# Millbrook Development Phase 2

**Township of Cavan Monaghan, County of Peterborough** 

Traffic Impact Study for the Towerhill Developments Ltd.

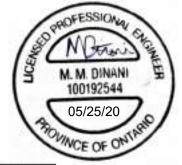
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# **Legal Notification**

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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 52.1 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		328 units
•	Townhouse		245 units
•	High Density Residential		<u>192 units</u>
	· ·	Total	765 units

Institutional Block 5.5 Acres

It is anticipated that the proposed development will be fully occupied by 2023.

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 access roads located directly across the Millbrook Development Phase 1 Street 'A' and Street 'B' South & Street 'I'] and one full-movement access onto Fallis Line at the west end of the development [Street 'L'].

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';
- Fallis Line / Street 'I' & Street 'D'; and
- Fallis Line / Street 'L'.

#### **Conclusions**

- 1. The proposed development of the Subject Site is expected to generate a total of 638 AM, 602 PM and 677 SAT peak hour trips.
- Background traffic and pedestrian counts were completed for the existing intersections of County Road 10 / Municipal Office Driveway on Tuesday April 25<sup>th</sup>, 2017 and Saturday August 12<sup>th</sup>, 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 (2023, 2026 and 2031) traffic volumes. The following improvements are recommended:

#### Background (2023) Traffic Volumes

As part of the Millbrook Community Centre Development

- County Road 10 / Municipal Office Driveway (Millbrook Community Centre)
  - o Construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length.

As part of the Millbrook Phase 1 Development

- County Road 10 / Larmer Line
  - o Construct a northbound left-turn lane with a 160 metre taper length, 60 metre parallel length and 25 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
  - o Install traffic signals.

#### **Background (2031) Traffic Volumes**

- County Road 10 / Larmer Line
  - o 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 (2023, 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 (2023) Traffic Volumes

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

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

 Construct a westbound left-turn lane with a 115 metre taper length, 30 metre parallel and 25 metre storage.

#### County Road 10 / Street 'B' North

- Construct a northbound left-turn lane with a 160 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.

#### Fallis Line

Extend the 60 km/h speed limit zone on Fallis Line to include the area from County Road 10 to a location 200 metres west of Street 'L'.



#### Conditional Works - Total (2031) Traffic Volumes

- County Road 10 / Street 'B' North
  - o Install traffic signals.
- 6. The sight lines available on Fallis Line for Street 'L', Street 'B' South and Street 'l' 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 52.1 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:

•	Institutional Block		5.5 Acres
		Total	765 units
•	High Density Residential		<u>192 units</u>
•	Townhouse		245 units
•	Single Detached		328 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 Developer, 141 units were built-out and occupied for Millbrook Development Phase 1 by the end of 2018 (existing year for this analysis).

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 'B' South & Street 'I'] and one full-movement access onto Fallis Line at the west end of the development [Street 'L'].

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.** 

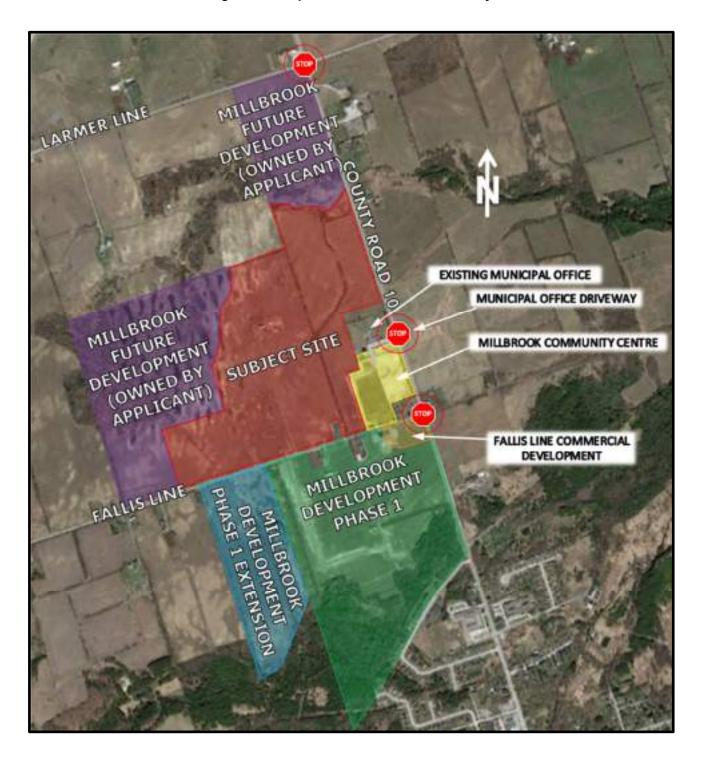
The Subject Site is bound by County Road 10, the existing Township municipal office and the future Millbrook Community Centre to the east, Fallis Line to the south, and Future Millbrook Development lands to the north and west.

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';
- Fallis Line / Street 'I' & Street 'D'; and
- Fallis Line / Street 'L'.



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 takes into account the County's Traffic Impact Assessment Guidelines and 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 2023. Traffic scenarios for the existing (2018), ultimate build-out year horizon year (2023) and planning horizon years (2026 and 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.

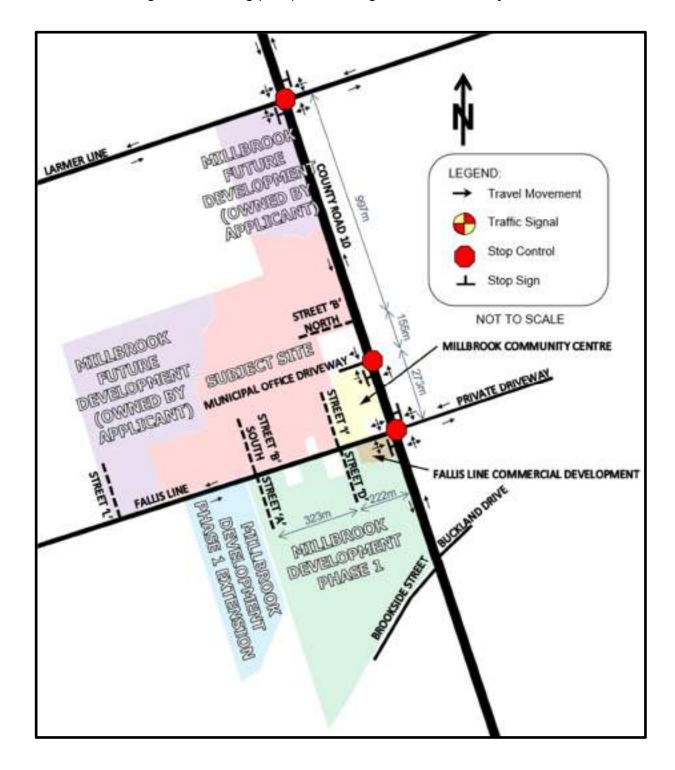
**Fallis Line** is a two-lane local road with a rural cross-section, 6.0 metre paved road width, 0.25 metre wide gravel shoulders and a 20 metre ROW within the study area. There are no sidewalks on Fallis Line. The assumed (unposted) speed limit on Fallis Line is 80km/h. Fallis Line is under the jurisdiction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

InstitutionalUrban Employment9.9 ha.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, multiuse 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* (10<sup>th</sup> 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 2023 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

		AM Peak Hour			PM Peak Hour			SAT Peak Hour		
Development	Size	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

<sup>\*</sup> The traffic generated was estimated in the 919 Fallis Line Traffic Brief (excerpts provided in Appendix B).

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



<sup>\*\*</sup> The internal capture rate has been calculated using the methodology outlined in Section 7 of the ITE Trip Generation Handbook (2<sup>nd</sup> Edition). Calculations are provided in **Appendix I**.

<sup>\*\*\*\*</sup> 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.

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

		AM Peak Hour			P	M Peak	Hour	SAT Peak Hour		
Development	Size	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Single-Family Detached										
Housing	269 units	50	150	200	168	99	267	136	115	251
ITE Land Use: 210										
Multifamily Housing										
(Low-Rise)	65 units	7	25	32	26	15	41	23	23	46
ITE Land Use: 220										
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

		Al	AM Peak Hour*			/I Peak	Hour*	SAT Peak Hour**			
Development	Size	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	

<sup>\*</sup> The traffic generated was estimated in the Azsura Traffic Brief (excerpts provided in Appendix B).

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.** 



<sup>\*\*</sup> The traffic generated was estimated based on the ITE Trip Generation Manual.

#### 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	TUO	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 2023, 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)

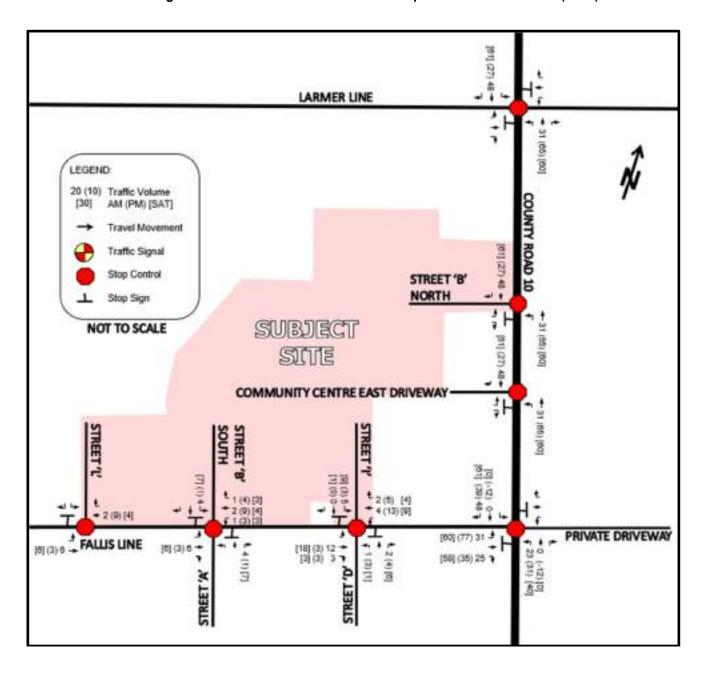
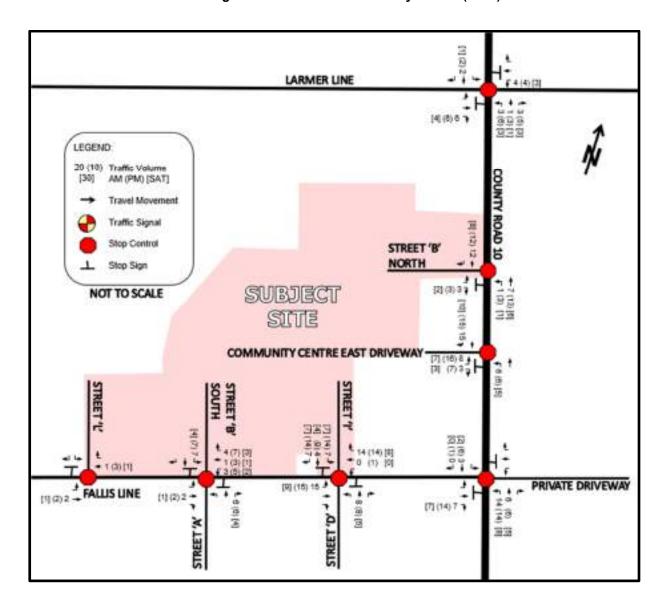




Figure 4 – Millbrook Community Centre (2021)





JDE-1331 Date: May 25<sup>th</sup>, 2020

+ + FE (\$11) [PS] LARMER LINE LEGEND: 20 (10) Traffic Volume AM (PM) [SAT] Travel Movement Traffic Signal STREET 'B' Stop Control NORTH Stop Sign SUBJECT NOT TO SCALE COMMUNITY CENTRE EAST DRIVEWAY [16] (20) 6 FALUS UNE PRIVATE DRIVEWAY [3] (4) 1 + [13] (16) 5 T [25] (21) 32 + (3] (4) 1 Y (39) (32) 49 7

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



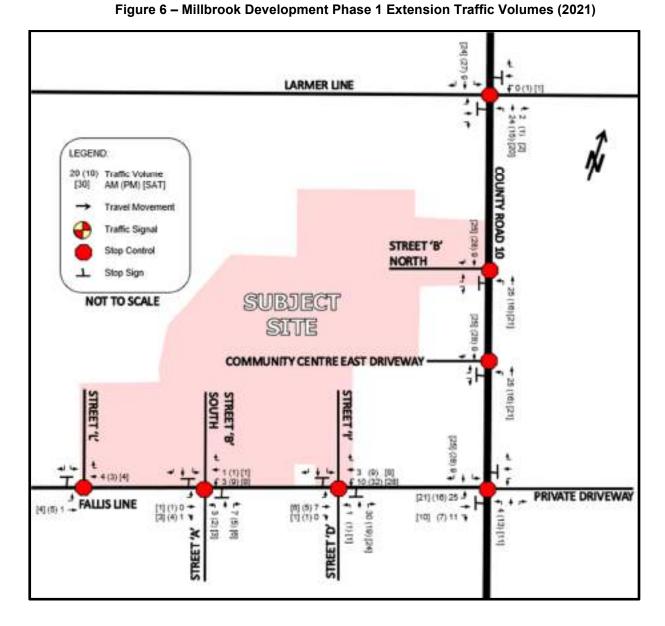
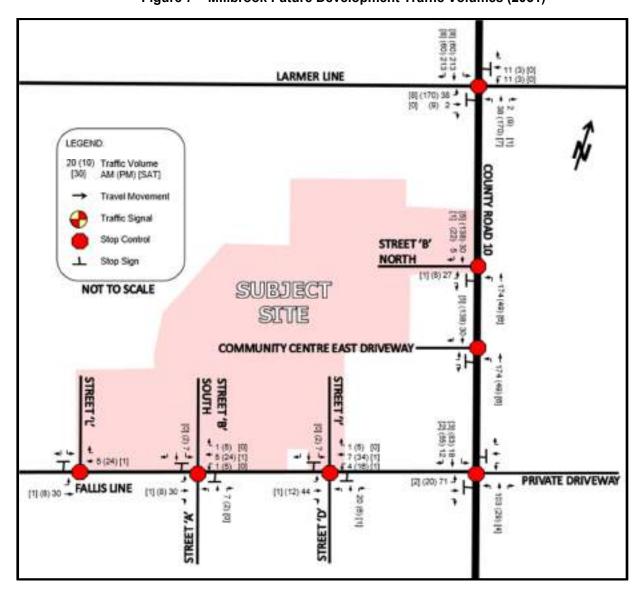




Figure 7 – Millbrook Future Development Traffic Volumes (2031)





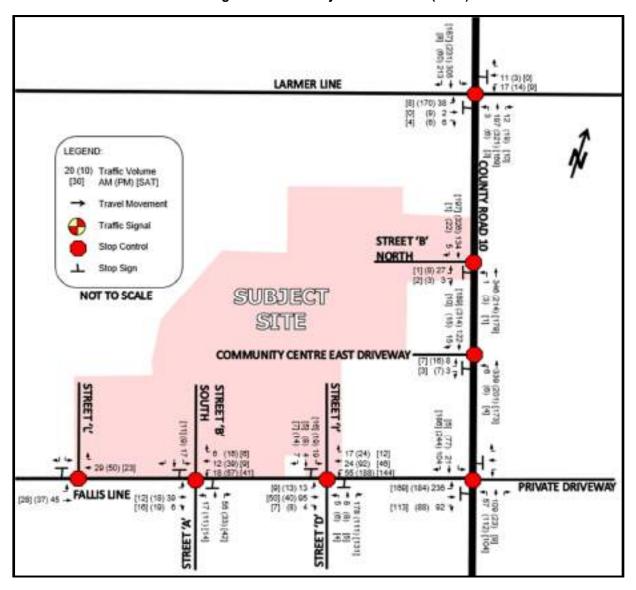
Date: May 25th, 2020

[thg] (171) 92 -LARMER LINE [4] (5) 6 % LEGEND: 20 (10) Traffic Volume AM (PM) [SAT] Travel Movement Traffic Signal Stop Control STREET 'B' NORTH Stop Sign SUBJECT NOT TO SCALE SITE 58 COMMUNITY CENTRE EAST DRIVEWAY [7] (16) 8 ± 1 [3] (7) 3 ± 1 SEE 303 (11) [6] (15) [6] + 24 (26) [22] [27] (29) 15 → FALUS UNE (9) (13) 13 4 (40) (28) 51 -(7) (8) 4 7 PRIVATE DRIVEWAY [107] (104) 185-3 +8 (8) + 57 (112) [11]{10}0 + [10](10)0 + the contra [113] (88) 92 % STREET 'A'

Figure 8 - Total Adjacent Volumes (2023 & 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 /	Tuesday, April 25 <sup>th</sup> , 2017	07:30 - 08:30	16:30 - 17:30	=
Larmer Line	Saturday, August 12th, 2017	-	-	12:00 - 13:00
County Road 10 /	Tuesday, April 25 <sup>th</sup> , 2017	07:30 - 08:30	16:30 - 17:30	-
Municipal Office Driveway	Saturday, August 12th, 2017	-	-	12:00 - 13:00
County Road 10 /	Tuesday, April 25th, 2017	07:30 - 08:30	16:30 - 17:30	-
Fallis Line	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.

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

As noted in Section 1.1, 141 units of the Millbrook Development Phase 1 were build-out and occupied by the end of 2018 (existing year for this analysis). Consequently, we have included the trip generation for these units in the existing (2018) scenario. For the purpose of our analysis we have assumed 114 units are single-detached residential and 27 units are townhouses.

**Figure 11** illustrates the adjusted existing (2018) AM, PM and SAT peak hour traffic volumes in the study area with the occupied Millbrook Phase 1 traffic.



Figure 10 - Existing (2018) Traffic Volumes - Without Occupied Millbrook Phase 1 Traffic

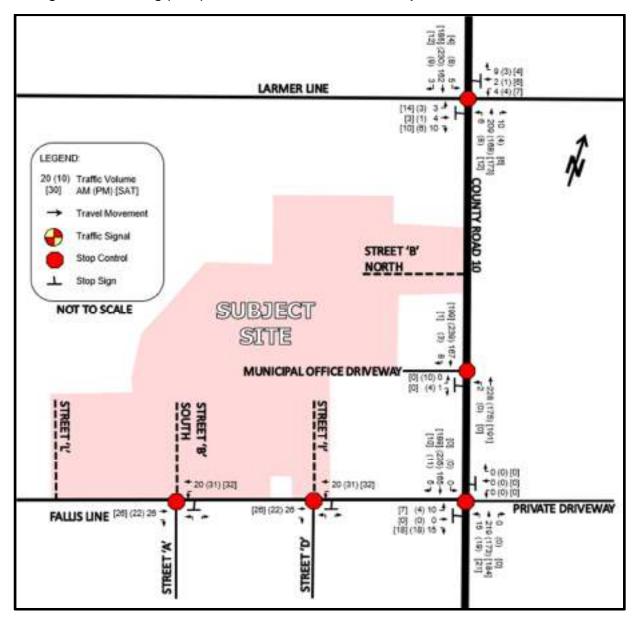
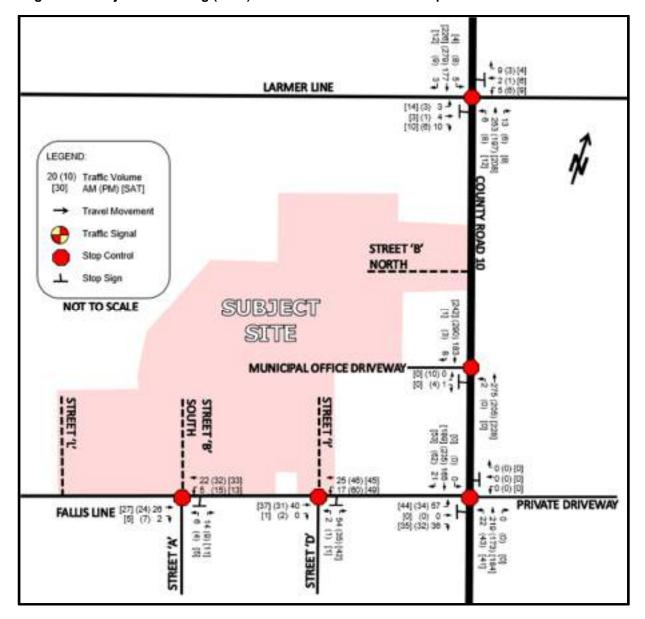




Figure 11 - Adjusted Existing (2018) Traffic Volumes - With Occupied Millbrook Phase 1 Traffic





#### 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.

24-hour Location Year Season Day of Week Traffic Volume Spring Monday 4,581 2005 Summer Tuesday 4,375 3,998 Brookside Spring Monday Count 2006 Summer Wednesday 4.651 Fall Wednesday 4,398 2009 Spring Wednesday 3,737 Spring Monday No Data 2005 Tuesday 892 Summer Monday Spring 1,842 2006 Summer Wednesday 4,524 Larmer Fall Wednesday 3,637 Count 2009 Spring Wednesday No Data 4791 Spring Tuesday Wednesday 4397 2016 Summer Fall Wednesday 5074

**Table 9 - County ATR Counts** 

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 for existing roads within the area will have the same background traffic growth rate.

**Figure 12, 13 and 14** illustrates the background (2023, 2026 and 2031) AM, PM and SAT peak hour traffic volumes for the study area.



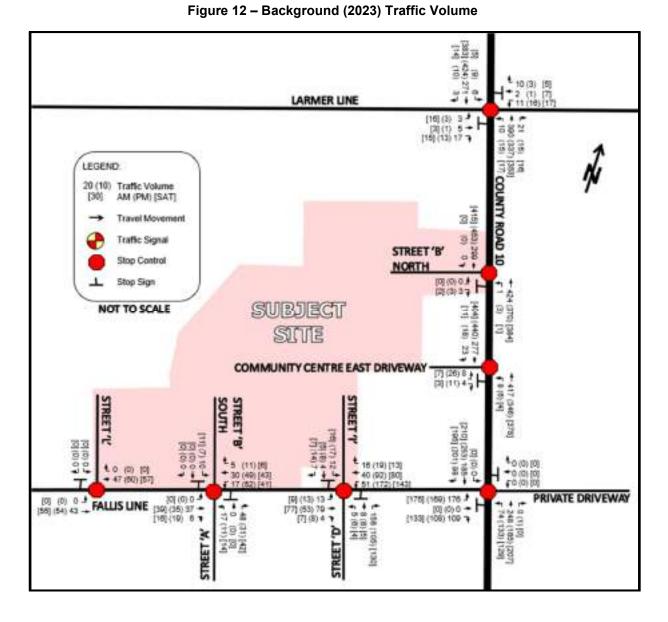
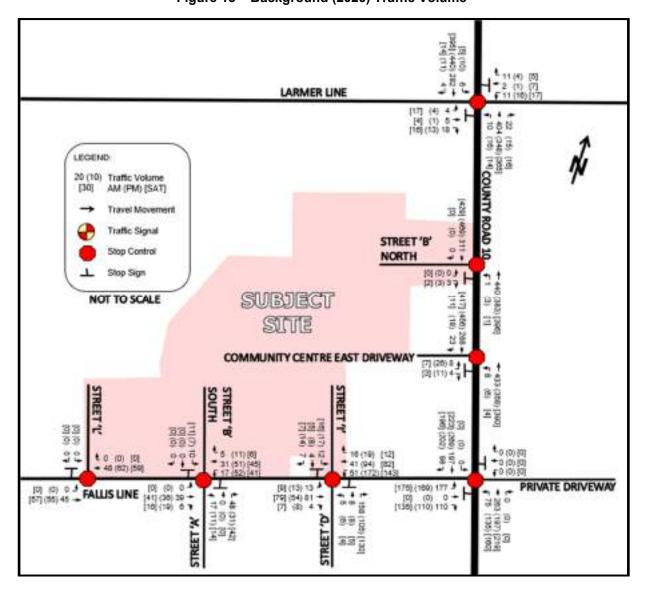
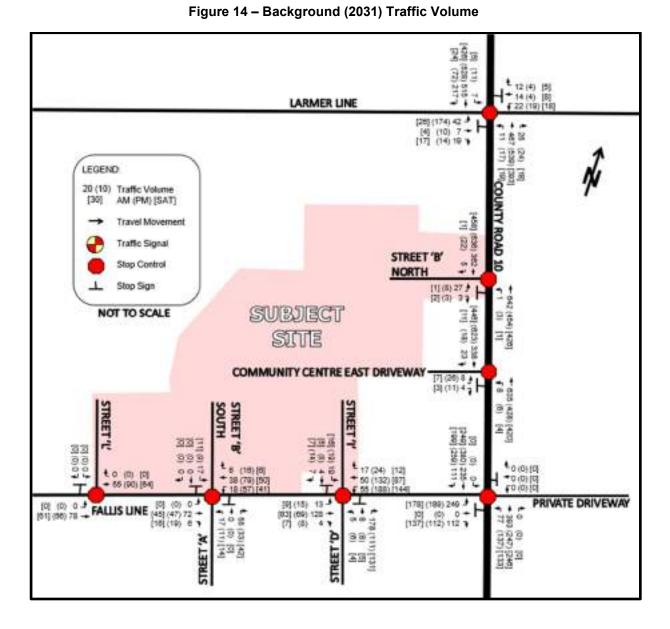




Figure 13 - Background (2026) Traffic Volume









# 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

		Control Delay (seconds per vehicle)				
LOS	LOS Description	Signalized Intersections	Stop Controlled Intersections			
Α	Very low delay; most vehicles do not stop (Excellent)	less than 10.0	less than 10.0			
В	Higher delay; more vehicles stop (Very Good)	between 10.0 and 20.0	between 10.0 and 15.0			
С	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			
Е	Vehicles must often wait through more than one red light; considered by many agencies to be the limit of <b>acceptable</b> 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 ( <b>Unacceptable</b> )	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

Lasation	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend SAT Peak Hour			
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	
County Road 10 / Larmer Line (unsignalized)	-	1.0	А	-	0.7	Α	-	1.3	Α	
EB	0.03	11.3	В	0.02	11.6	В	0.05	11.8	В	
WB	0.03	11.6	В	0.03	13.2	В	0.04	12.2	В	
County Road 10 / Fallis Line (unsignalized)	-	2.5	А	-	2.1	Α	-	2.3	Α	
EB	0.18	12.4	В	0.15	12.8	В	0.14	11.9	В	
NB	0.02	7.7	Α	0.04	8.1	Α	0.03	7.8	Α	
SB	0.00	0.0	Α	0.00	0.0	Α	0.00	0.0	Α	
County Road 10 / Municipal Office Driveway (unsignalized)	-	0.1	А	-	0.3	А	-	0.0	Α	
EB	0.01	9.4	Α	0.03	12.0	В	0.00	0.0	Α	

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, a left turn lane is not recommended as this intersection is operating with an 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 Appendix G of the Virginia Department of Transportation Road Design Manual [VDOT RDM] were applied. Based on the above noted criteria, a right turn taper is warranted in the southbound direction at the County Road 10 / Fallis Line intersection (results provided in **Appendix J**); however, a right turn taper is not recommended as this intersection is operating with an excellent LOS. Based on the above noted criteria, a right turn lane is not warranted at any of the other 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 infrastructure improvements are recommended within the study area for the existing (2018) scenario.

#### 3.3 Background (2023) Intersection Operation

The results of the LOS analysis under background (2023) 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 the following upon build-out and occupancy of the Millbrook Phase 1 Development:

- County Road 10 / Larmer Line
  - o Construction of a northbound left-turn lane with a 160 metre taper length, 60 metre parallel length and 25 metre storage length.
- County Road 10 / Fallis Line
  - Reduction in the posted speed limit from 80 km/h to 60km/h on Fallis Line from County Road 10 to west of Street 'A';
  - o Construction of a northbound left-turn lane with a 145 metre taper length, 60 metre parallel length and 25 metre storage length; and
  - Construction of a southbound right-turn lane with an 80 metre taper length and 85 metre parallel length.

As outlined in Section 2.3, the Millbrook Community Centre and Millbrook Phase 1 Development are anticipated to be completed by 2023; consequently, the above-noted improvements have been assumed to be complete by the 2023 horizon year.

With the above-noted exceptions, 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 (2023) LOS

Landing	Weekday AM Peak Hour			Weekda	ay PM Peak F	lour	Weekend SAT Peak Hour		
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	1.1	Α	-	1.0	Α	-	1.4	А
EB	0.06	13.2	В	0.04	13.6	В	0.09	15.5	С
WB	0.08	16.1	С	0.10	22.0	С	0.10	17.6	С
County Road 10 / Fallis Line (unsignalized)	-	9.6	A	-	15.4	С	-	9.6	А
EB	0.69	27.9	D	0.88	53.8	F	0.70	29.0	D
County Road 10 / Municipal Office Driveway (unsignalized)	-	0.3	А	-	0.8	Α	-	0.2	А
EB	0.04	14.3	В	0.13	17.1	С	0.03	14.3	В

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 noted in Section 3.1 in the PM peak hour; however, no additional improvements are recommended as the eastbound movements are only marginally outside the typical design limits.

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 above noted criteria a left turn lane 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 lane is not recommended.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Appendix G of the Virginia Department of Transportation Road Design Manual [VDOT RDM] were applied. Based on the above noted criteria, a right turn lane is not warranted at any of the other 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**).

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

No additional improvements are recommended within the study area for the background (2023) scenario.

## 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 13.** 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 13 - Background (2026) LOS

Lasation	Weekday AM Peak Hour			Week	day PM Pea	ak Hour	We	ekend SAT	Peak Hour
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	1.2	А	-	1.1	А	-	1.5	Α
EB	0.07	13.7	В	0.05	14.4	В	0.11	16.0	С
WB	0.08	16.4	С	0.10	22.5	С	0.10	18.2	С
County Road 10 / Fallis Line (unsignalized)	-	10.3	В	-	17.7	С	-	10.1	Α
EB	0.73	31.0	D	0.92	64.3	F	0.73	31.6	D
County Road 10 / Municipal Office Driveway (unsignalized)		0.3	А	-	0.8	А		0.2	Α
EB	0.04	14.6	В	0.13	17.6	С	0.03	14.6	В

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 this intersection (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. All-way-stop-control is not feasible for this location as it would only provide a temporary solution and a roundabout is not feasible as the existing road allowance cannot accommodate a roundabout.

A summary of the results of the Synchro analysis with above-noted improvements can be found below in **Table 14**. Detailed output of the Synchro analysis can be found in **Appendix E**.

Table 14 - Background (2026) LOS with Improvements

Lasatian	Wee	kday AM Pe	eak Hour	Week	day PM Pea	k Hour	We	ekend SAT	Peak Hour
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Fallis Line (signalized)	-	13.9	В	-	11.9	В	-	11.9	В
EB	0.72	25.6	С	0.70	24.5	С	0.70	2.9	С
NBL	0.14	9.2	Α	0.28	10.1	В	0.22	9.2	Α
NBT	0.32	10.1	В	0.23	8.7	Α	0.23	8.5	Α
SBT	0.24	9.3	Α	0.32	9.5	Α	0.23	7.6	Α
SBR	0.15	2.8	Α	0.25	2.2	Α	0.22	2.2	Α

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 lane 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 lane is not recommended.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Appendix G of the VDOT RDM were applied. Based on the above noted criteria, a right turn lane is 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**).

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

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

## 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 15**. 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**.

Weekday PM Peak Hour Weekend SAT Peak Hour Weekday AM Peak Hour Location Delay Delay Delay (N-S Street / E-W Street) V/C V/C LOS LOS V/C LOS (s) (s) (s) County Road 10 / Larmer Line 4.9 Α 58.6 F 1.8 Α (unsignalized) EΒ 0.59 62.7 F 1.72 411.4 F 0.16 18.8 C 0.40 WB 46.5 0.26 0.12 20.2 С F 45.0 Ε County Road 10 / Fallis 17.3 В В 12.0 В Line 127 (signalized) 28.2 С 0.72 25.4 С 0.70 24.1 EΒ 0.78 С 11.9 0.23 NBL 0.16 В 0.37 12.6 В 9.4 Α 0.52 0.30 NBT 15.1 В 9.7 Α 0.26 8.8 Α SBT 0.31 12.2 В 0.46 11.7 В 0.26 8.9 Α SBR 0.18 3.3 Α 0.31 2.3 Α 0.22 2.2 Α County Road 10 / Municipal Office Driveway 0.3 Α 0.9 Α 0.2 Α (unsignalized) ΕB 0.05 19.0 С 0.19 24.4 С 0.030 15.4 С

Table 15 - Background (2031) LOS

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 this intersection (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. All-way-stop-control is not feasible for this location as it would only provide a temporary solution and a roundabout is not feasible as the existing road allowance cannot accommodate a roundabout.

A summary of the results of the Synchro analysis with above-noted improvements can be found below in **Table 16**. Detailed output of the Synchro analysis can be found in **Appendix E**.



Date: May 25<sup>th</sup>, 2020

Table 16 - Background (2031) LOS with Improvements

1 46	Wee	Weekday AM Peak Hour			day PM Pea	ak Hour	We	Weekend SAT Peak Hour			
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS		
County Road 10 / Larmer											
Line	-	11.1	В	-	17.0	В	-	5.4	Α		
(signalized)											
EB	0.48	34.4	С	0.77	49.2	D	0.33	29.9	С		
NBL	0.30	29.1	С	0.12	23.9	С	0.23	33.4	С		
NBT	0.03	3.8	Α	0.04	7.2	Α	0.03	2.8	Α		
SBT	0.42	5.4	Α	0.53	11.0	В	0.27	3.0	Α		
SBR	0.64	8.3	Α	0.59	12.0	В	0.30	3.2	Α		

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.

For right turn movements at the unsignalized intersections in the study area, the criteria outlined in Appendix G of the VDOT RDM were applied. Based on the above noted criteria, a right turn lane is 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**).

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

No additional improvements are recommended within the study area for the background (2031) 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 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));
- ITE land use 221 (Multifamily Housing (Mid-Rise)); and
- ITE land use 520 (Elementary School)<sup>1</sup>.

The estimated trip generation of the proposed development is illustrated below in **Table 17**. 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.

<sup>&</sup>lt;sup>1</sup> Based on correspondence with the Kawartha Pine Ridge District School board, it has not yet been confirmed whether the institutional block will be an elementary school or middle school; however, based on future school projections, an elementary school would likely have more students (350 students). Consequently, for the purpose of this analysis, we have conservatively assumed the institutional block will be an elementary school.



**Table 17 - Estimated Traffic Generation of Proposed Development** 

		Δ	M Peak	Hour	PN	/ Peak H	our	SA	T Peak H	our*
Development	Size	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Single-Family Detached Housing ITE Land Use: 210	328 units	61	182	243	205	120	325	165	141	306
Multifamily Housing (Low-Rise) ITE Land Use: 220	245 units	26	87	113	87	51	138	116	116	232
Multifamily Housing (Mid-Rise) ITE Land Use: 221	192 units	18	52	70	52	33	85	42	43	85
Total Residential	765 units	105	321	426	344	204	548	323	300	623
Elementary School** ITE Land Use: 520	350 students	114	98	212	26	28	54	26	28	54
TOTAL TRIP GEN	ERATION	219	419	638	370	232	602	349	328	677

<sup>\*</sup>There are no SAT peak hour ITE trip generation rates for the ITE Elementary School land use (ITE#520). Consequently, we have assumed the trip generation in the SAT peak hour to be equivalent to the PM peak hour.

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 residential component of 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 residential component of the proposed development is illustrated in **Table 18**.

Table 18 - Millbrook Development Phase 2 Residential 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 35 single-detached residential units with frontage on Fallis Line (20 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 residential component of the proposed development was calculated for the AM, PM and SAT peak hour and has been illustrated in **Figure 15.** 

The distribution of elementary school traffic from the proposed development is based on the estimated origin / destination of trips generated by the proposed elementary school. Given that the proposed elementary school is anticipated to have a catchment area similar to the existing Millbrook/South Cavan



<sup>\*\*</sup> We have applied a 10% reduction in the ITE trip generation rates for the ITE Elementary School land use (ITE#520) to account for internal trips within the proposed development.

Public School, the main origins and destinations would be from residential areas within this area. The resulting traffic distribution pattern, based on the above noted assumptions, for the AM, PM and SAT peak hours is illustrated in **Table 19**.

Table 19 - Millbrook Development Phase 2 School Traffic Distribution

Travel Direction (to/from)	Percentage of Total Traffic Generation
North via County Road 10	5%
Southeast via County Road 10	65%
Southwest via Fallis Line	10%
Southwest via Larmer Line	10%
East via Larmer Line	10%
Total	100%

Using the above noted traffic distribution, the traffic assignment for the school component of the proposed development was calculated for the AM, PM and SAT peak hour and has been illustrated in **Figure 16**.



JDE-1331 Date: May 25th, 2020

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- 29 (002) [001] LARMER LINE 198) (17) 5 ¥ 686 LEGEND: 20 (10) Traffic Volume [30] AM (PM) [SAT] Travel Movement Traffic Signal + 91 (00) 18 + STREET 'B' Stop Control NORTH Stop Sign [160] (108) 160 Å [25] (18) 26 Å SUBJECT NOT TO SCALE [50] (80) (04] (80) # 19 (00) fed + SITE COMMUNITY CENTRE EAST DRIVEWAY # - 92 (02) feel tutu bil 12 (2) es (vel log) 11 (37) [36] 17 (57) [53] 19 (62) [56] (3) [3] 34 15 (9) [14] PRIVATE DRIVEWAY [1] (1) 0 FALUS UNE [14](11) 15 + [40] (28) 46 -[3] (3) 1 4 [50] (36) 57 + 200 [80] (42) 84 \* 100

Figure 15 - Proposed Development Residential Traffic Assignment



STREET 'A'

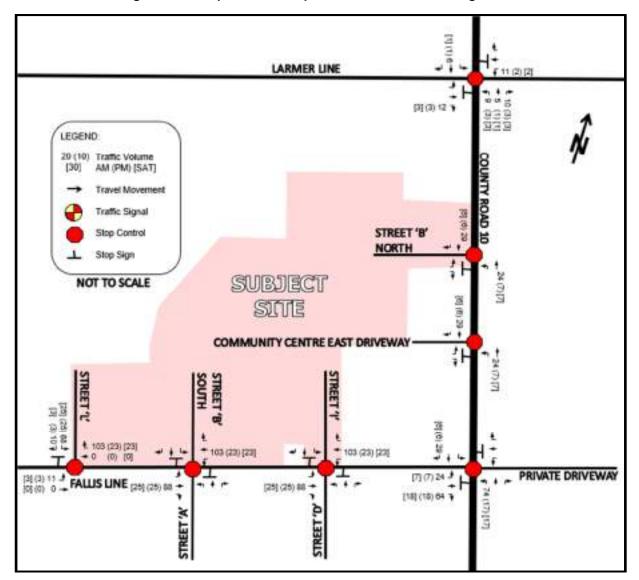


Figure 16 – Proposed Development School Traffic Assignment

# 4.3 Total Horizon Year Traffic Volumes with the Proposed Development

For the total (2023, 2026 and 2031) horizon years with development traffic volume, the proposed development traffic was added to the background (2023, 2026 and 2031) traffic volume. The resulting total (2023, 2026 and 2031) horizon years with proposed traffic volume for the AM, PM and SAT peak hour are illustrated in **Figure 17**, **18** and **19**.



Figure 17 - Total (2023) Traffic Volumes

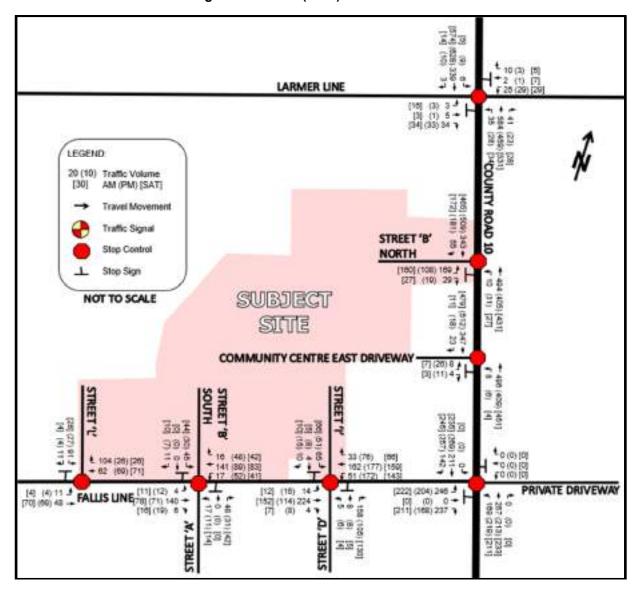
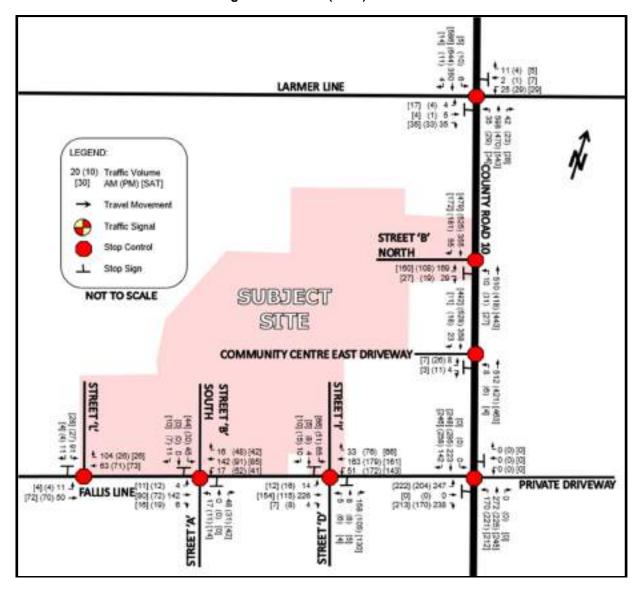




Figure 18 - Total (2026) Traffic Volumes





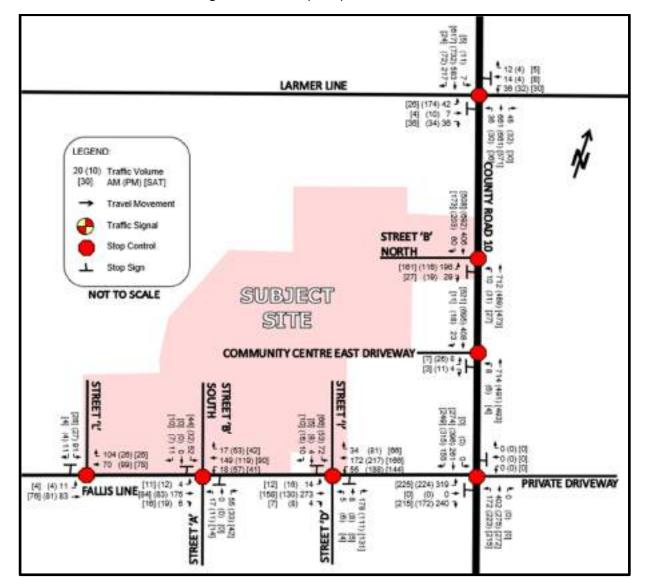


Figure 19 - Total (2031) Traffic Volumes

# 5 Intersection Operation with Proposed Development

# 5.1 **Total (2023) Intersection Operation**

The results of the LOS analysis under total (2023) 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. It is recommended that the a posted speed limit of 60km/h is provided on Fallis Line from County Road 10 to a location 200 west of Street 'L'. Detailed output of the Synchro analysis can be found in **Appendix F**.



**Table 20 - Total (2023) LOS** 

Location	Weekd	ay AM Peak	Hour	Week	day PM Peak I	Hour	Wee	ekend SAT Pe	ak Hour
(N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	2.1	А	-	2.3	Α	-	2.4	Α
EB	0.13	15.5	С	0.12	17.0	С	0.21	22.1	С
WB	0.27	34.3	D	0.35	55.8	F	0.28	38.5	Е
County Road 10 / Fallis Line (unsignalized)	-	112.3	F	-	99.9	F	-	61.2	F
EB	1.56	290.4	F	1.67	351.3	F	1.31	187.2	F
County Road 10 / Community Centre East Driveway (unsignalized)	-	0.3	A	1	0.8	А	ı	0.2	А
EB	0.04	16.6	С	0.15	20.2	С	0.03	16.3	С
Street 'B' South & Street 'A' / Fallis Line (unsignalized)	-	3.3	Α	-	3.6	Α	-	4.0	Α
NB	0.09	10.1	В	0.06	9.6	Α	0.07	9.6	Α
SB	0.11	11.9	В	0.07	11.5	В	0.10	11.5	В
Street 'I' & Street 'D' / Fallis Line (unsignalized)	-	5.6	А	-	6.1	Α	-	6.3	А
NB	0.25	11.5	В	0.18	11.2	В	0.19	10.7	В
SB	0.28	21.3	С	0.31	24.6	С	0.34	26.0	D
County Road 10 / Street 'B' North (unsignalized)	-	7.3	Α	-	4.6	В	-	10.3	В
EB	0.70	39.8	Е	0.61	43.1	Е	0.85	69.5	F
Street 'L' / Fallis Line (unsignalized)	-	3.5	А	1	1.6	А	1	1.7	А
WB	0.00	0.0	Α	0.00	0.0	Α	0.00	0.0	Α
SB	0.15	10.4	В	0.04	9.6	Α	0.05	9.6	Α

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, as noted in Section 3.1. Based on the Ontario Traffic Manual Book 12 *Signal Justification*, traffic signals are not warranted at this intersection (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. All-way-stop-control is not feasible for this location as it would only provide a temporary solution and a roundabout is not feasible as the existing road allowance cannot accommodate a roundabout.

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 in Appendix 9A of the MTO DS a northbound left turn lane is recommended at this intersection with a 160 metre taper length, 60 metre parallel length and 25 metre storage length. Based on the criteria outlined for right turn movements



outlined in Appendix G of the VDOT RDM, a southbound right turn lane is recommended at this intersection with an 80 metre taper length and 85 metre parallel length.

Based on the left turn lane criteria outlined for left turn movements Appendix 9A of the MTO DS, 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, 30 metre parallel and 25 metre storage at this intersection.

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**.

Weekday AM Peak Hour Weekday PM Peak Hour Weekend SAT Peak Hour Location Delay Delay Delay (N-S Street / E-W Street) V/C LOS V/C LOS V/C LOS (s) (s) (s) County Road 10 / 20.2 С 14.8 В 15.1 Fallis I ine В (signalized) 0.79 ΕB С 0.84 29.0 0.78 26.4 С 26.3 С NBL 0.39 18.5 В 0.50 16.3 В 0.40 14.3 R NBT 0.38 16.9 В 0.27 11.3 В 0.27 11.6 В 16.0 В 0.27 SBT 0.30 В 0.35 12.0 11.6 В SBR 0.24 4.1 Α 0.32 2.7 Α 0.28 2.7 Α Street 'I' & Street 'D' / Fallis Line 5.6 Α 6.1 Α 6.3 Α (unsignalized) WB 0.00 0.0 Α 0.00 0.0 Α 0.00 0.0 Α NB 0.25 11.5 В 0.18 11.1 В 0.19 10.7 В SB 0.28 21.2 0.30 24.1 С 0.34 25.5 С D County Road 10 / Street 'B' North Α 6.6 Α 3.6 7.1 Α (unsignalized) ΕB 0.67 36.1 0.53 33.1 D 0.74 47.7 Ε

Table 21 - Total (2023) LOS with Improvements

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 left turn lane criteria outlined in Appendix 9A of the MTO DS, a left turn lane 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 lane is not recommended. Additional left turn lanes are not warranted at the other unsignalized study area intersections.

Based on the right turn lane criteria outlined Appendix G of the VDOT RDM, a right turn lane is warranted in the westbound direction at the Street 'L' / Fallis Line and Street 'l' & Street 'D' / Fallis Line intersections; however, based on low thru volumes and low intersection delay, no additional westbound right turn lanes are recommended. Based on the right turn lane criteria outlined Appendix G of the VDOT RDM, a right turn taper is also warranted in the northbound direction at the County Road 10 / Larmer Line intersection; however, a northbound right turn taper is not recommended as it will not notably improve capacity at this intersection and due to the upcoming recommendation for signalization in the 2031 horizon year. Additional right turn lanes are not warranted at the other unsignalized study area intersections for this horizon year.

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 95<sup>th</sup> percentile queue can be accommodated for all proposed storage lanes in the study area.

No additional improvements are recommended within the study area for the total (2023) scenario.

## 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** 

Lacation	Week	day AM Pea	ak Hour	Weekd	lay PM Pea	k Hour	Wee	kend SAT F	eak Hour
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (unsignalized)	-	2.2	А	-	2.4	В	1	2.6	Α
EB	0.14	16.4	С	0.14	18.2	С	0.23	23.5	С
WB	0.28	36.1	E	0.38	59.6	F	0.30	40.4	E
County Road 10 / Fallis Line (signalized)	-	20.3	С	-	15.0	В	-	15.1	В
EB	0.85	29.1	С	0.78	26.3	С	0.79	26.3	С
NBL	0.40	19.0	В	0.52	17.0	В	0.41	14.6	В
NBT	0.40	17.3	В	0.28	11.5	В	0.28	11.7	В
SBT	0.32	16.2	В	0.37	12.3	В	0.29	11.8	В
SBR	0.24	4.1	Α	0.32	2.7	Α	0.28	2.7	Α
County Road 10 / Community Centre East Driveway (unsignalized)	-	0.3	А	,	0.8	А	-	0.2	Α
EB	0.05	17.0	С	0.16	20.9	С	0.03	16.7	С
Street 'B' South & Street 'A' / Fallis Line (unsignalized)	-	3.3	А	-	3.5	Α	-	4.0	Α
NB	0.09	10.1	В	0.06	9.6	Α	0.07	9.6	Α
SB	0.11	12.0	В	0.07	11.5	В	0.10	11.6	В
Street 'I' & Street 'D' / Fallis Line (unsignalized)	-	5.6	А	-	6.1	А	-	6.3	Α
WBTR	0.00	0.0	Α	0.00	0.0	Α	0.00	0.0	Α
NB	0.25	11.5	В	0.18	11.1	В	0.19	10.7	В
SB	0.28	21.4	С	0.30	24.2	С	0.34	25.8	D
County Road 10 / Street 'B' North (unsignalized)	-	7.0	А	-	3.8	А	-	7.7	Α
EB	0.70	39.5	E	0.55	35.8	Е	0.77	52.9	F
Street 'L' / Fallis Line (unsignalized)	-	3.5	А	-	1.6	А	-	1.6	А
WB	0.00	0.0	Α	0.00	0.0	Α	0.00	0.0	Α
SB	0.15	10.4	В	0.04	9.6	Α	0.05	9.6	Α

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 these intersections 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 in Appendix 9A of the MTO DS, a left turn lane 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 lane is not recommended. Left turn lanes are not warranted at the other unsignalized study area intersections.

Based on the right turn lane criteria outlined Appendix G of the VDOT RDM, a right turn lane is warranted in the westbound direction at the Street 'L' / Fallis Line and Street 'l' & Street 'D' / Fallis Line intersections; however, based on low thru volumes and low intersection delay, no additional westbound right turn lanes are recommended. Based on the right turn lane criteria outlined Appendix G of the VDOT RDM, a right turn taper is also warranted in the northbound direction at the County Road 10 / Larmer Line intersection; however, a northbound right turn taper is not recommended as it will not improve capacity at this intersection and due to the upcoming recommendation for signalization in the 2031 horizon year. Additional right turn lanes are not warranted at any other unsignalized study area intersections for this horizon year.

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 95<sup>th</sup> percentile queue can be accommodated for all proposed storage lanes in the study area.

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** 

	Week	day AM Peak	Hour	Weekda	ay PM Peak	Hour	Weeker	nd SAT Pea	k Hour
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Larmer Line (signalized)	-	11.2	В	-	21.0	С	-	6.6	А
EB	0.51	29.8	С	0.80	49.9	D	0.39	24.9	С
WB	0.40	32.6	С	0.18	25.6	С	0.30	34.7	С
NBL	0.09	4.4	Α	0.10	8.2	Α	0.06	3.2	Α
NBTR	0.62	8.2	Α	0.67	14.3	В	0.42	4.6	Α
SB	0.71	10.4	В	0.80	19.3	В	0.45	4.9	Α
County Road 10 / Fallis Line (signalized)	-	23.5	С	-	17.3	В	-	15.3	В
EB	0.85	24.7	С	0.79	27.2	С	0.79	26.4	С
NBL	0.56	27.7	С	0.71	29.0	С	0.43	15.2	В
NBT	0.73	29.0	С	0.36	12.9	В	0.31	12.2	В
SBT	0.46	20.8	С	0.52	15.3	В	0.32	12.2	В
SBR	0.30	52	Α	0.39	2.9	Α	0.29	2.8	Α
County Road 10 / Community Centre East Driveway (unsignalized)	-	0.3	А	-	0.9	А	-	0.2	А
EB	0.07	22.7	С	0.23	29.9	D	0.04	17.7	С
Street 'B' South & Street 'A' / Fallis Line (unsignalized)	-	3.4	А	-	3.4	Α	-	4.0	Α
WBTR	0.00	0.0	Α	0.00	0.0	Α	0.00	0.0	Α
NB	0.11	10.4	В	0.06	9.8	Α	0.07	9.7	Α
SB	0.13	12.9	В	0.08	12.2	В	0.10	11.7	В
Street 'I' & Street 'D' / Fallis Line (unsignalized)	-	6.4	А	-	6.4	Α	-	6.3	А
NB	0.30	12.4	В	0.20	11.6	В	0.20	10.8	В
SB	0.37	27.3	D	0.37	30.3	D	0.35	26.5	D
County Road 10 / Street 'B' North (unsignalized)	-	24.7	В	-	7.7	А	ı	9.6	А
EB	1.15	154.5	F	0.84	85.8	F	0.85	68.6	F
Street 'L' / Fallis Line (unsignalized)	-	3.2	А	-	1.4	Α	ı	1.6	А
WB	0.00	0.0	Α	0.00	0.0	Α	0.00	0.0	Α
SB	0.16	10.8	В	0.05	9.9	Α	0.046	9.7	Α

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 this intersection (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. All-way-stop-control is not feasible for this location as the intersection will still operateoutside design limits and a roundabout is not feasible as the existing road allowance cannot accommodate a roundabout.

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

Lasakian	Wee	Weekday AM Peak Hour			day PM Pea	ık Hour	We	ekend SAT	Peak Hour
Location (N-S Street / E-W Street)	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
County Road 10 / Street 'B' North (signalized)	-	15.8	В	-	9.6	А	-	11.3	В
EB	0.73	44.9	D	0.60	43.8	D	0.65	39.3	D
NBL	0.02	6.0	Α	0.08	4.9	Α	0.06	5.8	Α
NBT	0.65	12.2	В	0.39	6.0	Α	0.40	7.6	Α
SBT	0.41	8.4	Α	0.56	8.1	Α	0.44	8.0	Α
SBR	0.06	1.9	Α	0.18	1.1	Α	0.1	1.4	Α

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 left turn lane criteria outlined in Appendix 9A of the MTO DS, no left turn lanes are warranted at the unsignalized study area intersections (results provided in **Appendix G**).

