOS	C	A	A	A	A
Approach Delay	24.1		9.0	5.9	
Approach LOS	C		A	A	
Queue Length 50th (m)	25.2	6.9	13.1	13.2	0.0
Queue Length 95th (m)	47.5	18.9	30.3	30.7	8.8
Internal Link Dist (m)	333.1		460.0	656.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1410	608	1021	1010	964
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.23	0.26	0.26	0.22

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 58	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

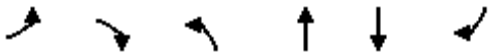
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	178	137	132	247	249	199
Future Volume (vph)	178	137	132	247	249	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1720		1785	1879	1860	1597
Flt Permitted	0.97		0.60	1.00	1.00	1.00
Satd. Flow (perm)	1720		1119	1879	1860	1597
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	189	146	140	263	265	212
RTOR Reduction (vph)	49	0	0	0	0	97
Lane Group Flow (vph)	286	0	140	263	265	115
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	14.4		31.5	31.5	31.5	31.5
Effective Green, g (s)	14.4		31.5	31.5	31.5	31.5
Actuated g/C Ratio	0.25		0.54	0.54	0.54	0.54
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	427		608	1022	1011	868
v/s Ratio Prot	c0.17			0.14	c0.14	
v/s Ratio Perm			0.13			0.07
v/c Ratio	0.67		0.23	0.26	0.26	0.13
Uniform Delay, d1	19.6		6.9	7.0	7.0	6.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1		0.9	0.6	0.6	0.3
Delay (s)	23.7		7.8	7.6	7.7	6.8
Level of Service	C		A	A	A	A
Approach Delay (s)	23.7			7.7	7.3	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	57.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	3	5	420	446	11
Future Volume (Veh/h)	7	3	5	420	446	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	7	3	5	438	465	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	918	470	476			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	918	470	476			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	302	597	1097			

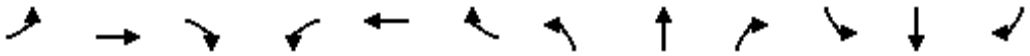
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	10	5	438	476
Volume Left	7	5	0	0
Volume Right	3	0	0	11
cSH	355	1097	1700	1700
Volume to Capacity	0.03	0.00	0.26	0.28
Queue Length 95th (m)	0.7	0.1	0.0	0.0
Control Delay (s)	15.4	8.3	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	15.4	0.1		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	42	7	22	14	11	467	7	515
Future Volume (vph)	42	7	22	14	11	467	7	515
Lane Group Flow (vph)	0	81	0	57	13	586	0	879
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
v/c Ratio		0.48		0.30	0.03	0.42		0.76
Control Delay		34.4		29.1	3.8	5.4		13.1
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		34.4		29.1	3.8	5.4		13.1
Queue Length 50th (m)		8.6		6.1	0.4	27.2		64.1
Queue Length 95th (m)		18.3		14.1	1.9	47.7		124.5
Internal Link Dist (m)		884.7		354.8		385.0		381.6
Turn Bay Length (m)					85.0			
Base Capacity (vph)		416		483	506	1382		1157
Starvation Cap Reductn		0		0	0	0		0
Spillback Cap Reductn		0		0	0	0		0
Storage Cap Reductn		0		0	0	0		0
Reduced v/c Ratio		0.19		0.12	0.03	0.42		0.76

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.8
Natural Cycle: 80
Control Type: Semi Act-Uncoord

Splits and Phases: 1: County Road 10 & Larmer Line



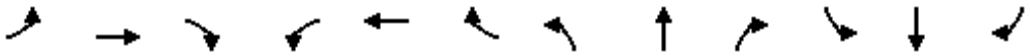
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	7	19	22	14	12	11	467	25	7	515	217
Future Volume (vph)	42	7	19	22	14	12	11	467	25	7	515	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frt		0.96			0.97		1.00	0.99			0.96	
Flt Protected		0.97			0.98		0.95	1.00			1.00	
Satd. Flow (prot)		1659			1776		1785	1764			1473	
Flt Permitted		0.78			0.87		0.34	1.00			1.00	
Satd. Flow (perm)		1331			1572		646	1764			1467	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	50	8	23	26	17	14	13	556	30	8	613	258
RTOR Reduction (vph)	0	20	0	0	13	0	0	1	0	0	10	0
Lane Group Flow (vph)	0	61	0	0	44	0	13	585	0	0	869	0
Heavy Vehicles (%)	0%	0%	20%	0%	0%	0%	0%	6%	0%	0%	4%	67%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.8			7.8		61.3	61.3			61.3	
Effective Green, g (s)		7.8			7.8		61.3	61.3			61.3	
Actuated g/C Ratio		0.10			0.10		0.76	0.76			0.76	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		128			151		488	1333			1108	
v/s Ratio Prot								0.33				
v/s Ratio Perm		c0.05			0.03		0.02				c0.59	
v/c Ratio		0.48			0.29		0.03	0.44			0.78	
Uniform Delay, d1		34.7			34.1		2.5	3.6			5.9	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		2.8			1.1		0.1	1.1			5.6	
Delay (s)		37.5			35.2		2.6	4.7			11.5	
Level of Service		D			D		A	A			B	
Approach Delay (s)		37.5			35.2			4.6			11.5	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	174	10	19	4	17	539	11	528
Future Volume (vph)	174	10	19	4	17	539	11	528
Lane Group Flow (vph)	0	225	0	32	19	640	0	695
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
v/c Ratio		0.77		0.12	0.04	0.53		0.59
Control Delay		49.2		23.9	7.2	11.0		12.0
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		49.2		23.9	7.2	11.0		12.0
Queue Length 50th (m)		33.5		3.5	1.0	50.9		57.8
Queue Length 95th (m)		55.7		10.2	3.9	87.7		100.5
Internal Link Dist (m)		884.7		354.8		385.0		381.6
Turn Bay Length (m)					85.0			
Base Capacity (vph)		377		332	464	1202		1178
Starvation Cap Reductn		0		0	0	0		0
Spillback Cap Reductn		0		0	0	0		0
Storage Cap Reductn		0		0	0	0		0
Reduced v/c Ratio		0.60		0.10	0.04	0.53		0.59

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 87
Natural Cycle: 60
Control Type: Semi Act-Uncoord

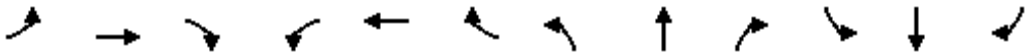
Splits and Phases: 1: County Road 10 & Larmer Line



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	10	14	19	4	4	17	539	24	11	528	72
Future Volume (vph)	174	10	14	19	4	4	17	539	24	11	528	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frt		0.99			0.98		1.00	0.99			0.98	
Flt Protected		0.96			0.97		0.95	1.00			1.00	
Satd. Flow (prot)		1782			1453		1785	1849			1831	
Flt Permitted		0.73			0.79		0.38	1.00			0.99	
Satd. Flow (perm)		1356			1193		715	1849			1809	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	198	11	16	22	5	5	19	612	27	12	600	82
RTOR Reduction (vph)	0	3	0	0	4	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	222	0	0	28	0	19	639	0	0	690	0
Heavy Vehicles (%)	0%	0%	0%	25%	0%	33%	0%	1%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.5			18.5		56.5	56.5			56.5	
Effective Green, g (s)		18.5			18.5		56.5	56.5			56.5	
Actuated g/C Ratio		0.21			0.21		0.65	0.65			0.65	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		288			253		464	1200			1174	
v/s Ratio Prot								0.35				
v/s Ratio Perm		c0.16			0.02		0.03				c0.38	
v/c Ratio		0.77			0.11		0.04	0.53			0.59	
Uniform Delay, d1		32.2			27.6		5.5	8.2			8.6	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		12.0			0.2		0.2	1.7			2.2	
Delay (s)		44.2			27.8		5.7	9.9			10.8	
Level of Service		D			C		A	A			B	
Approach Delay (s)		44.2			27.8			9.7			10.8	
Approach LOS		D			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

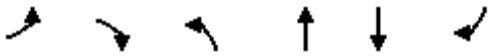
Appendix F –
Synchro Analysis Output –
Total Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4	22	13	2	10	26	582	31	5	330	3
Future Volume (Veh/h)	3	4	22	13	2	10	26	582	31	5	330	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	4	5	26	15	2	12	31	693	37	6	393	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1175	1199	395	1209	1182	712	397			730		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1175	1199	395	1209	1182	712	397			730		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	97	96	90	99	97	97			99		
cM capacity (veh/h)	160	181	617	147	185	436	1173			883		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	35	29	31	730	403
Volume Left	4	15	31	0	6
Volume Right	26	12	0	37	4
cSH	369	207	1173	1700	883
Volume to Capacity	0.09	0.14	0.03	0.43	0.01
Queue Length 95th (m)	2.4	3.6	0.6	0.0	0.2
Control Delay (s)	15.8	25.2	8.2	0.0	0.2
Lane LOS	C	D	A		A
Approach Delay (s)	15.8	25.2	0.3		0.2
Approach LOS	C	D			

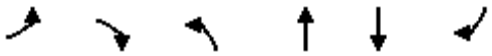
Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	43.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	218	175	96	248	205	110
Future Volume (Veh/h)	218	175	96	248	205	110
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	253	203	112	288	238	128
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	750	238	366			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	750	238	366			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	24	75	91			
cM capacity (veh/h)	333	806	1204			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	456	112	288	238	128
Volume Left	253	112	0	0	0
Volume Right	203	0	0	0	128
cSH	451	1204	1700	1700	1700
Volume to Capacity	1.01	0.09	0.17	0.14	0.08
Queue Length 95th (m)	101.7	2.3	0.0	0.0	0.0
Control Delay (s)	75.7	8.3	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	75.7	2.3		0.0	
Approach LOS	F				

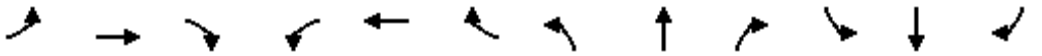
Intersection Summary				
Average Delay	29.0			
Intersection Capacity Utilization	48.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	458	310	23
Future Volume (Veh/h)	8	4	8	458	310	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	5	9	539	365	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	936	378	392			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	936	378	392			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	295	673	1178			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	14	9	539	392
Volume Left	9	9	0	0
Volume Right	5	0	0	27
cSH	369	1178	1700	1700
Volume to Capacity	0.04	0.01	0.32	0.23
Queue Length 95th (m)	0.9	0.2	0.0	0.0
Control Delay (s)	15.2	8.1	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	15.2	0.1		0.0
Approach LOS	C			

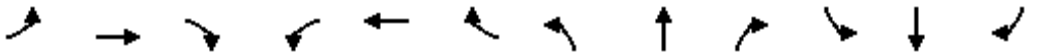
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	41	6	17	33	18	17	0	49	49	0	14
Future Volume (Veh/h)	4	41	6	17	33	18	17	0	49	49	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	45	7	18	36	20	18	0	53	53	0	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	56			52			154	148	48	192	142	46
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	56			52			154	148	48	192	142	46
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	100	95	93	100	99
cM capacity (veh/h)	1562			1567			797	736	1026	725	742	1029

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	56	74	71	68
Volume Left	4	18	18	53
Volume Right	7	20	53	15
cSH	1562	1567	956	776
Volume to Capacity	0.00	0.01	0.07	0.09
Queue Length 95th (m)	0.1	0.3	1.8	2.2
Control Delay (s)	0.5	1.8	9.1	10.1
Lane LOS	A	A	A	B
Approach Delay (s)	0.5	1.8	9.1	10.1
Approach LOS			A	B

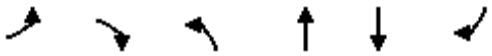
Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	23.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	128	4	51	56	35	5	8	158	71	4	10
Future Volume (Veh/h)	16	128	4	51	56	35	5	8	158	71	4	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	139	4	55	61	38	5	9	172	77	4	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	99			143			378	384	141	542	367	80
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	99			143			378	384	141	542	367	80
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			99	98	81	78	99	99
cM capacity (veh/h)	1507			1452			552	526	912	351	537	986

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	160	154	186	92
Volume Left	17	55	5	77
Volume Right	4	38	172	11
cSH	1507	1452	866	386
Volume to Capacity	0.01	0.04	0.21	0.24
Queue Length 95th (m)	0.3	0.9	6.2	7.0
Control Delay (s)	0.9	2.9	10.3	17.2
Lane LOS	A	A	B	C
Approach Delay (s)	0.9	2.9	10.3	17.2
Approach LOS			B	C

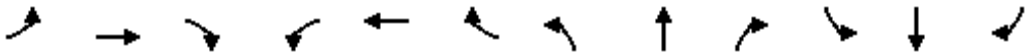
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	186	30	10	456	304	61
Future Volume (Veh/h)	186	30	10	456	304	61
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	202	33	11	496	330	66
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	881	363	396			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	881	363	396			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	36	95	99			
cM capacity (veh/h)	317	686	1174			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	235	507	396
Volume Left	202	11	0
Volume Right	33	0	66
cSH	343	1174	1700
Volume to Capacity	0.69	0.01	0.23
Queue Length 95th (m)	36.6	0.2	0.0
Control Delay (s)	35.6	0.3	0.0
Lane LOS	E	A	
Approach Delay (s)	35.6	0.3	0.0
Approach LOS	E		

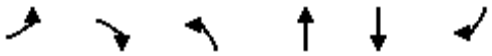
Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	30	26	1	3	25	458	20	9	629	10
Future Volume (Veh/h)	3	1	30	26	1	3	25	458	20	9	629	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	1	34	30	1	3	28	520	23	10	715	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1320	1340	720	1362	1334	532	726			543		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1320	1340	720	1362	1334	532	726			543		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.6	2.2			2.2		
p0 queue free %	98	99	92	70	99	99	97			99		
cM capacity (veh/h)	129	148	431	99	149	492	886			1036		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	38	34	28	543	736
Volume Left	3	30	28	0	10
Volume Right	34	3	0	23	11
cSH	349	108	886	1700	1036
Volume to Capacity	0.11	0.32	0.03	0.32	0.01
Queue Length 95th (m)	2.8	9.3	0.7	0.0	0.2
Control Delay (s)	16.6	53.1	9.2	0.0	0.3
Lane LOS	C	F	A		A
Approach Delay (s)	16.6	53.1	0.5		0.3
Approach LOS	C	F			

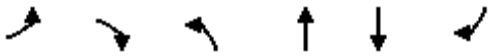
Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	55.9%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	193	150	206	207	261	245
Future Volume (Veh/h)	193	150	206	207	261	245
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	230	179	245	246	311	292
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1047	311	603			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1047	311	603			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	76	75			
cM capacity (veh/h)	191	734	984			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	409	245	246	311	292
Volume Left	230	245	0	0	0
Volume Right	179	0	0	0	292
cSH	283	984	1700	1700	1700
Volume to Capacity	1.45	0.25	0.14	0.18	0.17
Queue Length 95th (m)	171.4	7.5	0.0	0.0	0.0
Control Delay (s)	253.3	9.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	253.3	4.9		0.0	
Approach LOS	F				

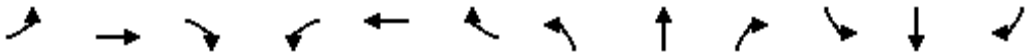
Intersection Summary			
Average Delay	70.5		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	11	6	392	491	18
Future Volume (Veh/h)	26	11	6	392	491	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	13	7	456	571	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1052	582	592			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1052	582	592			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	97	99			
cM capacity (veh/h)	252	517	994			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	43	7	456	592
Volume Left	30	7	0	0
Volume Right	13	0	0	21
cSH	298	994	1700	1700
Volume to Capacity	0.14	0.01	0.27	0.35
Queue Length 95th (m)	3.8	0.2	0.0	0.0
Control Delay (s)	19.1	8.6	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	19.1	0.1		0.0
Approach LOS	C			

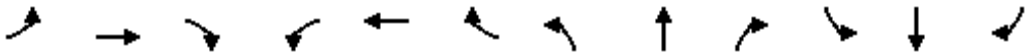
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	40	19	52	53	52	11	0	32	32	0	9
Future Volume (Veh/h)	14	40	19	52	53	52	11	0	32	32	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	43	21	57	58	57	12	0	35	35	0	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	115			64			294	312	54	319	294	86
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	115			64			294	312	54	319	294	86
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			98	100	97	94	100	99
cM capacity (veh/h)	1487			1551			632	578	1019	594	591	978

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	79	172	47	45
Volume Left	15	57	12	35
Volume Right	21	57	35	10
cSH	1487	1551	882	651
Volume to Capacity	0.01	0.04	0.05	0.07
Queue Length 95th (m)	0.2	0.9	1.3	1.7
Control Delay (s)	1.5	2.7	9.3	10.9
Lane LOS	A	A	A	B
Approach Delay (s)	1.5	2.7	9.3	10.9
Approach LOS			A	B

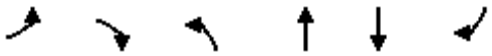
Intersection Summary				
Average Delay	4.4			
Intersection Capacity Utilization	27.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	85	8	172	148	82	6	8	105	54	9	16
Future Volume (Veh/h)	19	85	8	172	148	82	6	8	105	54	9	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	92	9	187	161	89	7	9	114	59	10	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	250			101			740	762	96	836	722	206
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	250			101			740	762	96	836	722	206
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			88			98	97	88	73	97	98
cM capacity (veh/h)	1327			1504			286	290	965	222	306	840

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	122	437	130	86
Volume Left	21	187	7	59
Volume Right	9	89	114	17
cSH	1327	1504	749	270
Volume to Capacity	0.02	0.12	0.17	0.32
Queue Length 95th (m)	0.4	3.2	4.7	10.1
Control Delay (s)	1.4	4.0	10.8	24.4
Lane LOS	A	A	B	C
Approach Delay (s)	1.4	4.0	10.8	24.4
Approach LOS			B	C

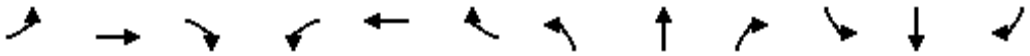
Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	119	21	32	387	486	199
Future Volume (Veh/h)	119	21	32	387	486	199
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	129	23	35	421	528	216
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1127	636	744			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1127	636	744			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	41	95	96			
cM capacity (veh/h)	219	481	873			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	152	456	744
Volume Left	129	35	0
Volume Right	23	0	216
cSH	239	873	1700
Volume to Capacity	0.64	0.04	0.44
Queue Length 95th (m)	29.4	1.0	0.0
Control Delay (s)	43.2	1.2	0.0
Lane LOS	E	A	
Approach Delay (s)	43.2	1.2	0.0
Approach LOS	E		

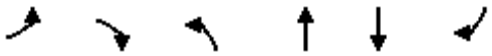
Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	3	33	27	6	4	32	536	24	4	581	13
Future Volume (Veh/h)	15	3	33	27	6	4	32	536	24	4	581	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	15	3	34	28	6	4	33	553	25	4	599	13
Pedestrians								5				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.2				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1240	1258	610	1286	1252	566	612			578		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1240	1258	610	1286	1252	566	612			578		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	98	93	78	96	99	97			100		
cM capacity (veh/h)	144	166	496	127	167	528	977			1006		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	52	38	33	578	616
Volume Left	15	28	33	0	4
Volume Right	34	4	0	25	13
cSH	273	144	977	1700	1006
Volume to Capacity	0.19	0.26	0.03	0.34	0.00
Queue Length 95th (m)	5.2	7.6	0.8	0.0	0.1
Control Delay (s)	21.3	38.8	8.8	0.0	0.1
Lane LOS	C	E	A		A
Approach Delay (s)	21.3	38.8	0.5		0.1
Approach LOS	C	E			

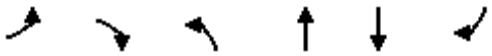
Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	46.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	212	196	198	228	228	237
Future Volume (Veh/h)	212	196	198	228	228	237
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	226	209	211	243	243	252
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	908	243	495			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	908	243	495			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	9	74	80			
cM capacity (veh/h)	248	801	1079			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	435	211	243	243	252
Volume Left	226	211	0	0	0
Volume Right	209	0	0	0	252
cSH	371	1079	1700	1700	1700
Volume to Capacity	1.17	0.20	0.14	0.14	0.15
Queue Length 95th (m)	132.1	5.5	0.0	0.0	0.0
Control Delay (s)	134.9	9.1	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	134.9	4.3		0.0	
Approach LOS	F				

