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Summit View Residential Subdivision, Phase 3

TRAFFIC IMPACT STUDY

Poplar Developments I Inc.

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Issue	Date	Description
1	April 13, 2023	Final Report
2	August 19, 2024	Revised to address Town comments

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1 Introduction

Tatham Engineering Limited was retained by Poplar Developments I Inc. to address the traffic impacts associated with the proposed Summit View Residential Subdivision, Phase 3 development, to be located at the northwest corner of Poplar Sideroad (County Road 32) and High Street in the Town of Collingwood (as illustrated in Figure 1).

It is noted that Phases 1 and 2 of the Summit View development were previously addressed in the *Charleston Homes Residential Development Traffic Impact Study*[1] completed in 2015. The current Phase 3 lands were also addressed in the noted study, albeit they were not part of the Summit View development and thus were considered as part of the background development review. The lands have subsequently been incorporated into the overall Summit View development, an updated study for which is warranted given that the initial study was completed in 2015.

1.1 STUDY PURPOSE

The purpose of this study is to revisit the initial traffic impact study and update it specific to the Phase 3 lands and the potential transportation impacts of such on the area road network. In doing so, the report will address the requirements of the Town of Collingwood and the County of Simcoe given the respective jurisdictions of the fronting roads. In particular, the following will be discussed:

- the operations of the study area road system prior to the proposed development;
- the growth in the traffic volumes not otherwise attributed to the development (i.e. from overall growth in the area and/or other developments);
- the number of new trips the proposed development is likely to generate;
- the operations of the study area road system upon the completion of the proposed development; and
- the resulting impacts and need for mitigating measures (if required) to ensure acceptable overall road operations, including during the construction of the proposed development.

[1] *Charleston Homes Residential Development Traffic Impact Study.* C.C. Tatham & Associates Ltd., December 2015.

1.2 REPORT HISTORY

The initial *Summit View Residential Subdivision, Phase 3 Traffic Impact Study* was issued in April 2023 and subsequently submitted to the Town as part of the development application. Through the Town's review process, peer review comments were provided in February 2024, a copy of which is provided in Appendix A.

Furthermore, it is noted that the site plan has been revised slightly to consider 1 additional townhouse unit; the total development now consists of 38 semi-detached units and 98 townhouse units (increased from 97 units).

This revised study considers the peer review comments and associated revisions, and adopts the current site plan with the increased unit count.

1.3 REPORT STRUCTURE

The report is structured as follows:

- Chapter 1: introduction and study purpose;
- Chapter 2: existing conditions, detailing the road system and corresponding traffic operations;
- Chapter 3: future conditions, prior to the completion of the proposed development (referred to as future background conditions), and the expected growth in traffic levels and the resulting operating conditions;
- Chapter 4: proposed development and associated details including land use, access, traffic volumes and parking;
- Chapter 5: future conditions, with completion of the proposed development (referred to as future total conditions); and
- Chapter 6: summary of the report and key findings.

2 Existing Conditions

This chapter will describe the road network, traffic volumes and operations for the existing conditions.

2.1 ROAD NETWORK

The road network to be addressed by this study consists of High Street, Poplar Sideroad (County Road 32), Plewes Drive/Findlay Drive, Campbell Street, Rowland Street, Hurontario Street (County Road 124) and the following intersections:

- Hurontario Street and Poplar Sideroad;
- High Street and Poplar Sideroad (roundabout);
- High Street and Plewes Drive/Findlay Drive;
- High Street and Campbell Street; and
- Rowland Street and Poplar Sideroad.

Photographs of the road system are provided in Figure 2.

2.1.1 Road Sections

High Street

As per the *Town of Collingwood Official Plan*, High Street is designated as an arterial road. The road is oriented north-south through the study area and has a 2 lane rural cross-section (i.e. 1 lane of travel per direction with gravel shoulders and open ditches). The posted speed limit is 50 km/h and hence a design of 70 km/h has been assumed (posted speed limit + 20 km/h). As an arterial road, High Street has an assumed planning capacity of 900 vehicles per hour per lane (vphpl). The road maintains a straight and flat alignment through the study area. It is noted that High Street has a 30-metre right-of-way that can accommodate a future 4 lane profile.

Poplar Sideroad/County Road 32

Poplar Sideroad, also known as County Road 32, is a primary arterial road under the jurisdiction of the County, as per the *County of Simcoe Official Plan*. The road is oriented east-west and has a 2 lane profile. Poplar Sideroad is urbanized (curb and gutter) from Rowland Street (approximately 415 metres west of High Street) through to Hurontario Street/County Road 124. The road has a posted speed limit of 60 km/h and an assumed design speed of 80 km/h. As a primary arterial road in the County road network, Poplar Sideroad has an assumed planning

capacity in the order of 900 to 1,100 vphpl. The road is relatively flat and straight through the study area.

Hurontario Street/County Road 124

County Road 124 is a north-south primary arterial road under the jurisdiction of the County of Simcoe. The road has a 2 lane rural cross section and a posted speed limit of 70 km/h through the study area. As a primary arterial road, County Road 124 has an assumed planning capacity in the order of 900 to 1,100 vphpl.

North of Poplar Sideroad, County Road 124 is within the Town of Collingwood and thus under the jurisdiction of the Town and known locally as Hurontario Street. In the immediate area, the general characteristics remains consistent with those of County Road 124 (i.e. rural cross section with 1 travel lane per direction). The speed limit on Hurontario Street is 60 km/h.

Local Roads

Campbell Street, Plewes Drive, Findlay Drive and Rowland Street are all local roads within the study area. Each consist of a 2 lane cross section providing one lane of travel per direction with a speed limit of 50 km/h. As local roads, a planning capacity of 400 vphpl has been assumed.

2.1.2 Intersections

Hurontario Street/County Road 124 & Poplar Sideroad/County Road 32

The intersection of Poplar Sideroad and Hurontario Street/County Road 124 is a signalized 4 leg intersection. The north and west approaches provide an exclusive left turn lane and a shared through-right turn lane, whereas the south and east approaches consist of separate left turn, through and right turn lanes. The signal timing plan includes an advance green for the northbound, eastbound and westbound left turn movements.

Poplar Sideroad & High Street

The intersection of High Street with Poplar Sideroad is a 3 leg roundabout, with each approach operating under yield control. The north leg (High Street) flares to a 2 lane approach in advance of the roundabout to accommodate an exclusive left turn lane and an exclusive right turn lane, with a single departure lane. The east and west legs each have a 2 lane approach (flared from 1 lane in advance of the roundabout) and a 2 lane departure configuration (which taper to a single lane to match the existing cross-section on Poplar Sideroad), thus providing 2 lanes through the roundabout in the east-west direction.

High Street & Plewes Drive/Findlay Drive

The intersection of High Street and Plewes Drive/Findlay Drive is a 4 leg intersection with stop control on the minor street (Plewes Drive/Findlay Drive). The north approach consists of an exclusive left turn lane, a through lane and a right turn taper, whereas the south approach consists of an exclusive left turn lane and a shared through-right turn lane. The east and west approaches each provide a single shared left-through-right turn lane.

While the intersection operates under stop control, an intersection pedestrian signal (IPS) was recently implemented to provide protected pedestrian crossing opportunities of High Street thus improving pedestrian connectivity between the Summit View development and the surrounding areas, including several schools within walking distance.

High Street & Campbell Street

The intersection of Campbell Street with High Street is a 3 leg intersection with stop control on all approaches (i.e. 3-way stop). The north approach consists of an exclusive left turn lane and a through lane, whereas the south approach consists of a shared through-right turn lane. The east approach (Campbell Street) provides a shared left-right turn lane.

Rowland Street & Poplar Sideroad

The intersection of Rowland Street with Poplar Sideroad is a 3 leg intersection with stop control on Rowland Street. The north approach consists of a shared left-right lane, whereas the east and west approaches consist of a shared through-right lane and shared left-through turn lane, respectively.

2.2 TRANSIT NETWORK

There are several transit services/routes operating within the Town of Collingwood including several Town routes (west, East and Crosstown) and services linking Collingwood to Blue Mountain and Wasaga Beach. Notwithstanding, there are currently no transit routes operating on the frontage roads of the subject site or operating in the immediate area. The closest services are provided along High Street (north of Campbell Street) and Campbell Street to the north (approximately 780 metres walking distance). Refer to Figure 3 for an excerpt from the *South Georgian Bay Regional Transit Riders Guide* illustrating the subject site and the area transit services.

2.3 ACTIVE TRANSPORTATION NETWORK

A number of sidewalks and trails are provided in the immediate area as evident in the aerial photographs of Figure 2 and the excerpt of the Collingwood Trails map provided in Figure 4. These include:

- the Heather Pathway (3.0 metre gravel trail) which runs along the west side of High Steet and the north side of Poplar Sideroad in the immediate area;
- on-road bicycle routes along Campbell Street, Findlay Drive and Clark Street; and
- standard sidewalk systems throughout Summit View Phases 1 and 2 and the adjacent Mountaincroft residential subdivision to the east.

Immediately adjacent to the site, there is the following (as evident in Figure 5):

- 3.0 metre gravel trail along the west side of High Street;
- a 1.5 metre paved boulevard on the north side of Poplar Sideroad/County Road 32 (immediately behind the curb); and
- a 0.5 metre paved boulevard on the south side of Poplar Sideroad/County Road 32 (immediately behind the curb).

2.4 TRAFFIC VOLUMES

2.4.1 2023 Traffic Counts

As part of the initial *Phase 3 Traffic Impact Study*, traffic counts were conducted on Wednesday January 18, 2023 (7:00 to 10:00 and 15:00 to 18:00) at the intersections along High Street and at the intersection of Hurontario Street/County Road 124 with Poplar Sideroad. A peak hour traffic count was also conducted at the intersection of Rowland Street with Poplar Sideroad on Tuesday January 31, 2023 (8:15 to 9:15 and 15:45 to 16:45, reflective of the peak hour periods observed at the Poplar Sideroad/High Street roundabout).

2.4.2 2022 Traffic Counts

In response to the peer review comments stemming from the initial study, traffic counts were also obtained from the Town as completed on October 4, 2022 at the High Street intersections with Poplar Sideroad and Plewes Drive/Findlay Drive. It was noted in the peer review comments that the October 2022 counts were somewhat greater than the January 2023 counts, thus warranting consideration.

2.4.3 2024 Traffic Counts

In addition, a further traffic count was completed on June 19, 2024 at the intersection of County Hurontario Street/County Road 124 with Poplar Sideroad.

2.4.4 Rationalization

The corresponding peak hour traffic counts are illustrated in Figure 6 through Figure 8, reflective of 2022, 2023 and 2024 counts with additional details provided in Appendix B. A comparative assessment of the counts is provided in Figure 9, which illustrates the variations in the observed traffic counts resulting from changing daily, weekly and possible seasonal traffic patterns and travel demands. Of note, there is no consistent pattern in the variations across the intersections, or even within the individual intersections themselves. In some cases, the 2022 volumes are greater than the 2023 volumes, which in turn are greater than the 2024 volumes (or vice versa).

To ensure a conservative approach to this revised study, thereby addressing the peer review comments, the maximum counted volumes for each individual intersection movement have been carried forward. Furthermore, those volumes realized through the 2022 or 2023 counts were further increased by 2% to reflect 2024 conditions (thus employing a consistent horizon). The exception is those movements to/from Summit View Phases 1 and 2 at Plewes Drive and Rowland Street – the 2023 counts have been employed to reflect the most current development levels, internal road system and external road connections (recognizing that additional development and the construction of Rowland Street occurred subsequent to the 2022 counts).

The resulting peak hour traffic volumes, considered representative of 2024 conditions, are illustrated in Figure 9. The noted 2024 AM and PM peak hours volumes are in the order of 15% to 30% greater than the 2023 volumes as employed in the previous *Phase 3 Traffic Impact Study* (when considering the total AM and PM peak hour volumes on High Street and Poplar Sideroad).

2.5 TRAFFIC OPERATIONS

The assessment of existing conditions provides the baseline from which the future traffic operations (both with and without the subject development) can be assessed from. As the capacity and hence operations, of a road system is effectively governed by its intersections, the traffic operations of the existing conditions has focused on the exiting intersections based on the following:

- the 2024 traffic volumes;
- the existing intersection configurations and controls;

- procedures outlined in the *2000 Highway Capacity Manual*[2] (using Synchro v.11 software) for signalized and unsignalized intersections; and
- ARCADY roundabout software for analysis of the roundabout.

For each intersection, the analysis considers:

- the average delay (measured in seconds);
- level of service (LOS); and
- volume to capacity (v/c) for each movement if signalized, or for critical movements only if unsignalized (for roundabouts and all-way stop control intersections, the results pertain to the overall approach versus individual movements).

With respect to the noted metrics:

- level of service 'A' corresponds to the best operating condition with minimal delays whereas level of service 'F' corresponds to poor operations resulting from high intersection delays (additional details regarding Level of Service definitions are provided in Appendix C); and
- a v/c ratio of less than 1.0 indicates the intersection movement is operating at less than capacity while v/c of 1.0 indicates capacity has been reached.

A summary of the analysis provided in Table 1; detailed operations worksheets are included in Appendix D.

Based on the existing volumes, intersection configuration and control, all of the intersections provide acceptable overall levels of service (LOS C or better) with average delays during both peak hours. No individual movement operates below LOS D. As such, no intersection improvements are required to support the existing conditions.

[2] *Highway Capacity Manual.* Transportation Research Board, Washington DC, 2000.

Table 1: Intersection Operations – 2024 Existing

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	16	B	0.24	14	B	0.12
	EB TR	signal	52	D	0.90	36	D	0.89
	WB L	signal	17	B	0.25	17	B	0.36
	WB T	signal	23	C	0.65	18	B	0.49
	WB R	signal	17	B	0.12	15	B	0.11
	NB L	signal	11	B	0.32	15	B	0.32
	NB T	signal	11	B	0.23	15	B	0.23
	NB R	signal	9	A	0.05	13	B	0.03
	SB L	signal	20	C	0.44	30	C	0.60
	SB TR	signal	16	B	0.26	26	C	0.54
	overall	signal	23	C	0.61	25	C	0.71
Poplar Sideroad & High Street	EB	roundabout	2	A	0.11	3	A	0.18
	WB	roundabout	2	A	0.25	2	A	0.25
	SB	roundabout	2	A	0.14	2	A	0.16
High Street & Plewes Drive/Findlay Drive	EB LTR	stop	23	C	0.30	30	D	0.29
	WB LTR	stop	11	B	0.18	12	B	0.16
	NB L	free	8	A	0.01	1	A	0.01
	SB L	free	8	A	0.07	2	A	0.09
High Street & Campbell Street	WB	stop	10	A	0.18	10	B	0.17
	NB	stop	14	B	0.55	16	C	0.61
	SB	stop	13	B	0.11	18	C	0.17
Rowland Street & Poplar Sideroad	EB LT	free	1	A	0.00	1	A	0.00
	SB LR	stop	11	B	0.04	12	B	0.04

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

3 Future Background Conditions

This chapter will describe the road network and background traffic volumes expected for the following horizon years:

- 2030 to reflect full build-out of the proposed Phase 3 development;
- 2035 which corresponds to 5 years beyond build-out; and
- 2040 which corresponds to 10 years beyond build-out.

The latter horizons (+5 and +10 years) are required to address Simcoe County requirements.

3.1 ROAD NETWORK

3.1.1 Collingwood Transportation Study Update

As per the *Collingwood Transportation Study Update*[3], the following improvements have been recommended for the study area road network:

- traffic signals or roundabout at the intersection of Campbell Street with High Street (2031); and
- widen High Street to 4 lanes from Tenth Street (where it is currently 4 lanes) to Poplar Sideroad (2041).

With respect to the former improvement, the study noted the following options subject to further studies and cost-benefit analyses prior to identification of a preferred solution:

- Option 1: widen the east approach (Campbell Street) to accommodate exclusive left and right turn lanes, widen the south approach to include a northbound right-turn lane and add traffic signals; and.
- Option 2: construct a 2 lane roundabout.

3.1.2 High Street Class EA Update

In 2007, the Town undertook a Class Environmental Assessment to address the need for road system improvements along High Street from Third Street to Poplar Sideroad[4]. The Town is currently updating this Class EA (which prompted the previously noted October 2022 traffic counts). While the Class EA update is yet to be complete, it is understood that the traffic study

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[3] *Collingwood Transportation Study Update*. R.J. Burnside & Associates Limited, August 2019.

[4] *High Street Schedule C, Class EA Reconstruction and Infrastructure Improvements*. R.J. Burnside & Associates Limited, July 2007.

to support the Class EA recommends the following road improvements (as noted in the peer review comments provided in Appendix A):

- widening of High Street to 3 or 4 lanes by 2032;
- provision of a northbound and southbound left turn lane on High Street at Plewes Drive/Findlay Drive (which has since been implemented);
- signalization of the intersection of High Street with Plewes Drive/Findlay Drive (timing to be confirmed, but possibly as early as 2032); and
- provision of traffic signals and left turn lanes on all approaches at the intersection of High Street with Campbell Street by 2032.

3.1.3 Assumed Road Improvements

In completing the operational analysis under future conditions, the above noted improvements will only be considered if the traffic operations dictate, thereby confirming their need and associated timing of such.

3.2 TRANSIT NETWORK

The Town of Collingwood commissioned a transit service review study in 2021[5], through which a number of service options were considered including:

- fixed routes that would be similar to the existing service but with modifications to the Town routes to better serve newer and future developments, including provision of services along High Street (to Findlay Drive) and Findlay Drive that would serve the Summit View site;
- on-demand service that would cover the entire town and be responsive to user needs; and
- hybrid service that would include 2 fixed routes through the core of the Town (including along High Street (to Findlay Drive) and Findlay Drive in addition to on-demand service within the west and east limits of the Town.

The recommended service strategy under the 5-year service plan is to implement the on-demand transit service option beginning in 2022 (which has yet to be implemented). Given the nature of this service, and recognizing that buses would operate according to the trip requests of its users, it is expected to provide appropriate service to/from the subject site.