Based on the right turn lane criteria outlined Appendix G of the VDOT RDM, a right turn lane is warranted in the westbound direction at the Street 'L' / Fallis Line and Street 'l' & Street 'D' / Fallis Line intersections; however, based on low thru volumes and low intersection delay, no additional westbound right turn lanes are recommended. Based on the right turn lane criteria outlined Appendix G of the VDOT RDM, a right turn taper is also warranted in the westbound direction at the Street 'B' & Street 'A' / Fallis Line intersection however, based on low thru volumes and low intersection delay, a westbound right turn taper is not recommended. Additional right turn lanes are not warranted at any other unsignalized study area intersections for this horizon year.

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 95<sup>th</sup> percentile queue can be accommodated for all proposed storage lanes in the study area.

No additional improvements are recommended within the study area for the total (2031) scenario.

## 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 80km/h (130 metres).

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

#### Street 'l'

The sight distance east and west of the Street 'I' is significantly greater than the minimum stopping sight distance requirements as identified in the TAC Guidelines for a design speed of 80km/h (130 metres).



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

#### 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.

#### Street 'L'

The sight distance east and west of the Street 'L' is greater than the minimum stopping sight distance requirements as identified in the TAC Guidelines for a design speed of 80km/h (130 metres).

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

#### 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.

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

The proposed spacing between Street 'L' and Street 'B' South 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 'B' South and Street 'l' 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 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 - 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.

# 5.7 **Traffic Calming**

The Township requested traffic calming be provided midway along Street B. Based on our review of the proposed road layout, it is recommended that a raised intersection is provided at the Street B / Street E intersection to control vehicle speeds within the study area. The proposed raised intersection is located approximately midway through the subject site providing traffic calming within this critical area. Furthermore, the proposed development includes a 90-degree corner midway through the subject site on Street B which will further act as a traffic calming measure due to the lower speeds required to navigate this corner.

# 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.  2017 - Vehicle lost control near the CR 10 / Larmer Line intersection and slid in to a ditch.	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.
2009 - Vehicle struck a deer on County Road 10 near Fallis Line. 2017 - Vehicle struck a deer on County Road 10 just south of Larmer 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.
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 97.3 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 328 single-detached, 245 townhouse and 192 high-density residential units. The proposed development will also include a 5.5 acre institutional block.

- 1. The proposed development of the Subject Site is expected to generate a total of 638 AM, 602 PM and 677 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 25<sup>th</sup>, 2017 and Saturday August 12<sup>th</sup>, 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 (2023, 2026 and 2031) traffic volumes. The following improvements are recommended:

#### **Background (2023) Traffic Volumes**

As part of the Millbrook Community Centre Development

- County Road 10 / Municipal Office Driveway (Millbrook Community Centre)
  - Construct a northbound left-turn lane with a 160 metre taper length, 70 metre parallel length and 15 metre storage length.

As part of the Millbrook Phase 1 Development

- County Road 10 / Larmer Line
  - o Construct a northbound left-turn lane with a 160 metre taper length, 60 metre parallel length and 25 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
  - o 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 (2023, 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 (2023) 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, 30 metre parallel and 25 metre storage.

#### County Road 10 / Street 'B' North

- Construct a northbound left-turn lane with a 160 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.

#### Fallis Line

 Extend the 60 km/h speed limit zone on Fallis Line to include the area from County Road 10 to a location 200 metres west of Street 'L'.

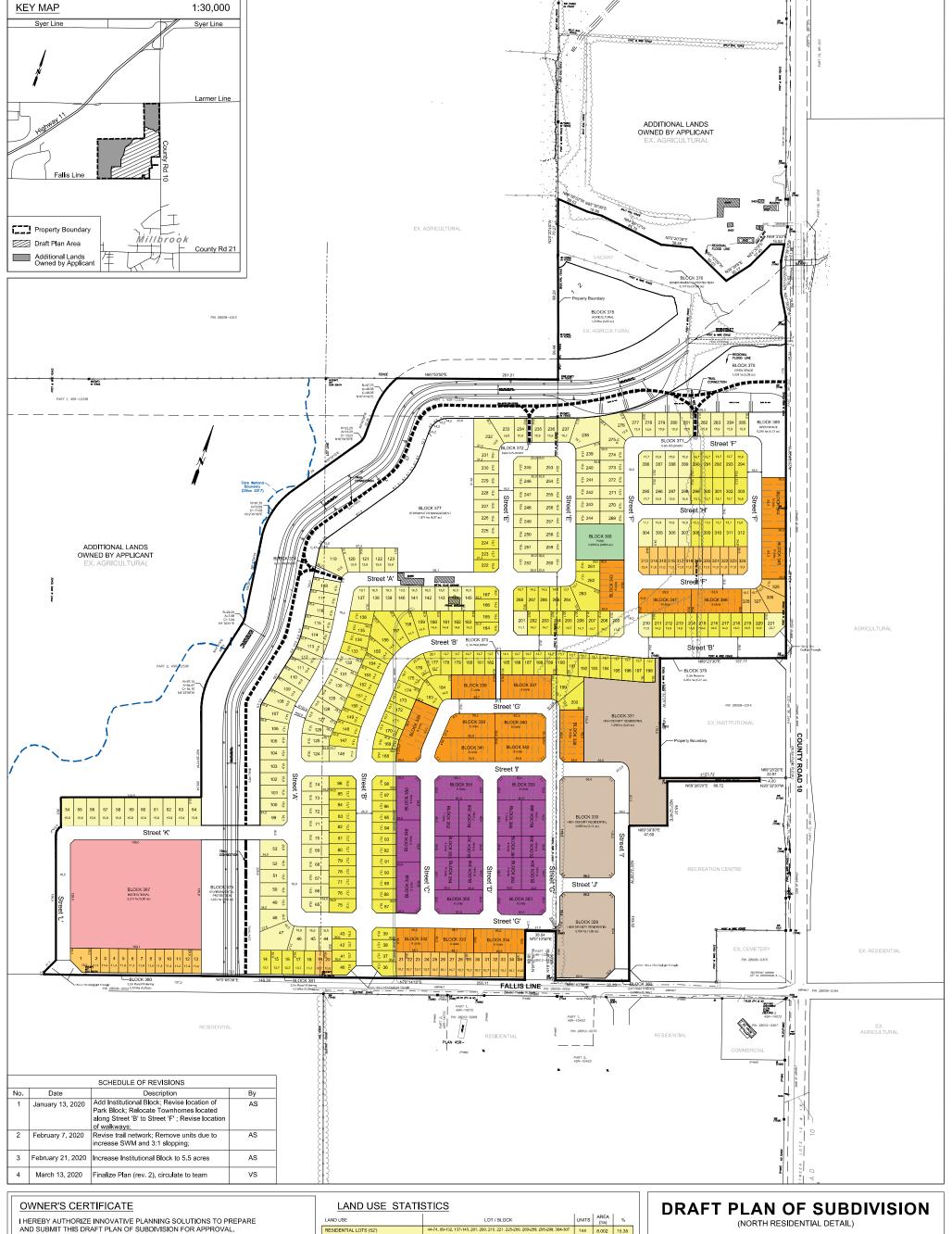
#### Conditional Works - Total (2031) Traffic Volumes

- County Road 10 / Street 'B' North
  - o Install traffic signals.
- 6. The sight lines available on Fallis Line for Street 'L', Street 'B' South and Street 'l' 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







LAND USE STATE	STICS			
LAND USE	LOT / BLOCK	UNITS	AREA (ha)	%
RESIDENTIAL LOTS (52')	44-74, 99-132, 137-145, 201, 209, 210, 221, 225-260, 269-289, 295-298, 304-307	144	8.002	15.35
RESIDENTIAL LOTS (45')	14-18, 36-43, 75-98, 133-136, 147-200, 202-208, 211-220, 222-224, 261-268, 290-294, 299-303, 308-312	138	6.418	12.32
RESIDENTIAL LOTS (35')	1-13, 19-35, 313-328	46	1.701	3,26
RESIDENTIAL LOTS (TOWNHOMES - 20')	BLOCKS 348-366	124	2.568	4.93
RESIDENTIAL LOTS (TOWNHOMES - 25')	BLOCKS 332-347	121	2.981	5.72
RESIDENTIAL APARTMENTS	BLOCKS 329-331	192	3.013	5.78
INSTITUTIONAL	BLOCK 367		2.213	4.25
PARK, OPEN SPACE, & WALKWAYS	BLOCKS 368-374		3.037	5.83
ENVIRONMENTAL PROTECTION	BLOCKS 375-376		10.396	19.96
STORMWATER MANAGEMENT	BLOCK 377		1.971	3.78
AGRICULTURAL	BLOCK 378		1.222	2.35
0.3m RESERVE	BLOCK 379		0.004	0.01
ROAD WIDENING	BLOCKS 380-382		0.319	0.61
STREETS	STREETS 'A' - 'L'		8.263	15.85
TOTAL		765	52.108	100

i) OTONABEE LOAM j) SHOWN ON PLAN k) ALL MUNICIPAL SERVICES

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



# INNOVATIVE PLANNING SOLUTIONS PLANNERS · PROJECT MANAGERS · LAND DEVELOPERS

647 WELHAM RD., UNIT 9, BARRIE, ONTARIO, L4N 0B7 tel: 705 • 812 • 3281 fax: 705 • 812 • 3438 e: info@ipsconsultinginc.com www.ipsconsultinginc.com

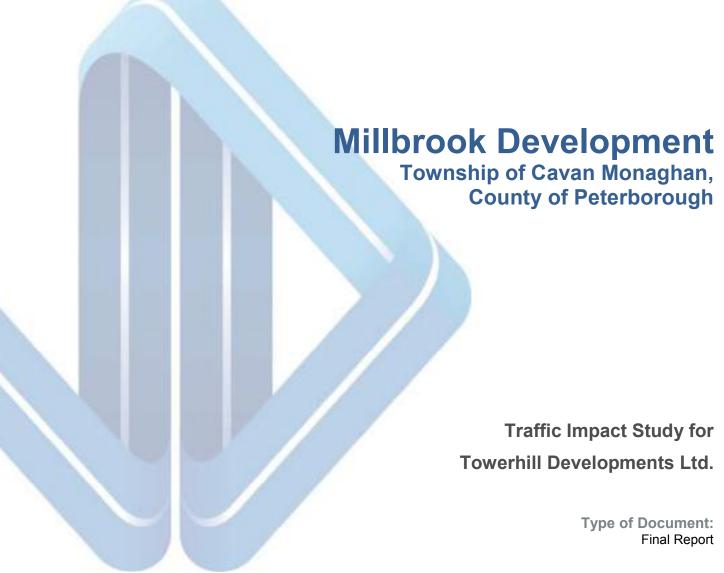
FILE:	18-783	SCALE:	1:2,000
DATE :	February 27, 2019	DRAWN BY:	AS / VS

# Appendix B -**Adjacent Development TIS Excerpts**



# Millbrook TIS Excerpts





Project Number:

Date Submitted: July 3<sup>rd</sup>, 2014

JDE - 1331

John Northcote, P.Eng.

Professional License #: 100124071

NGINEERING



JD Northcote Engineering Inc.

86 Cumberland Street Barrie, ON (705) 725-4035 www.JDEngineering.ca 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	South / East	South / West	North	
	via Larmer Line	via Millbrook	via Hwy 115	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

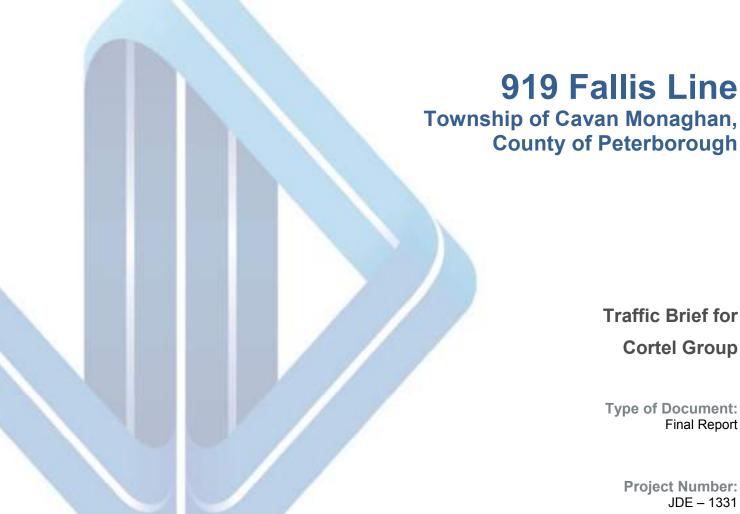
Direction	East	South / East	South / West	South / West	North	
	via Larmer Line	via Millbrook	via Larmer Line	via Fallis Line	Via CR 10	
Egress	3%	28%	5%	5%	59%	

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





**Traffic Brief for Cortel Group** 

**Type of Document:** Final Report

> **Project Number:** JDE - 1331

Date Submitted: October 2<sup>nd</sup>, 2017

John Northcote, P.Eng.

Professional License #: 100124071





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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* (9<sup>th</sup> 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

		Α	AM Peak Hour		PM Peak Hour		SAT Peak Hour			
Development	Size	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OU T	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

<sup>\*</sup> The internal capture rate has been calculated using the methodology outlined in Section 7 of the ITE Trip Generation Handbook (2<sup>nd</sup> Addition). Calculations are provided in **Appendix B**.

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



<sup>\*\*</sup> 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.

## 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.

Travel Direction (to/from)

South / East via Millbrook
South / West via Hwy 115
North via CR10
Total
Percentage of Total
Traffic Generation

15%
19%
19%
100%

Table 2 - Proposed Office Traffic Distribution

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<sup>1</sup>. **Table 3** illustrates the calculation of the distribution of ingress and egress traffic for the fast food restaurant component of the proposed development.

<sup>&</sup>lt;sup>1</sup> 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.



5

**Table 3 - Proposed Fast-Food Restaurant Traffic Distribution** 

		Ingress / Egress Traffic Direction					
Scenario	Direction	Northbound via County Road 10	<b>Southbound</b> via County Road 10	Eastbound via Fallis Line			
AM	In	44%	28%	28%			
Alvi	Out	43%	43%	13%			
PM	In	43%	39%	19%			
PIVI	Out	41%	30%	28%			
CAT	ln	44%	24%	28%			
SAT	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.

COUNTY ROUGH FALLS UNE TO MO ME TO MO M

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



NOT TO SCALE

FALLIS LINE

FALLI

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



Stop Sign NOT TO SCALE

335 335 三克克 \*0000 \*0000 300 2100 4 \$0 00 101 \$0 00 101 \* 0 (0) (0) \* 26 (12)[2] **FALLIS LINE** PRIVATE DRIVEWAY 阿印 2147 [0] (0) 0.4 [0] (1) 3.4 [0] (1) 1.7 900 900 000 \*409 D 333 355 SUBJECT SITE LEGEND: **4** 0 (5) [0] **7** ○ (1) [0] 20 (10) [20] Traffic Volume AM (PM) [SAT] Travel Movement Traffic Signal HORIZON AVE. Stop Control

Figure 5 - Office Traffic Assignment



333 8 1 (4) [1] +1 (12) [3] +1 (12) [3] \* 0 (0) [0] \* 67 (46) [35] 0 (0) (0) PRIVATE DRIVEWAY 101 (01 to A [0] [0) 0 + [00] (26) 22 \* 何(2)6+ (月(2)2**▼** 666 28 EM LEGEND: SWEDTERS OF STATE F 1 (2) [1] Traffic Volume 20 (10) [20] AM (PM) [SAT] Travel Movement Traffic Signal Stop Control Stop Sign NOT TO SCALE

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 10<sup>th</sup>, 2017

John Northcote, P.Eng.

Professional License #: 100124071





JD Northcote Engineering Inc. 86 Cumberland Street Barrie, ON

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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* (9<sup>th</sup> 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

		Α	M Peak	Hour	PI	M Peak	Hour	S	AT Pea	k Hour
Development	Size	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.** 



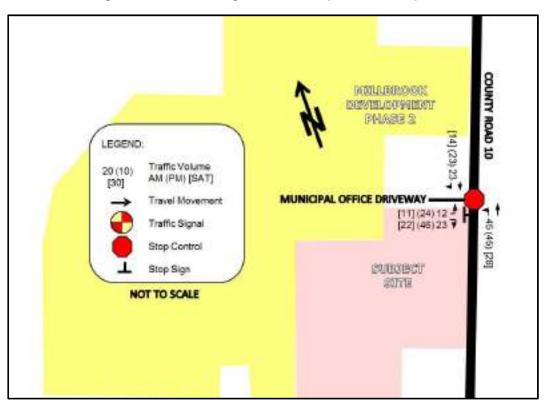


Figure 8 – Traffic Assignment for Proposed Development

## 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.** 



Date: October 10<sup>th</sup>, 2017

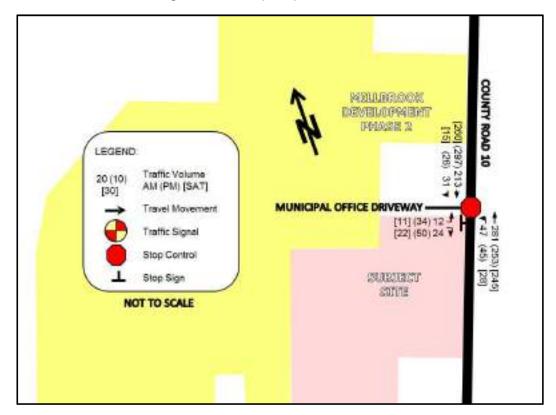


Figure 9 - Total (2019) Traffic Volumes

## 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**.

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

Table 10 - Total (2019) LOS

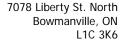
The results of the LOS analysis indicate that all intersections are operating within the typical design limits noted in Section 3.1.

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**







P - 905.263.4399 F - 905.448.2532 info@asurza.ca www.asurza.ca

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



### 4. Traffic Generation

Estimation of trips generated by the proposed 65 residential units was derived from the Trip Generation Manual, 9<sup>th</sup> 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	ITE	Unit of	AM Peak	Hour of A	dj. Street	PM Peak	Hour of A	dj. Street						
Code	Land Use	Measure	Rate	In	Out	Rate	In	Out						
210	Single-Family Detached House	Units	Eq.	25%	75%	Eq.	63%	37%						
	E	STIMATED NU	MBER OF	TRIPS BY I	LAND USE									
ITE	ITE	Total	AM Peak	Hour of A	dj. Street	PM Peak	Hour of A	dj. Street						
Code	Land Use	Units	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*.

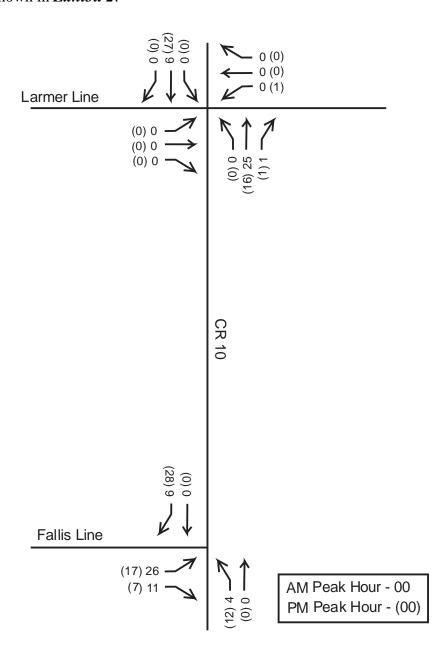


Exhibit 2: Trips Generated by the 65 Residential Units.

## Appendix C – Traffic Count Data



#### Ontario Traffic Inc. **Morning Peak Diagram Specified Period One Hour Peak** From: 7:30:00 From: 7:00:00 To: 10:00:00 To: 8:30:00 Municipality: Weather conditions: Millbrook Site #: 1710800001 Intersection: County Rd 10 & Fallis Line Person(s) who counted: TFR File #: Count date: 25-Apr-17 \*\* Non-Signalized Intersection \*\* Major Road: County Rd 10 runs N/S North Leg Total: 392 Heavys 0 0 0 Heavys 0 East Leg Total: 0 8 North Entering: 167 Trucks 1 7 East Entering: 0 Trucks 13 East Peds: North Peds: Cars 4 155 0 159 Cars 212 0 $\mathbb{X}$ Totals 5 Totals 225 Peds Cross: Peds Cross: ⋈ 162 0 County Rd 10 Heavys Trucks Cars Totals Trucks Heavys Totals Cars 19 20 0 0 0 0 0 0 Fallis Line 0 Heavys Trucks Cars **Totals** Private Driveway 0 1 9 10 0 0 15 Trucks Heavys Totals 0 15 Cars 0 0 0 24 County Rd 10 $\mathbb{X}$ Peds Cross: Cars 170 218 Peds Cross: $\bowtie$ Cars 15 203 West Peds: 0 Trucks 7 Trucks 0 12 0 12 South Peds: 0 Heavys 0 Heavys 0 0 South Entering: 230 West Entering: 25 0 0 West Leg Total: 45 Totals 177 Totals 15 South Leg Total: 407 **Comments**

#### Ontario Traffic Inc. **Afternoon Peak Diagram Specified Period One Hour Peak** From: 16:30:00 From: 16:00:00 To: 17:30:00 19:00:00 To: Municipality: Weather conditions: Millbrook Site #: 1710800001 Intersection: County Rd 10 & Fallis Line Person(s) who counted: TFR File #: Count date: 25-Apr-17 \*\* Non-Signalized Intersection \*\* Major Road: County Rd 10 runs N/S Heavys 0 North Leg Total: 415 0 0 Heavys 0 East Leg Total: 1 4 North Entering: 241 Trucks 0 4 0 Trucks 0 East Entering: East Peds: North Peds: O Cars 11 226 0 237 Cars 174 0 $\mathbb{X}$ Totals 174 Peds Cross: Peds Cross: ⋈ Totals 11 230 0 County Rd 10 Heavys Trucks Cars Totals Trucks Heavys Totals Cars 30 30 0 0 0 0 0 0 Fallis Line 0 Heavys Trucks Cars **Totals** Private Driveway 0 0 4 4 0 0 0 18 18 Trucks Heavys Totals 0 Cars 1 0 0 22 County Rd 10 $\mathbb{X}$ Peds Cross: Peds Cross: M Cars 244 Cars 19 170 190 West Peds: 0 Trucks 4 Trucks 0 0 0 0 South Peds: 0 West Entering: 22 Heavys 0 0 South Entering: 190 Heavys 0 0 West Leg Total: 52 Totals 248 Totals 19 South Leg Total: 438 **Comments**

## **Total Count Diagram**

Municipality: Millbrook

Site #: 1710800001

Intersection: County Rd 10 & Fallis Line

TFR File #:

North Leg Total: 1864

North Entering: 933

North Peds:

Peds Cross:

Count date: 25-Apr-17 Weather conditions:

Person(s) who counted:

### \*\* Non-Signalized Intersection \*\*

Heavys 0 0 0

Trucks 3 35 32 0 Cars 32 866 0 898 Totals 35

898

Heavys 0 Trucks 32 Cars 899

Totals 931

Major Road: County Rd 10 runs N/S

East Entering: East Peds: 0  $\mathbb{X}$ Peds Cross:

East Leg Total: 3

Totals Heavys Trucks Cars

0

⋈

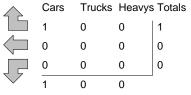
5 97 102



0







Private Driveway

пеачуѕ	TTUCKS	Cais	1016
0	2	37	39
0	0	0	0
0	1	87	88
0	3	124	'



Fallis Line



				<b>─</b> ✓
С	ars	Trucks	Heavys	Totals

 $\mathbb{X}$ Peds Cross: West Peds: 1 West Entering: 127

West Leg Total: 229

Cars 953 Trucks 33 Heavys 0 Totals 986

928 Cars 65 861 2 32 Trucks 2 30 0 Heavys 0 0 0 Totals 67

Peds Cross:  $\bowtie$ South Peds: 0 South Entering: 960 South Leg Total: 1946

### **Comments**

## Ontario Traffic Inc Traffic Count Summary

Intersection: (	County I	Rd 10 &	Fallis Li	ne	Count I	Date: 25-Apr-17		Munic	cipality: Mil	lbrook			
	Nortl	n Appro	ach Tot	als					Soutl	n Appro	ach Tot	als	
11	Include	es Cars, T	rucks, & H	-	T-1-1	North/South			Include	es Cars, T	rucks, & H		Tartal
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	Total Approaches	Hou Endi		Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00	0:00	0	0	0	0	0
8:00:00	0	138		141	0	318	8:00		13	164	0	177	0
9:00:00	0	128	5	133	0	329	9:00		12	184	0	196	0
10:00:00	0	106	5	111	0		10:00		8	139	1	148	0 0 0
16:00:00	0	0	0	0	0		16:00		0	0	0	0	0
17:00:00	0	191	7	198	0		17:00		16	159	1	176	0
18:00:00	0	215	10	225	0		18:00		13	152	0	165	0
19:00:00	0	120	5	125	0	223	19:00	):00	5	93	0	98	0
Totals:	0	898	35	933	0	1893			67	891	2	960	0
	East	Appro	ach Tota	als					West	Appro	ach Tota	als	
Hour	Include	es Cars, I	rucks, & H	-	Total	East/West Total	Hou		Include	es Cars, I	rucks, & H		Total
Ending	Left	Thru	Right	Grand Total	Total Peds	Approaches	Endi		Left	Thru	Right	Grand Total	Peds
7:00:00	0	0	0	0	0	0	7:00		0	0	0	0	0
8:00:00	0	0	0	0	0	20	8:00		7	0	13	20	0
9:00:00	0	0	0	0	0	23	9:00		12	0	11	23	0
10:00:00	0	0	1	1	0	20			7	0	12	19	0 0
16:00:00	0	0	0	0	0	0	16:00		0	0	0	.0	0
17:00:00	0	0	0	0	0		17:00		2	0	15	17	0
18:00:00	0	0	0	0	0		18:00		5	0	23	28	0
19:00:00	0	0	0	0	0	20	19:00	):00	6	0	14	20	1
Totals:	0	0		1	0	128			39	0	88	127	1
			Calc	ulated Va	alues f	or Traffic Cr	ossin	g Ma	ajor Stre	eet			
Hours En		7:00 0	8:00	9:00 12	10:00 7			6:00 0	-	18:00 5	19:00 6		

		Passen	ger Cars -	North Ap	proach			Tru	ıcks - Nor	th Appro	ach			Hea	avys - Nor	th Appro	ach		Pedes	trians
Interval	Le	ft	Thi	ru	Rig	ht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	North	Cross
Time	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		26	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0		33	0	0	0	0	6	3	0	0	0	0	0	0	0	0	0	
8:00:00	0	0		55	2	2	0	0		2		1		0		0	0	0	0	0
8:15:00	0	0		34	3	1	0	0		2	-	0		0		0	0	0	0	
8:30:00	0	0		33	4	1	0	0		0		0		0		0	0	0	0	
8:45:00	0	0		22	4	0	0	0		1	1	0		0		0	0	0	0	
9:00:00	0	0		33	7	3	0	0		3		0		0		0	0	0	0	
9:15:00	0	0		23	8	1	0	0			-	0		0		0	0	0	0	
9:30:00	0	0		11	9	1	0	0			1	0		0		0	0	0	0	
9:45:00	0	0		28	10	1	0	0		3		1		0		0	0	0	0	
10:00:00	0	0		34	11	1	0	0		3		0		0		0	0	0	0	
10:00:03	0	0		0	11	0	0	0		0		0		0		0	0	0	0	
16:00:00	0	0		0	11	0	0	0		0	_	0		0			0	0	0	
16:15:00	0	0		44	13	2	0	0			2	0		0		0	0	0	0	
16:30:00	0	0		32	15	2	0	0		2		0		0		0	0	0	0	
16:45:00	0	0		53	17	2	0	0			2	0		0		0	0	0	0	
17:00:00	0	0		57	18	1	0	0			2 2	0		0		0	0	0	0	
17:15:00 17:30:00	0	0		53 63	24 26	6 2	0			1	2	0		0		0	0	0	0	
17:30:00	0	0		52	28	2	0	0		0		0	1	0		0	0	0	0	
18:00:00	0	0		45	28	0	0	0		0		0		0		0	0	0	0	
18:15:00	0	0		34	28	0	0	0		0	_	1		0		0	0	0	0	
18:30:00	0	0		38	30	2	0	0		0		0		0		0	0	0	0	
18:45:00	0	0		27	32	2	0	0			3	0		0		0	0	0	0	
19:00:00	0	0		20	32	0	0	0				0		0		0	0	0	0	
19:00:02	0	0		0	32	0	0	0				0		0	1		0	0	0	
10.00.02			000		02				02											

		Passen	ger Cars	- East Ap	proach			Tre	ucks - Ea	st Appro	ach			He	avys - Eas	st Approa	ach		Pedes	trians
Interval	Lef	ft	Th	ru	Rig	ht	Le	ft	Th	nru	Rig	ght	Le	ft	Th	ru	Rig	jht	East C	Cross
Time	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
7:45:00	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
8:15:00	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
8:45:00	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
9:15:00	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
9:45:00	0	0	0		1 1	1	0	0					1	0		0		0	0	0
10:00:00 10:00:03	0	0	0	-	1	0	0	0				0		0		0		0	0	0
16:00:03	0	0			1	0	0	0				0		0		0		0	0	0
16:15:00	0	0	0		1	0	0	0				0		0		0	0	0	0	0
16:30:00	0	0			1	0	0	0				0		0		0		0	0	0
16:45:00	0	0			1	0	0	0						0		0		0	0	0
17:00:00	0	0	0		1	0	0	0			1	0		0		0	0	0	0	0
17:15:00	0	0	_	-	1	0	0	0						0		0		0	0	0
17:30:00	0	0	_	-	1	0	0	0	_			0		0	-	0		0	0	0
17:45:00	0	0	0		1	0	0	0				0		0		0		0	0	0
18:00:00	0	0	_	-	1	0	0	0	_					0		0		0	0	0
18:15:00	0	0			1	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
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
19:00:02	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

		Passeng	ger Cars -	South A <sub>l</sub>	pproach			Tru	ıcks - Sou	th Appro	oach			Hea	ıvys - Sou	th Appro	ach		Pedes	trians
Interval	Lei	ft	Thi	ru	Rig	ıht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	lht	South	Cross
Time	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
7:15:00	2	2		23	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
7:30:00	7	5		29	0	0	1	1	3		0	0		0		0	0	0	0	0
7:45:00	10	3		50	0	0	1	0		3		0		0		0	0	0	0	0
8:00:00	12	2		54	0	0	1	0		2		0		0	0	0	0	0	0	0
8:15:00	17	5	204	48	0	0	1	0				0		0		0	0	0	0	0
8:30:00	22	5		51	0	0	1	0			_	0		0	0	0	0	0	0	0
8:45:00	22	0		46	0	0	1	0			0	0		0		0	0	0	0	0
9:00:00	24	2	330	29	0	0	1	0				0		0		0	0	0	0	0
9:15:00	25	1	358	28	1	1	1	0				0		0	0	0	0	0	0	0
9:30:00	26	1	384	26	1	0	1	0				0		0		0	0	0	0	0
9:45:00	29	3	419	35	1	0	1 1	0				0	1	0		0	0	0	0	0
10:00:00	32	3	459	40	1	0	11	0				0		0		0	0	0	0	0
10:00:03 16:00:00	32 32	0		0	1	0	1_ 1	0				0		0	0	0	0	0	0	0
16:00:00	36	0	495	36	1	0	1	0				0		0		0	0	0	0	0
16:30:00	37	1	539	44	1	0	2	0				0		0		0	0	0	0	0
16:45:00	42	5	587	48	1	0	2	0				0	_	0		0	0	0	0	0
17:00:00	47	5	616	29	2	1	2	0				0		0		0	0	0	0	0
17:00:00	51	4	679	63	2	0	2	0				0		0		0	0	0	0	0
17:13:00	56	5	709	30	2	0	2	0	1			0	_	0		0	0	0	0	0
17:45:00	58	2	737	28	2	0	2	0				0	1	0	0	0	0	0	0	0
18:00:00	60	2		31	2	0	2	0				0	_	0		0	0	0	0	0
18:15:00	64	4	799	31	2	0	2	0				0		0		0	0	0	0	0
18:30:00	65	1	827	28	2	0	2	0				0	-	0	0	0	0	0	0	0
18:45:00	65	0		19		0	2	0				0	_	0		0	0	0	0	0
19:00:00	65	0		15	2	0	2	0				0		0		0	0	0	0	0
19:00:02	65	0		0	2		2	0				0		0		0	0	0	0	0
						_														

Interval   Time   Cum   Incr   Cum   Incr		Passe	senge	er Cars -	West Ap	proach							Hea	avys - We	st Appro	ach		Pedes	trians		
T-00:00	val Lef	Left		Thr	u	Rig	jht	Le	eft	Th	ru	Rig	ght	Le	ft	Th	ru	Rig	jht	West 0	Cross
7:15:00	ie Cum	Incr	r	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00         3         2         0         0         6         4         0 </td <td>0:00</td> <td>0</td>	0:00	0	0	0	0	0	0	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<		1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00         6         3         0         0         13         2         1         0<			2	0	0	6	4	0	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		5	1	1		0				0	0	0		0	0	0
8:30:00         12         3         0         0         21         3         1         0																			0	0	0
8:45:00         15         3         0         0         21         0         1         0																			0	0	0
9:00:00         17         2         0         0         24         3         2         1         0			-		-		-	_ '											0	0	0
9:15:00         18         1         0         0         24         0         2         0								-											0	0	0
9:30:00         19         1         0         0         28         4         2         0			2		-											-			0	0	0
9:45:00         21         2         0         0         32         4         2         0			1		-														0	0	0
10:00:00			1				•												0	0	0
10:00:03         24         0         0         0         36         0         2         0					-		•					_							0	0	0
16:00:00         24         0         0         0         36         0         2         0										1									0	0	0
16:15:00         25         1         0         0         43         7         2         0							-												0	0	0
16:30:00         26         1         0         0         45         2         2         0			4				-												0	0	0
16:45:00         26         0         0         0         48         3         2         0			1		-		•												0	0	
17:00:00         26         0         0         0         51         3         2         0			1													_			0	0	0
17:15:00         28         2         0         0         57         6         2         0			-		-		-							-		_			0	0	0
17:30:00         30         2         0         0         63         6         2         0																			0	0	0
17:45:00         30         0         0         0         68         5         2         0					-									_					0	0	0
18:00:00         31         1         0         0         74         6         2         0												_							0	0	0
18:15:00     33     2     0     0     77     3     2     0			1																0	0	0
18:30:00     34     1     0     0     81     4     2     0			2																0	0	0
18:45:00     36     2     0     0     82     1     2     0			1		-					_									0	0	0
19:00:00 37 1 0 0 87 5 2 0 0 0 1 1 0 0 0 0			2				1												0	1	1
			1		-		5									-			0	1	0
			0		-								0						0	1	0
					_			_													

#### Ontario Traffic Inc. **Mid-day Peak Diagram Specified Period One Hour Peak From:** 12:00:00 **From:** 11:00:00 To: 17:00:00 To: 13:00:00 Municipality: Millbrook Weather conditions: Site #: 1722900001 Intersection: CR 10 & Fallis Line Person(s) who counted: TFR File #: 18 Count date: 12-Aug-17 \*\* Non-Signalized Intersection \*\* Major Road: CR 10 runs N/S Heavys 0 North Leg Total: 382 0 Heavys 0 North Entering: 195 Trucks 0 Trucks 0 North Peds: 194 Cars 10 184 Cars 187 Peds Cross: $\bowtie$ Totals 10 185 Totals 187 **CR 10** Heavys Trucks Cars Totals 31 Fallis Line Heavys Trucks Cars Totals 0 7 0 18 18 0 25 $\mathbb{X}$ Peds Cross: Cars 202 Peds Cross: Cars 21 180 201 $\bowtie$ West Peds: 0 Trucks 1 Trucks 0 0 0 South Peds: 0 West Entering: 25 Heavys 0 Heavys 0 0 South Entering: 201 West Leg Total: 56 Totals 203 Totals 21 South Leg Total: 404 **Comments**

## **Total Count Diagram**

Municipality: Millbrook

**Site #:** 1722900001

Intersection: CR 10 & Fallis Line

**TFR File #:** 18

West Entering: 178

West Leg Total: 342

Count date: 12-Aug-17

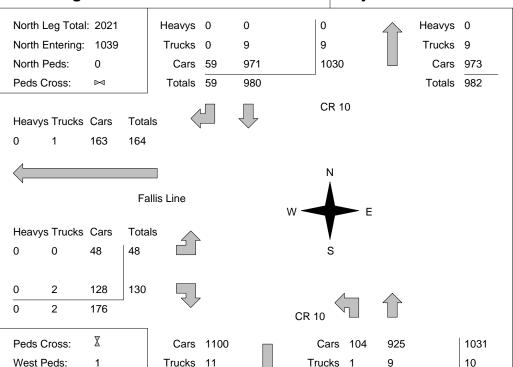
Weather conditions:

Person(s) who counted:

### \*\* Non-Signalized Intersection \*\*

Major Road: CR 10 runs N/S

0



Heavys 0

Totals 1111

**Comments** 

Heavys 0

Totals 105

Peds Cross: 

South Peds: 0

South Entering: 1041

South Leg Total: 2152

## Ontario Traffic Inc. Traffic Count Summary

Intersection: (	CR 10 &	Fallis L	ine		Count [	Date: 12-Aug-17	7	Munic	cipality: Mil	lbrook			
	North	n Appro	ach Tot	als					South	n Appro	ach Tot	als	
	Include	es Cars, T	rucks, & H	eavys		North/South					rucks, & H		
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	Total Approaches	Hou Endi		Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0		11:00		0	0	0	0	0
12:00:00	Ö	158	7	165	Ö		12:00		24	188	1	213	Ö
13:00:00	Ō	185	10	195	Ō		13:00		21	180	0	201	0
14:00:00	0	175	12	187	0		14:00		13	140	0	153	
15:00:00	0	146	12	158	0		15:00		16	157	1	174	0 0 0
16:00:00	0	166	7	173	0		16:00		13	143	0	156	0
17:00:00	0	150	11	161	0		17:00		18	126	0	144	0
Totals:	0 <b>East</b> Include	980 : <b>Appro</b> a es Cars, T	59 ach Tota	1039 als eavys	0	2080 East/West			105 West	934 Approses Cars, T	2 ach Tota rucks, & H	1041 als eavys	0
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	Total Approaches	Hou Endi	ır na	Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0	0			0	0	0	0	0
12:00:00	0	0	0	0	0		12:00		9	0	24	33	1
13:00:00	0	0	0	0	5		13:00		7	0	18	25	0
14:00:00	0	0	0	0	0	20	14:00	0:00	10	0	10	20	0
15:00:00	1	0	0	1	0		15:00		10	0	32	42	0
16:00:00	0	0	0	0	0		16:00		6	0	20	26	0 0
17:00:00	0	0	0	0	0	31	17:00	0:00	6	0	25	31	0
Totals:	1	0	0 <b>Calc</b>	1 ulated V	5 <b>/alues f</b>	178 or Traffic Cr	ossin	a Ma	48 aior Stre	0 <b>eet</b>	129	177	1
Hours En	dina:	11:00	12:00	13:00	14:00	J. 1141110 01		<b>9 m</b> 5:00	-	17:00	17:00		
Crossing			12.00	7	14.00		10	11	16.00	17.00	17.00		
	values.	J	9	,	10				J	J	0		

		Passen	ger Cars -	North A	proach			Tru	cks - Nor	th Appro	ach			Hea	ıvys - Nor	th Appro	ach		Pedes	trians
Interval	Le	ft	Th	ru	Rig	ıht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	North	Cross
Time	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	C
11:15:00	0	0	47	47	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	O
11:30:00	0	0	83	36	3	3	0	0	1	0	0	0	0	0	0	0	0	0	0	C
11:45:00	0	0	119	36	5	2	0	0	1	0	0	0	0	0	0	0	0	0	0	
12:00:00	0	0		38	7	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0		44	12	5	0	0	1	0	0	0		0		0	0	0	0	0
12:30:00	0	0		51	14	2	0	0	1	0	_	0		0		0	0	0	0	0
12:45:00	0	0		45	16	2	0	0		0	_	0		0	0	0	0	0	0	0
13:00:00	0	0		44	17	1	0	0			0	0		0		0	0	0	0	0
13:15:00	0	0		43	24	7	0	0		0	_	0		0		0	0	0	0	C
13:30:00	0	0	439	55	24	0	0	0		1	0	0		0	0	0	0	0	0	C
13:45:00	0	0		38		2	0	0			-	0		0		0	0	0	0	0
14:00:00	0	0		38	29	3	0	0		0		0		0		0	0	0	0	0
14:15:00	0	0		34	32	3	0	0		1	0	0		0		0	0	0	0	0
14:30:00	0	0		32	33	1	0	0		0		0		0		0	0	0	0	0
14:45:00	0	0		48	36	3	0	0		1	0	0		0		0	0	0	0	0
15:00:00	0	0		30	41	5	0	0		0	_	0		0		0	0	0	0	0
15:15:00	0	0		35	43	2	0	0		1	0	0		0		0	0	0	0	0
15:30:00	0	0	749	55	44	1	0	0		1	0	0		0		0	0	0	0	0
15:45:00	0	0		38	47 48	3	0	0		0		0		0		0	0	0	0	0
16:00:00	0	0		34		1	0	0						0		0	0	0	0	0
16:15:00 16:30:00	0	0	857 890	36 33	48 52	0	0	0		0		0		0		0	0	0	0	0
16:45:00	0	0		38		4	0	0		0	_	0		0		0	0	0	0	0
17:00:00	0	0		43	59	3	0	0				0		0		0	0	0	0	
17:00:00	0	0		0	59	0	0	0			_	0		0	-	0	0	0	0	

		Passen	ger Cars	- East Ap	proach			Tro	ucks - Eas	st Appro	ach			He	avys - Eas	st Approa	ach		Pedes	trians
Interval	Le	ft	Th	ru	Rig	ht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	East (	Cross
Time	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	C
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	O
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C
11:45:00	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
12:15:00		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	5	
12:45:00	0	0	0		0	0	0	0		0		0		0		0	0	0	5	C
13:00:00	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	5	0
13:30:00		0	0		0	0	0	0		0	_	0		0		0	0	0	5	
13:45:00		0			0	0	0	0		0		0		0		0	0	0	5	
14:00:00		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	5	0
14:30:00		1	0		0	0	0	0		0		0		0		0	0	0	5	
14:45:00	1	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	5	0
15:15:00		0	0		0	0	0	0		0		0		0	_	0	0	0	5 5	0
15:30:00		•	0		0	-	0	0				0		0		0	0	0	5	0
15:45:00 16:00:00		0	_		0	0	0	0		0	_	0		0		0	0	0		
16:00:00		0	0		0	0	0	0		0		0	1	0		0	0	0	5 5	0
16:30:00	1	0			0	0	0	0		0		0		0		0	0	0	5	
16:45:00	1	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	5	
17:00:00		0			0	0	0	0			_	0		0	_	0	0	0	5	

		Passeng	ger Cars -	South A	pproach			Tru	ıcks - Sou	th Appro	oach			Hea	ıvys - Sou	th Appro	ach		Pedes	trians
Interval	Le	ft	Thi	ru	Rig	ıht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	South	Cross
Time	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	
12:00:00	23	2	186	36	1	0	1	0	-	0	0	0	0	0	0	0	0	0	0	
12:15:00	27	4	234	48	1	0	1	0		0	0	0		0		0	0	0	0	
12:30:00	34	7	279	45	1	0	1	0				0		0		0	0	0	0	
12:45:00	37	3	323	44	1	0	1	0				0		0	0	0	0	0	0	
13:00:00	44	7		43	1	0	1	0				0		0		0	0	0	0	
13:15:00	48	4	402	36	1	0	1	0			_	0		0		0	0	0	0	
13:30:00	53	5	446	44	1	0	1	0			_	0		0	0	0	0	0	0	
13:45:00	56	3	481	35	1	0	1	0			-	0		0		0	0	0	0	
14:00:00	57	1	506	25	1	0	1	0			_	0		0		0	0	0	0	
14:15:00	59	2		33	1	0	1	0			-	0		0		0	0	0	0	
14:30:00	66	7	581	42	1	0	1	0				0		0		0	0	0	0	
14:45:00	69	3		30	1	0	1	0		2		0		0		0	0	0	0	
15:00:00	73	4	660	49	2	1	1	0		1	0	0		0		0	0	0	0	
15:15:00	75	2		37	2	0	1	0		2		0		0		0	0	0	0	
15:30:00	77	2		33	2	0	1	0		0		0		0		0	0	0	0	
15:45:00	86	9		29	2	0	1	0		0	_	0		0		0	0	0	0	
16:00:00	86	0		41	2	0	1	0		1	0	0		0		0	0	0	0	
16:15:00	92	6	829	29	2	0	1	0		0		0		0		0	0	0	0	
16:30:00	95	3		38	2	0	1	0		0	-	0		0		0	0	0	0	
16:45:00	100	5		29	2	0	1	0		0	_	0		0		0	0	0	0	
17:00:00	104	4	925	29	2	0	1	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

		Passen	ger Cars	- West Ap	proach			Tru	ıcks - We	st Appro	ach			Hea	avys - We	st Appro	ach		Pedes	trians
Interval	Let	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	West	Cross
Time	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	C
11:15:00	4	4	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	C
11:30:00	5	1	0	0	11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	C
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		23	7	0	0			1	1		0		0	0	0	1	C
12:15:00	11	2			31	8	0	0	_			0		0		0	0	0	1	C
12:30:00	14	3	0		35	4	0	0				0		0		0	0	0	1	C
12:45:00	15	1	0		36	1	0	0				0		0		0	0	0	1	C
13:00:00	16	1	0		41	5	0	0	_			0		0		0	0	0	1	C
13:15:00	17	1	0		46	5	0	0	_			0		0		0	0	0	1	C
13:30:00	20	3	0		48	2	0	0				0		0	0	0	0	0	1	C
13:45:00	22	2			50	2	0	0				0		0		0	0	0	1	
14:00:00	26	4	0		51	1	0	0		0	-	0		0		0	0	0	1	
14:15:00	28	2	0		56	5	0	0			1	0		0		0	0	0	1	C
14:30:00	29	1	0		63	7	0	0				0		0		0	0	0	1	C
14:45:00	32	3	0		68	5	0	0				0		0		0	0	0	1	
15:00:00	36	4	0		83	15	0	0				0		0		0	0	0	1	
15:15:00	39	3	0		87	4	0	0				0		0		0	0	0	1	C
15:30:00 15:45:00	40 42	2	0		93 96	6	0	0				0		0		0	0	0	1	C
16:00:00	42	0	_		103	7	0	0				0		0		0	0	0	1	
16:00:00	46	- 0	0		110	7	0	0				0		0		0	0	0	1	C
16:30:00	47	4	0		115	5	0	0			-	1		0		0	0	0	1	
16:45:00	48	1	0		124	9	0	0				0		0		0	0	0	1	
17:00:00	48	0			127	3	0	0	_			0		0		0	0	0	1	
17:00:18	48	0			128	1	0	0						0	-	0	0	0	1	

#### Ontario Traffic Inc. **Morning Peak Diagram Specified Period One Hour Peak** From: 7:30:00 From: 7:00:00 To: 10:00:00 To: 8:30:00 Municipality: Weather conditions: Millbrook Site #: 1710800002 Intersection: County Rd 10 & Larmer Line Person(s) who counted: TFR File #: Count date: 25-Apr-17 \*\* Non-Signalized Intersection \*\* Major Road: County Rd 10 runs N/S North Leg Total: 404 Heavys 0 0 0 Heavys 0 East Leg Total: 34 8 Trucks 2 North Entering: 167 0 Trucks 13 East Entering: 15 East Peds: North Peds: Cars 1 153 5 159 Cars 224 0 $\mathbb{X}$ Totals 3 Totals 237 Peds Cross: Peds Cross: ⋈ 159 5 County Rd 10 Heavys Trucks Cars Totals Trucks Heavys Totals Cars 2 9 0 0 0 2 4 0 Larmer Line 0 Heavys Trucks Cars Totals Larmer Line 0 0 23 23 4 2 10 Trucks Heavys Totals 0 8 Cars 19 0 35 19 County Rd 10 $\mathbb{X}$ Peds Cross: 208 Peds Cross: $\bowtie$ Cars 165 Cars 6 192 10 West Peds: 0 Trucks 8 Trucks 0 13 0 13 South Peds: 0 West Entering: 37 Heavys 0 0 0 South Entering: 221 Heavys 0 0 West Leg Total: 48 Totals 173 Totals 6 South Leg Total: 394 **Comments**

#### Ontario Traffic Inc. **Afternoon Peak Diagram Specified Period One Hour Peak** From: 16:30:00 From: 16:00:00 To: 17:30:00 19:00:00 To: Municipality: Weather conditions: Millbrook Site #: 1710800002 Intersection: County Rd 10 & Larmer Line Person(s) who counted: TFR File #: Count date: 25-Apr-17 \*\* Non-Signalized Intersection \*\* Major Road: County Rd 10 runs N/S North Leg Total: 413 Heavys 0 0 0 Heavys 0 East Leg Total: 21 3 North Entering: 242 Trucks 0 0 Trucks 2 East Entering: 3 East Peds: North Peds: Cars 9 222 8 239 Cars 169 0 $\mathbb{X}$ Totals 171 Peds Cross: Peds Cross: ⋈ Totals 9 225 8 County Rd 10 Heavys Trucks Cars Totals Trucks Heavys Totals 18 18 0 0 0 4 0 Larmer Line Heavys Trucks Cars Totals Larmer Line 0 0 3 3 0 1 1 0 6 6 Trucks Heavys Totals 0 Cars 13 0 10 13 County Rd 10 $\mathbb{X}$ Peds Cross: Cars 231 176 Peds Cross: $\bowtie$ Cars 8 164 4 West Peds: 0 Trucks 4 Trucks 0 0 1 South Peds: 0 West Entering: 10 Heavys 0 0 South Entering: 177 Heavys 0 0 West Leg Total: 28 Totals 235 Totals 8 South Leg Total: 412 **Comments**

## **Total Count Diagram**

Municipality: Millbrook

**Site #:** 1710800002

Intersection: County Rd 10 & Larmer Line

Larmer Line

TFR File #: 1

North Leg Total: 1872

North Entering: 947

North Peds:

Peds Cross:

Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

### \*\* Non-Signalized Intersection \*\*

.