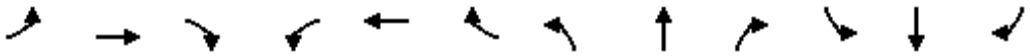
Intersection Summary			
Average Delay	43.8		
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	3	5	434	463	11
Future Volume (Veh/h)	7	3	5	434	463	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	7	3	5	452	482	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	950	488	493			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	950	488	493			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	290	584	1081			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	10	5	452	493
Volume Left	7	5	0	0
Volume Right	3	0	0	11
cSH	342	1081	1700	1700
Volume to Capacity	0.03	0.00	0.27	0.29
Queue Length 95th (m)	0.7	0.1	0.0	0.0
Control Delay (s)	15.9	8.3	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	15.9	0.1		0.0
Approach LOS	C			

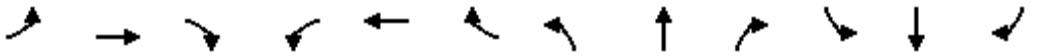
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	44	16	41	48	46	14	0	42	48	0	13
Future Volume (Veh/h)	14	44	16	41	48	46	14	0	42	48	0	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	48	17	45	52	50	15	0	46	52	0	14
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	102			65			268	278	56	300	262	77
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	102			65			268	278	56	300	262	77
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			98	100	95	91	100	99
cM capacity (veh/h)	1503			1550			659	608	1016	608	621	990

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	80	147	61	66
Volume Left	15	45	15	52
Volume Right	17	50	46	14
cSH	1503	1550	897	663
Volume to Capacity	0.01	0.03	0.07	0.10
Queue Length 95th (m)	0.2	0.7	1.7	2.5
Control Delay (s)	1.5	2.4	9.3	11.0
Lane LOS	A	A	A	B
Approach Delay (s)	1.5	2.4	9.3	11.0
Approach LOS			A	B

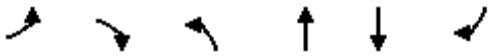
Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	28.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	122	7	143	129	73	4	5	130	71	5	10
Future Volume (Veh/h)	12	122	7	143	129	73	4	5	130	71	5	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	133	8	155	140	79	4	5	141	77	5	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	219			141			666	692	137	796	656	180
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	219			141			666	692	137	796	656	180
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			89			99	98	85	67	99	99
cM capacity (veh/h)	1362			1455			335	327	917	234	343	869

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	154	374	150	93
Volume Left	13	155	4	77
Volume Right	8	79	141	11
cSH	1362	1455	829	262
Volume to Capacity	0.01	0.11	0.18	0.36
Queue Length 95th (m)	0.2	2.7	5.0	11.7
Control Delay (s)	0.7	3.8	10.3	26.2
Lane LOS	A	A	B	D
Approach Delay (s)	0.7	3.8	10.3	26.2
Approach LOS			B	D

Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	53.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	178	28	29	412	448	192
Future Volume (Veh/h)	178	28	29	412	448	192
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	193	30	32	448	487	209
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1104	592	696			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1104	592	696			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	15	94	96			
cM capacity (veh/h)	228	510	909			

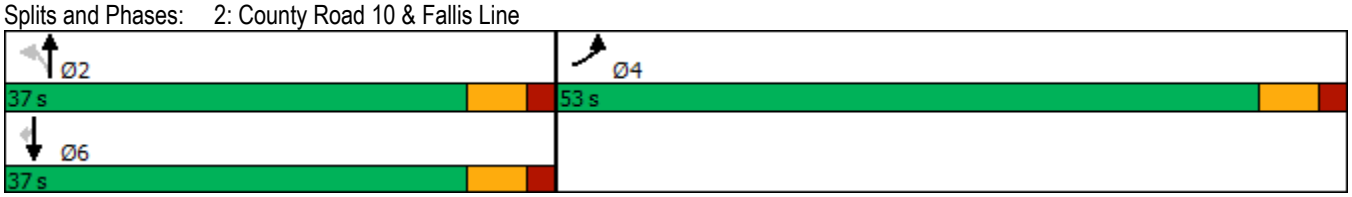
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	223	480	696
Volume Left	193	32	0
Volume Right	30	0	209
cSH	246	909	1700
Volume to Capacity	0.91	0.04	0.41
Queue Length 95th (m)	59.5	0.8	0.0
Control Delay (s)	78.8	1.0	0.0
Lane LOS	F	A	
Approach Delay (s)	78.8	1.0	0.0
Approach LOS	F		

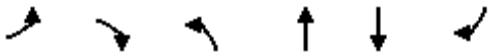
Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	218	96	248	205	110
Future Volume (vph)	218	96	248	205	110
Lane Group Flow (vph)	456	112	288	238	128
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.80	0.20	0.33	0.27	0.18
Control Delay	27.6	12.7	13.0	12.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	12.7	13.0	12.4	3.5
Queue Length 50th (m)	41.0	7.0	19.3	15.4	0.0
Queue Length 95th (m)	65.2	18.9	42.4	34.7	7.9
Internal Link Dist (m)	333.1		460.0	687.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1220	559	864	880	714
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.20	0.33	0.27	0.18

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 64.2
Natural Cycle: 45
Control Type: Semi Act-Uncoord

Splits and Phases: 2: County Road 10 & Fallis Line





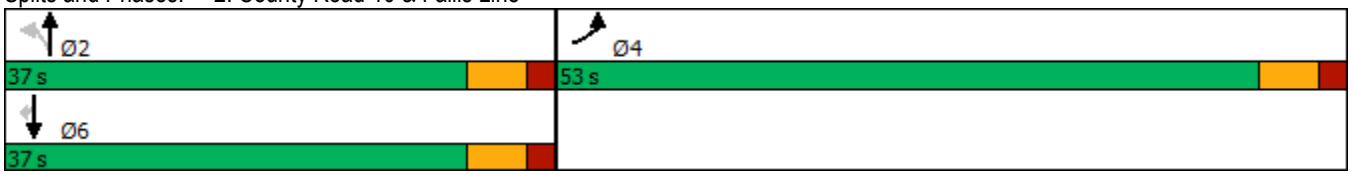
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	218	175	96	248	205	110
Future Volume (vph)	218	175	96	248	205	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1628		1785	1773	1807	1331
Flt Permitted	0.97		0.61	1.00	1.00	1.00
Satd. Flow (perm)	1628		1147	1773	1807	1331
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	253	203	112	288	238	128
RTOR Reduction (vph)	45	0	0	0	0	65
Lane Group Flow (vph)	411	0	112	288	238	63
Heavy Vehicles (%)	10%	0%	0%	6%	4%	20%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	20.8		31.3	31.3	31.3	31.3
Effective Green, g (s)	20.8		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.32		0.49	0.49	0.49	0.49
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	528		560	865	882	649
v/s Ratio Prot	c0.25			c0.16	0.13	
v/s Ratio Perm			0.10			0.05
v/c Ratio	0.78		0.20	0.33	0.27	0.10
Uniform Delay, d1	19.6		9.3	10.0	9.7	8.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	7.1		0.8	1.0	0.8	0.3
Delay (s)	26.7		10.1	11.1	10.4	9.1
Level of Service	C		B	B	B	A
Approach Delay (s)	26.7			10.8	10.0	
Approach LOS	C			B	A	

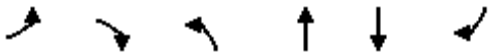
Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	64.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	193	206	207	261	245
Future Volume (vph)	193	206	207	261	245
Lane Group Flow (vph)	409	245	246	311	292
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.75	0.45	0.26	0.33	0.30
Control Delay	25.8	14.2	10.4	11.1	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	14.2	10.4	11.1	2.5
Queue Length 50th (m)	34.1	15.7	14.0	18.5	0.0
Queue Length 95th (m)	53.9	36.8	30.2	38.4	9.0
Internal Link Dist (m)	333.1		460.0	699.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1352	547	964	945	961
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.30	0.45	0.26	0.33	0.30

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 60.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord

Splits and Phases: 2: County Road 10 & Fallis Line





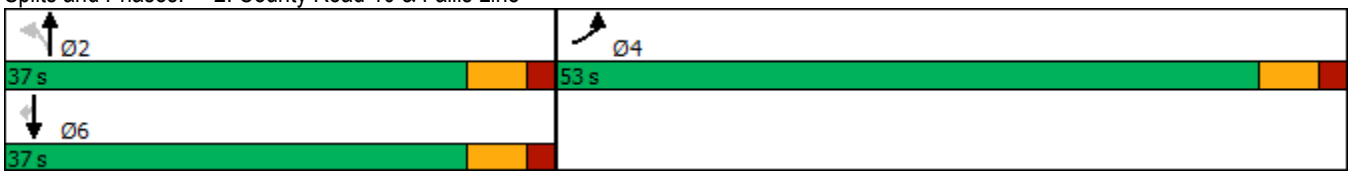
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	193	150	206	207	261	245
Future Volume (vph)	193	150	206	207	261	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1720		1785	1879	1842	1597
Flt Permitted	0.97		0.57	1.00	1.00	1.00
Satd. Flow (perm)	1720		1068	1879	1842	1597
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	230	179	245	246	311	292
RTOR Reduction (vph)	46	0	0	0	0	142
Lane Group Flow (vph)	363	0	245	246	311	150
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	17.5		31.2	31.2	31.2	31.2
Effective Green, g (s)	17.5		31.2	31.2	31.2	31.2
Actuated g/C Ratio	0.29		0.51	0.51	0.51	0.51
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	495		548	965	946	820
v/s Ratio Prot	c0.21			0.13	0.17	
v/s Ratio Perm			c0.23			0.09
v/c Ratio	0.73		0.45	0.25	0.33	0.18
Uniform Delay, d1	19.5		9.3	8.2	8.6	7.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5		2.6	0.6	0.9	0.5
Delay (s)	25.0		11.9	8.9	9.6	8.4
Level of Service	C		B	A	A	A
Approach Delay (s)	25.0			10.4	9.0	
Approach LOS	C			B	A	

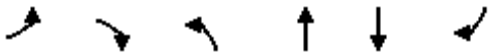
Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	212	198	228	228	237
Future Volume (vph)	212	198	228	228	237
Lane Group Flow (vph)	435	211	243	243	252
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.77	0.37	0.26	0.26	0.27
Control Delay	25.8	13.1	10.9	10.9	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	13.1	10.9	10.9	2.6
Queue Length 50th (m)	36.2	13.2	14.2	14.3	0.0
Queue Length 95th (m)	63.8	34.5	33.8	33.8	11.0
Internal Link Dist (m)	333.1		460.0	656.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1333	578	951	941	933
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.37	0.26	0.26	0.27

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 61.7
Natural Cycle: 45
Control Type: Semi Act-Uncoord

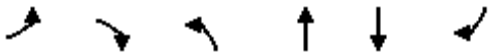
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	212	196	198	228	228	237
Future Volume (vph)	212	196	198	228	228	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1713		1785	1879	1860	1597
Flt Permitted	0.97		0.61	1.00	1.00	1.00
Satd. Flow (perm)	1713		1142	1879	1860	1597
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	226	209	211	243	243	252
RTOR Reduction (vph)	54	0	0	0	0	124
Lane Group Flow (vph)	381	0	211	243	243	128
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	18.4		31.2	31.2	31.2	31.2
Effective Green, g (s)	18.4		31.2	31.2	31.2	31.2
Actuated g/C Ratio	0.30		0.51	0.51	0.51	0.51
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	511		578	951	942	808
v/s Ratio Prot	c0.22			0.13	0.13	
v/s Ratio Perm			c0.18			0.08
v/c Ratio	0.75		0.37	0.26	0.26	0.16
Uniform Delay, d1	19.5		9.2	8.6	8.6	8.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.9		1.8	0.6	0.7	0.4
Delay (s)	25.3		11.0	9.3	9.3	8.6
Level of Service	C		B	A	A	A
Approach Delay (s)	25.3			10.1	8.9	
Approach LOS	C			B	A	

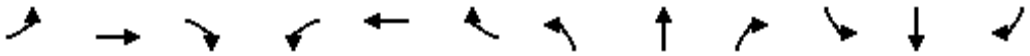
Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	178	28	29	412	448	192
Future Volume (Veh/h)	178	28	29	412	448	192
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	193	30	32	448	487	209
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	999	487	696			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	999	487	696			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	27	95	96			
cM capacity (veh/h)	263	585	909			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	223	32	448	487	209
Volume Left	193	32	0	0	0
Volume Right	30	0	0	0	209
cSH	284	909	1700	1700	1700
Volume to Capacity	0.79	0.04	0.26	0.29	0.12
Queue Length 95th (m)	46.4	0.8	0.0	0.0	0.0
Control Delay (s)	52.1	9.1	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	52.1	0.6		0.0	
Approach LOS	F				

Intersection Summary				
Average Delay	8.5			
Intersection Capacity Utilization	42.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	23	14	2	11	27	605	32	6	348	4
Future Volume (Veh/h)	4	5	23	14	2	11	27	605	32	6	348	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	5	6	27	17	2	13	32	720	38	7	414	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1228	1252	416	1264	1236	739	419			758		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1228	1252	416	1264	1236	739	419			758		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	96	95	87	99	97	97			99		
cM capacity (veh/h)	146	168	599	134	171	421	1151			862		

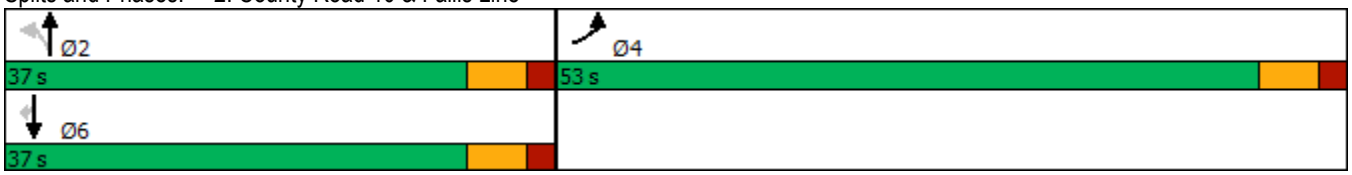
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	38	32	32	758	426
Volume Left	5	17	32	0	7
Volume Right	27	13	0	38	5
cSH	330	188	1151	1700	862
Volume to Capacity	0.12	0.17	0.03	0.45	0.01
Queue Length 95th (m)	2.9	4.5	0.7	0.0	0.2
Control Delay (s)	17.3	28.0	8.2	0.0	0.2
Lane LOS	C	D	A		A
Approach Delay (s)	17.3	28.0	0.3		0.2
Approach LOS	C	D			

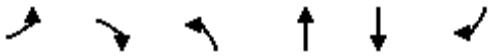
Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	45.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	219	98	272	224	111
Future Volume (vph)	219	98	272	224	111
Lane Group Flow (vph)	461	114	316	260	129
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.80	0.21	0.37	0.30	0.18
Control Delay	27.6	12.9	13.5	12.7	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	12.9	13.5	12.7	3.5
Queue Length 50th (m)	41.7	7.2	21.8	17.2	0.0
Queue Length 95th (m)	65.9	19.6	47.0	38.4	8.0
Internal Link Dist (m)	333.1		460.0	687.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1217	546	861	877	712
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.21	0.37	0.30	0.18

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 64.4
Natural Cycle: 45
Control Type: Semi Act-Uncoord

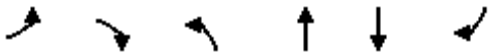
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	219	177	98	272	224	111
Future Volume (vph)	219	177	98	272	224	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1628		1785	1773	1807	1331
Flt Permitted	0.97		0.60	1.00	1.00	1.00
Satd. Flow (perm)	1628		1125	1773	1807	1331
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	255	206	114	316	260	129
RTOR Reduction (vph)	46	0	0	0	0	66
Lane Group Flow (vph)	415	0	114	316	260	63
Heavy Vehicles (%)	10%	0%	0%	6%	4%	20%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	21.0		31.3	31.3	31.3	31.3
Effective Green, g (s)	21.0		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.33		0.49	0.49	0.49	0.49
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	531		547	863	879	647
v/s Ratio Prot	c0.26			c0.18	0.14	
v/s Ratio Perm			0.10			0.05
v/c Ratio	0.78		0.21	0.37	0.30	0.10
Uniform Delay, d1	19.6		9.4	10.3	9.9	8.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	7.4		0.9	1.2	0.9	0.3
Delay (s)	27.0		10.3	11.5	10.8	9.2
Level of Service	C		B	B	B	A
Approach Delay (s)	27.0			11.2	10.2	
Approach LOS	C			B	B	

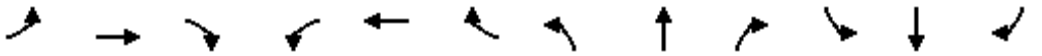
Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	484	328	23
Future Volume (Veh/h)	8	4	8	484	328	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	5	9	569	386	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	986	400	413			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	986	400	413			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	275	655	1157			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	14	9	569	413
Volume Left	9	9	0	0
Volume Right	5	0	0	27
cSH	347	1157	1700	1700
Volume to Capacity	0.04	0.01	0.33	0.24
Queue Length 95th (m)	1.0	0.2	0.0	0.0
Control Delay (s)	15.8	8.1	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	15.8	0.1		0.0
Approach LOS	C			

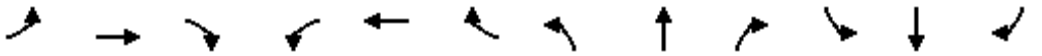
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	44	6	17	35	18	17	0	49	49	0	14
Future Volume (Veh/h)	4	44	6	17	35	18	17	0	49	49	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	48	7	18	38	20	18	0	53	53	0	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	58			55			158	154	52	196	147	48
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	58			55			158	154	52	196	147	48
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	100	95	93	100	99
cM capacity (veh/h)	1559			1563			791	732	1022	719	738	1027

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	59	76	71	68
Volume Left	4	18	18	53
Volume Right	7	20	53	15
cSH	1559	1563	952	770
Volume to Capacity	0.00	0.01	0.07	0.09
Queue Length 95th (m)	0.1	0.3	1.8	2.2
Control Delay (s)	0.5	1.8	9.1	10.1
Lane LOS	A	A	A	B
Approach Delay (s)	0.5	1.8	9.1	10.1
Approach LOS			A	B

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	24.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	131	4	51	58	35	5	8	158	71	4	10
Future Volume (Veh/h)	16	131	4	51	58	35	5	8	158	71	4	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	142	4	55	63	38	5	9	172	77	4	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					357							
pX, platoon unblocked												
vC, conflicting volume	101			146			364	389	144	546	372	82
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	101			146			364	389	144	546	372	82
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			99	98	81	78	99	99
cM capacity (veh/h)	1504			1448			564	522	909	348	534	983

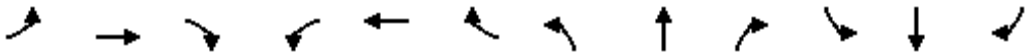
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	163	55	101	186	92
Volume Left	17	55	0	5	77
Volume Right	4	0	38	172	11
cSH	1504	1448	1700	864	383
Volume to Capacity	0.01	0.04	0.06	0.22	0.24
Queue Length 95th (m)	0.3	0.9	0.0	6.2	7.0
Control Delay (s)	0.9	7.6	0.0	10.3	17.3
Lane LOS	A	A		B	C
Approach Delay (s)	0.9	2.7		10.3	17.3
Approach LOS				B	C

Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	41.6%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	186	30	10	482	324	61
Future Volume (Veh/h)	186	30	10	482	324	61
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	202	33	11	524	352	66
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	898	352	418			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	898	352	418			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	35	95	99			
cM capacity (veh/h)	309	696	1152			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	235	11	524	352	66
Volume Left	202	11	0	0	0
Volume Right	33	0	0	0	66
cSH	336	1152	1700	1700	1700
Volume to Capacity	0.70	0.01	0.31	0.21	0.04
Queue Length 95th (m)	38.1	0.2	0.0	0.0	0.0
Control Delay (s)	37.3	8.2	0.0	0.0	0.0
Lane LOS	E	A			
Approach Delay (s)	37.3	0.2		0.0	
Approach LOS	E				

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	31	27	1	4	26	476	21	10	654	11
Future Volume (Veh/h)	3	1	31	27	1	4	26	476	21	10	654	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	1	35	31	1	5	30	541	24	11	743	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1378	1396	750	1420	1391	553	756			565		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1378	1396	750	1420	1391	553	756			565		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.6	2.2			2.2		
p0 queue free %	97	99	92	65	99	99	97			99		
cM capacity (veh/h)	117	136	415	89	137	478	864			1017		