[5] *Collingwood Transit Service Review.* IBI Group, September 29, 2021.

3.3 ACTIVE TRANSPORTATION NETWORK

The *Town of Collingwood Active Transportation Framework 2017* and the *Collingwood Active Transportation Plan 2012-2017* identify Poplar Sideroad/County Road 32 as a possible future corridor for a trail system to support both recreational and active transportation uses, albeit they provide no recommendations or directions with respect to facility type or timing.

3.4 TRAFFIC VOLUMES

Background traffic volumes expected for the 2030, 2035 and 2040 horizon years for the study area have been determined based on the existing traffic volumes, historical and projected growth, and additional increases in volumes due to other development within the immediate area (apart from the subject development).

3.4.1 Background Growth

Population Growth

Based on the Census data for the years 2006 and 2021, the population of the Town of Collingwood increased from 17,290 to 24,811 persons, which translates to an annual growth of 2.4%.

As per the *2021 Community Profile*[6], the Town's 2030 population is estimated at 29,866, which translates to 2.1% annual growth over the 9-year period 2021 to 2030.

As per the County of Simcoe's *Growth Forecast and Land Needs Assessment*[7], the Town of Collingwood has been allocated a population of 42,690 by 2051. In considering a 2021 population of 24,811, an annual growth rate of 1.8% is anticipated for the period 2021 to 2051.

The corresponding population figures are provided in Table 2.

Table 2: Town of Collingwood Population

STATISTIC	2001	2006	2011	2016	2021	2030	2051
Population	16,039	17,290	19,241	21,793	24,811	29,866	42,690
Annual Growth		2006 to 2021 - 2.4%			2021 to 2051 – 1.8%		

[6] *2021 Community Profile.* Town of Collingwood, May 2021.
[7] *Growth Forecast and Land Needs Assessment.* March 31, 2022. Hemson for the County of Simcoe.

Traffic Growth

In order to establish historical growth on the road network, the 2023 peak hour volumes observed on High Street (at Campbell Street and at Poplar Sideroad) and on Poplar Sideroad (at High Street) were compared with traffic counts conducted at the same intersections in November 2015. The following growth was realized:

- High Street at Poplar Sideroad: -1.3% per annum;
- High Street at Campbell Street: +4.0% per annum; and
- Poplar Sideroad at High Street: +1.2% per annum.

The resulting growth rates on High Street are likely impacted by the connection of Findlay Drive to High Street, which occurred after the 2015 counts were conducted. The Findlay Drive connection adds volumes to High Street north of Findlay Drive (i.e. it provides a new east-west connection between High Street and Hurontario Street) while also reducing volumes on High Street south of Findlay Drive (local traffic accessing the Mountaincroft development and surrounding developments no longer have to travel along Poplar Sideroad to access High Street). The 2023 counts also captured development volumes associated with the fully built-out Mountaincroft development and those associated with Summit View Phases 1 and 2. In this respect the 4% annual growth does not reflect typical growth, nor does the 1.3% decrease identified south at Poplar Sideroad.

Other Studies

Background growth rates have been considered as employed in several other studies as follows:

- the 2015 *Charleston Homes Residential Development Traffic Impact Study* employed a background growth rate of 1% per annum on the area road system;
- the 2017 *Eden Oak Homes – Proposed Residential Development Traffic Impact Study Update*[8] (Eden Oak is the residential development just north and east of the of the Hurontario Street/Poplar Sideroad intersection) employed a background growth rate of 1% per annum for both Poplar Sideroad/County Road 32 and Hurontario Street/County Road 124 in estimating future traffic volumes;
- the 2019 *Collingwood Transportation Study Update* employed a 0.5% background growth rate, applied to all Town roads considered in the assessment; and

[8] *Eden Oak Homes – Proposed Residential Development Traffic Impact Study Update.* Cole Engineering, September 2017.

- the *50 Saunders Street Traffic Impact Brief*[9].considered a 2% annual increase on Poplar Sideroad.

Overall Background Growth

In consideration of the noted population and traffic growth rates, an annual background growth rate of 2.0% has been assumed.

3.4.2 Development Growth

Other planned developments within the immediate study area were identified through a review of the Town of Collingwood's online development map. The following developments have been identified for consideration in the establishment of future background volumes:

- Trails of Collingwood;
- 50 Saunders Street; and
- Summit View Phase 2.

The locations of the above noted background developments are illustrated in Figure 11, with additional details provided below.

Trails of Collingwood

The Trails of Collingwood Subdivision site is located on the east side of High Street, approximately 300 metres north of Campbell Street. As per the *Trails of Collingwood Subdivision Traffic Impact Study*[10], the proposed development is to consist of 34 single detached units, 32 semi-detached units, 78 townhouse units and 111 apartment units, for a total of 255 units. Revisions to the draft plan of subdivision were proposed in 2017 and subsequently approved. The current draft plan of subdivision consists of 34 single detached units, 32 semi-detached units, 46 townhouse units and 125 apartment units, for a total of 237 units (18 fewer units than considered in the initial TIS). Regardless, the site generated traffic provided in the original TIS has been maintained to ensure a conservative approach.

There is currently no development activity on the site. For the purpose of this study, full build-out has been assumed by 2030. The site generated traffic, as presented in the respective traffic impact study, has been carried through the study area road network based on the trip distribution assumptions provided in Section 4.6.2. The assignment of trips through the road network is illustrate in Figure 12.

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[9] *50 Saunders Street Traffic Impact Brief.* Tatham Engineering Limited, February 9, 2024.
[10] *Trails of Collingwood Subdivision Traffic Impact Study.* R.J. Burnside & Associates Ltd. June 2007.

50 Saunders Street

The 50 Saunders Street residential development is to be located on the northwest corner of the intersection of Saunders Street with Poplar Sideroad. As noted in the *50 Saunders Street Traffic Impact Brief*[11], upon completion (assumed in 2030), it will consist of 64 single family units and will generate in the order of 51 to 66 new peak hour trips. Details with respect to the assignment of the associated traffic volumes through the study area road system were determined from the noted study, the results of which are illustrated in Figure 13.

Summit View Phase 2

Summit View Phases 1 and 2 are located immediately north and west of the proposed Phase 3 lands. Upon full build-out, Phases 1 and 2 will consist of a combined 406 residential units. A summary of the units by phase is provide below:

- Phase 1 – 213 units (82 singles, 44 semis and 87 towns) and
- Phase 2 – 193 units (151 singles and 42 semis)

Phase 1 is complete, and Phase 2 is approximately 45% built-out (86 units were complete at the time of the 2023 traffic counts). As such, 107 units remain to be built in Phase 2 with full build-out is anticipated by 2025.

Recognizing that the traffic counts captured the traffic associated with the existing level of build-out, only the traffic associated with the remaining 107 units has been considered as additional traffic. The associated trips have been established based on trip rates provided in the ITE *Trip Generation Manual*[12]*, 11th Edition* for the *single family detached* (ITE code 210) land use. For the purpose of this assessment (and to ensure a conservative approach) it is assumed that the 107 units to be constructed are single detached units. The ITE trip rates and the resulting trip estimates for the remaining Phase 2 units are summarized in Table 3.

Table 3: Trip Generation - Summit View Phase 2 Remaining Units

LAND USE	VARIABLE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		In	Out	Total	In	Out	Total
single family detached (ITE 210)	units	0.18	0.52	0.70	0.59	0.35	0.94
Ph 2 remaining units	107	19	55	74	63	37	100

[11] *50 Saunders Street Traffic Impact Brief.* Tatham Engineering Limited. December 3, 2019.
[12] *Trip Generation Manual, 11th Edition.* Institute of Transportation Engineers. September 2021.

As noted, the remaining units in Phase 2 are expected to generate 74 new trips during the AM peak hour and 100 trips during the PM peak hour upon full build-out. The noted Phase 2 trips have been assigned to the study area road network based on the trip distribution/assignment assumptions provided in Section 4.6 for Summit View Phase 3. The assignment of trips through the road network is illustrate in Figure 14.

3.4.3 Background Traffic Volumes

The future background traffic volumes for the 2030, 2035 and 2040 horizon years are illustrated in Figure 15 through Figure 17 and reflect the following:

- the 2024 traffic volumes as per Figure 10;
- the noted annual background growth rate; and
- the additional traffic volumes associated with the noted background developments.

In comparison to the previous *Phase 3 Traffic Impact Study*, the 2040 background traffic volumes on High Street are approximately 15% to 25% greater than previously considered (with additional volumes to result from the Phase 3 development).

3.4.4 Consideration for the High Street Class EA Update

As per the peer review comments provided in Appendix A, it is understood that the traffic study completed for the High Street Class EA update employed a reduced background growth rate of 1% per annum along High Street, in addition to traffic generated by 13 developments considered to increase volumes on High Street. The resulting long-term (2041/2042) High Street volumes were noted as being 25% greater during the AM peak hour and 32% during the PM peak hour, when compared to the previous *Phase 3 Traffic Impact Study* projections.

However, as neither the noted traffic study nor the Class EA have been completed and the data available for further review and consideration, such cannot be readily recreated and the assumptions upon which they are based be confirmed and carried forward in this study. In this regard, and for the purpose of this study, the assumptions and methodology as discussed in Section 3.4.3 and the resulting background traffic volumes as provided in Figure 15 through Figure 17 have been carried forward.

3.4.5 Consideration for the Collingwood Transportation Study Update

It is recognized that the 2040 background traffic volumes considered in this study are lower than the 2041 projections considered in the *Collingwood Transportation Study Update*. While the latter employed a nominal background growth of 0.5% per annum, it also considered a number of planned and potential developments within the Town. These developments, which were

assumed to be built-out by the 2041 horizon, result in an estimated increase in population of 22,815 persons. In considering the 2021 census of 24,811, this results in an ultimate population of 47,626 by 2041. As previously noted, the County's *Growth Forecast and Land Needs Assessment* allocates the Town a population of 42,690 by 2051. Thus, the traffic projections contained within the *Collingwood Transportation Study Update* reflect a conservative scenario in that not all of the noted developments are likely to be built out by 2041 as otherwise assumed.

Notwithstanding, a sensitivity analysis has also been conducted for the 2041 horizon to consider the future total traffic volumes considered in the *Collingwood Transportation Study Update* and the impact of such on intersections of High Street with Plewes Drive/Findlay Drive and the Summit View Phase 3 access. The sensitivity analysis is documented in Section 5.4.

3.5 TRAFFIC OPERATIONS

The intersection operations were again analyzed for each horizon year given the projected background volumes and maintaining the existing intersection configuration and controls. As previously noted, the identified future road system improvements (widening of High Street to 3 or 4 lanes and intersection improvements at Plewes Drive/Findlay Drive and Campbell Street) will only be considered if improvements are warranted by the traffic operations, thereby confirming the need for such and the associated timing.

3.5.1 2030 Operations

The results of the 2030 background operational assessment are summarized in Table 4; corresponding detailed worksheets are provided in Appendix E. With the exception of High Street and Plewes Drive/Findlay Drive, the study area intersections provide acceptable overall levels of service (LOS E or better) with average delays during both peak hours. Notwithstanding the southbound movement at the intersection of High Street and Campbell Street (LOS E), all other individual movements experience LOS D or better.

At the intersection of High Street with Plewes Drive/Findlay Drive, poor operations (LOS F) resulting from increased delays are expected for the eastbound movement during the PM peak hour. To address such, traffic signals are recommended thereby ensuring improved opportunities for the side street traffic to enter the intersection. A summary of the intersection operations with traffic signal control is provided in Table 5 with detailed worksheets provided in Appendix E. As expected, the implementation of traffic signals will ensure excellent operations during the peak hours.

It is noted that Plewes Drive/Findlay Drive is approximately 480 metres north of the Poplar Sideroad road and thus there will be no concerns with respect to queuing at the recommended traffic signals impacting roundabout operations.

Table 4: Intersection Operations – 2030 Background

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	14	B	0.26	15	B	0.15
	EB TR	signal	42	D	0.93	45	D	0.94
	WB L	signal	17	B	0.30	21	C	0.47
	WB T	signal	23	C	0.65	21	C	0.56
	WB R	signal	17	B	0.14	16	B	0.13
	NB L	signal	14	B	0.43	20	B	0.49
	NB T	signal	14	B	0.28	18	B	0.26
	NB R	signal	12	B	0.06	16	B	0.03
	SB L	signal	19	C	0.59	40	D	0.71
	SB TR	signal	21	C	0.34	34	C	0.66
	overall	signal	25	C	0.72	31	C	0.80
Poplar Sideroad & High Street	EB	roundabout	3	A	0.14	3	A	0.22
	WB	roundabout	2	A	0.29	2	A	0.30
	SB	roundabout	2	A	0.17	2	A	0.19
High Street & Plewes Drive/Findlay Drive	EB LTR	stop	50	E	0.62	**66**	**F**	0.62
	WB LTR	stop	12	B	0.23	6	B	0.22
	NB L	free	8	A	0.01	1	A	0.02
	SB L	free	8	A	0.09	3	A	0.11
High Street & Campbell Street	WB	stop	11	B	0.23	11	B	0.22
	NB	stop	20	C	0.72	25	C	0.78
	SB	stop	18	C	0.13	37	E	0.20
Rowland Street & Poplar Sideroad	EB LT	free	1	A	0.00	1	A	0.01
	SB LR	stop	12	B	0.08	13	B	0.08

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

Table 5: Intersection Operations – 2030 Background + Improvements

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
High Street & Plewes Drive/Findlay Drive	EB LTR	signal	14	B	0.37	16	B	0.36
	WB LTR	signal	13	B	0.12	15	B	0.11
	NB L	signal	4	A	0.02	3	A	0.03
	NB TR	signal	5	A	0.28	4	A	0.31
	SB L	signal	4	A	0.17	4	A	0.20
	SB T	signal	5	A	0.32	4	A	0.35
	SB R	signal	4	A	0.03	3	A	0.07
	overall	signal	7	A	0.33	6	A	0.36

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

3.5.2 2035 Operations

The results of the 2035 background operational assessment are summarized in Table 6 with corresponding worksheets provided in Appendix E. It is noted that the road system improvements recommended under the 2030 background conditions (namely traffic signals at the High Street intersection with Plewes Drive/Findlay Drive have been carried forward).

Acceptable operations will be provided for all movements, intersections and peak hours with the exception of the southbound approach on High Street at Campbell Street which will experience increased delays and hence a level of service F during the PM peak hour. This is largely attributed to the increased southbound through volumes operating under stop control which incur increased delays and slightly exceed the approach capacity. To rectify this, traffic signals have also been considered for this intersection in addition to the provision of separate westbound left and right turn lanes (separate left turn lanes are typically provided at signalized intersections to increase the effectiveness of the traffic signals). A summary of the resulting operations is provided in Table 7 with detailed worksheets provided in Appendix E. As expected, the implementation of traffic signals will ensure excellent operations during the peak hours.

Table 6: Intersection Operations – 2035 Background

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	15	B	0.28	14	B	0.17
	EB TR	signal	42	D	0.93	51	D	0.98
	WB L	signal	18	B	0.32	23	C	0.53
	WB T	signal	22	C	0.63	20	C	0.57
	WB R	signal	17	B	0.15	16	B	0.14
	NB L	signal	18	B	0.52	29	C	0.67
	NB T	signal	17	B	0.32	21	C	0.30
	NB R	signal	14	B	0.06	18	B	0.04
	SB L	signal	37	D	0.69	54	D	0.85
	SB TR	signal	25	C	0.39	41	D	0.77
	overall	signal	27	C	0.77	36	D	0.89
Poplar Sideroad & High Street	EB	roundabout	3	A	0.15	3	A	0.24
	WB	roundabout	3	A	0.32	3	A	0.32
	SB	roundabout	2	A	0.19	2	A	0.21
High Street & Plewes Drive/Findlay Drive	EB LTR	signal	14	B	0.37	16	B	0.36
	WB LTR	signal	13	B	0.13	15	B	0.13
	NB L	signal	4	A	0.02	3	A	0.03
	NB TR	signal	5	A	0.30	4	A	0.34
	SB L	signal	5	A	0.20	4	A	0.23
	SB T	signal	5	A	0.36	5	A	0.39
	SB R	signal	4	A	0.03	3	A	0.07
	overall	signal	7	A	0.36	6	A	0.38
High Street & Campbell Street	WB	stop	11	B	0.26	12	B	0.25
	NB	stop	27	D	0.81	32	D	0.86
	SB	stop	23	C	0.15	**57**	**F**	**1.03**
Rowland Street & Poplar Sideroad	EB LT	free	1	A	0.00	1	A	0.01
	SB LR	stop	13	B	0.09	14	B	0.08

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

Table 7: Intersection Operations – 2035 Background + Improvements

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
High Street & Campbell Street	WB L	signal	18	B	0.22	20	B	0.28
	WB R	signal	17	B	0.06	19	B	0.06
	NB TR	signal	5	A	0.44	4	A	0.44
	SB L	signal	3	A	0.16	3	A	0.24
	SB T	signal	4	A	0.40	4	A	0.50
	overall	signal	6	A	0.40	5	A	0.47

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

3.5.3 2040 Operations

The results of the 2040 background operational assessment are summarized in Table 8 with corresponding worksheets provided in Appendix E. All road system improvements previously noted have been carried forward (traffic signals at the intersections of High Street with Plewes Drive/Findlay Drive and Campbell Street).

As indicated, acceptable operations will be provided for each movement and each overall intersection with the exception of the shared through-right eastbound movement on Poplar Sideroad with its intersection with Hurontario Street, which is expected to operate at capacity during the PM peak hour. To address this condition, the following improvements have been considered:

- provide a southbound advance green signal phase (which would provide immediate benefit if implemented earlier); and
- provide a separate eastbound right turn lane on Poplar Sideroad (thus mirroring the lane configuration on the east side of the intersection).

With the noted improvements, the intersection will provide improved operations as summarized in Table 9 (detailed worksheets provided in Appendix E).