Heavys 0 0 0 0 0 Trucks 4 30 0 34 Cars 39 842 32 913

Cars 39 842 32 913 Totals 43 872 32

Major Road: County Rd 10 runs N/S

Heavys 1 Trucks 31 Cars 893

Cars 893
Totals 925

East Leg Total: 134
East Entering: 62
East Peds: 0
Peds Cross: \[ \]

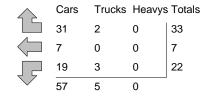
Heavys Trucks Cars Totals
0 4 85 89

⋈



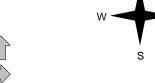
County Rd 10





Heavys Trucks Cars Totals

0 1 54 55 
0 0 12 12 
0 2 42 44 
0 3 108





Cars 68

Peds Cross: 

West Peds: 0

West Entering: 111

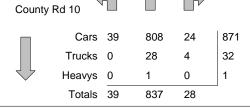
West Leg Total: 200

 Cars
 903

 Trucks
 35

 Heavys
 0

 Totals
 938



Peds Cross: 
South Peds: 0
South Entering: 904
South Leg Total: 1842

Trucks Heavys Totals

72

0

### **Comments**

## Ontario Traffic Inc Traffic Count Summary

Intersection: (	County F	Rd 10 &	Larmer	Line	Count [	Date: 25-Apr-17	•	Munic	cipality: Mil	lbrook			
	North	n Appro	ach Tot	als					Soutl	n Appro	ach Tot	als	
	Include	es Cars, T	rucks, & H			North/South			Include	es Cars, T	rucks, & H		
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	Total Approaches	Hoı Endi		Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00	0:00	0	0	0	0	0
8:00:00	1	125	5	131	0	300	8:00		3	162	4	169	0
9:00:00	6	129	3	138	0	325	9:00		6	171	10	187	0
10:00:00	2	113	3	118	0		10:00		8	124	4	136	0 0 0
16:00:00	0	0	0	0	0		16:00		0	0	0	0	0
17:00:00	7	180	6	193	0		17:00		7	152	6	165	0
18:00:00	8	209	11	228	0		18:00		7	140	2	149	0
19:00:00	8	116	15	139	0	237	19:00	0:00	8	88	2	98	0
Totals:	32	872	43	947	0	1851			39	837	28	904	0
	Include	: <b>Appro</b> a es Cars. T	rucks, & H	eavvs		<b>5</b> 1 0 0 / 1			Include	<b>Appro</b> es Cars. T	ach Tota rucks, & H	a <b>is</b> eavvs	
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches	Hou Endi		Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00	0:00	0	0	0	0	0
8:00:00	4	1	16	21	0	53	8:00		22	2	8	32	0
9:00:00	2	1	3	6	0	36	9:00		16	4	10	30	0
10:00:00	1	1	6	8	0	20			4	1	7	12	0 0
16:00:00	0	0	0	0	0	0	16:00		0	0	0	0	0
17:00:00	7	0	5	12	0		17:00 18:00		2	2	10	14	0
18:00:00 19:00:00	2	1 3	1 2	4 11	0		19:00		2	3	4 5	9 14	0
10.00.00	J	3			O	23	10.00	J.00	J	0	J	17	0
Totals:	22	7	33	62	0	173			55	12	44	111	0
						or Traffic Cr		_	-				
Hours En		7:00 0	8:00 28	9:00 22	10:00 6		16	00:6	17:00 11	18:00 7	19:00 18		

		Passen	ger Cars -	North Ap	proach			Tru	ıcks - Nor	th Appro	ach			Hea	ıvys - Nor	th Appro	ach		Pedes	trians
Interval	Lei	ft	Thi	ru	Rig	ht	Le	ft	Th	ru	Rig	ght	Le	ft	Thi	ru	Rig	lht	North (	Cross
Time	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	0	0	0	0		1	1	1	0	0	0	0	0	0	0	0
7:30:00	0	0		23	2	2	0	0		1	1	0		0		0	0	0	0	0
7:45:00	1	1	66	32	3	1	0	0	-	2	-	0		0		0	0	0	0	0
8:00:00	1	0		53	3	0	0	0		2	2			0		0	0	0	0	0
8:15:00	4	3	151	32	3	0		0		2				0	0	0	0	0	0	0
8:30:00	5	1	187	36	3	0	0	0		0	3			0		0	0	0	0	0
8:45:00	6	1	210	23	3	0	0	0		1	3			0		0	0	0	0	0
9:00:00	7	1	242	32	5	2	0	0		3	3		_	0		0	0	0	0	0
9:15:00	7	0		26	6	1	0	0		3	4	1		0		0	0	0	0	0
9:30:00	7	0		12	6	0	0	0		0		0		0		0	0	0	0	0
9:45:00	7	0		25	6	0	0	0		4	4	0		0		0	0	0	0	0
10:00:00	9	2		40	7	1	0	0	1	3	4	0	1	0		0	0	0	0	0
10:05:45	9	0		0	7	0	0	0				0		0		0	0	0	0	0
16:00:00	9	0		0	7	0	0	0		0	-	0		0		0	0	0	0	0
16:15:00	10	1	382	37	7	0	0	0		2		0		0		0	0	0	0	0
16:30:00	12	2		29	9	2	0	0		1	4	0		0		0	0	0	0	0
16:45:00	14	2	458	47	12	3	0	0		0	-	0	_	0	_	0	0	0	0	0
17:00:00	16	2		63	13	1	0	0		1	4	0		0		0	0	0	0	0
17:15:00	18	2		51	16	3	0	0		1	4	0	1	0		0	0	0	0	0
17:30:00	20	2		61	18	2	0	0		1	4	0		0	0	0	0	0	0	0
17:45:00	21	1	681	48	21	3	0	0		0		0		0		0	0	0	0	0
18:00:00	24	3		47 30	24 32	3	0	0		0		0		0		0	0	0	0	0
18:15:00	27	3		37	33	8	0	0		1	4	0		0		0	0	0	0	0
18:30:00	28	1	795			1	0	0		0	4	0		0		0		0	0	0
18:45:00	31	3 1		25 22	37	4	0	0		1	-	0		0		0	0	0	0	0
19:00:00	32 32	0	842	0	39 39	2	0	0		0		0		0		0	0	0	0	0
19:05:10	32	0	842	U	39	U	U	U	30	U	4	U	0	U	U	U	0	U	0	

		Passen	ger Cars	- East Ap	proach			Tro	ucks - Ea	st Appro	ach			He	avys - Eas	st Approa	ach		Pedes	trians
Interval	Lef	ft	Th	ru	Rig	ht	Le	ft	Th	ru	Rig	ht	Le	ft	Th	ru	Rig	ht	East (	Cross
Time	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	C
7:15:00	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	C
7:30:00	2	0	0	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	C
7:45:00	3	1	1	1	11	4	0	0	0	0	0	0		0	0	0	0	0	0	C
8:00:00	4	1	1	0	16	5	0	0				0		0		0	0	0	0	C
8:15:00	4	0	-	0	16	0	0	0	_	0		0		0			0	0	0	C
8:30:00	6	2			16	0	0	0				0		0		0	0	0	0	C
8:45:00	6	0	2		17	1	0	0			0	0		0	0	0	0	0	0	C
9:00:00	6	0	_		19	2	0	0	_			0		0		0	0	0	0	C
9:15:00	6	0			21	2	1	1	0			1		0		0	0	0	0	C
9:30:00	6	0	3		22	1	1	0			1	0		0	0	0	0	0	0	C
9:45:00	6	0	3		23	1	1	0				0		0		0	0	0	0	C
10:00:00	6	0	3		24	1	1	0		0	-	0		0		0	0	0	0	
10:05:45	6	0			24	0	1	0				0		0		0	0	0	0	
16:00:00	6	0	3		24	0	1	0				0		0			0	0	0	
16:15:00	8	2	3		26	2	1	0	0		-	0		0		0	0	0	0	C
16:30:00	9	1	3		27	1	2	1	0			0	-	0		0	0	0	0	
16:45:00	10	1	3		27	0	3	1	0			0		0		0	0	0	0	C
17:00:00	11	1	3		28	1	3	0				0		0		0	0		0	C
17:15:00 17:30:00	12 12	0		0	29 29	0		0				0		0	_		0	0	0	
17:30:00	12	0	4	0	29	0	3	0				0	1	0		0	0	0	0	C
18:00:00	13	1	4	0	29	0	3	0				0		0		0	0	0	0	C
18:15:00	17	4	6	2		1	3	0		0		0		0		0	0	0	0	C
18:30:00	17	0		0	30	0	3	0	_			0		0		0	0	0	0	
18:45:00	19	2	6	0	30	0	3	0				0		0			0	0	0	
19:00:00	19	0			31	1	3	0				0	_	0		0	0	0	0	C
19:05:10	19	0				0	3	0				0		0			0	0	0	
10.00.10			,								_								Ŭ	

		Passenç	ger Cars -	South Ap	proach			Tru	cks - Sou	th Appro	oach			Hea	ıvys - Sou	ıth Appro	ach		Pedes	trians
Interval	Le	ft	Thi	ru	Rig	ıht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	South	Cross
Time	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		48	1	1	0	0	4	4	2	0		0	0	0	0	0	0	
8:00:00	3	2		53	2	1	0	0		3		0		0		0	0	0	0	0
8:15:00	5	2		44	5	3	0	0		4	_	0		0		0	0	0	0	0
8:30:00	7	2		47	10	5	0	0		2		0		0		0	0	0	0	0
8:45:00	9	2		40	11	1	0	0		2		0		0	0	0	0	0	0	0
9:00:00	9	0		29	11	0	0	0		3		1		0		0	0	0	0	0
9:15:00	10	1	340	25	12	1	0	0		0		0		0		0	0	0	0	0
9:30:00	12	2		24	12	0	0	0		3		0		0	0	0	0	0	0	0
9:45:00	14	2		34	13	1	0	0		2		1		0		0	0	0	0	0
10:00:00	17	3		33	14	1	0	0		3		0		0		0	0	0	0	0
10:05:45	17	0		0	14	0	0	0		0		0		0		0	0	0	0	0
16:00:00	17	0		0	14	0	0	0		0		0		0	0		0	0	0	0
16:15:00	19	2		34	14	0	0	0		1	4	0		0		0	0	0	0	0
16:30:00	20	1	504	39	16	2	0	0		0		0	_	0		0	0	0	0	0
16:45:00	23	3	550	46	17	1	0	0		0	4 4	0		0	0	0	0	0	0	0
17:00:00	24	1	581	31 59	20	3	0	0		1		0		0		0	0	0	0	0
17:15:00 17:30:00	27 28	3	640 668	28	20 20	0	0	0		0	-	0	1	0	_	0	0	0	0	
17:30:00	30	2	691	23	22	2	0	0		0		0	1	0	0	0	0	0	0	0
18:00:00	31		721	30	22	0	0	0		0		0		0		0	0	0	0	0
18:15:00	32	1	755	34	22	0	0	0		0	_	0		0		0	0	0	0	0
18:30:00	36	4	776	21	23	1	0	0		0		0		0		0	0	0	0	0
18:45:00	38	2		17	24	1	0	0		0		0		0		1	0	0	0	0
19:00:00	39	1	808	15	24	0	0	0		0		0		0		0	0	0	0	0
19:05:10	39	0		0	24	0	0	0		0		0		0	-	0	0	0	0	
10.00.10			000		27				20										U	

		Passen	ger Cars -	West Ap	proach			Tru	ucks - We	st Appro	ach			Hea	avys - We	st Appro	ach		Pedes	trians
Interval	Lef	ft	Thi	·u	Rig	ht	Le	ft	Th	ru	Rig	ght	Le	ft	Th	ru	Rig	ht	West 0	Cross
Time	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	1	0	1	1		0		0	0	0	0	0
8:00:00	22	6	2	2	7	2	0	0		0		0		0		0	0	0	0	0
8:15:00	28	6	2	0	11	4	0	0	_	0				0		0	0	0	0	0
8:30:00	31	3	4	2	12	1	0	0		0		0		0	0	0	0	0	0	0
8:45:00	35	4	5	1	13	1	0	0		0		0		0		0	0	0	0	0
9:00:00	38	3	6	1	16	3	0	0	_	0		0		0		0	0	0	0	0
9:15:00	38	0	7	1	18 18	2	0	0		0				0		0	0	0	0	0
9:30:00 9:45:00	39 41	2	7	0	20	0	0	0	_	0	1	0		0	-	0	0	0	0	0
10:00:00	42		7	0	23	3	0	0		0		0		0		0	0	0	0	0
10:05:45	42	0	7	0	23	0	0	0		0		0		0		0	0	0	0	0
16:00:00	42	0	7	0	23	0	0	0		0	1	0		0		0	0	0	0	0
16:15:00	42	0	8	1	28	5	0	0		0		0		0		0	0	0	0	0
16:30:00	42	0	9	1	30	2	0	0		0	•			0		0	0	0	0	0
16:45:00	44	2	9	0	33	3	0	0		0		0		0		0	0	0	0	0
17:00:00	44	0	9	0	33	0	0	0	_	0				0		0	0	0	0	0
17:15:00	44	0	9	0	36	3	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		0	39	2	1	1	0	0	-	0	0	0	0	0	0	0	0	0
18:30:00	54	2	12	0	41	2	1	0	0	0		0		0	0	0	0	0	0	0
18:45:00	54	0	12	0	42	1	1	0	_	0			0	0	0	0	0	0	0	0
19:00:00	54	0		0	42	0	1	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 One Hour Peak From:** 12:00:00 From: 11:00:00 To: 17:00:00 To: 13:00:00 Municipality: Weather conditions: Millbrook Site #: 1722900002 Intersection: CR 10 & Larmer Line Person(s) who counted: TFR File #: Count date: 12-Aug-17 \*\* Non-Signalized Intersection \*\* Major Road: CR 10 runs N/S Heavys 0 North Leg Total: 385 0 0 Heavys 0 East Leg Total: 30 2 Trucks 0 2 East Entering: North Entering: 197 0 Trucks 1 17 North Peds: Cars 12 179 4 195 Cars 187 East Peds: 5 $\mathbb{X}$ Totals 12 Totals 188 Peds Cross: Peds Cross: ⋈ 181 4 **CR 10** Heavys Trucks Cars Totals Trucks Heavys Totals Cars 30 30 0 0 0 6 0 Larmer Line Heavys Trucks Cars Totals Larmer Line 0 0 14 14 0 3 0 10 10 Trucks Heavys Totals 0 Cars 13 0 27 13 $\mathbb{X}$ Peds Cross: 187 Peds Cross: $\bowtie$ Cars 196 Cars 12 169 West Peds: 0 Trucks 2 Trucks 0 0 1 South Peds: 0 West Entering: 27 Heavys 0 Heavys 0 0 0 South Entering: 188 West Leg Total: 57 Totals 198 Totals 12 South Leg Total: 386 **Comments**

## **Total Count Diagram**

Municipality: Millbrook

**Site #:** 1722900002

Intersection: CR 10 & Larmer Line

TFR File #: 1

North Leg Total: 2027

North Entering: 1044

North Peds:

Peds Cross:

Count date: 12-Aug-17

### Weather conditions:

### Person(s) who counted:

### \*\* Non-Signalized Intersection \*\*

Heavys 0 0 0 0 Trucks 0 10 0 10

Cars 59 943 32
Totals 59 953 32

Major Road: CR 10 runs N/S

Heavys 0 Ea

Cars 969
Totals 983

Trucks 14

East Leg Total: 169
East Entering: 85
East Peds: 5
Peds Cross: \( \bar{\text{\delta}} \)

Heavys Trucks Cars Totals
0 0 160 160

⋈



 Cars
 Trucks
 Heavys Totals

 33
 2
 0
 35

 27
 0
 0
 27

 22
 1
 0
 23

Larmer Line

Heavys	Trucks	Cars	Tota
0	0	75	75
0	0	22	22
0	0	54	54
0	0	151	





1034

**CR 10** 

Larmer Line



Cars	Trucks	Heavys	Totals
84	0	0	84

Peds Cross: 

West Peds: 0

West Entering: 151

West Leg Total: 311

Cars 1019
Trucks 11
Heavys 0
Totals 1030



 Cars
 74
 861
 30
 965

 Trucks
 0
 12
 0
 12

 Heavys
 0
 0
 0
 0

 Totals
 74
 873
 30

Peds Cross: 
South Peds: 0
South Entering: 977
South Leg Total: 2007

### **Comments**

## Ontario Traffic Inc. Traffic Count Summary

Intersection: (	CR 10 &	Larmer	Line		Count [	Date: 12-Aug-17	7	Munic	cipality: Mil	lbrook			
	North	n Appro	ach Tot	als					South	1 Appro	ach Tot	als	
			rucks, & H	eavys		North/South			Include	es Cars, T	rucks, & H	eavys	
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	Total Approaches	Hou Endi		Left	Thru	Right	Grand Total	Total Peds
11:00:00	0	0	0	0	0	0	11:00	0:00	0	0	0	0	0
12:00:00	2	152	7	161	0	357	12:00	0:00	7	185	4	196	0
13:00:00	4	181	12	197	0	385	13:00	0:00	12	170	6	188	0
14:00:00	5	177	9	191	0		14:00		14	124	7	145	0
15:00:00	8	149	7	164	0		15:00		15	146	5	166	0 0 0
16:00:00	10	154	11	175	0		16:00		11	128	8	147	
17:00:00	3	140	13	156	0	289	17:00	0:00	15	118	0	133	0
Totals:	32 <b>East</b>	953 Approa	59 ach Tota	1044 als eavys	0	2019			74 West	871 Approses Cars, T	30 ach Tota	975 als eavys	0
Hour				Grand	Total	East/West Total	Hou	ur				Grand	Total
Ending 11:00:00	Left 0	Thru 0	Right 0	Total 0	Peds 0	Approaches 0	Endi 11:00		Left 0	Thru 0	Right 0	Total 0	Peds 0
12:00:00	Ö	3	6	9	0		12:00		17	4	9	30	ő
13:00:00	7	6	4	17	5		13:00		14	3	10	27	0
14:00:00	2	5	7	14	0		14:00		14	4	9	27	0
15:00:00	4	6	9	19	Ö		15:00		5	2	4	11	0
16:00:00	8	4	3	15	Ö		16:00		9	1	9	19	0 0
17:00:00	2	3	6	11	0		17:00		14	8	13	35	0
Totals:	23	27	35 <b>Calc</b>	85 ulated V	5 <b>/alues f</b>	234 or Traffic Cr	ossin	a Ma	73	22 eet	54	149	0
Hours En	dina:	11:00	12:00	13:00	14:00			<b>9 m</b> 5:00	-	17:00	17:00		
Crossing			21	27	21		10	15	21	24	24		
Crossing	values.	<u> </u>	۷۱	۷1	۲۱			10	۷ ا	<u> </u>			

		Passenger Cars - No  Left Thru  Cum Incr Cum In			proach			Tru	ıcks - Nor	th Appro	ach			Hea	vys - Nor	th Appro	ach		Pedes	trians
Interval	Lef	ft	Thi	ru	Rig	ht	Le	ft	Th	ru	Ri	ght	Le	ft	Th	ru	Rig	ht	North	Cross
Time	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
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
12:00:00	2	1	151	38	7	0	0	0		0				0		0		0	0	0
12:15:00	2	0	198	47	11	4	0	0		0				0		0		0	0	0
12:30:00	3	1	244	46	15	4	0	0		0	0			0	0	0		0	0	0
12:45:00	4	1	287	43	16	1	0	0		1	0			0		0		0	0	0
13:00:00	6	2	330	43	19	3	0	0		1	0			0		0		0	0	0
13:15:00	7	1	377	47	20	1	0	0		0				0		0		0	0	0
13:30:00	9	2	429	52	24	4	0	0		1	0			0		0		0	0	0
13:45:00	10	1	467	38	26	2	0	0		0				0		0		0	0	0
14:00:00	11	1	506	39	28	2	0	0		0				0		0		0	0	0
14:15:00	13	2	542	36	28	0	0	0		1	0			0		0		0	0	0
14:30:00	16	3	572	30	30 32	2	0	0		0	0			0		0			0	0
14:45:00 15:00:00	18 19	2	620 653	48 33	35	3	0	0		0	-			0		0		0	0	0
15:00:00	23	4	684	31	40	5	0	0		1	0			0		0		0	0	0
15:30:00	26	3	737	53	40	2	0	0	-	1	0			0		0		0	0	0
15:45:00	27	1	773	36	44	2	0	0		2	_			0		0		0	0	0
16:00:00	29	2	803	30	46	2	0	0	1				-	0	0	0		0	0	0
16:15:00	29	0	834	31	49	3	0	0			1			0		0		0	0	0
16:30:00	32	3	866	32	51	2	0	0						0		0		0	0	0
16:45:00	32	0		37	56	5	0	0	_					0		0		0	0	0
17:00:00	32	0	943	40	59	3	0	0	_		1			0		0		0	0	0
17:00:51	32	0	943	0	59	0	0	0						0		0		0	0	0
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Net	Pedestrians			ich	st Approa	avys - Eas	Hea			ach	st Appro	ucks - Eas	Tr			proach	East Ap	ger Cars	Passen		
11:00:00	<b>East Cross</b>		ght	Riç	ru	Thi	t	Left	ght	Rig	nru	Th	:ft	Le	jht	Rig	ru	Th	t	Lef	Interval
11:15:00         0<	Cum Incr	r	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Time
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11:45:00	0 0	0	(	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11:15:00
12:00:00	0 0	0		0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	
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12:30:00	0 0							-						_			1				
12:45:00	0 0																1		2		
13:00:00	5 5														3				1		
13:15:00	5 0														1			•			
13:30:00	5 0						_							-	-					-	
13:45:00         9         1         13         1         14         2         0         0         0         2         0	5 0	-												_					0		
14:00:00         9         0         14         1         15         1         0	5 0						_					_			-				1		
14:15:00         10         1         16         2         17         2         0 <td< td=""><td>5 0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	5 0													_	2						
14:30:00         11         1         17         1         18         1         0 <td< td=""><td>5 0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td>0</td><td></td><td></td></td<>	5 0														1				0		
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		Passenç	ger Cars -	South A	oproach			Tru	cks - Sou	th Appro	oach			Hea	vys - Sou	ıth Appro	ach		Pedes	trians
Interval	Le	ft	Thi	ru	Rig	ıht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	South	Cross
Time	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	C
11:15:00	0	0	46	46	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	O
11:30:00	2	2	96	50	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	C
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	1 183 35 4 1 3 228 45 6 2			0	0	2	0	0	0	0	0	0	0	0	0	0	0	
12:15:00	10	3				2	0	0		1	0	0		0		0	0	0	0	0
12:30:00	12	2		44	7	1	0	0		0	_	0		0		0	0	0	0	0
12:45:00	16	4	314	42	8	1	0	0		0		0		0	0	0	0	0	0	0
13:00:00	19	3					0	0		0		0		0		0	0	0	0	0
13:15:00	22	3				2	0	0		0	_	0		0	_	0	0	0	0	0
13:30:00	27	5	421	37	14	2	0	0		0	_	0	1	0	0	0	0	0	0	0
13:45:00	31	4	451	30	15	1	0	0		0	-	0		0		0	0	0	0	0
14:00:00	33	2		25	17	2	0	0		0		0		0		0	0	0	0	0
14:15:00	37	4	505	29	19	2	0	0		0	-	0		0		0	0	0	0	0
14:30:00	40	3	543	38	21	2	0	0		0		0		0			0	0	0	0
14:45:00	41	1	575	32	22	1	0	0		2	_	0		0		0	0	0	0	0
15:00:00	48	7	619	44	22	0	0	0		1	0	0		0		0	0	0	0	0
15:15:00	51	3		33	25	3	0	0		2		0		0	_	0	0	0	0	0
15:30:00	54	3	682	30	27	2	0	0		0		0		0		0	0	0	0	0
15:45:00	55	1	710	28	29	2	0	0		0	_	0		0		0	0	0	0	C
16:00:00	59	4	744	34	30	1	0	0		1	0	0		0		0	0	0	0	0
16:15:00	63	4	774	30	30	0	0	0		0		0		0		0	0	0	0	0
16:30:00	69	6		32	30	0	0	0		1	0	0		0		0	0	0	0	0
16:45:00	71	2		26	30	0	0	0		1	0	0		0		0	0	0	0	0
17:00:00	74	3		27	30	0	0	0		1	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	C

		Passenger Cars - West Ap           Left         Thru           Cum         Incr         Cum		proach			Tru	ucks - We	st Appro	ach			Hea	avys - We	st Appro	ach		Pedes	trians	
Interval	Lef	ft	Thi	ru	Rig	ht	Le	ft	Th	ru	Rig	ght	Le	ft	Th	ru	Rig	ht	West 0	Cross
Time	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	1	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
12:15:00	21	4	4	0	10	1	0	0		0				0		0		0	0	0
12:30:00	23	2		2	14	4	0	0		0		0		0		0		0	0	0
12:45:00	26	3		1	18	4	0	0		0				0		0		0	0	0
13:00:00	31	5		0	19	1	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
13:30:00	38	2	8	0	25	3	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
14:00:00	45	4	11	2	28	2	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
14:30:00	47	1	13 13	0	31 32	2	0	0		0		0		0		0		0	0	0
14:45:00 15:00:00	49 50	2	13	0	32	0	0	0		0		0		0		0		0	0	0
15:00:00	50	2		0	34	2	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
15:45:00	57	4	14	0	38	3	0	0		0		0		0		0		0	0	0
16:00:00	59	2		0	41	3	0	0	1	0	_	0	-	0		0		0	0	0
16:15:00	64	5	15	1	45	4	0	0	1	0				0		0		0	0	0
16:30:00	67	3		4	47	2	0	0		0		0		0		0		0	0	0
16:45:00	71	4		3	50	3	0	0	_	0				0		0		0	0	0
17:00:00	73	2		0	54	4	0	0	_	0				0		0		0	0	0
17:00:51	75	2		0	54	0	0	0				0		0		0		0		0
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#### Ontario Traffic Inc. **Morning Peak Diagram Specified Period One Hour Peak** From: 7:30:00 **From:** 7:00:00 To: 10:00:00 To: 8:30:00 Municipality: Millbrook Weather conditions: Site #: 1710800003 Intersection: County Rd 10 & Municipal Office D Person(s) who counted: TFR File #: 16 Count date: 25-Apr-17 \*\* Non-Signalized Intersection \*\* Major Road: County Rd 10 runs N/S North Leg Total: 396 Heavys 0 0 Heavys 0 9 North Entering: 172 Trucks 1 Trucks 13 North Peds: Cars 7 156 163 Cars 211 ⋈ Totals 8 164 Totals 224 Peds Cross: County Rd 10 Heavys Trucks Cars Totals Municipal Office Driveway Heavys Trucks Cars Totals 0 0 0 0 0 1 County Rd 10 $\mathbb{X}$ Peds Cross: Peds Cross: Cars 157 Cars 2 211 213 $\bowtie$ West Peds: 0 Trucks 8 Trucks 0 13 13 South Peds: 0 West Entering: 1 Heavys 0 0 South Entering: 226 Heavys 0 West Leg Total: 11 Totals 165 Totals 2 South Leg Total: 391 **Comments**

#### Ontario Traffic Inc. **Afternoon Peak Diagram Specified Period One Hour Peak** From: 16:30:00 **From:** 16:00:00 To: 17:30:00 19:00:00 To: Municipality: Millbrook Weather conditions: Site #: 1710800003 Intersection: County Rd 10 & Municipal Office D Person(s) who counted: TFR File #: 16 Count date: 25-Apr-17 \*\* Non-Signalized Intersection \*\* Major Road: County Rd 10 runs N/S Heavys 0 North Leg Total: 423 0 Heavys 0 4 North Entering: 241 Trucks 0 4 Trucks 0 North Peds: 0 Cars 3 234 237 Cars 182 ⋈ Totals 3 Peds Cross: 238 Totals 182 County Rd 10 Heavys Trucks Cars Totals 3 Municipal Office Driveway Heavys Trucks Cars Totals 0 10 10 0 0 4 County Rd 10 $\mathbb{X}$ Peds Cross: Cars 238 Peds Cross: Cars 0 172 172 M West Peds: 0 Trucks 4 Trucks 0 0 0 South Peds: 0 West Entering: 14 Heavys 0 Heavys 0 0 South Entering: 172 West Leg Total: 17 Totals 242 Totals 0 South Leg Total: 414 **Comments**

#### **Total Count Diagram**

Municipality: Millbrook

Site #: 1710800003

Intersection: County Rd 10 & Municipal Office D

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

0 North Leg Total: 1885 Heavys 0 Heavys 0 North Entering: 962 Trucks 2 37 35 Trucks 33 North Peds: 887 0 Cars 38 925 Cars 890  $\bowtie$ 922 Peds Cross: Totals 40 Totals 923 County Rd 10

Heavys Trucks Cars Totals 3 63



Heavys Trucks Cars Totals 2 16 18

2 13 0 11 27

 $\mathbb{X}$ Peds Cross: West Peds: 0 West Entering: 31 West Leg Total: 97



Cars 898 Trucks 37 Heavys 0 Totals 935







Peds Cross:  $\bowtie$ South Peds: 0 South Entering: 931 South Leg Total: 1866

#### **Comments**

# Ontario Traffic Inc Traffic Count Summary

Intersection:	County F	Rd 10 &	Municip	al Office	Count I	Date: 25-Apr-17	,	Munic	cipality: Mil	Ibrook				
	North	Appro	ach Tot	als			'							
Hour	Include	es Cars, I	rucks, & H		Total	North/South	Нош	r	Include	es Cars, I	rucks, & H	-	Total	
Hour Ending														
Hour Ending														
North Appreach Totals														
North Approach Totals													0	
North Approach Totals													0	
9:00:00													0	
Totals:   0   920   40   960   0   1890   26   904   0   930												0		
Totals:   O   920   40   960   O   1890   East Approach   Total   19:00:00   O   125   O   125   O   126   O   19:00:00   O   O   O   O   O   O   O   O   O													۷	
Totals:	East Approach Totals													
	Totals:   0   920   40   960   0   1890   26   904   0   930													
Hour Ending   Left   Thru   Right   Total   Total   Peds   Total   Approaches   East/West   Total   Hour Ending   Coron   Total   Total   Total   Total   Approaches   Total   Hour Ending   Left   Thru   Right   Total   Total   Peds   Total   Approaches   Total   Hour Ending   Left   Thru   Right   Total   T														
	0												0	
	I													
North Approach Totals														
	North Approach Totals													
											3		0	
											2	2	0	
19:00:00	0	0	0	0	0	3	19:00	:00	2	0	1	3	0	
Totals:	0	0						P.A.			13	31	0	
Hours Fr	dina	7.00					_	_	-		10:00			
	iulliü.	7.00	0.00	9.00	10.00		01	.UU	17 (11)	10.00	18.00			

		Passen	ger Cars -	North A	proach			Tru	cks - Nor	th Appro	ach			Hea	vys - Nor	th Appro	ach		Pedes	trians
Interval	Let	ft	Thru Right r Cum Incr Cum Incr					ft	Th	ru	Rig	ht	Le	ft	Th	ru	Rig	ht	North	Cross
Time	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				0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0		25	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0		33	0	0	0	0	5	3	0	0		0	0	0	0	0	0	
8:00:00	0	0	129	55	0	0	0	0		3		0		0		0	0	0	0	0
8:15:00	0	0		34	3	3	0	0		2	-	1		0		0	0	0	0	0
8:30:00	0	0		34	7	4	0	0		0		0		0		0	0	0	0	0
8:45:00	0	0		22	9	2	0	0		1	1	0		0	0	0	0	0	0	0
9:00:00	0	0		35	10	1	0	0		3		0		0		0	0	0	0	0
9:15:00	0	0		23	15	5	0	0		3	_	1		0		0	0	0	0	0
9:30:00	0	0	288	11	16	1	0	0		0		0		0	0	0	0	0	0	0
9:45:00	0	0		28	17	1	0	0		4	2	0		0		0	0	0	0	0
10:00:00	0	0		35	26	9	0	0		5		0		0		0	0	0	0	0
10:01:43	0	0		2	26	0	0	0		0		0		0		0	0	0	0	0
16:00:00	0	0		1	26	0	0	0		0		0		0	0		0	0	0	0
16:15:00	0	0		45	27	1	0	0		1	2	0		0		0	0	0	0	0
16:30:00	0	0		33	29	2	0	0		2		0		0		0	0	0	0	0
16:45:00	0	0		53	30	1	0	0		1	2	0		0	0	0	0	0	0	0
17:00:00	0	0	544	59	32	2	0	0		1	2 2	0		0		0	0	0	0	0
17:15:00 17:30:00	0	0		58 64	32 32	0	0	0		1	2	0		0	_	0	0	0	0	
17:30:00	0	0	718	52	33	1	0	0		0		0	1	0	0	0	0	0	0	0
18:00:00	0	0		52 44	35	2	0	0		0		0		0		0	0	0	0	0
18:15:00	0	0		35	35	0	0	0		0	2	0		0		0	0	0	0	0
18:30:00	0	0		39	37	2	0	0		0		0		0		0	0	0	0	0
18:45:00	0	0		29	37	0	0	0		1	2	0		0		0	0	0	0	0
19:00:00	0	0		20	38	1	0	0		0	1	0		0		0	0	0	0	0
19:00:53	0	0		2		0	0	0		0		0		0			0	0	0	
10.00.00			001	_																

		Passen	ger Cars	- East Ap	proach			Tru	ucks - Eas	st Appro	ach			He	avys - Eas	st Approa	ach		Pedes	trians
Interval	Lef	Left Thru Right					Le	ft	Th	ru	Rig	ht	Le	ft	Th	ru	Rig	ht	East (	Cross
Time	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		
8:00:00				0	0	0				0		0		0	0	0	0	0		
8:15:00			-			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	
8:45:00	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	
9:15:00	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	
9:45:00	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	
10:01:43	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	
16:15:00	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	
16:45:00	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	
17:15:00 17:30:00	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	
18:00:00	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	
18:30:00	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	
19:00:00	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	
10.00.00																				

		Passenç	ger Cars -	South A <sub>l</sub>	proach			Tru	ıcks - Sou	th Appro	ach			Hea	vys - Sou	th Appro	ach		Pedes	trians
Interval	Le	ft	Thi	ru	Rig	ht	Le	ft	Th	ru	Rig	ght	Le	ft	Thi	ru	Rig	ht	South	Cross
Time	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	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		32	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0
7:45:00	1	0		50	0	0	1	0		4	0	0	-	0		0		0		0
8:00:00	1	0		57	0	0	1	0		2		0		0		0		0		0
8:15:00	1	0		51	0	0	1	0			0	0		0		0		0		0
8:30:00	3	2		53	0	0	1	0			0	0		0	0	0		0	0	0
8:45:00	8	5	311	44	0	0	1	0			0	0		0		0		0	-	0
9:00:00	8	0		30	0	0	1	0			_	0		0		0		0		0
9:15:00	10	2		26	0	0	1	0				0		0		0		0	-	0
9:30:00	11	1	393	26	0	0	1	0		2	0			0	_	0		0	-	0
9:45:00	12	1	430	37	0	0	1	0		3	0	0		0		0		0		0
10:00:00	21	9		34	0	0	1	0			0	0		0		0		0		0
10:01:43	21	0		3	0	0	1	0						0	0	0		0	0	0
16:00:00	21	0		0	0	0	1	0				0		0		0		0	0	0
16:15:00 16:30:00	21 21	0		37 45	0	0	1	0		2 0		0		0		0		0		
16:30:00	21	0		45	0	0	1	0		0		0		0	0	0		0	0	0
17:00:00	21	0		28	0	0	1	0		0	_	0		0		0		0	-	0
17:00:00	21	0		64	0	0	1	0		0	1	0		0		0		0		0
17:13:00	21	0	721	32	0	0	1	0		0	_	0	-	0	0	0		0	0	0
17:45:00	22	1	747	26	0	0	1	0		0	1	0		0		0		0		0
18:00:00	22	0		31	0	0	1	0		0		0		0		0		0		0
18:15:00	23	1	810	32	0	0	1	0		0		0		0		0		0	-	0
18:30:00	25	2		27	0	0	1	0		0				0		0		0	0	0
18:45:00	25	0		20	0	0	1	0		0		0		0		0		0		0
19:00:00	25	0		16	0	0	1	0		0				0		0		0	0	0
19:00:53	25	0		1	0	0	1	0		0	_			0		0		0		0
			I								1								l	

		Passen	ger Cars	- West Ap	proach			Tru	ıcks - We	st Appro	ach			Hea	avys - We	st Appro	ach		Pedes	trians
Interval	Lef	Left Thru Right					Le	ft	Th	ru	Rig	ght	Le	ft	Th	ru	Rig	ht	West	Cross
Time	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	
8:00:00	0					0	0	0				0		0		0	0	0	0	0
8:15:00				0	0	0	_	0		0		0			0	0	0	0		
8:30:00		0 0 0 1		1	0	0				0		0		0	0	0	0	0		
8:45:00	0	0	0	0	1	0	1	1	0		-	0		0		0	0	0	0	0
9:00:00	0	0	_	0	2	1	1	0	_			0		0		0	0	0	0	0
9:15:00	1	1	0	0	3	1	1	0				0		0		0	0	0	0	0
9:30:00	1	0	0	0	4	1	2	1	0			1		0		0	0	0	0	0
9:45:00	2	1	0	0	5	1	2	0				0		0		0	0	0	0	0
10:00:00	4	2	0	0	5	0	2	0		0		0		0		0	0	0	0	0
10:01:43	4	0		0	5	0	2	0				0		0		0	0	0	0	0
16:00:00	4	0	0		5	0	2	0				0		0			0	0	0	0
16:15:00	4	0	0	0	5	0	2	0	_			0		0		0	0	0	0	0
16:30:00	4	0	0	0	6 7	1	2	0		0		0		0		0	0	0	0	0
16:45:00	8	4	0	0		1	2	0				0		0		0	0	0	0	0
17:00:00 17:15:00	14 14	6 0	0	0	8	1	2	0				0		0		0	0	0	0	0
17:15:00	14	0	_	-	10	1	2	0						0			0	0	0	0
17:30:00	14	0	0	0	10	0	2	0				0	1	0		0	0	0	0	0
18:00:00	14	0			10	0	2	0				0		0		0	0	0	0	0
18:15:00	16	2	0	0	10	0	2	0		0				0		0	0	0	0	0
18:30:00	16	0		0	11	1	2	0			-			0		0	0	0	0	0
18:45:00	16	0	_		11	0	2	0						0			0	0	0	0
19:00:00	16	0		0	11	0	2	0			1	0		0		0	0	0	0	0
19:00:53	16	0			11	0	2	0						0	1		0	0	0	
10.00.00	10				- 11														U	
															1					

#### Ontario Traffic Inc. **Mid-day Peak Diagram Specified Period One Hour Peak From:** 12:00:00 From: 11:00:00 To: 17:00:00 To: 13:00:00 Municipality: Millbrook Weather conditions: Site #: 1722900003 Intersection: CR 10 & Municipal Office Driveway Person(s) who counted: TFR File #: Count date: 12-Aug-17 \*\* Non-Signalized Intersection \*\* Major Road: CR 10 runs N/S Heavys 0 North Leg Total: 383 0 Heavys 0 North Entering: 196 Trucks 0 Trucks 0 North Peds: 0 Cars 1 194 195 Cars 187 Peds Cross: $\bowtie$ Totals 1 195 Totals 187 **CR 10** Heavys Trucks Cars Totals Municipal Office Driveway Heavys Trucks Cars Totals 0 0 0 0 0 0 $\mathbb{X}$ Peds Cross: Peds Cross: Cars 194 Cars 0 187 $\bowtie$ West Peds: 0 Trucks 1 Trucks 0 0 0 South Peds: 0 West Entering: 0 Heavys 0 Heavys 0 0 South Entering: 187 West Leg Total: 1 Totals 195 Totals 0 South Leg Total: 382 **Comments**

#### **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 \*\*

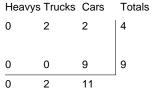
Major Road: CR 10 runs N/S

Heavys 0 0 North Leg Total: 2014 Heavys 0 10 North Entering: 1036 Trucks 1 Trucks 13 1023 North Peds: Cars 3 1026 Cars 965 ⋈ 1032 Peds Cross: Totals 4 Totals 978 **CR 10** 

Heavys Trucks Cars Totals
0 1 10 11



Municipal Office Driveway



Peds Cross: 

West Peds: 1

West Entering: 13

West Leg Total: 24





 Cars
 1032

 Trucks
 9

 Heavys
 0

 Totals
 1041



Cars 7 963 970
Trucks 0 11 11

Heavys 0 0
Totals 7 974

Peds Cross: 
South Peds: 0
South Entering: 981

South Leg Total: 2022

#### **Comments**

## Ontario Traffic Inc. Traffic Count Summary

Intersection: /	D 10 º	Municir	al Office	Drivou	Count C	Date: 10 Aug 1	7 1	Munic	ipality: N //:	lhrook				
					ay ·····	12-Aug-1	,   ·				ach Tot	tale		
	North Approach Totals													
North Approach Totals														
11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00	0 0 0 0 0	0 161 195 187 157 173	0 1 1 0 0	162 196 187 157 173	0 0 0 0	0 358 383 335 326 321	11:00: 12:00: 13:00: 14:00: 15:00: 16:00:	00 00 00 00 00	0 2 0 2 1 1	0 194 187 146 168 147	0 0 0 0 0	0 196 187 148 169 148	0 0 0 0 0	
Totals:	0	1032	4	1036	0	2017							0	
	North Approach Totals													
Hour Ending				Grand		Total	Hour Endin	g				Grand	Total Peds	
11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00	0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	0 5 0 0	0 3 0 1 3 3	11:00: 12:00: 13:00: 14:00: 15:00: 16:00:	00 00 00 00 00	0 0 0 1 2	0 0 0 0	0 3 0 1 2 1	3 0 1 3 3	0 1 0 0 0 0	
Totals:	0	0						- 85	4		9	13	1	

		Passen	ger Cars -	North A	proach			Tru	cks - Nor	th Appro	ach			Hea	ıvys - Nor	th Appro	ach		Pedes	trians
Interval	Le	ft	Th	ru	Rig	ıht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	North	Cross
Time	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	C
11:15:00	0	0	46	46	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	C
11:30:00	0	0	84	38	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	C
11:45:00	0	0	121	37	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
12:00:00	0	0			39 1 1 50 1 0			0	1	0	0	0	0	0	0	0	0	0	0	
12:15:00	0	0			1	1 0		0	1	0	0	0		0		0	0	0	0	
12:30:00	0	0		52	1	0	0	0	1	0	_	0		0		0	0	0	0	
12:45:00	0	0		47	1	0	0	0		0	_	0		0	0	0	0	0	0	(
13:00:00	0	0		45		2 1 2 0		0			0	0		0		0	0	0	0	
13:15:00	0	0		50		0	0	0		0	_	0		0		0	0	0	0	
13:30:00	0	0		55	2	0	0	0		1	0	0		0	0	0	0	0	0	
13:45:00	0	0		41	2	0	0	0			-	0		0		0	0	0	0	
14:00:00	0	0		40	2	0	0	0		0		0		0		0	0	0	0	
14:15:00	0	0		37	2	0	0	0		1	0	0		0		0	0	0	0	
14:30:00	0	0		33	2	0	0	0		0		0		0		0	0	0	0	
14:45:00	0	0		51	2	0	0	0		1	0	0		0		0	0	0	0	
15:00:00	0	0		34	2	0	0	0		0	_	0		0		0	0	0	0	
15:15:00	0	0		36	2	0	0	0		1	0	0		0		0	0	0	0	
15:30:00	0	0		57	2	0	0	0		1	0	0		0		0	0	0	0	(
15:45:00	0	0		41	2	0	0	0		2		0		0		0	0	0	0	(
16:00:00	0	0		35	2	0	0	0		0		0		0		0	0	0	0	(
16:15:00	0	0		35	2	0	0	0		0	1	1	0	0		0	0	0	0	(
16:30:00 16:45:00	0	0		37 41	3	0	0	0		0		0		0		0	0	0	0	(
17:00:00	0	0		46	3	0	0	0				0		0		0	0	0	0	
17:00:00	0	0		0	3		0	0				0		0	_	0	0	0	0	

		Passen	ger Cars	- East Ap	proach			Tru	ucks - Eas	st Appro	ach			He	avys - Eas	st Approa	ach		Pedes	trians
Interval	Le	ft	Th	ru	Rig	ht	Le	ft	Th	ru	Rig	jht	Le	ft	Th	ru	Rig	ht	East (	Cross
Time	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	C
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	O
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C
11:45:00	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
12:15:00						0	0	0		0		0		0		0	0	0	0	C
12:30:00					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	5	0		
13:15:00						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	5	
13:45:00	0	0	0		0	0	0	0		0		0		0		0	0	0	5_	
14:00:00	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	5	0
14:30:00	0	0	0		0	0	0	0		0		0		0		0	0	0	5 5	0
14:45:00 15:00:00	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	5	0
15:30:00	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	5	
16:00:00	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	1	0		0	0	0	5	
16:30:00	0	0	0		0	0	0	0		0		0		0		0	0	0	5	
16:45:00	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	5	
17:00:02	0	0	0		0	0	0	0			_	0		0	_	0	0	0	5	

		Passenç	ger Cars -	South A <sub>l</sub>	proach			Tru	ıcks - Sou	th Appro	ach			Hea	vys - Sou	th Appro	ach		Pedes	trians
Interval	Lef	ft	Thi	ru	Rig	ht	Le	ft	Th	ru	Rig	ght	Le	ft	Thi	ru	Rig	ht	South	Cross
Time	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
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		52	0	0	0	0	_		0	0	0	0	0	0	0	0	0	0
11:45:00	2	1	155	57	0	0	0	0			1	0	-	0		0	0	0	0	0
12:00:00	2	0		37	0	0	0	0		0		0		0		0	0	0	0	0
12:15:00	2	0		49	0	0	0	0						0		0	0	0	0	0
12:30:00	2	0		48	0	0	0	0				0		0	0	0	0	0	0	0
12:45:00	2	0		46	0	0	0	0				0		0		0	0	0	0	0
13:00:00	2	0		44	0	0	0	0	_			0		0		0	0	0	0	0
13:15:00	2	0		37 45	0	0	0	0			1	0		0		0	0	0	0	0
13:30:00 13:45:00	3 4	1	461 497	36	0	0	0	0		0		0		0	_	0	0	0	0	0
14:00:00	4	0		28	0	0	0	0			_	0		0		0	0	0	0	0
14:00:00	4	0		36	0	0	0	0			1			0		0	0	0	0	0
14:30:00	4	0	604	43	0	0	0	0		0		0		0		0	0	0	0	0
14:45:00	4	0	637	33	0	0	0	0		2		0		0		0	0	0	0	0
15:00:00	5	1	689	52	0	0	0	0		2		0		0		0	0	0	0	0
15:15:00	6	1	728	39	0	0	0	0		2		0		0		0	0	0	0	0
15:30:00	6	0		34	0	0	0	0		0		0		0		0	0	0	0	0
15:45:00	6	0		31	0	0	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		1	0	0	0	0	0	0	0	0	0	0
17:00:00	7	0	963	29	0	0	0	0		1	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

		Passen	ger Cars -	West Ap	proach			Tru	ıcks - We	st Appro	ach			Hea	avys - We	st Appro	ach		Pedes	trians
Interval	Lef	ft	Thi	ru	Rig	ht	Le	ft	Th	ru	Rig	ght	Le	ft	Th	ru	Rig	ıht	West 0	Cross
Time	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	1	1
11:45:00	0	0	0	0	2	1	0	0		0		0		0		0		0	1	0
12:00:00	0	0	0	0	3	1	0	0	1	0		0		0		0		0	1	0
12:15:00	0	0		0	3	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	1	0
12:45:00	0	0	0	0	3	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	1	0
13:15:00	0	0		0	3	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	1	0
13:45:00	0	0	0	0	4	0	0	0		0		0		0		0		0	1	0
14:00:00	0	0	0	0	4	0	0	0	1	0		0		0		0		0	1	0
14:15:00 14:30:00	0	0	0	0	5	0	0	0		0		0		0		0		0	1	0
14:30:00	1	1	0	0	5	0	0	0		0		0		0		0		0	1	0
15:00:00	1	0		0	5 6	1	0	0		0		0		0		0		0	1	0
15:00:00	<u>'</u> 1	0	0	0	7	1	1	1	0	0		0		0		0		0	1	0
15:30:00	1	0		0	7	0	1	0		0		0		0		0		0	1	0
15:45:00	1	0	0	0	7	0	1	0		0	1	0		0		0		0	1	0
16:00:00	2	1	0	0	7	0	1	0		0		0		0		0		0	1	0
16:15:00	2	0	0	0	8	1	1	0		0	1	0		0		0		0	1	0
16:30:00	2	0	0	0	8	0	2	1	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	1	0
17:00:00	2	0	0	0	9	0	2	0		0	1	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**



Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	- J-J-1
Traffic Vol, veh/h	3	4	10	5	2	9	6	253	13	5	177	3
Future Vol, veh/h	3	4	10	5	2	9	6	253	13	5	177	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	_	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	20	0	0	0	0	6	0	0	4	67
Mvmt Flow	4	5	12	6	2	11	7	301	15	6	211	4
Major/Minor N	/linor2		1	Minor1			Major1			Major2		
Conflicting Flow All	554	555	213	557	550	309	215	0	0	316	0	0
Stage 1	225	225	-	323	323	-	-	-	-	-	-	-
Stage 2	329	330	-	234	227	-	_	_	_	_	-	-
Critical Hdwy	7.1	6.5	6.4	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.48	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	446	443	784	444	446	736	1367	-	-	1256	-	-
Stage 1	782	721	-	693	654	-	-	-	-	-	-	-
Stage 2	688	649	-	774	720	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	434	438	784	430	441	736	1367	-	-	1256	-	-
Mov Cap-2 Maneuver	434	438	-	430	441	-	-	-	-	-	-	-
Stage 1	777	717	-	689	650	-	-	-	-	-	-	-
Stage 2	671	645	-	753	716	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.3			11.6			0.2			0.2		
HCM LOS	В			В								
Minor Lane/Major Mvmt	ł .	NBL	NBT	NRR I	EBLn1\	WBI n1	SBL	SBT	SBR			
Capacity (veh/h)		1367	-	-	590	564	1256	- 100	-			
HCM Lane V/C Ratio		0.005	-			0.034		-	_			
HCM Control Delay (s)		7.6	0	-	11.3	11.6	7.9	0	_			
HCM Lane LOS		Α.	A	_	11.3 B	В	7.5 A	A	_			
HCM 95th %tile Q(veh)		0	-	_	0.1	0.1	0	-	_			
		J			J. 1	0.1						

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDIN	INDL	4	\$	ODIN
Traffic Vol, veh/h	57	36	22	219	165	21
	57 57	36	22	219	165	21
Future Vol, veh/h						
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	
Storage Length	0	-	-	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	10	0	0	6	4	20
Mvmt Flow	66	42	26	255	192	24
Major/Mina-	line TO		Joie 1		lais=0	
	/linor2		Major1		/lajor2	^
Conflicting Flow All	511	204	216	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.5	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	509	842	1366	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %	0			_	_	_
Mov Cap-1 Maneuver	498	842	1366		_	_
Mov Cap-1 Maneuver	498	U <del>1</del> 2	1000	_	_	_
	793	-	-	-	-	
Stage 1		-	-	-	-	-
Stage 2	728	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	12.4		0.7		0	
HCM LOS	В		0.1		U	
TIOWI LOO	D					
Minor Long/Maior M		NDI	NDT	EDL-4	CDT	CDD
Minor Lane/Major Mvmt		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1366	-		-	-
HCM Lane V/C Ratio		0.019		0.183	-	-
HCM Control Delay (s)		7.7	0	12.4	-	-
HCM Lane LOS		Α	Α	В	-	-
HCM 95th %tile Q(veh)		0.1	-	0.7	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDIN	NDL	4	\$	ODIT
Traffic Vol, veh/h	0	1	2	275	183	8
Future Vol, veh/h	0	1	2	275	183	8
Conflicting Peds, #/hr	0	0	0	0	0	0
	Stop	-	Free	Free	Free	Free
Sign Control RT Channelized		Stop				
	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	6	5	13
Mvmt Flow	0	1	2	324	215	9
Major/Minor M	linor2	N	Major1		/aior?	
			Major1		/lajor2	
Conflicting Flow All	548	220	224	0	-	0
Stage 1	220	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	501	825	1357	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Platoon blocked, %				_	-	-
Mov Cap-1 Maneuver	500	825	1357	_	_	_
Mov Cap-2 Maneuver	500	-	-	_	_	_
Stage 1	819		_	_		_
•	734	-	-	-	-	-
Stage 2	134	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	9.4		0.1		0	
HCM LOS	Α		• • • • • • • • • • • • • • • • • • • •			
110111 200	,,					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1357	-		-	-
HCM Lane V/C Ratio		0.002	-	0.001	-	-
HCM Control Delay (s)		7.7	0	9.4	-	-
HCM Lane LOS		Α	Α	Α	-	-
HCM 95th %tile Q(veh)		0	-	0	-	-
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				-		

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			- 43→			4			4	
Traffic Vol, veh/h	3	1	6	6	1	3	8	197	6	8	279	9
Future Vol, veh/h	3	1	6	6	1	3	8	197	6	8	279	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	25	0	33	0	1	0	0	1	0
Mvmt Flow	3	1	7	7	1	3	9	224	7	9	317	10
Major/Minor M	1inor2			Minor1			Major1		ı	Major2		
Conflicting Flow All	588	589	322	590	591	228	327	0	0	231	0	0
Stage 1	340	340	-	246	246	-	-	-	-		-	-
Stage 2	248	249	-	344	345	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.35	6.5	6.53	4.1	_	_	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	_	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	_	6.35	5.5	_	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3		4	3.597	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	423	423	724	387	422	740	1244	-	-	1349	-	-
Stage 1	679	643	-	709	706	-	-	-	-	-	-	-
Stage 2	760	704	_	626	640	-	-	-	_	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	415	416	724	378	415	740	1244	-	-	1349	-	-
Mov Cap-2 Maneuver	415	416	-	378	415	-	-	-	-	-	-	-
Stage 1	674	638	_	703	700	-	-	-	-	-	-	-
Stage 2	749	698	-	614	635	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.6			13.2			0.3			0.2		
HCM LOS	В			В			3.0			J		
Minor Lane/Major Mvmt		NBL	NBT	NBR F	EBLn1V	VBI n1	SBL	SBT	SBR			
Capacity (veh/h)		1244	-	-	558	448	1349	-	-			
HCM Lane V/C Ratio		0.007	_	_		0.025			_			
HCM Control Delay (s)		7.9	0	_	11.6	13.2	7.7	0	_			
HCM Lane LOS		Α.5	A	-	В	13.2 B	Α	A	_			
HCM 95th %tile Q(veh)		0	-	-	0.1	0.1	0	-	-			
					J. 1	0.1	- 0					

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	ĵ.	
Traffic Vol, veh/h	34	32	43	173	235	62
Future Vol, veh/h	34	32	43	173	235	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	
Storage Length	0	-	-	-	-	-
Veh in Median Storage,		_	-	0	0	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	2	0
Mymt Flow	40	38	51	206	280	74
IVIVIII( I IOW	70	30	JI	200	200	77
	/linor2		Major1		/lajor2	
Conflicting Flow All	625	317	354	0	-	0
Stage 1	317	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	452	728	1216	_	_	-
Stage 1	743	-	-	-	-	-
Stage 2	750	-	_	-	_	-
Platoon blocked, %	. 00			_	_	_
Mov Cap-1 Maneuver	431	728	1216	_	_	_
Mov Cap-1 Maneuver	431	- 120	1210	_	_	_
Stage 1	708	_	_			
Stage 2	750	-	_	_		-
Slaye Z	100	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	12.8		1.6		0	
HCM LOS	В					
Minor Long /Maior NA		NDI	NDT	EDL::-4	CDT	CDD
Minor Lane/Major Mvmt		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1216	-		-	-
HCM Lane V/C Ratio		0.042		0.146	-	-
HCM Control Delay (s)		8.1	0	12.8	-	-
HCM Lane LOS		Α	Α	В	-	-
HCM 95th %tile Q(veh)		0.1	-	0.5	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	LDIX	HUL	4	<u>351</u>	ODIT
Traffic Vol, veh/h	10	4	0	205	290	3
Future Vol, veh/h	10	4	0	205	290	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-		-	
Storage Length	0	-	_	-	_	INOHE
Veh in Median Storage,		-		0	0	-
	# 0 0		-	0	-	-
Grade, %		- 06	- 06	-	0	- 00
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	12	5	0	238	337	3
Major/Minor N	/linor2	N	/lajor1	N	/lajor2	
Conflicting Flow All	577	339	340	0	- -	0
Stage 1	339	-	-	-	_	-
Stage 2	238	_			_	
Critical Hdwy	6.4	6.2	4.1	-	-	-
•	5.4		4.1	-	-	-
Critical Hdwy Stg 1		-	-	_	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	482	708	1230	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	482	708	1230	-	-	-
Mov Cap-2 Maneuver	482	-	-	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Annroach	EB		NB		SB	
Approach						
HCM Control Delay, s	12		0		0	
HCM LOS	В					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1230	-		-	-
HCM Lane V/C Ratio		-		0.031	_	_
HCM Control Delay (s)		0		12	_	-
HCM Lane LOS		A	-	В	_	_
		0	-	0.1		
HCM 95th %tile Q(veh)		U	-	U. I	-	-

Intersection													
Int Delay, s/veh	1.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		4			4			4			4		
Traffic Vol, veh/h	14	3	10	9	6	4	12	208	8	4	226	12	
Future Vol, veh/h	14	3	10	9	6	4	12	208	8	4	226	12	
Conflicting Peds, #/hr	0	0	5	5	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage	, # -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97	
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0	
Mvmt Flow	14	3	10	9	6	4	12	214	8	4	233	12	
Major/Minor N	Minor2		N	Minor1		İ	Major1		N	Major2			
Conflicting Flow All	494	493	244	501	495	218	245	0	0	222	0	0	
Stage 1	247	247		242	242	-	-	-	-	-	-	-	
Stage 2	247	246	-	259	253	-	-	-	-	-	-	-	
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-	
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-	
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-	
Pot Cap-1 Maneuver	489	480	800	484	479	827	1333	-	-	1359	-	-	
Stage 1	761	706	-	766	709	-	-	-	-	-	-	-	
Stage 2	761	706	-	750	701	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	477	474	797	469	473	827	1333	-	-	1359	-	-	
Mov Cap-2 Maneuver	477	474	-	469	473	-	-	-	-	-	-	-	
Stage 1	753	704	-	758	702	-	-	-	-	-	-	-	
Stage 2	743	699	-	732	699	-	-	-	-	-	-	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	11.8			12.2			0.4			0.1			
HCM LOS	В			В									
Minor Lane/Major Mvm	t	NBL	NBT	NBR E	EBLn1V	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)		1333	-	-	560	518	1359	-	-				
HCM Lane V/C Ratio		0.009	-	-	0.05	0.038	0.003	-	-				
HCM Control Delay (s)		7.7	0	-	11.8	12.2	7.7	0	-				
HCM Lane LOS		Α	Α	-	В	В	Α	Α	-				
HCM 95th %tile Q(veh)		0	-	-	0.2	0.1	0	-	-				

Intersection						
Int Delay, s/veh	2.3					
		EDD	NDI	NDT	ODT	ODD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	0.5		्री	<b>\$</b>	
Traffic Vol, veh/h	44	35	41	184	189	53
Future Vol, veh/h	44	35	41	184	189	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	47	37	44	196	201	56
	1inor2		Major1		//ajor2	
Conflicting Flow All	513	229	257	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	_	-	-
Follow-up Hdwy	3.5	3.3	2.2	_	_	-
Pot Cap-1 Maneuver	525	815	1320	_	_	_
Stage 1	814	-	-	_	_	_
Stage 2	769	_	_	_	_	_
Platoon blocked, %	105			_	_	_
Mov Cap-1 Maneuver	506	815	1320			
			1320	-	-	
Mov Cap-2 Maneuver	506	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	11.9		1.4		0	
HCM LOS	В		1.7		U	
TIOWI LOG	ט					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1320	-	608	-	_
HCM Lane V/C Ratio		0.033	-	0.138	-	-
HCM Control Delay (s)		7.8	0	11.9	_	_
HCM Lane LOS		A	Ā	В	_	_
HCM 95th %tile Q(veh)		0.1	-	0.5	_	_
HOW JOHN JOHNE Q(VEII)		0.1	_	0.0	_	