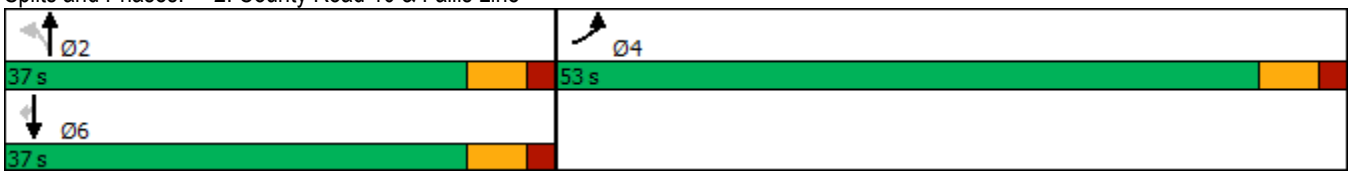
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	39	37	30	565	767
Volume Left	3	31	30	0	11
Volume Right	35	5	0	24	13
cSH	332	101	864	1700	1017
Volume to Capacity	0.12	0.36	0.03	0.33	0.01
Queue Length 95th (m)	3.0	11.1	0.8	0.0	0.2
Control Delay (s)	17.3	59.6	9.3	0.0	0.3
Lane LOS	C	F	A		A
Approach Delay (s)	17.3	59.6	0.5		0.3
Approach LOS	C	F			

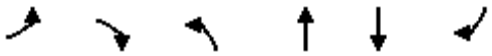
Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	58.2%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	194	208	226	287	246
Future Volume (vph)	194	208	226	287	246
Lane Group Flow (vph)	413	248	269	342	293
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.76	0.48	0.28	0.36	0.31
Control Delay	25.8	15.2	10.7	11.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	15.2	10.7	11.5	2.5
Queue Length 50th (m)	34.6	16.3	15.6	20.8	0.0
Queue Length 95th (m)	54.3	38.3	33.2	42.7	9.0
Internal Link Dist (m)	333.1		460.0	699.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1350	517	962	943	960
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.48	0.28	0.36	0.31

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 60.9
Natural Cycle: 50
Control Type: Semi Act-Uncoord

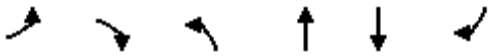
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	194	153	208	226	287	246
Future Volume (vph)	194	153	208	226	287	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719		1785	1879	1842	1597
Flt Permitted	0.97		0.54	1.00	1.00	1.00
Satd. Flow (perm)	1719		1012	1879	1842	1597
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	231	182	248	269	342	293
RTOR Reduction (vph)	47	0	0	0	0	143
Lane Group Flow (vph)	366	0	248	269	342	150
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	17.6		31.2	31.2	31.2	31.2
Effective Green, g (s)	17.6		31.2	31.2	31.2	31.2
Actuated g/C Ratio	0.29		0.51	0.51	0.51	0.51
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	497		519	964	945	819
v/s Ratio Prot	c0.21			0.14	0.19	
v/s Ratio Perm			c0.25			0.09
v/c Ratio	0.74		0.48	0.28	0.36	0.18
Uniform Delay, d1	19.5		9.5	8.4	8.8	8.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.6		3.1	0.7	1.1	0.5
Delay (s)	25.1		12.7	9.1	9.9	8.4
Level of Service	C		B	A	A	A
Approach Delay (s)	25.1			10.8	9.2	
Approach LOS	C			B	A	

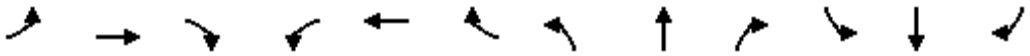
Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	11	6	412	518	18
Future Volume (Veh/h)	26	11	6	412	518	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	13	7	479	602	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1106	612	623			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1106	612	623			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	97	99			
cM capacity (veh/h)	233	496	968			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	43	7	479	623
Volume Left	30	7	0	0
Volume Right	13	0	0	21
cSH	278	968	1700	1700
Volume to Capacity	0.15	0.01	0.28	0.37
Queue Length 95th (m)	4.1	0.2	0.0	0.0
Control Delay (s)	20.3	8.7	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	20.3	0.1		0.0
Approach LOS	C			

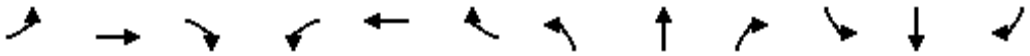
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	42	19	52	57	52	11	0	32	32	0	9
Future Volume (Veh/h)	14	42	19	52	57	52	11	0	32	32	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	46	21	57	62	57	12	0	35	35	0	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	119			67			301	320	56	326	302	90
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	119			67			301	320	56	326	302	90
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			98	100	97	94	100	99
cM capacity (veh/h)	1482			1547			625	573	1016	588	586	973

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	82	176	47	45
Volume Left	15	57	12	35
Volume Right	21	57	35	10
cSH	1482	1547	876	644
Volume to Capacity	0.01	0.04	0.05	0.07
Queue Length 95th (m)	0.2	0.9	1.3	1.7
Control Delay (s)	1.4	2.6	9.3	11.0
Lane LOS	A	A	A	B
Approach Delay (s)	1.4	2.6	9.3	11.0
Approach LOS			A	B

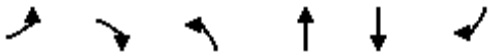
Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	27.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	85	8	172	148	82	6	8	105	54	9	16
Future Volume (Veh/h)	19	85	8	172	148	82	6	8	105	54	9	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	92	9	187	161	89	7	9	114	59	10	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					357							
pX, platoon unblocked												
vC, conflicting volume	250			101			696	762	96	836	722	206
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	250			101			696	762	96	836	722	206
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			88			98	97	88	73	97	98
cM capacity (veh/h)	1327			1504			307	290	965	222	306	840

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	122	187	250	130	86
Volume Left	21	187	0	7	59
Volume Right	9	0	89	114	17
cSH	1327	1504	1700	756	270
Volume to Capacity	0.02	0.12	0.15	0.17	0.32
Queue Length 95th (m)	0.4	3.2	0.0	4.7	10.1
Control Delay (s)	1.4	7.7	0.0	10.7	24.4
Lane LOS	A	A		B	C
Approach Delay (s)	1.4	3.3		10.7	24.4
Approach LOS				B	C

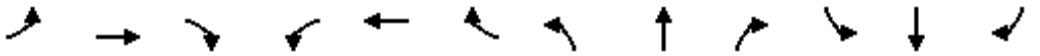
Intersection Summary				
Average Delay	6.6			
Intersection Capacity Utilization	39.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	119	21	32	408	513	199
Future Volume (Veh/h)	119	21	32	408	513	199
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	129	23	35	443	558	216
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1071	558	774			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1071	558	774			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	45	96	96			
cM capacity (veh/h)	236	533	851			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	152	35	443	558	216
Volume Left	129	35	0	0	0
Volume Right	23	0	0	0	216
cSH	258	851	1700	1700	1700
Volume to Capacity	0.59	0.04	0.26	0.33	0.13
Queue Length 95th (m)	26.0	1.0	0.0	0.0	0.0
Control Delay (s)	37.1	9.4	0.0	0.0	0.0
Lane LOS	E	A			
Approach Delay (s)	37.1	0.7		0.0	
Approach LOS	E				

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	41.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	4	34	27	7	5	33	555	25	5	601	14
Future Volume (Veh/h)	17	4	34	27	7	5	33	555	25	5	601	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	18	4	35	28	7	5	34	572	26	5	620	14
Pedestrians								5				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.2				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1286	1303	632	1332	1297	585	634			598		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1286	1303	632	1332	1297	585	634			598		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	97	93	76	96	99	96			99		
cM capacity (veh/h)	132	155	482	116	157	515	959			989		

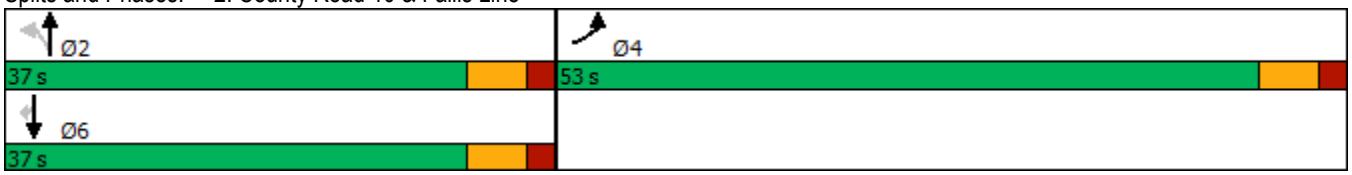
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	57	40	34	598	639
Volume Left	18	28	34	0	5
Volume Right	35	5	0	26	14
cSH	243	136	959	1700	989
Volume to Capacity	0.23	0.29	0.04	0.35	0.01
Queue Length 95th (m)	6.7	8.7	0.8	0.0	0.1
Control Delay (s)	24.3	42.3	8.9	0.0	0.1
Lane LOS	C	E	A		A
Approach Delay (s)	24.3	42.3	0.5		0.1
Approach LOS	C	E			

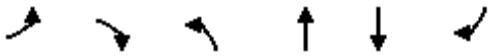
Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	48.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	212	198	248	249	238
Future Volume (vph)	212	198	248	249	238
Lane Group Flow (vph)	438	211	264	265	253
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.77	0.37	0.28	0.28	0.27
Control Delay	25.8	13.4	11.1	11.2	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	13.4	11.1	11.2	2.6
Queue Length 50th (m)	36.4	13.3	15.8	15.9	0.0
Queue Length 95th (m)	64.2	34.8	36.8	37.0	11.0
Internal Link Dist (m)	333.1		460.0	656.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1331	566	950	940	932
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.37	0.28	0.28	0.27

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 61.8
Natural Cycle: 45
Control Type: Semi Act-Uncoord

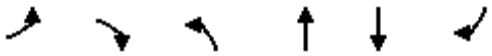
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	212	199	198	248	249	238
Future Volume (vph)	212	199	198	248	249	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1712		1785	1879	1860	1597
Flt Permitted	0.97		0.60	1.00	1.00	1.00
Satd. Flow (perm)	1712		1119	1879	1860	1597
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	226	212	211	264	265	253
RTOR Reduction (vph)	55	0	0	0	0	125
Lane Group Flow (vph)	383	0	211	264	265	128
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	18.4		31.2	31.2	31.2	31.2
Effective Green, g (s)	18.4		31.2	31.2	31.2	31.2
Actuated g/C Ratio	0.30		0.51	0.51	0.51	0.51
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	511		566	951	942	808
v/s Ratio Prot	c0.22			0.14	0.14	
v/s Ratio Perm			c0.19			0.08
v/c Ratio	0.75		0.37	0.28	0.28	0.16
Uniform Delay, d1	19.5		9.2	8.7	8.7	8.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.9		1.9	0.7	0.7	0.4
Delay (s)	25.5		11.1	9.5	9.5	8.6
Level of Service	C		B	A	A	A
Approach Delay (s)	25.5			10.2	9.0	
Approach LOS	C			B	A	

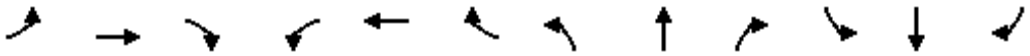
Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	3	5	455	485	11
Future Volume (Veh/h)	7	3	5	455	485	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	7	3	5	474	505	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	994	510	516			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	994	510	516			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	273	567	1060			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	10	5	474	516
Volume Left	7	5	0	0
Volume Right	3	0	0	11
cSH	323	1060	1700	1700
Volume to Capacity	0.03	0.00	0.28	0.30
Queue Length 95th (m)	0.7	0.1	0.0	0.0
Control Delay (s)	16.5	8.4	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	16.5	0.1		0.0
Approach LOS	C			

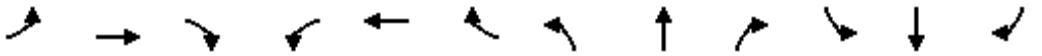
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	47	16	41	51	46	14	0	42	48	0	13
Future Volume (Veh/h)	14	47	16	41	51	46	14	0	42	48	0	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	51	17	45	55	50	15	0	46	52	0	14
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	105			68			274	284	60	306	268	80
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	105			68			274	284	60	306	268	80
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			98	100	95	91	100	99
cM capacity (veh/h)	1499			1546			653	604	1012	603	617	986

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	83	150	61	66
Volume Left	15	45	15	52
Volume Right	17	50	46	14
cSH	1499	1546	892	657
Volume to Capacity	0.01	0.03	0.07	0.10
Queue Length 95th (m)	0.2	0.7	1.7	2.5
Control Delay (s)	1.4	2.4	9.3	11.1
Lane LOS	A	A	A	B
Approach Delay (s)	1.4	2.4	9.3	11.1
Approach LOS			A	B

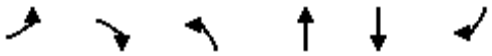
Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	28.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	125	7	143	132	73	4	5	130	71	5	10
Future Volume (Veh/h)	12	125	7	143	132	73	4	5	130	71	5	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	136	8	155	143	79	4	5	141	77	5	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					357							
pX, platoon unblocked												
vC, conflicting volume	222			144			632	698	140	802	662	182
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	222			144			632	698	140	802	662	182
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			89			99	98	85	67	99	99
cM capacity (veh/h)	1359			1451			352	325	913	232	340	865

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	157	155	222	150	93
Volume Left	13	155	0	4	77
Volume Right	8	0	79	141	11
cSH	1359	1451	1700	828	259
Volume to Capacity	0.01	0.11	0.13	0.18	0.36
Queue Length 95th (m)	0.2	2.7	0.0	5.0	11.9
Control Delay (s)	0.7	7.8	0.0	10.3	26.5
Lane LOS	A	A		B	D
Approach Delay (s)	0.7	3.2		10.3	26.5
Approach LOS				B	D

Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	45.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	178	28	29	433	471	192
Future Volume (Veh/h)	178	28	29	433	471	192
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	193	30	32	471	512	209
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1047	512	721			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1047	512	721			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	21	95	96			
cM capacity (veh/h)	246	566	890			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	223	32	471	512	209
Volume Left	193	32	0	0	0
Volume Right	30	0	0	0	209
cSH	266	890	1700	1700	1700
Volume to Capacity	0.84	0.04	0.28	0.30	0.12
Queue Length 95th (m)	52.0	0.8	0.0	0.0	0.0
Control Delay (s)	62.4	9.2	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	62.4	0.6		0.0	
Approach LOS	F				

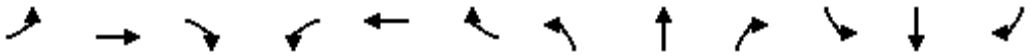
Intersection Summary				
Average Delay	9.8			
Intersection Capacity Utilization	43.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	42	7	25	14	28	668	7	581
Future Volume (vph)	42	7	25	14	28	668	7	581
Lane Group Flow (vph)	0	87	0	61	33	837	0	958
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
v/c Ratio		0.50		0.32	0.07	0.61		0.82
Control Delay		33.4		29.8	4.1	7.9		16.3
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		33.4		29.8	4.1	7.9		16.3
Queue Length 50th (m)		8.5		6.6	1.1	49.9		80.2
Queue Length 95th (m)		18.8		15.0	3.8	87.5		#182.7
Internal Link Dist (m)		884.7		354.8		385.0		381.6
Turn Bay Length (m)					85.0			
Base Capacity (vph)		419		481	466	1378		1171
Starvation Cap Reductn		0		0	0	0		0
Spillback Cap Reductn		0		0	0	0		0
Storage Cap Reductn		0		0	0	0		0
Reduced v/c Ratio		0.21		0.13	0.07	0.61		0.82

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 79.6
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: County Road 10 & Larmer Line



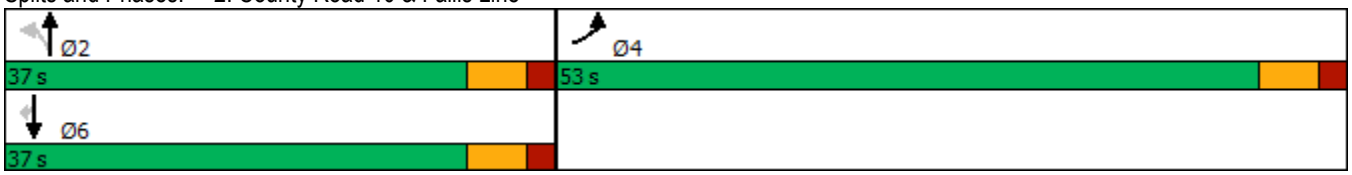
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	7	24	25	14	12	28	668	35	7	581	217
Future Volume (vph)	42	7	24	25	14	12	28	668	35	7	581	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frt		0.95			0.97		1.00	0.99			0.96	
Flt Protected		0.97			0.98		0.95	1.00			1.00	
Satd. Flow (prot)		1635			1777		1785	1764			1497	
Flt Permitted		0.79			0.86		0.32	1.00			0.99	
Satd. Flow (perm)		1326			1559		597	1764			1488	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	50	8	29	30	17	14	33	795	42	8	692	258
RTOR Reduction (vph)	0	24	0	0	13	0	0	1	0	0	9	0
Lane Group Flow (vph)	0	63	0	0	48	0	33	836	0	0	949	0
Heavy Vehicles (%)	0%	0%	20%	0%	0%	0%	0%	6%	0%	0%	4%	67%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.9			7.9		60.9	60.9			60.9	
Effective Green, g (s)		7.9			7.9		60.9	60.9			60.9	
Actuated g/C Ratio		0.10			0.10		0.75	0.75			0.75	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		129			152		449	1329			1121	
v/s Ratio Prot								0.47				
v/s Ratio Perm		c0.05			0.03		0.06				c0.64	
v/c Ratio		0.49			0.32		0.07	0.63			0.85	
Uniform Delay, d1		34.5			33.9		2.6	4.7			6.8	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		2.9			1.2		0.3	2.3			7.9	
Delay (s)		37.4			35.2		2.9	6.9			14.7	
Level of Service		D			D		A	A			B	
Approach Delay (s)		37.4			35.2			6.8			14.7	
Approach LOS		D			D			A			B	

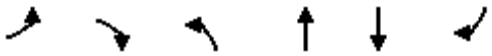
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	291	100	402	262	124
Future Volume (vph)	291	100	402	262	124
Lane Group Flow (vph)	546	116	467	305	144
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.84	0.26	0.59	0.38	0.21
Control Delay	30.0	16.9	20.5	16.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	16.9	20.5	16.7	4.1
Queue Length 50th (m)	57.1	8.9	43.2	25.0	0.0
Queue Length 95th (m)	84.7	24.3	89.3	54.2	9.7
Internal Link Dist (m)	333.1		460.0	687.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1122	454	793	808	675
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.26	0.59	0.38	0.21

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 70.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord

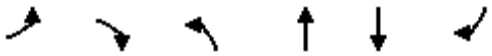
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	291	179	100	402	262	124
Future Volume (vph)	291	179	100	402	262	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1628		1785	1773	1807	1331
Flt Permitted	0.97		0.54	1.00	1.00	1.00
Satd. Flow (perm)	1628		1015	1773	1807	1331
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	338	208	116	467	305	144
RTOR Reduction (vph)	32	0	0	0	0	79
Lane Group Flow (vph)	514	0	116	467	305	65
Heavy Vehicles (%)	10%	0%	0%	6%	4%	20%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	26.6		31.4	31.4	31.4	31.4
Effective Green, g (s)	26.6		31.4	31.4	31.4	31.4
Actuated g/C Ratio	0.38		0.45	0.45	0.45	0.45
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	618		455	795	810	597
v/s Ratio Prot	c0.32			c0.26	0.17	
v/s Ratio Perm			0.11			0.05
v/c Ratio	0.83		0.25	0.59	0.38	0.11
Uniform Delay, d1	19.7		12.0	14.5	12.8	11.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	9.3		1.3	3.2	1.3	0.4
Delay (s)	29.0		13.4	17.6	14.1	11.6
Level of Service	C		B	B	B	B
Approach Delay (s)	29.0			16.8	13.3	
Approach LOS	C			B	B	

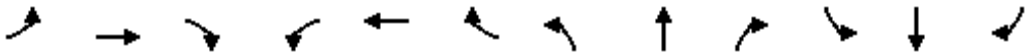
Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	686	378	23
Future Volume (Veh/h)	8	4	8	686	378	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	5	9	807	445	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1284	458	472			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1284	458	472			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	182	607	1100			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	14	9	807	472
Volume Left	9	9	0	0
Volume Right	5	0	0	27
cSH	243	1100	1700	1700
Volume to Capacity	0.06	0.01	0.47	0.28
Queue Length 95th (m)	1.4	0.2	0.0	0.0
Control Delay (s)	20.7	8.3	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	20.7	0.1		0.0
Approach LOS	C			

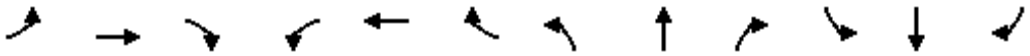
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	77	6	18	42	19	17	0	56	56	0	14
Future Volume (Veh/h)	4	77	6	18	42	19	17	0	56	56	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	84	7	20	46	21	18	0	61	61	0	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	67			91			207	202	88	253	196	56
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	67			91			207	202	88	253	196	56
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	100	94	91	100	99
cM capacity (veh/h)	1547			1517			735	686	976	653	692	1016