Table 8: Intersection Operations – 2040 Background

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	B	B	16	15	B	0.20
	EB TR	signal	D	D	48	64	E	**1.02**
	WB L	signal	C	C	21	32	C	0.66
	WB T	signal	C	C	24	22	C	0.66
	WB R	signal	B	B	18	16	B	0.60
	NB L	signal	C	C	23	56	E	0.15
	NB T	signal	B	B	19	24	C	0.86
	NB R	signal	B	B	16	20	B	0.33
	SB L	signal	D	D	43	71	E	0.04
	SB TR	signal	C	C	27	49	D	0.93
	overall	signal	C	C	30	44	D	0.83
Poplar Sideroad & High Street	EB	roundabout	3	A	0.17	3	A	0.27
	WB	roundabout	3	A	0.35	3	A	0.36
	SB	roundabout	2	A	0.21	2	A	0.23
High Street & Plewes Drive/Findlay Drive	EB LTR	signal	14	B	0.38	14	B	0.30
	WB LTR	signal	13	B	0.14	13	B	0.12
	NB L	signal	4	A	0.02	3	A	0.03
	NB TR	signal	5	A	0.34	5	A	0.40
	SB L	signal	5	A	0.22	5	A	0.29
	SB T	signal	6	A	0.39	6	A	0.45
	SB R	signal	4	A	0.03	4	A	0.07
	overall	signal	7	A	0.39	7	A	0.42
High Street & Campbell Street	WB L	signal	19	B	0.25	19	B	0.26
	WB R	signal	18	B	0.07	19	B	0.06
	NB TR	signal	5	A	0.47	4	A	0.48
	SB L	signal	3	A	0.19	4	A	0.29
	SB T	signal	4	A	0.43	5	A	0.55
	overall	signal	6	A	0.44	6	A	0.51
Rowland Street & Poplar Sideroad	EB LT	free	1	A	0.00	1	A	0.01
	SB LR	stop	13	B	0.09	14	B	0.09

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

Table 9: Intersection Operations – 2040 Background + Improvements

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	18	B	0.44	18	B	0.44
	EB T	signal	40	D	0.90	40	D	0.90
	EB R	signal	18	B	0.11	18	B	0.11
	WB L	signal	18	B	0.34	18	B	0.34
	WB T	signal	31	C	0.81	31	C	0.81
	WB R	signal	18	B	0.17	18	B	0.17
	NB L	signal	15	B	0.52	15	B	0.52
	NB T	signal	14	B	0.32	14	B	0.32
	NB R	signal	12	B	0.07	12	B	0.07
	SB L	signal	33	C	0.70	33	C	0.70
	SB TR	signal	21	C	0.39	22	C	0.39
	overall	signal	25	C	0.75	25	C	0.75

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

3.6 ROAD NETWORK IMPROVEMENTS

In consideration of the background intersection operations, the following improvements are recommended:

2030
- signalization of the intersection of High Street with Plewes Drive/Findlay Drive (consistent with the recommendations of the High Street Class EA)

2035
- 2035 - signalization of the intersection of High Street with Campbell Street and provision of a westbound left turn lane (consistent with the recommendations of the High Street Class EA)

2040
- provision of an eastbound right turn lane on Poplar Sideroad at Hurontario Street

4 Proposed Development

This chapter provides additional details with respect to the proposed Summit View Phase 3 development, including its location, the projected site generated traffic volumes and the assignment of such to the adjacent road network.

4.1 LOCATION

The subject site is located on the north-west corner of the intersection of High Street and Poplar Sideroad in the Town of Collingwood (as per Figure 1).

4.2 LAND USE & PHASING

The proposed residential development will consist of:

- 38 semi- detached units;
- 98 townhouse units; and
- 136 total units.

A single phase has been considered with full build-out assumed by 2030. A site plan is provided in Figure 18.

4.3 ACCESS

4.3.1 Location

As evident in the site plan of Figure 18, access to the Phase 3 lands will be provided via the following:

- a new municipal road connection to High Street (referred to as Street B); and
- 2 internal connections to the existing road network serving Summit View Phases 1 and 2, which in turn will provide access to Plewes Drive and Rowland Street.

The proposed Street B access to High Street is located approximately 285 metres south of Plewes Drive and 180 metres north of Poplar Sideroad. As per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads*[13], a minimum intersection spacing of 200 metres is recommended on arterial roads, which is sufficient to accommodate back-to-back storage for left turning vehicles at the adjacent intersections. While the proposed separation

[13] *Geometric Design Guide for Canadian Roads, Chapter 9.* Transportation Association of Canada. June 2017.

between Street B and the roundabout at Poplar Sideroad does not satisfy the recommended 200 metre separation, it is not considered problematic in that:

- Street B will serve relatively low volumes (particularly northbound left turns); and
- given the roundabout at Poplar Sideroad, there will be no need for back-to-back left turn lanes.

In this respect, the proposed 180 metre separation is considered acceptable.

4.3.2 Configuration

As noted, the Street B access to High Street will be constructed as a municipal road (to applicable Town standards) and thus will provide 1 inbound lane and 1 outbound lane (shared left-right lane) operating under stop control at High Street.

4.3.3 Sight Lines

The sight lines along High Street at Street B have been reviewed in context of the minimum stopping sight distance and intersection sight distance requirements as per the TAC guidelines, which are further explained below.

- Minimum stopping sight distance provides sufficient distance for an approaching motorist to observe a hazard in the road and bring their vehicle to a complete stop prior to the hazard.
- Intersection sight distance allows a vehicle to enter a main road from a side street (or site access) and attain the appropriate operating speed without significantly impacting the operating speed of an approaching vehicle.

Table 10 summarizes the sight distance requirements for a design speed of 70 km/h, reflective of the posted speed of 50 km/h on High Street, and the available sight lines along High Street at the proposed Street B intersection.

Table 10: Site Access Sight Line Assessment

LOCATION	DESIGN SPEED	STOPPING SIGHT DISTANCE	INTERSECTION SIGHT DISTANCE		AVAILABLE SIGHT DISTANCES TO/FROM	
			Left Turn	Right Turn	South	North
Street B	70 km/h	105 m	150 m	130 m	180 m	>200 m

As indicated, the minimum stopping and intersection sight distance requirements for a 70 km/h design speed are satisfied in all instances (the available sight distances exceed the required distances).

4.4 TRANSIT PROVISIONS

As per the recommendations provided in Town's recent transit service review study (refer to Section 3.2), a number of options exist for providing transit service to the Summit View development (and the overall area in general). These include modifications to existing routes and/or new routes to provide service on High Street to Findlay Drive, and the introduction of on-demand service that would cover the entire Town.

4.5 ACTIVE TRANSPORTATION PROVISIONS

The overall Summit View development includes a comprehensive sidewalk network and internal walkways which will provide internal connectivity within the site. This connectivity will be extended through Phase 3.

The site is also well connected to the Town's trail network, including direct connection to the existing trail on the west side of High Street. It is understood that a trail will also be introduced along the Poplar Sideroad frontage of the site to further improve this connectivity.

Pedestrian crossings of High Street can be accommodated at the Poplar Sideroad roundabout, at the pedestrian signals that were recently installed at the Plewes Drive/Findlay Drive intersection and at Campbell Street which currently operates under all-way stop control.

4.6 TRAFFIC

4.6.1 Trip Generation

The number of vehicle trips to be generated by the proposed development has been determined based on the type of use, development size, and ITE trip generation rates (as per *ITE Trip Generation Manual, 11th Edition*) for the *single family attached* (ITE code 215) land use. The associated trip rates and trip estimates are provided in Table 11.

Table 11: Trip Generation – Summit View Phase 3

LAND USE	VARIABLE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		In	Out	Total	In	Out	Total
single family attached (ITE 215)	trips/unit	0.15	0.33	0.48	0.32	0.25	0.57
semi-detached units	38	6	13	18	12	9	22
townhouse units	98	15	32	47	32	24	56
Totals	**136**	**20**	**45**	**65**	**44**	**33**	**78**

Overall, the proposed development is expected to generate 65 trips during the weekday AM peak hour and 77 trips during the weekday PM peak hour (total of inbound and outbound trips).

4.6.2 Trip Distribution

The distribution of the site generated trips has been developed based on the results of the *Transportation Tomorrow Survey* (TTS) conducted in 2016 . The TTS is a comprehensive travel survey conducted in the Greater Golden Horseshoe area once every five years (the 2021 survey was pre-empted by the COVID pandemic and is currently being conducted). As per the *TTS 2016 Data Guide,* the development site resides in Traffic Boundary Zone 8606; however, as this traffic zone had limited development at the time of the 2016 TTS, the data for Traffic Zone 8567 (which is bounded by High Street, First Street, Poplar Sideroad and Minnesota Street/Collingwood Loop Trail corridor and encompasses most of the built-up area of Collingwood) was utilized. Trip data was filtered to consider trips to, from and internal to the respective traffic zone. The following distribution was established:

- to/from Toronto/Barrie/Springwater 4%;
- to/from Clearwater 13%;
- to/from Grey County 5%;
- to/from Wasaga Beach 9%;
- to/from other locations outside of Collingwood 4%; and
- to/from locations within Collingwood 65%.

As indicated, 65% of the trips remain wholly within the Town of Collingwood, whereas 35% originate from, or are destined to, areas outside of the Town. With respect to the trips that remain within Collingwood, a majority of these trips will travel to/from the north and northeast areas of the Town given the location of the site at the southwest limits of the Town.

Based on the above, with consideration given to anticipated travel routes, the following distribution/assignment has been assumed:

- to/from the north via High Street 50%;
- to/from the south via County Road 124 10%;
- to/from the west via Poplar Sideroad 10%;
- to/from the east via Poplar Sideroad 15%
- to/from the east via Campbell Street 10%; and
- to/from the east via Findlay Drive 5%.

4.6.3 Trip Assignment

It has been assumed that some traffic assigned to Campbell Street and Findlay Drive will ultimately travel north to the downtown area. Similarly, traffic assigned to/from the east on Poplar Sideroad will ultimately travel south on Highway 26.

With respect to the assignment of trips to the site access points, with the exception of trips distributed to/from the west along Poplar Sideroad (which are assumed to access the wider road network via Rowland Street at Poplar Sideroad), all site traffic has been assigned to the High Street access (Street B).

The resulting assignment of site traffic to the road network is illustrated in Figure 19.

5 Future Total Conditions

This chapter will address the resulting impacts of the proposed development on the adjacent road system. The following areas are to be addressed:

- operations at the key intersections and the Street B site access; and
- potential improvements to the study area road network, if necessary.

5.1 TRAFFIC VOLUMES

5.1.1 Re-Distribution of Summit View Phases 1 & 2 Traffic

Recognizing that the completion of Phase 3 will include new internal street connections to Phases 1 and 2, it is expected that some existing traffic will divert through Phase 3 to access High Street. While the re-distribution of traffic is not expected to be significant given the layout of the internal road network serving the Summit View development, a minor traffic diversion has been considered.

For the purpose of this assessment, it has been assumed that 10% of the traffic generated by Phases 1 and 2 that is otherwise distributed to/from the north, south and east has been re-assigned through to Street B. It has been assumed that internal traffic travelling to/from the west will continue to do so via Rowland Street. The resulting re-distribution of the Phase 1 and 2 traffic is provided in Figure 20.

5.1.2 Total Traffic Volumes

To assess the impacts of the increased traffic volumes resulting from the proposed development, the site generated traffic was combined with the 2030, 2035 and 2040 background traffic volumes, with consideration given to the noted re-distribution of Summit View Phases 1 and 2 traffic. The resulting future total traffic volumes are presented in Figure 21 to Figure 23.

In comparison to the previous *Phase 3 Traffic Impact Study*, the 2040 total traffic volumes on High Street are approximately 15% to 25% greater than previously projected.

5.2 TRAFFIC OPERATIONS

The operations of the key intersections were again investigated considering the total traffic volumes and any intersection improvements established under background conditions for each horizon year. The operations of the proposed intersection of Street B with High Street have also been reviewed, assuming a shared left/right turn lane configuration on Street B operating under stop control.

5.2.1 2030 Operations

The 2030 operations are summarized in Table 12 with detailed worksheets provided in Appendix F. As noted, acceptable operations will be provided for all movements, intersections and time periods and thus no further improvements are warranted.

Table 12: Intersection Operations – 2030 Total

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	14	B	0.24	15	B	0.16
	EB TR	signal	36	D	0.89	46	D	0.95
	WB L	signal	17	B	0.31	21	C	0.47
	WB T	signal	22	C	0.63	21	C	0.56
	WB R	signal	17	B	0.14	16	B	0.13
	NB L	signal	15	B	0.45	20	C	0.51
	NB T	signal	15	B	0.29	19	B	0.26
	NB R	signal	13	B	0.06	16	B	0.03
	SB L	signal	31	C	0.62	40	D	0.71
	SB TR	signal	23	C	0.36	34	C	0.66
	overall	signal	24	C	0.72	31	C	0.81
Poplar Sideroad & High Street	EB	roundabout	3	A	0.14	3	A	0.22
	WB	roundabout	2	A	0.30	2	A	0.30
	SB	roundabout	2	A	0.18	2	A	0.19
High Street & Plewes Drive/Findlay Drive	EB LTR	signal	14	B	0.34	16	B	0.33
	WB LTR	signal	13	B	0.12	15	B	0.13
	NB L	signal	4	A	0.02	3	A	0.03
	NB TR	signal	5	A	0.31	4	A	0.34
	SB L	signal	4	A	0.18	4	A	0.21
	SB T	signal	5	A	0.34	4	A	0.38
	SB R	signal	4	A	0.03	3	A	0.06
	overall	signal	7	A	0.34	6	A	0.37
High Street & Campbell Street	WB LR	stop	11	B	0.24	12	B	0.24
	NB TR	stop	23	C	0.77	29	D	0.83
	SB L	stop	19	C	0.13	46	E	0.20
Rowland Street & Poplar Sideroad	EB LT	free	1	A	0.00	1	A	0.01
	SB LR	stop	12	B	0.08	13	B	0.07
High Street & Site Access	EB LR	stop	14	B	0.13	16	C	0.12
	NB LT	free	1	A	0.01	1	A	0.02

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

5.2.2 2035 Operations

Table 13 summarizes the 2035 operations; detailed worksheets are provided in Appendix F. Again, all operations are acceptable and thus no additional improvements are required.

Table 13: Intersection Operations – 2035 Total

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	15	B	0.28	17	B	0.16
	EB TR	signal	44	D	0.94	44	D	0.92
	WB L	signal	18	B	0.33	20	C	0.36
	WB T	signal	22	C	0.63	22	C	0.57
	WB R	signal	17	B	0.15	18	B	0.14
	NB L	signal	18	B	0.53	18	B	0.46
	NB T	signal	17	B	0.33	17	B	0.27
	NB R	signal	14	B	0.06	15	B	0.03
	SB L	signal	38	D	0.70	39	D	0.74
	SB TR	signal	25	C	0.39	31	C	0.63
	overall	signal	27	C	0.78	30	C	0.78
Poplar Sideroad & High Street	EB	roundabout	3	A	0.15	3	A	0.24
	WB	roundabout	3	A	0.32	3	A	0.33
	SB	roundabout	2	A	0.20	2	A	0.22
High Street & Plewes Drive/Findlay Drive	EB LTR	signal	14	B	0.35	17	B	0.41
	WB LTR	signal	13	B	0.13	15	B	0.12
	NB L	signal	4	A	0.02	3	A	0.02
	NB TR	signal	5	A	0.34	4	A	0.30
	SB L	signal	5	A	0.20	4	A	0.21
	SB T	signal	5	A	0.37	4	A	0.33
	SB R	signal	4	A	0.03	3	A	0.06
	overall	signal	7	A	0.37	6	A	0.35
High Street & Campbell Street	WB L	signal	18	B	0.22	18	B	0.22
	WB R	signal	17	B	0.06	17	B	0.06
	NB TR	signal	5	A	0.47	4	A	0.39
	SB L	signal	4	A	0.17	4	A	0.23
	SB T	signal	4	A	0.41	5	A	0.46
	overall	signal	6	A	0.43	6	A	0.42
Rowland Street & Poplar Sideroad	EB LT	free	1	A	0.00	1	A	0.01
	SB LR	stop	13	B	0.08	13	B	0.07

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
High Street & Site Access	EB LR	stop	15	B	0.14	15	B	0.11
	NB LT	free	1	A	0.01	1	A	0.02

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

5.2.3 2040 Operations

The 2040 operations are summarized in Table 14 with accompanying worksheets provided in Appendix F. Again, all operations are acceptable and thus no additional improvements are required.

Table 14: Intersection Operations – 2040 Total

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Hurontario Street & Poplar Sideroad	EB L	signal	18	B	0.44	19	B	0.29
	EB T	signal	41	D	0.90	48	D	0.94
	EB T	signal	18	B	0.11	19	B	0.16
	WB L	signal	18	B	0.34	26	C	0.59
	WB T	signal	31	C	0.81	29	C	0.76
	WB R	signal	18	B	0.17	19	B	0.15
	NB L	signal	15	B	0.53	21	C	0.60
	NB T	signal	14	B	0.32	16	B	0.28
	NB R	signal	12	B	0.07	14	B	0.04
	SB L	signal	33	C	0.70	52	D	0.78
	SB TR	signal	22	C	0.39	32	C	0.70
	overall	signal	26	C	0.76	31	C	0.83
Poplar Sideroad & High Street	EB	roundabout	3	A	0.17	3	A	0.27
	WB	roundabout	3	A	0.36	3	A	0.36
	SB	roundabout	2	A	0.22	2	A	0.24
High Street & Plewes Drive/Findlay Drive	EB LTR	signal	14	B	0.35	17	B	0.32
	WB LTR	signal	13	B	0.15	16	B	0.14
	NB L	signal	4	A	0.02	3	A	0.03
	NB TR	signal	5	A	0.37	5	A	0.40
	SB L	signal	5	A	0.23	5	A	0.28
	SB T	signal	6	A	0.41	5	A	0.45
	SB R	signal	4	A	0.03	3	A	0.07
	overall	signal	7	A	0.40	7	A	0.43

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
High Street & Campbell Street	WB L	signal	20	C	0.25	23	C	0.27
	WB R	signal	19	B	0.07	22	C	0.06
	NB TR	signal	5	A	0.49	4	A	0.48
	SB L	signal	4	A	0.19	4	A	0.29
	SB T	signal	4	A	0.43	5	A	0.54
	overall	signal	6	A	0.45	6	A	0.51
Rowland Street & Poplar Sideroad	EB LT	free	1	A	0.00	1	A	0.01
	SB LR	stop	13	B	0.09	14	B	0.09
High Street & Site Access	EB LR	stop	16	C	0.15	19	C	0.15
	NB LT	free	1	A	0.01	1	A	0.02

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

As indicated, the study area intersections will provide acceptable operations through the 2040 horizon.