Intersection						
Int Delay, s/veh	0					
					0==	05.5
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	, A			4	<b>₽</b>	
Traffic Vol, veh/h	0	0	0	228	242	1
Future Vol, veh/h	0	0	0	228	242	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	0	0	0	238	252	1
	-		-			
	/linor2		Major1		Major2	
Conflicting Flow All	491	253	253	0	-	0
Stage 1	253	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	540	791	1324	-	-	-
Stage 1	794	_	-	_	_	-
Stage 2	806	-	-	_	_	-
Platoon blocked, %				_	_	_
Mov Cap-1 Maneuver	540	791	1324	_	_	_
Mov Cap-1 Maneuver	540	751	1027	_	_	_
Stage 1	794	_		-	-	
Stage 2	806	-	-	-	_	-
Staye 2	000	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	Α					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1324	-	-	-	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s)		0	-	0	-	-
HCM Lane LOS		Α	-	Α	-	-
HCM 95th %tile Q(veh)		0	-	-	-	-
,						

Date: May 25th, 2020

# Appendix E – Synchro Analysis Output – Background Conditions



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ች	₽			4	
Traffic Vol, veh/h	3	5	17	11	2	10	10	390	21	6	271	3
Future Vol, veh/h	3	5	17	11	2	10	10	390	21	6	271	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	_	-	None	-	-	None	-	_	None	-	-	None
Storage Length	-	-	_	-	-	-	850	-	_	-	-	-
Veh in Median Storage	.# -	0	-	-	0	-	-	0	-	-	0	_
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	20	0	0	0	0	6	0	0	4	67
Mvmt Flow	4	6	20	13	2	12	12	464	25	7	323	4
Major/Minor I	Minor2		, and the second	Minor1			Major1		N	Major2		
		050			842		327	0		489	^	^
Conflicting Flow All	847	852	325	853		477			0		0	0
Stage 1	339	339	-	501	501	-	-	-	-	-	-	-
Stage 2	508	513	- 6.4	352	341	6.0	- 11	-	-	11	-	-
Critical Hdwy	7.1	6.5	6.4	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	2 40	6.1	5.5	2.2	2.2	-	-	2.2	-	-
Follow-up Hdwy	3.5	4	3.48	3.5	4	3.3		-	-		-	-
Pot Cap-1 Maneuver	284	299	676	281	303	592	1244	-	-	1085	-	-
Stage 1	680	643	-	556	546	-	-	-	-	-	-	-
Stage 2	551	539	-	669	642	-	-	-	-	-	-	-
Platoon blocked, %	070	204	676	005	200	E00	1044	-	-	1005	-	-
Mov Cap-1 Maneuver	273	294	676	265	298	592	1244	-	-	1085	-	-
Mov Cap-2 Maneuver	273	294	-	265	298	-	-	-	-	-	-	-
Stage 1	673	638	-	550	541	-	-	-	-	-	-	-
Stage 2	532	534	-	638	637	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.2			16.1			0.2			0.2		
HCM LOS	В			С								
Minor Lane/Major Mvm	ıt	NBL	NBT	NBR	EBLn1\	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1244	-	-	470	353	1085	-	-			
HCM Lane V/C Ratio		0.01	-	-	0.063	0.078	0.007	-	-			
HCM Control Delay (s)		7.9	-	-	13.2	16.1	8.3	0	-			
HCM Lane LOS		Α	-	-	В	С	Α	Α	-			
HCM 95th %tile Q(veh)	)	0	-	-	0.2	0.3	0	-	-			
., ,												

Intersection						
Int Delay, s/veh	9.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		ሻ	<b>†</b>	<b>↑</b>	7
Traffic Vol, veh/h	176	109	74	248	185	98
Future Vol, veh/h	176	109	74	248	185	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	950	-	_	800
Veh in Median Storage		-	-	0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	10	0	0	6	4	20
Mvmt Flow	205	127	86	288	215	114
IVIVIIIL FIOW	205	121	00	200	210	114
Major/Minor I	Minor2	<u> </u>	Major1	N	Major2	
Conflicting Flow All	675	215	329	0	_	0
Stage 1	215	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Critical Hdwy	6.5	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	_	-	-	-
Follow-up Hdwy	3.59	3.3	2.2	_	-	-
Pot Cap-1 Maneuver	407	830	1242	_	-	-
Stage 1	802	-		_	_	_
Stage 2	619	_	_	_	_	_
Platoon blocked, %	010			_	_	_
Mov Cap-1 Maneuver	379	830	1242			-
Mov Cap-1 Maneuver	379	000	1242	_	_	-
·		-	-		-	-
Stage 1	747	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	27.9		1.9		0	
HCM LOS	D					
NA:		NDI	Not	EDL 4	057	000
Minor Lane/Major Mvm	τ	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1242	-		-	-
HCM Lane V/C Ratio		0.069		0.693	-	-
HCM Control Delay (s)		8.1	-		-	-
HCM Lane LOS		Α	-	D	-	-
HCM 95th %tile Q(veh)		0.2	-	5.3	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDIN	ivel i	<u> </u>	\$	ODIN
Traffic Vol, veh/h	8	1	8	<b>T</b> 417	277	23
Future Vol, veh/h	8	4	8	417	277	23
			0			
Conflicting Peds, #/hr	0	0		0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	6	5	13
Mvmt Flow	9	5	9	491	326	27
Major/Minor N	1inor2		Anior1		Major2	
			Major1			
Conflicting Flow All	849	340	353	0	-	0
Stage 1	340	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	334	707	1217	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	608	-	-	_	-	-
Platoon blocked, %				_	_	_
Mov Cap-1 Maneuver	332	707	1217	_	_	_
Mov Cap-1 Maneuver	332	101	1211		_	_
·	720	-	-	-	_	-
Stage 1		-	-	-	-	-
Stage 2	608	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	14.3		0.2		0	
HCM LOS	В					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1217	-		-	-
HCM Lane V/C Ratio		0.008		0.035	-	-
HCM Control Delay (s)		8	-	14.3	-	-
HCM Lane LOS		Α	-	В	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-
, , ,						

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ች	<b>1</b>			4	
Traffic Vol, veh/h	3	1	13	16	1	3	15	337	15	9	424	10
Future Vol, veh/h	3	1	13	16	1	3	15	337	15	9	424	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	<u>-</u>	None	·-	-	None	-	_	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	25	0	33	0	1	0	0	1	0
Mvmt Flow	3	1	15	18	1	3	17	383	17	10	482	11
Major/Minor N	/linor2			Minor1			Major1		1	Major2		
Conflicting Flow All	936	942	488	942	939	392	493	0	0	400	0	0
Stage 1	508	508	-	426	426	-	-	-	-	-	-	-
Stage 2	428	434	-	516	513	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.35	6.5	6.53	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.725	4	3.597	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	247	265	584	221	266	594	1081	-	-	1170	-	-
Stage 1	551	542	-	564	589	-	-	-	-	-	-	-
Stage 2	609	585	-	502	539	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	240	258	584	210	259	594	1081	-	-	1170	-	-
Mov Cap-2 Maneuver	240	258	-	210	259	-	-	-	-	-	-	-
Stage 1	542	535	-	555	580	-	-	-	-	-	-	-
Stage 2	595	576	-	482	533	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.6			22			0.3			0.2		
HCM LOS	В			С								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1081	-	-	440	235	1170	-	-			
HCM Lane V/C Ratio		0.016	-	-		0.097		-	-			
HCM Control Delay (s)		8.4	-	-	13.6	22	8.1	0	-			
HCM Lane LOS		Α	-	-	В	С	Α	Α	-			
HCM 95th %tile Q(veh)		0	-	-	0.1	0.3	0	-	-			

Intersection						
Int Delay, s/veh	15.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
		EBK				
Lane Configurations	160	100	122	<b>↑</b>	253	<b>7</b>
Traffic Vol, veh/h Future Vol, veh/h	169 169	108 108	133 133	185 185	253 253	201 201
·						
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	950	-	-	800
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	201	129	158	220	301	239
Major/Minor N	1inor2	N	Major1	N	/lajor2	
Conflicting Flow All	837	301	540	0	- najoiz	0
Stage 1	301	JU 1 -	540	-		-
	536					-
Stage 2		6.2	- 11	-		_
Critical Hdwy	6.4		4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	339	743	1039	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	287	743	1039	-	-	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	53.8		3.8		0	
HCM LOS	F					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1039	_	377	_	_
HCM Lane V/C Ratio		0.152	_	0.875	-	-
HCM Control Delay (s)		9.1	_		_	-
HCM Lane LOS		A	_	F	_	_
HCM 95th %tile Q(veh)		0.5	_	8.6	_	_
HOW JOHN JOHN Q(VEII)		0.0	-	0.0	_	_

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
		EDK				אמני
Lane Configurations	26	4.4	<b>ነ</b>	246	140	40
Traffic Vol, veh/h	26	11	6	346	440	18
Future Vol, veh/h	26	11	6	346	440	18
Conflicting Peds, #/hr	0	0	0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	30	13	7	402	512	21
Major/Minor N	1inor2	N	Major1		/aior?	
			Major1		//ajor2	
Conflicting Flow All	939	523	533	0	-	0
Stage 1	523	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	295	558	1045	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	293	558	1045	-	_	-
Mov Cap-2 Maneuver	293	-	-	-	_	-
Stage 1	595	_	_	_	_	_
Stage 2	670	_	_	_	_	
Olage Z	010					
Approach	EB		NB		SB	
HCM Control Delay, s	17.1		0.1		0	
HCM LOS	С					
Minor Lang/Major Mymt		NBL	NDT	EBLn1	SBT	SBR
Minor Lane/Major Mvmt						
Capacity (veh/h)		1045	-	• • • •	-	-
HCM Lane V/C Ratio		0.007		0.126	-	-
HCM Control Delay (s)		8.5	-		-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)		0	-	0.4	-	-

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		Ť	ĵ,			4	
Traffic Vol, veh/h	16	3	15	17	7	5	17	353	16	5	383	14
Future Vol, veh/h	16	3	15	17	7	5	17	353	16	5	383	14
Conflicting Peds, #/hr	0	0	5	5	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	16	3	15	18	7	5	18	364	16	5	395	14
Major/Minor N	/linor2		N	Minor1			Major1			Major2		
Conflicting Flow All	826	828	407	834	827	372	409	0	0	380	0	0
Stage 1	412	412	-	408	408	-	-	-	-	-	-	-
Stage 2	414	416	-	426	419	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	293	309	648	290	309	678	1161	-	-	1190	-	-
Stage 1	621	598	-	624	600	-	-	-	-	-	-	-
Stage 2	620	595	-	610	593	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	281	303	645	276	303	678	1161	-	-	1190	-	-
Mov Cap-2 Maneuver	281	303	-	276	303	-	-	-	-	-	-	-
Stage 1	611	595	-	614	590	-	-	-	-	-	-	-
Stage 2	598	585	-	587	590	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	15.5			17.6			0.4			0.1		
HCM LOS	С			С								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1161	-	-	377	315	1190	-	-			
HCM Lane V/C Ratio		0.015	-	-		0.095		-	_			
HCM Control Delay (s)		8.1	-	-	15.5	17.6	8	0	-			
HCM Lane LOS		A	-	-	С	С	A	A	_			
HCM 95th %tile Q(veh)		0	-	-	0.3	0.3	0	-	-			

Intersection						
Int Delay, s/veh	9.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		*	<b>↑</b>	<b>↑</b>	7
Traffic Vol, veh/h	175	133	129	207	210	195
Future Vol, veh/h	175	133	129	207	210	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	
Storage Length	0	-	950	-	_	800
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	_	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	186	141	137	220	223	207
Major/Minor N	/linor2	N	Major1	N	/lajor2	
Conflicting Flow All	717	223	430	0	_	0
Stage 1	223	-	-	-	_	-
Stage 2	494	-	_	-	-	-
Critical Hdwy	6.4	6.2	4.1	_	_	-
Critical Hdwy Stg 1	5.4	-		_	_	_
Critical Hdwy Stg 2	5.4	_	_	_		_
Follow-up Hdwy	3.5	3.3	2.2		_	_
Pot Cap-1 Maneuver	399	822	1140	_	_	_
•	819	UZZ	1140	_	_	-
Stage 1		-	-	-	-	-
Stage 2	617	-	-	-	-	-
Platoon blocked, %	0=4	000	1110	-	-	-
Mov Cap-1 Maneuver	351	822	1140	-	-	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Approach	EB		NB		SB	
	29		3.3		0	
HCM Control Delay, s HCM LOS			3.3		U	
LICINI FOS	D					
NA:		NDI	Not	EDL 4	057	000
Minor Lane/Major Mvm		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1140	-		-	-
HCM Lane V/C Ratio		0.12	-	0.703	-	-
HCM Control Delay (s)		8.6	-	29	-	-
HCM Lane LOS		Α	-	D	-	-
HCM 95th %tile Q(veh)		0.4	-	5.4	-	-
·						

Intersection						
Int Delay, s/veh	0.2					
			ND	Not	057	000
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	•		<b>↑</b>	<b>^}</b>	4.4
Traffic Vol, veh/h	7	3	4	378	404	11
Future Vol, veh/h	7	3	4	378	404	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	7	3	4	394	421	11
WWW.		J	7	004	741	
Major/Minor N	linor2	N	Major1	N	Major2	
Conflicting Flow All	829	427	432	0	-	0
Stage 1	427	-	-	-	-	-
Stage 2	402	-	_	_	_	-
Critical Hdwy	6.4	6.2	4.1	_	-	_
Critical Hdwy Stg 1	5.4	- 0.2	7.1	_	_	_
	5.4	-	_		_	
Critical Hdwy Stg 2				-	-	
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	343	632	1138	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	342	632	1138	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	680	_	_	_	_	_
olago L	000					
Approach	EB		NB		SB	
HCM Control Delay, s	14.3		0.1		0	
HCM LOS	В					
NA: 1 /NA: NA (	_	NDI	NDT	EDL 4	ODT	000
Minor Lane/Major Mvmt		NBL	NRI	EBLn1	SBT	SBR
Capacity (veh/h)		1138	-	•••	-	-
HCM Lane V/C Ratio		0.004	-	0.026	-	-
HCM Control Delay (s)		8.2	-	14.3	-	-
HCM Lane LOS		Α	-	В	-	-
HCM 95th %tile Q(veh)		0	-		-	-
				<b>J</b>		

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ች	ĵ.			4	
Traffic Vol, veh/h	4	5	18	11	2	11	10	404	22	6	282	4
Future Vol, veh/h	4	5	18	11	2	11	10	404	22	6	282	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	<u>-</u>	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	20	0	0	0	0	6	0	0	4	67
Mvmt Flow	5	6	21	13	2	13	12	481	26	7	336	5
Major/Minor N	Minor2			Minor1			Major1		1	Major2		
Conflicting Flow All	879	884	339	884	873	494	341	0	0	507	0	0
Stage 1	353	353	-	518	518	-	-	-	-	-	_	_
Stage 2	526	531	-	366	355	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.4	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.48	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	270	286	664	268	291	579	1229	-	-	1068	-	-
Stage 1	668	634	-	544	536	-	-	-	-	-	-	-
Stage 2	539	529	-	657	633	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	259	281	664	252	286	579	1229	-	-	1068	-	-
Mov Cap-2 Maneuver	259	281	-	252	286	-	-	-	-	-	-	-
Stage 1	661	629	-	539	531	-	-	-	-	-	-	-
Stage 2	519	524	-	625	628	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.7			16.4			0.2			0.2		
HCM LOS	В			С								
Minor Lane/Major Mvm	t	NBL	NBT	NBR	EBLn1\	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1229	-	-	447	345	1068	-	-			
HCM Lane V/C Ratio		0.01	-	-		0.083		-	_			
HCM Control Delay (s)		8	-	-	13.7	16.4	8.4	0	-			
HCM Lane LOS		A	-	-	В	С	Α	A	-			
HCM 95th %tile Q(veh)		0	-	-	0.2	0.3	0	-	-			
,												

Intersection						
Int Delay, s/veh	10.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥#		ሻ	<b>†</b>	<b>↑</b>	7
Traffic Vol, veh/h	177	110	75	263	197	98
Future Vol, veh/h	177	110	75	263	197	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	950	-	_	800
Veh in Median Storage,		_	-	0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	10	0	0	6	4	20
Mvmt Flow	206	128	87	306	229	114
IVIVIIIL FIOW	200	120	0/	300	229	114
Major/Minor M	/linor2	N	Major1	N	Major2	
Conflicting Flow All	709	229	343	0	_	0
Stage 1	229	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	6.5	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	_	-	-	-
Follow-up Hdwy	3.59	3.3	2.2	_	-	-
Pot Cap-1 Maneuver	389	815	1227	_	_	_
Stage 1	791	-		_	_	_
Stage 2	606	_	_			
Platoon blocked, %	000			_	_	-
Mov Cap-1 Maneuver	361	815	1227	-	_	
		010	1221	-	-	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	31		1.8		0	
HCM LOS	D		1.0		U	
TOW LOO	U					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1227	-		-	-
HCM Lane V/C Ratio		0.071		0.727	_	_
HCM Control Delay (s)		8.2	_		_	_
HCM Lane LOS		Α		D	_	-
HCM 95th %tile Q(veh)		0.2	_	5.8	_	_
HOW JOHN /OHIE WIVEII)		0.2	_	5.0	_	_

Intersection Int Delay, s/veh  Movement  EBL  EBR  NBL  NBT  SBT  SBR  Lane Configurations
Movement EBL EBR NBL NBT SBT SBR
Traffic Vol, veh/h 8 4 8 433 288 23 Future Vol, veh/h 8 4 8 433 288 23
,
,
Sign Control Stop Stop Free Free Free Free
RT Channelized - None - None - None
Storage Length 0 - 850
Veh in Median Storage, # 0 0 0 -
Grade, % 0 0 0 -
Peak Hour Factor 85 85 85 85 85
Heavy Vehicles, % 0 0 0 6 5 13
Mvmt Flow 9 5 9 509 339 27
Major/Minor Minor2 Major1 Major2
Conflicting Flow All 880 353 366 0 - 0
Stage 1 353
Stage 2 527
Critical Hdwy 6.4 6.2 4.1
Critical Hdwy Stg 1 5.4
Critical Hdwy Stg 2 5.4
Follow-up Hdwy 3.5 3.3 2.2
Pot Cap-1 Maneuver 320 695 1204
Stage 1 716
Stage 2 596
Platoon blocked, %
,,
Mov Cap-1 Maneuver 318 695 1204
Mov cup i Maneuver 010 000 1204
Mov Cap-2 Maneuver 318
Mov Cap-2 Maneuver 318 Stage 1 711
Mov Cap-2 Maneuver 318
Mov Cap-2 Maneuver 318 Stage 1 711
Mov Cap-2 Maneuver 318 Stage 1 711
Mov Cap-2 Maneuver       318       -
Mov Cap-2 Maneuver       318       -
Mov Cap-2 Maneuver       318       -
Mov Cap-2 Maneuver         318         -
Mov Cap-2 Maneuver         318         -
Mov Cap-2 Maneuver         318         -
Mov Cap-2 Maneuver         318         -
Mov Cap-2 Maneuver         318         -
Mov Cap-2 Maneuver         318         -

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ች	<b>1</b>			4	
Traffic Vol, veh/h	4	1	13	16	1	4	16	348	15	10	440	11
Future Vol, veh/h	4	1	13	16	1	4	16	348	15	10	440	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	25	0	33	0	1	0	0	1	0
Mvmt Flow	5	1	15	18	1	5	18	395	17	11	500	13
Major/Minor N	Minor2			Minor1		1	Major1		ı	Major2		
Conflicting Flow All	972	977	507	977	975	404	513	0	0	412	0	0
Stage 1	529	529	-	440	440	-	-	-	-	-	-	-
Stage 2	443	448	-	537	535	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.35	6.5	6.53	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.725	4	3.597	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	234	253	570	209	253	585	1063	-	-	1158	-	-
Stage 1	537	530	-	554	581	-	-	-	-	-	-	-
Stage 2	598	576	-	489	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	226	245	570	198	245	585	1063	-	-	1158	-	-
Mov Cap-2 Maneuver	226	245	-	198	245	-	-	-	-	-	-	-
Stage 1	528	523	-	545	571	-	-	-	-	-	-	-
Stage 2	582	566	-	469	520	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	14.4			22.5			0.4			0.2		
HCM LOS	В			C						- ,		
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1\	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1063	-	-	404	229	1158	-	-			
HCM Lane V/C Ratio		0.017	_			0.104	0.01	_	_			
HCM Control Delay (s)		8.4	-	-	14.4		8.1	0	_			
HCM Lane LOS		A	-	_	В	C	A	Ā	-			
HCM 95th %tile Q(veh)		0.1	-	-	0.2	0.3	0	-	-			
7000 4(1011)		<b>.</b>			V	5.5						

Intersection						
Int Delay, s/veh	17.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		*	<b>†</b>	<b>†</b>	7
Traffic Vol, veh/h	169	110	135	197	269	202
Future Vol, veh/h	169	110	135	197	269	202
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	950	-	-	800
Veh in Median Storage,		-	-	0	0	-
Grade, %	. 0	_	_	0	0	_
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	2	0
Mymt Flow	201	131	161	235	320	240
IVIVIIIL I IOW	201	101	101	200	320	240
	1inor2		Major1		Major2	
Conflicting Flow All	877	320	560	0	-	0
Stage 1	320	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	322	725	1021	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	578	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	271	725	1021	-	-	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	624	-	-	_	_	-
Stage 2	578	_	-	-	-	-
5g5 _						
	==		ND		0.5	
Approach	EB		NB		SB	
HCM Control Delay, s	64.3		3.7		0	
HCM LOS	F					
Minor Lane/Major Mvmt		NBL	NRT	EBLn1	SBT	SBR
Capacity (veh/h)		1021	-	360	-	-
HCM Lane V/C Ratio		0.157		0.923	_	-
HCM Control Delay (s)		9.2	-	64.3	-	-
		J.Z	_	04.5	•	-
				⊏		
HCM Lane LOS HCM 95th %tile Q(veh)		A 0.6	-	9.6	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
	EBL	EDK				אמני
Lane Configurations		11	<b>້</b> ງ	250	<b>1</b>	10
Traffic Vol, veh/h	26 26	11 11	6	358	456	18
Future Vol, veh/h			6	358	456	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-		-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	30	13	7	416	530	21
Major/Minor	liner?		Anior1		/aicr2	
	/linor2		Major1		/lajor2	
Conflicting Flow All	971	541	551	0	-	0
Stage 1	541	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	283	545	1029	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	545	1029	-	_	_
Mov Cap-2 Maneuver	281	-	_	_	_	_
Stage 1	584	_	_	_	_	_
Stage 2	660	_	_	_	_	_
Olage 2	000					
Approach	EB		NB		SB	
HCM Control Delay, s	17.6		0.1		0	
HCM LOS	С					
Minaria na Antoire M		NDI	NDT	EDL 4	ODT	000
Minor Lane/Major Mvm	l .	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1029	-	0_0	-	-
HCM Lane V/C Ratio		0.007	-	0.131	-	-
HCM Control Delay (s)		8.5	-	17.6	-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)		0	-	0.4	-	-

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		¥	ĵ.			4	
Traffic Vol, veh/h	17	4	16	17	7	5	17	365	16	5	395	14
Future Vol, veh/h	17	4	16	17	7	5	17	365	16	5	395	14
Conflicting Peds, #/hr	0	0	5	5	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	18	4	16	18	7	5	18	376	16	5	407	14
Major/Minor N	/linor2			Minor1			Major1		1	Major2		
Conflicting Flow All	850	852	419	859	851	384	421	0	0	392	0	0
Stage 1	424	424	-	420	420	-		-	-	-	-	-
Stage 2	426	428	_	439	431		_	_	_	_	_	_
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	_	_	4.1	_	_
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	_	_	- '	_	_
Critical Hdwy Stg 2	6.1	5.5	_	6.1	5.5	-	-	_	_	_	_	_
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	_	_	2.2	_	_
Pot Cap-1 Maneuver	283	299	638	279	299	668	1149	_		1178	_	
Stage 1	612	590	-	615	593	-	- 1173	_	_	- 1170	_	_
Stage 2	610	588	_	601	586			_		_	_	-
Platoon blocked, %	010	500		001	500			_	_		_	_
Mov Cap-1 Maneuver	271	292	636	263	292	668	1149	_	_	1178	_	_
Mov Cap-1 Maneuver	271	292	-	263	292	-	- 1173	_	_	- 1170	_	_
Stage 1	602	586	_	605	584	_				_	_	-
Stage 2	588	579	_	576	582	_	_	_	_	_	_	_
Olugo Z	500	010		370	502							
A				14/5			L ID			0.0		
Approach	EB			WB			NB			SB		
HCM Control Delay, s	16			18.2			0.3			0.1		
HCM LOS	С			С								
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1V		SBL	SBT	SBR			
Capacity (veh/h)		1149	-	-	364	302	1178	-	-			
HCM Lane V/C Ratio		0.015	-	-		0.099		-	-			
HCM Control Delay (s)		8.2	-	-	16	18.2	8.1	0	-			
HCM Lane LOS		Α	-	-	С	С	Α	Α	-			
HCM 95th %tile Q(veh)		0	-	-	0.3	0.3	0	-	-			

Intersection						
Int Delay, s/veh	10.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ች	<b>†</b>	<b>↑</b>	7
Traffic Vol, veh/h	175	135	130	219	223	196
Future Vol, veh/h	175	135	130	219	223	196
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	950	-	-	800
Veh in Median Storage,		_	-	0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	1	0
Mymt Flow	186	144	138	233	237	209
WWITH FIOW	100	144	130	233	231	209
Major/Minor N	/linor2	N	Major1	N	/lajor2	
Conflicting Flow All	746	237	446	0	-	0
Stage 1	237	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	384	807	1125	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	337	807	1125	-	-	-
Mov Cap-2 Maneuver	337	-		_	_	_
Stage 1	708	_	_	_	-	_
Stage 2	608	_	_	_	_	_
Olugo Z	000					
Approach	EB		NB		SB	
HCM Control Delay, s	31.6		3.2		0	
HCM LOS	D					
Minor Lane/Major Mvmt		NBL	NRT	EBLn1	SBT	SBR
Capacity (veh/h)		1125	-	452	- 100	-
HCM Lane V/C Ratio		0.123	-	0.73	-	-
HCM Control Delay (s)		8.6	-		-	-
HCM Lane LOS		Α		51.0 D	_	-
LIVINI LAHE LUU		$\overline{}$	-		-	-
HCM 95th %tile Q(veh)		0.4	-	5.9	_	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
		EDK				SDK
Lane Configurations	Y	2	<u></u> ነ	200	<b>}</b>	11
Traffic Vol, veh/h	7 7	3	4	390	417	
Future Vol, veh/h		3	4	390	417	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	7	3	4	406	434	11
Major/Minor N	/linor2	N	Major1	ı	//ajor2	
Conflicting Flow All	854	440	445	0	-	0
•	440					
Stage 1		-	-	-	-	-
Stage 2	414		4.4	-		-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	332	621	1126	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	331	621	1126	-	-	-
Mov Cap-2 Maneuver	331	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	671	-	-	-	-	-
, and the second						
A	ED		ND		O.D.	
Approach	EB		NB		SB	
HCM Control Delay, s	14.6		0.1		0	
HCM LOS	В					
Minor Lane/Major Mvmt		NBL	NRT	EBLn1	SBT	SBR
Capacity (veh/h)		1126	-		-	-
HCM Lane V/C Ratio		0.004		0.027	_	-
HCM Control Delay (s)		8.2	_	14.6	-	-
HCM Lane LOS			-	14.0 B		-
		A 0	-	0.1	-	
HCM 95th %tile Q(veh)		U	-	U. I	-	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		*	<b></b>	<u></u>	7
Traffic Volume (vph)	177	110	75	263	197	98
Future Volume (vph)	177	110	75	263	197	98
Satd. Flow (prot)	1627	0	1785	1773	1807	1331
Flt Permitted	0.970		0.616	.,,,	.001	1001
Satd. Flow (perm)	1627	0	1157	1773	1807	1331
Satd. Flow (RTOR)	52	U	1101	1113	1001	114
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
	10%	0.86	0.86	6%	4%	20%
Heavy Vehicles (%)	10%	U 70	U 70	070	470	20%
Shared Lane Traffic (%)	22.4	^	07	200	000	444
Lane Group Flow (vph)	334	0	87	306	229	114
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	0.0		0.0	0.0	0.0	0.0
•						
Lead-Lag Optimize?	Nla :		N A	N A	N 1	N A
Recall Mode	None		Max	Max	Max	Max
Act Effct Green (s)	15.6		31.6	31.6	31.6	31.6
Actuated g/C Ratio	0.26		0.53	0.53	0.53	0.53
v/c Ratio	0.72		0.14	0.32	0.24	0.15
Control Delay	25.6		9.2	10.1	9.3	2.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	25.6		9.2	10.1	9.3	2.8
LOS	С		Α	В	Α	Α
Approach Delay	25.6			9.9	7.1	
Approach LOS	C			Α	Α	
Queue Length 50th (m)	26.9		4.3	16.8	11.9	0.0
Queue Length 95th (m)	46.4		12.3	35.8	26.6	6.3
Internal Link Dist (m)	1075.5		12.0	460.0	547.0	0.0
Turn Bay Length (m)	1070.0		95.0	+00.0	J+1.U	80.0
	1308		617	945	964	763
Base Capacity (vph)						
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		0.14	0.32	0.24	0.15
Intersection Summary						
0 1 1						

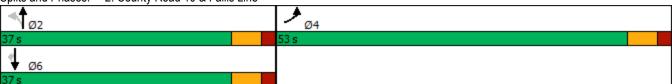
Cycle Length: 90

Actuated Cycle Length: 59.2

Natural Cycle: 45
Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.72
Intersection Signal Delay: 13.9
Intersection Capacity Utilization 46.1%
Analysis Period (min) 15

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



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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		*	<b></b>	<u> </u>	7
Traffic Volume (vph)	169	110	135	197	269	202
Future Volume (vph)	169	110	135	197	269	202
Satd. Flow (prot)	1728	0	1785	1879	1842	1597
Flt Permitted	0.971	J	0.567	1010	1012	1001
Satd. Flow (perm)	1728	0	1065	1879	1842	1597
Satd. Flow (RTOR)	55	U	1000	1073	1042	240
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0.04	0.04	0.04	0.04	2%	0.04
Shared Lane Traffic (%)	0 70	0 /0	0 70	0 70	Z /0	0 /0
· ,	332	0	161	235	320	240
Lane Group Flow (vph)		U				
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)	14.6		31.6	31.6	31.6	31.6
Actuated g/C Ratio	0.25		0.54	0.54	0.54	0.54
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
LOS	24.5 C		10.1 B			
	24.5		В	A	A	Α
Approach LOS	24.5 C			9.3	6.3	
Approach LOS			0.0	A	A	0.0
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	00.0
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 Summers						
Intersection Summary						

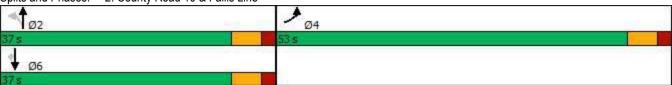
Synchro 10 Report 04/02/2020

Cycle Length: 90

Actuated Cycle Length: 58.2

Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 11.9
Intersection Capacity Utilization 52.7%
Analysis Period (min) 15

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



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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		*	<b></b>	<u> </u>	7
Traffic Volume (vph)	175	135	130	219	223	196
Future Volume (vph)	175	135	130	219	223	196
Satd. Flow (prot)	1720	0	1785	1879	1860	1597
Flt Permitted	0.973		0.611		. 300	
Satd. Flow (perm)	1720	0	1148	1879	1860	1597
Satd. Flow (RTOR)	65		. 1 13	.510	.500	209
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0.54	0.54	0%	0.54	1%	0.54
Shared Lane Traffic (%)	0 /0	0 /0	0 /0	0 /0	1 /0	0 /0
Lane Group Flow (vph)	330	0	138	233	237	209
Turn Type	Prot	J	Perm	NA	NA	Perm
Protected Phases	4		1 61111	2	6	i Cilli
	4		0	2	Ö	G
Permitted Phases	4		2	0	^	6
Detector Phase	4		2	2	6	6
Switch Phase	4.0		4.0	4.6	4.0	4.0
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)	14.3		31.6	31.6	31.6	31.6
Actuated g/C Ratio	0.25		0.55	0.55	0.55	0.55
v/c Ratio	0.70		0.22	0.23	0.23	0.22
Control Delay	23.9		9.2	8.5	8.6	2.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	23.9		9.2	8.5	8.6	2.2
LOS	23.3 C		Α.Δ	Α	Α	Α.Δ
Approach Delay	23.9			8.8	5.6	^
Approach LOS	23.9 C					
			6.7	A	A	0.0
Queue Length 50th (m)	24.6		6.7	11.3	11.5	0.0
Queue Length 95th (m)	46.8		18.5	26.7	27.2	8.6
Internal Link Dist (m)	1075.5		0= 0	460.0	547.0	00.0
Turn Bay Length (m)			95.0	400-	40	80.0
Base Capacity (vph)	1413		626	1025	1014	965
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	0.23		0.22	0.23	0.23	0.22
Intersection Summary						

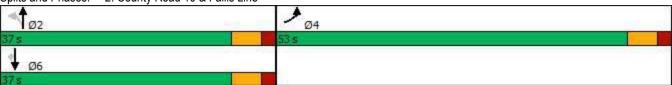
Synchro 10 Report 04/02/2020

Cycle Length: 90

Actuated Cycle Length: 57.9

Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 11.9
Intersection Capacity Utilization 51.9%
Analysis Period (min) 15
Intersection Control LOS: B

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



Intersection													
Int Delay, s/veh	4.9												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	}
Lane Configurations		4			4		ች	<b>1</b>			4		
Traffic Vol, veh/h	42	7	19	22	14	12	11	467	25	7	515	217	7
Future Vol, veh/h	42	7	19	22	14	12	11	467	25	7	515	217	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	)
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	)
RT Channelized	-	-	None	-	<u>-</u>	None	-	-	None	-	-	None	)
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84	ļ
Heavy Vehicles, %	0	0	20	0	0	0	0	6	0	0	4	2	)
Mvmt Flow	50	8	23	26	17	14	13	556	30	8	613	258	}
Major/Minor N	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	1371	1370	742	1371	1484	571	871	0	0	586	0	0	)
Stage 1	758	758	-	597	597	-	-	-	-	-	-	-	-
Stage 2	613	612	-	774	887	-	-	-	-	-	-	-	
Critical Hdwy	7.1	6.5	6.4	7.1	6.5	6.2	4.1	-	-	4.1	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.48	3.5	4	3.3	2.2	-	-	2.2	-	-	
Pot Cap-1 Maneuver	125	148	388	125	126	524	783	-	-	999	-	-	-
Stage 1	402	418	-	493	495	-	-	-	-	-	-	-	
Stage 2	483	487	-	394	365	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	106	143	388	110	122	524	783	-	-	999	-	-	-
Mov Cap-2 Maneuver	106	143	-	110	122	-	-	-	-	-	-	-	
Stage 1	395	411	-	485	487	-	-	-	-	-	-	-	-
Stage 2	446	479	-	358	359	-	-	-	-	-	-	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	62.7			46.5			0.2			0.1			
HCM LOS	F			E									
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1\	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)		783	-	-	138	142	999	-	-				
HCM Lane V/C Ratio		0.017	-	-		0.402		-	-				
HCM Control Delay (s)		9.7	_	-	62.7	46.5	8.6	0	-				
HCM Lane LOS		A	-	-	F	E	A	A	_				
HCM 95th %tile Q(veh)		0.1	-	-	3	1.7	0	-	-				
,													

	•	$\rightarrow$	1	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ኘ	<u> </u>	<u> </u>	7
Traffic Volume (vph)	249	112	77	393	235	111
Future Volume (vph)	249	112	77	393	235	111
Satd. Flow (prot)	1628	0	1785	1773	1807	1331
Flt Permitted	0.967	- 0	0.591	1110	1001	1301
Satd. Flow (perm)	1628	0	1110	1773	1807	1331
Satd. Flow (RTOR)	38	U	1110	1115	1007	129
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
	10%	0.80	0.00	6%	4%	20%
Heavy Vehicles (%)	10%	0%	0%	070	470	20%
Shared Lane Traffic (%)	400	0	00	457	072	100
Lane Group Flow (vph)	420	0	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
Act Effct Green (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
v/c Ratio	0.78		0.49	0.49	0.49	0.49
Control Delay	28.2		11.9	15.1	12.2	3.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
•	28.2		11.9		12.2	
Total Delay				15.1		3.3
LOS Approach Dolov	C		В	14.6	B	Α
Approach Delay	28.2			14.6	9.4	
Approach LOS	C		- ^	В	A	
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
Interpolation Commencer						
Intersection Summary						

Actuated Cycle Length: 63.4

Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 17.3
Intersection Capacity Utilization 52.3%
ICU Level of Service A
Analysis Period (min) 15

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

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDIN	ive i	<u> </u>	\$	ODIN
Traffic Vol, veh/h	8	4	8	635	338	23
Future Vol, veh/h	8	4	8	635	338	23
Conflicting Peds, #/hr	0	0	0	000	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	olop -	None	-	None		None
Storage Length	0	-	850	-	_	-
Veh in Median Storage,		_	-	0	0	_
Grade, %	0	-	_	0	0	-
Peak Hour Factor	85	85	85	85	85	85
			00		5	13
Heavy Vehicles, %	0	0		6		
Mvmt Flow	9	5	9	747	398	27
Major/Minor N	/linor2	ı	Major1	N	Major2	
Conflicting Flow All	1177	412	425	0	-	0
Stage 1	412		725	-	_	-
Stage 2	765	-	_	-	_	_
Critical Hdwy	6.4	6.2	4.1	-		-
	5.4	0.2	4.1	-	-	-
Critical Hdwy Stg 1				-	-	
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	213	644	1145	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	211	644	1145	-	-	-
Mov Cap-2 Maneuver	211	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	463	-	-	-	-	-
A norse sel	ГΡ		ND		CD	
Approach	EB		NB		SB	
HCM Control Delay, s	19		0.1		0	
HCM LOS	С					
Minor Lane/Major Mvmt	ŀ	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1145	-		-	-
HCM Lane V/C Ratio		0.008		0.052	_	-
		8.2	-	19		
HCM Control Delay (s) HCM Lane LOS				19 C	-	-
		A	-		-	-
HCM 95th %tile Q(veh)		0	-	0.2	-	-

Intersection													
Int Delay, s/veh	58.6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		4			4		ች	<b>1</b>			4		
Traffic Vol, veh/h	174	10	14	19	4	4	17	539	24	11	528	72	
Future Vol, veh/h	174	10	14	19	4	4	17	539	24	11	528	72	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	<u>.</u>	None	·-	-	None	-	-	None	-	-	None	
Storage Length	-	-	_	-	-	-	850	-	-	-	-	_	
Veh in Median Storage	,# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	_	0	_	-	0	-	-	0	-	-	0	_	
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	25	0	33	0	1	0	0	1	0	
Mvmt Flow	198	11	16	22	5	5	19	613	27	13	600	82	
Major/Minor I	Minor2			Minor1			Major1		N	Major2			
Conflicting Flow All	1337	1345	641	1346	1373	627	682	0	0	640	0	0	
Stage 1	667	667	-	665	665	-	-	-	-	-	-	-	
Stage 2	670	678	_	681	708	_	_	_	_	_	_	_	
Critical Hdwy	7.1	6.5	6.2	7.35	6.5	6.53	4.1	_	_	4.1	_	_	
Critical Hdwy Stg 1	6.1	5.5	- 0.2	6.35	5.5	0.00		_	_	T. I	_	_	
Critical Hdwy Stg 2	6.1	5.5	_	6.35	5.5	_	_	_	_	_	_	_	
Follow-up Hdwy	3.5	4		3.725	4	3.597	2.2	_	_	2.2	_	_	
Pot Cap-1 Maneuver	~ 132	153	478	115	147	432	920	_	_	954	_	_	
Stage 1	451	460	-110	414	461	402	320	_	_	334	_	_	
Stage 2	450	455	_	405	441	_		_				_	
Platoon blocked, %	400	700		700	771			_	_		_	_	
Mov Cap-1 Maneuver	~ 123	146	478	101	141	432	920	_	_	954	_	_	
Mov Cap-1 Maneuver		146	-110	101	141	402	320	_	_	JJ4	_	_	
Stage 1	442	450	_	405	451	_	-	-		-	-	_	
Stage 2	432	445		373	431			_			_		
Stage 2	402	440	-	313	401	-	-	_	-	-	-	-	
Annroach	EB			WB			NB			SB			
Approach													
HCM Control Delay, s\$				45			0.3			0.2			
HCM LOS	F			E									
Minor Lane/Major Mvm	t	NBL	NBT	NRD	EBLn1\	WRI n1	SBL	SBT	SBR				
		920		ואטוז		120	954						
Capacity (veh/h) HCM Lane V/C Ratio			-	-	131	0.256		-	-				
		0.021	-	<u>-</u>	411.4	45		-	-				
HCM Control Delay (s) HCM Lane LOS		9	-	-\$			8.8	0	-				
		0.1	-	-	F 16.8	E 1	A 0	Α	-				
HCM 95th %tile Q(veh)		0.1			10.0		U	-	-				
Notes													
~: Volume exceeds cap	pacity	\$: De	elay exc	eeds 30	00s	+: Com	putation	Not De	efined	*: All r	najor v	olume ir	n platoon

	•	$\rightarrow$	4	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	,	ሻ	<u> </u>	<u> </u>	7
Traffic Volume (vph)	189	112	137	247	380	259
Future Volume (vph)	189	112	137	247	380	259
Satd. Flow (prot)	1731	0	1785	1879	1842	1597
Flt Permitted	0.970	· ·	0.449	1010	1012	1001
Satd. Flow (perm)	1731	0	844	1879	1842	1597
Satd. Flow (RTOR)	49	U	011	1073	10-12	308
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0.04	0.04	0.04	0.04	2%	0%
Shared Lane Traffic (%)	0 70	0 70	0 70	0 70	Z /0	0 70
` ,	358	0	163	294	452	308
Lane Group Flow (vph)		U				
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)	15.8		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.27		0.53	0.53	0.53	0.53
v/c Ratio	0.27		0.33	0.30	0.33	0.33
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
LOS	С		В	Α	В	Α
Approach Delay	25.4			10.8	7.9	
Approach LOS	С			В	Α	
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
	0.20		0.01	J.50	J.70	0.01
Intersection Summary						

Cycle Length: 90

Actuated Cycle Length: 59.2

Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 12.7
Intersection Capacity Utilization 59.9%
Analysis Period (min) 15

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

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
	EDL W	LDK				אמט
Lane Configurations		11	<b>\</b>	420	<b>♣</b> 623	18
Traffic Vol, veh/h	26		6	428		
Future Vol, veh/h	26	11	6	428	623	18
Conflicting Peds, #/hr	0	0	0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-		-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	30	13	7	498	724	21
Major/Minor	Minor		Anier1		laier?	
	Minor2		Major1		Major2	
Conflicting Flow All	1247	735	745	0	-	0
Stage 1	735	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	193	423	872	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	423	872	-	-	-
Mov Cap-2 Maneuver	191	-		_	_	_
Stage 1	474	_		_		
Stage 2	606	_	_	_	_	_
Glaye Z	000	_	-	_	_	_
Approach	EB		NB		SB	
HCM Control Delay, s	24.4		0.1		0	
HCM LOS	С					
NA' I /NA - ' NA		NIDI	NDT	EDL 4	ODT	000
Minor Lane/Major Mvm	I	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		872	-		-	-
HCM Lane V/C Ratio		0.008		0.189	-	-
HCM Control Delay (s)		9.2	-		-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)	)	0	-	0.7	-	-

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		Ť	ĵ,			4	
Traffic Vol, veh/h	26	4	17	18	8	5	19	393	18	5	426	24
Future Vol, veh/h	26	4	17	18	8	5	19	393	18	5	426	24
Conflicting Peds, #/hr	0	0	5	5	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	27	4	18	19	8	5	20	405	19	5	439	25
Major/Minor N	/linor2		<u> </u>	Minor1			Major1			Major2		
Conflicting Flow All	923	926	457	933	929	415	464	0	0	424	0	0
Stage 1	462	462	-	455	455	-	-	-	-	-	-	-
Stage 2	461	464	-	478	474	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	252	271	608	248	270	642	1108	-	-	1146	-	-
Stage 1	584	568	-	589	572	-	-	-	-	-	-	-
Stage 2	584	567	-	572	561	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	240	264	606	233	264	642	1108	-	-	1146	-	-
Mov Cap-2 Maneuver	240	264	-	233	264	-	-	-	-	-	-	-
Stage 1	573	565	-	578	562	-	-	-	-	-	-	-
Stage 2	561	557	-	546	558	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	18.8			20.2			0.4			0.1		
HCM LOS	С			С								
Minor Lane/Major Mvmt	t	NBL	NBT	NBR I	EBLn1\	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1108	-	-	310	269	1146	-	-			
HCM Lane V/C Ratio		0.018	-	-		0.119		_	-			
HCM Control Delay (s)		8.3	-	-	18.8	20.2	8.2	0	_			
HCM Lane LOS		A	_	_	C	C	A	Ā	-			
HCM 95th %tile Q(veh)		0.1	-	-	0.5	0.4	0	-	_			

	۶	•	4	<b>†</b>	ţ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<u> </u>	<u> </u>	7
Traffic Volume (vph)	178	137	133	246	249	199
Future Volume (vph)	178	137	133	246	249	199
Satd. Flow (prot)	1720	0	1785	1879	1860	1597
Flt Permitted	0.973	U	0.596	1013	1000	1001
Satd. Flow (perm)	1720	0	1120	1879	1860	1597
(, ,	65	U	1120	10/9	1000	212
Satd. Flow (RTOR) Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)	005	•	444	000	005	040
Lane Group Flow (vph)	335	0	141	262	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	С		Α	Α	Α	Α
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		19.1	30.3	30.7	8.8
• ,			19.1			0.0
Internal Link Dist (m)	333.1		05.0	460.0	656.0	00.0
Turn Bay Length (m)	1110		95.0	1001	1010	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 Capacity Utilization 53.7%
ICU Level of Service A
Analysis Period (min) 15

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

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	**		ኘ	<u> </u>	<u>₽</u>	
Traffic Vol, veh/h	7	3	4	420	446	11
Future Vol, veh/h	7	3	4	420	446	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	Stop -	None	-	None	-	
Storage Length	0	-	850	-	_	-
Veh in Median Storage,		-	-	0	0	_
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	90	90	90	90	90	90
Mvmt Flow	7	3	4	438	465	11
IVIVIIIL FIUW	1	3	4	430	400	11
Major/Minor N	/linor2	N	Major1	N	Major2	
Conflicting Flow All	917	471	476	0	-	0
Stage 1	471	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	_	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	_	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	304	597	1097	_	-	-
Stage 1	632	-	-	-	_	-
Stage 2	649	_	_	_	_	_
Platoon blocked, %	JTU		_	_	_	-
Mov Cap-1 Maneuver	303	597	1097	-	-	-
Mov Cap-1 Maneuver	303	331	1001	-	-	-
Stage 1	629	-	-	-	-	-
•	649	-	-	-	-	-
Stage 2	049	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	15.4		0.1		0	
HCM LOS	С					
- · ·						
				<b>-</b>	^==	0==
Minor Lane/Major Mvmt		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1097	-		-	-
HCM Lane V/C Ratio		0.004	-	0.029	-	-
HCM Control Delay (s)		8.3	-		-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-

	۶	<b>→</b>	*	•	<b>←</b>	•	1	†	<i>&gt;</i>	<b>/</b>	<b>↓</b>	✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		*	f)			4	
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
Satd. Flow (prot)	0	1659	0	0	1777	0	1785	1763	0	0	1745	0
Flt Permitted		0.778			0.866		0.344				0.995	
Satd. Flow (perm)	0	1331	0	0	1573	0	646	1763	0	0	1736	0
Satd. Flow (RTOR)		22			14			5			42	
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
Heavy Vehicles (%)	0%	0%	20%	0%	0%	0%	0%	6%	0%	0%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	0	0	57	0	13	586	0	0	879	0
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)	2.0	0.0		2.0	0.0		0.0	0.0		2.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0			6.0	
Lead/Lag		0.0			0.0		0.0	0.0			0.0	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	INOTIC	9.0		INOTIC	9.0		62.5	62.5		IVIAA	62.5	
Actuated g/C Ratio		0.11			0.11		02.3	0.78			0.78	
v/c Ratio		0.48			0.30		0.70	0.70			0.76	
Control Delay		34.4			29.1		3.8	5.4			8.3	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
		34.4			29.1		3.8	5.4			8.3	
Total Delay LOS		34.4 C			29.1 C		3.0 A					
							А	A			A	
Approach LOS		34.4			29.1			5.3			8.3	
Approach LOS		С			C		0.4	A			A	
Queue Length 50th (m)		8.6			6.1		0.4	27.2			52.1	
Queue Length 95th (m)		18.3			14.1		1.9	47.7			92.3	
Internal Link Dist (m)		884.7			354.8		05.0	385.0			381.6	
Turn Bay Length (m)		440			400		85.0	4000			4000	
Base Capacity (vph)		416			483		506	1382			1369	
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			0.64	
Intersection Summary												

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 79.8

Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

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



	٠	<b>→</b>	•	•	<b>←</b>	•	4	†	<i>&gt;</i>	<b>/</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		7	f)			4	
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
Satd. Flow (prot)	0	1782	0	0	1454	0	1785	1850	0	0	1831	0
Flt Permitted		0.729			0.793		0.381				0.987	
Satd. Flow (perm)	0	1356	0	0	1192	0	716	1850	0	0	1809	0
Satd. Flow (RTOR)		4			5			4			13	
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
Heavy Vehicles (%)	0%	0%	0%	25%	0%	33%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	225	0	0	32	0	19	640	0	0	695	0
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	
Act Effct Green (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	
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	
LOS		D			С		Α	В			В	
Approach Delay		49.2			23.9			10.9			12.0	
Approach LOS		D			С			В			В	
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		0.0	385.0			381.6	
Turn Bay Length (m)		001.1			001.0		85.0	000.0			001.0	
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	_	0.00	_	_	0.10	_	0.04	0.00	_	_	0.00	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 87

Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 17.0
Intersection Capacity Utilization 64.7%
Analysis Period (min) 15

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



EBT					١,	ı		_	*	*
Δ	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
442			4		ሻ	ĵ»			4	
4	17	18	8	5	19	393	18	5	426	24
4	17	18	8	5	19	393	18	5	426	24
1715	0	0	1786	0	1785	1866	0	0	1847	0
0.811			0.789		0.494				0.997	
1430	0	0	1440	0	928	1866	0	0	1843	0
18			5			5			6	
	5	5								
0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
49	0	0	32	0	20	424	0	0	469	0
NA		Perm	NA		Perm	NA		Perm	NA	
4			8			2			6	
		8			2			6		
4		8	8		2	2		6	6	
			-					-	-	
4.0		4.0	4.0		4.0	4.0		4.0	4.0	
22.0		22.0	22.0		22.0	22.0		22.0	22.0	
30.0		30.0	30.0		60.0	60.0		60.0	60.0	
33.3%		33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
4.0		4.0	4.0		4.0	4.0		4.0	4.0	
2.0		2.0	2.0		2.0	2.0		2.0	2.0	
0.0		,	0.0		0.0	0.0			0.0	
6.0			6.0		6.0	6.0			6.0	
0.0			0.0		0.0	0.0			0.0	
None		None	None		Max	Max		Max	Max	
								111001		
					, ,					
					0.6					
					,					
•••			00		85.0	000.0			00110	
446			440			1587			1568	
									0	
0.11			0.07		0.03	0.27			0.30	
	None 7.3 0.09 0.33 29.9 0.0 29.9 C 29.9 C 5.0 13.4 884.7 446 0 0 0.11	7.3 0.09 0.33 29.9 0.0 29.9 C 29.9 C 5.0 13.4 884.7 446 0 0	7.3 0.09 0.33 29.9 0.0 29.9 C 29.9 C 5.0 13.4 884.7 446 0 0	7.3 7.3 0.09 0.09 0.33 0.23 29.9 33.4 0.0 0.0 29.9 33.4 C C 29.9 33.4 C C 5.0 4.4 13.4 11.1 884.7 354.8	7.3 7.3 0.09 0.09 0.33 0.23 29.9 33.4 0.0 0.0 29.9 33.4 C C C 29.9 33.4 C C C 5.0 4.4 13.4 11.1 884.7 354.8	7.3       7.3       67.5         0.09       0.09       0.85         0.33       0.23       0.03         29.9       33.4       2.8         0.0       0.0       0.0         29.9       33.4       2.8         C       C       A         29.9       33.4       C         C       C       C         5.0       4.4       0.6         13.4       11.1       2.3         884.7       354.8       85.0         446       440       789         0       0       0         0       0       0         0       0       0         0       0       0         0       0       0         0       0       0         0       0       0	7.3       7.3       67.5       67.5         0.09       0.09       0.85       0.85         0.33       0.23       0.03       0.27         29.9       33.4       2.8       3.0         0.0       0.0       0.0       0.0         29.9       33.4       2.8       3.0         C       C       A       A         29.9       33.4       3.0       3.0         C       C       A       A         5.0       4.4       0.6       15.1         13.4       11.1       2.3       28.5         884.7       354.8       385.0         446       440       789       1587         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0	7.3       7.3       67.5       67.5         0.09       0.09       0.85       0.85         0.33       0.23       0.03       0.27         29.9       33.4       2.8       3.0         0.0       0.0       0.0       0.0         29.9       33.4       2.8       3.0         C       C       A       A         29.9       33.4       3.0       3.0         C       C       A       A         5.0       4.4       0.6       15.1         13.4       11.1       2.3       28.5         884.7       354.8       385.0         446       440       789       1587         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0	7.3       7.3       67.5       67.5         0.09       0.09       0.85       0.85         0.33       0.23       0.03       0.27         29.9       33.4       2.8       3.0         0.0       0.0       0.0       0.0         29.9       33.4       2.8       3.0         C       C       A       A         29.9       33.4       3.0       3.0         C       C       A       A         5.0       4.4       0.6       15.1         13.4       11.1       2.3       28.5         884.7       354.8       385.0         446       440       789       1587         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0         0       0       0       0	7.3       7.3       67.5       67.5       67.5         0.09       0.09       0.85       0.85       0.85         0.33       0.23       0.03       0.27       0.30         29.9       33.4       2.8       3.0       3.2         0.0       0.0       0.0       0.0       0.0         29.9       33.4       2.8       3.0       3.2         C       C       A       A       A         29.9       33.4       3.0       3.2         C       C       A       A       A         5.0       4.4       0.6       15.1       17.3         13.4       11.1       2.3       28.5       32.5         884.7       354.8       385.0       381.6         446       440       789       1587       1568         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0         0       0       0       0       0