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	95	87	79	76
Volume Left	4	20	18	61
Volume Right	7	21	61	15
cSH	1547	1517	908	702
Volume to Capacity	0.00	0.01	0.09	0.11
Queue Length 95th (m)	0.1	0.3	2.2	2.8
Control Delay (s)	0.3	1.8	9.3	10.7
Lane LOS	A	A	A	B
Approach Delay (s)	0.3	1.8	9.3	10.7
Approach LOS			A	B

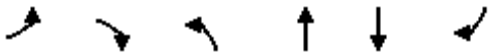
Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	28.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	178	4	55	67	36	5	8	178	78	4	10
Future Volume (Veh/h)	16	178	4	55	67	36	5	8	178	78	4	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	193	4	60	73	39	5	9	193	85	4	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					357							
pX, platoon unblocked												
vC, conflicting volume	112			197			435	461	195	639	444	92
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			197			435	461	195	639	444	92
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			99	98	77	70	99	99
cM capacity (veh/h)	1490			1388			504	473	851	286	484	970

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	214	60	112	207	100
Volume Left	17	60	0	5	85
Volume Right	4	0	39	193	11
cSH	1490	1388	1700	810	316
Volume to Capacity	0.01	0.04	0.07	0.26	0.32
Queue Length 95th (m)	0.3	1.0	0.0	7.7	10.1
Control Delay (s)	0.7	7.7	0.0	11.0	21.6
Lane LOS	A	A		B	C
Approach Delay (s)	0.7	2.7		11.0	21.6
Approach LOS				B	C

Intersection Summary				
Average Delay	7.3			
Intersection Capacity Utilization	46.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	213	30	10	684	375	66
Future Volume (Veh/h)	213	30	10	684	375	66
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	232	33	11	743	408	72
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1173	408	480			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1173	408	480			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	95	99			
cM capacity (veh/h)	212	648	1093			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	265	11	743	408	72
Volume Left	232	11	0	0	0
Volume Right	33	0	0	0	72
cSH	231	1093	1700	1700	1700
Volume to Capacity	1.14	0.01	0.44	0.24	0.04
Queue Length 95th (m)	93.3	0.2	0.0	0.0	0.0
Control Delay (s)	148.4	8.3	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	148.4	0.1		0.0	
Approach LOS	F				

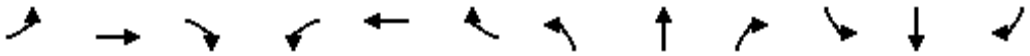
Intersection Summary			
Average Delay	26.3		
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	174	10	30	4	27	667	11	742
Future Volume (vph)	174	10	30	4	27	667	11	742
Lane Group Flow (vph)	0	245	0	44	31	792	0	938
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
v/c Ratio		0.80		0.17	0.09	0.67		0.80
Control Delay		49.8		25.3	8.1	14.3		19.7
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		49.8		25.3	8.1	14.3		19.7
Queue Length 50th (m)		36.4		5.1	1.8	76.1		105.6
Queue Length 95th (m)		60.2		13.0	5.8	124.6		#182.7
Internal Link Dist (m)		884.7		354.8		385.0		381.6
Turn Bay Length (m)					85.0			
Base Capacity (vph)		380		315	346	1186		1167
Starvation Cap Reductn		0		0	0	0		0
Spillback Cap Reductn		0		0	0	0		0
Storage Cap Reductn		0		0	0	0		0
Reduced v/c Ratio		0.64		0.14	0.09	0.67		0.80

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 87.1
Natural Cycle: 65
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: County Road 10 & Larmer Line



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	10	32	30	4	4	27	667	30	11	742	72
Future Volume (vph)	174	10	32	30	4	4	27	667	30	11	742	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frt		0.98			0.98		1.00	0.99			0.99	
Flt Protected		0.96			0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1770			1447		1785	1849			1839	
Flt Permitted		0.74			0.75		0.29	1.00			0.99	
Satd. Flow (perm)		1357			1127		540	1849			1817	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	198	11	36	34	5	5	31	758	34	12	843	82
RTOR Reduction (vph)	0	7	0	0	4	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	238	0	0	40	0	31	791	0	0	934	0
Heavy Vehicles (%)	0%	0%	0%	25%	0%	33%	0%	1%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.3			19.3		55.8	55.8			55.8	
Effective Green, g (s)		19.3			19.3		55.8	55.8			55.8	
Actuated g/C Ratio		0.22			0.22		0.64	0.64			0.64	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		300			249		345	1184			1164	
v/s Ratio Prot								0.43				
v/s Ratio Perm		c0.18			0.04		0.06				c0.51	
v/c Ratio		0.79			0.16		0.09	0.67			0.80	
Uniform Delay, d1		32.0			27.4		6.0	9.8			11.6	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		13.4			0.3		0.5	3.0			5.9	
Delay (s)		45.4			27.7		6.5	12.8			17.5	
Level of Service		D			C		A	B			B	
Approach Delay (s)		45.4			27.7			12.6			17.5	
Approach LOS		D			C			B			B	

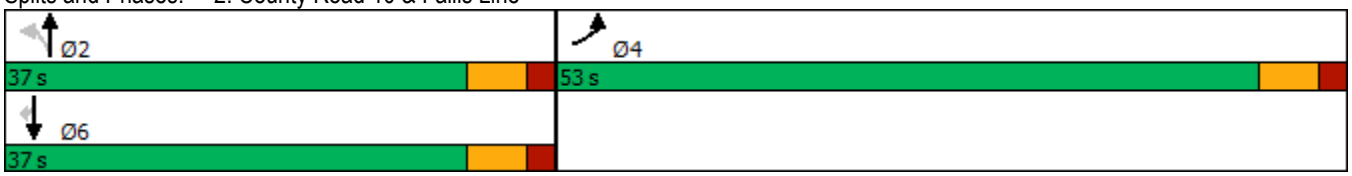
Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

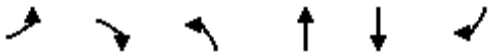
Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	214	210	276	398	303
Future Volume (vph)	214	210	276	398	303
Lane Group Flow (vph)	440	250	329	474	361
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.77	0.65	0.35	0.51	0.37
Control Delay	26.6	24.3	12.1	14.3	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	24.3	12.1	14.3	2.7
Queue Length 50th (m)	38.8	19.5	21.0	33.6	0.0
Queue Length 95th (m)	59.3	#55.5	43.0	65.6	10.1
Internal Link Dist (m)	333.1		460.0	699.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1322	386	941	922	979
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.65	0.35	0.51	0.37

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 62.4
Natural Cycle: 55
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

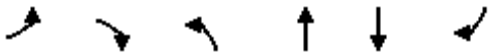
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	214	155	210	276	398	303
Future Volume (vph)	214	155	210	276	398	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1722		1785	1879	1842	1597
Flt Permitted	0.97		0.41	1.00	1.00	1.00
Satd. Flow (perm)	1722		773	1879	1842	1597
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	255	185	250	329	474	361
RTOR Reduction (vph)	42	0	0	0	0	180
Lane Group Flow (vph)	398	0	250	329	474	181
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	19.1		31.2	31.2	31.2	31.2
Effective Green, g (s)	19.1		31.2	31.2	31.2	31.2
Actuated g/C Ratio	0.31		0.50	0.50	0.50	0.50
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	527		387	941	922	799
v/s Ratio Prot	c0.23			0.18	0.26	
v/s Ratio Perm			c0.32			0.11
v/c Ratio	0.75		0.65	0.35	0.51	0.23
Uniform Delay, d1	19.5		11.5	9.4	10.5	8.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1		8.1	1.0	2.0	0.7
Delay (s)	25.6		19.6	10.4	12.5	9.4
Level of Service	C		B	B	B	A
Approach Delay (s)	25.6			14.4	11.2	
Approach LOS	C			B	B	

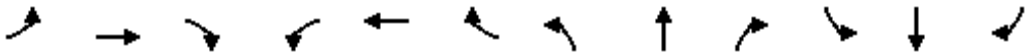
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	11	6	482	685	18
Future Volume (Veh/h)	26	11	6	482	685	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	13	7	560	797	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1382	808	818			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1382	808	818			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	97	99			
cM capacity (veh/h)	159	384	819			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	43	7	560	818
Volume Left	30	7	0	0
Volume Right	13	0	0	21
cSH	193	819	1700	1700
Volume to Capacity	0.22	0.01	0.33	0.48
Queue Length 95th (m)	6.3	0.2	0.0	0.0
Control Delay (s)	28.9	9.4	0.0	0.0
Lane LOS	D	A		
Approach Delay (s)	28.9	0.1		0.0
Approach LOS	D			

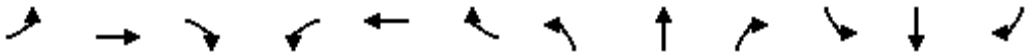
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	53	19	57	85	57	11	0	34	34	0	9
Future Volume (Veh/h)	14	53	19	57	85	57	11	0	34	34	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	58	21	62	92	62	12	0	37	37	0	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	154			79			356	376	68	382	356	123
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	154			79			356	376	68	382	356	123
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			98	100	96	93	100	99
cM capacity (veh/h)	1439			1532			574	530	1000	536	544	933

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	94	216	49	47
Volume Left	15	62	12	37
Volume Right	21	62	37	10
cSH	1439	1532	846	590
Volume to Capacity	0.01	0.04	0.06	0.08
Queue Length 95th (m)	0.2	1.0	1.4	2.0
Control Delay (s)	1.3	2.4	9.5	11.6
Lane LOS	A	A	A	B
Approach Delay (s)	1.3	2.4	9.5	11.6
Approach LOS			A	B

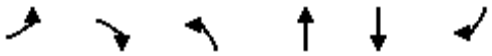
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	30.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	100	8	188	186	87	6	8	111	56	9	16
Future Volume (Veh/h)	19	100	8	188	186	87	6	8	111	56	9	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	109	9	204	202	95	7	9	121	61	10	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					357							
pX, platoon unblocked												
vC, conflicting volume	297			118			788	860	114	938	818	250
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	297			118			788	860	114	938	818	250
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			86			97	96	87	67	96	98
cM capacity (veh/h)	1276			1483			262	251	945	185	266	794

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	139	204	297	137	88
Volume Left	21	204	0	7	61
Volume Right	9	0	95	121	17
cSH	1276	1483	1700	718	226
Volume to Capacity	0.02	0.14	0.17	0.19	0.39
Queue Length 95th (m)	0.4	3.6	0.0	5.3	13.2
Control Delay (s)	1.3	7.8	0.0	11.2	30.7
Lane LOS	A	A		B	D
Approach Delay (s)	1.3	3.2		11.2	30.7
Approach LOS				B	D

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	39.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	127	21	32	479	680	221
Future Volume (Veh/h)	127	21	32	479	680	221
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	138	23	35	521	739	240
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1330	739	979			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1330	739	979			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	16	95	95			
cM capacity (veh/h)	164	421	713			

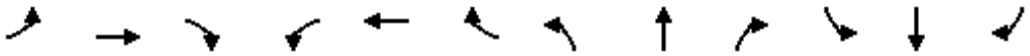
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	161	35	521	739	240
Volume Left	138	35	0	0	0
Volume Right	23	0	0	0	240
cSH	180	713	1700	1700	1700
Volume to Capacity	0.90	0.05	0.31	0.43	0.14
Queue Length 95th (m)	50.9	1.2	0.0	0.0	0.0
Control Delay (s)	94.8	10.3	0.0	0.0	0.0
Lane LOS	F	B			
Approach Delay (s)	94.8	0.6		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	9.2		
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	26	4	28	8	35	583	5	632
Future Volume (vph)	26	4	28	8	35	583	5	632
Lane Group Flow (vph)	0	67	0	42	36	629	0	682
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
v/c Ratio		0.39		0.29	0.06	0.42		0.46
Control Delay		25.2		34.5	3.2	4.6		5.0
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		25.2		34.5	3.2	4.6		5.0
Queue Length 50th (m)		4.7		5.6	1.1	26.8		30.6
Queue Length 95th (m)		14.8		13.5	3.6	49.8		57.1
Internal Link Dist (m)		884.7		354.8		385.0		381.6
Turn Bay Length (m)					85.0			
Base Capacity (vph)		462		448	636	1495		1479
Starvation Cap Reductn		0		0	0	0		0
Spillback Cap Reductn		0		0	0	0		0
Storage Cap Reductn		0		0	0	0		0
Reduced v/c Ratio		0.15		0.09	0.06	0.42		0.46

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 80
Natural Cycle: 55
Control Type: Semi Act-Uncoord

Splits and Phases: 1: County Road 10 & Larmer Line



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	4	35	28	8	5	35	583	27	5	632	24
Future Volume (vph)	26	4	35	28	8	5	35	583	27	5	632	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frpb, ped/bikes		0.98			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			0.99		1.00	1.00			1.00	
Frt		0.93			0.98		1.00	0.99			1.00	
Flt Protected		0.98			0.97		0.95	1.00			1.00	
Satd. Flow (prot)		1678			1773		1785	1866			1851	
Flt Permitted		0.85			0.81		0.42	1.00			1.00	
Satd. Flow (perm)		1455			1481		795	1866			1846	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	4	36	29	8	5	36	601	28	5	652	25
RTOR Reduction (vph)	0	33	0	0	5	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	34	0	0	37	0	36	628	0	0	681	0
Confl. Peds. (#/hr)			5	5								
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.5			6.5		62.8	62.8			62.8	
Effective Green, g (s)		6.5			6.5		62.8	62.8			62.8	
Actuated g/C Ratio		0.08			0.08		0.77	0.77			0.77	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		116			118		614	1441			1425	
v/s Ratio Prot								0.34				
v/s Ratio Perm		0.02			c0.03		0.05				c0.37	
v/c Ratio		0.29			0.32		0.06	0.44			0.48	
Uniform Delay, d1		35.2			35.3		2.2	3.2			3.3	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		1.4			1.5		0.2	1.0			1.2	
Delay (s)		36.6			36.9		2.4	4.1			4.5	
Level of Service		D			D		A	A			A	
Approach Delay (s)		36.6			36.9			4.0			4.5	
Approach LOS		D			D			A			A	

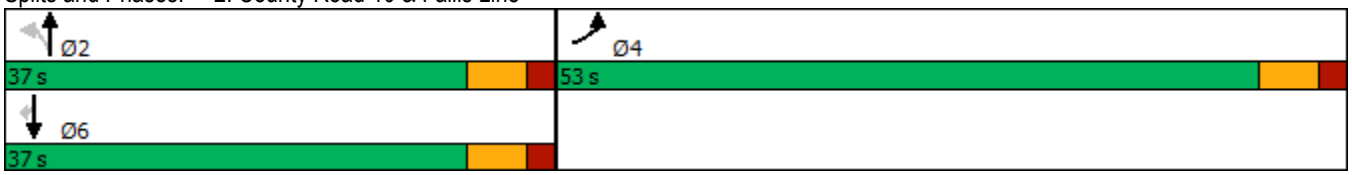
Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	81.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

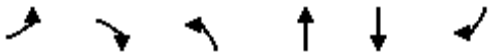
c Critical Lane Group

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	215	201	275	275	241
Future Volume (vph)	215	201	275	275	241
Lane Group Flow (vph)	443	214	293	293	256
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.78	0.39	0.31	0.31	0.27
Control Delay	26.0	13.9	11.5	11.6	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	13.9	11.5	11.6	2.6
Queue Length 50th (m)	37.1	13.8	18.0	18.0	0.0
Queue Length 95th (m)	65.0	36.1	41.4	41.6	11.2
Internal Link Dist (m)	333.1		460.0	656.0	
Turn Bay Length (m)		95.0			80.0
Base Capacity (vph)	1326	550	946	936	931
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.39	0.31	0.31	0.27

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 62
Natural Cycle: 45
Control Type: Semi Act-Uncoord

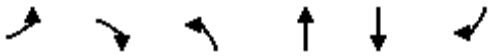
Splits and Phases: 2: County Road 10 & Fallis Line





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	215	201	201	275	275	241
Future Volume (vph)	215	201	201	275	275	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1712		1785	1879	1860	1597
Flt Permitted	0.97		0.58	1.00	1.00	1.00
Satd. Flow (perm)	1712		1091	1879	1860	1597
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	229	214	214	293	293	256
RTOR Reduction (vph)	54	0	0	0	0	127
Lane Group Flow (vph)	389	0	214	293	293	129
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	18.7		31.2	31.2	31.2	31.2
Effective Green, g (s)	18.7		31.2	31.2	31.2	31.2
Actuated g/C Ratio	0.30		0.50	0.50	0.50	0.50
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	517		549	947	937	804
v/s Ratio Prot	c0.23			0.16	0.16	
v/s Ratio Perm			c0.20			0.08
v/c Ratio	0.75		0.39	0.31	0.31	0.16
Uniform Delay, d1	19.5		9.5	9.0	9.0	8.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1		2.1	0.8	0.9	0.4
Delay (s)	25.6		11.6	9.9	9.9	8.7
Level of Service	C		B	A	A	A
Approach Delay (s)	25.6			10.6	9.4	
Approach LOS	C			B	A	

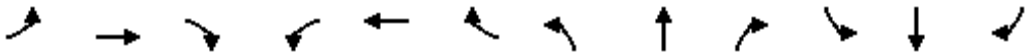
Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	61.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	3	5	485	514	11
Future Volume (Veh/h)	7	3	5	485	514	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	7	3	5	505	535	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1056	540	546			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1056	540	546			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	251	545	1033			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	10	5	505	546
Volume Left	7	5	0	0
Volume Right	3	0	0	11
cSH	299	1033	1700	1700
Volume to Capacity	0.03	0.00	0.30	0.32
Queue Length 95th (m)	0.8	0.1	0.0	0.0
Control Delay (s)	17.4	8.5	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	17.4	0.1		0.0
Approach LOS	C			

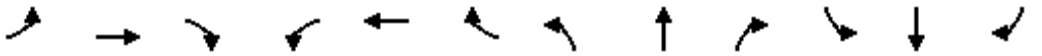
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	51	16	41	56	46	14	0	42	48	0	13
Future Volume (Veh/h)	14	51	16	41	56	46	14	0	42	48	0	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	55	17	45	61	50	15	0	46	52	0	14
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	111			72			284	294	64	316	278	86
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	111			72			284	294	64	316	278	86
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			98	100	95	91	100	99
cM capacity (veh/h)	1492			1541			643	596	1007	594	609	978

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	87	156	61	66
Volume Left	15	45	15	52
Volume Right	17	50	46	14
cSH	1492	1541	884	648
Volume to Capacity	0.01	0.03	0.07	0.10
Queue Length 95th (m)	0.2	0.7	1.7	2.6
Control Delay (s)	1.3	2.3	9.4	11.2
Lane LOS	A	A	A	B
Approach Delay (s)	1.3	2.3	9.4	11.2
Approach LOS			A	B

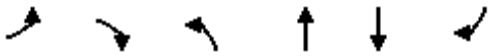
Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	28.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	129	7	144	137	73	4	5	131	71	5	10
Future Volume (Veh/h)	12	129	7	144	137	73	4	5	131	71	5	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	140	8	157	149	79	4	5	142	77	5	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					357							
pX, platoon unblocked												
vC, conflicting volume	228			148			646	712	144	817	676	188
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	228			148			646	712	144	817	676	188
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			89			99	98	84	66	98	99
cM capacity (veh/h)	1352			1446			344	318	909	226	333	859

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	161	157	228	151	93
Volume Left	13	157	0	4	77
Volume Right	8	0	79	142	11
cSH	1352	1446	1700	822	252
Volume to Capacity	0.01	0.11	0.13	0.18	0.37
Queue Length 95th (m)	0.2	2.8	0.0	5.1	12.3
Control Delay (s)	0.7	7.8	0.0	10.4	27.4
Lane LOS	A	A		B	D
Approach Delay (s)	0.7	3.2		10.4	27.4
Approach LOS				B	D

Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	46.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	179	28	29	463	500	193
Future Volume (Veh/h)	179	28	29	463	500	193
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	195	30	32	503	543	210
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1110	543	753			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1110	543	753			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	13	94	96			
cM capacity (veh/h)	225	544	866			

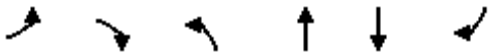
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	225	32	503	543	210
Volume Left	195	32	0	0	0
Volume Right	30	0	0	0	210
cSH	244	866	1700	1700	1700
Volume to Capacity	0.92	0.04	0.30	0.32	0.12
Queue Length 95th (m)	61.3	0.9	0.0	0.0	0.0
Control Delay (s)	82.3	9.3	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	82.3	0.6		0.0	
Approach LOS	F				