5.3 ROAD NETWORK IMPROVEMENTS

5.3.1 Existing Intersections

Beyond the intersection improvements identified under the future background conditions (refer to Section 3.6), no further improvements are required at the respective intersections under the future total conditions.

5.3.2 Site Access Intersection

Despite the otherwise good operations provided at the site access, the need for exclusive turn lanes on High Street at Street B has been reviewed based on the following:

- MTO guidelines for auxiliary lanes at unsignalized intersections;
- a design speed of 70 km/h (reflective of the 50 km/h speed limit); and
- the projected 2030, 2035 and 2040 total volumes.

Right Turn Lanes

With respect to right turn lanes, as per MTO standards, such are generally warranted where right turn volumes exceed 60 vehicles per hour and/or impede through traffic. As the right turn volumes on High Street at Street B are in the order of 18 to 38 vehicles per hour, an exclusive right tun lane is not required.

Left Turn Lanes

The MTO left turn lane warrants are based on design speed, advancing volume (i.e. traffic travelling in the same direction as the left-turning traffic), opposing volume (i.e. traffic travelling in the opposite direction as the left-turning traffic) and percentage of left turns in the advancing volume. The left turn volumes are in the order of 3 to 5% of the advancing volume during the peak periods. As such, the warrants for 5% left turns in the advancing volume were assessed for the 2040 horizon (the most critical time period with respect to increased traffic volumes).

As per the completed left turn lane warrants (provided in Appendix G) a northbound left turn lane with 15 metres storage is marginally warranted during the 2040 PM peak hour, despite there being only 18 left turns (it is not otherwise warranted for the remaining horizon years and peak hour periods). However, such is not considered necessary from the traffic operations perspective (in that acceptable operations without such will be provided).

Understanding however that High Street is to be widened to 3 (if not 4 lanes) by 2032 (as per the High Street Class EA), the provision of a left turn lane will otherwise be addressed.

5.4 SENSITIVITY ANALYSIS

As previously noted, the *Collingwood Transportation Study Update* was comprehensive in its consideration of all planned and potential development within the Town. It adopted a conservative approach to the assessment, assuming all planned and potential developments were built-out by the 2041 horizon. Consideration for the build-out of all development (planned and potential) within the Town by 2041 is beyond the scope of a typical traffic impact study, which is intended to focus on development specific impacts within the immediate study area. As such, the assessment contained herein did not consider developments located outside of the study area, nor did it consider the potential developments.

A sensitivity analysis has been conducted to consider the 2041 total volumes provided in the *Collingwood Transportation Study Update,* to identify any additional improvements that may be required should the development schedule provided in the Collingwood study unfold as assumed. Within the study area, 2041 traffic projections were only provided at the intersection of High Street with Campbell Street. As such the volumes on High Street were subsequently extended through the intersections of Plewes Drive/Findlay Drive and Street B. The resulting 2041 volumes are illustrated in Figure 24 (the volumes on High Street immediately south of Campbell Street are 20% to 60% greater than the 2040 projections developed for this study).

The sensitivity analysis has only considered the intersections of High Street with Plewes Drive/Findlay Drive and High Street with Street B, as these intersections were not assessed in the Collingwood study. The assessment considers the following:

- the widening of High Street to a 4 lane cross-section as recommended in the *Collingwood Transportation Study Update*; and
- traffic signals at the intersection of High Street with Plewes Drive/Findlay Drive, as recommended herein.

The result of the sensitivity analysis are provided in Table 15 with detailed worksheets provided in Appendix H.

Table 15: Intersection Operations – 2041 Total (Sensitivity Analysis)

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
High Street & Plewes Drive/Findlay Drive	EB LTR	signal	24	C	0.55	23	C	0.37
	WB LTR	signal	20	B	0.15	21	C	0.13
	NB LTR	signal	4	A	0.31	4	A	0.39
	SB LTR	signal	4	A	0.41	6	A	0.64
	overall	signal	7	A	0.43	7	A	0.60
High Street & Street B	EB LR	stop	18	C	0.19	33	D	0.27

Despite the increased volumes on High Street as projected in the *Collingwood Transportation Study Update,* the subject intersections will continue to provide acceptable operations. In this regard, should the future traffic volumes exceed the projections developed in this study, such can be accommodated without additional road system improvements.

6 Summary

Proposed Development

This study has addressed the transportation impacts associated with the Summit View Residential Subdivision, Phase 3 development located at the northwest corner of Poplar Sideroad and High Street in the Town of Collingwood. Upon completion, the development is expected to generate 65 trips during the AM peak hour and 78 trips during the PM peak hour.

Transportation Assessment

In addressing the study area traffic operations, the key intersections were analysed under existing (2024) and future (2030, 2035 and 2040) horizon periods. The site access (Street B) on High Street was also assessed under total conditions for the future horizons. The improvements as summarized below are noted.

- The intersection of High Street with Plewes Drive/Findlay Drive will experience poor operations (LOS F) in 2030 under background conditions. While traffic signals are not warranted based on traffic signal justification criteria, such are nonetheless recommended to address the poor operating conditions, which result largely due to the increased volumes on High Street. This recommendation is consistent with that of the Town's current *High Street Class EA Update.* Recognizing the benefits that signalization of this intersection will provide to both the future background and future total traffic volumes, and understanding that such is recommended to serve the future background volumes (i.e. without the Phase 3 development), the associated costs should be addressed in conjunction with the widening of High Street through the Town's development charges.
- The intersection of High Street with Campbell Street will experience poor operations under 2035 background conditions. To remedy such, traffic signals are also recommended at this intersection, in addition to the provision of separate westbound left and right turn lanes to maximize the efficiency of the signals. This recommendation is consistent with that of the Town's current *High Street Class EA Update.*
- Under the 2040 background conditions, consideration should be given to the provision of an exclusive eastbound right turn lane on Poplar Sideroad at Hurontario Street to improve operations (to be undertaken by the County given the prevailing road jurisdiction of the intersection).
- Despite the limited left turn volumes, a northbound left turn lane on High Street at Street B to serve Summit View Phase 3 is warranted under the 2040 PM peak hour conditions (not

otherwise warranted under 2030 or 2035 conditions, or the 2040 AM conditions). It is expected that any widening of High Street (to 3 or 4 lanes) will be realized by 2040 (identified as needed by 2032 as per the *High Street Class EA Update*) thus addressing this need. The left turn lane is not otherwise required to support the completion of the development under the 2030 and 2035 horizons.

A sensitivity analysis was conducted to consider the 2041 traffic projections provided in the *Collingwood Transportation Study Update,* which was comprehensive in its consideration of planned and potential development within the Town. The sensitivity analysis focused on the intersection operations at High Street with Plewes Drive/Findlay Drive and at High Street with Street B, as these intersections were not included in the *Collingwood Transportation Study Update.* The assessment considered the 4 lane widening of High Street by 2041 (as recommended in the Collingwood Study) and the implementation of traffic signals at High Street with Plewes Drive/Findlay Drive (as recommended herein under the 2030 background conditions). The sensitivity analysis indicates that both intersections will provide acceptable operations and no further improvements are required to accommodate the 2041 projections provided in the *Collingwood Transportation Study Update.*

Appendix A:
Peer Review Comments

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BURNSIDE
[THE DIFFERENCE IS OUR PEOPLE]

Technical Memorandum – TIS Peer Review

Date: February 13, 2024 **Project No.:** 300058038.0000

Project Name: Summit View Residential Subdivision, Phase 3

Client Name: Town of Collingwood

Submitted To: Sheldon Hancock, Engineering Technologist

Submitted By: Henry Centen, P. Eng.

This memorandum provides Burnside's peer review comments on the following report:

- Traffic Impact Study, Summit View Residential Subdivision, Phase 3; dated April 13, 2023; prepared by Tatham Engineering

The subject development proposes 135 residential units, consisting of 38 semi-detached units and 97 townhouse units, with an assumed build-out by 2030. The site access is to be provided via a new public road connection to High Street, as well as via connections to existing or planned public roads in Phases 1 and 2 of this development (i.e., Mitchell Avenue and Bassett Street). The connections in the Phases 1 and 2 subdivisions connect to Plewes Drive and Rowland Street, which in turn connect to High Street and Poplar Sideroad (County Road 32).

The current application is for a Zoning By-law Amendment and a Draft Plan of Subdivision.

Burnside Comments on the Traffic Impact Study (TIS):

1. **County Comments** – The proposed development considers impacts affecting County Road 32. Review comments should be provided from Simcoe County.

2. **Existing Traffic Volumes** – The existing traffic in the TIS is based on traffic counts taken in January 2023. The counts on High Street in the area of the proposed Street B connection were much lower than counts taken in an ongoing EA study being completed by the Town for improvements to High Street. The counts for the EA study were taken in October 2022 and were 35% higher in the AM peak hour and 45% higher in the PM peak hour (two-way traffic). This suggests that the winter counts are not the design condition

for this area, considering seasonal fluctuations and/or weather impacts. The modelling in the TIS should be revised to reflect design conditions.

3. **Background Developments and Traffic Growth** – The growth in traffic is forecasted in the TIS based on a background growth rate of 2% per annum plus traffic generated from three developments in this area. The TIS notes that these growth rates are significantly lower than the growth rates forecasted in the Town's *Collingwood Transportation Study Update (Burnside, August 2019) (TSU)*, however suggests that the inclusion of all of the developments considered in the TSU would not typically be considered in the TIS. We note that the TSU forecasts have been used in other TIS studies affecting High Street, however we agree that such forecasts may be conservative. A draft traffic study, prepared as part of the Town's ongoing EA for High Street Improvements, is based on a background growth rate of 1% per annum plus traffic generated from 13 developments that generate traffic through High Street. A comparison of the long-term forecasts (i.e., 2041/2042) from the two models indicates that the EA modelling forecast traffic volumes on High Street that are 25% higher in the AM peak hour and 32% higher in the PM peak hour. Further review of the modelling assumptions made in the TIS should be provided.

4. **Recommended Road Improvements** – The TIS makes the following recommendations for improvements to the road network in the study area:

   - Signalization of the intersection of High Street / Plewes Drive / Findlay Drive by 2040, to address poor operations.

   The traffic study for the Town's EA makes the following recommendations for improvements to the road network in the study area:

   - Widen High Street to a 3-lane cross-section or a 4-lane cross-section by 2032.
   - Add a northbound and southbound left turn lane at the intersection at High Street / Plewes Drive / Findlay Drive. Monitor this intersection for potential signalization. If High Street is widened to a 3-lane cross-section only, this intersection should be signalized by 2032.
   - Signalize and add left turn lanes on all legs of the intersection at High Street / Campbell Street, by 2032.

   The High Street / Street B intersection was not considered in the EA study. Further review should be provided in the TIS to confirm the timeframe for implementing a northbound left turn lane at this intersection, pending implementation of the proposed widening of High Street.

   Given the different modelling data / assumptions used in the EA study and in the TIS study, further review should be provided to reconcile the recommendations for road improvements.

5. **Active Transportation Connectivity and Transit Connectivity**– The TIS notes that the area is not well served by transit currently. Consideration should be made to extending transit to this area.

   The TIS notes that there is a paved shoulder along Poplar Sideroad. Consideration should be made to extending the trail across the Poplar Sideroad frontage, to connect to the trail system along High Street and to the east of High Street.

   The TIS does not consider pedestrian crossing needs on High Street and should be expanded to review the connectivity requirements for such crossings.

6. **Design Considerations** – The current application is for Zoning By-law Amendment and a Draft Plan of Subdivision. Future detailed designs should consider the internal road cross section requirements and circulation (AutoTURN analysis), including provision for parking, snow storage, vehicular and active transportation connectivity, daylighting, and identifying any areas not meeting the Town's standards or urban design requirements, traffic control and traffic calming etc.

In conclusion, we recommend that the TIS be revised and resubmitted to address the items noted in this peer review.

R.J. Burnside & Associates Limited

Henry Centen, P. Eng.

Senior Transportation Engineer

HBC:
240213_TIS_Review_058038
2/13/2024 2:37 PM

Appendix B:
Traffic Counts

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

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

One Hour Peak
From: 8:30:00
To: 9:30:00

Municipality: Collingwood
Site #: 2300900001
Intersection: Poplar Sideroad & Hurontario St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Poplar Sideroad runs W/E

North Leg Total:	684			
North Entering:	307			
North Peds:	5			
Peds Cross:	⋈			

Heavys	0	0	22	22
Trucks	2	4	1	7
Cars	19	121	138	278
Totals	21	125	161	

Heavys	12	
Trucks	4	
Cars	361	
Totals	377	

East Leg Total:	931	
East Entering:	482	
East Peds:	0	
Peds Cross:	⧖	

Hurontario St

Heavys	Trucks	Cars	Totals
8	22	458	488

Poplar Sideroad

Heavys	Trucks	Cars	Totals
1	1	45	47
4	9	221	234
1	10	79	90
6	20	345	

N
W E
S

Cars	Trucks	Heavys	Totals
138	0	9	147
303	6	4	313
16	6	0	22
457	12	13	

Poplar Sideroad

Cars	Trucks	Heavys	Totals
400	22	27	449

Country Rd 124

Peds Cross:	⧖			
West Peds:	1			
West Entering:	371			
West Leg Total:	859			

Cars	216			
Trucks	20			
Heavys	1			
Totals	237			

Cars	136	178	41	355
Trucks	14	3	12	29
Heavys	4	2	1	7
Totals	154	183	54	

Peds Cross:	⋈	
South Peds:	0	
South Entering:	391	
South Leg Total:	628	

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

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

Municipality: Collingwood
Site #: 2300900001
Intersection: Poplar Sideroad & Hurontario St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Poplar Sideroad runs W/E

North Leg Total: 823
North Entering: 466
North Peds: 4
Peds Cross: ⋈

Heavys	0	0	0	0
Trucks	0	0	3	3
Cars	21	249	193	463
Totals	21	249	196	

Heavys	1
Trucks	2
Cars	354
Totals	357

East Leg Total: 1025
East Entering: 484
East Peds: 0
Peds Cross: ⧗

Hurontario St

Heavys	Trucks	Cars	Totals
0	7	382	389

Poplar Sideroad

Heavys	Trucks	Cars	Totals
0	0	35	35
7	6	293	306
2	5	127	134
9	11	455	

Cars	Trucks	Heavys	Totals
164	1	0	165
271	5	0	276
40	3	0	43
475	9	0	

N
W E
S

Poplar Sideroad

Cars	Trucks	Heavys	Totals
519	10	12	541

Country Rd 124

Peds Cross: ⧗
West Peds: 1
West Entering: 475
West Leg Total: 864

Cars	416
Trucks	8
Heavys	2
Totals	426

Cars	90	155	33	278
Trucks	2	1	1	4
Heavys	0	1	5	6
Totals	92	157	39	

Peds Cross: ⋈
South Peds: 0
South Entering: 288
South Leg Total: 714

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

Municipality: Collingwood
Site #: 2300900001
Intersection: Poplar Sideroad & Hurontario St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Poplar Sideroad runs W/E

North Leg Total:	3938
North Entering:	1981
North Peds:	12
Peds Cross:	⋈

Heavys	2	7	43	52
Trucks	3	14	9	26
Cars	123	935	845	1903
Totals	128	956	897	

Heavys	41
Trucks	18
Cars	1898
Totals	1957

East Leg Total:	5209
East Entering:	2594
East Peds:	0
Peds Cross:	⧖

Hurontario St

Heavys	Trucks	Cars	Totals
18	70	2257	2345

Cars	Trucks	Heavys	Totals
764	5	31	800
1543	31	12	1586
177	27	4	208
2484	63	47	

Poplar Sideroad

N
W E
S

Heavys	Trucks	Cars	Totals
1	2	219	222
14	37	1421	1472
6	32	556	594
21	71	2196	

Poplar Sideroad

Cars	Trucks	Heavys	Totals
2474	77	64	2615

Country Rd 124

Peds Cross:	⧖
West Peds:	2
West Entering:	2288
West Leg Total:	4633

Cars	1668
Trucks	73
Heavys	17
Totals	1758

Cars	591	915	208	1714
Trucks	36	11	31	78
Heavys	4	9	7	20
Totals	631	935	246	

Peds Cross:	⋈
South Peds:	0
South Entering:	1812
South Leg Total:	3570

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Poplar Sideroad & Hurontario St | **Count Date:** 18-Jan-23 | **Municipality:** Collingwood

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	110	61	14	185	2
9:00:00	141	121	29	291	3
10:00:00	117	111	20	248	2
15:00:00	0	0	0	0	0
16:00:00	178	226	21	425	0
17:00:00	196	249	21	466	4
18:00:00	155	188	23	366	1
Totals:	897	956	128	1981	12

North/South Total Approaches: 3793

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	86	135	35	256	0
9:00:00	138	201	59	398	0
10:00:00	127	147	40	314	0
15:00:00	0	0	0	0	0
16:00:00	106	145	35	286	0
17:00:00	92	157	39	288	0
18:00:00	82	150	38	270	0
S Totals:	631	935	246	1812	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	31	254	161	446	0
9:00:00	24	314	130	468	0
10:00:00	27	251	88	366	0
15:00:00	0	0	0	0	0
16:00:00	39	251	133	423	0
17:00:00	43	276	165	484	0
18:00:00	44	240	123	407	0
Totals:	208	1586	800	2594	0