Actuated Cycle Length: 79.4

Natural Cycle: 45

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.33

Intersection Signal Delay: 5.4

Intersection Capacity Utilization 42.8%

Analysis Period (min) 15

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



Appendix F –
Synchro Analysis Output –
Total Conditions



Intersection												
Int Delay, s/veh	2.1											
		EDT	EDD	\\/DI	WDT	WDD	NDI	NDT	NDD	CDI	CDT	CDD
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	•	4	0.4	0.5	- ♣	40	<u>ነ</u>	<b>\$</b>	4.4	^	4	•
Traffic Vol, veh/h	3	5	34	25	2	10	35	584	41	6	339	3
Future Vol, veh/h	3	5	34	25	2	10	35	584	41	6	339	3
Conflicting Peds, #/hr	0	0	0	0	0	0	_ 0	0	_ 0	_ 0	0	_ 0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage	e,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	20	0	0	0	0	6	0	0	4	67
Mvmt Flow	4	6	40	30	2	12	42	695	49	7	404	4
Major/Minor	Minor2		1	Minor1			Major1		N	Major2		
Conflicting Flow All	1231	1248	406	1247	1226	720	408	0	0	744	0	0
Stage 1	420	420	400	804	804	720	400	-	-	744	-	-
Stage 2	811	828	-	443	422	-	-	_	_	_	-	_
Critical Hdwy	7.1	6.5	6.4	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	0.4	6.1	5.5	0.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5		-	-	-	-	-	-
, ,	3.5	5.5	3.48	3.5	5.5	3.3	2.2	-	-	2.2	-	-
Follow-up Hdwy	156	175	608	152	180	431	1162	-	-	873	-	
Pot Cap-1 Maneuver	615	593		380	398	431	1102	-	-	0/3	-	-
Stage 1			-			-	-	-	-	-	-	-
Stage 2	376	389	-	598	592	-	-	-	-	-	-	-
Platoon blocked, %	1.45	167	600	122	170	121	1100	-	-	072	-	-
Mov Cap-1 Maneuver	145	167	608	133	172	431	1162	-	-	873	-	-
Mov Cap-2 Maneuver	145	167	-	133	172	-	-	-	-	-	-	-
Stage 1	593	587	-	366	384	-	-	-	-	-	-	-
Stage 2	350	375	-	547	586	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	15.5			34.3			0.4			0.2		
HCM LOS	С			D			•••					
Minor Lane/Major Mvm	nt	NBL	NBT	NBR I	EBLn1\	VBI n1	SBL	SBT	SBR			
Capacity (veh/h)		1162		-	201	166	873		-			
HCM Lane V/C Ratio		0.036	-			0.265		-	_			
HCM Control Delay (s)		8.2	-	-		34.3	9.2	0	-			
HCM Lane LOS		0.2 A		-	15.5 C		9.2 A		-			
	\	0.1	-	-	0.4	D 1	0	Α				
HCM 95th %tile Q(veh	)	0.1	-	-	0.4	1	U	-	-			

Movement	Intersection								
Approach		112.3							
Tarlife Vol, veh/h 246 237 169 257 211 142 142 140 140 140 140 140 140 140 140 140 140			EDD	NDI	NDT	CDT	CDD		
riadfic Vol, veh/h 246 237 169 257 211 142  riutre Vol, veh/h 246 237 169 257 211 142  Sign Control Stop Stop Stop Free Free Free Free Free Free Free Fre			LDK						
cuture Vol, veh/h         246         237         169         257         211         142           Conflicting Peds, #hr         0 <td< td=""><td></td><td></td><td>227</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>			227						
Conflicting Peds, #/hr   O   O   O   O   O   O   O   O   O									
Stop   Stop   Stop   Stop   Stop   Stop   Stop   Stop   Store   Free   Free   Free   None   Storage Length   O									
None   None							-		
Storage Length		•							
Veh in Median Storage, # 0 0 0 0 0 - 0 0 0 0 0 0 0 0 0									
Grade, % 0 - 0 0 0 - 0 0 0 0 0 0 0 0 0 0 0 0 0									
Peak Hour Factor 86 86 86 86 86 86 86 86 86 86 86 86 86						-			
Heavy Vehicles, %					-	-			
Amount Flow         286         276         197         299         245         165           Adjor/Minor         Minor2         Major1         Major2           Conflicting Flow All         938         245         410         0         0           Stage 1         245         -         -         -         -           Critical Howy         6.5         6.2         4.1         -         -         -           Critical Howy Stg 2         5.5         -         -         -         -         -           Critical Howy Stg 2         5.5         -         -         -         -         -           Corlical Howy Stg 2         5.5         -         -         -         -         -           Collow-up Hdwy         3.59         3.3         2.2         -         -         -         -           Vot Cap-1 Maneuver         -         284         799         1160         -         <									
Major   Major   Major   Major   Major   Major   Major									
Stage 1	vivmt Flow	286	276	197	299	245	165		
Stage 1									
Stage 1						/ajor2			
Stage 2	Conflicting Flow All		245	410	0	-	0		
Critical Hdwy Stg 1 5.5 6.2 4.1			-	-	-	-	-		
Critical Hdwy Stg 1 5.5				-	-	-	-		
Critical Hdwy Stg 2 5.5	Critical Hdwy		6.2	4.1	-	-	-		
Follow-up Hdwy 3.59 3.3 2.2	Critical Hdwy Stg 1	5.5	-	-	-	-	-		
Pot Cap-1 Maneuver ~ 284	Critical Hdwy Stg 2	5.5	-	-	-	-	-		
Stage 1 777	Follow-up Hdwy	3.59	3.3	2.2	-	-	-		
Stage 2	Pot Cap-1 Maneuver	~ 284	799	1160	-	-	-		
Platoon blocked, %  Nov Cap-1 Maneuver ~ 236	Stage 1	777	-	-	-	-	-		
Platoon blocked, %  Nov Cap-1 Maneuver ~ 236		482	-	-	-	-	-		
Mov Cap-1 Maneuver ~ 236	Platoon blocked, %				-	-	-		
Nov Cap-2 Maneuver		~ 236	799	1160	-	-	-		
Stage 1       645       -				-	-	-	-		
Stage 2			-	-	-	-	-		
Approach EB NB SB HCM Control Delay, s 290.4 3.5 0 HCM LOS F  Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1160 - 361 HCM Lane V/C Ratio 0.169 - 1.556 HCM Control Delay (s) 8.7 - 290.4 HCM Lane LOS A - F HCM Lane LOS A - F HCM 95th %tile Q(veh) 0.6 - 31.7			-	-	-	-	-		
ACM Control Delay, s 290.4  ACM LOS  Alinor Lane/Major Mvmt  NBL  NBT EBLn1  SBT  SBR  Capacity (veh/h)  1160  - 361   HCM Lane V/C Ratio  0.169  - 1.556   HCM Control Delay (s)  8.7  - 290.4   HCM Lane LOS  A  - F   HCM Lane LOS  A  - F   HCM 95th %tile Q(veh)  0.6  - 31.7   Notes	<u> </u>								
ACM Control Delay, s 290.4 3.5 0  ACM LOS F  Alinor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR  Capacity (veh/h) 1160 - 361  HCM Lane V/C Ratio 0.169 - 1.556  HCM Control Delay (s) 8.7 - 290.4  HCM Lane LOS A - F  HCM Lane LOS A - F  HCM 95th %tile Q(veh) 0.6 - 31.7	Approach	EB		NB		SB			
Alinor Lane/Major Mvmt   NBL   NBT EBLn1   SBT   SBR     Capacity (veh/h)									
Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1160 - 361 HCM Lane V/C Ratio 0.169 - 1.556 HCM Control Delay (s) 8.7 - 290.4 HCM Lane LOS A - F HCM 95th %tile Q(veh) 0.6 - 31.7				0.0		- 3			
Capacity (veh/h) 1160 - 361 HCM Lane V/C Ratio 0.169 - 1.556 HCM Control Delay (s) 8.7 - 290.4 HCM Lane LOS A - F HCM 95th %tile Q(veh) 0.6 - 31.7									
Capacity (veh/h) 1160 - 361 HCM Lane V/C Ratio 0.169 - 1.556 HCM Control Delay (s) 8.7 - 290.4 HCM Lane LOS A - F HCM 95th %tile Q(veh) 0.6 - 31.7	Minor Lang/Major My	ot	NDI	NDT	EDI 51	CDT	CDD		
HCM Lane V/C Ratio 0.169 - 1.556 HCM Control Delay (s) 8.7 - 290.4 HCM Lane LOS A - F HCM 95th %tile Q(veh) 0.6 - 31.7		III		INDI					
HCM Control Delay (s) 8.7 - 290.4 HCM Lane LOS A - F HCM 95th %tile Q(veh) 0.6 - 31.7 HOM 95th %tile Q(veh) 0.6 - 31.7				_					
HCM Lane LOS A - F HCM 95th %tile Q(veh) 0.6 - 31.7 Notes						-			
ICM 95th %tile Q(veh) 0.6 - 31.7 Notes		)		-		-			
Votes		,		-		-			
	HCM 95th %tile Q(veh	1)	0.6	-	31.7	-	-		
· Volume exceeds capacity \$ Delay exceeds 300s + Computation Not Defined * All major volume in platoon	Notes								
. Volume execute capacity w. Delay execute 5005 i. Combutation Not Delined . All mater volume in biateon	~: Volume exceeds ca	pacity	\$: De	lay exc	eeds 30	)0s	+: Com	outation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					
		EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		<u> </u>	100	<b>}</b>	00
Traffic Vol, veh/h	8	4	8	496	347	23
Future Vol, veh/h	8	4	8	496	347	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	6	5	13
Mvmt Flow	9	5	9	584	408	27
Major/Minor M	1inor2	N	Major1	N	//ajor2	
Conflicting Flow All	1024	422	435	0	- -	0
Stage 1	422	-	-	-	_	-
Stage 2	602	_	_	_	_	_
Critical Hdwy	6.4	6.2	4.1	_	_	_
Critical Hdwy Stg 1	5.4	0.2	4.1	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	_
	3.5	3.3	2.2	-	-	-
Follow-up Hdwy	263	636	1135	-	-	-
Pot Cap-1 Maneuver	666	030	1133	-	-	-
Stage 1		-	-	-	-	-
Stage 2	551	-	-	-	-	-
Platoon blocked, %	004	000	4405	-	-	-
Mov Cap-1 Maneuver	261	636	1135	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	661	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	16.6		0.1		0	
HCM LOS	C		0.1		U	
TOW LOO	J					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1135	-	0_0	-	-
HCM Lane V/C Ratio		0.008	-	0.043	-	-
HCM Control Delay (s)		8.2	-		-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-
· · ·						

3.3											
EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	- 43→			- 43→			4			4	
4	140	6	17	141	16	17	0	48	45	0	11
4	140	6	17	141	16	17	0	48	45	0	11
0	0	0	0	0	0	0	0	0	0	0	0
Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
-	-	None	-	-	None	-	-	None	-	-	None
-	-	-	-	-	-	-	-	-	-	-	-
# -	0	-	-	0	-	-	0	-	-	0	-
-	0	-	-	0	-	-	0	-	-	0	-
92	92	92	92	92	92	92	92	92	92	92	92
0	10	0	0	20	0	0	0	0	0	0	0
4	152	7	18	153	17	18	0	52	49	0	12
laiar1	-		Jaior?	-	N	linar1	-	N	linar?	-	-
							070			205	400
1/0	U	0	159								162
-	-	-	-	-							-
-	-	-	-	-	-						-
4.1	-	-	4.1	-	-			6.2			6.2
-	-	-	-	-	-			-			-
-	-	-	-	-	-			-			-
	-	-		-	-		4			4	3.3
1420	-	-	1433	-	-			895			888
-	-	-	-	-	-			-			-
-	-	-	-	-	-	803	735	-	816	764	-
	-	-		-	-						
1420	-	-	1433	-	-	577	553	895	534	556	888
-	-	-	-	-	-	577	553	-	534	556	-
-	-	-	-	-	-	840	764	-	806	731	-
-	-	-	-	-	-	781	725	-	766	762	-
FR			WB			NB			SB		
0.2			0.1								
						D			D		
	IDL 4	ED!	EDT	EDD	\A/D1	MET	M/DD (	2DL 4			
N											
			-								
			-			-					
				-		-	-				
		Α	Α	-	Α		-				
	0.3	0	-	-	0	-	-	0.4			
	4 0 Free - - - 92 0 4 Major1 170 - - 4.1 - 2.2 1420 - - -	4 140 4 140 0 0 Free Free 0 92 92 0 10 4 152  Major1  170 0 4.1 2.2 - 1420 1420  1420  EB 0.2  NBLn1  782 0.09 10.1 B	4 140 6 4 140 6 0 0 0 Free Free Free - None None - 0 - 92 92 92 0 10 0 4 152 7   Major1 N 170 0 0 141 2.2 1420 1420	4 140 6 17 4 140 6 17 0 0 0 0 0 Free Free Free Free None 0 92 92 92 92 0 10 0 0 0 4 152 7 18  Anjor1	4 140 6 17 141 4 140 6 17 141 0 0 0 0 0 0 0  Free Free Free Free Free None 0 - 0 0 92 92 92 92 92 0 10 0 0 20 4 152 7 18 153  Major1	4       140       6       17       141       16         4       140       6       17       141       16         0       0       0       0       0       0         Free       Free       Free       Free       Free       Free       Free         -       -       None       -       -       None         -       -       -       0       -       -       None         -       -       -       0       -       -       None       -       None       -       None       -       None       -       None       -       -       None       -       -       None       -<	4       140       6       17       141       16       17         4       140       6       17       141       16       17         0       0       0       0       0       0       0         Free       Free       Free       Free       Free       Stop         -       None       -       -       None       -         -       -       -       0       -       -         -       0       -       -       0       -       -         92	4       140       6       17       141       16       17       0         4       140       6       17       141       16       17       0         0       0       0       0       0       0       0       0         Free       Free       Free       Free       Free       Free       Stop       Stop         -       None       -       -       None       -       -       0         -       -       0       -       -       0       -       -       0         -       0       -       -       0       -       -       0       0         92 <td>4       140       6       17       141       16       17       0       48         4       140       6       17       141       16       17       0       48         0       0       0       0       0       0       0       0       0         Free       Free       Free       Free       Free       Free       Stop       Stop       Stop         -       None       -       -       None       -       -       None         -       -       0       -       -       0       -       -       0       -         #       0       0       -       0       0       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       -       0       -       0       -       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0</td> <td>  4</td> <td>  14</td>	4       140       6       17       141       16       17       0       48         4       140       6       17       141       16       17       0       48         0       0       0       0       0       0       0       0       0         Free       Free       Free       Free       Free       Free       Stop       Stop       Stop         -       None       -       -       None       -       -       None         -       -       0       -       -       0       -       -       0       -         #       0       0       -       0       0       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       -       0       -       0       -       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0	4	14

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	14	224	4	51	162	33	5	8	158	65	4	10
Future Vol, veh/h	14	224	4	51	162	33	5	8	158	65	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	10	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	15	243	4	55	176	36	5	9	172	71	4	11
Major/Minor N	/lajor1		ľ	Major2		ľ	Minor1		N	Minor2		
Conflicting Flow All	212	0	0	247	0	0	587	597	245	670	581	194
Stage 1	-	-	-	-	-	-	275	275	-	304	304	-
Stage 2	-	-	-	-	-	-	312	322	-	366	277	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1370	-	-	1331	_	-	424	419	799	373	428	853
Stage 1	-	-	-	-	-	-	736	686	-	710	667	-
Stage 2	-	-	-	-	-	-	703	655	-	657	685	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1370	-	-	1331	-	-	396	394	799	275	403	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	396	394	-	275	403	-
Stage 1	-	-	-	-	-	-	726	677	-	701	636	-
Stage 2	-	-	-	-	-	-	657	624	-	503	676	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.6			11.5			21.3		
HCM LOS	J. 1						В			C		
Minor Lane/Major Mvmt	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR:	SBLn1			
Capacity (veh/h)		741	1370	-		1331	-	-	306			
HCM Lane V/C Ratio		0.251	0.011	_		0.042	_		0.281			
HCM Control Delay (s)		11.5	7.7	0	-	7.8	0	-				
HCM Lane LOS		В	Α	A	-	A	A	-	С			
HCM 95th %tile Q(veh)		1	0	-	-	0.1	-	-	1.1			
						-						

Intersection						
Int Delay, s/veh	7.3					
		EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	400	00	40	404	<b>♣</b>	
Traffic Vol, veh/h	169	29	10	494	343	55
Future Vol, veh/h	169	29	10	494	343	55
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage,	,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	18	0
Mvmt Flow	184	32	11	537	373	60
NA . ' . /NA'	4' - 0		4.1.4		4.1.0	
	/linor2		Major1		/lajor2	
Conflicting Flow All	962	403	433	0	-	0
Stage 1	403	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	286	652	1137	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	282	652	1137	-	_	-
Mov Cap-2 Maneuver	282	-		_	_	_
Stage 1	669					_
Stage 2	576	_				
Staye Z	510	-	-	-	_	-
Approach	EB		NB		SB	
HCM Control Delay, s	39.8		0.2		0	
HCM LOS	Е					
NAC 1 /NA - 2 NA		NDI	NDT	EDL 4	ODT	000
Minor Lane/Major Mvm		NBL	NRI	EBLn1	SBT	SBR
Capacity (veh/h)		1137	-	308	-	-
HCM Lane V/C Ratio		0.01	-	0.699	-	-
HCM Control Delay (s)		8.2	0	39.8	-	-
HCM Lane LOS		Α	Α	Ε	-	-
HCM 95th %tile Q(veh)		0	-	4.9	-	-
,						

Intersection						
Int Delay, s/veh	3.5					
		EDT	WDT	WDD	ODi	ODE
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		र्	- ∱	40.4	¥	
Traffic Vol, veh/h	11	48	62	104	91	11
Future Vol, veh/h	11	48	62	104	91	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	e, # -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	13	55	71	120	105	13
					^	
	Major1		//ajor2		Minor2	
Conflicting Flow All	191	0	-	0	212	131
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	81	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1389	_	_	_	779	921
Stage 1	-	_	_	_	898	-
Stage 2	_	_	_	_	945	_
Platoon blocked, %		_	_	_	010	
Mov Cap-1 Maneuver	1389	_	_	_	771	921
Mov Cap-1 Maneuver	1000	_	_	_	771	JZ I
		-			889	
Stage 1	-	-	-	-		-
Stage 2	-	-	-	-	945	-
Approach	EB		WB		SB	
HCM Control Delay, s	1.4		0		10.4	
HCM LOS	•••		•		В	
TIOM LOO						
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)		1389	-	-	-	785
HCM Lane V/C Ratio		0.009	-	-	-	0.149
HCM Control Delay (s)		7.6	0	-	-	10.4
HCM Lane LOS		Α	Α	-	-	В
HCM 95th %tile Q(veh	)	0	-	-	-	0.5
/0110 3/1011	,	v				0.0

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ሻ	ĵ.			4	
Traffic Vol. veh/h	3	1	33	29	1	3	28	459	23	9	628	10
Future Vol, veh/h	3	1	33	29	1	3	28	459	23	9	628	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	_	-	None	_	-	None	_	_	None	-	-	None
Storage Length	-	-	-	-	-	_	850	-	_	-	-	_
Veh in Median Storage,	.# -	0	-	-	0	_	_	0	_	-	0	-
Grade, %	-	0	-	-	0	_	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	25	0	33	0	1	0	0	1	0
Mvmt Flow	3	1	38	33	1	3	32	522	26	10	714	11
					•							
Major/Minor N	/linor2			Minor1		<u> </u>	Major1		1	Major2		
Conflicting Flow All	1341	1352	720	1358	1344	535	725	0	0	548	0	0
Stage 1	740	740	-	599	599	-	-	-	-	-	-	-
Stage 2	601	612	_	759	745	_	_	_	_	_	_	_
Critical Hdwy	7.1	6.5	6.2	7.35	6.5	6.53	4.1	_	_	4.1	_	-
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	-	-	_	_	-	_	_
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	-	_	_	-	_	-
Follow-up Hdwy	3.5	4	3.3	3.725	4	3.597	2.2	_	_	2.2	_	_
Pot Cap-1 Maneuver	131	151	431	112	153	490	887	_	_	1032	_	-
Stage 1	412	426	-	451	494	00	-	_	_		_	_
Stage 2	491	487	_	366	424	_	_	_	_	_	_	-
Platoon blocked, %	.01	101		500				_	_		_	_
Mov Cap-1 Maneuver	124	143	431	98	145	490	887	_	_	1032	_	-
Mov Cap-2 Maneuver	124	143	-	98	145	-	-	_	_	-	_	_
Stage 1	397	419	_	435	476	_	_	_	_	_	_	-
Stage 2	469	469	_	328	417	_	_	_	_	_	_	_
Clago Z	100	100		520	711							
Approach	EB			WB			NB			SB		
HCM Control Delay, s	17			55.8			0.5			0.1		
HCM LOS	C			F								
<u></u>				•								
Minor Lane/Major Mvmt	t	NBL	NBT	NBR	EBLn1\	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		887	-	_	343	107	1032	-	-			
HCM Lane V/C Ratio		0.036	-	-	0.123	0.35	0.01	-	-			
HCM Control Delay (s)		9.2	-	-	17	55.8	8.5	0	-			
HCM Lane LOS		A	_	_	C	F	A	A	_			
HCM 95th %tile Q(veh)		0.1	-	_	0.4	1.4	0	-	_			
		0.1			J. 1	1.1	- 0					

Intersection								
Int Delay, s/veh	99.9							
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	W		ች	<b></b>	<b>†</b>	7		
Traffic Vol, veh/h	204	168	219	213	269	257		
Future Vol, veh/h	204	168	219	213	269	257		
Conflicting Peds, #/hr	0	0	0	0	0	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized	-	None	-	None	-			
Storage Length	0	-	950	-	_	800		
Veh in Median Storage		_	-	0	0	-		
Grade, %	0	_	_	0	0	-		
Peak Hour Factor	84	84	84	84	84	84		
Heavy Vehicles, %	0	0	0	0	2	0		
Mvmt Flow	243	200	261	254	320	306		
INTALLE LON	270	200	201	204	020	300		
Maian/Minar	Minar		1-11		Anis O			
	Minor2		Major1		/lajor2			
Conflicting Flow All	1096	320	626	0	-	0		
Stage 1	320	-	-	-	-	-		
Stage 2	776	-	-	-	-	-		
Critical Hdwy	6.4	6.2	4.1	-	-	-		
Critical Hdwy Stg 1	5.4	-	-	-	-	-		
Critical Hdwy Stg 2	5.4	-	-	-	-	-		
Follow-up Hdwy	3.5	3.3	2.2	-	-	-		
Pot Cap-1 Maneuver	~ 238	725	965	-	-	-		
Stage 1	741	-	-	-	-	-		
Stage 2	457	-	-	-	-	-		
Platoon blocked, %				-	-	-		
Mov Cap-1 Maneuver	~ 174	725	965	-	-	-		
Mov Cap-2 Maneuver		-	-	-	-	-		
Stage 1	541	-	-	-	-	-		
Stage 2	457	-	-	-	-	-		
<u> </u>								
Approach	EB		NB		SB			
HCM Control Delay, s	351.3		5.1		0			
HCM LOS	F		J.,					
Minor Long/Maior M	-4	NDI	NDT	EDL 4	CDT	CDD		
Minor Lane/Major Mvm	π	NBL		EBLn1	SBT	SBR		
Capacity (veh/h)		965	-	265	-	-		
HCM Lane V/C Ratio		0.27		1.671	-	-		
HCM Control Delay (s)		10.1	-\$	351.3	-	-		
HCM Lane LOS		В	-	F	-	-		
HCM 95th %tile Q(veh	)	1.1	-	28.1	-	-		
Notes								
·: Volume exceeds ca	pacity	\$: De	lav exc	eeds 30	00s	+: Com	outation Not Defined	*: All major volume in platoon
. Totallio oxooodo da	paorty	ψ. Δ0	.a, ono	2040 00	.50		Jakation 110t Dollilou	major volumo in piatoon

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EDL W	LDK				אמט
Traffic Vol, veh/h	26	11	<b>ሻ</b> 6	<b>↑</b> 409	<b>Љ</b> 512	18
Future Vol, veh/h	26	11	6	409	512	18
Conflicting Peds, #/hr	0	0	0	409	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	
Storage Length	0	NOHE -	850	NOHE -	-	TAOHE
Veh in Median Storage		-	-	0	0	-
Grade, %	, # 0	-	_	0	0	-
Peak Hour Factor	86	86	86	86	86	86
	0	0	0		2	
Heavy Vehicles, %				476		0
Mvmt Flow	30	13	7	476	595	21
Major/Minor I	Minor2	N	Major1	N	/lajor2	
Conflicting Flow All	1096	606	616	0		0
Stage 1	606	-	-	-	_	-
Stage 2	490	_	_	_	_	_
Critical Hdwy	6.4	6.2	4.1	_	_	_
Critical Hdwy Stg 1	5.4	- 0.2	7.1		_	_
Critical Hdwy Stg 2	5.4	-	_	_	-	
Follow-up Hdwy	3.5	3.3	2.2			
Pot Cap-1 Maneuver	238	501	974	_	-	_
Stage 1	548	JU I -	314	-	-	-
	620		-	-	-	-
Stage 2	020	-	-	-	-	-
Platoon blocked, %	000	E04	074	-	-	-
Mov Cap-1 Maneuver	236	501	974	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	620	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	20.2		0.1		0	
HCM LOS	20.2 C		J. 1		J	
TIOWI LOO	U					
Minor Lane/Major Mvm	t	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		974	-	_00	-	-
HCM Lane V/C Ratio		0.007	-	0.154	-	-
HCM Control Delay (s)		8.7	-	20.2	-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)	_	0	-	0.5	-	-

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	12	71	19	52	89	48	11	0	31	30	0	7
Future Vol, veh/h	12	71	19	52	89	48	11	0	31	30	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	77	21	57	97	52	12	0	34	33	0	8
Major/Minor N	/lajor1			Major2		ı	Minor1		N	Minor2		
Conflicting Flow All	149	0	0	98	0	0	355	377	88	368	361	123
Stage 1	-	-	-	-	-	-	114	114	-	237	237	-
Stage 2	-	-	-	-	-	-	241	263	-	131	124	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1445	-	-	1508	-	-	604	558	976	592	569	933
Stage 1	-	-	-	-	-	-	896	805	-	771	713	-
Stage 2	-	-	-	-	-	-	767	694	-	877	797	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1445	-	-	1508	-	-	576	530	976	549	540	933
Mov Cap-2 Maneuver	-	-	-	-	-	-	576	530	-	549	540	-
Stage 1	-	-	-	-	-	-	887	797	-	763	684	-
Stage 2	-	-	-	-	-	-	730	666	-	838	789	-
Ü,												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			2.1			9.6			11.5		
HCM LOS							A			В		
Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		826	1445	-		1508	-	-	595			
HCM Lane V/C Ratio		0.055		_		0.037	_		0.068			
HCM Control Delay (s)		9.6	7.5	0	-	7.5	0	-				
HCM Lane LOS		A	A	A	_	A	Ä	_	В			
HCM 95th %tile Q(veh)		0.2	0	-	-	0.1	-	-	0.2			
		J.L				J. 1			J.L			

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	02.1
Traffic Vol, veh/h	16	114	8	172	177	76	6	8	105	51	8	15
Future Vol, veh/h	16	114	8	172	177	76	6	8	105	51	8	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	17	124	9	187	192	83	7	9	114	55	9	16
Major/Minor M	1ajor1		1	Major2		ľ	Minor1		N	Minor2		
Conflicting Flow All	275	0	0	133	0	0	783	812	129	832	775	234
Stage 1	-	-	-	-	-	-	163	163	-	608	608	-
Stage 2	-	-	-	-	-	-	620	649	-	224	167	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1300	-	-	1464	-	-	314	315	926	291	331	810
Stage 1	-	-	-	-	-	-	844	767	-	486	489	-
Stage 2	-	-	-	-	-	-	479	469	-	783	764	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1300	-	-	1464	-	-	263	263	926	218	277	810
Mov Cap-2 Maneuver	-	-	-	-	-	-	263	263	-	218	277	-
Stage 1	-	-	-	-	-	-	832	756	-	479	415	-
Stage 2	-	-	-	-	-	-	390	398	-	669	753	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			3.2			11.2			24.6		
HCM LOS							В			С		
Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		714		-		1464	-	-	263			
HCM Lane V/C Ratio		0.181		_		0.128	_	_	0.306			
HCM Control Delay (s)		11.2	7.8	0	-	7.8	0	-	24.6			
HCM Lane LOS		В	A	Ā	-	Α	Ā	_	C C			
HCM 95th %tile Q(veh)		0.7	0	-	-	0.4	-	-	1.3			

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
		EDK	INDL			SDK
Lane Configurations	100	10	24	405	<b>\$</b>	101
Traffic Vol, veh/h	108	19	31	405	509	181
Future Vol, veh/h	108	19	31	405	509	181
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-		-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	117	21	34	440	553	197
N.A (N.A.)	N4'		4.1.4		1	
	Minor2		Major1		//ajor2	
Conflicting Flow All	1160	652	750	0	-	0
Stage 1	652	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	218	471	868	_	_	_
Stage 1	522	-	-	_	_	_
Stage 2	608	_	_	_	_	_
Platoon blocked, %	000			_	_	_
Mov Cap-1 Maneuver	207	471	868	-	-	_
			000	-	-	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	43.1		0.7		0	
HCM LOS	+3.1 E		0.1		U	
TIOWI LOG	Ľ					
Minor Lane/Major Mvm	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		868	-		-	-
HCM Lane V/C Ratio		0.039	-	0.611	_	-
HCM Control Delay (s)		9.3	0		-	-
HCM Lane LOS		A	A	E	_	_
HCM 95th %tile Q(veh)	)	0.1	-	3.6	_	_
How Jour Joure W(Ver)		0.1	-	3.0	-	

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
	EDL			WDK		SDK
Lane Configurations	1	4	<b>}</b>	06	77	1
Traffic Vol, veh/h	4	69	69	26	27	4
Future Vol, veh/h	4	69	69	26	27	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage		0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	5	79	79	30	31	5
Major/Minor	Major1	N	Major2		Minor2	
						0.4
Conflicting Flow All	109	0	-	0	183	94
Stage 1	-	-	-	-	94	-
Stage 2	<del>-</del>	-	-	-	89	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	
Pot Cap-1 Maneuver	1488	-	-	-	809	966
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	937	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1488	-	-	-	806	966
Mov Cap-2 Maneuver	-	_	-	_	806	-
Stage 1	_	_	_	_	928	_
Stage 2	_	_	_	_	937	_
Olage 2					501	
Approach	EB		WB		SB	
HCM Control Delay, s	0.4		0		9.6	
HCM LOS					Α	
Minor Lane/Major Mvm	<b>\</b>	EBL	EBT	WBT	WIDD	CDI n1
	IL				WBR	
Capacity (veh/h)		1488	-	-	-	824
HCM Lane V/C Ratio		0.003	-	-		0.043
HCM Control Delay (s)		7.4	0	-	-	9.6
HCM Lane LOS		A	Α	-	-	A
HCM 95th %tile Q(veh)	)	0	-	-	-	0.1

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		Ť	f)			4	
Traffic Vol, veh/h	16	3	34	29	7	5	34	531	28	5	574	14
Future Vol, veh/h	16	3	34	29	7	5	34	531	28	5	574	14
Conflicting Peds, #/hr	0	0	5	5	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	16	3	35	30	7	5	35	547	29	5	592	14
Major/Minor	Minor2			Minor1			Major1		1	Major2		
Conflicting Flow All	1247	1255	604	1265	1248	562	606	0	0	576	0	0
Stage 1	609	609	-	632	632	-	-	-	-	-	-	-
Stage 2	638	646	-	633	616	-	-	_	_	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	_	_	-	-	-
Critical Hdwy Stg 2	6.1	5.5	_	6.1	5.5	-	-	-	_	_	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	_	_	2.2	-	-
Pot Cap-1 Maneuver	152	173	502	147	175	530	982	_	_	1007	_	-
Stage 1	486	488	-	472	477	-		_	_	-	-	-
Stage 2	468	470	_	471	485	-	-	-	_	_	-	-
Platoon blocked, %	.00	., 0			.00			_	_		_	_
Mov Cap-1 Maneuver	141	165	500	130	167	530	982	-	-	1007	-	-
Mov Cap-2 Maneuver	141	165	-	130	167	-		_	_	-	-	-
Stage 1	469	484	_	455	460	-	-	-	_	_	-	-
Stage 2	440	453	_	430	481	_	_	_	_	_	_	_
2.5.30 2		.00		.00	.01							
Approach	EB			WB			NB			SB		
HCM Control Delay, s	22.1			38.5			0.5			0.1		
HCM LOS	C			E								
<u></u>				_								
Minor Lane/Major Mvm	ıt	NBL	NBT	NBR I	EBLn1\	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		982	-	-	265	149	1007	-	-			
HCM Lane V/C Ratio		0.036	-	_		0.284		_	_			
HCM Control Delay (s)		8.8	_	-	22.1	38.5	8.6	0	-			
HCM Lane LOS		A	-	_	C	E	A	Ā	_			
HCM 95th %tile Q(veh)	)	0.1	-	-	0.8	1.1	0	-	-			
2 22 3 3 3 3 4 (1011)												

Intersection						
Int Delay, s/veh	61.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y Y	EDR	INDL	ND		SDR 7
Traffic Vol, veh/h	222	211	<b>1</b> 211	<b>T</b> 233	<b>↑</b> 235	245
Future Vol, veh/h	222	211	211	233	235	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-		-			None
Storage Length	0	-	950	-	_	800
Veh in Median Storage		_	-	0	0	-
Grade, %	0	_	_	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	236	224	224	248	250	261
IVIVIIIL FIOW	230	224	224	240	250	201
	Minor2		Major1		Major2	
Conflicting Flow All	946	250	511	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	293	794	1065	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 231	794	1065	-	_	_
Mov Cap-2 Maneuver		_	-	_	-	_
Stage 1	629	-	_	_	-	-
Stage 2	498	_	_	_	_	_
Oldgo 2	100					
Annroach	EB	_	NB	_	SB	_
Approach			4.4		0	
HCM Control Delay, s	101.2 F		4.4		U	
HCM LOS	Г					
Minor Lane/Major Mvm	nt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1065	-	353	-	-
HCM Lane V/C Ratio		0.211	-	1.305	-	-
HCM Control Delay (s)		9.3	-	187.2	-	-
HCM Lane LOS		Α	-	F	-	-
HCM 95th %tile Q(veh)	)	0.8	-	21.5	-	-
Notes	'1	ф D	la		00-	
~: Volume exceeds cap	pacity	\$: De	lay exc	eeds 30	JUS	+: Com

Intersection Int Delay, s/veh	0.2					
		EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	^	<u> </u>	454	<b>♣</b>	44
Traffic Vol, veh/h	7	3	4	451	479	11
Future Vol, veh/h	7	3	4	451	479	11
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	7	3	4	470	499	11
Major/Minor M	linar?		Major1		10ior?	
	1inor2		Major1		/lajor2	
Conflicting Flow All	983	505	510	0	-	0
Stage 1	505	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	278	571	1065	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	277	571	1065	-	-	-
Mov Cap-2 Maneuver	277	-	-	-	-	-
Stage 1	608	-	-	-	-	-
Stage 2	628	-	-	-	-	-
A	EB		ND		O.D.	
Approach	EB		NB		SB	
HCM Control Delay, s	16.3		0.1		0	
HCM LOC	С					
HCM LOS						
TIOW EOS						
		NBI	NBT	FBLn1	SBT	SBR
Minor Lane/Major Mvmt		NBL 1065		EBLn1 328	SBT	SBR
Minor Lane/Major Mvmt Capacity (veh/h)		1065	-	328	-	-
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio		1065 0.004	-	328 0.032	-	-
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)		1065 0.004 8.4	-	328 0.032 16.3	- - -	- - -
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio		1065 0.004	-	328 0.032	-	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	11	78	16	41	83	42	14	0	42	44	0	10
Future Vol, veh/h	11	78	16	41	83	42	14	0	42	44	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	·-	<u>-</u>	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	85	17	45	90	46	15	0	46	48	0	11
Major/Minor N	/lajor1			Major2		N	/linor1		N	/linor2		
Conflicting Flow All	136	0	0	102	0	0	327	344	94	344	329	113
Stage 1	-	-	-	-	-	-	118	118	-	203	203	-
Stage 2	_	-	_	-	-	-	209	226	-	141	126	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	_	-	-	-	_	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1461	-	-	1503	-	-	630	582	968	614	593	945
Stage 1	-	-	-	-	-	-	891	802	-	804	737	-
Stage 2	-	-	-	-	-	-	798	721	-	867	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1461	-	-	1503	-	-	603	558	968	566	568	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	603	558	-	566	568	-
Stage 1	-	-	-	-	-	-	883	795	-	797	713	-
Stage 2	-	-	-	-	-	-	763	697	-	819	789	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			1.8			9.6			11.5		
HCM LOS							Α			В		
Minor Lane/Major Mvm	1	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		841	1461	-	-	1503	-	-	611			
HCM Lane V/C Ratio		0.072		-	-	0.03	-	-	0.096			
HCM Control Delay (s)		9.6	7.5	0	-	7.5	0	-	11.5			
HCM Lane LOS		Α	Α	Α	-	Α	Α	-	В			
HCM 95th %tile Q(veh)		0.2	0	-	-	0.1	-	-	0.3			

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	12	152	7	143	159	66	4	5	130	66	5	10
Future Vol, veh/h	12	152	7	143	159	66	4	5	130	66	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	165	8	155	173	72	4	5	141	72	5	11
Major/Minor N	/lajor1		ľ	Major2		1	Minor1		N	Minor2		
Conflicting Flow All	245	0	0	173	0	0	722	750	169	787	718	209
Stage 1	_	-	-	-	-	-	195	195	_	519	519	-
Stage 2	-	-	-	-	-	-	527	555	-	268	199	-
Critical Hdwy	4.1	_	_	4.1	-	_	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	_	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	_	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1333	-	-	1416	-	-	345	342	880	312	357	836
Stage 1	_	-	-	_	-	-	811	743	-	544	536	-
Stage 2	-	-	-	-	-	-	538	516	-	742	740	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1333	-	-	1416	-	-	300	295	880	231	308	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	300	295	-	231	308	-
Stage 1	-	-	-	-	-	-	802	735	-	538	467	-
Stage 2	-	-	-	-	-	-	458	450	-	611	732	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			3.1			10.7			26		
HCM LOS	0.5			J. I			10.7 B			20 D		
TIOWI LOG							ט			U		
Minor Long/Maior Mary		VIDL 4	EDI	ГРТ	EDD	WDI	WDT	WDD	2DL 4			
Minor Lane/Major Mvmt		<u>VBLn1</u> 781	1333	EBT	EBR	WBL 1416	WBT	WBR				
Capacity (veh/h) HCM Lane V/C Ratio		0.193		-	-		-	-	258 0.341			
		10.7	0.01	-		0.11	-					
HCM Long LOS			7.7	0	-	7.9	0	-	26			
HCM Lane LOS		B 0.7	A 0	Α	-	A 0.4	Α	-	D 1.5			
HCM 95th %tile Q(veh)		0.7	U	-	-	0.4	-	-	1.5			

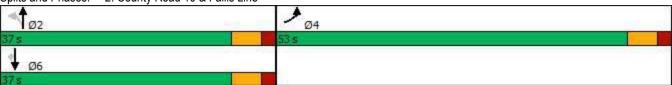
Intersection Int Delay, s/veh	10.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	CDL W	LDN	INDL	IND I	) 	אמט
Traffic Vol, veh/h	160	27	27	431	465	172
Future Vol, veh/h	160	27	27	431	465	172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	Stop -			None	-	
Storage Length	0	-	_	-	_	INUITE
Veh in Median Storage,		-	_	0	0	-
Grade, %	, # 0	-	_	0	0	-
Peak Hour Factor	92	92	92	92	92	92
	92	92			92	92
Heavy Vehicles, %			0	0		
Mvmt Flow	174	29	29	468	505	187
Major/Minor N	/linor2	N	Major1	N	Major2	
Conflicting Flow All	1125	599	692	0	-	0
Stage 1	599	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	_	-	-
Critical Hdwy Stg 1	5.4	-	_	-	-	-
Critical Hdwy Stg 2	5.4	_	-	-	-	_
Follow-up Hdwy	3.5	3.3	2.2	-	_	-
Pot Cap-1 Maneuver	229	505	912	_	_	-
Stage 1	553	-	-	-	-	-
Stage 2	597	_	-	-	-	_
Platoon blocked, %	•••			_	_	_
Mov Cap-1 Maneuver	219	505	912	_	_	_
Mov Cap-1 Maneuver	219	-	-	_	_	
Stage 1	529	_	_	_	-	
Stage 2	597	-	-	_		-
Olaye Z	331	_	-	_	_	_
Approach	EB		NB		SB	
HCM Control Delay, s	69.5		0.5		0	
	F					
HCM LOS						
HCM LOS						
	1	NRI	NRT	FBI n1	SRT	SBR
Minor Lane/Major Mvmt	t	NBL 912		EBLn1	SBT	SBR
Minor Lane/Major Mvmt	t	912	-	239	-	-
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio	t	912 0.032	-	239 0.85	-	-
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	t	912 0.032 9.1	- - 0	239 0.85 69.5	- - -	- - -
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio		912 0.032	-	239 0.85	-	-

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		सी	_ ĵ∍		¥	
Traffic Vol, veh/h	4	70	71	26	28	4
Future Vol, veh/h	4	70	71	26	28	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	e,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	5	80	82	30	32	5
			-			
	Major1		Major2		Minor2	
Conflicting Flow All	112	0	-	0	187	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	90	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	_	_	-	_	5.41	-
Follow-up Hdwy	2.209	-	_	_	3.509	3.309
Pot Cap-1 Maneuver	1484	_	_	_	804	962
Stage 1	-	_	_	_	929	-
Stage 2	_	_	-	-	936	-
Platoon blocked, %		_	_	_	000	
Mov Cap-1 Maneuver	1484				801	962
Mov Cap-1 Maneuver	1404	_	_	_	801	302
		-	-	-	925	
Stage 1	-	-	-	-		-
Stage 2	-	-	-	-	936	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.4		0		9.6	
HCM LOS					Α	
					, ,	
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR	
Capacity (veh/h)		1484	-	-	-	818
HCM Lane V/C Ratio		0.003	-	-	-	0.045
HCM Control Delay (s)		7.4	0	-	-	9.6
HCM Lane LOS		Α	Α	-	-	Α
HCM 95th %tile Q(veh	)	0	-	-	-	0.1
	,	-				

	۶	•	1	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		ሻ	<b>1</b>	<b></b>	7
Traffic Volume (vph)	246	237	169	257	211	142
Future Volume (vph)	246	237	169	257	211	142
Satd. Flow (prot)	1628	0	1785	1773	1807	1331
Flt Permitted	0.975		0.605			
Satd. Flow (perm)	1628	0	1137	1773	1807	1331
Satd. Flow (RTOR)	81					165
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	10%	0%	0%	6%	4%	20%
Shared Lane Traffic (%)	1070	0,0	<b>3</b> ,3	<b>3</b> ,3	1,7	_0,0
Lane Group Flow (vph)	562	0	197	299	245	165
Turn Type	Prot	J	Perm	NA	NA	Perm
Protected Phases	4		1 31111	2	6	1 31111
Permitted Phases	T		2		0	6
Detector Phase	4		2	2	6	6
Switch Phase	4		2		U	U
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
` /	22.0		22.0	22.0	22.0	22.0
Minimum Split (s)			37.0	37.0	37.0	37.0
Total Split (s)	53.0		41.1%	41.1%	41.1%	41.1%
Total Split (%)	58.9%					
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)	26.6		31.5	31.5	31.5	31.5
Actuated g/C Ratio	0.38		0.45	0.45	0.45	0.45
v/c Ratio	0.84		0.39	0.38	0.30	0.24
Control Delay	29.0		18.5	16.9	16.0	4.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	29.0		18.5	16.9	16.0	4.1
LOS	С		В	В	В	Α
Approach Delay	29.0			17.6	11.2	
Approach LOS	С			В	В	
Queue Length 50th (m)	56.0		16.1	24.3	19.2	0.0
Queue Length 95th (m)	83.9		40.7	54.7	44.3	10.4
Internal Link Dist (m)	333.1			460.0	687.0	
Turn Bay Length (m)	55511		95.0		30.10	80.0
Base Capacity (vph)	1132		509	794	809	687
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	0.50		0.39	0.38	0.30	0.24
	0.50		0.03	0.00	0.50	0.24
Intersection Summary						
Cycle Length: 90	12					
Actuated Cycle Length: 70	1.2					

Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 20.2 Intersection LOS: C
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15

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



Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		<b>ነ</b>	₽			4			4	
Traffic Vol, veh/h	14	224	4	51	162	33	5	8	158	65	4	10
Future Vol, veh/h	14	224	4	51	162	33	5	8	158	65	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	10	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	15	243	4	55	176	36	5	9	172	71	4	11
Major/Minor N	1ajor1		ľ	Major2		N	Minor1		N	/linor2		
Conflicting Flow All	212	0	0	247	0	0	587	597	245	670	581	194
Stage 1		-	-		-	-	275	275	-	304	304	-
Stage 2	_	_	_	-	-	-	312	322	-	366	277	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	_	_	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1370	_	-	1331	_	-	424	419	799	373	428	853
Stage 1	-	_	_	-	-	-	736	686	-	710	667	-
Stage 2	-	-	-	-	-	-	703	655	-	657	685	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1370	-	-	1331	-	-	398	397	799	276	405	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	398	397	-	276	405	-
Stage 1	-	-	-	-	-	-	726	677	-	701	640	-
Stage 2	-	-	-	-	-	-	661	628	-	503	676	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.6			11.5			21.2		
HCM LOS	0.7			1.0			11.3 B			C C		
1.0M 200												
Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SRI n1			
Capacity (veh/h)			1370	<u> </u>		1331	-	- VVDIC	307			
HCM Lane V/C Ratio			0.011	-		0.042	_	_	0.28			
HCM Control Delay (s)		11.5	7.7	0	-	7.8	-	-	21.2			
HCM Lane LOS		11.3 B	Α.	A	_	7.0 A	_	_	21.2 C			
HCM 95th %tile Q(veh)		1	0	-	-	0.1	-	-	1.1			
			U			0.1			1.1			

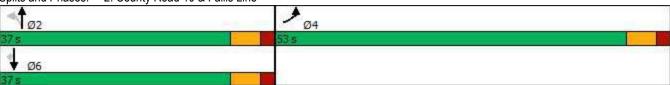
Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<b>†</b>	<b></b>	7
Traffic Vol, veh/h	169	29	10	494	343	55
Future Vol, veh/h	169	29	10	494	343	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None	-			None
			850			850
Storage Length	0	-		-	-	
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	18	0
Mvmt Flow	184	32	11	537	373	60
Major/Minor N	/linor2	ı	Major1	N	//ajor2	
Conflicting Flow All	932	373	433	0	- -	0
Stage 1	373	-	-	-	_	-
Stage 2	559	-	_	-	_	_
	6.4	6.2	4.1			
Critical Hdwy				-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	298	678	1137	-	-	-
Stage 1	701	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	295	678	1137	_	-	-
Mov Cap-2 Maneuver	295	-	-	_	_	_
Stage 1	694	_	_	_	_	_
Stage 2	576	_	_		_	_
Staye 2	3/0	-		-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	36.1		0.2		0	
HCM LOS	Е					
NA: 1 (NA: NA		NDI	NDT	EDL 4	ODT	000
Minor Lane/Major Mvm	t	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1137	-	322	-	-
HCM Lane V/C Ratio		0.01	-	0.668	-	-
HCM Control Delay (s)		8.2	-	•••	-	-
HCM Lane LOS		Α	-	Е	-	-
HCM 95th %tile Q(veh)		0	-	4.5	-	-

	۶	•	4	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<b>†</b>	<u> </u>	7
Traffic Volume (vph)	204	168	219	213	269	257
Future Volume (vph)	204	168	219	213	269	257
Satd. Flow (prot)	1717	0	1785	1879	1842	1597
Flt Permitted	0.973		0.554			
Satd. Flow (perm)	1717	0	1041	1879	1842	1597
Satd. Flow (RTOR)	69			. 5, 5		306
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%
Shared Lane Traffic (%)	070	0 70	070	070	270	070
Lane Group Flow (vph)	443	0	261	254	320	306
Turn Type	Prot	J	Perm	NA	NA	Perm
Protected Phases	4		I GIIII	2	6	I GIIII
Permitted Phases	4		2		U	6
Detector Phases	4		2	2	6	6
	4		2	2	Ö	Ö
Switch Phase	4.0		4.0	4.0	4.0	4.0
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)	19.0		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.30		0.50	0.50	0.50	0.50
v/c Ratio	0.78		0.50	0.27	0.35	0.32
Control Delay	26.4		16.3	11.3	12.0	2.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	26.4		16.3	11.3	12.0	2.7
LOS	C		В	В	В	Α
Approach Delay	26.4			13.8	7.5	
Approach LOS	C			В	Α.	
Queue Length 50th (m)	38.2		18.3	15.4	20.3	0.0
Queue Length 95th (m)	59.1		42.5	32.9	42.0	9.6
Internal Link Dist (m)	333.1		<b>¬∠.</b> J	460.0	699.0	9.0
Turn Bay Length (m)	JJJ. I		95.0	+00.0	0.00.0	80.0
Base Capacity (vph)	1322		95.0 522	942	923	953
. , , ,						
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		0.50	0.27	0.35	0.32
Intersection Summary						
Cycle Length: 90						
Astroted Cycle Length: 60	2					

Actuated Cycle Length: 62.3

Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 14.8
Intersection Capacity Utilization 62.9%
Analysis Period (min) 15

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



Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		*	f)			4			4	
Traffic Vol, veh/h	16	114	8	172	177	76	6	8	105	51	8	15
Future Vol, veh/h	16	114	8	172	177	76	6	8	105	51	8	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	17	124	9	187	192	83	7	9	114	55	9	16
Major/Minor N	//ajor1		1	Major2		ľ	Minor1		N	Minor2		
Conflicting Flow All	275	0	0	133	0	0	783	812	129	832	775	234
Stage 1	-	-	-	-	-	-	163	163	-	608	608	-
Stage 2	-	-	-	-	-	-	620	649	-	224	167	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	_	-	-	_	_	-	6.1	5.5	-	6.1	5.5	_
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1300	-	-	1464	-	-	314	315	926	291	331	810
Stage 1	-	-	-	-	-	-	844	767	_	486	489	-
Stage 2	-	-	-	_	_	-	479	469	-	783	764	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1300	-	-	1464	_	-	268	271	926	222	285	810
Mov Cap-2 Maneuver	-	-	-	-	-	-	268	271	-	222	285	-
Stage 1	-	-	-	-	-	-	832	756	-	479	426	-
Stage 2	-	-	-	-	-	-	401	409	-	669	753	-
<b>3</b> -												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			3.2			11.1			24.1		
HCM LOS				•			В			С		
Minor Lane/Major Mvm	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		720	1300	-		1464	-	-	268			
HCM Lane V/C Ratio			0.013	-		0.128	_	-	0.3			
HCM Control Delay (s)		11.1	7.8	0	-	7.8	-	_	24.1			
HCM Lane LOS		В	A	A	_	A	_	_	С			
HCM 95th %tile Q(veh)		0.7	0	-	-	0.4	-	-	1.2			
		•				•						

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<b>†</b>	<b>†</b>	7
Traffic Vol, veh/h	108	19	31	405	509	181
Future Vol, veh/h	108	19	31	405	509	181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	850
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	117	21	34	440	553	197
			-			
N.A. '. (N.A'.	<b>1</b> : 0				4 . 0	
	/linor2		//ajor1		/lajor2	
Conflicting Flow All	1061	553	750	0	-	0
Stage 1	553	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	250	537	868	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	240	537	868	-	-	-
Mov Cap-2 Maneuver	240	-	-	-	-	-
Stage 1	557	-	-	-	-	-
Stage 2	608	-	-	_	-	-
g						
Approach	EB		NB		SB	
			0.7			
HCM Control Delay, s	33.1		0.7		0	
HCM LOS	D					
Minor Lane/Major Mvmt	t	NBL	NBT I	EBLn1	SBT	SBR
Capacity (veh/h)		868	-	262	-	-
HCM Lane V/C Ratio		0.039	_	0.527	_	-
HCM Control Delay (s)		9.3	_		_	-
HCM Lane LOS		Α	-	D	-	-
HCM 95th %tile Q(veh)		0.1	-	2.8	-	-
(7011)		3.1				

	•	$\rightarrow$	4	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		ኘ	<u> </u>	<u> </u>	7
Traffic Volume (vph)	222	211	211	233	235	245
Future Volume (vph)	222	211	211	233	235	245
Satd. Flow (prot)	1711	0	1785	1879	1860	1597
Flt Permitted	0.975	U	0.604	1013	1000	1001
Satd. Flow (perm)	1711	0	1135	1879	1860	1597
Satd. Flow (RTOR)	79	U	1100	1073	1000	261
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0.94	0.94	0.94	0.94	1%	0.94
	U%	U 70	U%	U%	170	U 70
Shared Lane Traffic (%)	460	0	224	248	250	261
Lane Group Flow (vph)		U				
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)	19.5		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.31		0.50	0.50	0.50	0.50
v/c Ratio	0.79		0.40	0.30	0.30	0.30
Control Delay	26.3		14.3	11.6	11.6	2.7
•	0.0		0.0	0.0	0.0	0.0
Queue Delay						
Total Delay	26.3		14.3	11.6	11.6	2.7
LOS	C		В	10 O	B	Α
Approach Delay	26.3			12.9	7.1	
Approach LOS	С			В	A	
Queue Length 50th (m)	39.3		14.9	15.3	15.4	0.0
Queue Length 95th (m)	68.3		38.6	36.1	36.4	11.6
Internal Link Dist (m)	333.1			460.0	656.0	
Turn Bay Length (m)			95.0			80.0
Base Capacity (vph)	1309		564	934	924	925
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	0.35		0.40	0.27	0.27	0.28
Intersection Summary						
Overlant available 00						

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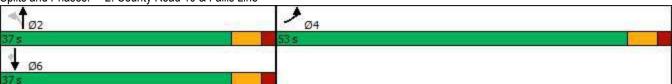
Cycle Length: 90

Actuated Cycle Length: 62.9

Natural Cycle: 45
Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.79
Intersection Signal Delay: 15.1
Intersection Capacity Utilization 64.3%
ICU Level of Service C
Analysis Period (min) 15