Intersection Summary				
Average Delay	12.4			
Intersection Capacity Utilization	44.6%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	213	10	684	375	66
Future Volume (vph)	213	10	684	375	66
Lane Group Flow (vph)	265	11	743	408	72
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	63.0	63.0	63.0	63.0
Total Split (%)	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.75	0.02	0.63	0.38	0.07
Control Delay	46.2	6.1	12.1	8.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	6.1	12.1	8.4	1.8
Queue Length 50th (m)	40.3	0.6	64.1	27.5	0.0
Queue Length 95th (m)	65.5	2.5	110.1	48.8	4.3
Internal Link Dist (m)	372.5		283.0	385.0	
Turn Bay Length (m)		85.0			85.0
Base Capacity (vph)	429	627	1183	1062	1089
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.02	0.63	0.38	0.07

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 87.7
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 6: County Road 10 & Street 'B' North



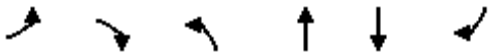
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	213	30	10	684	375	66
Future Volume (vph)	213	30	10	684	375	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770		1785	1773	1592	1597
Flt Permitted	0.96		0.50	1.00	1.00	1.00
Satd. Flow (perm)	1770		940	1773	1592	1597
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	232	33	11	743	408	72
RTOR Reduction (vph)	6	0	0	0	0	24
Lane Group Flow (vph)	259	0	11	743	408	48
Heavy Vehicles (%)	0%	0%	0%	6%	18%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	17.1		58.5	58.5	58.5	58.5
Effective Green, g (s)	17.1		58.5	58.5	58.5	58.5
Actuated g/C Ratio	0.20		0.67	0.67	0.67	0.67
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	345		627	1184	1063	1066
v/s Ratio Prot	c0.15			c0.42	0.26	
v/s Ratio Perm			0.01			0.03
v/c Ratio	0.75		0.02	0.63	0.38	0.05
Uniform Delay, d1	33.2		4.9	8.3	6.5	5.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	8.9		0.1	2.5	1.1	0.1
Delay (s)	42.2		4.9	10.8	7.6	5.1
Level of Service	D		A	B	A	A
Approach Delay (s)	42.2			10.8	7.2	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	87.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	127	32	479	680	221
Future Volume (vph)	127	32	479	680	221
Lane Group Flow (vph)	161	35	521	739	240
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	24.0	66.0	66.0	66.0	66.0
Total Split (%)	26.7%	73.3%	73.3%	73.3%	73.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.62	0.08	0.38	0.55	0.20
Control Delay	44.1	5.2	6.3	8.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	5.2	6.3	8.4	1.1
Queue Length 50th (m)	24.8	1.5	28.8	49.2	0.0
Queue Length 95th (m)	41.8	5.2	54.2	93.3	6.7
Internal Link Dist (m)	372.5		271.0	385.0	
Turn Bay Length (m)		85.0			85.0
Base Capacity (vph)	357	431	1360	1333	1222
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.45	0.08	0.38	0.55	0.20

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90.8
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 6: County Road 10 & Street 'B' North



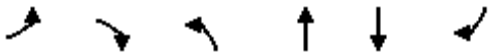
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	127	21	32	479	680	221
Future Volume (vph)	127	21	32	479	680	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1767		1785	1879	1842	1597
Flt Permitted	0.96		0.32	1.00	1.00	1.00
Satd. Flow (perm)	1767		596	1879	1842	1597
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	23	35	521	739	240
RTOR Reduction (vph)	7	0	0	0	0	66
Lane Group Flow (vph)	154	0	35	521	739	174
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	13.1		65.7	65.7	65.7	65.7
Effective Green, g (s)	13.1		65.7	65.7	65.7	65.7
Actuated g/C Ratio	0.14		0.72	0.72	0.72	0.72
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	254		431	1359	1332	1155
v/s Ratio Prot	c0.09			0.28	c0.40	
v/s Ratio Perm			0.06			0.11
v/c Ratio	0.61		0.08	0.38	0.55	0.15
Uniform Delay, d1	36.4		3.7	4.8	5.8	3.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1		0.4	0.8	1.7	0.3
Delay (s)	40.5		4.1	5.6	7.5	4.2
Level of Service	D		A	A	A	A
Approach Delay (s)	40.5			5.5	6.7	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	179	29	463	500	193
Future Volume (vph)	179	29	463	500	193
Lane Group Flow (vph)	225	32	503	543	210
Turn Type	Prot	Perm	NA	NA	Perm
Protected Phases	4		2	6	
Permitted Phases		2			6
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	32.0	58.0	58.0	58.0	58.0
Total Split (%)	35.6%	64.4%	64.4%	64.4%	64.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
v/c Ratio	0.67	0.06	0.40	0.44	0.18
Control Delay	39.6	6.3	8.0	8.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	6.3	8.0	8.4	1.4
Queue Length 50th (m)	30.2	1.5	30.2	33.8	0.0
Queue Length 95th (m)	51.4	5.4	60.0	66.6	7.4
Internal Link Dist (m)	372.5		314.0	385.0	
Turn Bay Length (m)		85.0			85.0
Base Capacity (vph)	565	519	1256	1244	1138
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.06	0.40	0.44	0.18

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 82.3
Natural Cycle: 50
Control Type: Semi Act-Uncoord

Splits and Phases: 6: County Road 10 & Street 'B' North



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	179	28	29	463	500	193
Future Volume (vph)	179	28	29	463	500	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1768		1785	1879	1860	1597
Flt Permitted	0.96		0.41	1.00	1.00	1.00
Satd. Flow (perm)	1768		776	1879	1860	1597
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	195	30	32	503	543	210
RTOR Reduction (vph)	7	0	0	0	0	69
Lane Group Flow (vph)	218	0	32	503	543	141
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Actuated Green, G (s)	15.2		55.0	55.0	55.0	55.0
Effective Green, g (s)	15.2		55.0	55.0	55.0	55.0
Actuated g/C Ratio	0.18		0.67	0.67	0.67	0.67
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	326		519	1257	1244	1068
v/s Ratio Prot	c0.12			0.27	c0.29	
v/s Ratio Perm			0.04			0.09
v/c Ratio	0.67		0.06	0.40	0.44	0.13
Uniform Delay, d1	31.2		4.7	6.1	6.4	4.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.1		0.2	1.0	1.1	0.3
Delay (s)	36.3		4.9	7.1	7.5	5.2
Level of Service	D		A	A	A	A
Approach Delay (s)	36.3			7.0	6.8	
Approach LOS	D			A	A	

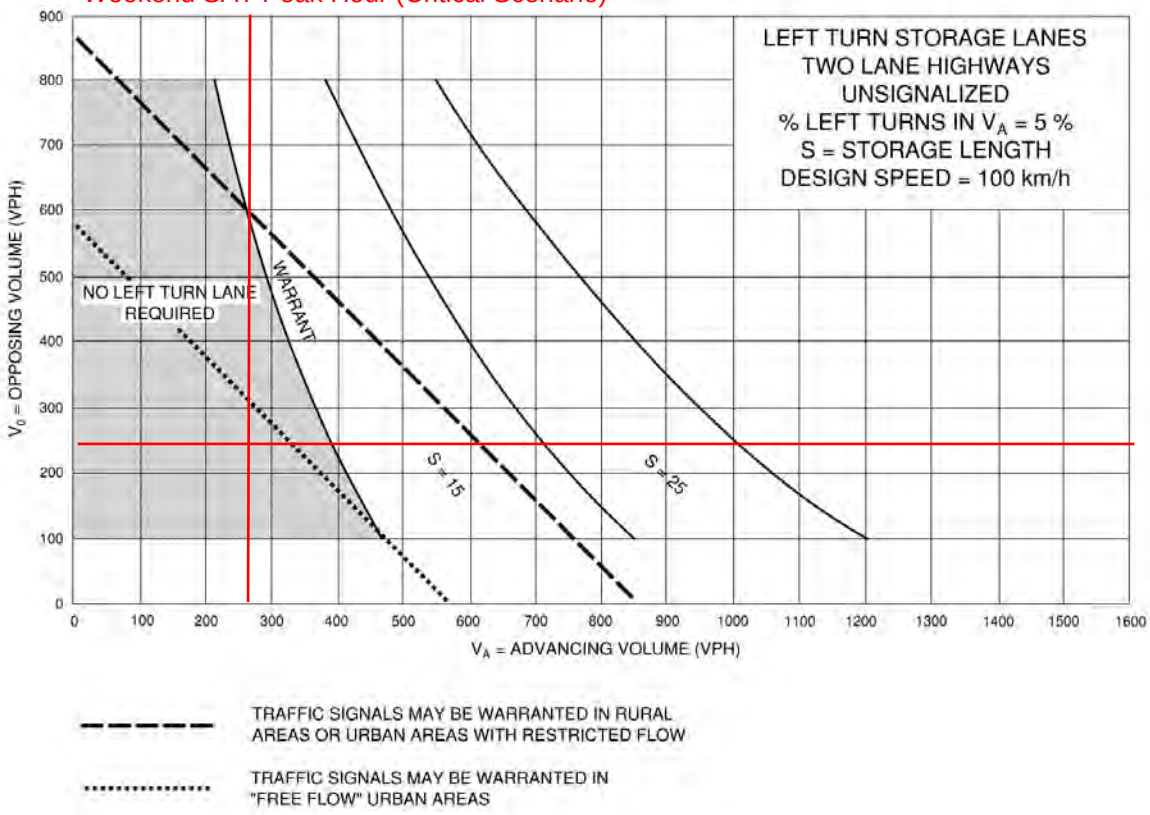
Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	82.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

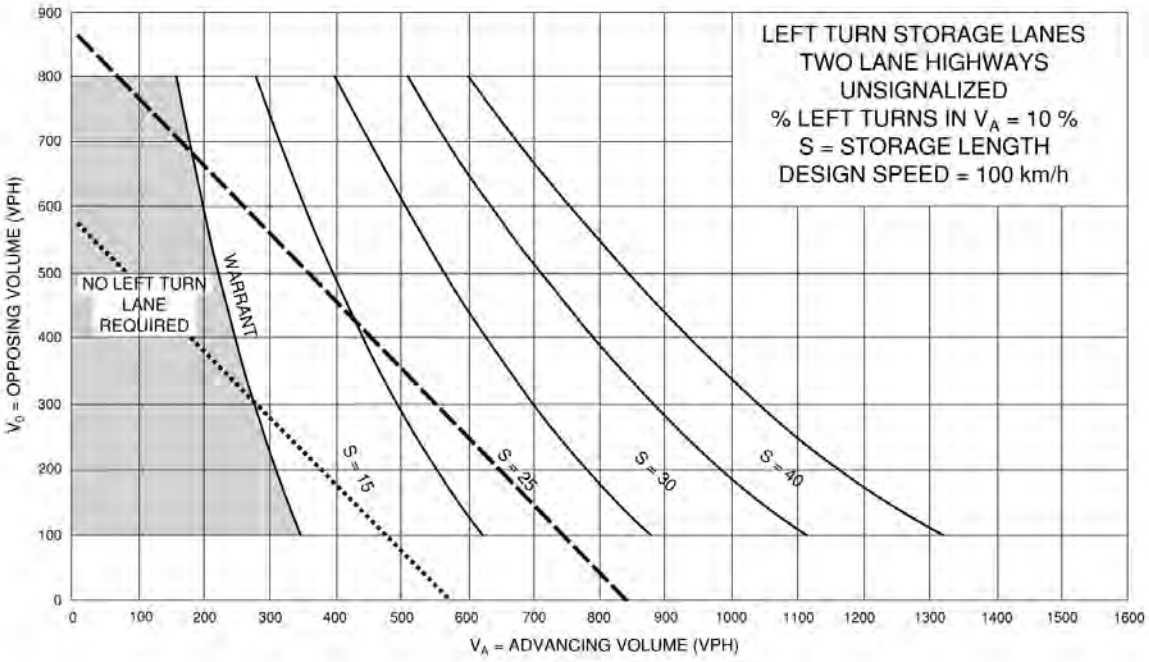
Appendix G –
MTO Left Turn Analysis

County Road 10 / Larmer Line

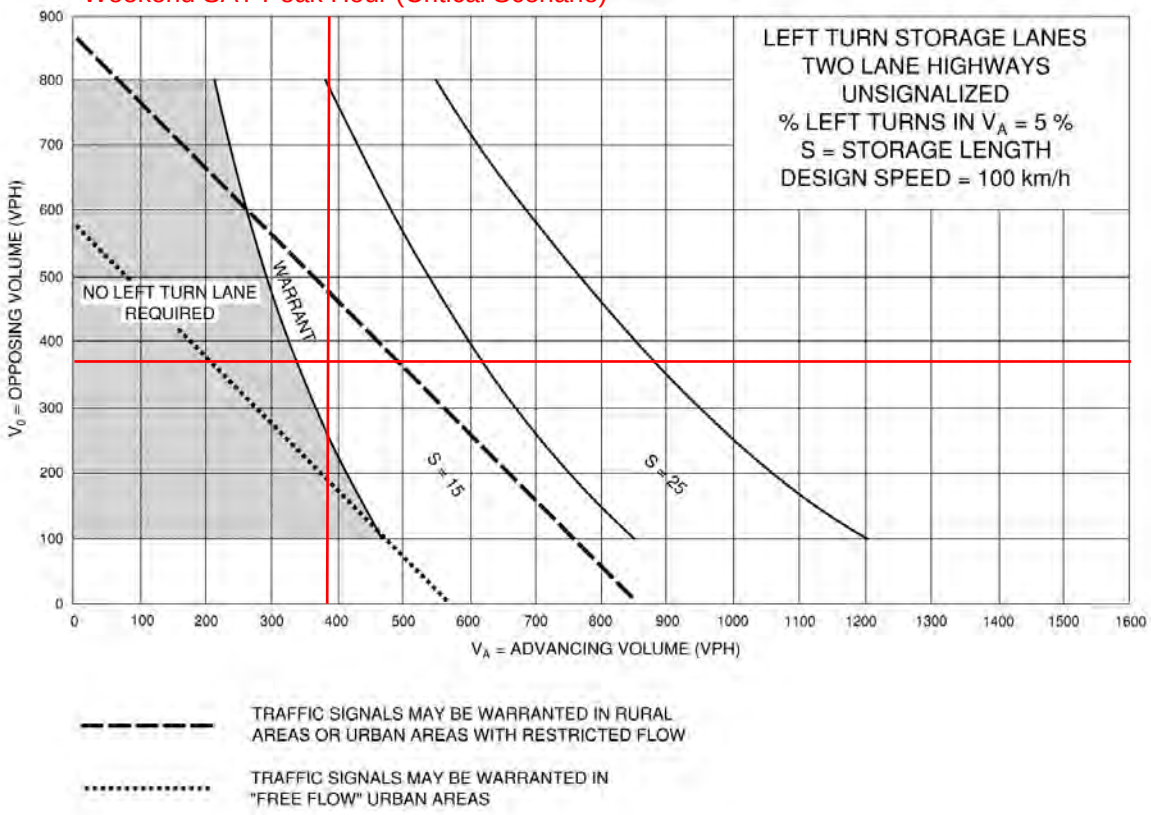
Existing 2018 - Southbound **Exhibit 9A-22**

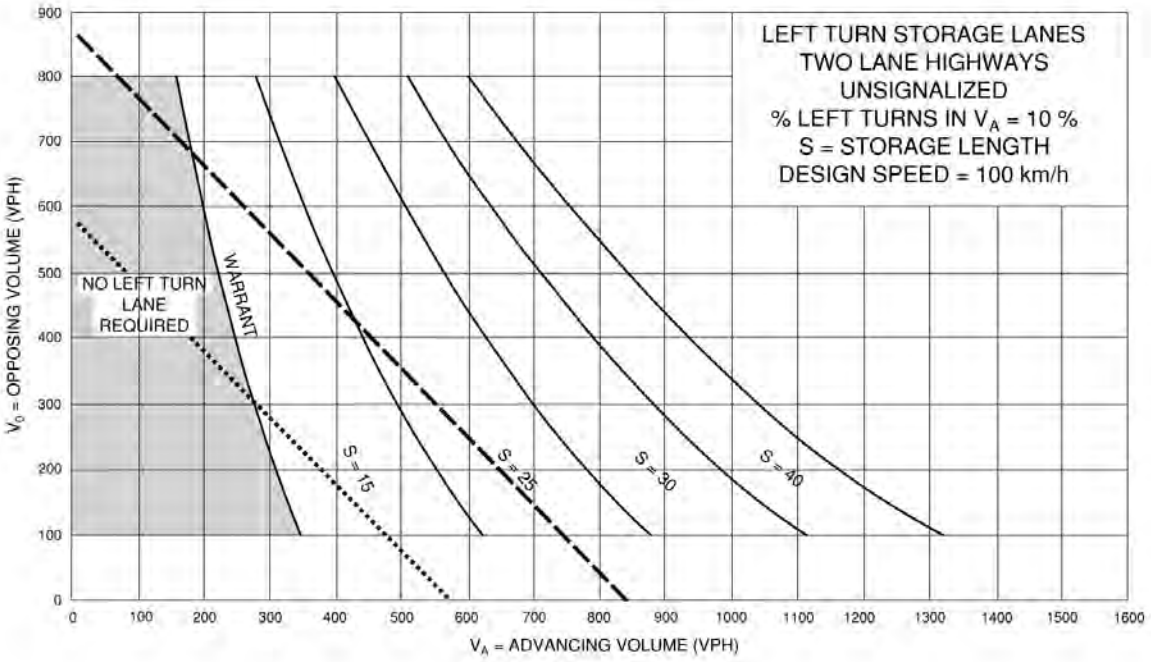
Weekend SAT Peak Hour (Critical Scenario)





County Road 10 / Larmer Line
Background 2021 - Southbound **Exhibit 9A-22**
Weekend SAT Peak Hour (Critical Scenario)

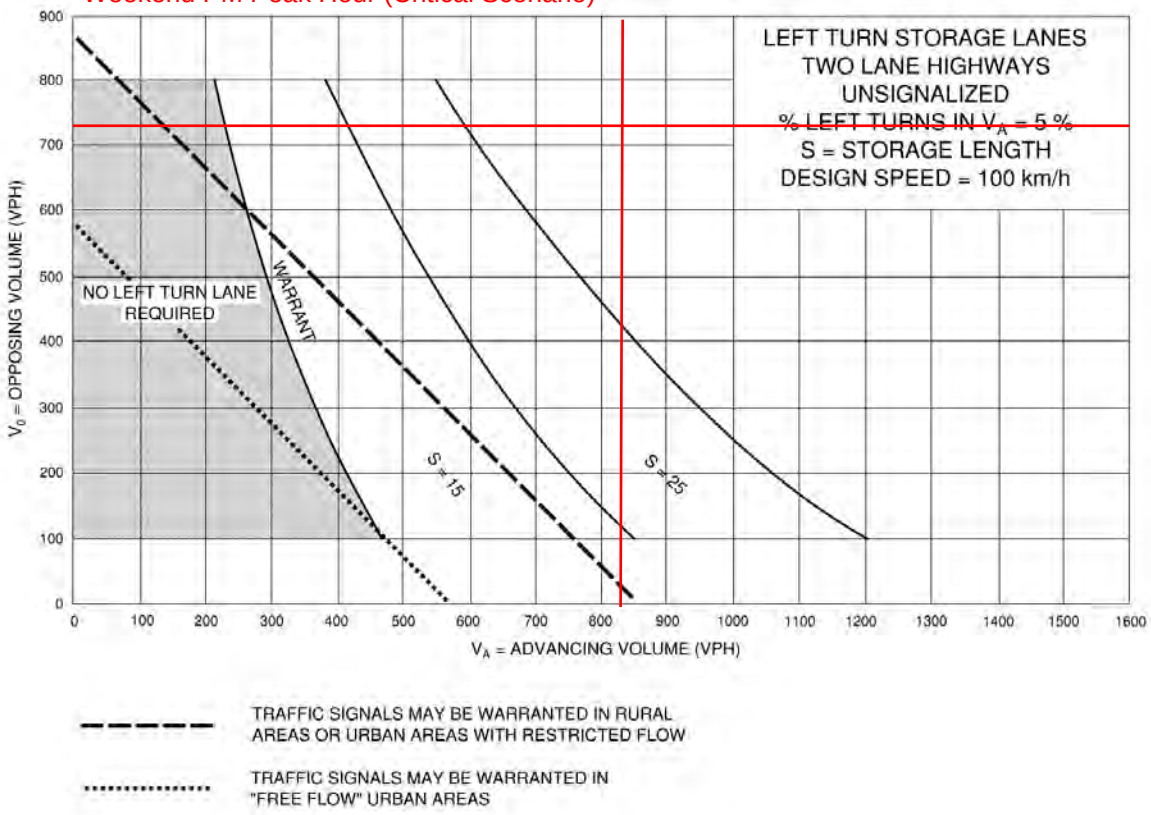


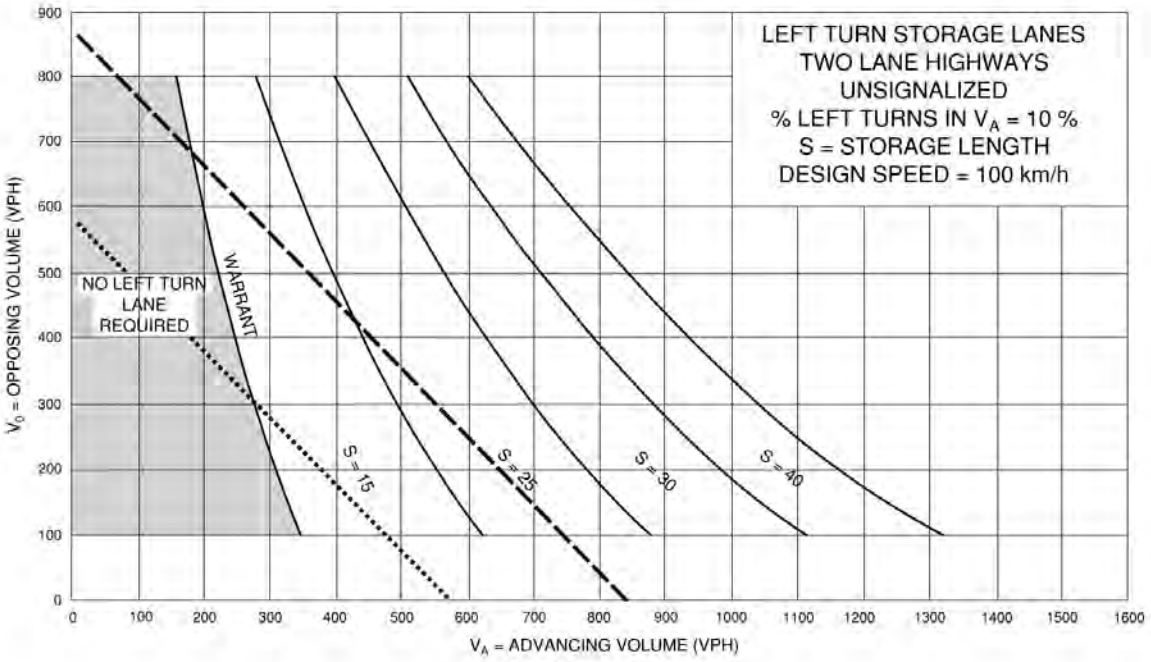


County Road 10 / Larmer Line

Total 2031 - Southbound **Exhibit 9A-22**

Weekend PM Peak Hour (Critical Scenario)