East/West Total Approaches: 4882

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	30	180	52	262	0
9:00:00	46	237	80	363	0
10:00:00	38	182	101	321	1
15:00:00	0	0	0	0	0
16:00:00	34	288	106	428	0
17:00:00	35	306	134	475	1
18:00:00	39	279	121	439	0
W Totals:	222	1472	594	2288	2

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	15:00	16:00	17:00	18:00
Crossing Values:	0	331	480	392	0	510	538	425

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	18	18	8	8	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	37	19	18	10	4	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:45:00	64	27	42	24	10	6	0	0	0	0	0	0	0	0	1	1	0	0	1	0
8:00:00	102	38	57	15	12	2	0	0	0	0	1	1	8	8	4	3	1	1	2	1
8:15:00	141	39	87	30	26	14	0	0	0	0	1	0	8	0	4	0	1	0	2	0
8:30:00	163	22	112	25	31	5	1	1	2	2	1	0	8	0	4	0	1	0	2	0
8:45:00	197	34	132	20	33	2	1	0	2	0	1	0	11	3	4	0	1	0	3	1
9:00:00	225	28	174	42	40	7	1	0	4	2	2	1	25	14	4	0	1	0	5	2
9:15:00	266	41	213	39	42	2	2	1	4	0	2	0	29	4	4	0	1	0	6	1
9:30:00	301	35	233	20	50	8	2	0	6	2	3	1	30	1	4	0	1	0	7	1
9:45:00	319	18	254	21	55	5	2	0	7	1	3	0	30	0	4	0	1	0	7	0
10:00:00	334	15	281	27	59	4	4	2	8	1	3	0	30	0	4	0	1	0	7	0
10:15:00	334	0	281	0	59	0	4	0	8	0	3	0	30	0	4	0	1	0	7	0
15:00:00	334	0	281	0	59	0	4	0	8	0	3	0	30	0	4	0	1	0	7	0
15:15:00	366	32	334	53	62	3	4	0	9	1	3	0	30	0	5	1	1	0	7	0
15:30:00	417	51	388	54	65	3	5	1	9	0	3	0	34	4	6	1	2	1	7	0
15:45:00	464	47	449	61	69	4	5	0	10	1	3	0	41	7	7	1	2	0	7	0
16:00:00	499	35	502	53	79	10	5	0	10	0	3	0	42	1	7	0	2	0	7	0
16:15:00	548	49	563	61	86	7	6	1	10	0	3	0	42	0	7	0	2	0	9	2
16:30:00	604	56	629	66	94	8	6	0	10	0	3	0	42	0	7	0	2	0	9	0
16:45:00	658	54	696	67	97	3	6	0	10	0	3	0	42	0	7	0	2	0	11	2
17:00:00	692	34	751	55	100	3	8	2	10	0	3	0	42	0	7	0	2	0	11	0
17:15:00	733	41	806	55	107	7	8	0	10	0	3	0	42	0	7	0	2	0	11	0
17:30:00	774	41	857	51	114	7	9	1	12	2	3	0	42	0	7	0	2	0	12	1
17:45:00	816	42	900	43	123	9	9	0	14	2	3	0	42	0	7	0	2	0	12	0
18:00:00	845	29	935	35	123	0	9	0	14	0	3	0	43	1	7	0	2	0	12	0
18:15:00	845	0	935	0	123	0	9	0	14	0	3	0	43	0	7	0	2	0	12	0
18:15:15	845	0	935	0	123	0	9	0	14	0	3	0	43	0	7	0	2	0	12	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	44	44	11	11	0	0	1	1	0	0	1	1	1	1	0	0	0	0
7:30:00	9	7	98	54	33	22	3	3	4	3	0	0	2	1	1	0	1	1	0	0
7:45:00	14	5	169	71	72	39	5	2	7	3	0	0	3	1	1	0	7	6	0	0
8:00:00	22	8	242	73	149	77	6	1	10	3	0	0	3	0	2	1	12	5	0	0
8:15:00	29	7	311	69	167	18	8	2	12	2	0	0	3	0	5	3	12	0	0	0
8:30:00	33	4	369	58	189	22	9	1	12	0	0	0	3	0	6	1	12	0	0	0
8:45:00	36	3	448	79	225	36	12	3	14	2	0	0	3	0	8	2	17	5	0	0
9:00:00	38	2	544	96	270	45	14	2	15	1	0	0	3	0	9	1	21	4	0	0
9:15:00	43	5	611	67	299	29	14	0	16	1	0	0	3	0	9	0	21	0	0	0
9:30:00	49	6	672	61	327	28	15	1	18	2	0	0	3	0	10	1	21	0	0	0
9:45:00	55	6	742	70	345	18	17	2	19	1	0	0	3	0	10	0	21	0	0	0
10:00:00	60	5	790	48	358	13	19	2	19	0	0	0	3	0	10	0	21	0	0	0
10:15:00	60	0	790	0	358	0	19	0	19	0	0	0	3	0	10	0	21	0	0	0
15:00:00	60	0	790	0	358	0	19	0	19	0	0	0	3	0	10	0	21	0	0	0
15:15:00	71	11	852	62	396	38	19	0	20	1	2	2	3	0	10	0	24	3	0	0
15:30:00	77	6	904	52	421	25	20	1	22	2	2	0	3	0	10	0	29	5	0	0
15:45:00	86	9	969	65	457	36	21	1	24	2	3	1	3	0	10	0	30	1	0	0
16:00:00	96	10	1033	64	478	21	21	0	25	1	4	1	4	1	12	2	30	0	0	0
16:15:00	108	12	1097	64	520	42	21	0	28	3	4	0	4	0	12	0	30	0	0	0
16:30:00	113	5	1162	65	560	40	23	2	29	1	5	1	4	0	12	0	30	0	0	0
16:45:00	122	9	1231	69	600	40	23	0	29	0	5	0	4	0	12	0	30	0	0	0
17:00:00	136	14	1304	73	642	42	24	1	30	1	5	0	4	0	12	0	30	0	0	0
17:15:00	146	10	1372	68	673	31	25	1	31	1	5	0	4	0	12	0	30	0	0	0
17:30:00	155	9	1448	76	709	36	26	1	31	0	5	0	4	0	12	0	31	1	0	0
17:45:00	173	18	1505	57	736	27	26	0	31	0	5	0	4	0	12	0	31	0	0	0
18:00:00	177	4	1543	38	764	28	27	1	31	0	5	0	4	0	12	0	31	0	0	0
18:15:00	177	0	1543	0	764	0	27	0	31	0	5	0	4	0	12	0	31	0	0	0
18:15:15	177	0	1543	0	764	0	27	0	31	0	5	0	4	0	12	0	31	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	15	15	23	23	6	6	0	0	1	1	1	1	0	0	0	0	0	0	0	0
7:30:00	35	20	44	21	12	6	4	4	1	0	3	2	0	0	0	0	0	0	0	0
7:45:00	52	17	74	30	19	7	6	2	1	0	3	0	0	0	2	2	0	0	0	0
8:00:00	79	27	131	57	30	11	7	1	1	0	5	2	0	0	3	1	0	0	0	0
8:15:00	103	24	170	39	44	14	8	1	2	1	6	1	0	0	3	0	0	0	0	0
8:30:00	133	30	222	52	52	8	9	1	4	2	10	4	0	0	3	0	0	0	0	0
8:45:00	163	30	269	47	66	14	12	3	4	0	12	2	2	2	5	2	0	0	0	0
9:00:00	206	43	326	57	81	15	16	4	5	1	12	0	2	0	5	0	1	1	0	0
9:15:00	238	32	364	38	88	7	19	3	6	1	19	7	4	2	5	0	1	0	0	0
9:30:00	269	31	400	36	93	5	23	4	7	1	22	3	4	0	5	0	1	0	0	0
9:45:00	297	28	432	32	104	11	23	0	8	1	22	0	4	0	5	0	1	0	0	0
10:00:00	320	23	469	37	110	6	27	4	9	1	23	1	4	0	5	0	1	0	0	0
10:15:00	320	0	469	0	110	0	27	0	9	0	23	0	4	0	5	0	1	0	0	0
15:00:00	320	0	469	0	110	0	27	0	9	0	23	0	4	0	5	0	1	0	0	0
15:15:00	339	19	502	33	114	4	27	0	9	0	24	1	4	0	5	0	1	0	0	0
15:30:00	358	19	537	35	122	8	30	3	9	0	27	3	4	0	7	2	2	1	0	0
15:45:00	388	30	570	33	129	7	32	2	9	0	27	0	4	0	7	0	2	0	0	0
16:00:00	420	32	611	41	139	10	33	1	10	1	28	1	4	0	7	0	2	0	0	0
16:15:00	437	17	647	36	149	10	33	0	10	0	28	0	4	0	7	0	4	2	0	0
16:30:00	462	25	686	39	155	6	34	1	10	0	28	0	4	0	7	0	5	1	0	0
16:45:00	484	22	723	37	159	4	35	1	10	0	28	0	4	0	8	1	6	1	0	0
17:00:00	510	26	766	43	172	13	35	0	11	1	29	1	4	0	8	0	7	1	0	0
17:15:00	522	12	798	32	181	9	35	0	11	0	30	1	4	0	9	1	7	0	0	0
17:30:00	540	18	843	45	192	11	36	1	11	0	31	1	4	0	9	0	7	0	0	0
17:45:00	576	36	889	46	200	8	36	0	11	0	31	0	4	0	9	0	7	0	0	0
18:00:00	591	15	915	26	208	8	36	0	11	0	31	0	4	0	9	0	7	0	0	0
18:15:00	591	0	915	0	208	0	36	0	11	0	31	0	4	0	9	0	7	0	0	0
18:15:15	591	0	915	0	208	0	36	0	11	0	31	0	4	0	9	0	7	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	35	35	8	8	0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:30:00	9	8	81	46	19	11	0	0	2	1	0	0	0	0	0	0	0	0	0	0
7:45:00	17	8	125	44	32	13	0	0	3	1	1	1	0	0	0	0	0	0	0	0
8:00:00	30	13	177	52	50	18	0	0	3	0	2	1	0	0	0	0	0	0	0	0
8:15:00	40	10	228	51	66	16	0	0	3	0	6	4	0	0	0	0	0	0	0	0
8:30:00	47	7	271	43	87	21	0	0	5	2	9	3	0	0	0	0	0	0	0	0
8:45:00	57	10	335	64	106	19	0	0	9	4	12	3	0	0	0	0	0	0	0	0
9:00:00	75	18	406	71	120	14	0	0	10	1	12	0	1	1	1	1	0	0	0	0
9:15:00	83	8	458	52	138	18	0	0	10	0	14	2	1	0	4	3	1	1	0	0
9:30:00	92	9	492	34	166	28	1	1	14	4	19	5	1	0	4	0	1	0	1	1
9:45:00	103	11	538	46	195	29	1	0	16	2	21	2	1	0	4	0	1	0	1	0
10:00:00	111	8	575	37	211	16	2	1	20	4	21	0	1	0	4	0	1	0	1	0
10:15:00	111	0	575	0	211	0	2	0	20	0	21	0	1	0	4	0	1	0	1	0
15:00:00	111	0	575	0	211	0	2	0	20	0	21	0	1	0	4	0	1	0	1	0
15:15:00	121	10	647	72	235	24	2	0	24	4	21	0	1	0	4	0	1	0	1	0
15:30:00	132	11	715	68	260	25	2	0	25	1	22	1	1	0	4	0	1	0	1	0
15:45:00	138	6	772	57	285	25	2	0	28	3	23	1	1	0	4	0	3	2	1	0
16:00:00	145	7	851	79	308	23	2	0	31	3	27	4	1	0	5	1	4	1	1	0
16:15:00	158	13	923	72	340	32	2	0	33	2	29	2	1	0	7	2	4	0	1	0
16:30:00	165	7	998	75	372	32	2	0	35	2	30	1	1	0	9	2	4	0	1	0
16:45:00	174	9	1068	70	412	40	2	0	36	1	31	1	1	0	11	2	4	0	2	1
17:00:00	180	6	1144	76	435	23	2	0	37	1	32	1	1	0	12	1	6	2	2	0
17:15:00	191	11	1224	80	464	29	2	0	37	0	32	0	1	0	13	1	6	0	2	0
17:30:00	199	8	1309	85	491	27	2	0	37	0	32	0	1	0	13	0	6	0	2	0
17:45:00	212	13	1367	58	529	38	2	0	37	0	32	0	1	0	14	1	6	0	2	0
18:00:00	219	7	1421	54	556	27	2	0	37	0	32	0	1	0	14	0	6	0	2	0
18:15:00	219	0	1421	0	556	0	2	0	37	0	32	0	1	0	14	0	6	0	2	0
18:15:15	219	0	1421	0	556	0	2	0	37	0	32	0	1	0	14	0	6	0	2	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

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

One Hour Peak
From: 8:15:00
To: 9:15:00

Municipality: Collingwood
Site #: 2300900002
Intersection: Poplar Sideroad & High St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

Major Road: Poplar Sideroad runs W/E

North Leg Total: 422
North Entering: 186
North Peds: 0
Peds Cross: ⋈

Heavys	0	3	3
Trucks	0	11	11
Cars	16	156	172
Totals	16	170	

Heavys	2
Trucks	12
Cars	222
Totals	236

East Leg Total: 770
East Entering: 470
East Peds: 0
Peds Cross: ⧖

High St

Heavys	Trucks	Cars	Totals
2	11	265	278

Poplar Sideroad

Heavys	Trucks	Cars	Totals
0	3	25	28
5	7	118	130
5	10	143	

N
W E
S

Cars	Trucks	Heavys	Totals
197	9	2	208
249	11	2	262
446	20	4	

Poplar Sideroad

Cars	Trucks	Heavys	Totals
274	18	8	300

Peds Cross: ⧖
West Peds: 0
West Entering: 158
West Leg Total: 436

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

One Hour Peak
From: 15:45:00
To: 16:45:00

Municipality: Collingwood
Site #: 2300900002
Intersection: Poplar Sideroad & High St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

Major Road: Poplar Sideroad runs W/E

North Leg Total: 493
North Entering: 259
North Peds: 0
Peds Cross: ⋈

Heavys	0	2	2
Trucks	0	14	14
Cars	19	224	243
Totals	19	240	

Heavys	0
Trucks	10
Cars	224
Totals	234

East Leg Total: 852
East Entering: 368
East Peds: 0
Peds Cross: ⧖

High St

Heavys	Trucks	Cars	Totals
1	4	169	174

Cars	Trucks	Heavys	Totals
203	10	0	213
150	4	1	155
353	14	1	

Poplar Sideroad

N
W E
S

Heavys	Trucks	Cars	Totals
0	0	21	21
5	14	225	244
5	14	246	

Poplar Sideroad

Cars	Trucks	Heavys	Totals
449	28	7	484

Peds Cross: ⧖
West Peds: 0
West Entering: 265
West Leg Total: 439

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

Municipality: Collingwood
Site #: 2300900002
Intersection: Poplar Sideroad & High St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

Major Road: Poplar Sideroad runs W/E

North Leg Total: 2454
North Entering: 1233
North Peds: 5
Peds Cross: ⋈

Heavys	0	7	7
Trucks	3	52	55
Cars	104	1067	1171
Totals	107	1126	

Heavys	4
Trucks	58
Cars	1159
Totals	1221

East Leg Total: 4175
East Entering: 2188
East Peds: 1
Peds Cross: ⧖

High St

Heavys	Trucks	Cars	Totals
11	54	1116	1181

Poplar Sideroad

Heavys	Trucks	Cars	Totals
0	3	104	107
14	46	801	861
14	49	905	

N
W E
S

Cars	Trucks	Heavys	Totals
1055	55	4	1114
1012	51	11	1074
2067	106	15	

Poplar Sideroad

Cars	Trucks	Heavys	Totals
1868	98	21	1987

Peds Cross: ⧖
West Peds: 0
West Entering: 968
West Leg Total: 2149

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Poplar Sideroad & High St | **Count Date:** 18-Jan-23 | **Municipality:** Collingwood

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*121*	*0*	*17*	*138*	*1*	*138*
9:00:00	*162*	*0*	*16*	*178*	*0*	*178*
10:00:00	*153*	*0*	*18*	*171*	*1*	*171*
15:00:00	*0*	*0*	*0*	*0*	*0*	*0*
16:00:00	*219*	*0*	*17*	*236*	*0*	*236*
17:00:00	*229*	*0*	*23*	*252*	*1*	*252*
18:00:00	*242*	*0*	*16*	*258*	*2*	*258*
Totals:	1126	0	107	1233	5	1233

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*0*	*0*	*0*	*0*	*0*
9:00:00	*0*	*0*	*0*	*0*	*0*
10:00:00	*0*	*0*	*0*	*0*	*0*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*0*	*0*	*0*	*0*	*0*
18:00:00	*0*	*0*	*0*	*0*	*0*
S Totals:	0	0	0	0	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*0*	*175*	*140*	*315*	*0*	*401*
9:00:00	*0*	*270*	*203*	*473*	*0*	*625*
10:00:00	*0*	*219*	*170*	*389*	*1*	*503*
15:00:00	*0*	*0*	*0*	*0*	*0*	*0*
16:00:00	*0*	*162*	*218*	*380*	*0*	*568*
17:00:00	*0*	*139*	*228*	*367*	*0*	*629*
18:00:00	*0*	*109*	*155*	*264*	*0*	*430*
Totals:	0	1074	1114	2188	1	3156