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



Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		7	₽			4			4	
Traffic Vol, veh/h	12	152	7	143	159	66	4	5	130	66	5	10
Future Vol, veh/h	12	152	7	143	159	66	4	5	130	66	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	165	8	155	173	72	4	5	141	72	5	11
Major/Minor N	/lajor1			Major2		ı	Minor1		N	Minor2		
Conflicting Flow All	245	0	0	173	0	0	722	750	169	787	718	209
Stage 1	-	-	-	-	-	-	195	195	-	519	519	-
Stage 2	-	-	-	-	-	-	527	555	-	268	199	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1333	-	-	1416	-	-	345	342	880	312	357	836
Stage 1	-	-	-	-	-	-	811	743	-	544	536	-
Stage 2	-	-	-	-	-	-	538	516	-	742	740	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1333	-	-	1416	-	-	305	301	880	235	315	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	305	301	-	235	315	-
Stage 1	-	-	-	-	-	-	802	735	-	538	478	-
Stage 2	-	-	-	-	-	-	468	460	-	611	732	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			3.1			10.7			25.5		
HCM LOS							В			D		
Minor Lane/Major Mvm	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		783	1333	-	-	1416	-	-	262			
HCM Lane V/C Ratio		0.193	0.01	-	-	0.11	-	-	0.336			
HCM Control Delay (s)		10.7	7.7	0	-	7.9	_	-				
HCM Lane LOS		В	Α	A	-	Α	-	-	D			
HCM 95th %tile Q(veh)		0.7	0	-	-	0.4	-	-	1.4			

Intersection						
Int Delay, s/veh	7.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W.	וטו	NDL	<u> </u>	<u> </u>	7
Traffic Vol, veh/h	160	27	27	<b>T</b> 431	<b>T</b> 465	172
Future Vol. veh/h	160	27	27	431	465	172
, , , , , , , , , , , , , , , , , , ,						
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	
Storage Length	0	-	850	-	-	850
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	174	29	29	468	505	187
Major/Minor N	/linor2	N	Major1	ı	Major2	
Conflicting Flow All	1031	505	692	0	-	0
Stage 1	505	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	261	571	912	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	253	571	912	-	-	-
Mov Cap-2 Maneuver	253	_	_	_	_	_
Stage 1	590	_	-	_	_	_
Stage 2	597	_	_	_	_	_
Olage 2	551					
Approach	EB		NB		SB	
HCM Control Delay, s	47.7		0.5		0	
HCM LOS	Ε					
Minor Long /Maior M		NDI	NDT	CDL 4	CDT	CDD
Minor Lane/Major Mvm		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		912	-	0	-	-
HCM Lane V/C Ratio		0.032	-	0.739	-	-
HCM Control Delay (s)		9.1	-	47.7	-	-
HCM Lane LOS		Α	-	Е	-	-
HCM 95th %tile Q(veh)		0.1	-	5.3	-	-

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ች	₽			4	
Traffic Vol, veh/h	4	5	35	25	2	11	35	598	42	6	350	4
Future Vol, veh/h	4	5	35	25	2	11	35	598	42	6	350	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	<u>-</u>	<u>.</u>	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-
Veh in Median Storage,	# -	0	_	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	20	0	0	0	0	6	0	0	4	67
Mvmt Flow	5	6	42	30	2	13	42	712	50	7	417	5
Major/Minor N	/linor2			Minor1			Major1		N	Major2		
Conflicting Flow All	1263	1280	420	1279	1257	737	422	0	0	762	0	0
Stage 1	434	434	-	821	821	-	-	-	-	-	-	-
Stage 2	829	846	-	458	436	-	-	_	_	-	-	-
Critical Hdwy	7.1	6.5	6.4	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	_	_	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.48	3.5	4	3.3	2.2	_	_	2.2	-	-
Pot Cap-1 Maneuver	148	167	597	144	173	422	1148	-	-	859	-	-
Stage 1	604	585	-	371	391		-	_	_	-	-	-
Stage 2	368	381	-	587	583	-	-	-	_	-	-	-
Platoon blocked, %								-	_		-	-
Mov Cap-1 Maneuver	137	159	597	125	165	422	1148	-	-	859	-	-
Mov Cap-2 Maneuver	137	159	-	125	165	-	-	-	-	-	-	-
Stage 1	582	579	-	357	377	-	-	-	-	-	-	_
Stage 2	341	367	-	534	577	-	-	-	_	-	-	-
<b>y</b> -												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	16.4			36.1			0.4			0.2		
HCM LOS	С			Ε								
Minor Lane/Major Mvm		NBL	NBT	NBR I	EBLn1\	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1148	-	_	369	160	859	-	-			
HCM Lane V/C Ratio		0.036	-	-	0.142	0.283	0.008	-	-			
HCM Control Delay (s)		8.3	-	-	16.4	36.1	9.2	0	-			
HCM Lane LOS		Α	-	-	С	Е	Α	Α	-			
HCM 95th %tile Q(veh)		0.1	-	-	0.5	1.1	0	-	-			
,												

	•	$\rightarrow$	1	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ኘ	<u> </u>	<u> </u>	7
Traffic Volume (vph)	247	238	170	272	223	142
Future Volume (vph)	247	238	170	272	223	142
Satd. Flow (prot)	1628	0	1785	1773	1807	1331
Flt Permitted	0.975	0	0.589	1110	1301	1301
Satd. Flow (perm)	1628	0	1107	1773	1807	1331
Satd. Flow (RTOR)	81	U	1101	1115	1001	165
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	10%	0.86	0.00	6%	4%	20%
	1076	0 %	0 70	0 70	4 70	20%
Shared Lane Traffic (%)	FC4	0	100	246	250	105
Lane Group Flow (vph)	564	0	198	316	259	165
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)	26.7		31.5	31.5	31.5	31.5
Actuated g/C Ratio	0.38		0.45	0.45	0.45	0.45
v/c Ratio	0.85		0.40	0.40	0.43	0.43
	29.1		19.0	17.3	16.2	4.1
Control Delay	0.0		0.0	0.0	0.0	
Queue Delay						0.0
Total Delay	29.1		19.0	17.3	16.2	4.1
LOS	C		В	B	B	Α
Approach Delay	29.1			17.9	11.5	
Approach LOS	С			В	В	
Queue Length 50th (m)	56.2		16.3	26.1	20.5	0.0
Queue Length 95th (m)	84.0		41.6	58.4	47.1	10.5
Internal Link Dist (m)	333.1			460.0	687.0	
Turn Bay Length (m)			95.0			80.0
Base Capacity (vph)	1130		495	793	808	686
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	0.50		0.40	0.40	0.32	0.24
			30	3		J '
Intersection Summary Cycle Length: 90						

Actuated Cycle Length: 70.3

Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 20.3 Intersection LOS: C
Intersection Capacity Utilization 64.4% ICU Level of Service C
Analysis Period (min) 15

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

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
	 ₩	EDR				SDR
Lane Configurations		1	ች	<b>†</b>	<b>}</b>	22
Traffic Vol, veh/h	8	4	8	512	358	23
Future Vol, veh/h	8	4	8	512	358	23
Conflicting Peds, #/hr	0	0	0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-		-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	6	5	13
Mvmt Flow	9	5	9	602	421	27
N.A /N.A	d'		4 4		4	
	1inor2		Major1		Major2	
Conflicting Flow All	1055	435	448	0	-	0
Stage 1	435	-	-	-	-	-
Stage 2	620	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	_	_	_	_
Follow-up Hdwy	3.5	3.3	2.2	-	_	-
Pot Cap-1 Maneuver	252	625	1123	_	-	-
Stage 1	657	-		_	_	_
Stage 2	540	-				_
Platoon blocked, %	J <del>4</del> 0	-	-	-	_	-
	050	COF	4400	-	-	-
Mov Cap-1 Maneuver	250	625	1123	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	652	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	17		0.1		0	
HCM LOS	C		U. I		U	
I IOIVI LUO	U					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1123	-		-	-
HCM Lane V/C Ratio		0.008	-	0.045	-	-
HCM Control Delay (s)		8.2	_	17	-	_
HCM Lane LOS		Α	_	C	_	_
HCM 95th %tile Q(veh)		0	_	0.1	_	_
HOW JOHN JOHN WINE WINE		U	_	0.1	_	_

Movement   EBL   EBT   EBR   WBL   WBT   WBR   NBL   NBT   NBR   SBL   SBT   SBR
Traffic Vol, veh/h
Traffic Vol, veh/h         4         142         6         17         142         16         17         0         48         45         0         11           Future Vol, veh/h         4         142         6         17         142         16         17         0         48         45         0         11           Conflicting Peds, #/hr         0
Future Vol, veh/h         4         142         6         17         142         16         17         0         48         45         0         11           Conflicting Peds, #/hr         0
Conflicting Peds, #/hr         0
Sign Control         Free         Stop         Stop         Stop         Stop         Stop         Stop         Stop         Stop         None         -         -         None         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         0         0
RT Channelized         -         None         -         -         0         -         0         -         -         0         -         -         0         -         -         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         12         0         12         0
Storage Length       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       -       -       0       0       -       -       0       12       0       12       0       12       0       12       0       12       0       12       0       12       0       0       12       0       0       12       0       0
Veh in Median Storage, # - 0 - 0 -
Grade, %         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         -         -         0         0         -         -         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         12           Major/Minor         Major/Minor         Major/Minor         Major/Minor         Major/Minor         Minor1         Minor2         Minor2           Conflicting Flow All         171         0         0         161         0         0         371         373         158         391         368         163           Stage 1         -         -         <
Peak Hour Factor         92
Heavy Vehicles, %       0       10       0       0       20       12         Major/Minor       Major       Major       Minor       Minor       Minor       Minor       Conflicting Flow All       171       0       0       161       0       0       371       373       158       391       368       163       163       Stage 1       -       -       -       -       -       -       -       166       166       -       199       199       -
Mount Flow         4         154         7         18         154         17         18         0         52         49         0         12           Major/Minor         Major1         Major2         Minor1         Minor2         Minor2           Conflicting Flow All         171         0         0         161         0         0         371         373         158         391         368         163           Stage 1         -         -         -         -         -         166         166         -         199         199         -           Stage 2         -         -         -         -         -         205         207         -         192         169         -
Major/Minor         Major1         Major2         Minor1         Minor2           Conflicting Flow All         171         0         0         161         0         0         371         373         158         391         368         163           Stage 1         -         -         -         -         -         166         166         -         199         199         -           Stage 2         -         -         -         -         205         207         -         192         169         -
Conflicting Flow All       171       0       0       161       0       0       371       373       158       391       368       163         Stage 1       -       -       -       -       -       166       166       -       199       199       -         Stage 2       -       -       -       -       205       207       -       192       169       -
Conflicting Flow All       171       0       0       161       0       0       371       373       158       391       368       163         Stage 1       -       -       -       -       -       166       166       -       199       199       -         Stage 2       -       -       -       -       205       207       -       192       169       -
Conflicting Flow All       171       0       0       161       0       0       371       373       158       391       368       163         Stage 1       -       -       -       -       -       166       166       -       199       199       -         Stage 2       -       -       -       -       205       207       -       192       169       -
Stage 1       -       -       -       -       -       166       166       -       199       199       -         Stage 2       -       -       -       -       205       207       -       192       169       -
Stage 2 205 207 - 192 169 -
OHIDALITUWY 4.1 4.1 7.1 U.J U.Z 7.1 U.J U.Z
Critical Hdwy Stg 1 6.1 5.5 - 6.1 5.5 -
Critical Hdwy Stg 2 6.1 5.5 - 6.1 5.5 -
Follow-up Hdwy 2.2 2.2 3.5 4 3.3 3.5 4 3.3
Pot Cap-1 Maneuver 1418 1430 589 561 893 572 564 887
Stage 1 841 765 - 807 740 -
Stage 2 802 734 - 814 763 -
Platoon blocked, %
Mov Cap-1 Maneuver 1418 1430 574 551 893 531 554 887
Mov Cap-2 Maneuver 574 551 - 531 554 -
Stage 1 838 763 - 805 730 -
Stage 2 780 724 - 764 761 -
- 100 121 104 101
Approach EB WB NB SB
HCM Control Delay, s 0.2 0.7 10.1 12
HCM LOS B B
TION LOO
Minor Lane/Major Mvmt NBLn1 EBL EBT EBR WBL WBT WBR SBLn1
Capacity (veh/h) 780 1418 1430 576
HCM Lane V/C Ratio 0.091 0.003 0.013 0.106
, · · · · · · · · · · · · · · · · · · ·
HCM Lane LOS B A A - A A - B
HCM 95th %tile Q(veh) 0.3 0 0 0.4

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			₽			4			4	
Traffic Vol, veh/h	14	226	4	51	163	33	5	8	158	65	4	10
Future Vol, veh/h	14	226	4	51	163	33	5	8	158	65	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	10	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	15	246	4	55	177	36	5	9	172	71	4	11
Major/Minor N	1ajor1			Major2		N	Minor1		N	/linor2		
Conflicting Flow All	213	0	0	250	0	0	591	601	248	674	585	195
Stage 1	-	-	-	-	-	-	278	278		305	305	-
Stage 2	-	-	-	-	_	-	313	323	-	369	280	-
Critical Hdwy	4.1	-	-	4.1	_	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	_	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	_	_	_	-	_	-	6.1	5.5	_	6.1	5.5	-
Follow-up Hdwy	2.2	_	_	2.2	_	_	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1369	_	-	1327	_	-	422	417	796	371	426	851
Stage 1	-	-	_	-	_	-	733	684	-	709	666	-
Stage 2	-	-	-	-	_	-	702	654	-	655	683	-
Platoon blocked, %		-	_		_	-						
Mov Cap-1 Maneuver	1369	-	-	1327	-	-	396	395	796	274	403	851
Mov Cap-2 Maneuver	-	-	_	-	_	-	396	395	-	274	403	-
Stage 1	-	-	-	-	_	-	723	675	-	700	639	-
Stage 2	-	-	_	-	_	-	660	627	-	500	674	-
2 <b>3</b> 2 <u>-</u>												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.6			11.5			21.4		
HCM LOS	0.4			1.0			11.5 B			21.4 C		
TOW LOO							U			U		
Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	CDI n1			
Capacity (veh/h)		739	1369	<u> </u>		1327	VVDI	WDR -	305			
HCM Lane V/C Ratio		0.252		-		0.042	-		0.282			
HCM Control Delay (s)		11.5	7.7	0	-	7.8		-				
HCM Lane LOS				A	-	7.0 A	-	-	21.4 C			
HCM 95th %tile Q(veh)		B 1	A 0	A -	-	0.1	-	-	1.1			
HOW BOUT WITH Q(VEII)		1	U	-	-	U. I	-	-	1.1			

Novement	Intersection						
Movement		7					
Lane Configurations			EDD	NDI	NDT	CDT	CDD
Traffic Vol, veh/h 169 29 10 510 355 58 Future Vol, veh/h 169 29 10 510 355 58 Future Vol, veh/h 169 29 10 510 355 58 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			FBK				
Future Vol, veh/h Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Peds, #/hr O Conflicting Free Conflicting Free Conflicting Flow Conflicting Flow All Conflicting Flow All Conflicting Flow All Conflicting Flow All Conflicting Hdwy Conflicting Hdwy Conflicting Hdwy Conflicting Hdwy Conflicting Hdwy Conflicting Flow All Conflicting Flow Conflicting Flow Conflicting Flow Conflicting Flow Conflicting Flow Conflicting Free Conflicting Flow Conflicting	•		00				7
Conflicting Peds, #/hr         0							55
Sign Control         Stop RT Channelized         Stop None         Free RT Channelized         Free RT Channelized         None         850           Veh in Median Storage, %         0<	· ·						55
RT Channelized         - None         - None         - None         - None         Storage Length         0         - 850         - 90         0         0         0         0         0         0         0         0         0         184         32         11         554         386         60           Mornt Flow         184         32         11         554         386         60         60           Major/Minor         Minor         Minor         Major         Major         Major         Major           Conflicting Flow All         962         386         446         0         - 60         60         10         60         10         60         10         10							_ 0
Storage Length				Free			
Veh in Median Storage, #         0         -         -         0         0           Grade, %         0         -         -         0         0           Peak Hour Factor         92         92         92         92         92         92           Heavy Vehicles, %         0         0         0         6         18         0           Mvmt Flow         184         32         11         554         386         60           Mover Mill         962         386         446         0         -         0         0         64         60         -         0         0         0         64         60         -         0         0         0         0         64         60         -         0 <t< td=""><td></td><td></td><td>None</td><td></td><td>None</td><td>-</td><td></td></t<>			None		None	-	
Grade, %         0         -         -         0         0           Peak Hour Factor         92			-	850			850
Peak Hour Factor         92			-	-		-	-
Heavy Vehicles, %		-					-
Mymt Flow         184         32         11         554         386         60           Major/Minor         Minor2         Major1         Major2           Conflicting Flow All         962         386         446         0         -         0           Stage 1         386         -	Peak Hour Factor	92	92	92	92	92	92
Major/Minor         Minor2         Major1         Major2           Conflicting Flow All         962         386         446         0         -         0           Stage 1         386         -         -         -         -         -           Stage 2         576         -         -         -         -         -           Critical Hdwy         6.4         6.2         4.1         -	Heavy Vehicles, %	0	0	0	6	18	0
Stage 1   386	Mvmt Flow	184	32	11	554	386	60
Stage 1   386							
Stage 1   386	Majar/Minar N	Air and		11-:1		1-:0	_
Stage 1       386       -       -       -       -         Stage 2       576       -       -       -       -         Critical Hdwy       6.4       6.2       4.1       -       -         Critical Hdwy Stg 1       5.4       -       -       -       -         Critical Hdwy Stg 2       5.4       -       -       -       -         Follow-up Hdwy       3.5       3.3       2.2       -       -         Pot Cap-1 Maneuver       286       666       1125       -       -         Stage 1       691       -       -       -       -         Stage 2       566       -       -       -       -         Mov Cap-1 Maneuver       283       666       1125       -       -         Stage 1       684       -       -       -       -         Stage 2       566       -       -       -       -         Approach       EB       NB       SB         HCM Control Delay, s       39.5       0.2       0         Acceptable of the control Delay (s)       8.2       -       30.9       -         Acceptable of the control Delay (s) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Stage 2       576       -       -       -       -         Critical Hdwy       6.4       6.2       4.1       -       -         Critical Hdwy Stg 1       5.4       -       -       -       -         Critical Hdwy Stg 2       5.4       -       -       -       -         Follow-up Hdwy       3.5       3.3       2.2       -       -         Pot Cap-1 Maneuver       286       666       1125       -       -         Stage 1       691       -       -       -       -         Stage 2       566       -       -       -       -         Platoon blocked, %       -       -       -       -       -         Mov Cap-1 Maneuver       283       666       1125       -       -         Stage 1       684       -       -       -       -         Stage 2       566       -       -       -       -         Approach       EB       NB       SB         HCM Control Delay, s       39.5       0.2       0         Minor Lane/Major Mvmt       NBL       NBT EBLn1       SBT       SBF         Minor Lane/Major Mvmt <t< td=""><td></td><td></td><td></td><td>446</td><td>0</td><td>-</td><td>0</td></t<>				446	0	-	0
Critical Hdwy         6.4         6.2         4.1         -         -           Critical Hdwy Stg 1         5.4         -         -         -         -           Critical Hdwy Stg 2         5.4         -         -         -         -           Follow-up Hdwy         3.5         3.3         2.2         -         -         -           Pot Cap-1 Maneuver         286         666         1125         - </td <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td>-</td>				-	-		-
Critical Hdwy Stg 1 5.4 Critical Hdwy Stg 2 5.4 Follow-up Hdwy 3.5 3.3 2.2 Follow-up Hdwy 3.5 3.3 2.2 Follow-up Hdwy 3.5 3.3 2.2 Follow-up Hdwy 3.5 3.3 2.2 Follow-up Hdwy 3.5 3.3 2.2 Follow-up Hdwy 3.5 3.3 2.2 Follow-up Hdwy 3.5 3.3 2.2 Follow-up Hdwy 286 666 1125 Follow-up Hdwy 287 666 Follow-up Hdwy 288 666 1125 - Follow-up Hdwy 288 666 1125 - Follow-up Hdwy 288 666 112				-	-	-	-
Critical Hdwy Stg 2 5.4	•		6.2	4.1	-	-	-
Follow-up Hdwy 3.5 3.3 2.2 Pot Cap-1 Maneuver 286 666 1125 Stage 1 691			-	-	-	-	-
Pot Cap-1 Maneuver         286         666         1125         -         -           Stage 1         691         -         -         -         -           Stage 2         566         -         -         -         -           Platoon blocked, %         -         -         -         -         -           Mov Cap-1 Maneuver         283         666         1125         -         -           Mov Cap-2 Maneuver         283         -         -         -         -           Stage 1         684         -         -         -         -           Stage 2         566         -         -         -         -           Approach         EB         NB         SB           HCM Control Delay, s         39.5         0.2         0           HCM LOS         E           Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBF           Capacity (veh/h)         1125         -         309         -           HCM Lane V/C Ratio         0.01         -         0.696         -           HCM Control Delay (s)         8.2         -         39.5         -           <	Critical Hdwy Stg 2				-	-	-
Stage 1         691         -	Follow-up Hdwy				-	-	-
Stage 2         566         -         -         -           Platoon blocked, %         -         -         -           Mov Cap-1 Maneuver         283         666         1125         -           Mov Cap-2 Maneuver         283         -         -         -           Stage 1         684         -         -         -           Stage 2         566         -         -         -           Approach         EB         NB         SB           HCM Control Delay, s         39.5         0.2         0           HCM LOS         E    Minor Lane/Major Mvmt  NBL  NBT EBLn1  SBT  SBF  Capacity (veh/h)  1125  - 309  - HCM Lane V/C Ratio  0.01  - 0.696  - HCM Control Delay (s)  R.2  - 39.5  - HCM Lane LOS  A  - E  - Control Delay (s)  R.2  - Control Delay (s)  R.2  - Control Delay (s)  R.3  - Control Delay (s)  R.4  - E  - Control Delay (s)  R.5  - Control Delay (s)  R.7  - Contro	Pot Cap-1 Maneuver		666	1125	-	-	-
Platoon blocked, %	Stage 1	691	-	-	-	-	-
Mov Cap-1 Maneuver         283         666         1125         -         -           Mov Cap-2 Maneuver         283         - <td>Stage 2</td> <td>566</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	Stage 2	566	-	-	-	-	-
Mov Cap-2 Maneuver         283         -	Platoon blocked, %				-	-	-
Mov Cap-2 Maneuver         283         -	Mov Cap-1 Maneuver	283	666	1125	-	-	-
Stage 1         684         -		283	-	-	-	-	-
Stage 2         566         -         -         -         -         -           Approach         EB         NB         SB           HCM Control Delay, s         39.5         0.2         0           HCM LOS         E             Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBF           Capacity (veh/h)         1125         -         309         -           HCM Lane V/C Ratio         0.01         -         0.696         -           HCM Control Delay (s)         8.2         -         39.5         -           HCM Lane LOS         A         -         E         -	·		_	-	-	_	_
Approach         EB         NB         SB           HCM Control Delay, s         39.5         0.2         0           HCM LOS         E           Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBF           Capacity (veh/h)         1125         - 309         -         -           HCM Lane V/C Ratio         0.01         - 0.696         -         -           HCM Control Delay (s)         8.2         - 39.5         -           HCM Lane LOS         A         - E         -			_	_	-	-	_
HCM Control Delay, s   39.5   0.2   0	5g5 =						
HCM Control Delay, s   39.5   0.2   0							
Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBF           Capacity (veh/h)         1125         - 309         -           HCM Lane V/C Ratio         0.01         - 0.696         -           HCM Control Delay (s)         8.2         - 39.5         -           HCM Lane LOS         A         -         E							
Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBF           Capacity (veh/h)         1125         -         309         -           HCM Lane V/C Ratio         0.01         -         0.696         -           HCM Control Delay (s)         8.2         -         39.5         -           HCM Lane LOS         A         -         E         -				0.2		0	
Capacity (veh/h)       1125       - 309       -         HCM Lane V/C Ratio       0.01       - 0.696       -         HCM Control Delay (s)       8.2       - 39.5       -         HCM Lane LOS       A       -       E       -	HCM LOS	E					
Capacity (veh/h)       1125       - 309       -         HCM Lane V/C Ratio       0.01       - 0.696       -         HCM Control Delay (s)       8.2       - 39.5       -         HCM Lane LOS       A       -       E       -							
Capacity (veh/h)       1125       - 309       -         HCM Lane V/C Ratio       0.01       - 0.696       -         HCM Control Delay (s)       8.2       - 39.5       -         HCM Lane LOS       A       -       E       -	Minor Lane/Major Mymt	1	NRI	MRT	FRI n1	SRT	SBB
HCM Lane V/C Ratio       0.01       - 0.696       -         HCM Control Delay (s)       8.2       - 39.5       -         HCM Lane LOS       A       -       E       -							
HCM Control Delay (s) 8.2 - 39.5 - HCM Lane LOS A - E -							-
HCM Lane LOS A - E -				-			-
				-			-
				-			-
HCM 95th %tile Q(veh) 0 - 4.9 -	HOW YOUR WINE W(VEN)		U	-	4.9	-	-

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	EDL	<u>- EB I</u>		WDN	SBL W	SDN
Traffic Vol, veh/h	11	<b>€</b> 50	<b>♣</b> 63	104	<b>'T'</b> 91	11
Future Vol, veh/h	11	50	63	104	91	11
Conflicting Peds, #/hr	0	0	03	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-		Stop -	None
Storage Length	-	INOHE -	_	NOHE -	0	INOHE -
Veh in Median Storage	#	0	0	-	0	-
Grade, %	,# -	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
	1	1	1			
Heavy Vehicles, %		57		1	105	13
Mvmt Flow	13	5/	72	120	105	13
Major/Minor N	Major1	N	Major2		Minor2	
Conflicting Flow All	192	0	-	0	215	132
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	_	-	-	5.41	-
Critical Hdwy Stg 2	_	_	_	-	5.41	_
Follow-up Hdwy	2.209	_	_	_		3.309
Pot Cap-1 Maneuver	1388	_	-	-	775	920
Stage 1	-	_	-	-	897	-
Stage 2	_	_	_	-	943	_
Platoon blocked, %		_	_	_	0.10	
Mov Cap-1 Maneuver	1388	_	_	_	767	920
Mov Cap-2 Maneuver	-	_	_	_	767	-
Stage 1	_		_	_	888	_
Stage 2	_	-	_	-	943	_
Stage 2	-	-	-	-	343	-
Approach	EB		WB		SB	
HCM Control Delay, s	1.4		0		10.4	
HCM LOS					В	
Minor Lane/Major Mvm	t	EBL	EBT	WBT	WRR	SBLn1
Capacity (veh/h)		1388	-	-	-	781
HCM Lane V/C Ratio		0.009	_	_	_	0.15
HCM Control Delay (s)		7.6	0	_	_	10.4
HCM Lane LOS		7.0 A	A	-	- -	10.4 B
HCM 95th %tile Q(veh)		0				0.5
HOW SOUL WILLE C(Ven)		U	-	-	-	0.5

Intersection													
Int Delay, s/veh	2.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		4			4		ሻ	ĵ.			4		
Traffic Vol, veh/h	4	1	33	29	1	4	29	470	23	10	644	11	
Future Vol, veh/h	4	1	33	29	1	4	29	470	23	10	644	11	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-	
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88	
Heavy Vehicles, %	0	0	0	25	0	33	0	1	0	0	1	0	
Mvmt Flow	5	1	38	33	1	5	33	534	26	11	732	13	
Major/Minor M	linor2			Minor1			Major1		N	Major2			
	1377	1387	739	1393	1380	547	745	0	0	560	0	0	
Stage 1	761	761	-	613	613	-	-	_	-	-	_	_	
Stage 2	616	626	-	780	767	-	-	_	_	-	-	-	
Critical Hdwy	7.1	6.5	6.2	7.35	6.5	6.53	4.1	_	_	4.1	-	-	
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	_	-	-	_	-	-	-	
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	_	_	-	-	-	_	
Follow-up Hdwy	3.5	4	3.3	3.725	4	3.597	2.2	-	-	2.2	-	-	
Pot Cap-1 Maneuver	123	144	421	106	146	482	872	-	-	1021	-	-	
Stage 1	401	417	-	443	486	-	-	-	-	-	-	-	
Stage 2	481	480	-	356	414	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	116	136	421	92	138	482	872	-	-	1021	-	-	
Mov Cap-2 Maneuver	116	136	-	92	138	-	-	-	-	-	-	-	
Stage 1	386	409	-	426	468	-	-	-	-	-	-	-	
Stage 2	457	462	-	318	407	-	-	-	-	-	-	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	18.2			59.6			0.5			0.1			
HCM LOS	C			F						<i>-</i>			
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBI n1	SBL	SBT	SBR				
Capacity (veh/h)		872	-		316	103	1021		-				
HCM Lane V/C Ratio		0.038	_	_		0.375		_	_				
HCM Control Delay (s)		9.3	_	_	18.2	59.6	8.6	0	_				
HCM Lane LOS		Α	_	_	C	F	Α	A	_				
HCM 95th %tile Q(veh)		0.1	_	-	0.5	1.5	0	-	_				
113111 3311 701110 Q(VOII)		V. 1			3.0	1.0	U						

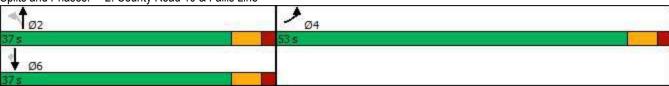
	•	$\rightarrow$	1	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDIK	ሻ		<u> </u>	7
Traffic Volume (vph)	204	170	221	225	285	258
Future Volume (vph)	204	170	221	225	285	258
Satd. Flow (prot)	1717	0	1785	1879	1842	1597
Flt Permitted	0.973	- 0	0.536	1313	1072	1001
Satd. Flow (perm)	1717	0	1007	1879	1842	1597
Satd. Flow (RTOR)	70	U	1001	1073	1042	307
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0.04	0.04	0.04	0.04	2%	0.04
Shared Lane Traffic (%)	0 70	0 70	0 70	0 70	2 /0	0 /0
	445	0	263	268	339	307
Lane Group Flow (vph)	Prot	U	Perm	NA	NA NA	Perm
Turn Type Protected Phases			Perm			Perm
	4		0	2	6	
Permitted Phases	4		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)	19.1		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.31		0.50	0.50	0.50	0.50
v/c Ratio	0.31		0.50	0.30	0.30	0.30
	26.3			11.5	12.3	2.7
Control Delay			17.0			
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	26.3		17.0	11.5	12.3	2.7
LOS	С		В	В	В	Α
Approach Delay	26.3			14.2	7.7	
Approach LOS	С			В	Α	
Queue Length 50th (m)	38.3		18.8	16.4	21.9	0.0
Queue Length 95th (m)	59.1		44.1	34.9	44.8	9.6
Internal Link Dist (m)	333.1			460.0	699.0	
Turn Bay Length (m)			95.0			80.0
Base Capacity (vph)	1320		504	941	922	953
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		0.52	0.28	0.37	0.32
Intersection Summary						
Overland an other OO						

Synchro 10 Report 04/03/2020

Cycle Length: 90

Actuated Cycle Length: 62.4

Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 15.0
Intersection Capacity Utilization 64.0%
Analysis Period (min) 15
Intersection Service B



Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL W	EDK				SDK
•		11	<b>້</b> ງ	424	<b>}</b>	18
Traffic Vol, veh/h	26 26	11	6	421	528 528	
Future Vol, veh/h			6	421		18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	30	13	7	490	614	21
Major/Minor	Minor?		Anior1		laier?	
	Minor2		Major1		/lajor2	
Conflicting Flow All	1129	625	635	0	-	0
Stage 1	625	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	228	488	958	-	-	-
Stage 1	537	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	488	958	-	_	_
Mov Cap-2 Maneuver	226	-	_	_	_	_
Stage 1	533	_	_	_	_	_
Stage 2	611	_	_	_	_	_
Olage 2	011					
Approach	EB		NB		SB	
HCM Control Delay, s	20.9		0.1		0	
HCM LOS	С					
NASa an Lana (NAS) - NA		NDI	NDT	EDL 4	ODT	ODB
Minor Lane/Major Mvm	τ	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		958	-	_00	-	-
HCM Lane V/C Ratio		0.007	-	0.16	-	-
HCM Control Delay (s)		8.8	-	20.9	-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)		0	-	0.6	-	-
. ,						

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	12	72	19	52	91	48	11	0	31	30	0	7
Future Vol, veh/h	12	72	19	52	91	48	11	0	31	30	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	78	21	57	99	52	12	0	34	33	0	8
Major/Minor N	/lajor1		1	Major2		ľ	Minor1		N	Minor2		
Conflicting Flow All	151	0	0	99	0	0	358	380	89	371	364	125
Stage 1	-	_	-	-	-	-	115	115	-	239	239	_
Stage 2	-	-	-	-	-	-	243	265	-	132	125	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1442	-	-	1507	-	-	601	556	975	589	567	931
Stage 1	-	-	-	-	-	-	895	804	-	769	711	-
Stage 2	-	-	-	-	-	-	765	693	-	876	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1442	-	-	1507	-	-	573	527	975	546	538	931
Mov Cap-2 Maneuver	-	-	-	-	-	-	573	527	-	546	538	-
Stage 1	-	-	-	-	-	-	886	796	-	761	681	-
Stage 2	-	-	-	-	-	-	727	664	-	837	788	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			2			9.6			11.5		
HCM LOS							Α			В		
Minor Lane/Major Mvmt	1	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR:	SBLn1			
Capacity (veh/h)		824		-		1507	-	-	592			
HCM Lane V/C Ratio		0.055		_		0.038	_		0.068			
HCM Control Delay (s)		9.6	7.5	0	_	7.5	0	_	11.5			
HCM Lane LOS		Α.	Α.	A	_	Α.	A	_	В			
HCM 95th %tile Q(veh)		0.2	0	-	_	0.1	-	_	0.2			
		J.L	J			J. 1			J.L			

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			₽			4			4	
Traffic Vol, veh/h	16	115	8	172	179	76	6	8	105	51	8	15
Future Vol, veh/h	16	115	8	172	179	76	6	8	105	51	8	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	17	125	9	187	195	83	7	9	114	55	9	16
Major/Minor N	/lajor1			Major2		N	Minor1		N	Minor2		
Conflicting Flow All	278	0	0	134	0	0	787	816	130	836	779	237
Stage 1	-	-	-	-	-	-	164	164	-	611	611	-
Stage 2	-	-	-	-	-	-	623	652	-	225	168	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1296	-	-	1463	-	-	312	314	925	289	330	807
Stage 1	-	-	-	-	-	-	843	766	-	484	487	-
Stage 2	-	-	-	-	-	-	477	467	-	782	763	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1296	-	-	1463	-	-	267	270	925	221	284	807
Mov Cap-2 Maneuver	-	-	-	-	-	-	267	270	-	221	284	-
Stage 1	-	-	-	-	-	-	831	755	-	477	425	-
Stage 2	-	-	-	-	-	-	399	407	-	668	752	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			3.2			11.1			24.2		
HCM LOS							В			С		
Minor Lane/Major Mvmt	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		719		-		1463	-	-	267			
HCM Lane V/C Ratio			0.013	-		0.128	-		0.301			
HCM Control Delay (s)		11.1	7.8	0	-	7.8	-	-				
HCM Lane LOS		В	Α	A	-	A	-	-	C			
HCM 95th %tile Q(veh)		0.7	0	-	-	0.4	-	-	1.2			
(/011)												

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	₩	LDIN	NDE T	<u> </u>	<u>□ □ □ □ □</u>	7
Traffic Vol, veh/h	108	19	31	418	525	181
Future Vol, veh/h	108	19	31	418	525	181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	Stop -		-	None	-	None
Storage Length	0	-	850	-	_	850
Veh in Median Storage		_	-	0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	92	0	2	0
Mymt Flow	117	21	34	454	571	197
IVIVIIIL FIOW	117	21	34	454	3/1	197
Major/Minor N	Minor2	N	Major1	N	/lajor2	
Conflicting Flow All	1093	571	768	0	-	0
Stage 1	571	-	-	-	-	-
Stage 2	522	_	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	_	_	_
Critical Hdwy Stg 2	5.4	_	_	_	_	_
Follow-up Hdwy	3.5	3.3	2.2	_	_	_
Pot Cap-1 Maneuver	239	524	855	_	_	_
Stage 1	569	-	-	_	_	_
Stage 2	599		_	_	_	_
Platoon blocked, %	333	-	_	_	_	-
	220	524	855			-
Mov Cap-1 Maneuver	229 229	524		-	-	-
Mov Cap-2 Maneuver		-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	35.8		0.6		0	
HCM LOS	E					
Minor Long/Major My	1	NDI	NDT	EDL1	CDT	CDD
Minor Lane/Major Mvm	ι	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		855	-		-	-
HCM Lane V/C Ratio		0.039	-	0.552	-	-
HCM Control Delay (s)		9.4	-		-	-
HCM Lane LOS		Α	-	E	-	-
HCM 95th %tile Q(veh)		0.1	-	3	-	-

Int Delay, s/veh	Intersection						
Movement		1.6					
Lane Configurations			EDT	WDT	WDD	CDI	CDD
Traffic Vol, veh/h         4         70         71         26         27         4           Future Vol, veh/h         4         70         71         26         27         4           Conflicting Peds, #/hr         0         0         0         0         0         0         0           Sign Control         Free         Free         Free         Free         Free         Stop         Stop           RT Channelized         -         None         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <td></td> <td>ERL</td> <td></td> <td></td> <td>WBK</td> <td></td> <td>SRK</td>		ERL			WBK		SRK
Future Vol, veh/h Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Control Free Free Free Free Free Free Free Fre	•	4			00		4
Conflicting Peds, #/hr         0         0         0         0         0         0         0         0         0         0         Stop         None         Description         None         Description         Description         Description         Description         Description         Description         Description         Description         Description         Stop         Brit         Minor         Princiption         Stop <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>							
Sign Control         Free Rough         Rough         None Rough         Rough<							
RT Channelized         - None         - None         - None           Storage Length         0         0           Veh in Median Storage, # - 0 0 0 - 0         - 0 0 - 0         0           Grade, % - 0 0 0 - 0 - 0         0         0           Peak Hour Factor         87 87 87 87 87 87         87 87           Heavy Vehicles, % 1 1 1 1 1 1 1 1 1 1         1 1 1 1 1 1         1 1 1 1 1           Mwmt Flow         5 80 82 30 31 5         5           Major/Minor         Major1         Major2         Minor2           Conflicting Flow All 112 0 - 0 187 97 Stage 1 97 - 97 Stage 2 90 - 97 - 97 Stage 2 90 - 97 - 97 Stage 2 90 - 97 - 97 Stage 2 90 - 97 - 97 Stage 2 90 - 97 - 97 Stage 2 90 - 97 - 97 Stage 2 90 - 97 - 97 Stage 2 90 - 97 - 97 Stage 2 97 Stage 2 97 - 97 Stage 2 97 Stage 2 97 Stage 2 97 Stage 2 97 Stage 2 97 Stage 2 97 Stage 2 97 St							
Storage Length							
Veh in Median Storage, #         -         0         0         -         0         -         0         -         O         -         O         -         O         -         O         -         O         -         O         -         O         -         O         -         O         -         O         -         O         -         O         -         O         -         Por         B87         80         80         80		-					
Grade, %         -         0         0         -         0         -           Peak Hour Factor         87					-		-
Peak Hour Factor         87		e,# -			-		-
Heavy Vehicles, %							
Major/Minor         Major1         Major2         Minor2           Conflicting Flow All         112         0         -         0         187         97           Stage 1         -         -         -         90         -           Stage 2         -         -         -         90         -           Critical Hdwy         4.11         -         -         6.41         6.21           Critical Hdwy Stg 1         -         -         -         5.41         -           Critical Hdwy Stg 2         -         -         -         5.41         -           Follow-up Hdwy         2.209         -         -         5.41         -           Follow-up Hdwy         2.209         -         -         3.509         3.309           Pot Cap-1 Maneuver         1484         -         -         804         962           Stage 1         -         -         -         929         -           Stage 2         -         -         -         801         962           Mov Cap-1 Maneuver         1484         -         -         801         -           Stage 1         -         -         -	Peak Hour Factor	87	87	87	87	87	87
Major/Minor         Major1         Major2         Minor2           Conflicting Flow All         112         0         -         0         187         97           Stage 1         -         -         -         90         -           Stage 2         -         -         -         90         -           Critical Hdwy         4.11         -         -         6.41         6.21           Critical Hdwy Stg 1         -         -         -         5.41         -           Critical Hdwy Stg 2         -         -         -         5.41         -           Follow-up Hdwy         2.209         -         -         5.41         -           Follow-up Hdwy         2.209         -         -         3.509         3.309           Pot Cap-1 Maneuver         1484         -         -         804         962           Stage 1         -         -         -         929         -           Stage 2         -         -         -         801         -           Mov Cap-2 Maneuver         -         -         -         801         -           Stage 2         -         -         -         9	Heavy Vehicles, %	1	1		1	1	1
Conflicting Flow All       112       0       -       0       187       97         Stage 1       -       -       -       90       -         Stage 2       -       -       -       90       -         Critical Hdwy       4.11       -       -       6.41       6.21         Critical Hdwy Stg 1       -       -       -       5.41       -         Critical Hdwy Stg 2       -       -       -       5.41       -         Follow-up Hdwy       2.209       -       -       3.509       3.309         Pot Cap-1 Maneuver       1484       -       -       804       962         Stage 1       -       -       -       929       -         Stage 2       -       -       -       801       962         Mov Cap-2 Maneuver       -       -       -       801       -         Stage 1       -       -       -       925       -         Stage 2       -       -       -       936       -         Approach       EB       WB       SB         HCM Control Delay, s       0.4       0       9.6         HCM Lane V/C Ra	Mvmt Flow	5	80	82	30	31	5
Conflicting Flow All       112       0       -       0       187       97         Stage 1       -       -       -       90       -         Stage 2       -       -       -       90       -         Critical Hdwy       4.11       -       -       6.41       6.21         Critical Hdwy Stg 1       -       -       -       5.41       -         Critical Hdwy Stg 2       -       -       -       5.41       -         Follow-up Hdwy       2.209       -       -       3.509       3.309         Pot Cap-1 Maneuver       1484       -       -       804       962         Stage 1       -       -       -       929       -         Stage 2       -       -       -       801       962         Mov Cap-2 Maneuver       -       -       -       801       -         Stage 1       -       -       -       925       -         Stage 2       -       -       -       936       -         Approach       EB       WB       SB         HCM Control Delay, s       0.4       0       9.6         HCM Lane V/C Ra							
Conflicting Flow All       112       0       -       0       187       97         Stage 1       -       -       -       90       -         Stage 2       -       -       -       90       -         Critical Hdwy       4.11       -       -       6.41       6.21         Critical Hdwy Stg 1       -       -       -       5.41       -         Critical Hdwy Stg 2       -       -       -       5.41       -         Follow-up Hdwy       2.209       -       -       3.509       3.309         Pot Cap-1 Maneuver       1484       -       -       804       962         Stage 1       -       -       -       929       -         Stage 2       -       -       -       801       962         Mov Cap-2 Maneuver       -       -       -       801       -         Stage 1       -       -       -       925       -         Stage 2       -       -       -       936       -         Approach       EB       WB       SB         HCM Control Delay, s       0.4       0       9.6         HCM Lane V/C Ra	Major/Mina-	Maiant		Mais -0		Miner	
Stage 1       -       -       -       97       -         Stage 2       -       -       -       90       -         Critical Hdwy Stg 1       -       -       -       5.41       -         Critical Hdwy Stg 2       -       -       -       5.41       -         Follow-up Hdwy       2.209       -       -       5.41       -         Follow-up Hdwy       2.209       -       -       3.509       3.309         Pot Cap-1 Maneuver       1484       -       -       804       962         Stage 1       -       -       -       929       -         Stage 2       -       -       -       801       962         Mov Cap-2 Maneuver       -       -       -       801       -         Stage 1       -       -       -       925       -         Stage 2       -       -       -       936       -         Approach       EB       WB       SB         HCM Control Delay, s       0.4       0       9.6							

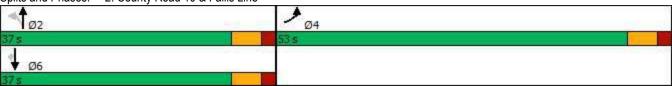
Intersection													
Int Delay, s/veh	2.6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		4			4		ሻ	- ↑			4	02.1	
Traffic Vol, veh/h	17	4	35	29	7	5	34	543	28	5	586	14	
Future Vol, veh/h	17	4	35	29	7	5	34	543	28	5	586	14	
Conflicting Peds, #/hr	0	0	5	5	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized		-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	850	-	-	-	-	-	
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97	
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0	
Mvmt Flow	18	4	36	30	7	5	35	560	29	5	604	14	
Major/Minor N	/linor2		1	Minor1			Major1		N	Major2			
Conflicting Flow All	1272	1280	616	1291	1273	575	618	0	0	589	0	0	
Stage 1	621	621	-	645	645	-	-	-	-	-	-	-	
Stage 2	651	659	-	646	628	-	-	-	-	-	-	-	
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-	
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-	
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-	
Pot Cap-1 Maneuver	146	167	494	142	169	521	972	-	-	996	-	-	
Stage 1	478	482	-	464	471	-	-	-	-	-	-	-	
Stage 2	461	464	-	464	479	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	135	160	492	124	162	521	972	-	-	996	-	-	
Mov Cap-2 Maneuver	135	160	-	124	162	-	-	-	-	-	-	-	
Stage 1	461	478	-	447	454	-	-	-	-	-	-	-	
Stage 2	433	447	-	421	475	-	-	-	-	-	-	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	23.5			40.4			0.5			0.1			
HCM LOS	С			Е									
Minor Lane/Major Mvmt	ł .	NBL	NBT	NRR I	EBLn1\	WRI n1	SBL	SBT	SBR				
Capacity (veh/h)		972	-	-	252	143	996	- 100	-				
HCM Lane V/C Ratio		0.036	-			0.296		-	-				
HCM Control Delay (s)		8.8	-	_	23.5	40.4	8.6	0	-				
HCM Lane LOS		Α	_	_	23.3 C	+0.+ E	Α	A	_				
HCM 95th %tile Q(veh)		0.1	_	_	0.9	1.2	0	-	_				
		J. 1			0.0	1.2							

	•	$\rightarrow$	4	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<u> </u>	<u>∪</u>	7
Traffic Volume (vph)	222	213	212	245	248	246
Future Volume (vph)	222	213	212	245	248	246
Satd. Flow (prot)	1711	0	1785	1879	1860	1597
Flt Permitted	0.975	- 0	0.596	1010	1000	1001
Satd. Flow (perm)	1711	0	1120	1879	1860	1597
Satd. Flow (RTOR)	81	0	1120	1013	1000	262
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0.94	0.94	0.94	0.94	1%	0.94
	0 /0	0 /0	U /0	0 /0	1 /0	U /0
Shared Lane Traffic (%)	400	^	200	001	064	262
Lane Group Flow (vph)	463	0	226	261	264	
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	0.0		0.0	0.0	0.0	0.0
Lead-Lag Optimize?						
Recall Mode	None		Max	Max	Max	Max
Act Effct Green (s)	19.6		31.2	31.2	31.2	31.2
Actuated g/C Ratio	0.31		0.50	0.50	0.50	0.50
v/c Ratio	0.79		0.41	0.28	0.29	0.28
Control Delay	26.3		14.6	11.7	11.8	2.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	26.3		14.6	11.7	11.8	2.7
LOS	С		В	В	В	Α
Approach Delay	26.3			13.0	7.3	
Approach LOS	С			В	Α	
Queue Length 50th (m)	39.5		15.2	16.3	16.5	0.0
Queue Length 95th (m)	68.5		39.5	38.1	38.6	11.6
Internal Link Dist (m)	333.1		30.0	460.0	656.0	
Turn Bay Length (m)	300.1		95.0	100.0	000.0	80.0
Base Capacity (vph)	1308		556	933	923	925
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	0.35		0.41	0.28	0.29	0.28
Intersection Summary						

Cycle Length: 90

Actuated Cycle Length: 62.9

Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 15.1 Intersection LOS: B
Intersection Capacity Utilization 65.2% ICU Level of Service C
Analysis Period (min) 15



Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EDL W	LDK				אמט
•		2		<b>↑</b> 463	<b>♣</b> 492	11
Traffic Vol, veh/h Future Vol, veh/h	7 7	3	4	463	492	11
	0	0	0	403		0
Conflicting Peds, #/hr				Free	0 Eroo	
Sign Control	Stop	Stop	Free		Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	7	3	4	482	513	11
Major/Minor N	/linor2	N	Major1	N	//ajor2	
Conflicting Flow All	1009	519	524	0	-	0
Stage 1	519	-		-	-	
Stage 2	490	-	-	-	_	-
	6.4	6.2	4.1	-		-
Critical Hdwy			4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	269	561	1053	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	620	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	268	561	1053	-	-	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	620	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	16.7		0.1		0	
HCM LOS	С					
Minor Lane/Major Mvm	t	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1053	-		-	-
HCM Lane V/C Ratio		0.004		0.033	_	_
HCM Control Delay (s)		8.4	_	16.7	_	_
HCM Lane LOS		Α		C	_	_
HCM 95th %tile Q(veh)		0	-	0.1	_	-
HOW SOUL WILL CALABIT		U	-	0.1	-	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	11	80	16	41	85	42	14	0	42	44	0	10
Future Vol, veh/h	11	80	16	41	85	42	14	0	42	44	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	87	17	45	92	46	15	0	46	48	0	11
				-						-		
Major/Minor N	/lajor1			Majora			Minor1		N	Minor2		
		^		Major2	^			240			222	445
Conflicting Flow All	138	0	0	104	0	0	331	348	96	348	333	115
Stage 1	-	-	-	-	-	-	120	120	-	205	205	-
Stage 2	-	-	-	-	-	-	211	228	-	143	128	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1458	-	-	1500	-	-	626	579	966	610	590	943
Stage 1	-	-	-	-	-	-	889	800	-	802	736	-
Stage 2	-	-	-	-	-	-	796	719	-	865	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1458	-	-	1500	-	-	599	555	966	562	565	943
Mov Cap-2 Maneuver	-	-	-	-	-	-	599	555	-	562	565	-
Stage 1	-	-	-	-	-	-	881	793	-	795	712	-
Stage 2	-	-	-	-	-	-	761	695	-	817	787	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			1.8			9.6			11.6		
HCM LOS							A			В		
Minor Lane/Major Mvmt	t	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBL n1			
Capacity (veh/h)		838		-	-	1500	-	-	607			
HCM Lane V/C Ratio			0.008	_	_	0.03	_		0.097			
HCM Control Delay (s)		9.6	7.5	0	_	7.5	0	_				
HCM Lane LOS		9.0 A	7.5 A	A	_	7.5 A	A		11.0 B			
HCM 95th %tile Q(veh)		0.2	0	-	-	0.1	-	-	0.3			
HOW JOHN JOHN Q(VEH)		0.2	U		_	0.1	-	-	0.0			

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		1	f)			4			4	
Traffic Vol, veh/h	12	154	7	143	161	66	4	5	130	66	5	10
Future Vol, veh/h	12	154	7	143	161	66	4	5	130	66	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	167	8	155	175	72	4	5	141	72	5	11
Major/Minor N	/lajor1		1	Major2		ľ	Minor1		N	Minor2		
Conflicting Flow All	247	0	0	175	0	0	726	754	171	791	722	211
Stage 1	-	-	-	-	-	-	197	197	-	521	521	-
Stage 2	-	-	-	-	-	-	529	557	-	270	201	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	_	_	-	6.1	5.5	-	6.1	5.5	_
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1331	-	-	1414	-	-	343	341	878	310	355	834
Stage 1	-	_	-	-	-	-	809	742	_	542	535	-
Stage 2	-	_	_	_	-	-	537	515	-	740	739	-
Platoon blocked, %		-	-		-	-				-		
Mov Cap-1 Maneuver	1331	_	_	1414	-	-	304	300	878	233	312	834
Mov Cap-2 Maneuver	-	-	-	-	-	-	304	300	-	233	312	-
Stage 1	-	-	-	-	-	-	800	734	-	536	476	-
Stage 2	-	-	-	-	-	-	467	458	-	610	731	-
<b>J</b> -												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			3			10.7			25.8		
HCM LOS							В			D		
										_		
Minor Lane/Major Mvmt	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		781	1331	-	-	1414	-	-	260			
HCM Lane V/C Ratio		0.193	0.01	-	-	0.11	-	_	0.339			
HCM Control Delay (s)		10.7	7.7	0	-	7.9	-	_				
HCM Lane LOS		В	A	Ā	-	A	-	_	D			
HCM 95th %tile Q(veh)		0.7	0	-	-	0.4	-	-	1.4			
		3.1				<b>J</b> .,						

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDI	NDL	<u> </u>	<u>361</u>	JDK 7
Traffic Vol, veh/h	160	27	<b>7</b> 27	<b>T</b> 443	<b>T</b> 479	172
Future Vol, veh/h	160	27	27	443	479	172
Conflicting Peds, #/hr	0	0	0	443	4/9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	Stop -		-	None	-	None
Storage Length	0	NOHE -	850	None -	_	850
Veh in Median Storage			- 050	0	0	
	, # 0	-	-	0		-
Grade, % Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	174	29	29	482	521	187
Major/Minor N	/linor2	N	Major1	N	/lajor2	
Conflicting Flow All	1061	521	708	0		0
Stage 1	521	-	_	-	_	_
Stage 2	540	_	_	_	_	_
Critical Hdwy	6.4	6.2	4.1	_	_	_
Critical Hdwy Stg 1	5.4	-		_	_	_
Critical Hdwy Stg 2	5.4	_	_	_	_	-
Follow-up Hdwy	3.5	3.3	2.2	_	_	_
Pot Cap-1 Maneuver	250	559	900	_	_	_
Stage 1	600	-	-	_	_	
Stage 2	588		_		_	_
Platoon blocked, %	500	-	-		_	-
	242	559	900	-		-
Mov Cap-1 Maneuver				-	-	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	52.9		0.5		0	
HCM LOS	F					
	•					
Minor Long/Maior M		NDI	NDT	EDL-4	CDT	CDD
Minor Lane/Major Mvm		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		900	-	264	-	-
HCM Lane V/C Ratio		0.033	-	0.77	-	-
HCM Control Delay (s)		9.1	-	52.9	-	-
HCM Lane LOS		Α	-	F	-	-
HCM 95th %tile Q(veh)		0.1	-	5.7	-	-

Intersection						
Int Delay, s/veh	1.6					
		EDT	WDT	WDD	CDI	CDD
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		<b>€</b> 1	<b>}</b>	00	<b>\</b>	4
Traffic Vol, veh/h	4	72	73	26	28	4
Future Vol, veh/h	4	72	73	26	28	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-			None	-	
Storage Length	-	-	-	-	0	-
Veh in Median Storage	e,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	5	83	84	30	32	5
Major/Minor	Majort	N	/loios2		Minor	
	Major1		Major2		Minor2	00
Conflicting Flow All	114	0	-	0	192	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	
Pot Cap-1 Maneuver	1481	-	-	-	799	960
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	933	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1481	-	-	-	796	960
Mov Cap-2 Maneuver	-	-	-	-	796	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	933	-
<u> </u>						
Annroach	ED		WD		CD	
Approach	EB		WB		SB	
HCM Control Delay, s	0.4		0		9.6	
HCM LOS					Α	
Minor Lane/Major Mvm	nt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)		1481		1101	-	813
HCM Lane V/C Ratio		0.003	-	-		0.045
		7.4			-	9.6
HCM Lang LOS			0	-		
HCM Lane LOS	\	A	Α	-	-	Α
HCM 95th %tile Q(veh	)	0	-	-	-	0.1