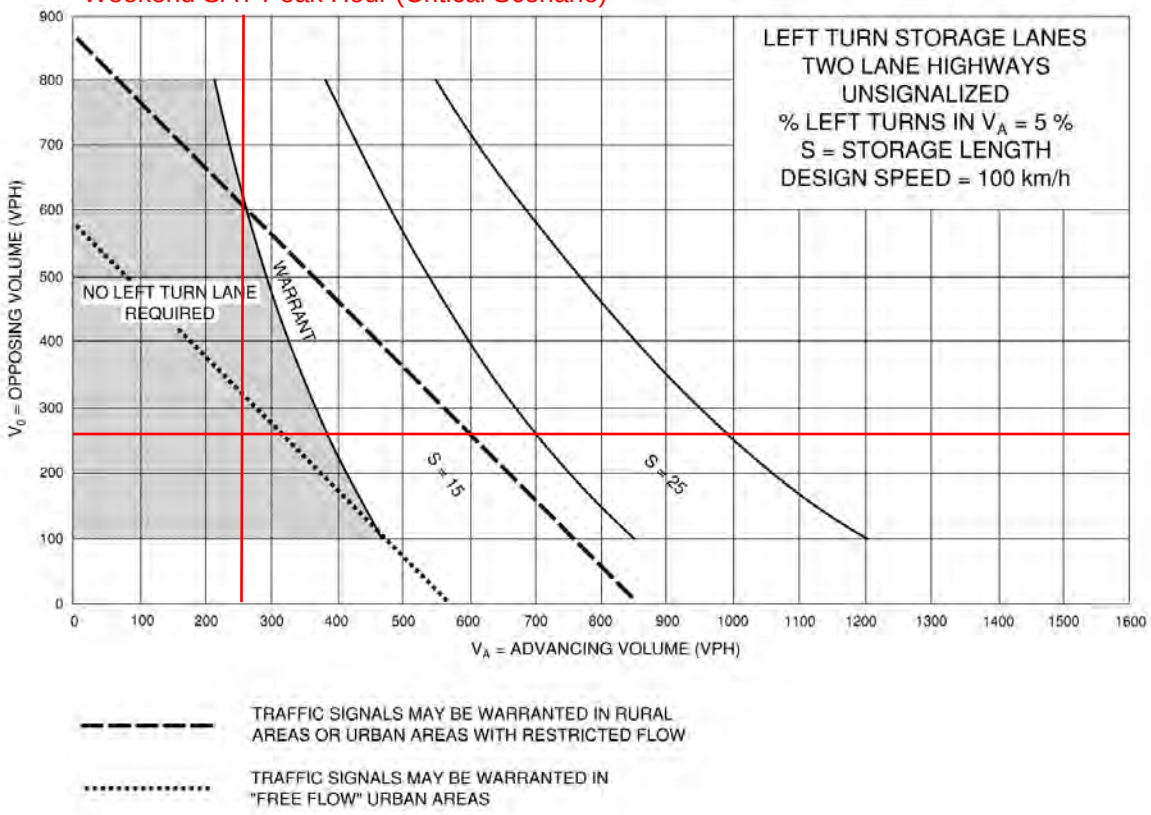


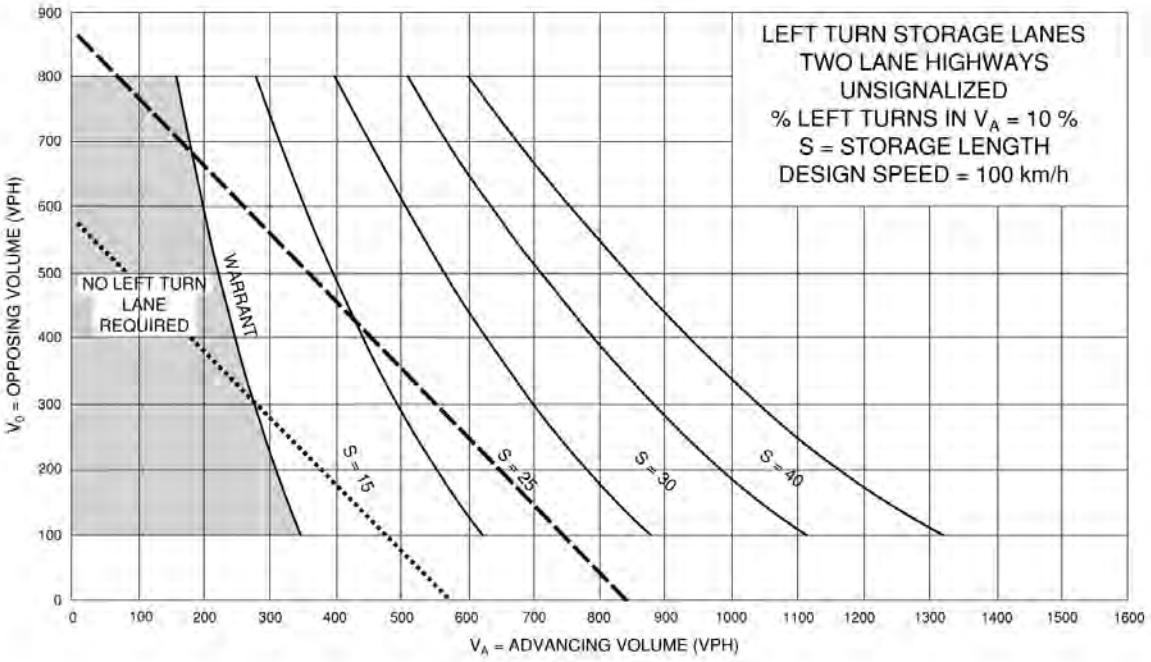


County Road 10 / Larmer Line

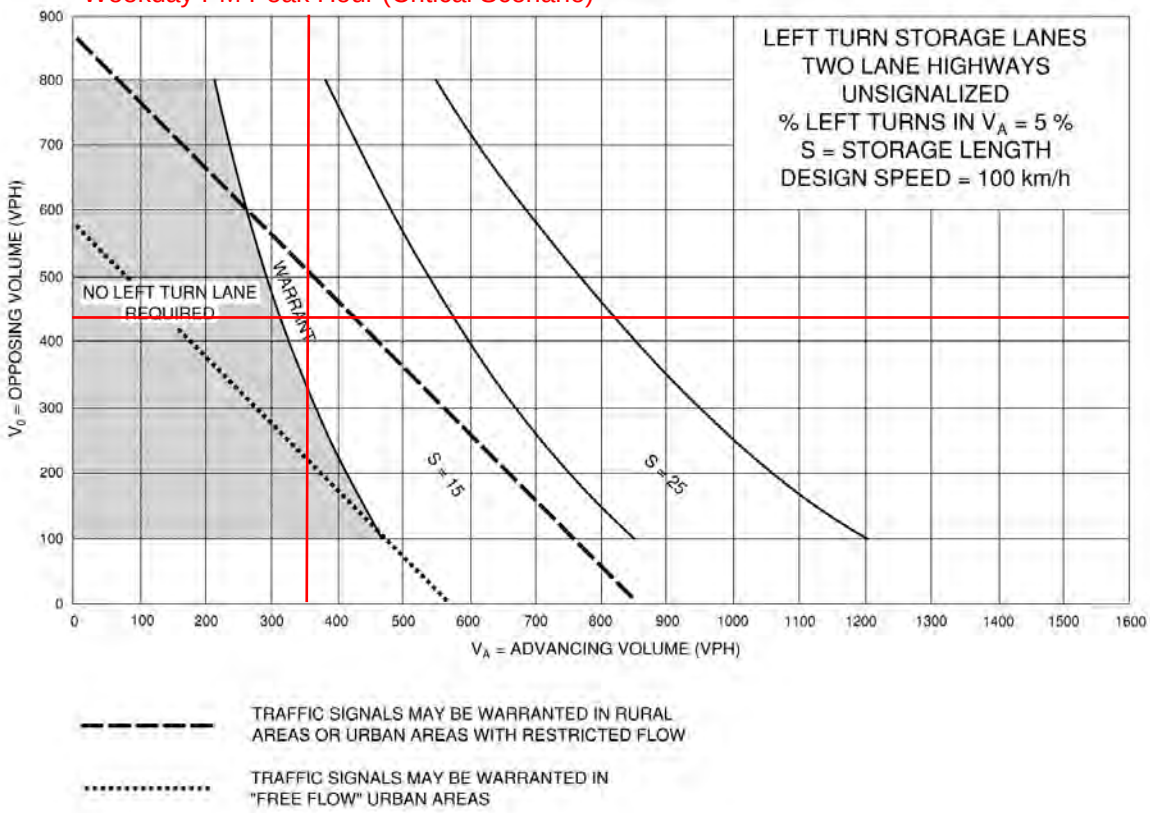
Existing 2018 - Northbound **Exhibit 9A-22**

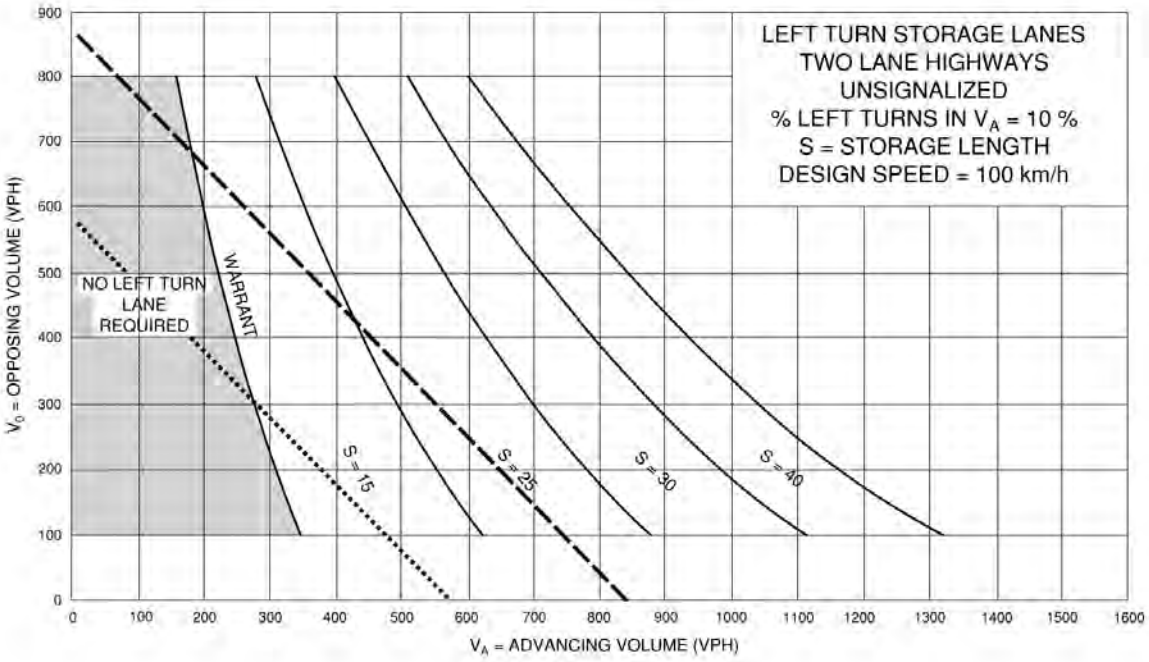
Weekend SAT Peak Hour (Critical Scenario)



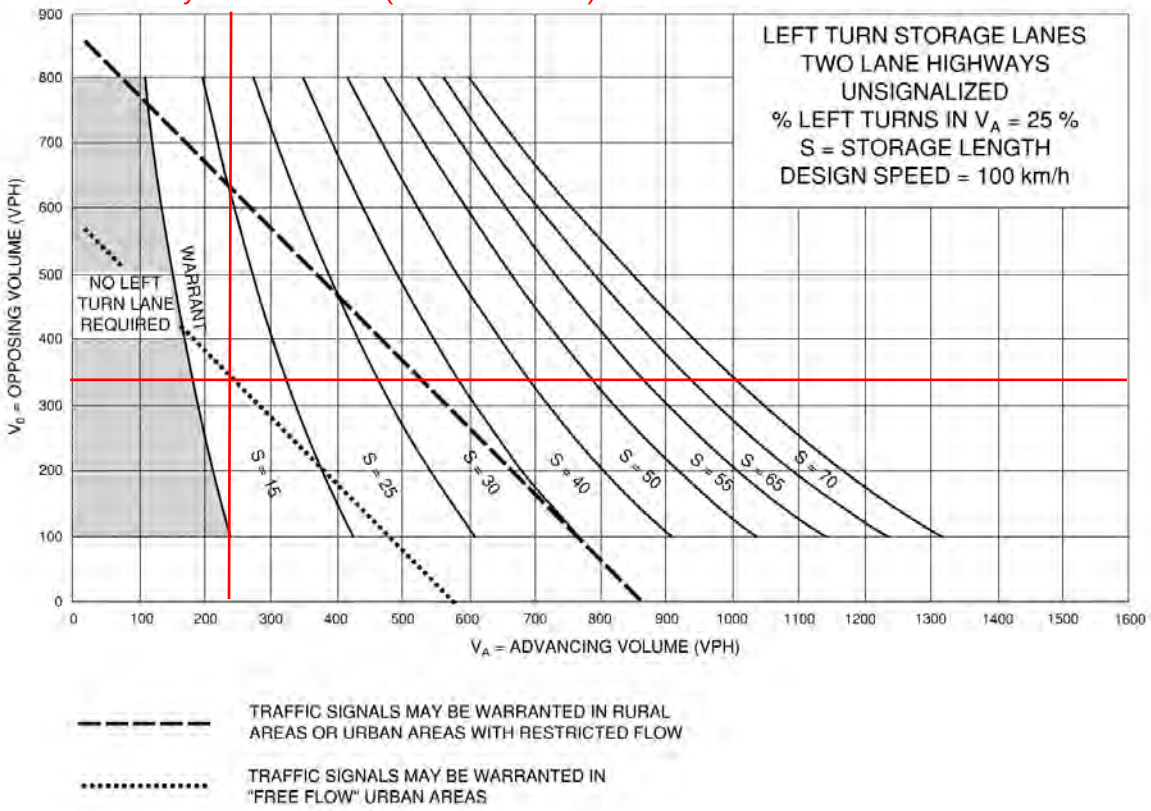


County Road 10 / Larmer Line
Background 2021 - Northbound **Exhibit 9A-22**
Weekday PM Peak Hour (Critical Scenario)





County Road 10 / Fallis Line
Existing 2018 - Northbound **Exhibit 9A-24**
Weekday PM Peak Hour (Critical Scenario)