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*11*	*75*	*0*	*86*	*0*
9:00:00	*27*	*125*	*0*	*152*	*0*
10:00:00	*17*	*97*	*0*	*114*	*0*
15:00:00	*0*	*0*	*0*	*0*	*0*
16:00:00	*17*	*171*	*0*	*188*	*0*
17:00:00	*23*	*239*	*0*	*262*	*0*
18:00:00	*12*	*154*	*0*	*166*	*0*
W Totals:	107	861	0	968	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*10:00*	*15:00*	*16:00*	*17:00*	*18:00*
Crossing Values:	*0*	*121*	*162*	*154*	*0*	*219*	*229*	*242*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	25	25	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	49	24	0	0	8	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:45:00	85	36	0	0	10	2	3	3	0	0	0	0	0	0	0	0	0	0	1	0
8:00:00	117	32	0	0	17	7	4	1	0	0	0	0	0	0	0	0	0	0	1	0
8:15:00	143	26	0	0	21	4	8	4	0	0	0	0	0	0	0	0	0	0	1	0
8:30:00	177	34	0	0	25	4	12	4	0	0	0	0	0	0	0	0	0	0	1	0
8:45:00	227	50	0	0	30	5	15	3	0	0	0	0	0	0	0	0	0	0	1	0
9:00:00	266	39	0	0	33	3	15	0	0	0	0	0	2	2	0	0	0	0	1	0
9:15:00	299	33	0	0	37	4	19	4	0	0	0	0	3	1	0	0	0	0	1	0
9:30:00	328	29	0	0	40	3	23	4	0	0	0	0	3	0	0	0	0	0	2	1
9:45:00	371	43	0	0	42	2	26	3	0	0	2	2	3	0	0	0	0	0	2	0
10:00:00	403	32	0	0	49	7	30	4	0	0	2	0	3	0	0	0	0	0	2	0
10:15:00	403	0	0	0	49	0	30	0	0	0	2	0	3	0	0	0	0	0	2	0
15:00:00	403	0	0	0	49	0	30	0	0	0	2	0	3	0	0	0	0	0	2	0
15:15:00	456	53	0	0	53	4	31	1	0	0	2	0	3	0	0	0	0	0	2	0
15:30:00	503	47	0	0	59	6	32	1	0	0	2	0	3	0	0	0	0	0	2	0
15:45:00	558	55	0	0	65	6	34	2	0	0	2	0	5	2	0	0	0	0	2	0
16:00:00	612	54	0	0	66	1	38	4	0	0	2	0	5	0	0	0	0	0	2	0
16:15:00	677	65	0	0	72	6	41	3	0	0	2	0	7	2	0	0	0	0	2	0
16:30:00	732	55	0	0	79	7	44	3	0	0	2	0	7	0	0	0	0	0	2	0
16:45:00	782	50	0	0	84	5	48	4	0	0	2	0	7	0	0	0	0	0	2	0
17:00:00	828	46	0	0	88	4	49	1	0	0	3	1	7	0	0	0	0	0	3	1
17:15:00	897	69	0	0	91	3	51	2	0	0	3	0	7	0	0	0	0	0	3	0
17:30:00	957	60	0	0	95	4	51	0	0	0	3	0	7	0	0	0	0	0	3	0
17:45:00	1015	58	0	0	98	3	51	0	0	0	3	0	7	0	0	0	0	0	3	0
18:00:00	1067	52	0	0	104	6	52	1	0	0	3	0	7	0	0	0	0	0	5	2
18:15:00	1067	0	0	0	104	0	52	0	0	0	3	0	7	0	0	0	0	0	5	0
18:15:15	1067	0	0	0	104	0	52	0	0	0	3	0	7	0	0	0	0	0	5	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	32	32	21	21	0	0	2	2	1	1	0	0	0	0	0	0	0	0
7:30:00	0	0	65	33	55	34	0	0	6	4	3	2	0	0	1	1	0	0	0	0
7:45:00	0	0	105	40	96	41	0	0	11	5	5	2	0	0	1	0	0	0	0	0
8:00:00	0	0	157	52	131	35	0	0	16	5	8	3	0	0	2	1	1	1	0	0
8:15:00	0	0	227	70	172	41	0	0	20	4	11	3	0	0	4	2	2	1	0	0
8:30:00	0	0	277	50	212	40	0	0	23	3	12	1	0	0	5	1	2	0	0	0
8:45:00	0	0	336	59	259	47	0	0	27	4	14	2	0	0	5	0	2	0	0	0
9:00:00	0	0	412	76	324	65	0	0	28	1	17	3	0	0	5	0	2	0	0	0
9:15:00	0	0	476	64	369	45	0	0	31	3	20	3	0	0	6	1	4	2	0	0
9:30:00	0	0	532	56	404	35	0	0	34	3	25	5	0	0	7	1	4	0	0	0
9:45:00	0	0	582	50	448	44	0	0	35	1	30	5	0	0	7	0	4	0	0	0
10:00:00	0	0	618	36	477	29	0	0	39	4	32	2	0	0	7	0	4	0	1	1
10:15:00	0	0	618	0	477	0	0	0	39	0	32	0	0	0	7	0	4	0	1	0
15:00:00	0	0	618	0	477	0	0	0	39	0	32	0	0	0	7	0	4	0	1	0
15:15:00	0	0	663	45	523	46	0	0	43	4	33	1	0	0	7	0	4	0	1	0
15:30:00	0	0	695	32	568	45	0	0	46	3	35	2	0	0	9	2	4	0	1	0
15:45:00	0	0	726	31	634	66	0	0	47	1	38	3	0	0	10	1	4	0	1	0
16:00:00	0	0	764	38	688	54	0	0	51	4	39	1	0	0	11	1	4	0	1	0
16:15:00	0	0	799	35	739	51	0	0	51	0	42	3	0	0	11	0	4	0	1	0
16:30:00	0	0	831	32	786	47	0	0	51	0	47	5	0	0	11	0	4	0	1	0
16:45:00	0	0	876	45	837	51	0	0	51	0	48	1	0	0	11	0	4	0	1	0
17:00:00	0	0	903	27	904	67	0	0	51	0	51	3	0	0	11	0	4	0	1	0
17:15:00	0	0	940	37	950	46	0	0	51	0	51	0	0	0	11	0	4	0	1	0
17:30:00	0	0	965	25	991	41	0	0	51	0	53	2	0	0	11	0	4	0	1	0
17:45:00	0	0	992	27	1030	39	0	0	51	0	54	1	0	0	11	0	4	0	1	0
18:00:00	0	0	1012	20	1055	25	0	0	51	0	55	1	0	0	11	0	4	0	1	0
18:15:00	0	0	1012	0	1055	0	0	0	51	0	55	0	0	0	11	0	4	0	1	0
18:15:15	0	0	1012	0	1055	0	0	0	51	0	55	0	0	0	11	0	4	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900002

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

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	35	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	3	3	56	21	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
8:00:00	11	8	74	18	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8:15:00	15	4	94	20	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0
8:30:00	23	8	120	26	0	0	3	3	5	2	0	0	0	0	0	0	0	0	0	0
8:45:00	27	4	158	38	0	0	3	0	8	3	0	0	0	0	1	1	0	0	0	0
9:00:00	35	8	187	29	0	0	3	0	10	2	0	0	0	0	3	2	0	0	0	0
9:15:00	40	5	212	25	0	0	3	0	10	0	0	0	0	0	5	2	0	0	0	0
9:30:00	44	4	237	25	0	0	3	0	17	7	0	0	0	0	5	0	0	0	0	0
9:45:00	49	5	254	17	0	0	3	0	17	0	0	0	0	0	5	0	0	0	0	0
10:00:00	52	3	273	19	0	0	3	0	19	2	0	0	0	0	5	0	0	0	0	0
10:15:00	52	0	273	0	0	0	3	0	19	0	0	0	0	0	5	0	0	0	0	0
15:00:00	52	0	273	0	0	0	3	0	19	0	0	0	0	0	5	0	0	0	0	0
15:15:00	60	8	302	29	0	0	3	0	21	2	0	0	0	0	5	0	0	0	0	0
15:30:00	61	1	340	38	0	0	3	0	23	2	0	0	0	0	5	0	0	0	0	0
15:45:00	67	6	386	46	0	0	3	0	25	2	0	0	0	0	6	1	0	0	0	0
16:00:00	69	2	432	46	0	0	3	0	30	5	0	0	0	0	6	0	0	0	0	0
16:15:00	75	6	500	68	0	0	3	0	35	5	0	0	0	0	7	1	0	0	0	0
16:30:00	80	5	552	52	0	0	3	0	36	1	0	0	0	0	8	1	0	0	0	0
16:45:00	88	8	611	59	0	0	3	0	39	3	0	0	0	0	11	3	0	0	0	0
17:00:00	92	4	652	41	0	0	3	0	42	3	0	0	0	0	13	2	0	0	0	0
17:15:00	98	6	713	61	0	0	3	0	44	2	0	0	0	0	14	1	0	0	0	0
17:30:00	102	4	758	45	0	0	3	0	44	0	0	0	0	0	14	0	0	0	0	0
17:45:00	102	0	784	26	0	0	3	0	46	2	0	0	0	0	14	0	0	0	0	0
18:00:00	104	2	801	17	0	0	3	0	46	0	0	0	0	0	14	0	0	0	0	0
18:15:00	104	0	801	0	0	0	3	0	46	0	0	0	0	0	14	0	0	0	0	0
18:15:15	104	0	801	0	0	0	3	0	46	0	0	0	0	0	14	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

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

One Hour Peak
From: 8:15:00
To: 9:15:00

Municipality: Collingwood
Site #: 2300900003
Intersection: High St & Plewes Dr
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

Major Road: High St runs N/S

North Leg Total: 651
North Entering: 285
North Peds: 7
Peds Cross: ⋈

Heavys	2	3	6	11
Trucks	1	10	0	11
Cars	31	153	79	263
Totals	34	166	85	

Heavys	4
Trucks	10
Cars	352
Totals	366

East Leg Total: 215
East Entering: 115
East Peds: 0
Peds Cross: ⧗

High St

Heavys	Trucks	Cars	Totals
2	2	47	51

Plewes Dr

Heavys	Trucks	Cars	Totals
1	0	41	42
1	0	13	14
0	1	18	19
2	1	72	

Cars	Trucks	Heavys	Totals
106	0	1	107
6	0	0	6
2	0	0	2
114	0	1	

N
W E
S

Findlay Dr

Cars	Trucks	Heavys	Totals
93	0	7	100

High St

Peds Cross: ⧗
West Peds: 2
West Entering: 75
West Leg Total: 126

Cars	173
Trucks	11
Heavys	3
Totals	187

Cars	10	205	1	216
Trucks	1	10	0	11
Heavys	0	2	0	2
Totals	11	217	1	

Peds Cross: ⋈
South Peds: 7
South Entering: 229
South Leg Total: 416

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

One Hour Peak
From: 16:15:00
To: 17:15:00

Municipality: Collingwood
Site #: 2300900003
Intersection: High St & Plewes Dr
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

Major Road: High St runs N/S

North Leg Total: 722
North Entering: 398
North Peds: 0
Peds Cross: ⋈

Heavys	0	0	0	0
Trucks	0	6	0	6
Cars	56	235	101	392
Totals	56	241	101	

Heavys	0
Trucks	10
Cars	314
Totals	324

East Leg Total: 178
East Entering: 66
East Peds: 0
Peds Cross: ⧗

High St

Heavys	Trucks	Cars	Totals
0	0	75	75

Plewes Dr

Heavys	Trucks	Cars	Totals
0	0	42	42
0	0	5	5
0	0	7	7
0	0	54	

Cars	Trucks	Heavys	Totals
59	0	0	59
4	0	0	4
3	0	0	3
66	0	0	

N
W E
S

Findlay Dr

Cars	Trucks	Heavys	Totals
112	0	0	112

High St

Peds Cross: ⧗
West Peds: 2
West Entering: 54
West Leg Total: 129

Cars	245
Trucks	6
Heavys	0
Totals	251

Cars	15	213	6	234
Trucks	0	10	0	10
Heavys	0	0	0	0
Totals	15	223	6	

Peds Cross: ⋈
South Peds: 2
South Entering: 244
South Leg Total: 495

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

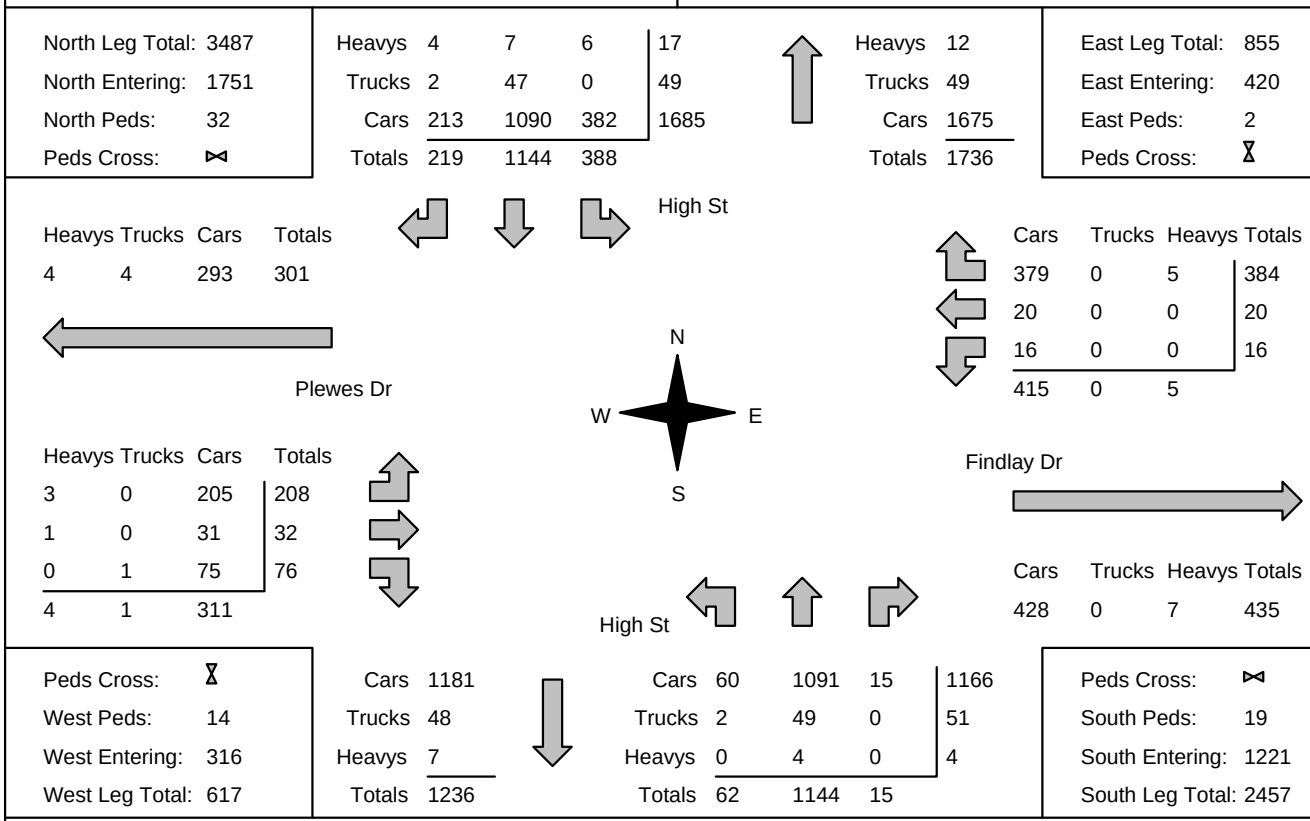
Municipality: Collingwood
Site #: 2300900003
Intersection: High St & Plewes Dr
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

Major Road: High St runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: High St & Plewes Dr | **Count Date:** 18-Jan-23 | **Municipality:** Collingwood

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	13	124	16	153	3
9:00:00	87	161	26	274	6
10:00:00	38	159	28	225	8
15:00:00	0	0	0	0	0
16:00:00	78	219	44	341	8
17:00:00	85	240	50	375	3
18:00:00	87	241	55	383	4
Totals:	388	1144	219	1751	32

North/South Total Approaches: 2972

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	5	146	0	151	5
9:00:00	9	212	3	224	5
10:00:00	8	181	4	193	2
15:00:00	0	0	0	0	0
16:00:00	16	217	2	235	4
17:00:00	19	228	3	250	2
18:00:00	5	160	3	168	1
S Totals:	62	1144	15	1221	19

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	3	3	46	52	0
9:00:00	2	5	104	111	0
10:00:00	3	2	50	55	2
15:00:00	0	0	0	0	0
16:00:00	3	6	76	85	0
17:00:00	3	4	60	67	0
18:00:00	2	0	48	50	0
Totals:	16	20	384	420	2

East/West Total Approaches: 736

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	36	0	13	49	2
9:00:00	47	14	19	80	3
10:00:00	23	5	10	38	3
15:00:00	0	0	0	0	0
16:00:00	32	4	11	47	0
17:00:00	41	7	9	57	0
18:00:00	29	2	14	45	6
W Totals:	208	32	76	316	14

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	15:00	16:00	17:00	18:00
Crossing Values:	0	50	74	41	0	53	56	38