	۶	-	$\rightarrow$	•	<b>←</b>	•	4	<b>†</b>	<i>&gt;</i>	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ň	f)			4	
Traffic Volume (vph)	42	7	36	36	14	12	36	661	45	7	583	217
Future Volume (vph)	42	7	36	36	14	12	36	661	45	7	583	217
Satd. Flow (prot)	0	1594	0	0	1779	0	1785	1761	0	0	1751	0
Flt Permitted		0.843			0.820		0.317				0.994	
Satd. Flow (perm)	0	1376	0	0	1501	0	596	1761	0	0	1741	0
Satd. Flow (RTOR)		40			13			7			37	
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
Heavy Vehicles (%)	0%	0%	20%	0%	0%	0%	0%	6%	0%	0%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	74	0	43	841	0	0	960	0
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	
Act Effct Green (s)		9.2			9.2		60.6	60.6			60.6	
Actuated g/C Ratio		0.12			0.12		0.78	0.78			0.78	
v/c Ratio		0.51			0.40		0.09	0.62			0.71	
Control Delay		29.8			32.6		4.4	8.2			10.4	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		29.8			32.6		4.4	8.2			10.4	
LOS		С			С		Α	Α			В	
Approach Delay		29.8			32.6			8.1			10.4	
Approach LOS		С			С			Α			В	
Queue Length 50th (m)		8.3			8.3		1.5	50.2			63.7	
Queue Length 95th (m)		19.5			17.9		4.8	90.4			117.6	
Internal Link Dist (m)		884.7			354.8		-	385.0			381.6	
Turn Bay Length (m)							85.0					
Base Capacity (vph)		450			470		462	1366			1358	
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		0.22			0.16		0.09	0.62			0.71	

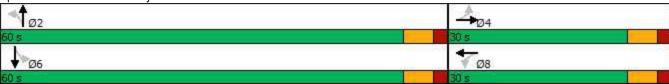
Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 78.1

Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

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



	•	$\rightarrow$	4	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<b>↑</b>	<u> </u>	7
Traffic Volume (vph)	319	240	172	402	261	155
Future Volume (vph)	319	240	172	402	261	155
Satd. Flow (prot)	1627	0	1785	1773	1807	1331
Flt Permitted	0.972	0	0.524	1110	1001	1001
Satd. Flow (perm)	1627	0	985	1773	1807	1331
Satd. Flow (RTOR)	80	0	300	1110	1001	180
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	10%	0.00	0.00	6%	4%	20%
Shared Lane Traffic (%)	1070	0 70	0 70	070	770	2070
Lane Group Flow (vph)	650	0	200	467	303	180
Turn Type	Prot	U	Perm	NA	NA	Perm
Protected Phases	4		1 61111	2	6	I CIIII
Permitted Phases	4		2		U	6
Detector Phase	4		2	2	6	6
Switch Phase	4		2	2	Ü	Ü
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
	22.0		22.0	22.0	22.0	22.0
Minimum Split (s)	62.0		28.0	28.0	28.0	28.0
Total Split (s)	68.9%		31.1%	31.1%	31.1%	31.1%
Total Split (%)						
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?	N					
Recall Mode	None		Max	Max	Max	Max
Act Effct Green (s)	27.5		22.5	22.5	22.5	22.5
Actuated g/C Ratio	0.44		0.36	0.36	0.36	0.36
v/c Ratio	0.85		0.56	0.73	0.46	0.30
Control Delay	24.7		27.7	29.0	20.8	5.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	24.7		27.7	29.0	20.8	5.2
LOS	С		С	С	С	Α
Approach Delay	24.7			28.6	15.0	
Approach LOS	С			С	В	
Queue Length 50th (m)	54.4		17.3	43.8	25.1	0.0
Queue Length 95th (m)	82.9		#52.3		58.4	11.9
Internal Link Dist (m)	333.1			460.0	687.0	
Turn Bay Length (m)			95.0			80.0
Base Capacity (vph)	1469		355	640	652	595
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	0.44		0.56	0.73	0.46	0.30
Intersection Summary						

Cycle Length: 90

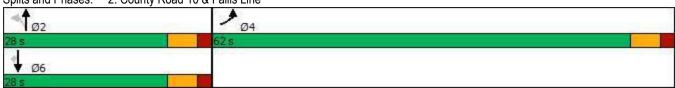
Actuated Cycle Length: 62.2

Natural Cycle: 55
Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.85
Intersection Signal Delay: 23.5
Intersection Capacity Utilization 70.6%
ICU Level of Service C

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Int Delay, s/veh	Intersection						
Movement		0.3					
Lane Configurations			EDD	NDI	NDT	CDT	CDD
Traffic Vol, veh/h         8         4         8         714         408         23           Future Vol, veh/h         8         4         8         714         408         23           Conflicting Peds, #/hr         0         0         0         0         0         0           Sign Control         Stop         Stop         Free         Stas         85         8			EDR				SDR
Future Vol, veh/h Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Peds, #/hr Conflicting Flow All Conflicting Flow All Conflicting Flow All Conflicting Howy Conflicting			1				റാ
Conflicting Peds, #/hr         0         0         0         0         0         0         0           Sign Control         Stop         Stop         Free         B         B         B         B         B         B         B							
Sign Control         Stop RT Channelized         Stop None         Free RT Channelized         - None							
RT Channelized			-				
Storage Length							
Veh in Median Storage, #         0         -         -         0         0         -           Grade, %         0         -         -         0         0         -           Peak Hour Factor         85         85         85         85         85           Heavy Vehicles, %         0         0         0         6         5         13           Mvmt Flow         9         5         9         840         480         27           Major/Minor         Minor         Major1         Major2           Conflicting Flow All         1352         494         507         0         -         0           Stage 1         494         - <td< td=""><td></td><td></td><td></td><td></td><td></td><td>-</td><td>None</td></td<>						-	None
Grade, %         0         -         -         0         0         -           Peak Hour Factor         85         85         85         85         85         85         85           Heavy Vehicles, %         0         0         0         6         5         13           Mwmt Flow         9         5         9         840         480         27           Major/Minor         Minor         Major1         Major2           Conflicting Flow All         1352         494         507         0         -         0           Stage 1         494         -						-	-
Peak Hour Factor         85         13         Mwmt Flow         9         5         9         840         480         27           Major/Minor         Minor         Minor         Major1         Major2         Major1         Major2           Conflicting Flow All         1352         494         507         0         -         0           Stage 1         494         -							
Heavy Vehicles, %							
Mynt Flow         9         5         9         840         480         27           Major/Minor         Minor2         Major1         Major2           Conflicting Flow All         1352         494         507         0         -         0           Stage 1         494         -			85	85			
Major/Minor         Minor2         Major1         Major2           Conflicting Flow All         1352         494         507         0         0           Stage 1         494         -         -         -         -           Stage 2         858         -         -         -         -           Critical Hdwy         6.4         6.2         4.1         -         -           Critical Hdwy Stg 1         5.4         -         -         -         -         -           Critical Hdwy Stg 2         5.4         - <t< td=""><td>Heavy Vehicles, %</td><td></td><td>0</td><td>0</td><td>6</td><td></td><td></td></t<>	Heavy Vehicles, %		0	0	6		
Conflicting Flow All         1352         494         507         0         -         0           Stage 1         494         -         -         -         -         -           Stage 2         858         -         -         -         -         -           Critical Hdwy         6.4         6.2         4.1         -         -         -           Critical Hdwy Stg 1         5.4         -         -         -         -         -           Critical Hdwy Stg 2         5.4         - <td>Mvmt Flow</td> <td>9</td> <td>5</td> <td>9</td> <td>840</td> <td>480</td> <td>27</td>	Mvmt Flow	9	5	9	840	480	27
Conflicting Flow All         1352         494         507         0         -         0           Stage 1         494         -         -         -         -         -           Stage 2         858         -         -         -         -         -           Critical Hdwy         6.4         6.2         4.1         -         -         -           Critical Hdwy Stg 1         5.4         -         -         -         -         -           Critical Hdwy Stg 2         5.4         - <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Conflicting Flow All         1352         494         507         0         -         0           Stage 1         494         -         -         -         -         -           Stage 2         858         -         -         -         -         -           Critical Hdwy         6.4         6.2         4.1         -         -         -           Critical Hdwy Stg 1         5.4         -         -         -         -         -           Critical Hdwy Stg 2         5.4         - <td>Major/Minor</td> <td>MinorO</td> <td></td> <td>Major1</td> <td></td> <td>10ior?</td> <td></td>	Major/Minor	MinorO		Major1		10ior?	
Stage 1       494       -							
Stage 2       858       -        -       -       -       -       -       -       -       -       -       -       -       -       -       -       -        -       -       -       -       -       -       -       -       -       -       - <th< td=""><td></td><td></td><td></td><td></td><td>0</td><td>-</td><td>U</td></th<>					0	-	U
Critical Hdwy         6.4         6.2         4.1         -				-	-	-	-
Critical Hdwy Stg 1         5.4         -				-	-	-	-
Critical Hdwy Stg 2         5.4         -			6.2	4.1	-	-	-
Follow-up Hdwy 3.5 3.3 2.2 Pot Cap-1 Maneuver 167 579 1068 Stage 1 617			-	-	-	-	-
Pot Cap-1 Maneuver         167         579         1068         - <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td>					-	-	-
Stage 1         617         -	Follow-up Hdwy		3.3		-	-	-
Stage 2         419         -	Pot Cap-1 Maneuver	167	579	1068	-	-	-
Platoon blocked, %	Stage 1	617	-	-	-	-	-
Platoon blocked, %	Stage 2	419	-	-	-	-	-
Mov Cap-1 Maneuver         166         579         1068         -         -         -           Mov Cap-2 Maneuver         166         - <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td>					-	-	-
Mov Cap-2 Maneuver         166         -		166	579	1068	-	_	-
Stage 1         612         -					_	_	_
Stage 2         419         -			_	-	_	_	_
Approach         EB         NB         SB           HCM Control Delay, s         22.7         0.1         0           HCM LOS         C             Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBR           Capacity (veh/h)         1068         - 218          -           HCM Lane V/C Ratio         0.009         - 0.065          -           HCM Control Delay (s)         8.4         - 22.7          -           HCM Lane LOS         A         - C          -	_		_	_	_	_	_
HCM Control Delay, s   22.7   0.1   0     HCM LOS   C	Olage 2	713					
HCM Control Delay, s   22.7   0.1   0     HCM LOS   C							
Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBR           Capacity (veh/h)         1068         - 218            HCM Lane V/C Ratio         0.009         - 0.065            HCM Control Delay (s)         8.4         - 22.7            HCM Lane LOS         A         - C	Approach	EB		NB		SB	
Minor Lane/Major Mvmt         NBL         NBT EBLn1         SBT         SBR           Capacity (veh/h)         1068         -         218         -         -           HCM Lane V/C Ratio         0.009         -         0.065         -         -           HCM Control Delay (s)         8.4         -         22.7         -         -           HCM Lane LOS         A         -         C         -         -	HCM Control Delay, s	22.7		0.1		0	
Capacity (veh/h)       1068       -       218       -       -         HCM Lane V/C Ratio       0.009       -       0.065       -       -         HCM Control Delay (s)       8.4       -       22.7       -       -         HCM Lane LOS       A       -       C       -       -	HCM LOS	С					
Capacity (veh/h)       1068       -       218       -       -         HCM Lane V/C Ratio       0.009       -       0.065       -       -         HCM Control Delay (s)       8.4       -       22.7       -       -         HCM Lane LOS       A       -       C       -       -							
Capacity (veh/h)       1068       -       218       -       -         HCM Lane V/C Ratio       0.009       -       0.065       -       -         HCM Control Delay (s)       8.4       -       22.7       -       -         HCM Lane LOS       A       -       C       -       -	N. 1. (N. 4. 1. N. 4.		MDI	NDT	EDL 4	ODT	000
HCM Lane V/C Ratio       0.009       - 0.065		nt		NRI		SBT	SBR
HCM Control Delay (s) 8.4 - 22.7 HCM Lane LOS A - C						-	-
HCM Lane LOS A - C				-		-	-
				-		-	-
110110511 0/111 0/ 1)	HCM Lane LOS			-		-	-
HCM 95th %tile Q(veh) 0 - 0.2	HCM 95th %tile Q(veh	)	0	-	0.2	-	-

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	4	175	6	18	149	17	17	0	55	52	0	11
Future Vol, veh/h	4	175	6	18	149	17	17	0	55	52	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	10	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	4	190	7	20	162	18	18	0	60	57	0	12
Major/Minor N	/lajor1			Major2		<u></u>	Minor1		N	Minor2		
Conflicting Flow All	180	0	0	197	0	0	419	422	194	443	416	171
Stage 1	-	-	-	-	-	-	202	202	-	211	211	-
Stage 2	-	-	-	-	-	-	217	220	-	232	205	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1408	-	-	1388	-	-	548	526	853	528	530	878
Stage 1	-	-	-	-	-	-	805	738	-	796	731	-
Stage 2	-	-	-	-	-	-	790	725	-	775	736	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1408	-	-	1388	-	-	533	516	853	484	520	878
Mov Cap-2 Maneuver	-	-	-	-	-	-	533	516	-	484	520	-
Stage 1	-	-	-	-	-	-	803	736	-	794	719	-
Stage 2	-	-	-	-	-	-	767	713	-	719	734	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.7			10.4			12.9		
HCM LOS							В			В		
Minor Lane/Major Mvm	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR:	SBLn1			
Capacity (veh/h)		747	1408	-	-	1388	-	-	525			
HCM Lane V/C Ratio		0.105		-		0.014	-	-	0.13			
HCM Control Delay (s)		10.4	7.6	0	-	7.6	0	-	12.9			
HCM Lane LOS		В	Α	Α	-	Α	Α	-	В			
HCM 95th %tile Q(veh)		0.4	0	-	-	0	-	-	0.4			
,												

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			₽			4			4	
Traffic Vol, veh/h	14	273	4	55	172	34	5	8	178	72	4	10
Future Vol, veh/h	14	273	4	55	172	34	5	8	178	72	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	10	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	15	297	4	60	187	37	5	9	193	78	4	11
Major/Minor N	/lajor1		ı	Major2		N	Minor1		N	/linor2		
Conflicting Flow All	224	0	0	301	0	0	662	673	299	756	657	206
Stage 1		-	-	-	-	-	329	329		326	326	
Stage 2	-	-	-	-	-	-	333	344	-	430	331	-
Critical Hdwy	4.1	-	_	4.1	-	_	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	_	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	_	_	_	_	_	_	6.1	5.5	_	6.1	5.5	-
Follow-up Hdwy	2.2	_	_	2.2	_	_	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1357	_	-	1272	_	-	378	379	745	327	387	840
Stage 1	-	_	_		_	_	688	650	-	691	652	-
Stage 2	_	_	-	-	_	-	685	640	-	607	649	-
Platoon blocked, %		_	_		_	_	- 500	3.0			3.3	
Mov Cap-1 Maneuver	1357	_	-	1272	_	-	353	357	745	227	364	840
Mov Cap-2 Maneuver	-	_	_		_	_	353	357	-	227	364	-
Stage 1	_	_	_	-	_	-	679	642	_	682	621	-
Stage 2	_	_	_	_	_	_	640	610	_	438	641	_
J. W. J. L.							3.10	3.0		.00	311	
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.7			12.4			27.3		
HCM LOS	0.4			1.7			12.4 B			21.3 D		
I IOIVI LOO							ט			U		
Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBI n1			
Capacity (veh/h)		693		EDI		1272	-	- VVDIC	253			
HCM Lane V/C Ratio			0.011	-		0.047	-		0.369			
		12.4	7.7	0	-	0.047		-				
HCM Control Delay (s) HCM Lane LOS		12.4 B		A	-	A	-	-	21.3 D			
HCM 95th %tile Q(veh)		1.3	A 0	A -	-	0.1	-	-	1.6			
HOW BOUT WITH Q(VEII)		1.3	U	-	-	U. I	-	-	1.0			

Intersection								
nt Delay, s/veh	24.7							
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	¥		ሻ	<b></b>	<b></b>	7		
Traffic Vol, veh/h	196	29	10	712	406	60		
Future Vol, veh/h	196	29	10	712	406	60		
Conflicting Peds, #/hr	0	0	0	0	0	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized	-	None	-		_			
Storage Length	0	-	850	-	_	850		
Veh in Median Storage		-	-	0	0	-		
Grade, %	0	_	_	0	0	_		
Peak Hour Factor	92	92	92	92	92	92		
Heavy Vehicles, %	0	0	0	6	18	0		
Mvmt Flow	213	32	11	774	441	65		
IVIVITIL I IOW	213	32	11	114	741	03		
Asian/Minar	Mina		1-11		1-is0			
	Minor2		Major1		Major2			
Conflicting Flow All	1237	441	506	0	-	0		
Stage 1	441	-	-	-	-	-		
Stage 2	796	-	-	-	-	-		
Critical Hdwy	6.4	6.2	4.1	-	-	-		
Critical Hdwy Stg 1	5.4	-	-	-	-	-		
Critical Hdwy Stg 2	5.4	-	-	-	-	-		
Follow-up Hdwy	3.5	3.3	2.2	-	-	-		
Pot Cap-1 Maneuver	~ 196	621	1069	-	-	-		
Stage 1	653	-	-	-	-	-		
Stage 2	448	-	-	-	-	-		
Platoon blocked, %				-	-	-		
Mov Cap-1 Maneuver	~ 194	621	1069	-	-	-		
Mov Cap-2 Maneuver		-	-	-	-	-		
Stage 1	646	-	-	-	-	-		
Stage 2	448	-	-	-	-	-		
J								
Approach	EB		NB		SB			
			0.1		0			
HCM LOS	F		J. 1		3			
I IOW LOO	ı							
NA:		NDI	NDT:	EDL 4	057	000		
Minor Lane/Major Mvn	nt	NBL		EBLn1	SBT	SBR		
Capacity (veh/h)		1069	-	213	-	-		
HCM Lane V/C Ratio		0.01		1.148	-	-		
HCM Control Delay (s)	)	8.4	-	154.5	-	-		
HCM Lane LOS		Α	-	F	-	-		
HCM 95th %tile Q(veh	1)	0	-	11.8	-	-		
Notes								
·: Volume exceeds ca	nacity	\$· De	lav exc	eeds 30	)Os	+· Com	outation Not Defined	*: All major volume in platoon
. Volumo oxocodo da	paorty	ψ. Δ0	.a, ono	2040 00	.50		Jakation Hot Donnou	. 7 di major volumo in piatoon

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	LDL	<u>⊏Б</u> 1	₩D1	WDR	SDL W	אפט
Traffic Vol, veh/h	11	<b>8</b> 3	70	104	91	11
Future Vol, veh/h	11	83	70	104	91	11
·						
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage,		0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	13	95	80	120	105	13
Major/Minor N	Major1	N	Major2		Minor2	
	200	0	viajuiz -	0	261	140
Conflicting Flow All						
Stage 1	-	-	-	-	140 121	-
Stage 2	-	-	-	-		- 04
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2		-	-	-	5.41	
	2.209	-	-	-	3.509	
Pot Cap-1 Maneuver	1378	-	-	-	730	911
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	907	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1378	-	-	-	723	911
Mov Cap-2 Maneuver	-	-	-	-	723	-
Stage 1	-	-	-	-	880	-
Stage 2	_	-	_	_	907	-
595 =						
A	ED		\A/D		0.0	
Approach	EB		WB		SB	
HCM Control Delay, s	0.9		0		10.8	
HCM LOS					В	
Minor Lane/Major Mvmt	1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)		1378		-	-	739
HCM Lane V/C Ratio		0.009	-	-		0.159
HOW LAND V/O NAU						
HCM Control Dolay (a)						
HCM Lang LOS		7.6	0	-	-	
HCM Control Delay (s) HCM Lane LOS HCM 95th %tile Q(veh)		7.6 A 0	0 A	-	-	10.6 B

	٠	-	•	•	<b>←</b>	•	4	<b>†</b>	<i>&gt;</i>	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ሻ	ĵ»			4	
Traffic Volume (vph)	174	10	34	32	4	4	30	661	32	11	732	72
Future Volume (vph)	174	10	34	32	4	4	30	661	32	11	732	72
Satd. Flow (prot)	0	1770	0	0	1446	0	1785	1848	0	0	1838	0
Flt Permitted		0.738			0.743		0.291				0.988	
Satd. Flow (perm)	0	1358	0	0	1117	0	547	1848	0	0	1818	0
Satd. Flow (RTOR)		10			5			5			10	
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
Heavy Vehicles (%)	0%	0%	0%	25%	0%	33%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	248	0	0	46	0	34	787	0	0	927	0
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	
Act Effct Green (s)		19.4			19.4		55.7	55.7			55.7	
Actuated g/C Ratio		0.22			0.22		0.64	0.64			0.64	
v/c Ratio		0.80			0.18		0.10	0.67			0.80	
Control Delay		49.9			25.6		8.2	14.3			19.3	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		49.9			25.6		8.2	14.3			19.3	
LOS		D			С		Α	В			В	
Approach Delay		49.9			25.6			14.0			19.3	
Approach LOS		D			С			В			В	
Queue Length 50th (m)		36.8			5.4		2.0	75.7			103.7	
Queue Length 95th (m)		60.9			13.6		6.3	123.1			#173.0	
Internal Link Dist (m)		884.7			354.8			385.0			381.6	
Turn Bay Length (m)							85.0					
Base Capacity (vph)		381			311		350	1183			1166	
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		0.65			0.15		0.10	0.67			0.80	

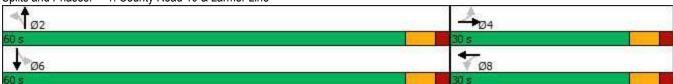
Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 87.1

Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 21.0 Intersection LOS: C
Intersection Capacity Utilization 75.0% ICU Level of Service D
Analysis Period (min) 15
# 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

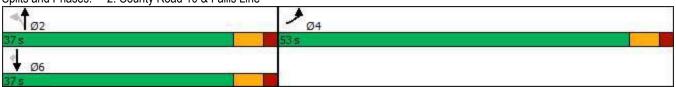


Lane Group   EBL   EBR   NBL   NBT   SBT   SBR   Lane Configurations   Traffic Volume (vph)   224   172   223   275   396   315   SBR   Future Volume (vph)   224   172   223   275   396   315   SBR   Future Volume (vph)   224   172   223   275   396   315   SBR   Future Volume (vph)   1719   0   1785   1879   1842   1597   Flt Permitted   0.972   0.406   Satd. Flow (perm)   1719   0   763   1879   1842   1597   Satd. Flow (perm)   1719   0   763   1879   1842   1597   Satd. Flow (RTOR)   64   375   Satd. Flow (Port)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   0   265   327   471   375   Satd. Flow (Pth)   472   2   2   2   6   6   6   6   6   6		•	$\rightarrow$	<b>1</b>	<b>†</b>	<b>↓</b>	4
Lane Configurations   Traffic Volume (vph)   224   172   223   275   396   315   Future Volume (vph)   224   172   223   275   396   315   Future Volume (vph)   1719   0   1785   1879   1842   1597   Fit Permitted   0.972   0.406   Satd. Flow (perm)   1719   0   763   1879   1842   1597   Satd. Flow (perm)   1719   0   763   1879   1842   1597   Satd. Flow (perm)   1719   0   763   1879   1842   1597   Satd. Flow (RTOR)   64   375   Satd. Flow (RTOR)   64   0.84   0.84   0.84   0.84   0.84   Heavy Vehicles (%)   0%   0%   0%   0%   2%   0%   Shared Lane Traffic (%)   Lane Group Flow (vph)   472   0   265   327   471   375   Turn Type   Prot   Perm   NA   NA   Perm   Protected Phases   4   2   2   6   6   Permitted Phases   4   2   2   6   6   Switch Phase   2   6   6   Switch Phase   3   2   2   6   6   Switch Phase   4   2   2   2   6   6   Switch Phase   53.0   37.0   37.0   37.0   37.0   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 (s)   58.9%   41.1%   41.1%   41.1%   41.1%   Fellow 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 Effet Green (s)   20.5   31.3   31.3   31.3   31.3   Actuated g/C Ratio   0.32   0.49   0.49   0.49   0.49   Vic Ratio   0.79   0.71   0.36   0.52   0.39   Control Delay   27.2   29.0   12.9   15.3   2.9   Queue Delay   0.0   0.0   0.0   0.0   0.0   Total Delay   27.2   29.0   12.9   15.3   2.9   Queue Length 50th (m)   42.9   22.6   22.1   35.2   0.0   Queue Length 95th (m)   64.1   #64.3   45.2   69.3   10.6   Internal Link Dist (m)   333.1   460.0   699.0   Turn Bay Length (m)   333.1   460.0   699.0	Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)         224         172         223         275         396         315           Future Volume (vph)         224         172         223         275         396         315           Satd. Flow (prot)         1719         0         1785         1879         1842         1597           Fit Permitted         0.972         0.406         0.406         375         1842         1597           Satd. Flow (perm)         1719         0         763         1879         1842         1597           Satd. Flow (perm)         1719         0         763         1879         1842         1597           Satd. Flow (perm)         1719         0         763         1879         1842         1597           Satd. Flow (perm)         40         0.84 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Future Volume (vph)   224   172   223   275   396   315   Satd. Flow (prot)   1719   0   1785   1879   1842   1597   Flt Permitted   0.972   0.406   Satd. Flow (perm)   1719   0   763   1879   1842   1597   Satd. Flow (perm)   1719   0   763   1879   1842   1597   Satd. Flow (perm)   64   375   Satd. Flow (			172				
Satd. Flow (prot)         1719         0         1785         1879         1842         1597           Flt Permitted         0.972         0.406         Control (perm)         1719         0         763         1879         1842         1597           Satd. Flow (RTOR)         64         Control (perm)         375         375         375         284         0.84<							
Fit Permitted							
Satd. Flow (perm)         1719         0         763         1879         1842         1597           Satd. Flow (RTOR)         64         .84         0.84<			0		1373	1072	1001
Satd. Flow (RTOR)         64         375           Peak Hour Factor         0.84         0.80         0.80         0.80         0.			0		1879	1842	1597
Peak Hour Factor         0.84         0.86         6.8         6.6         6.6         6.6         6.6         6.6         6.6         6.6         6.6         6.6         6.0         6.0         6.0         6.0         6.0         6.0         6.0         6.0         6.0         6.0         6.0         6.0         6.0         6.0			U	700	1013	1042	
Heavy Vehicles (%)			U 8/I	0.84	0.84	0.84	
Shared Lane Traffic (%)   Lane Group Flow (vph)   472   0   265   327   471   375   375   375   377   375							
Lane Group Flow (vph)		U /0	J /0	0 70	0 70	∠ /0	0 /0
Turn Type         Prot         Perm         NA         NA         Perm           Protected Phases         4         2         6           Detector Phase         4         2         2         6           Switch Phase         8         4         2         2         6         6           Minimum Initial (s)         4.0         4.0         4.0         4.0         4.0           Minimum Split (s)         22.0 <td< td=""><td></td><td>170</td><td>0</td><td>265</td><td>207</td><td>171</td><td>275</td></td<>		170	0	265	207	171	275
Protected Phases   4			U				
Permitted Phases   2				reiiii			reiiii
Detector Phase   4		4		0	2	р	6
Switch Phase         Minimum Initial (s)         4.0         37.0         40.0         40.0         40.0		4			^	^	
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         22.0           Total Split (%)         53.0         37.0         37.0         37.0         37.0         37.0           Total Split (%)         58.9%         41.1%         41.1%         41.1%         41.1%         41.1%           Yellow Time (s)         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           Lost Time Adjust (s)         0.0         0.0         0.0         0.0         0.0         0.0           Lost Time (s)         6.0         6.0         6.0         6.0         6.0         6.0           Lead-Lag Clastic         6.0         6.0         6.0         6.0         6.0         6.0           Lead-Lag Optimize?         Recall Mode         None         Max         Max         Max         Max           Recall Mode         None         Max         Max         Max         Max         Max           Actual Lag         Date Time Clas		4		2	2	6	6
Minimum Split (s)         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         37.0         40.0         40.0         40.0         40.0         40.0         40.0         40.0         40.0         40.0         40.0         40.0         40.9         42.9         42.2         29.0         12.9         15.3         2.9							
Total Split (s)         53.0         37.0         30.0         30.0         30.0         30.0         30.0         30.0         37.0         37.3         31.3							
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 4.0 All-Red Time (s) 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 0.0 0.0 Total Lost Time (s) 6.0 6.0 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) 20.5 31.3 31.3 31.3 31.3 31.3 Actuated g/C Ratio 0.32 0.49 0.49 0.49 0.49 v/c Ratio 0.79 0.71 0.36 0.52 0.39 Control Delay 27.2 29.0 12.9 15.3 2.9 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 27.2 29.0 12.9 15.3 2.9 LOS C C B B A Approach Delay 27.2 29.0 12.9 15.3 2.9 LOS C C C B B A Approach LOS C C C A Queue Length 50th (m) 42.9 22.6 22.1 35.2 0.0 Queue Length 95th (m) 64.1 #64.3 45.2 69.3 10.6 Internal Link Dist (m) 333.1 460.0 699.0 Turn Bay Length (m) Base Capacity (vph) 1291 373 919 901 972 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 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 Optimize?         Recall Mode         None         Max         Max         Max         Max           Recall Mode         None         Max         Max         Max         Max           Act Effct Green (s)         20.5         31.3							
All-Red Time (s) 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 0.0 0.0 Color Total Lost Time (s) 6.0 6.0 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) 20.5 31.3 31.3 31.3 31.3 Actuated g/C Ratio 0.32 0.49 0.49 0.49 0.49 v/c Ratio 0.79 0.71 0.36 0.52 0.39 Control Delay 27.2 29.0 12.9 15.3 2.9 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 27.2 29.0 12.9 15.3 2.9 LOS C C B B A Approach LOS C C C B B A Approach LOS C C C B B A Approach LOS C C C A Queue Length 95th (m) 42.9 22.6 22.1 35.2 0.0 Queue Length 95th (m) 42.9 22.6 22.1 35.2 0.0 Queue Length 95th (m) 333.1 460.0 699.0 Turn Bay Length (m) 95.0 80.0 Base Capacity (vph) 1291 373 919 901 972 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							
Lost Time Adjust (s)         0.0         0.49							
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)         20.5         31.3         31.2         0.49         0.49         0.49         0.49         0.49         0.49         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)         20.5         31.3         31.2         0.49         0.49         0.49         0.49         0.49         0.49         0.49         0.00         0.0         0.0	Lost Time Adjust (s)	0.0			0.0		0.0
Lead/Lag       Lead-Lag Optimize?         Recall Mode       None       Max       Max       Max       Max         Act Effct Green (s)       20.5       31.3       31.3       31.3       31.3         Actuated g/C Ratio       0.32       0.49       0.49       0.49       0.49         v/c Ratio       0.79       0.71       0.36       0.52       0.39         Control Delay       27.2       29.0       12.9       15.3       2.9         Queue Delay       0.0       0.0       0.0       0.0       0.0         Total Delay       27.2       29.0       12.9       15.3       2.9         LOS       C       C       B       B       A         Approach Delay       27.2       29.0       12.9       15.3       2.9         LOS       C       C       B       B       A         Approach Delay       27.2       29.0       12.9       15.3       2.9         LOS       C       C       B       B       A         Approach LOS       C       C       C       A       A         Queue Length 50th (m)       42.9       22.6       22.1       35.2 <t< td=""><td></td><td>6.0</td><td></td><td>6.0</td><td>6.0</td><td>6.0</td><td>6.0</td></t<>		6.0		6.0	6.0	6.0	6.0
Lead-Lag Optimize?         Recall Mode         None         Max         Max         Max         Max           Act Effct Green (s)         20.5         31.3         32.9         0.39         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         32.9         29.0         12.9         15.3	` ,						
Recall Mode         None         Max         Max         Max         Max           Act Effct Green (s)         20.5         31.3         31.3         31.3         31.3           Actuated g/C Ratio         0.32         0.49         0.49         0.49         0.49           v/c Ratio         0.79         0.71         0.36         0.52         0.39           Control Delay         27.2         29.0         12.9         15.3         2.9           Queue Delay         0.0         0.0         0.0         0.0         0.0           Total Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         C         B         B         A           Approach Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         B         B         A           Approach Delay         27.2         20.1         9.8           Approach LOS         C         C         A         C           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1							
Act Effct Green (s)       20.5       31.3       31.9       91.2       31.9       9.3       32.9       20.0       32.9       20.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       3.2       9.8       Approach LOS       C       C       C       B       B       A       Approach LOS       C       C       C       A       C       Queue Longth 50th (m)       42.9       22.6       22.1		None		Max	Max	Max	Max
Actuated g/C Ratio         0.32         0.49         0.49         0.49         0.49           v/c Ratio         0.79         0.71         0.36         0.52         0.39           Control Delay         27.2         29.0         12.9         15.3         2.9           Queue Delay         0.0         0.0         0.0         0.0         0.0           Total Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         B         B         A           Approach Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         B         B         A           Approach Delay         27.2         20.1         9.8         A           Approach LOS         C         C         A         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         8							
v/c Ratio         0.79         0.71         0.36         0.52         0.39           Control Delay         27.2         29.0         12.9         15.3         2.9           Queue Delay         0.0         0.0         0.0         0.0         0.0           Total Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         B         B         A           Approach Delay         27.2         20.1         9.8           Approach LOS         C         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0							
Control Delay         27.2         29.0         12.9         15.3         2.9           Queue Delay         0.0         0.0         0.0         0.0         0.0           Total Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         B         B         A           Approach Delay         27.2         20.1         9.8           Approach LOS         C         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0         0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Queue Delay         0.0         0.0         0.0         0.0         0.0           Total Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         B         B         A           Approach Delay         27.2         20.1         9.8           Approach LOS         C         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0							
Total Delay         27.2         29.0         12.9         15.3         2.9           LOS         C         C         B         B         A           Approach Delay         27.2         20.1         9.8           Approach LOS         C         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0	•						
LOS         C         C         B         B         A           Approach Delay         27.2         20.1         9.8           Approach LOS         C         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0							
Approach Delay         27.2         20.1         9.8           Approach LOS         C         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0         0							
Approach LOS         C         C         A           Queue Length 50th (m)         42.9         22.6         22.1         35.2         0.0           Queue Length 95th (m)         64.1         #64.3         45.2         69.3         10.6           Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0				U			A
Queue Length 50th (m)       42.9       22.6       22.1       35.2       0.0         Queue Length 95th (m)       64.1       #64.3       45.2       69.3       10.6         Internal Link Dist (m)       333.1       460.0       699.0         Turn Bay Length (m)       95.0       80.0         Base Capacity (vph)       1291       373       919       901       972         Starvation Cap Reductn       0       0       0       0       0         Spillback Cap Reductn       0       0       0       0       0         Storage Cap Reductn       0       0       0       0       0							
Queue Length 95th (m)       64.1       #64.3       45.2       69.3       10.6         Internal Link Dist (m)       333.1       460.0       699.0         Turn Bay Length (m)       95.0       80.0         Base Capacity (vph)       1291       373       919       901       972         Starvation Cap Reductn       0       0       0       0       0         Spillback Cap Reductn       0       0       0       0       0         Storage Cap Reductn       0       0       0       0       0				00.0			0.0
Internal Link Dist (m)         333.1         460.0         699.0           Turn Bay Length (m)         95.0         80.0           Base Capacity (vph)         1291         373         919         901         972           Starvation Cap Reductn         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0							
Turn Bay Length (m)       95.0       80.0         Base Capacity (vph)       1291       373       919       901       972         Starvation Cap Reductn       0       0       0       0       0         Spillback Cap Reductn       0       0       0       0       0         Storage Cap Reductn       0       0       0       0       0	• ,			#64.3			10.6
Base Capacity (vph)       1291       373       919       901       972         Starvation Cap Reductn       0       0       0       0       0         Spillback Cap Reductn       0       0       0       0       0         Storage Cap Reductn       0       0       0       0       0	` ,	333.1		0-0	460.0	699.0	
Starvation Cap Reductn         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0							
Spillback Cap Reductn         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0							
Storage Cap Reductn 0 0 0 0				0	0	0	0
					0		
Reduced v/c Ratio 0.37 0.71 0.36 0.52 0.39		0		0	0		
	Reduced v/c Ratio	0.37		0.71	0.36	0.52	0.39
Intersection Summary	Intersection Summary						

Cycle Length: 90

Actuated Cycle Length: 63.9

Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 17.3 Intersection LOS: B
Intersection Capacity Utilization 71.1% ICU Level of Service C
Analysis Period (min) 15
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<b>†</b>	<b>1</b>	
Traffic Vol, veh/h	26	11	6	491	695	18
Future Vol, veh/h	26	11	6	491	695	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None		None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage,	, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	30	13	7	571	808	21
Major/Minor N	/linor2		Major1	ı	Major2	
Conflicting Flow All	1404	819	829	0	viaj012 -	0
Stage 1	819					
Stage 2	585	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-		
•	5.4		4.1	-	-	-
Critical Hdwy Stg 1		-	-	-		-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2 811	-		-
Pot Cap-1 Maneuver	155	379	811	-	-	-
Stage 1	437	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %	454	070	044	-	-	-
Mov Cap-1 Maneuver	154	379	811	-	-	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	29.9		0.1		0	
HCM LOS	D		0.1		v	
1.0M E00						
				<b>ED</b> 1 1	0==	055
Minor Lane/Major Mvmt	t	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		811	-		-	-
Capacity (veh/h) HCM Lane V/C Ratio		0.009	-	0.23	-	-
Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)		0.009 9.5		0.23 29.9		- -
Capacity (veh/h) HCM Lane V/C Ratio		0.009	-	0.23	-	

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4		022	4	02.1
Traffic Vol, veh/h	12	83	19	57	119	53	11	0	33	32	0	7
Future Vol, veh/h	12	83	19	57	119	53	11	0	33	32	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	- 100	None	-	-	None	- -	- -	None	- -	-	None
Storage Length	_	_	-	_	_	-	_	_	-	_	_	-
Veh in Median Storage,	# -	0	_	_	0	_	_	0	_	_	0	-
Grade, %	" <u>-</u>	0	_	_	0	_	_	0	_	_	0	_
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	90	21	62	129	58	12	0	36	35	0	8
	10	- 50	<b>~</b> 1	UL.	120	- 00	12	- 0	- 00	- 00		- 0
Majay/Minas	1-:1			4=:==0			Alm and			Ain a = O		
	1ajor1			Major2			Minor1	400		Minor2	440	4=0
Conflicting Flow All	187	0	0	111	0	0	413	438	101	427	419	158
Stage 1	-	-	-	-	-	-	127	127	-	282	282	-
Stage 2	-	-	-	-	-	-	286	311	-	145	137	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1399	-	-	1492	-	-	553	515	960	541	528	893
Stage 1	-	-	-	-	-	-	882	795	-	729	681	-
Stage 2	-	-	-	-	-	-	726	662	-	863	787	-
Platoon blocked, %	4000	-	-	4.400	-	-	F0F	400	000	400	400	000
Mov Cap-1 Maneuver	1399	-	-	1492	-	-	525	486	960	498	498	893
Mov Cap-2 Maneuver	-	-	-	-	-	-	525	486	-	498	498	-
Stage 1	-	-	-	-	-	-	873	787	-	722	649	-
Stage 2	-	-	-	-	-	-	686	631	-	822	779	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			1.9			9.8			12.2		
HCM LOS							Α			В		
Minor Lane/Major Mvmt	1	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		795	1399			1492	-	-	541			
HCM Lane V/C Ratio			0.009	_		0.042	_		0.078			
HCM Control Delay (s)		9.8	7.6	0	_	7.5	0	_				
HCM Lane LOS		Α.	Α.	A	_	Α.5	A	_	12.2 B			
HCM 95th %tile Q(veh)		0.2	0	-	_	0.1	-	_	0.3			
		J.L	- 3			J. 1			3.0			

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			₽			4			4	
Traffic Vol, veh/h	16	130	8	188	217	81	6	8	111	53	8	15
Future Vol, veh/h	16	130	8	188	217	81	6	8	111	53	8	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	17	141	9	204	236	88	7	9	121	58	9	16
Major/Minor M	lajor1			Major2		N	Minor1		N	/linor2		
Conflicting Flow All	324	0	0	150	0	0	881	912	146	933	872	280
Stage 1	-	-	-	-	-	-	180	180	-	688	688	
Stage 2	-	-	-	-	-	-	701	732	-	245	184	-
Critical Hdwy	4.1	_	_	4.1	_	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	_	-	_	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	_	_	2.2	_	_	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1247	-	-	1444	-	_	269	276	906	248	291	764
Stage 1	-	_	_	-	_	_	826	754	-	440	450	-
Stage 2	_	_	_	_	_	_	433	430	_	763	751	-
Platoon blocked, %		_	_		_	_						
Mov Cap-1 Maneuver	1247	-	-	1444	-	_	226	233	906	184	246	764
Mov Cap-2 Maneuver	-	_	_	-	_	-	226	233	-	184	246	-
Stage 1	-	-	-	-	_	-	814	743	-	433	387	-
Stage 2	-	-	-	_	_	-	356	369	-	644	740	-
- <del></del>												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			3.1			11.6			30.3		
HCM LOS	0.0			J. I			11.0 B			50.5 D		
1.0M 200												
Minor Lane/Major Mvmt	N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBI n1			
Capacity (veh/h)	<u> </u>		1247	-		1444	-	- 1001	223			
HCM Lane V/C Ratio		0.199		-		0.142	_	_	0.37			
HCM Control Delay (s)		11.6	7.9	0	_	7.9	-	-	30.3			
HCM Lane LOS		11.0 B	7.9 A	A	_	7.9 A	_	_	30.3 D			
HCM 95th %tile Q(veh)		0.7	0	-	-	0.5	-	-	1.6			
HOW JOHN JOHN W(VEII)		0.1	- 0			0.0			1.0			

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	בטוע	inde j	<u> </u>	<u> </u>	7
Traffic Vol, veh/h	116	19	31	489	692	203
Future Vol, veh/h	116	19	31	489	692	203
Conflicting Peds, #/hr	0	0	0	0	032	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	Stop -	None	-	None	-	None
Storage Length	0	-	850	-	_	850
Veh in Median Storage,		_	-	0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	92	92	92	92	92	92
	92		92	92	2	0
Heavy Vehicles, %		0				
Mvmt Flow	126	21	34	532	752	221
Major/Minor N	1inor2	N	//ajor1	N	/lajor2	
	1352	752	973	0		0
Stage 1	752	-	-	-	-	-
Stage 2	600	-	_	-	_	-
Critical Hdwy	6.4	6.2	4.1	_	_	_
Critical Hdwy Stg 1	5.4	-	-	_	_	-
Critical Hdwy Stg 2	5.4	_	_	_	_	_
Follow-up Hdwy	3.5	3.3	2.2	_	_	_
Pot Cap-1 Maneuver	167	413	717			
Stage 1	469	- 10	- 11	_	_	_
Stage 1	552	_		-		-
	552	-	-		-	-
Platoon blocked, %	150	112	717	-		-
Mov Cap-1 Maneuver	159	413	717	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	447	_	-	-	-	-
Stage 2	552	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	85.8		0.6		0	
HCM LOS	F		3.3			
Minor Long/Major M.		NDI	NDT	CDL-4	CDT	CDD
Minor Lane/Major Mvmt		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		717	-		-	-
HCM Lane V/C Ratio		0.047		0.843	-	-
HCM Control Delay (s)		10.3	-		-	-
HCM Lane LOS		В	-	F	-	-
HCM 95th %tile Q(veh)		0.1	-	5.9	-	-

Intersection						
Int Delay, s/veh	1.4					
		EDT	WOT	WEE	ODI	ODB
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		र्	<b>₽</b>		¥	
Traffic Vol, veh/h	4	81	99	26	27	4
Future Vol, veh/h	4	81	99	26	27	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	e, # -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	5	93	114	30	31	5
					•	_
					^	
	Major1		Major2		Minor2	
Conflicting Flow All	144	0	-	0	232	129
Stage 1	-	-	-	-	129	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1445	-	_	-	758	924
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	_	924	-
Platoon blocked, %		_	_	_		
Mov Cap-1 Maneuver	1445	_	_	_	755	924
Mov Cap-2 Maneuver	-	_	_	_	755	-
Stage 1	_		_	_	895	_
•	_	-	-	-	924	-
Stage 2	_	-	-		924	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.4		0		9.9	
HCM LOS					Α	
Minor Lane/Major Mvm	<u>nt</u>	EBL	EBT	WBT	WBR :	SBLn1
Capacity (veh/h)		1445	-	-	-	773
HCM Lane V/C Ratio		0.003	-	-	-	0.046
HCM Control Delay (s)		7.5	0	-	-	9.9
HCM Lane LOS		Α	Α	-	-	Α
HCM 95th %tile Q(veh	)	0	-	-	-	0.1
	,					

	•	<b>→</b>	•	•	+	•	•	<b>†</b>	~	<b>/</b>	<b>+</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ሻ	- ↑			4	
Traffic Volume (vph)	26	4	36	30	8	5	36	571	30	5	617	24
Future Volume (vph)	26	4	36	30	8	5	36	571	30	5	617	24
Satd. Flow (prot)	0	1677	0	0	1788	0	1785	1864	0	0	1852	0
Flt Permitted		0.851			0.816		0.430				0.997	
Satd. Flow (perm)	0	1455	0	0	1497	0	808	1864	0	0	1846	0
Satd. Flow (RTOR)		37			5			5			4	
Confl. Peds. (#/hr)			5	5								
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	44	0	37	620	0	0	666	0
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	
Act Effct Green (s)		7.7			7.7		63.9	63.9			63.9	
Actuated g/C Ratio		0.10			0.10		0.80	0.80			0.80	
v/c Ratio		0.39			0.30		0.06	0.42			0.45	
Control Delay		24.9			34.7		3.2	4.6			4.9	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		24.9			34.7		3.2	4.6			4.9	
LOS		С			С		Α	Α			Α	
Approach Delay		24.9			34.7			4.5			4.9	
Approach LOS		С			С			A			A	
Queue Length 50th (m)		4.7			5.9		1.1	26.4			29.7	
Queue Length 95th (m)		14.8			13.9		3.7	49.2			55.4	
Internal Link Dist (m)		884.7			354.8			385.0			381.6	
Turn Bay Length (m)							85.0					
Base Capacity (vph)		464			454		645	1491			1476	
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			0.10		0.06	0.42			0.45	
Intersection Summary Cycle Length: 90												

Actuated Cycle Length: 79.9

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 6.6

Intersection Capacity Utilization 53.5%

Analysis Period (min) 15

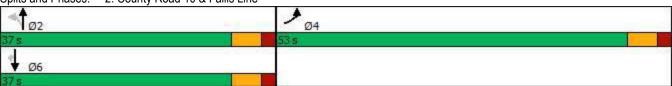
Splits and Phases: 1: County Road 10 & Larmer Line



	•	$\rightarrow$	4	<b>†</b>	<b>↓</b>	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<u> </u>	<u> </u>	7
Traffic Volume (vph)	225	215	215	272	274	249
Future Volume (vph)	225	215	215	272	274	249
Satd. Flow (prot)	1711	0	1785	1879	1860	1597
Flt Permitted	0.975	U	0.579	1013	1000	1001
Satd. Flow (perm)	1711	0	1088	1879	1860	1597
,, ,	80	U	1000	1079	1000	265
Satd. Flow (RTOR)		0.04	0.04	0.04	0.04	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)	400					
Lane Group Flow (vph)	468	0	229	289	291	265
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)	19.8		31.3	31.3	31.3	31.3
Actuated g/C Ratio	0.31		0.50	0.50	0.50	0.50
v/c Ratio	0.79		0.43	0.31	0.32	0.29
Control Delay	26.4		15.2	12.2	12.2	2.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	26.4		15.2	12.2	12.2	2.8
LOS	20.4 C		В	В	12.2 B	2.0 A
Approach Delay	26.4		О	13.5	7.7	^
	20.4 C			13.5 B		
Approach LOS			45.0		A	0.0
Queue Length 50th (m)	40.4		15.8	18.5	18.7	0.0
Queue Length 95th (m)	69.7		41.1	42.6	43.1	11.9
Internal Link Dist (m)	333.1			460.0	656.0	
Turn Bay Length (m)			95.0			80.0
Base Capacity (vph)	1302		537	929	919	923
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	0.36		0.43	0.31	0.32	0.29
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 63	3.2					
, location of old Longth. Of	·-					

Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

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



Intersection						
Int Delay, s/veh	0.2					
	EBL	EBR	NBL	NBT	SBT	SBR
Movement		EBK				SBK
Lane Configurations	¥	2		102	<b>\$</b>	44
Traffic Vol, veh/h	7	3	4	493	521	11
Future Vol, veh/h	7	3	4	493	521	11
Conflicting Peds, #/hr	0	0	0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	850	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	7	3	4	514	543	11
					4 . 0	
	Minor2		Major1		Major2	
Conflicting Flow All	1071	549	554	0	-	0
Stage 1	549	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	247	539	1026	-	-	-
Stage 1	583	-	-	-	-	-
Stage 2	599	-	-	_	-	_
Platoon blocked, %				_	_	_
Mov Cap-1 Maneuver	246	539	1026	_	_	-
Mov Cap-2 Maneuver	246	-		_	_	_
Stage 1	581					
Stage 2	599	-	-	-	-	-
Slaye 2	วรร	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	17.7		0.1		0	
HCM LOS	С					
				,		
Minor Lane/Major Mvm	nt .	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1026	-		-	-
HCM Lane V/C Ratio		0.004	-	0.035	-	-
HCM Control Delay (s)		8.5	-	17.7	-	-
HCM Lane LOS		Α	-	С	-	-
HCM 95th %tile Q(veh)	)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	11	84	16	41	90	42	14	0	42	44	0	10
Future Vol, veh/h	11	84	16	41	90	42	14	0	42	44	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	91	17	45	98	46	15	0	46	48	0	11
Major/Minor N	/lajor1		1	Major2		N	/linor1		N	Minor2		
Conflicting Flow All	144	0	0	108	0	0	341	358	100	358	343	121
Stage 1	-	-	-	-	-	-	124	124	-	211	211	121
Stage 2	_	_	_	_	_	_	217	234	-	147	132	_
Critical Hdwy	4.1	_	_	4.1	_	_	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	_	_	-	_	_	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	_	_	_	_	_	_	6.1	5.5	_	6.1	5.5	_
Follow-up Hdwy	2.2	_	_	2.2	_	_	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1451	-	-	1495	_	-	617	572	961	601	583	936
Stage 1	-	-	_	-	_	-	885	797	-	796	731	-
Stage 2	_	-	-	-	-	-	790	715	-	860	791	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1451	-	-	1495	-	-	590	548	961	554	559	936
Mov Cap-2 Maneuver	-	-	-	-	-	-	590	548	-	554	559	-
Stage 1	-	-	-	-	-	-	877	790	-	789	707	-
Stage 2	-	-	-	-	-	-	755	691	-	812	784	-
-												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			1.8			9.7			11.7		
HCM LOS							Α			В		
Minor Lane/Major Mvmt	t 1	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		830	1451	-	-	1495	-	-	599			
HCM Lane V/C Ratio		0.073		-	-	0.03	-	-	0.098			
HCM Control Delay (s)		9.7	7.5	0	-	7.5	0	-	11.7			
HCM Lane LOS		Α	A	A	-	A	A	-	В			
HCM 95th %tile Q(veh)		0.2	0	-	-	0.1	-	-	0.3			

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		ň	f)			4			4	
Traffic Vol, veh/h	12	158	7	144	166	66	4	5	131	66	5	10
Future Vol, veh/h	12	158	7	144	166	66	4	5	131	66	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	950	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	172	8	157	180	72	4	5	142	72	5	11
Major/Minor N	/lajor1		1	Major2		ľ	Minor1		N	Minor2		
Conflicting Flow All	252	0	0	180	0	0	740	768	176	806	736	216
Stage 1	-	-	-	-	-	-	202	202	-	530	530	_
Stage 2	-	-	-	-	-	-	538	566	-	276	206	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	_	_	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1325	-	-	1408	-	-	335	334	872	303	349	829
Stage 1	-	_	-	-	-	-	805	738	-	536	530	_
Stage 2	-	_	_	_	-	-	531	511	_	735	735	_
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1325	_	_	1408	-	-	296	293	872	227	306	829
Mov Cap-2 Maneuver	-	-	-	-	-	-	296	293	-	227	306	-
Stage 1	-	-	-	-	-	-	796	730	-	530	471	-
Stage 2	-	-	-	-	-	-	460	454	-	604	727	-
<b>J</b> -												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			3			10.8			26.5		
HCM LOS							В			D		
										_		
Minor Lane/Major Mvmt	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR :	SBLn1			
Capacity (veh/h)		774	1325	-		1408	-	-	254			
HCM Lane V/C Ratio		0.197	0.01	-		0.111	_	_	0.347			
HCM Control Delay (s)		10.8	7.7	0	-	7.9	-	_				
HCM Lane LOS		В	A	Ā	-	A	_	_	D			
HCM 95th %tile Q(veh)		0.7	0	-	-	0.4	-	-	1.5			
(1011)		<b>-</b>				<b>.</b>						

Intersection						
Int Delay, s/veh	9.6					
		EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	<b>**</b>	07	<u>ነ</u>	470	<b>†</b>	470
Traffic Vol, veh/h	161	27	27	473	508	173
Future Vol, veh/h	161	27	27	473	508	173
Conflicting Peds, #/hr	0	0	_ 0	_ 0	0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-		-	
Storage Length	0	-	850	-	-	850
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	175	29	29	514	552	188
Major/Minor	Minor		laier1	N	Major?	
	Minor2		Major1		Major2	
Conflicting Flow All	1124	552	740	0	-	0
Stage 1	552	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	229	537	876	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	221	537	876	-	-	-
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	562	-	_	-	_	-
Stage 2	569	_	_	_	_	_
2.5.30 2	300					
Approach	EB		NB		SB	
HCM Control Delay, s	68.6		0.5		0	
HCM LOS	F					
Minor Long/Major Mar	<b>1</b>	NDI	NDT	EDL -1	CDT	CDD
Minor Lane/Major Mvm	IL	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		876	-		-	-
HCM Lane V/C Ratio		0.034		0.848	-	-
HCM Control Delay (s)		9.3	-		-	-
HCM Lane LOS		Α	-	F	-	-
HCM 95th %tile Q(veh	)	0.1	-	6.8	-	-

Intersection						
Int Delay, s/veh	1.6					
	EBL	EDT	WDT	WDD	CDI	CDD
Movement	ERL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	,	<b>€</b>	<b>}</b>	00	<b>\</b>	4
Traffic Vol, veh/h	4	76	78	26	28	4
Future Vol, veh/h	4	76	78	26	28	4
Conflicting Peds, #/hr	_ 0	_ 0	0	_ 0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-			None	-	
Storage Length	-	-	-	-	0	-
Veh in Median Storage	,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	5	87	90	30	32	5
Major/Minor	Mais-1		Ania-O		Miner	
	Major1		Major2		Minor2	40-
Conflicting Flow All	120	0	-	0	202	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	97	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	
Pot Cap-1 Maneuver	1474	-	-	-	789	952
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	929	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1474	-	-	-	786	952
Mov Cap-2 Maneuver	-	-	-	-	786	-
Stage 1	-	-	-	_	918	-
Stage 2	_	_	_	_	929	-
					3_0	
Approach	EB		WB		SB	
HCM Control Delay, s	0.4		0		9.7	
HCM LOS					Α	
Minor Long/Major Mar	4	EDI	EDT	WDT	WDD	CDI ~1
Minor Lane/Major Mym	l .	EBL	EBT	WBT	WBR :	
Capacity (veh/h)		1474	-	-	-	804
HCM Lane V/C Ratio		0.003	-	-		0.046
HCM Control Delay (s)		7.5	0	-	-	9.7
HCM Lane LOS HCM 95th %tile Q(veh)		A	Α	-	-	Α
		0	-	-	-	0.1