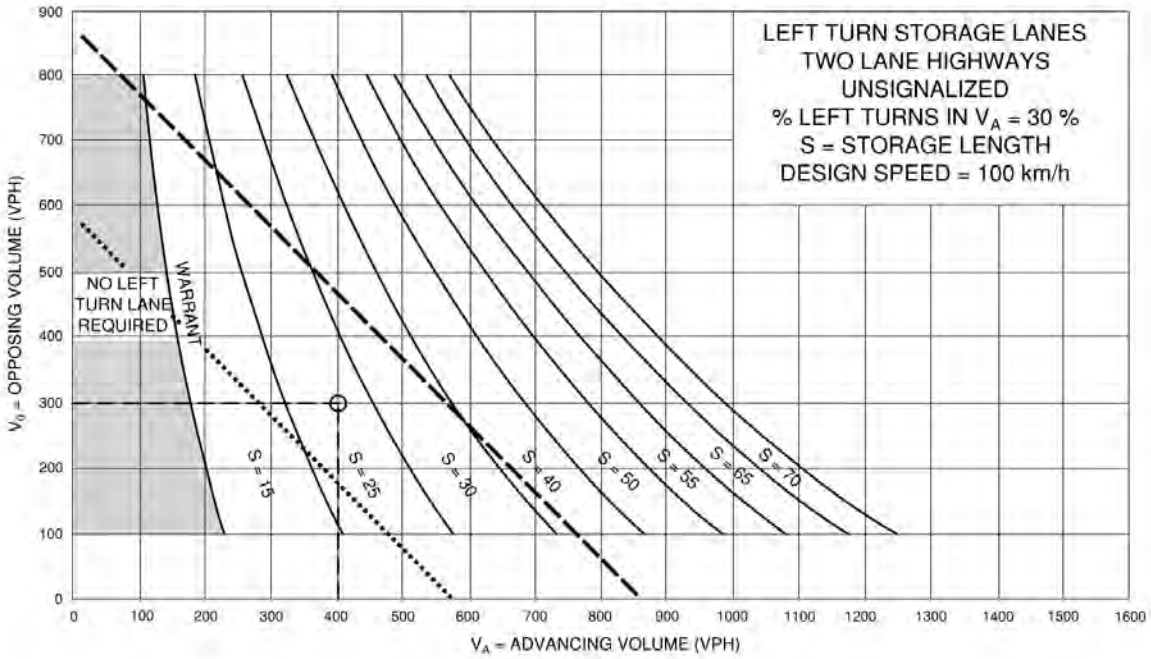
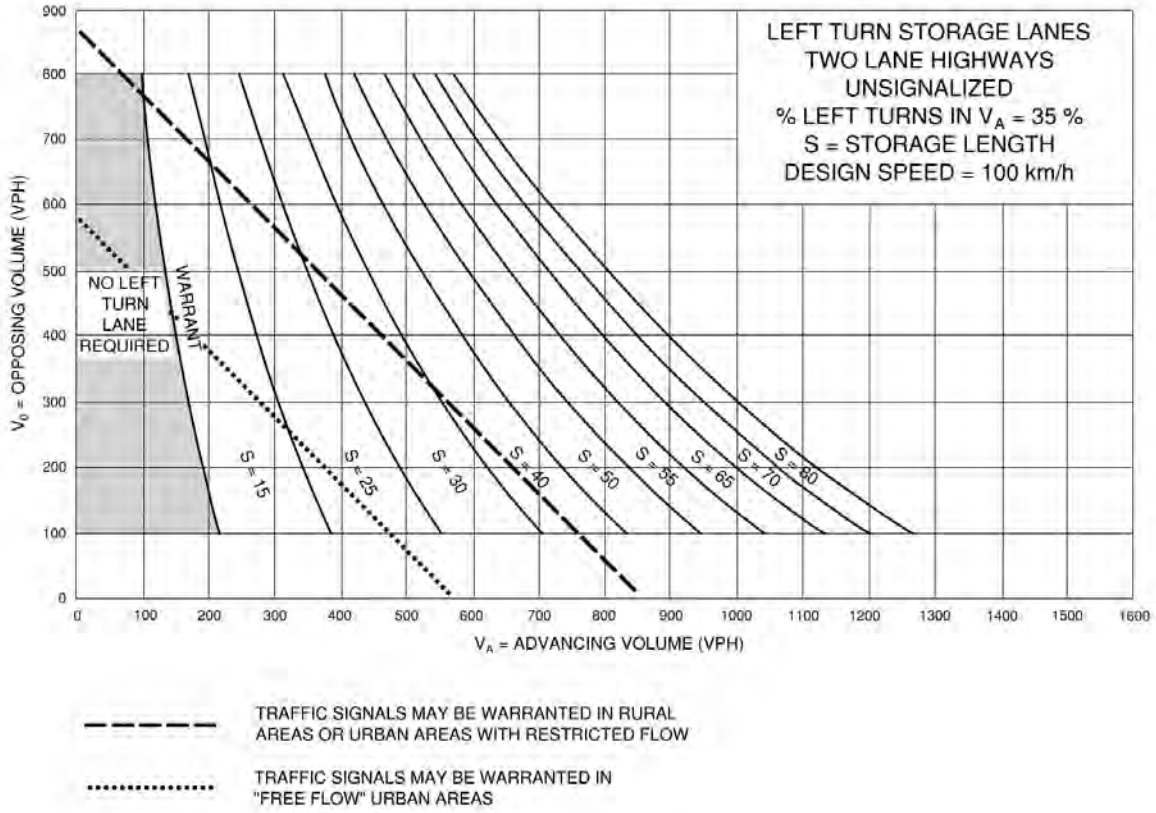
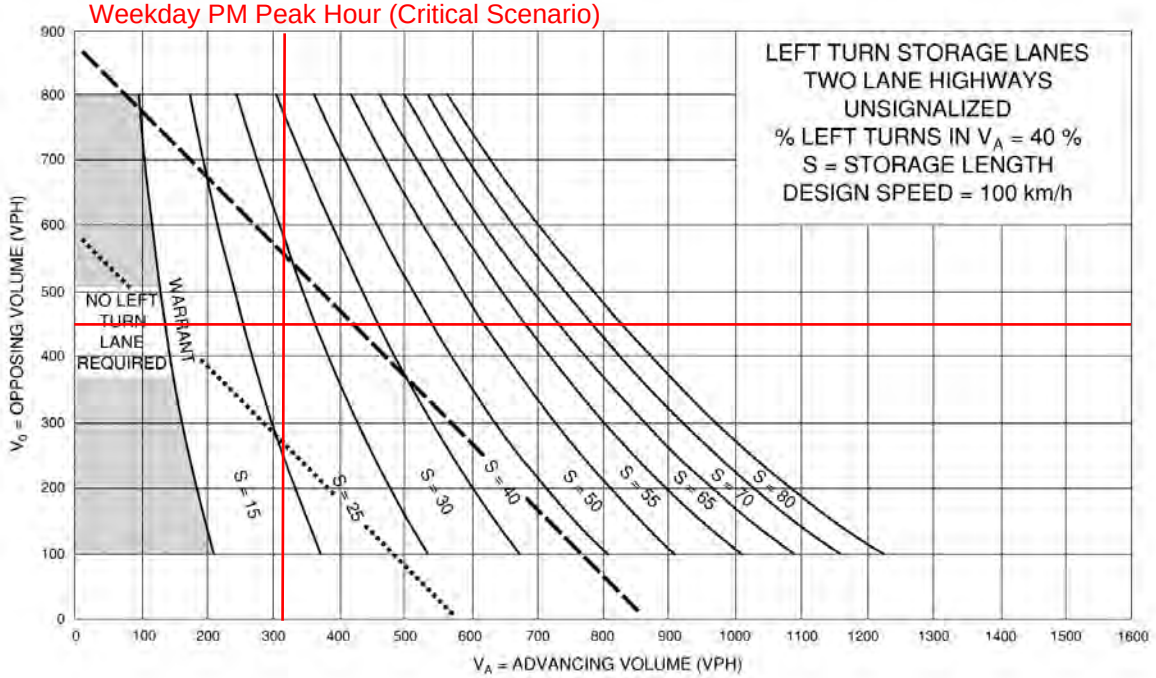


Exhibit 9A-25



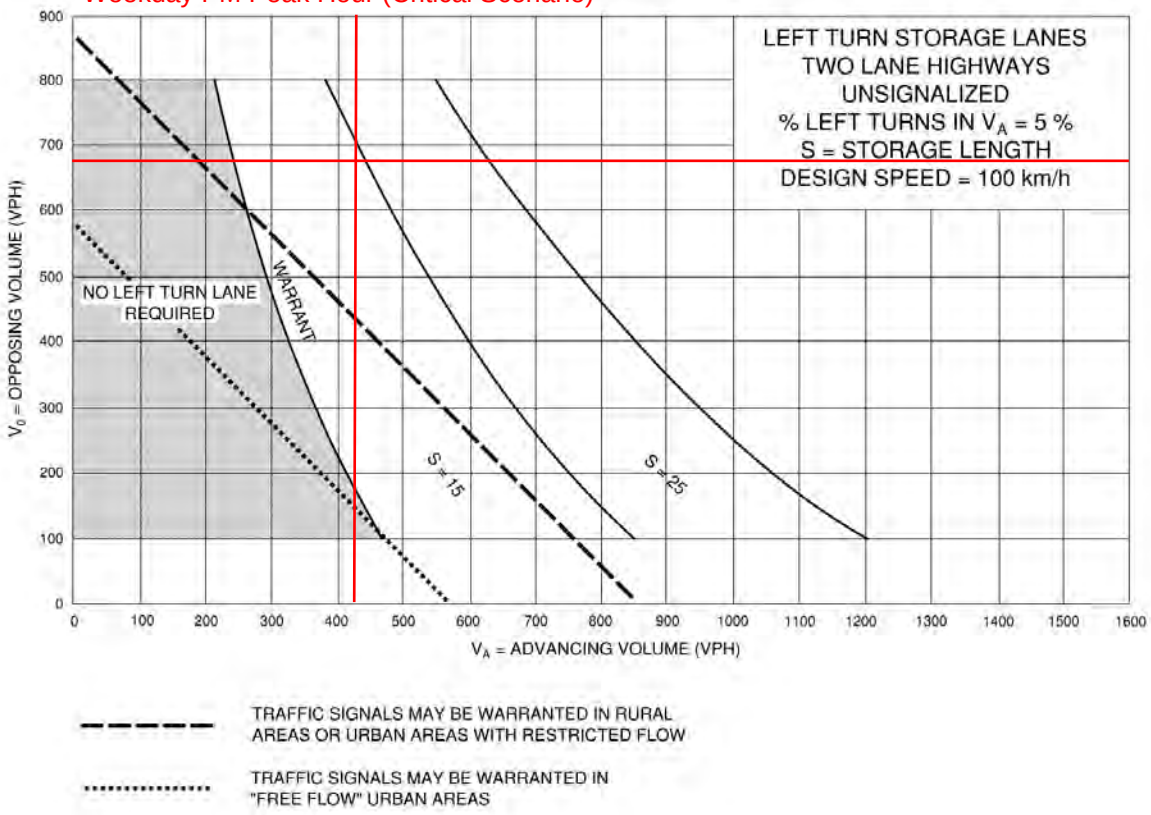
County Road 10 / Fallis Line
Background 2021 - Northbound
Weekday PM Peak Hour (Critical Scenario)



County Road 10 / Street 'B' North

Total 2021 - Northbound **Exhibit 9A-22**

Weekday PM Peak Hour (Critical Scenario)



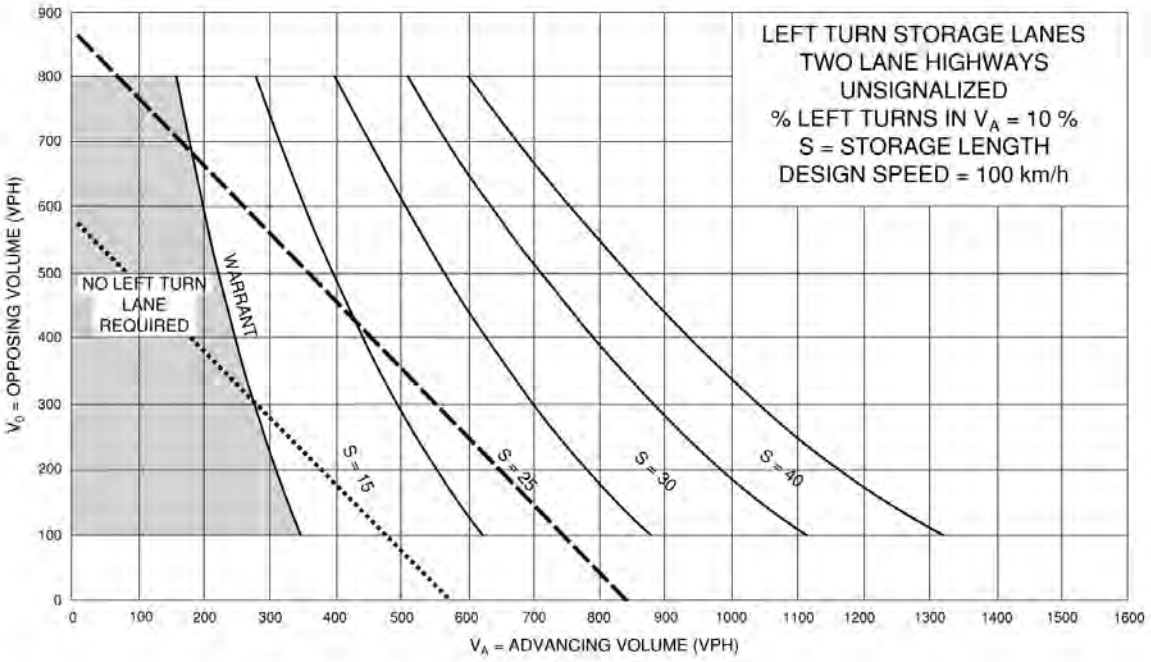
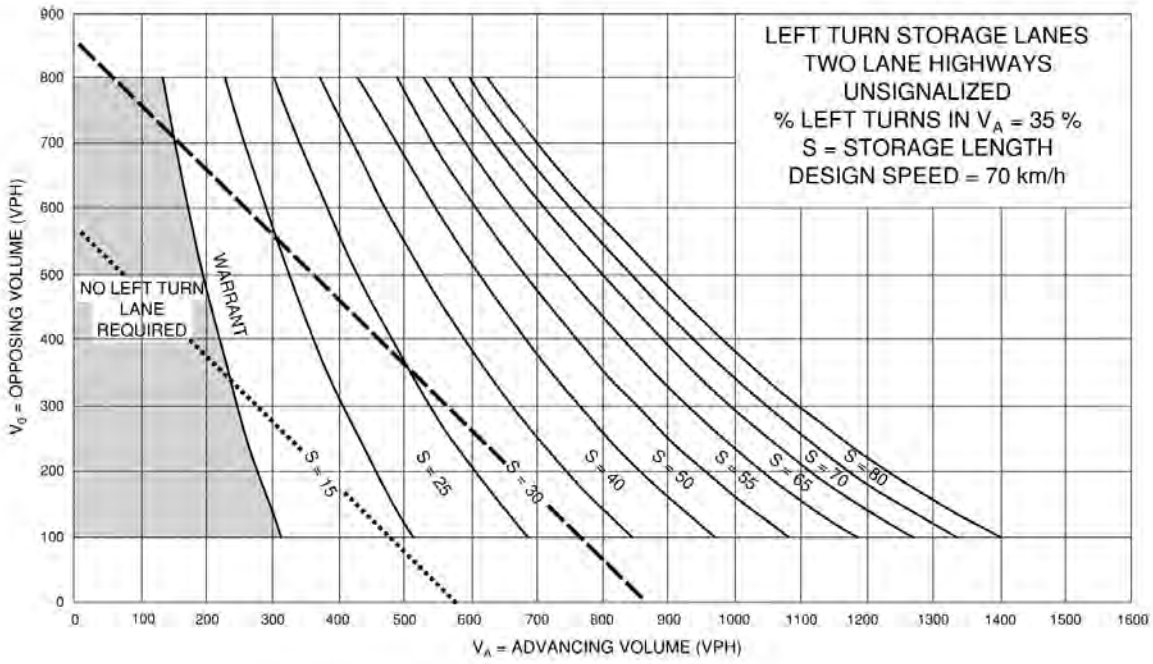


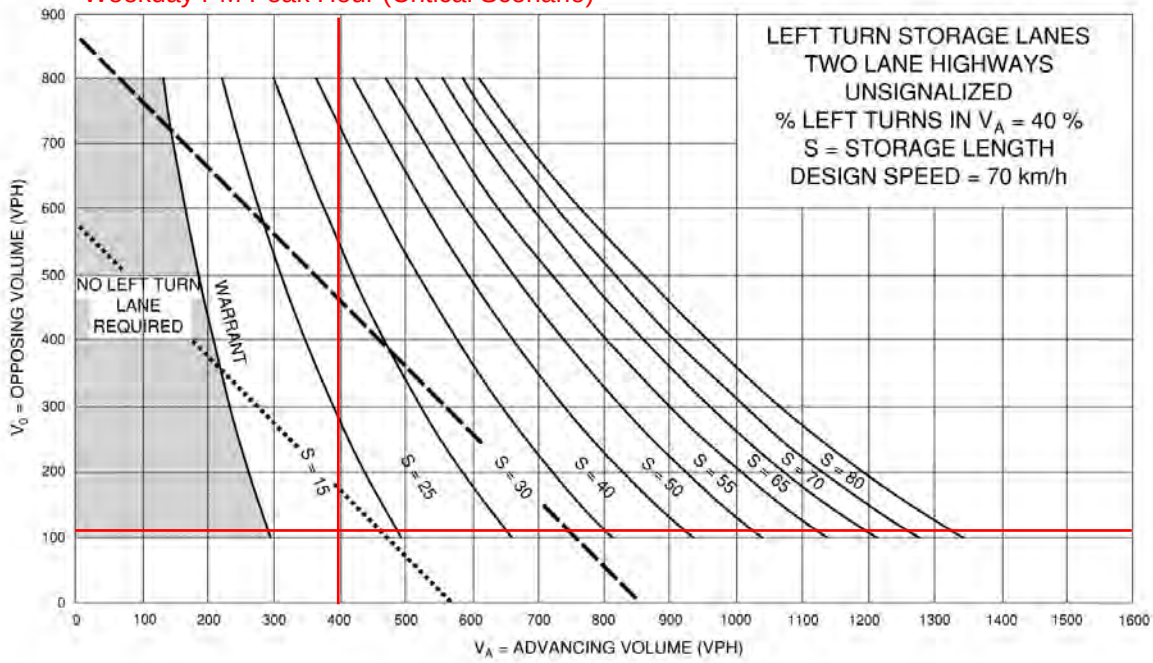
Exhibit 9A-13



Street 'I' & Street 'D' / Fallis Line

Total 2021 - Westbound

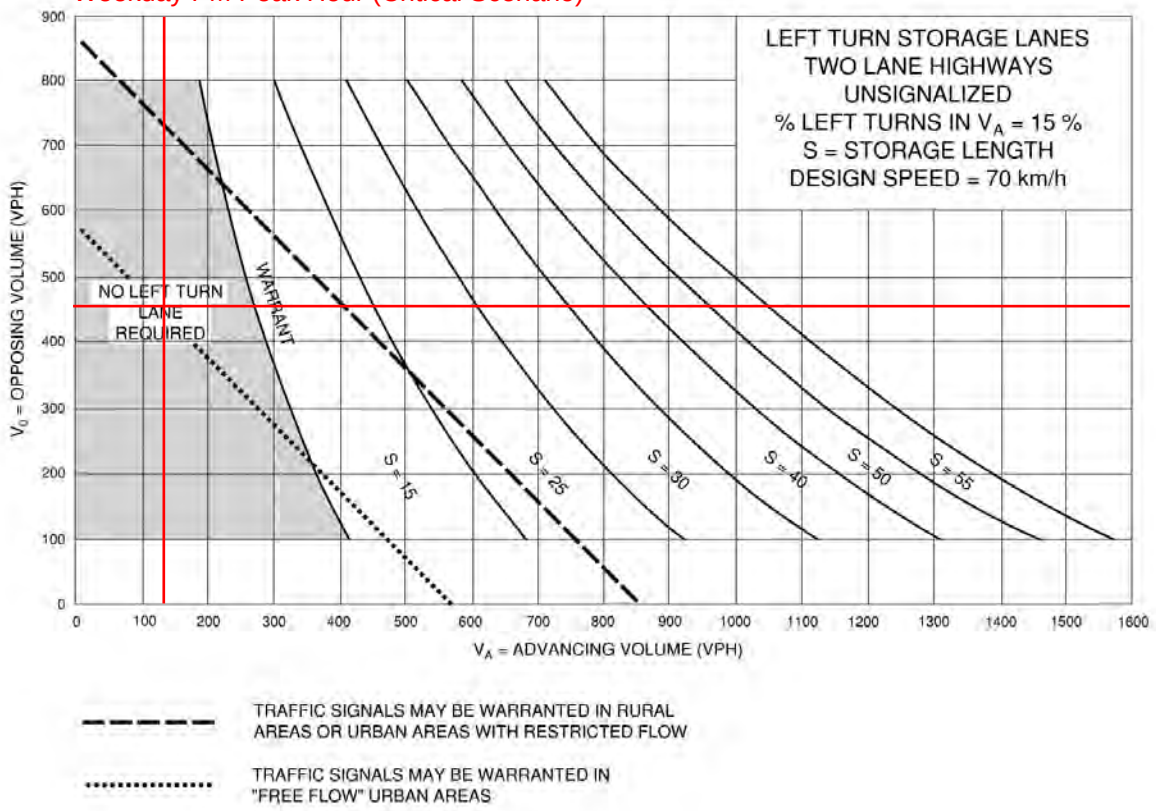
Weekday PM Peak Hour (Critical Scenario)



Street 'I' & Street 'D' / Fallis Line

Total 2031 - Eastbound **Exhibit 9A-11**

Weekday PM Peak Hour (Critical Scenario)