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	5	5	25	25	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	5	0	56	31	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:45:00	7	2	87	31	8	5	0	0	3	3	0	0	0	0	0	0	0	0	1	0
8:00:00	13	6	120	33	15	7	0	0	4	1	1	1	0	0	0	0	0	0	3	2
8:15:00	26	13	147	27	18	3	0	0	7	3	1	0	0	0	0	0	0	0	3	0
8:30:00	39	13	183	36	26	8	0	0	11	4	1	0	0	0	0	0	1	1	3	0
8:45:00	70	31	230	47	35	9	0	0	13	2	1	0	4	4	0	0	2	1	5	2
9:00:00	94	24	270	40	39	4	0	0	13	0	1	0	6	2	2	2	2	0	9	4
9:15:00	105	11	300	30	49	10	0	0	17	4	2	1	6	0	3	1	2	0	10	1
9:30:00	118	13	333	33	59	10	0	0	20	3	2	0	6	0	3	0	2	0	12	2
9:45:00	123	5	378	45	62	3	0	0	25	5	2	0	6	0	3	0	2	0	13	1
10:00:00	132	9	412	34	66	4	0	0	29	4	2	0	6	0	3	0	2	0	17	4
10:15:00	132	0	412	0	66	0	0	0	29	0	2	0	6	0	3	0	2	0	17	0
15:00:00	132	0	412	0	66	0	0	0	29	0	2	0	6	0	3	0	2	0	17	0
15:15:00	156	24	465	53	72	6	0	0	30	1	2	0	6	0	3	0	2	0	19	2
15:30:00	174	18	511	46	80	8	0	0	31	1	2	0	6	0	3	0	4	2	21	2
15:45:00	195	21	569	58	99	19	0	0	33	2	2	0	6	0	5	2	4	0	25	4
16:00:00	210	15	621	52	108	9	0	0	37	4	2	0	6	0	5	0	4	0	25	0
16:15:00	229	19	688	67	118	10	0	0	39	2	2	0	6	0	7	2	4	0	28	3
16:30:00	252	23	749	61	138	20	0	0	41	2	2	0	6	0	7	0	4	0	28	0
16:45:00	277	25	804	55	148	10	0	0	44	3	2	0	6	0	7	0	4	0	28	0
17:00:00	295	18	852	48	158	10	0	0	44	0	2	0	6	0	7	0	4	0	28	0
17:15:00	330	35	923	71	174	16	0	0	45	1	2	0	6	0	7	0	4	0	28	0
17:30:00	354	24	982	59	190	16	0	0	46	1	2	0	6	0	7	0	4	0	31	3
17:45:00	370	16	1037	55	202	12	0	0	46	0	2	0	6	0	7	0	4	0	32	1
18:00:00	382	12	1090	53	213	11	0	0	47	1	2	0	6	0	7	0	4	0	32	0
18:15:00	382	0	1090	0	213	0	0	0	47	0	2	0	6	0	7	0	4	0	32	0
18:15:15	382	0	1090	0	213	0	0	0	47	0	2	0	6	0	7	0	4	0	32	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	1	1	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	1	0	1	0	15	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	3	2	3	2	25	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	3	0	3	0	46	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	4	1	3	0	65	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	5	1	4	1	80	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	5	0	7	3	110	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	5	0	8	1	149	39	0	0	0	0	0	0	0	0	0	0	1	1	0	0
9:15:00	6	1	9	1	171	22	0	0	0	0	0	0	0	0	0	0	1	0	0	0
9:30:00	6	0	10	1	183	12	0	0	0	0	0	0	0	0	0	0	1	0	0	0
9:45:00	7	1	10	0	188	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0
10:00:00	8	1	10	0	199	11	0	0	0	0	0	0	0	0	0	0	1	0	2	2
10:15:00	8	0	10	0	199	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0
15:00:00	8	0	10	0	199	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0
15:15:00	9	1	12	2	216	17	0	0	0	0	0	0	0	0	0	0	1	0	2	0
15:30:00	10	1	15	3	237	21	0	0	0	0	0	0	0	0	0	0	3	2	2	0
15:45:00	10	0	15	0	255	18	0	0	0	0	0	0	0	0	0	0	5	2	2	0
16:00:00	11	1	16	1	271	16	0	0	0	0	0	0	0	0	0	0	5	0	2	0
16:15:00	12	1	16	0	286	15	0	0	0	0	0	0	0	0	0	0	5	0	2	0
16:30:00	12	0	18	2	301	15	0	0	0	0	0	0	0	0	0	0	5	0	2	0
16:45:00	13	1	19	1	311	10	0	0	0	0	0	0	0	0	0	0	5	0	2	0
17:00:00	14	1	20	1	331	20	0	0	0	0	0	0	0	0	0	0	5	0	2	0
17:15:00	15	1	20	0	345	14	0	0	0	0	0	0	0	0	0	0	5	0	2	0
17:30:00	15	0	20	0	362	17	0	0	0	0	0	0	0	0	0	0	5	0	2	0
17:45:00	16	1	20	0	370	8	0	0	0	0	0	0	0	0	0	0	5	0	2	0
18:00:00	16	0	20	0	379	9	0	0	0	0	0	0	0	0	0	0	5	0	2	0
18:15:00	16	0	20	0	379	0	0	0	0	0	0	0	0	0	0	0	5	0	2	0
18:15:15	16	0	20	0	379	0	0	0	0	0	0	0	0	0	0	0	5	0	2	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900003

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	22	22	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2
7:30:00	0	0	56	34	0	0	0	0	3	2	0	0	0	0	0	0	0	0	2	0
7:45:00	3	3	94	38	0	0	1	1	4	1	0	0	0	0	0	0	0	0	4	2
8:00:00	4	1	138	44	0	0	1	0	7	3	0	0	0	0	1	1	0	0	5	1
8:15:00	6	2	180	42	2	2	1	0	10	3	0	0	0	0	2	1	0	0	5	0
8:30:00	6	0	226	46	2	0	1	0	13	3	0	0	0	0	2	0	0	0	8	3
8:45:00	7	1	275	49	2	0	1	0	15	2	0	0	0	0	2	0	0	0	8	0
9:00:00	13	6	338	63	3	1	1	0	18	3	0	0	0	0	2	0	0	0	10	2
9:15:00	16	3	385	47	3	0	2	1	20	2	0	0	0	0	4	2	0	0	12	2
9:30:00	17	1	426	41	5	2	2	0	23	3	0	0	0	0	4	0	0	0	12	0
9:45:00	18	1	476	50	6	1	2	0	26	3	0	0	0	0	4	0	0	0	12	0
10:00:00	20	2	507	31	7	1	2	0	28	2	0	0	0	0	4	0	0	0	12	0
10:15:00	20	0	507	0	7	0	2	0	28	0	0	0	0	0	4	0	0	0	12	0
15:00:00	20	0	507	0	7	0	2	0	28	0	0	0	0	0	4	0	0	0	12	0
15:15:00	22	2	561	54	7	0	2	0	28	0	0	0	0	0	4	0	0	0	12	0
15:30:00	24	2	606	45	7	0	2	0	29	1	0	0	0	0	4	0	0	0	16	4
15:45:00	30	6	671	65	8	1	2	0	32	3	0	0	0	0	4	0	0	0	16	0
16:00:00	36	6	720	49	9	1	2	0	32	0	0	0	0	0	4	0	0	0	16	0
16:15:00	40	4	771	51	9	0	2	0	35	3	0	0	0	0	4	0	0	0	16	0
16:30:00	44	4	820	49	10	1	2	0	39	4	0	0	0	0	4	0	0	0	18	2
16:45:00	52	8	871	51	12	2	2	0	41	2	0	0	0	0	4	0	0	0	18	0
17:00:00	55	3	936	65	12	0	2	0	44	3	0	0	0	0	4	0	0	0	18	0
17:15:00	55	0	984	48	15	3	2	0	45	1	0	0	0	0	4	0	0	0	18	0
17:30:00	60	5	1025	41	15	0	2	0	47	2	0	0	0	0	4	0	0	0	18	0
17:45:00	60	0	1064	39	15	0	2	0	48	1	0	0	0	0	4	0	0	0	18	0
18:00:00	60	0	1091	27	15	0	2	0	49	1	0	0	0	0	4	0	0	0	19	1
18:15:00	60	0	1091	0	15	0	2	0	49	0	0	0	0	0	4	0	0	0	19	0
18:15:15	60	0	1091	0	15	0	2	0	49	0	0	0	0	0	4	0	0	0	19	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	10	6	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:45:00	17	7	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00:00	36	19	0	0	13	5	0	0	0	0	0	0	0	0	0	0	0	0	2	1
8:15:00	43	7	0	0	17	4	0	0	0	0	0	0	0	0	0	0	0	0	3	1
8:30:00	56	13	4	4	20	3	0	0	0	0	0	0	0	0	0	0	0	0	5	2
8:45:00	69	13	10	6	28	8	0	0	0	0	1	1	0	0	1	1	0	0	5	0
9:00:00	82	13	13	3	31	3	0	0	0	0	1	0	1	1	1	0	0	0	5	0
9:15:00	84	2	13	0	35	4	0	0	0	0	1	0	1	0	1	0	0	0	5	0
9:30:00	93	9	14	1	35	0	0	0	0	0	1	0	1	0	1	0	0	0	6	1
9:45:00	101	8	14	0	36	1	0	0	0	0	1	0	1	0	1	0	0	0	6	0
10:00:00	105	4	18	4	41	5	0	0	0	0	1	0	1	0	1	0	0	0	8	2
10:15:00	105	0	18	0	41	0	0	0	0	0	1	0	1	0	1	0	0	0	8	0
15:00:00	105	0	18	0	41	0	0	0	0	0	1	0	1	0	1	0	0	0	8	0
15:15:00	111	6	19	1	44	3	0	0	0	0	1	0	1	0	1	0	0	0	8	0
15:30:00	117	6	19	0	48	4	0	0	0	0	1	0	2	1	1	0	0	0	8	0
15:45:00	126	9	22	3	50	2	0	0	0	0	1	0	3	1	1	0	0	0	8	0
16:00:00	135	9	22	0	52	2	0	0	0	0	1	0	3	0	1	0	0	0	8	0
16:15:00	139	4	24	2	55	3	0	0	0	0	1	0	3	0	1	0	0	0	8	0
16:30:00	150	11	27	3	57	2	0	0	0	0	1	0	3	0	1	0	0	0	8	0
16:45:00	162	12	29	2	59	2	0	0	0	0	1	0	3	0	1	0	0	0	8	0
17:00:00	176	14	29	0	61	2	0	0	0	0	1	0	3	0	1	0	0	0	8	0
17:15:00	181	5	29	0	62	1	0	0	0	0	1	0	3	0	1	0	0	0	10	2
17:30:00	187	6	30	1	67	5	0	0	0	0	1	0	3	0	1	0	0	0	10	0
17:45:00	192	5	30	0	73	6	0	0	0	0	1	0	3	0	1	0	0	0	11	1
18:00:00	205	13	31	1	75	2	0	0	0	0	1	0	3	0	1	0	0	0	14	3
18:15:00	205	0	31	0	75	0	0	0	0	0	1	0	3	0	1	0	0	0	14	0
18:15:15	205	0	31	0	75	0	0	0	0	0	1	0	3	0	1	0	0	0	14	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

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

One Hour Peak
From: 8:30:00
To: 9:30:00

Municipality: Collingwood
Site #: 2300900004
Intersection: High St & Campbell St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

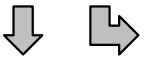
Major Road: High St runs N/S

North Leg Total: 681
North Entering: 311
North Peds: 2
Peds Cross: ⋈

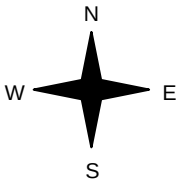
Heavys	9	1	10
Trucks	10	1	11
Cars	230	60	290
Totals	249	62	

Heavys	3
Trucks	11
Cars	356
Totals	370

East Leg Total: 227
East Entering: 107
East Peds: 0
Peds Cross: ⧖



Cars	Trucks	Heavys	Totals
73	1	0	74
32	0	1	33
105	1	1	



Campbell St

Cars	Trucks	Heavys	Totals
117	1	2	120

High St

Cars	262		
Trucks	10		
Heavys	10		
Totals	282		

Cars	283	57	340
Trucks	10	0	10
Heavys	3	1	4
Totals	296	58	

Peds Cross: ⋈
South Peds: 0
South Entering: 354
South Leg Total: 636

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

One Hour Peak
From: 16:15:00
To: 17:15:00

Municipality: Collingwood
Site #: 2300900004
Intersection: High St & Campbell St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

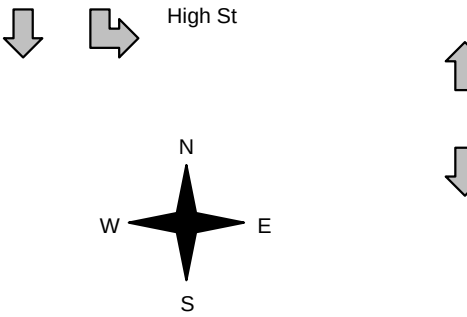
Major Road: High St runs N/S

North Leg Total: 834
North Entering: 470
North Peds: 4
Peds Cross: ⋈

Heavys	0	1	1
Trucks	6	0	6
Cars	367	96	463
Totals	373	97	

Heavys	0
Trucks	12
Cars	352
Totals	364

East Leg Total: 220
East Entering: 95
East Peds: 0
Peds Cross: ⋈



	Cars	Trucks	Heavys	Totals
	68	0	0	68
	27	0	0	27
	95	0	0	

	Cars	Trucks	Heavys	Totals
	124	0	1	125

High St

Cars	394		
Trucks	6		
Heavys	0		
Totals	400		

Cars	284	28	312
Trucks	12	0	12
Heavys	0	0	0
Totals	296	28	

Peds Cross: ⋈
South Peds: 0
South Entering: 324
South Leg Total: 724

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

Municipality: Collingwood
Site #: 2300900004
Intersection: High St & Campbell St
TFR File #: 1
Count date: 18-Jan-23

Weather conditions:

Person counted:
Person prepared:
Person checked:

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

Major Road: High St runs N/S

North Leg Total: 3917
North Entering: 2018
North Peds: 16
Peds Cross: ⋈

Heavys	15	6	21
Trucks	51	3	54
Cars	1524	419	1943
Totals	1590	428	

Heavys	15
Trucks	56
Cars	1828
Totals	1899

East Leg Total: 1198
East Entering: 551
East Peds: 6
Peds Cross: ⋈

High St

	Cars	Trucks	Heavys	Totals
	383	4	5	392
	157	0	2	159
	540	4	7	

N
W E
S

Campbell St

Cars	Trucks	Heavys	Totals
636	3	8	647

High St

Cars	1681		
Trucks	51		
Heavys	17		
Totals	1749		

Cars	1445	217	1662
Trucks	52	0	52
Heavys	10	2	12
Totals	1507	219	

Peds Cross: ⋈
South Peds: 4
South Entering: 1726
South Leg Total: 3475

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: High St & Campbell St | **Count Date:** 18-Jan-23 | **Municipality:** Collingwood

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	52	140	0	192	0
9:00:00	62	245	0	307	1
10:00:00	45	199	0	244	5
15:00:00	0	0	0	0	0
16:00:00	92	299	0	391	3
17:00:00	95	348	0	443	2
18:00:00	82	359	0	441	5
Totals:	428	1590	0	2018	16

North/South Total Approaches: 3744

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	0	178	51	229	1
9:00:00	0	303	55	358	2
10:00:00	0	228	23	251	0
15:00:00	0	0	0	0	0
16:00:00	0	284	39	323	0
17:00:00	0	297	31	328	0
18:00:00	0	217	20	237	1
S Totals:	0	1507	219	1726	4

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	15	0	43	58	0
9:00:00	27	0	65	92	1
10:00:00	22	0	66	88	2
15:00:00	0	0	0	0	0
16:00:00	42	0	91	133	2
17:00:00	30	0	62	92	0
18:00:00	23	0	65	88	1
Totals:	159	0	392	551	6

East/West Total Approaches: 551

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0
9:00:00	0	0	0	0	0
10:00:00	0	0	0	0	0
15:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0
18:00:00	0	0	0	0	0
W Totals:	0	0	0	0	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00	15:00	16:00	17:00	18:00
Crossing Values:	0	16	30	27	0	45	32	29

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900004

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	8	8	32	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	14	6	62	30	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
7:45:00	21	7	96	34	0	0	0	0	3	3	0	0	1	0	0	0	0	0	0	0
8:00:00	51	30	133	37	0	0	0	0	7	4	0	0	1	0	0	0	0	0	0	0
8:15:00	65	14	171	38	0	0	0	0	9	2	0	0	1	0	0	0	0	0	0	0
8:30:00	77	12	221	50	0	0	0	0	13	4	0	0	2	1	1	1	0	0	1	1
8:45:00	87	10	300	79	0	0	0	0	15	2	0	0	2	0	5	4	0	0	1	0
9:00:00	112	25	361	61	0	0	0	0	15	0	0	0	2	0	9	4	0	0	1	0
9:15:00	129	17	400	39	0	0	0	0	20	5	0	0	2	0	10	1	0	0	2	1
9:30:00	137	8	451	51	0	0	1	1	23	3	0	0	3	1	10	0	0	0	3	1
9:45:00	145	8	500	49	0	0	2	1	28	5	0	0	3	0	10	0	0	0	3	0
10:00:00	154	9	542	42	0	0	2	0	32	4	0	0	3	0	10	0	0	0	6	3
10:15:00	154	0	542	0	0	0	2	0	32	0	0	0	3	0	10	0	0	0	6	0
15:00:00	154	0	542	0	0	0	2	0	32	0	0	0	3	0	10	0	0	0	6	0
15:15:00	174	20	617	75	0	0	2	0	33	1	0	0	3	0	10	0	0	0	7	1
15:30:00	196	22	682	65	0	0	2	0	34	1	0	0	4	1	11	1	0	0	9	2
15:45:00	219	23	759	77	0	0	2	0	37	3	0	0	4	0	13	2	0	0	9	0
16:00:00	244	25	829	70	0	0	3	1	41	4	0	0	4	0	13	0	0	0	9	0
16:15:00	268	24	920	91	0	0	3	0	43	2	0	0	4	0	15	2	0	0	9	0
16:30:00	290	22	1008	88	0	0	3	0	45	2	0	0	5	1	15	0	0	0	9	0
16:45:00	314	24	1098	90	0	0	3	0	48	3	0	0	5	0	15	0	0	0	9	0
17:00:00	338	24	1168	70	0	0	3	0	48	0	0	0	5	0	15	0	0	0	11	2
17:15:00	364	26	1287	119	0	0	3	0	49	1	0	0	5	0	15	0	0	0	13	2
17:30:00	387	23	1378	91	0	0	3	0	50	1	0	0	6	1	15	0	0	0	15	2
17:45:00	405	18	1451	73	0	0	3	0	50	0	0	0	6	0	15	0	0	0	15	0
18:00:00	419	14	1524	73	0	0	3	0	51	1	0	0	6	0	15	0	0	0	16	1
18:15:00	419	0	1524	0	0	0	3	0	51	0	0	0	6	0	15	0	0	0	16	0
18:15:15	419	0	1524	0	0	0	3	0	51	0	0	0	6	0	15	0	0	0	16	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900004