	•	$\rightarrow$	1	<b>†</b>	ļ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		ኝ	<u></u>	<u></u>	7
Traffic Volume (vph)	196	29	10	712	406	60
Future Volume (vph)	196	29	10	712	406	60
Satd. Flow (prot)	1768	0	1785	1773	1592	1597
Flt Permitted	0.958		0.479	.,,,	1002	1301
Satd. Flow (perm)	1768	0	900	1773	1592	1597
Satd. Flow (RTOR)	8		000	1110	1002	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0.02	0%	6%	18%	0%
Shared Lane Traffic (%)	0 70	0 70	0 70	0 70	10 /0	0 70
Lane Group Flow (vph)	245	0	11	774	441	65
Turn Type	Prot	U	Perm	NA	NA	Perm
Protected Phases			Fellii			Fellii
	4		0	2	6	6
Permitted Phases	4		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
Act Effct Green (s)	16.4		59.2	59.2	59.2	59.2
Actuated g/C Ratio	0.19		0.68	0.68	0.68	0.68
v/c Ratio	0.19		0.00	0.65	0.00	0.06
Control Delay	44.9		6.0	12.2	8.4	1.9
•						
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	44.9		6.0	12.2	8.4	1.9
LOS	D		Α	В	A	Α
Approach Delay	44.9			12.1	7.6	
Approach LOS	D			В	Α	
Queue Length 50th (m)	36.5		0.5	65.6	29.1	0.0
Queue Length 95th (m)	60.2		2.5	118.9	53.9	4.1
Internal Link Dist (m)	372.5			283.0	385.0	
Turn Bay Length (m)			85.0			85.0
Base Capacity (vph)	429		608	1198	1076	1100
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	0.57		0.02	0.65	0.41	0.06
Intersection Summary						
intersection outlinary						

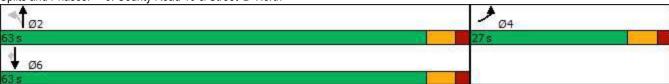
Synchro 10 Report 04/03/2020

Cycle Length: 90

Actuated Cycle Length: 87.6

Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 15.8
Intersection Capacity Utilization 60.1%
Analysis Period (min) 15

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



	•	$\rightarrow$	<b>1</b>	<b>†</b>	ţ	4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥		ሻ	<u></u>	<u></u>	7
Traffic Volume (vph)	116	19	31	489	692	203
Future Volume (vph)	116	19	31	489	692	203
Satd. Flow (prot)	1768	0	1785	1879	1842	1597
Flt Permitted	0.959	•	0.314	.575	1012	1301
Satd. Flow (perm)	1768	0	590	1879	1842	1597
Satd. Flow (RTOR)	8	· ·	000	1013	1042	221
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0.32	0.32	0.32	0.32	2%	0.52
Shared Lane Traffic (%)	0 70	0 70	0 70	0 70	2 /0	0 70
Lane Group Flow (vph)	147	0	34	532	752	221
,	Prot	U	Perm	NA	NA	Perm
Turn Type Protected Phases			Fellil			Fellil
	4		0	2	6	6
Permitted Phases	4		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
Act Effct Green (s)	12.4		66.7	66.7	66.7	66.7
Actuated g/C Ratio	0.14		0.73	0.73	0.73	0.73
v/c Ratio	0.14		0.73	0.73	0.73	0.73
Control Delay	43.8		4.9	6.0	8.1	1.1
•						
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	43.8		4.9	6.0	8.1	1.1
LOS	D		Α	Α	A	Α
Approach Delay	43.8			6.0	6.5	
Approach LOS	D			Α	Α	
Queue Length 50th (m)	22.8		1.4	28.7	49.1	0.0
Queue Length 95th (m)	38.6		4.9	53.7	92.3	6.2
Internal Link Dist (m)	372.5			271.0	385.0	
Turn Bay Length (m)			85.0			85.0
Base Capacity (vph)	355		431	1375	1348	1228
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	0.41		0.08	0.39	0.56	0.18
Intersection Summary						
O d d d oo						

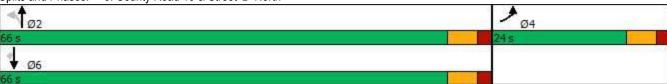
Synchro 10 Report 04/03/2020

Cycle Length: 90

Actuated Cycle Length: 91.1

Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 9.6
Intersection Capacity Utilization 54.0%
Analysis Period (min) 15

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



Lane Group		۶	•	1	<b>†</b>	ļ	4
Lane Configurations	Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)							
Future Volume (vph) 161 27 27 473 508 173 Satd. Flow (prot) 1768 0 1785 1879 1860 1597 Flt Permitted 0.959 0.412 Satd. Flow (prom) 1768 0 774 1879 1860 1597 Satd. Flow (RTOR) 9 188 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92 Heavy Vehicles (%) 0% 0% 0% 0% 0% 1% 0% Shared Lane Traffic (%) Lane Group Flow (vph) 204 0 29 514 552 188 Turn Type Prot Perm NA NA Perm Protected Phases 4 2 6 6 Permitted Phases 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 (%) 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 2.0 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 Total Lagli Time (s) 6.0 6.0 6.0 6.0 6.0 Lead/Lag Lead-Lag Optimize? Recall Mode None Max Max Max Act Effet Green (s) 14.2 55.9 55.9 55.9 55.9 Actuated g/C Ratio 0.17 0.68 0.68 0.68 0.68 V/c Ratio 0.65 0.06 0.40 0.40 0.44 0.16 Control Delay 39.3 5.8 7.6 8.0 1.4 Queue Delay 0.0 0.0 0.0 0.0 0.0 Conditional Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A B A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A B A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A B A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A B A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A B A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A B A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A B A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5.8 7.6 8.0 1.4 LOS D A A A A A Approach Delay 39.3 5			27				
Satd. Flow (prot)         1768         0         1785         1879         1860         1597           FIR Permitted         0.959         0.412         Satd. Flow (perm)         1768         0         774         1879         1860         1597           Satd. Flow (RTOR)         9							
Fit Permitted							
Satd. Flow (prom)         1768         0         774         1879         1860         1597           Satd. Flow (RTOR)         9	١. ,		•			.000	
Satd. Flow (RTOR)         9         188           Peak Hour Factor         0.92         0.9			0		1879	1860	1597
Peak Hour Factor	. ,		0	117	1010	1300	
Heavy Vehicles (%)   0%   0%   0%   0%   0%   1%   0%			0.92	0.92	ი 92	0.92	
Shared Lane Traffic (%)   Lane Group Flow (vph)   204   0 29 514 552 188     Turn Type							
Lane Group Flow (vph)         204         0         29         514         552         188           Turn Type         Prot         Perm         NA         NA         Perm           Protected Phases         4         2         6         6           Detector Phase         4         2         2         6         6           Switch Phase         8         2         2         6         6           Minimum Initial (s)         4.0         4.0         4.0         4.0         4.0           Minimum Split (s)         22.0         <	. ,	0 70	0 70	0 70	0 70	1 70	0 70
Turn Type         Prot         Perm         NA         NA         Perm           Protected Phases         4         2         6         6           Detector Phase         4         2         2         6         6           Switch Phase         8         2         2         6         6           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         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         20.0         22.0         20.0         22.0         20.0         22.0         20	` ,	204	٥	20	51/	552	188
Protected Phases         4         2         6           Detector Phase         4         2         2         6           Switch Phase         4         2         2         6         6           Switch Phase         8         8         2         2         6         6           Minimum Initial (s)         4.0         4.0         4.0         4.0         4.0         4.0           Minimum Split (s)         32.0         58.0         4.4         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         <	,		U				
Permitted Phases   2				i <del>c</del> iiii			i <del>c</del> iiii
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         2		4		0	2	Ö	G
Switch Phase         Minimum Initial (s)         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         Minimum Split (s)         22.0		1			0	6	
Minimum Initial (s)         4.0         4.0         4.0         4.0           Minimum Split (s)         22.0         22.0         22.0         22.0         22.0           Total Split (%)         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 Optimize?         Recall Mode         None         Max         Max         Max           Rectall Green (s)         14.2         55.9 <t< td=""><td></td><td>4</td><td></td><td>2</td><td>2</td><td>ь</td><td>ь</td></t<>		4		2	2	ь	ь
Minimum Split (s)         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         28.0         58.0         64.4%         64.6         66.0         60.0         60.0         60.0         60.0         60.0         60.0		4.0		, ^	4.0	, ,	
Total Split (s)         32.0         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           Act Effct Green (s)         14.2         55.9 <td< td=""><td>. ,</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	. ,						
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           Act Effct Green (s)         14.2         55.9         55.9         55.9         55.9         55.9           Actuated g/C Ratio         0.17         0.68         0.68         0.68         0.68           v/c Ratio         0.65         0.06         0.40         0.44         0.16           Control Delay         39.3         5.8         7.6         8.0         1.4           Queue Delay         0.0         0.0         0.0         0.0         0.0         0.0           Total Delay         39.3         5.8         7.6         8.0         1.4 <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>							
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)         14.2         55.9 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
All-Red Time (s) 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 0.0 0.0 Codd Codd Codd Codd Codd Codd Codd Cod							
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)         14.2         55.9         55.9         55.9         55.9           Actuated g/C Ratio         0.17         0.68         0.68         0.68         0.68           v/c Ratio         0.65         0.06         0.40         0.44         0.16           Control Delay         39.3         5.8         7.6         8.0         1.4           Queue Delay         0.0         0.0         0.0         0.0         0.0           Total Delay         39.3         5.8         7.6         8.0         1.4           LOS         D         A         A         A           Approach Delay         39.3         7.5         6.3           Approach LOS         D         A         A         A           Queue Length 50th (m)         27.2         1.3         29.7         32.8         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							

Synchro 10 Report 04/03/2020

Cycle Length: 90

Actuated Cycle Length: 82.2

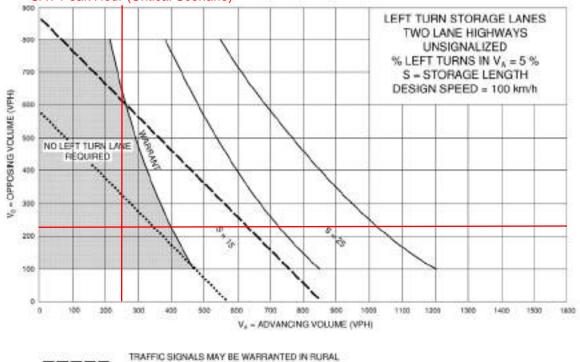
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 11.3
Intersection LOS: B
Intersection Capacity Utilization 47.3%
ICU Level of Service A
Analysis Period (min) 15

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

# Appendix G – MTO Left Turn Analysis

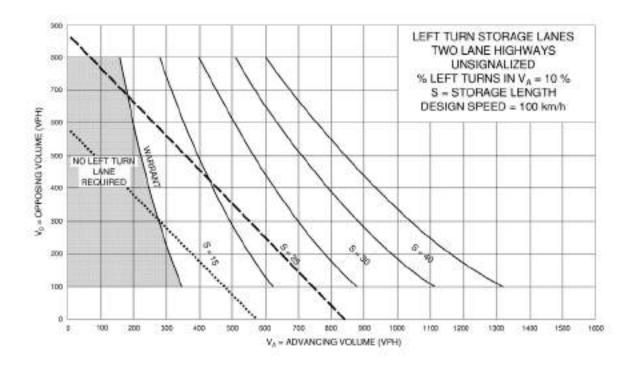


Existing (2018) - Southbound Exhibit 9A-22 SAT Peak Hour (Critical Scenario)



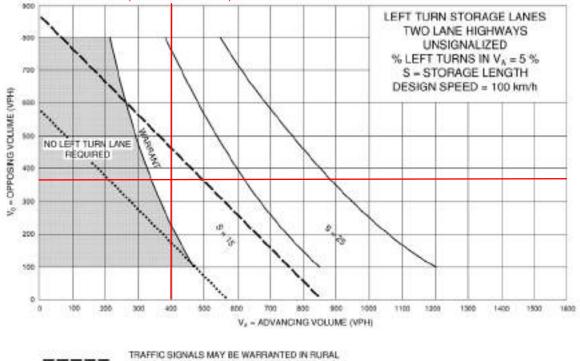
AREAS OR URBAN AREAS WITH RESTRICTED FLOW TRAFFIC SIGNALS MAY BE WARRANTED IN

TREE FLOW URBAN AREAS



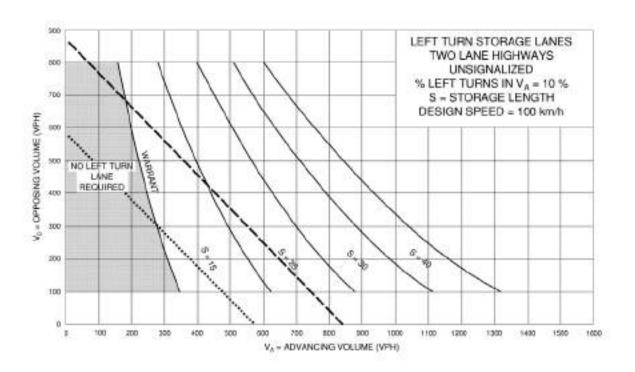
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Background (2023) - Southbound SAT Peak Hour (Critical Scenario) **Exhibit 9A-22** 

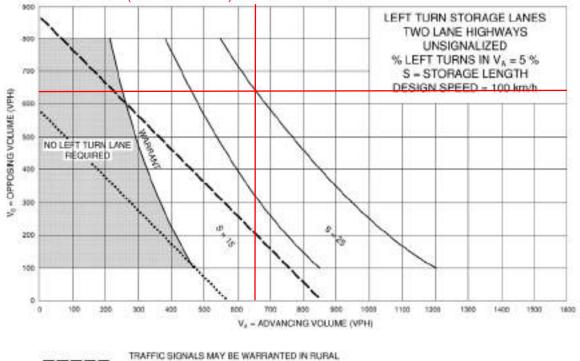


TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW TRAFFIC SIGNALS MAY BE WARRANTED IN

TREE FLOW URBAN AREAS

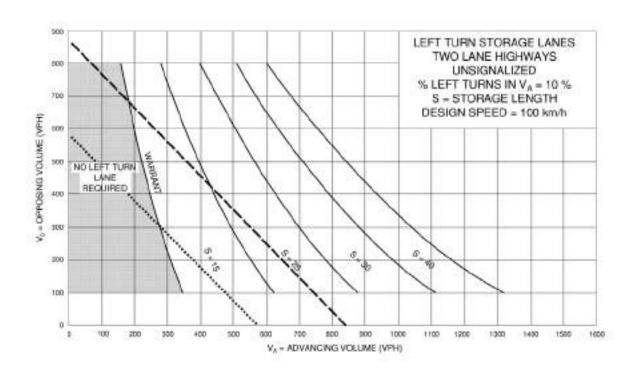


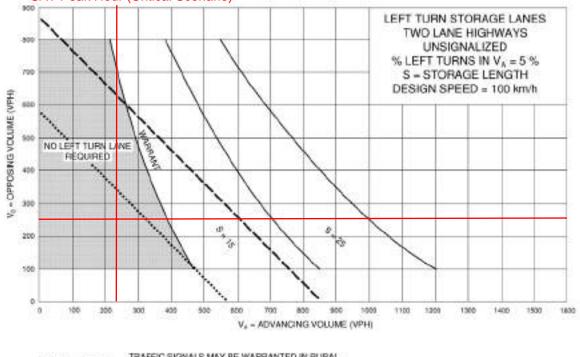
Total (2026) - Southbound Exhibit 9A-22
SAT Peak Hour (Critical Scenario)



TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED RLOW

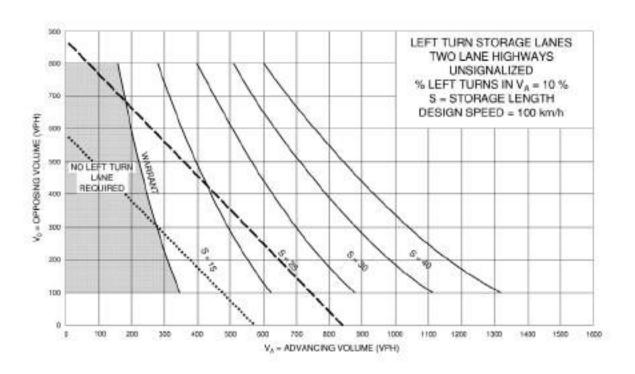
TRAFFIC SIGNALS MAY BE WARRANTED IN TREE FLOW! URBAN AREAS





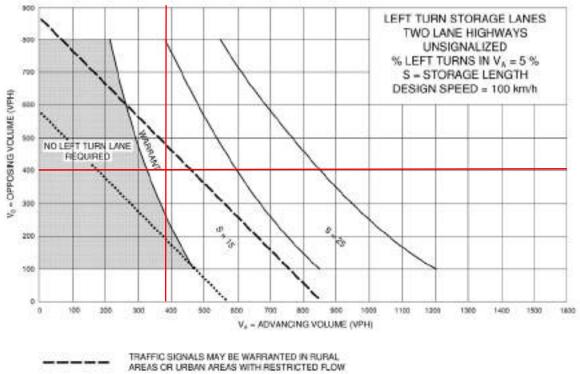
TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED R.OW

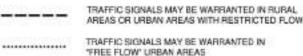
TRAFFIC SIGNALS MAY BE WARRANTED IN TREE FLOW! URBAN AREAS

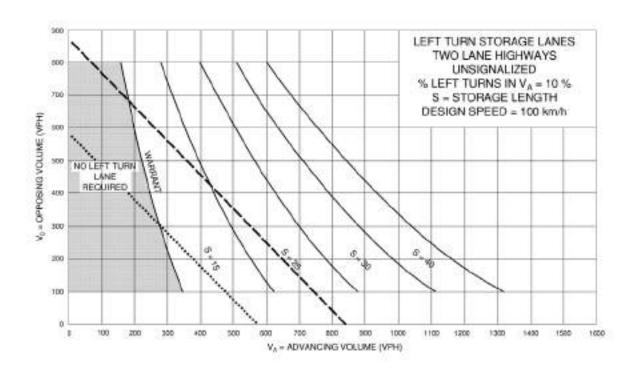


Background (2023) - Northbound SAT Peak Hour (Critical Scenario)

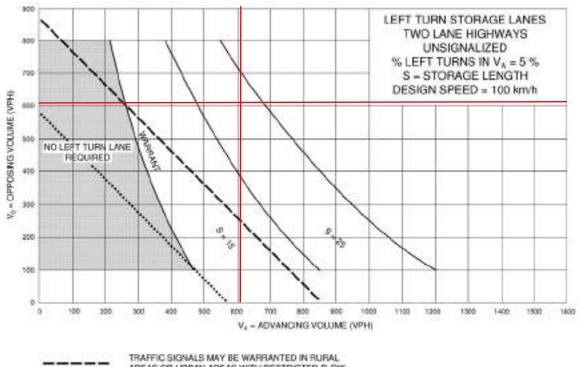
Exhibit 9A-22

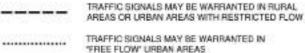


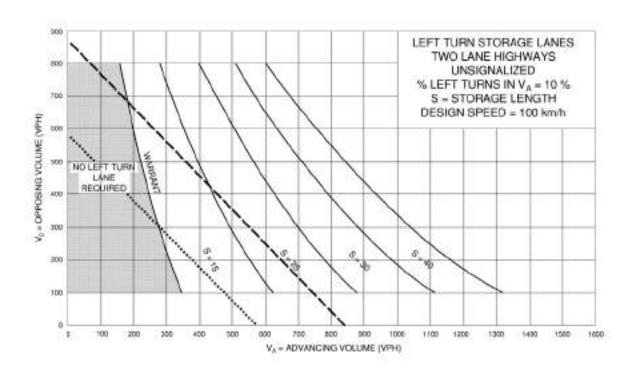




Total (2026) - Northbound SAT Peak Hour (Critical Scenario) Exhibit 9A-22



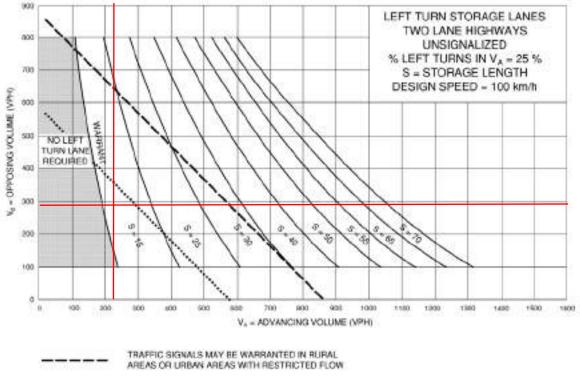


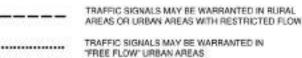


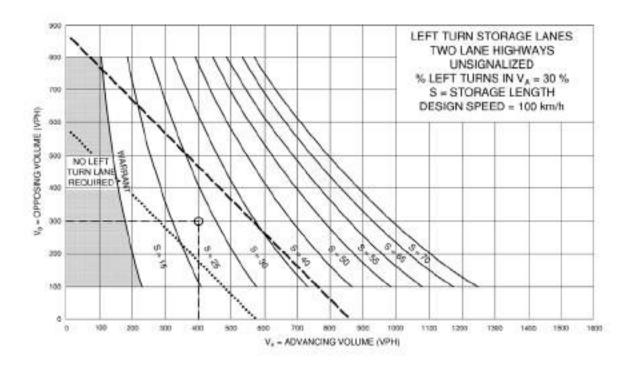
## County Road 10 / Fallis Line

Existing (2018) - Northbound PM Peak Hour (Critical Scenario)

Exhibit 9A-24

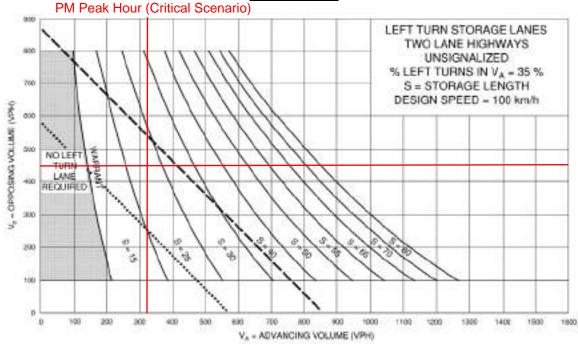






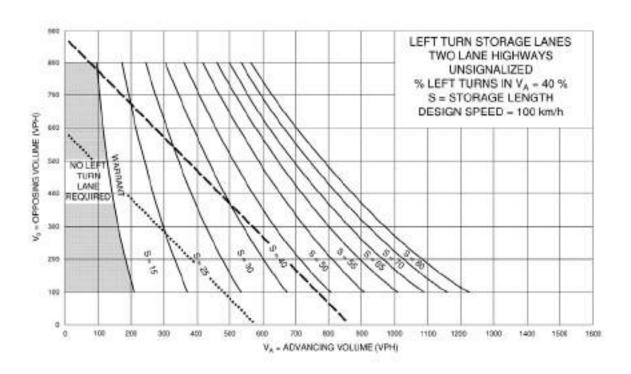
## **County Road 10 / Fallis Line**

Background (2023) - Northbound Exhibit 9A-25

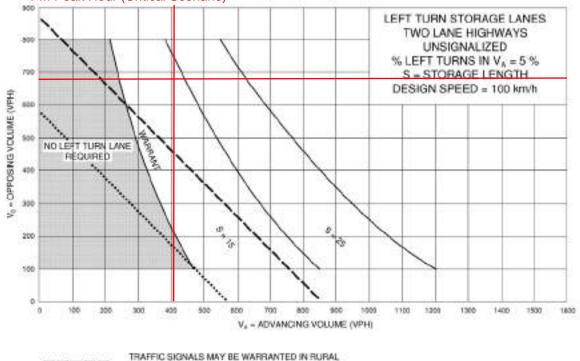


TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

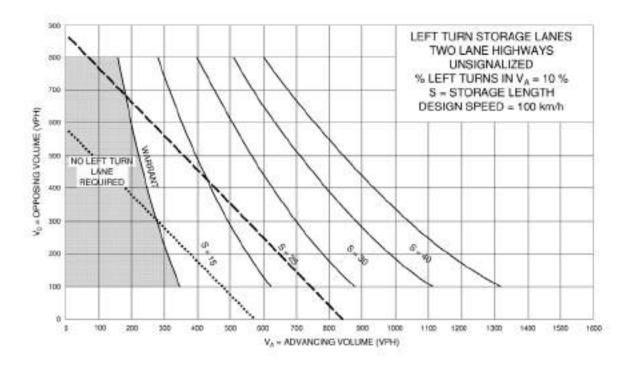


## County Road 10 / Street B Total (2023) - Northbound PM Peak Hour (Critical Scenario) Exhibit 9A-22

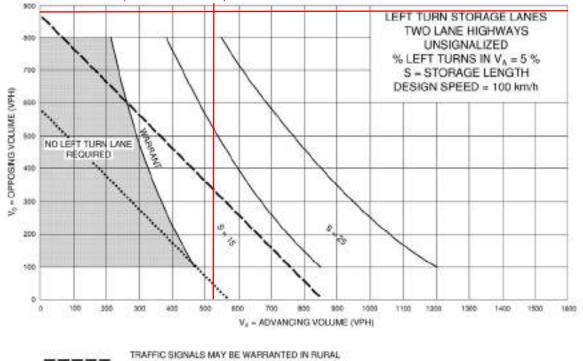


TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

TRAFFIC SIGNALS MAY BE WARRANTED IN TRIEF FLOW URBAN AREAS

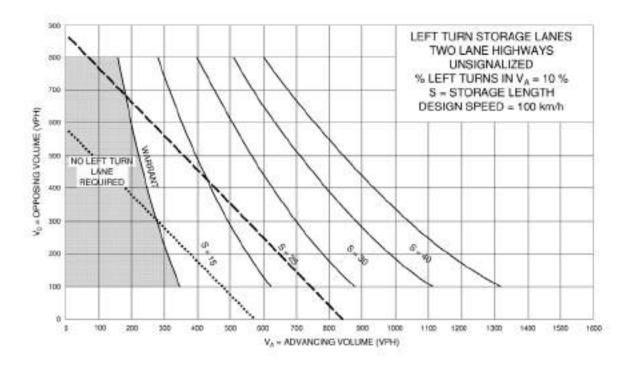


## County Road 10 / Street B



TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

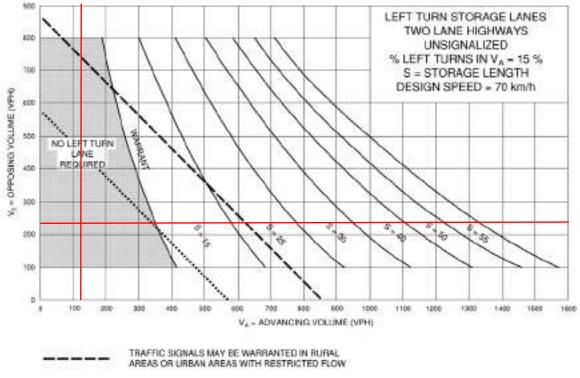
TRAFFIC SIGNALS MAY SE WARRANTED IN TREE FLOW! URBAN AREAS



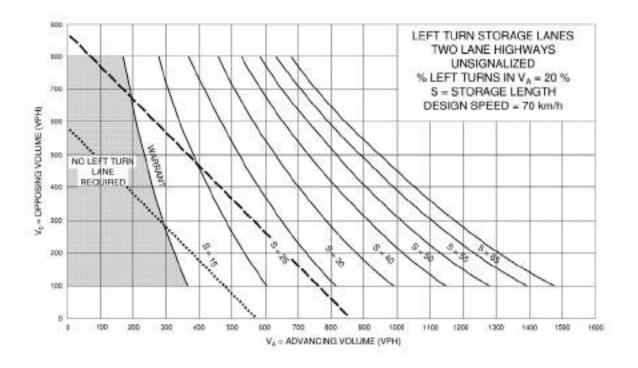
## Fallis Line / Street B & Street A

Total (2031) - Eastbound PM Peak Hour (Critical Scenario)

## Exhibit 9A-11

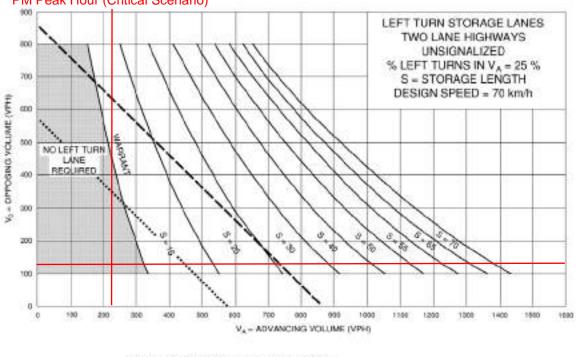






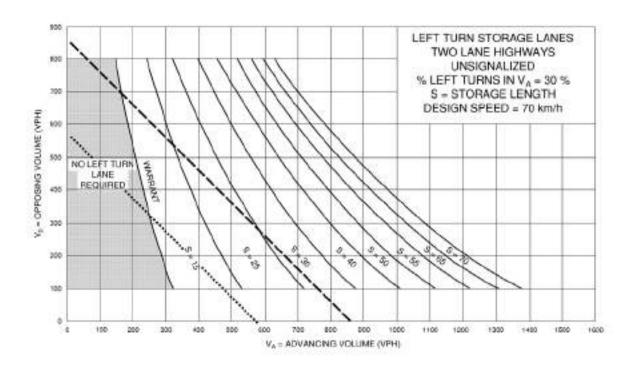
## Fallis Line / Street B & Street A

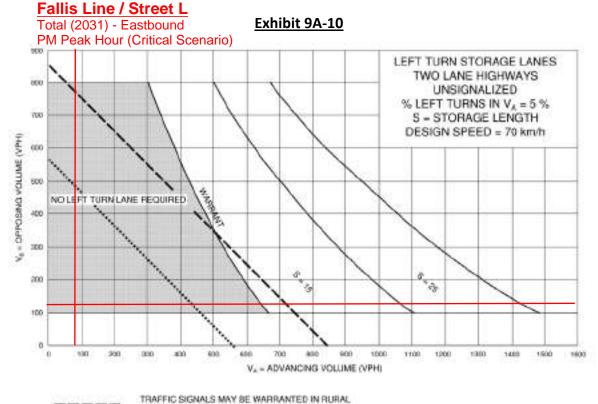
Total (2031) - Westbound Exhibit 9A-12
PM Peak Hour (Critical Scenario)



TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS



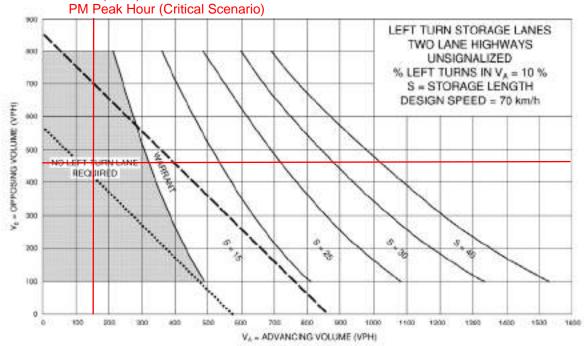


AREAS OR URBAN AREAS WITH RESTRICTED FLOW

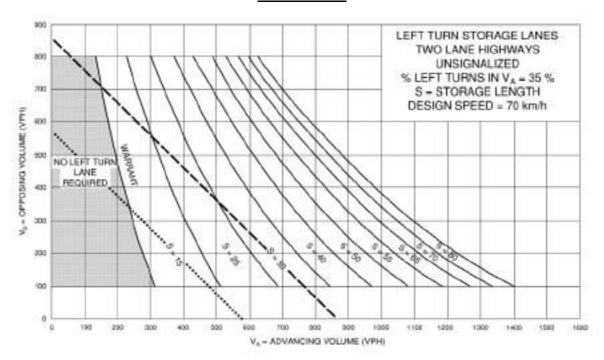
TRAFFIC SIGNALS MAY BE WARRANTED IN FREE FLOW URBAN AREAS

## Fallis Line / Street I & Street D

Total (2031) - Eastbound



## Exhibit 9A-13



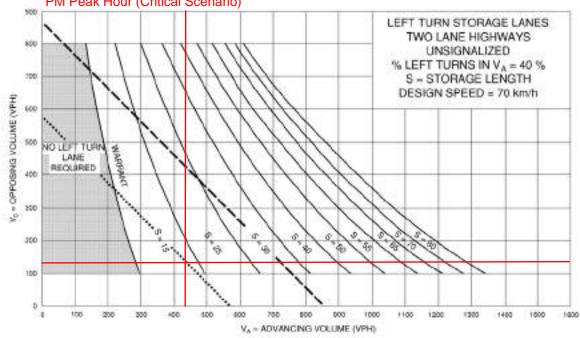
TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

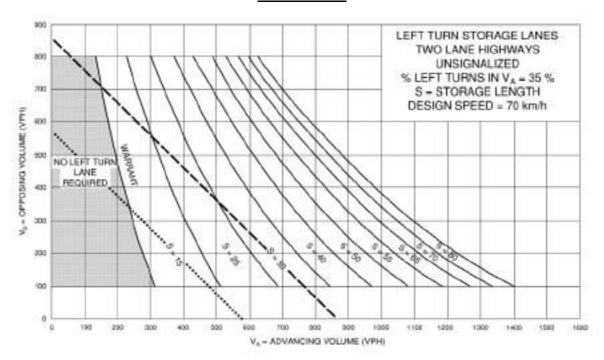
## Fallis Line / Street I & Street D

Total (2023) - Westbound

PM Peak Hour (Critical Scenario)



## Exhibit 9A-13

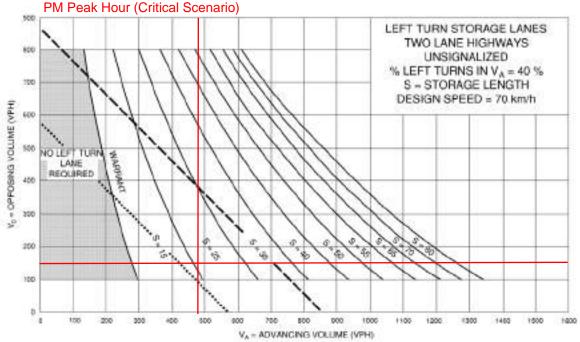


TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

## Fallis Line / Street I & Street D

Total (2031) - Westbound



# Appendix H – OTM Signal Justification Reports



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

County Road 10 / Larmer Line

			Compliance Sectional Entire %		Signal	Underground	
Justification	Description				Entiro %		Provisions
		Free Flow	Numerical	%	Ellille %	vvarrant	Warrant
	A. Vehicle volume, all aproaches						
1. Minimum Vehicluar Volume	(average hour)	480	873	182%	70%	YES	YES
	B. Vehicle volume, along minor streets				70%		
	(average hour)	120	101	85%		NO	NO
	A. Vehicle volume, major street						
2. Delay to cross traffic	(average hour)	480	680	142%		YES	YES
	B. Combined vehicle and pedestrian				118%		
	volume crossing artery from minor						
	streets (average hour)	50	76	151%		YES	YES

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

County Road 10 / Fallis Line

			Compliance Sectional Entire %		Signal	Underground	
Justification	Description				Entiro %		Provisions
		Free Flow	Numerical	%	Ellille %	vvairant	Warrant
	A. Vehicle volume, all aproaches					Ĭ	
1. Minimum Vehicluar Volume	(average hour)	480	788	164%	111%	YES	YES
	B. Vehicle volume, along minor streets				11170		
	(average hour)	180	239	133%		YES	YES
	A. Vehicle volume, major street						
	(average hour)	480	432	90%		NO	NO
2. Delay to cross traffic	B. Combined vehicle and pedestrian				75%		
	volume crossing artery from minor						
	streets (average hour)	50	136	272%		YES	YES

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

County Road 10 / Street 'B' North

	Description		Compliance			Signal	Underground
Justification			Sectional		Entire %	Warrant	Provisions
		Free Flow	Numerical	%	Ellille %	vvarrant	Warrant
	A. Vehicle volume, all aproaches				Ĭ	Ĭ	
1. Minimum Vehicluar Volume	(average hour)	480	741	154%	33%	YES	YES
	B. Vehicle volume, along minor streets				3370		
	(average hour)	180	90	50%		NO	NO
	A. Vehicle volume, major street						
	(average hour)	480	585	122%		NO	YES
Delay to cross traffic	B. Combined vehicle and pedestrian				81%		
	volume crossing artery from minor						
	streets (average hour)	50	78	156%		YES	YES

# Appendix I – ITE Internal Capture Calculations



## MULTI-USE DEVELOPMENT TRIP GENERATION

Analyst A. Aresta AND INTERNAL CAPTURE SUMMARY Date 23-Sep-18 Land Use A Retail ITE LU Code Size (sq.ft GFA) **Enter from External** Total Internal External 63 Enter 1.56% 64 63 Exit 62 2 60 3.23% 60 Total 126 3 123 Exit to External % 100% 2% 98% 4% 3 Demand 3% Demand 2 Balanced Balanced 20% 38% 13 Demand Demand Land Use B Office ITE LU Code Size (units) Total **Enter from External** Internal External 5.88% 34 32 Enter 32 20.00% 5 Exit 1 4

Total

%

39

100%

3

8%

36

92%

Exit to External

Time Period

AM Peak Hour

## MULTI-USE DEVELOPMENT TRIP GENERATION

Time Period

PM Peak Hour

Analyst A. Aresta AND INTERNAL CAPTURE SUMMARY Date 23-Sep-18 Land Use A Retail ITE LU Code Size (sq.ft GFA) **Enter from External** Total Internal External

1

2

3

2%

74

68

142

100%

73

66

Exit to External

Enter

Exit

Total

%

1.35% 2.94%

Land Use B

2% Demand 2 3% Demand 2 Balanced Balanced 23% 18 31% Demand Demand

73

66

139

98%

	ITE LU Code						
		Size (units)					
		Total	Internal	External	Enter from Extern		
)	Enter	16	2	14	14		
)	Exit	78	1	77	$\qquad \qquad \\ \\ \\ \\ \\$		
	Total	94	3	91	77		
	%	100%	3%	97%	Exit to External		

Office

12.50% 1.28%

### MULTI-USE DEVELOPMENT TRIP GENERATION

Time Period

Saturday Peak Hour

Analyst A. Aresta AND INTERNAL CAPTURE SUMMARY Date 23-Sep-18 Land Use A Retail ITE LU Code Size (sq.ft GFA) Enter from External Total Internal External 138 Enter 139 138 0.72% 1 Exit 134 1 133 0.75% 133 Total 273 2 271 Exit to External % 100% 1% 99% 4% Demand 3% 4 Demand 1 Balanced Balanced 20% 38% Demand Demand Land Use B Office ITE LU Code Size (units) Total Enter from External Internal External 33.33% Enter 3 1 33.33% Exit 3 1 2

Total

%

6

100%

2

33%

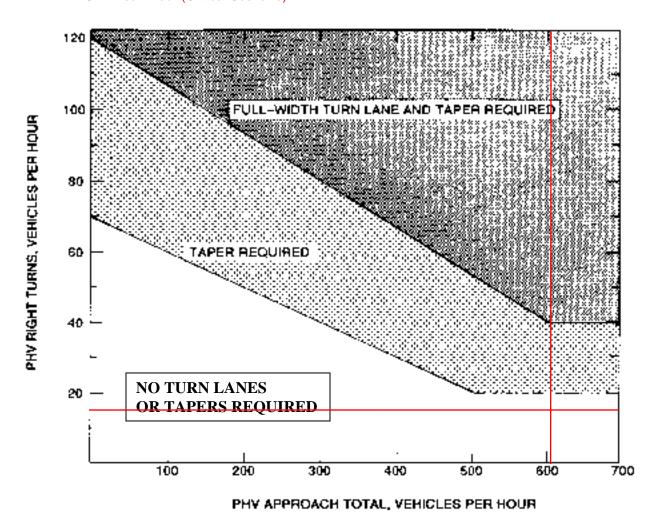
4

67%

Exit to External

## Appendix J – VDOT Right Turn Analysis





#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

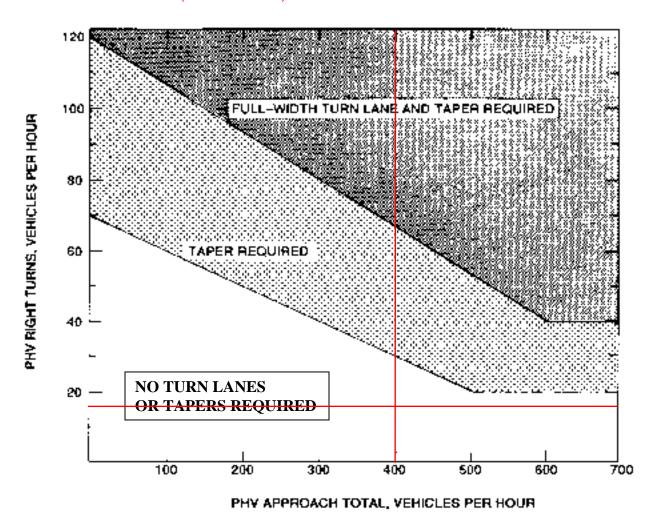
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula:  $PHV = ADT \times K \times D$ 

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

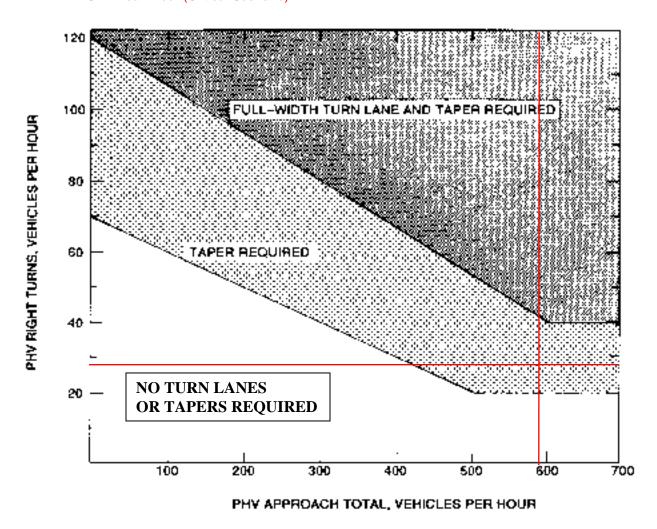
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

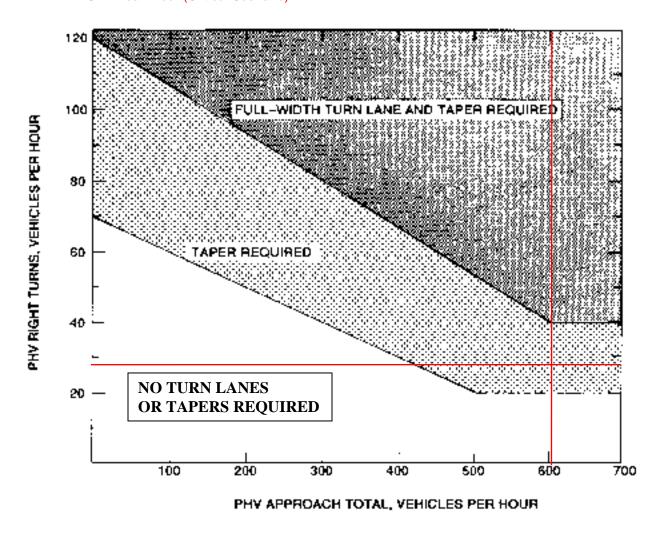
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula:  $PHV = ADT \times K \times D$ 

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

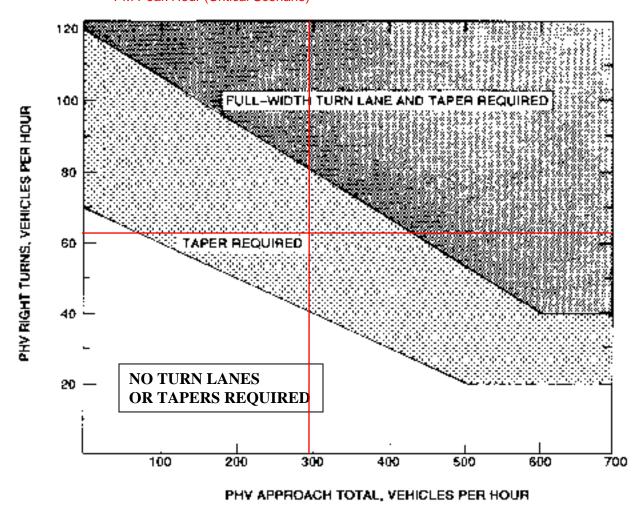
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

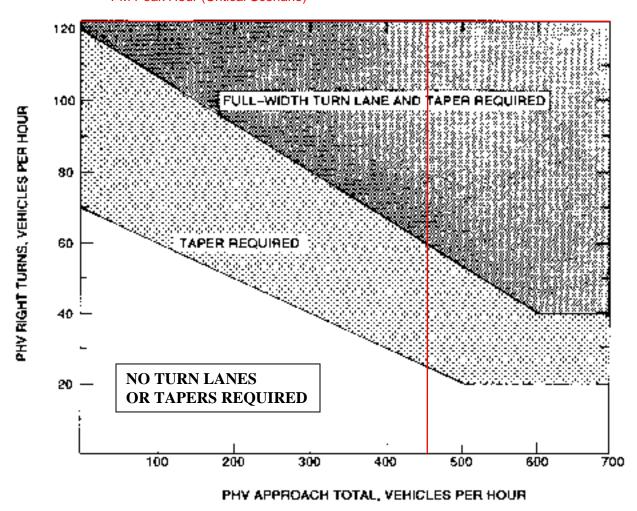
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

Adjusted right turns = PHV Right Turns - 20

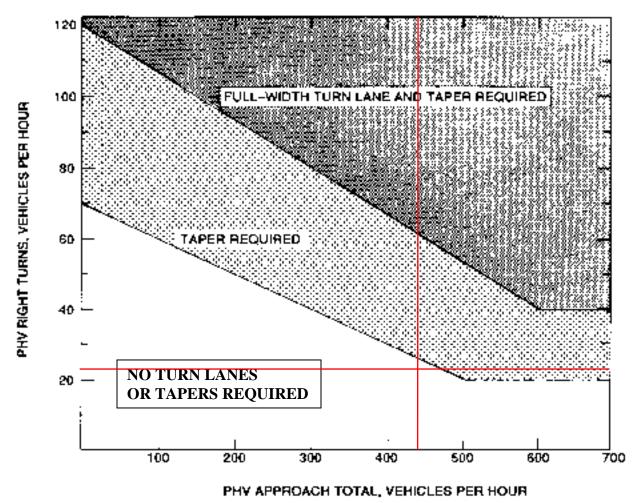
If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.

Total (2031) - Southbound AM Peak Hour (Critical Scenario)



Appropriate Radius required at all Intersections and Entrances (Commercial or Private).

#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

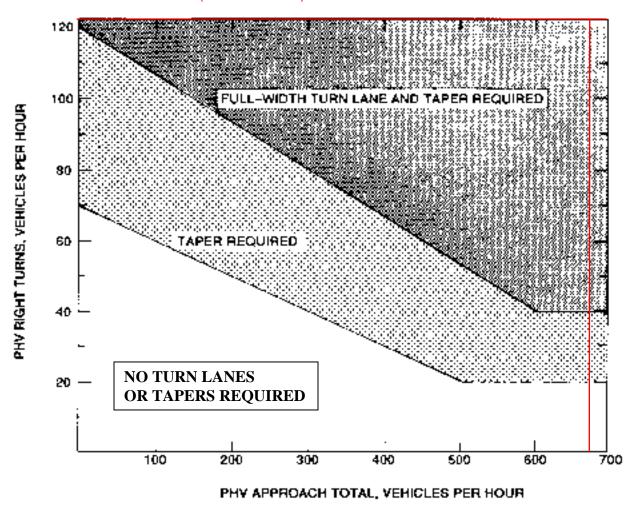
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula:  $PHV = ADT \times K \times D$ 

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

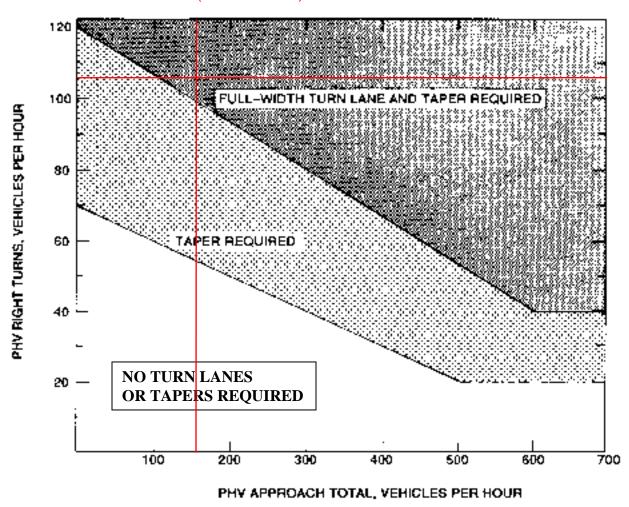
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

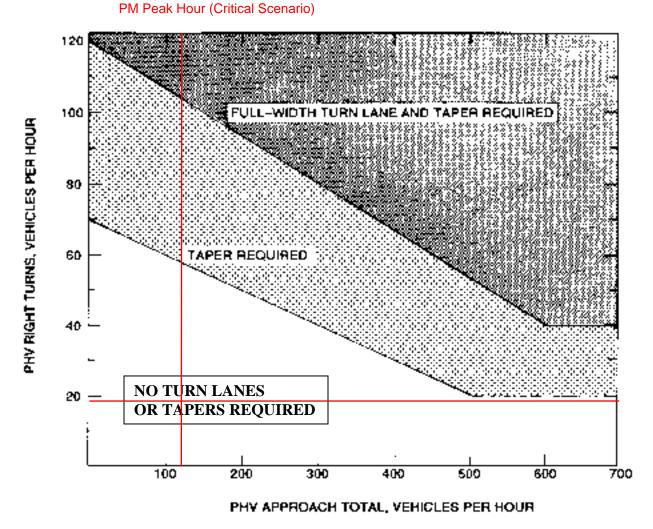
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

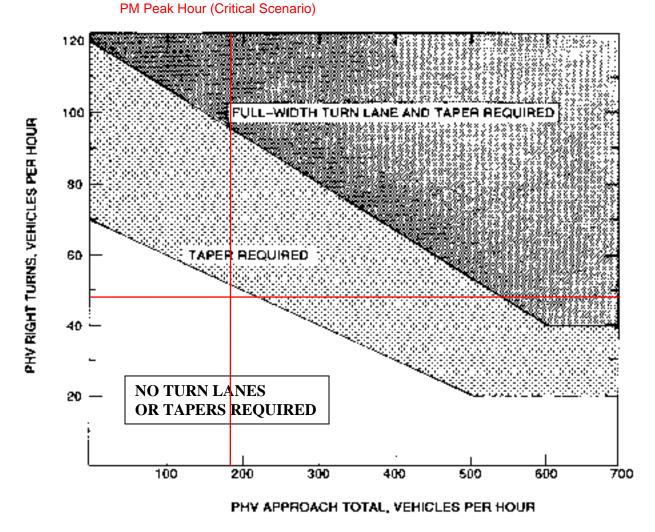
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

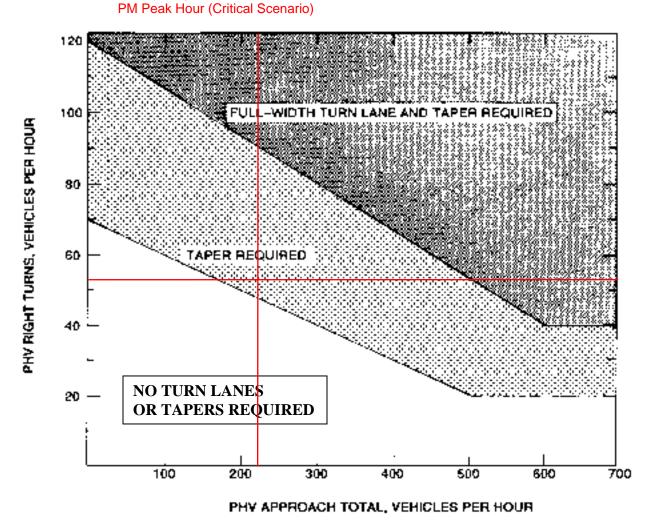
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

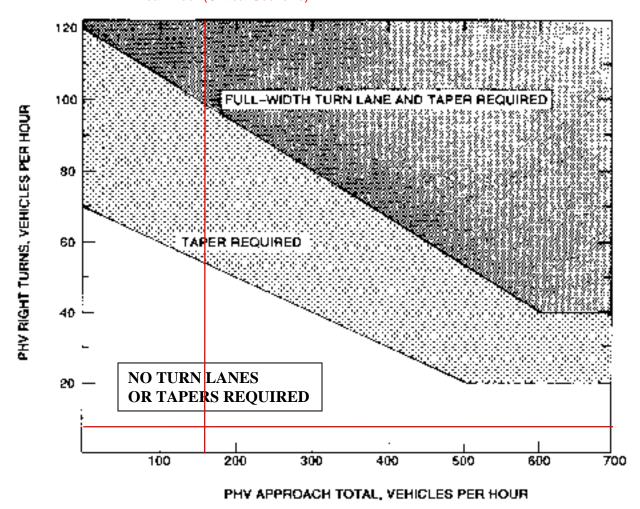
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.



#### **LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

#### **Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

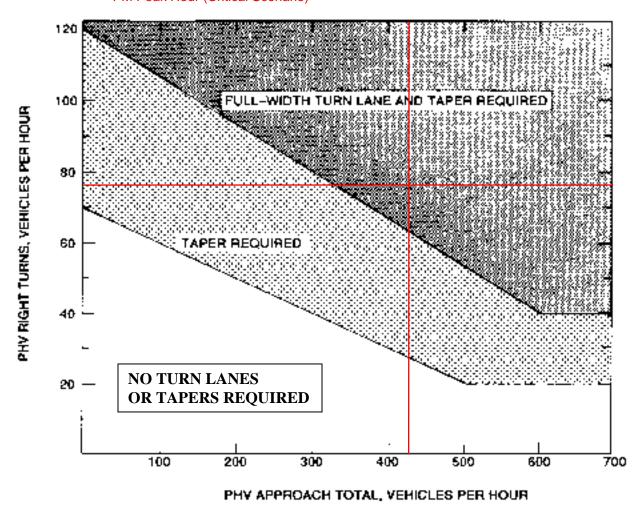
Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

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