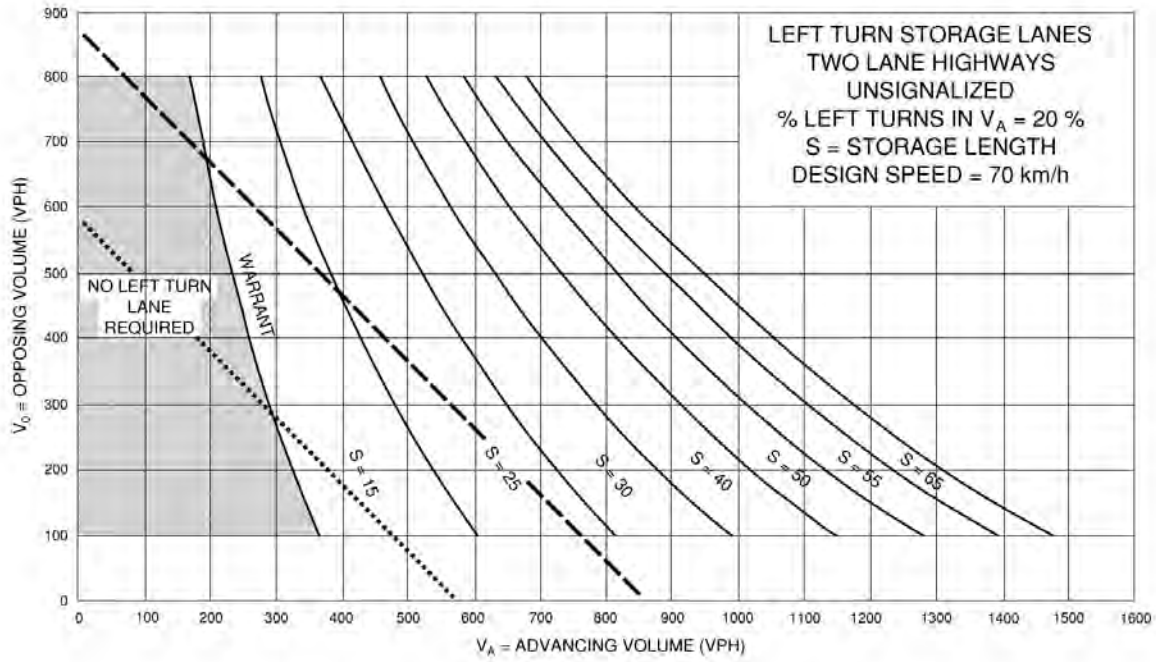
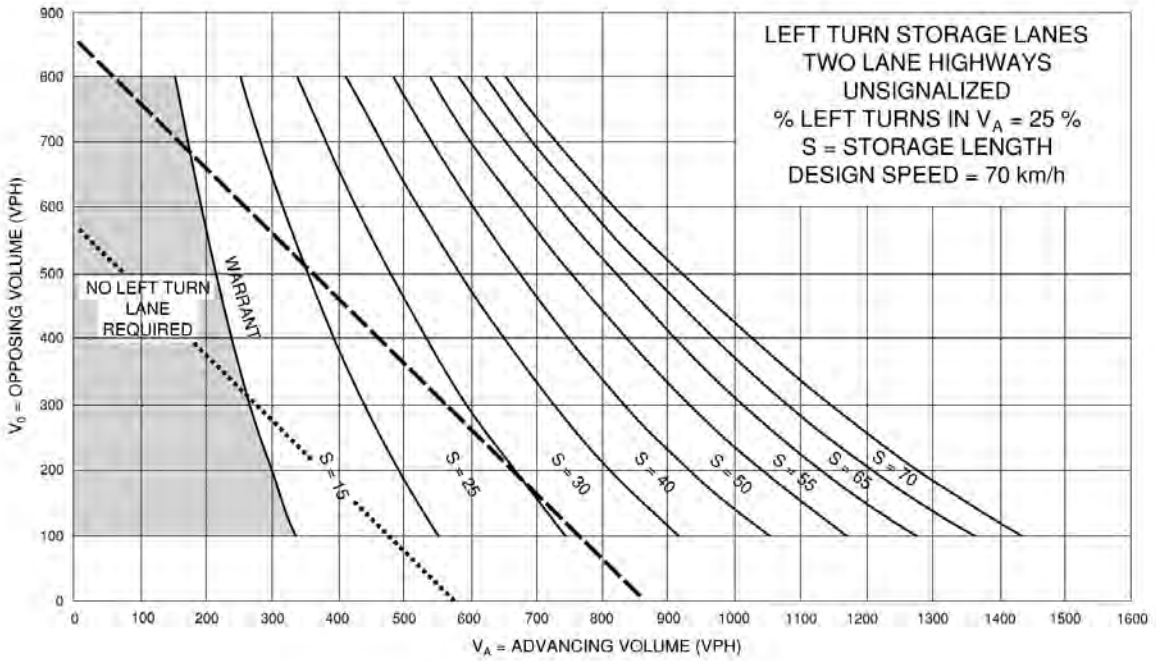


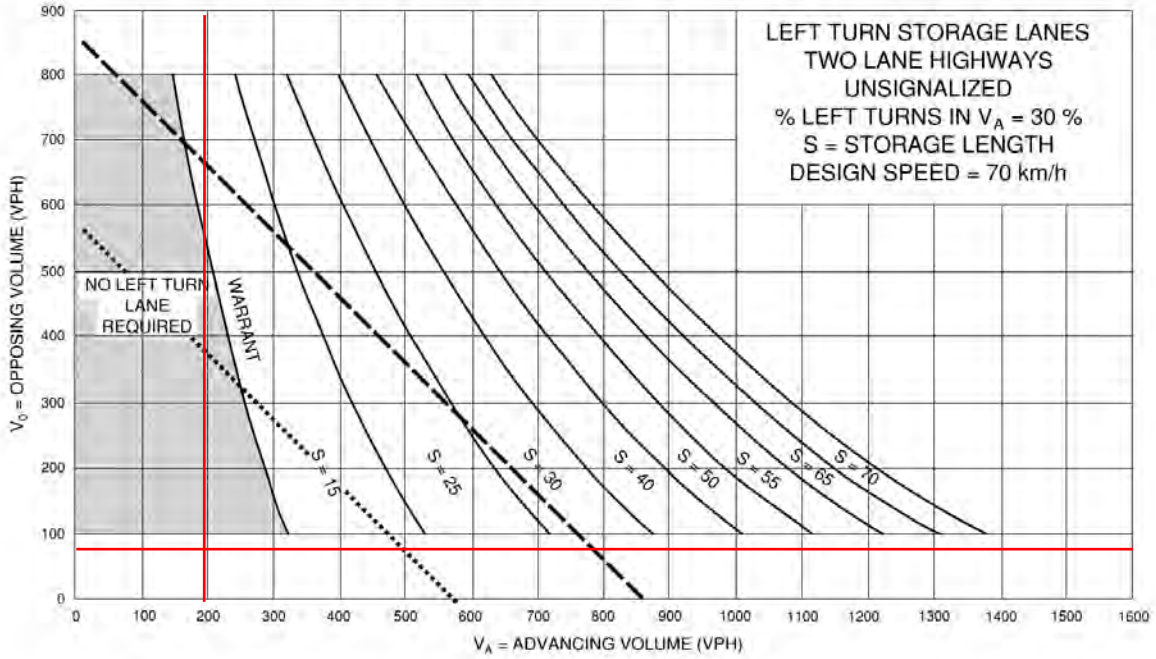
Exhibit 9A-12



Street 'B' South & Street 'A' / Fallis Line

Total 2031 - Westbound

Weekday PM Peak Hour (Critical Scenario)

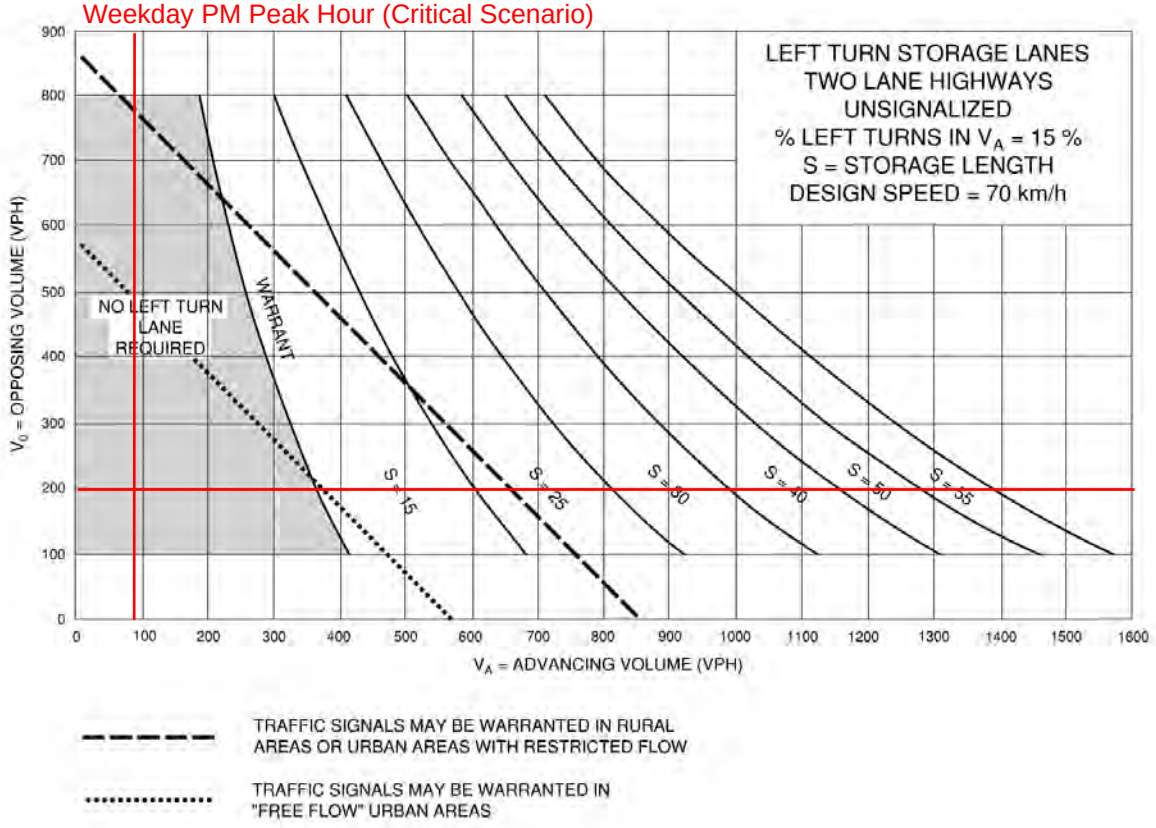


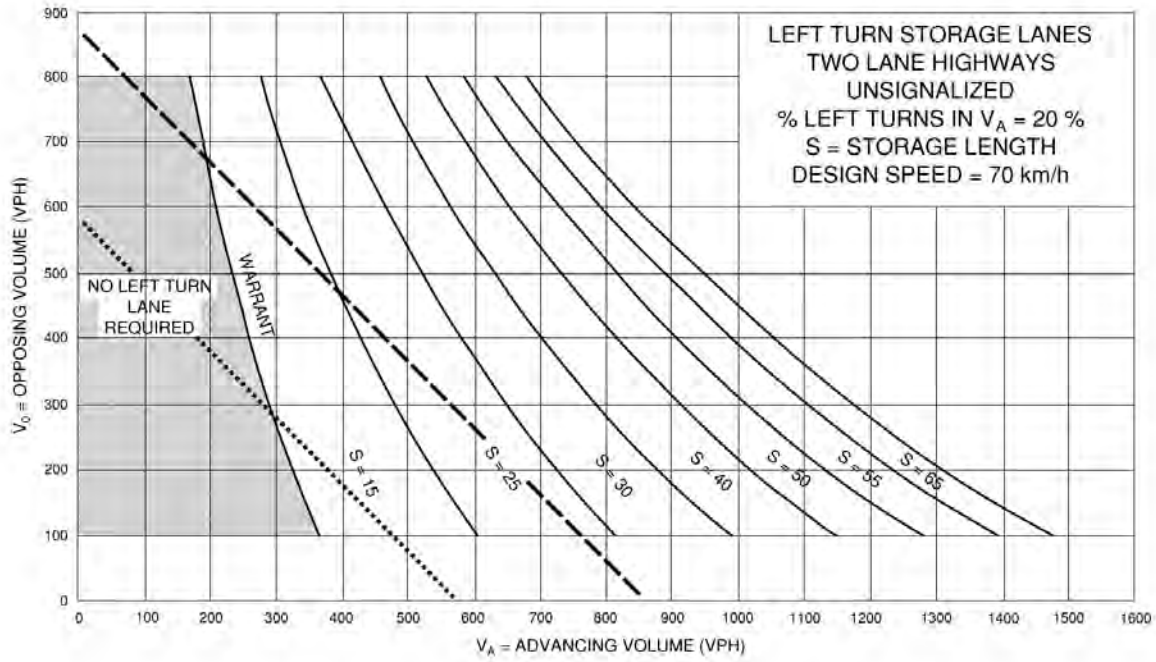
Street 'B' South & Street 'A' / Fallis Line

Total 2031 - Eastbound

Weekday PM Peak Hour (Critical Scenario)

Exhibit 9A-11





Appendix H –
OTM Signal Justification Reports

Justification No. 7 - 2031 Background Traffic (Critical Case)

County Road 10 / Larmer Line

Justification	Description		Compliance			Signal Warrant	Underground Provisions Warrant
			Sectional		Entire %		
		Free Flow	Numerical	%			
1. Minimum Vehicluar Volume	A. Vehicle volume, all aproaches (average hour)	480	693	144%	59%	YES	YES
	B. Vehicle volume, along minor streets (average hour)	120	85	71%		NO	NO
2. Delay to cross traffic	A. Vehicle volume, major street (average hour)	480	523	109%	91%	NO	YES
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (average hour)	50	69	138%		YES	YES

Justification No. 7 - 2026 Background Traffic

County Road 10 / Fallis Line

Justification	Description		Compliance			Signal Warrant	Underground Provisions Warrant
			Sectional		Entire %		
		Free Flow	Numerical	%			
1. Minimum Vehicluar Volume	A. Vehicle volume, all aproaches (average hour)	480	540	112%	68%	NO	YES
	B. Vehicle volume, along minor streets (average hour)	180	147	82%		NO	NO
2. Delay to cross traffic	A. Vehicle volume, major street (average hour)	480	293	61%	51%	NO	NO
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (average hour)	50	86	172%		YES	YES

Justification No. 7 - 2021 Total Traffic

County Road 10 / Fallis Line

Justification	Description		Compliance			Signal Warrant	Underground Provisions Warrant
			Sectional		Entire %		
		Rest. Flow	Numerical	%			
1. Minimum Vehicluar Volume	A. Vehicle volume, all aproaches (average hour)	480	640	133%	87%	YES	YES
	B. Vehicle volume, along minor streets (average hour)	180	188	104%		NO	YES
2. Delay to cross traffic	A. Vehicle volume, major street (average hour)	480	331	69%	58%	NO	NO
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (average hour)	50	101	202%		YES	YES

Justification No. 7 - 2031 Total Traffic (Critical Case)

County Road 10 / Community Centre East Driveway

Justification	Description		Compliance			Signal Warrant	Underground Provisions Warrant
			Sectional		Entire %		
		Free Flow	Numerical	%			
1. Minimum Vehicluar Volume	A. Vehicle volume, all aproaches (average hour)	480	584	122%	6%	YES	YES
	B. Vehicle volume, along minor streets (average hour)	180	12	7%		NO	NO
2. Delay to cross traffic	A. Vehicle volume, major street (average hour)	480	561	117%	14%	NO	YES
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (average hour)	50	9	17%		NO	NO

Justification No. 7 - 2031 Total Traffic (Critical Case)

Street 'B' South & Street 'A' / Fallis Line

Justification	Description		Compliance			Signal Warrant	Underground Provisions Warrant
			Sectional		Entire %		
		Free Flow	Numerical	%			
1. Minimum Vehicluar Volume	A. Vehicle volume, all aproaches (average hour)	480	170	36%	24%	NO	NO
	B. Vehicle volume, along minor streets (average hour)	120	58	48%		NO	NO
2. Delay to cross traffic	A. Vehicle volume, major street (average hour)	480	87	18%	12%	NO	NO
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (average hour)	50	30	59%		NO	NO

Justification No. 7 - 2031 Total Traffic (Critical Case)

Street 'I' & Street 'D' / Fallis Line

Justification	Description		Compliance			Signal Warrant	Underground Provisions Warrant
			Sectional		Entire %		
		Free Flow	Numerical	%			
1. Minimum Vehicluar Volume	A. Vehicle volume, all aproaches (average hour)	480	358	75%	50%	NO	NO
	B. Vehicle volume, along minor streets (average hour)	120	122	102%		NO	YES
2. Delay to cross traffic	A. Vehicle volume, major street (average hour)	480	202	42%	28%	NO	NO
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (average hour)	50	40	81%		NO	NO

Justification No. 7 - 2031 Total Traffic (Critical Case)

County Road 10 / Street 'B' North

Justification	Description		Compliance			Signal Warrant	Underground Provisions Warrant
			Sectional		Entire %		
		Free Flow	Numerical	%			
1. Minimum Vehicluar Volume	A. Vehicle volume, all aproaches (average hour)	480	735	153%	36%	YES	YES
	B. Vehicle volume, along minor streets (average hour)	180	98	54%		NO	NO
2. Delay to cross traffic	A. Vehicle volume, major street (average hour)	480	565	118%	78%	NO	YES
	B. Combined vehicle and pedestrian volume crossing artery from minor streets (average hour)	50	85	170%		YES	YES

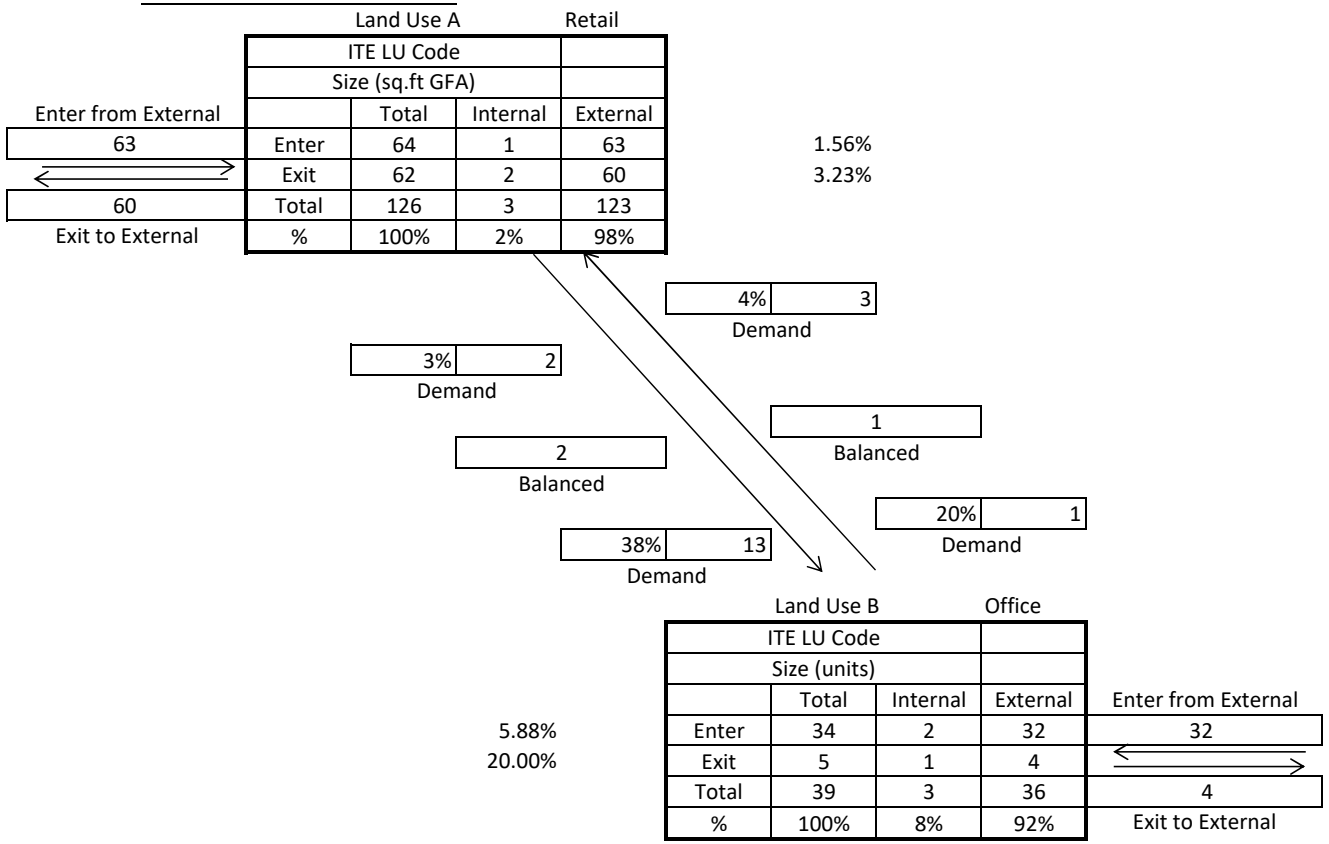
Appendix I –
ITE Internal Capture Calculations

MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY

Analyst: A. Aresta

Date: 23-Sep-18

Time Period: AM Peak Hour



MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY

Analyst: A. Aresta
Date: 23-Sep-18
Time Period: PM Peak Hour

Land Use A: Retail

ITE LU Code				
Size (sq.ft GFA)				
Enter from External		Total	Internal	External
73	Enter	74	1	73
⇐⇒	Exit	68	2	66
66	Total	142	3	139
Exit to External	%	100%	2%	98%

1.35%
2.94%

2% 1 Demand

3% 2 Demand

1 Balanced

2 Balanced

23% 18 Demand

31% 5 Demand

Land Use B: Office

ITE LU Code				
Size (units)				
	Total	Internal	External	Enter from External
Enter	16	2	14	14
Exit	78	1	77	⇐⇒
Total	94	3	91	77
%	100%	3%	97%	Exit to External

12.50%
1.28%

MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY

Analyst: A. Aresta

Date: 23-Sep-18

Time Period: Saturday Peak Hour

Land Use A: Retail

ITE LU Code			
Size (sq.ft GFA)			
	Total	Internal	External
Enter	139	1	138
Exit	134	1	133
Total	273	2	271
%	100%	1%	99%

Enter from External: 138

Exit to External: 133

0.72%

0.75%

4% 6 Demand

3% 4 Demand

1 Balanced

1 Balanced

20% 1 Demand

38% 1 Demand

Land Use B: Office

ITE LU Code			
Size (units)			
	Total	Internal	External
Enter	3	1	2
Exit	3	1	2
Total	6	2	4
%	100%	33%	67%

33.33%

33.33%

Enter from External: 2

Exit to External: 2