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	4	3	0	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	6	2	0	0	20	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	15	9	0	0	39	19	0	0	0	0	1	1	0	0	0	0	3	3	0	0
8:15:00	19	4	0	0	59	20	0	0	0	0	2	1	0	0	0	0	3	0	0	0
8:30:00	25	6	0	0	68	9	0	0	0	0	2	0	0	0	0	0	3	0	1	1
8:45:00	33	8	0	0	84	16	0	0	0	0	2	0	1	1	0	0	3	0	1	0
9:00:00	41	8	0	0	103	19	0	0	0	0	2	0	1	0	0	0	3	0	1	0
9:15:00	52	11	0	0	116	13	0	0	0	0	2	0	1	0	0	0	3	0	1	0
9:30:00	57	5	0	0	141	25	0	0	0	0	3	1	1	0	0	0	3	0	1	0
9:45:00	60	3	0	0	155	14	0	0	0	0	3	0	1	0	0	0	3	0	1	0
10:00:00	63	3	0	0	168	13	0	0	0	0	3	0	1	0	0	0	3	0	3	2
10:15:00	63	0	0	0	168	0	0	0	0	0	3	0	1	0	0	0	3	0	3	0
15:00:00	63	0	0	0	168	0	0	0	0	0	3	0	1	0	0	0	3	0	3	0
15:15:00	69	6	0	0	186	18	0	0	0	0	4	1	1	0	0	0	3	0	4	1
15:30:00	76	7	0	0	207	21	0	0	0	0	4	0	2	1	0	0	4	1	5	1
15:45:00	95	19	0	0	232	25	0	0	0	0	4	0	2	0	0	0	5	1	5	0
16:00:00	104	9	0	0	256	24	0	0	0	0	4	0	2	0	0	0	5	0	5	0
16:15:00	109	5	0	0	266	10	0	0	0	0	4	0	2	0	0	0	5	0	5	0
16:30:00	124	15	0	0	283	17	0	0	0	0	4	0	2	0	0	0	5	0	5	0
16:45:00	126	2	0	0	295	12	0	0	0	0	4	0	2	0	0	0	5	0	5	0
17:00:00	134	8	0	0	318	23	0	0	0	0	4	0	2	0	0	0	5	0	5	0
17:15:00	136	2	0	0	334	16	0	0	0	0	4	0	2	0	0	0	5	0	5	0
17:30:00	143	7	0	0	351	17	0	0	0	0	4	0	2	0	0	0	5	0	5	0
17:45:00	153	10	0	0	366	15	0	0	0	0	4	0	2	0	0	0	5	0	6	1
18:00:00	157	4	0	0	383	17	0	0	0	0	4	0	2	0	0	0	5	0	6	0
18:15:00	157	0	0	0	383	0	0	0	0	0	4	0	2	0	0	0	5	0	6	0
18:15:15	157	0	0	0	383	0	0	0	0	0	4	0	2	0	0	0	5	0	6	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900004

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	31	31	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1
7:30:00	0	0	73	42	7	6	0	0	3	2	0	0	0	0	0	0	0	0	1	0
7:45:00	0	0	116	43	21	14	0	0	4	1	0	0	0	0	0	0	0	0	1	0
8:00:00	0	0	170	54	51	30	0	0	7	3	0	0	0	0	1	1	0	0	1	0
8:15:00	0	0	227	57	58	7	0	0	10	3	0	0	0	0	2	1	0	0	3	2
8:30:00	0	0	292	65	66	8	0	0	13	3	0	0	0	0	2	0	0	0	3	0
8:45:00	0	0	367	75	83	17	0	0	15	2	0	0	0	0	2	0	0	0	3	0
9:00:00	0	0	460	93	105	22	0	0	18	3	0	0	0	0	3	1	1	1	3	0
9:15:00	0	0	520	60	116	11	0	0	20	2	0	0	0	0	5	2	1	0	3	0
9:30:00	0	0	575	55	123	7	0	0	23	3	0	0	0	0	5	0	1	0	3	0
9:45:00	0	0	634	59	126	3	0	0	26	3	0	0	0	0	5	0	1	0	3	0
10:00:00	0	0	676	42	128	2	0	0	28	2	0	0	0	0	5	0	1	0	3	0
10:15:00	0	0	676	0	128	0	0	0	28	0	0	0	0	0	5	0	1	0	3	0
15:00:00	0	0	676	0	128	0	0	0	28	0	0	0	0	0	5	0	1	0	3	0
15:15:00	0	0	738	62	139	11	0	0	28	0	0	0	0	0	5	0	1	0	3	0
15:30:00	0	0	799	61	152	13	0	0	29	1	0	0	0	0	7	2	2	1	3	0
15:45:00	0	0	881	82	161	9	0	0	33	4	0	0	0	0	10	3	2	0	3	0
16:00:00	0	0	950	69	166	5	0	0	33	0	0	0	0	0	10	0	2	0	3	0
16:15:00	0	0	1013	63	173	7	0	0	36	3	0	0	0	0	10	0	2	0	3	0
16:30:00	0	0	1082	69	179	6	0	0	40	4	0	0	0	0	10	0	2	0	3	0
16:45:00	0	0	1145	63	191	12	0	0	42	2	0	0	0	0	10	0	2	0	3	0
17:00:00	0	0	1235	90	197	6	0	0	45	3	0	0	0	0	10	0	2	0	3	0
17:15:00	0	0	1297	62	201	4	0	0	48	3	0	0	0	0	10	0	2	0	3	0
17:30:00	0	0	1355	58	207	6	0	0	50	2	0	0	0	0	10	0	2	0	4	1
17:45:00	0	0	1401	46	212	5	0	0	51	1	0	0	0	0	10	0	2	0	4	0
18:00:00	0	0	1445	44	217	5	0	0	52	1	0	0	0	0	10	0	2	0	4	0
18:15:00	0	0	1445	0	217	0	0	0	52	0	0	0	0	0	10	0	2	0	4	0
18:15:15	0	0	1445	0	217	0	0	0	52	0	0	0	0	0	10	0	2	0	4	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 18-Jan-23 Site #: 2300900004

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

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #22-311 - RJ Burnside & Associates

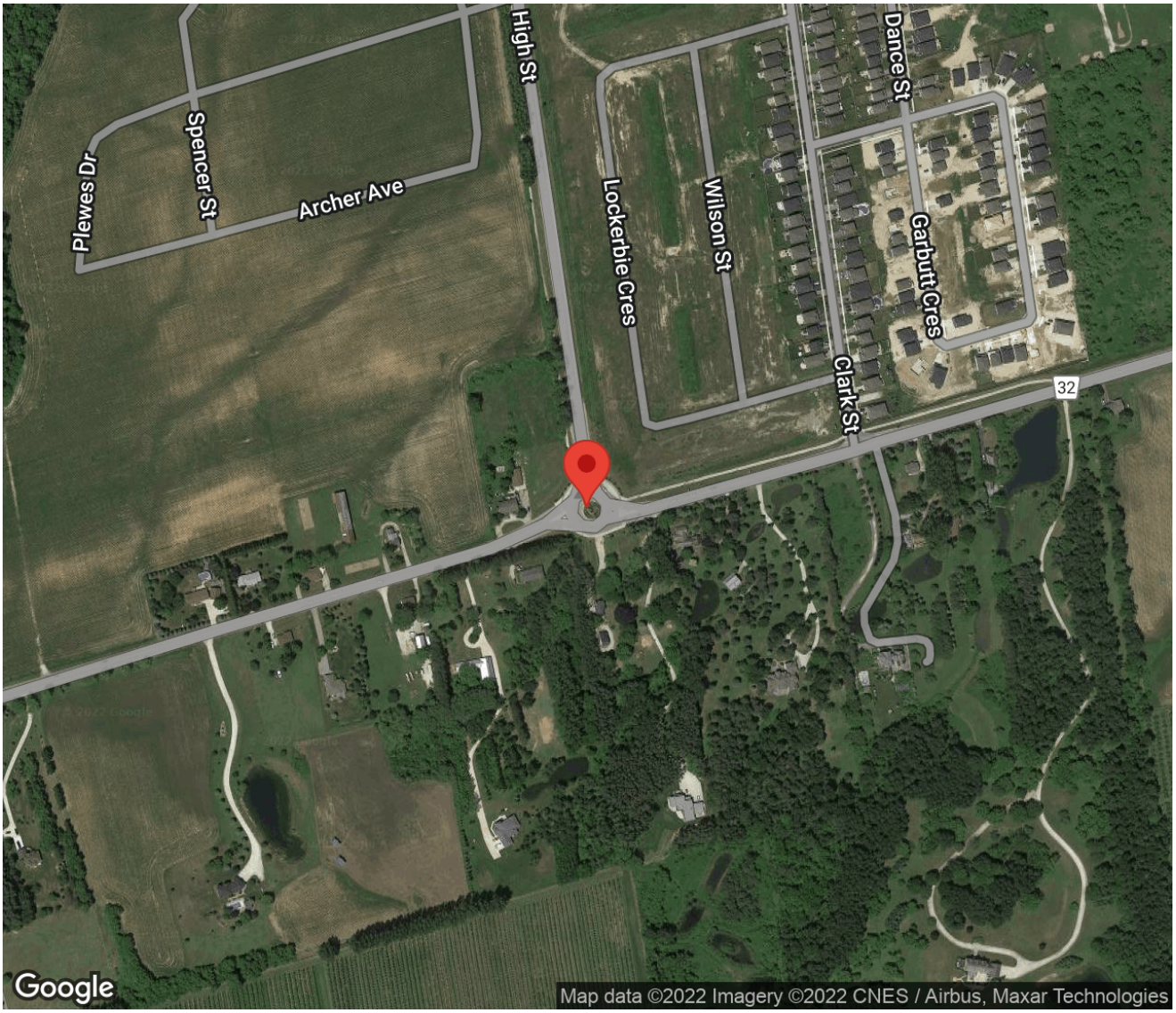
Intersection Count Report

Intersection:	High St & Poplar Sideroad
Municipality:	Collingwood
Count Date:	Tuesday, Oct 04, 2022
Site Code:	2231100001
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	06:00-09:00, 15:00-18:00
Weather:	Clear
Comments:	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	High St & Poplar Sideroad
Site Code:	2231100001
Municipality:	Collingwood
Count Date:	Oct 04, 2022



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	High St & Poplar Sideroad
Site Code:	2231100001
Municipality:	Collingwood
Count Date:	Oct 04, 2022

High St - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
06:00 - 07:00	64	1	12	0	77	0	0	0	0	0	0	0	77
07:00 - 08:00	140	2	12	0	154	1	0	0	0	0	0	0	154
08:00 - 09:00	268	1	17	0	286	1	0	0	0	0	0	0	286
BREAK													
15:00 - 16:00	277	1	28	0	306	0	0	0	0	0	0	0	306
16:00 - 17:00	305	1	23	0	329	1	0	0	0	0	0	0	329
17:00 - 18:00	277	0	27	0	304	1	0	0	0	0	0	0	304
GRAND TOTAL	**1331**	**6**	**119**	**0**	**1456**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**1456**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	High St & Poplar Sideroad
Site Code:	2231100001
Municipality:	Collingwood
Count Date:	Oct 04, 2022

Poplar Sideroad - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
06:00 - 07:00	2	104	72	0	178	0	3	49	0	0	52	0	230
07:00 - 08:00	1	176	128	0	305	0	15	116	0	0	131	0	436
08:00 - 09:00	0	249	206	0	455	0	22	140	0	0	162	0	617
BREAK													
15:00 - 16:00	0	186	251	0	437	0	21	208	0	0	229	0	666
16:00 - 17:00	3	196	270	0	469	0	24	241	0	0	265	1	734
17:00 - 18:00	0	123	233	0	356	0	20	205	0	0	225	0	581
GRAND TOTAL	**6**	**1034**	**1160**	**0**	**2200**	**0**	**105**	**959**	**0**	**0**	**1064**	**1**	**3264**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

North Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
06:00	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0
06:15	12	0	3	0	15	0	0	0	0	0	0	0	1	0	1	0
06:30	20	0	3	0	23	1	0	0	0	1	0	0	0	0	0	0
06:45	17	1	5	0	23	0	0	0	0	0	0	0	0	0	0	0
07:00	25	0	1	0	26	0	0	0	0	0	0	0	0	0	0	0
07:15	37	0	2	0	39	0	1	0	0	1	0	0	0	0	0	1
07:30	39	0	6	0	45	0	1	0	0	1	0	0	0	0	0	0
07:45	37	0	3	0	40	2	0	0	0	2	0	0	0	0	0	0
08:00	78	0	5	0	83	3	0	0	0	3	0	0	0	0	0	0
08:15	68	0	1	0	69	1	0	0	0	1	0	0	0	0	0	0
08:30	45	1	5	0	51	2	0	0	0	2	0	0	0	0	0	1
08:45	68	0	6	0	74	3	0	0	0	3	0	0	0	0	0	0
SUBTOTAL	460	2	40	0	502	12	2	0	0	14	0	0	1	0	1	2

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

North Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
15:00	57	0	9	0	66	2	0	0	0	2	0	0	0	0	0	0
15:15	87	0	6	0	93	3	0	1	0	4	0	0	0	0	0	0
15:30	67	1	6	0	74	6	0	0	0	6	0	0	0	0	0	0
15:45	50	0	6	0	56	3	0	0	0	3	2	0	0	0	2	0
16:00	85	0	8	0	93	1	0	0	0	1	0	0	0	0	0	0
16:15	69	0	1	0	70	4	0	0	0	4	1	0	0	0	1	0
16:30	52	1	9	0	62	3	0	0	0	3	0	0	0	0	0	0
16:45	86	0	5	0	91	4	0	0	0	4	0	0	0	0	0	1
17:00	84	0	4	0	88	4	0	0	0	4	0	0	0	0	0	0
17:15	56	0	9	0	65	0	0	0	0	0	0	0	1	0	1	0
17:30	78	0	5	0	83	1	0	0	0	1	0	0	0	0	0	0
17:45	54	0	8	0	62	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	825	2	76	0	903	31	0	1	0	32	3	0	1	0	4	2
GRAND TOTAL	1285	4	116	0	1405	43	2	1	0	46	3	0	2	0	5	4

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

South Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
					Total					Total					Total	
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

South Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
					Total					Total					Total	
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

East Approach - Poplar Sideroad

Start Time	Cars					Trucks					Bicycles					Total Peds
					Total					Total					Total	
06:00	1	9	10	0	20	0	1	2	0	3	0	0	0	0	0	0
06:15	0	16	19	0	35	0	4	0	0	4	0	0	0	0	0	0
06:30	0	18	14	0	32	0	7	0	0	7	0	0	0	0	0	0
06:45	1	42	25	0	68	0	7	2	0	9	0	0	0	0	0	0
07:00	0	33	26	0	59	0	7	0	0	7	0	0	0	0	0	0
07:15	0	30	28	0	58	0	7	1	0	8	0	0	0	0	0	0
07:30	1	40	23	0	64	0	2	2	0	4	0	0	0	0	0	0
07:45	0	52	45	0	97	0	5	3	0	8	0	0	0	0	0	0
08:00	0	58	47	0	105	0	10	7	0	17	0	0	0	0	0	0
08:15	0	50	46	0	96	0	8	3	0	11	0	0	0	0	0	0
08:30	0	53	49	0	102	0	11	6	0	17	0	2	0	0	2	0
08:45	0	48	41	0	89	0	9	7	0	16	0	0	0	0	0	0
SUBTOTAL	3	449	373	0	825	0	78	33	0	111	0	2	0	0	2	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

East Approach - Poplar Sideroad

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
15:00	0	35	54	0	89	0	5	2	0	7	0	0	0	0	0	0
15:15	0	40	58	0	98	0	7	2	0	9	0	0	0	0	0	0
15:30	0	46	64	0	110	0	5	2	0	7	0	0	0	0	0	0
15:45	0	44	68	0	112	0	4	1	0	5	0	0	0	0	0	0
16:00	0	42	55	0	97	0	6	4	0	10	0	1	0	0	1	0
16:15	2	43	85	0	130	0	7	4	0	11	0	0	0	0	0	0
16:30	1	38	54	0	93	0	7	1	0	8	0	0	0	0	0	0
16:45	0	49	66	0	115	0	3	1	0	4	0	0	0	0	0	0
17:00	0	33	54	0	87	0	4	0	0	4	0	0	0	0	0	0
17:15	0	32	68	0	100	0	1	0	0	1	0	0	0	0	0	0
17:30	0	31	55	0	86	0	2	1	0	3	0	0	0	0	0	0
17:45	0	19	55	0	74	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	3	452	736	0	1191	0	52	18	0	70	0	1	0	0	1	0
GRAND TOTAL	6	901	1109	0	2016	0	130	51	0	181	0	3	0	0	3	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

West Approach - Poplar Sideroad

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
06:00	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0
06:15	1	9	0	0	10	0	0	0	0	0	0	0	0	0	0	0
06:30	2	19	0	0	21	0	0	0	0	0	0	0	0	0	0	0
06:45	0	15	0	0	15	0	2	0	0	2	0	0	0	0	0	0
07:00	0	14	0	0	14	0	1	0	0	1	0	0	0	0	0	0
07:15	4	26	0	0	30	0	4	0	0	4	0	0	0	0	0	0
07:30	4	26	0	0	30	0	7	0	0	7	0	0	0	0	0	0
07:45	7	36	0	0	43	0	2	0	0	2	0	0	0	0	0	0
08:00	4	18	0	0	22	0	6	0	0	6	0	0	0	0	0	0
08:15	6	25	0	0	31	0	3	0	0	3	0	0	0	0	0	0
08:30	6	32	0	0	38	0	9	0	0	9	0	0	0	0	0	0
08:45	5	36	0	0	41	0	11	0	0	11	1	0	0	0	1	0
SUBTOTAL	39	260	0	0	299	0	45	0	0	45	1	0	0	0	1	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Municipality: Collingwood
Count Date: Oct 04, 2022

West Approach - Poplar Sideroad

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
15:00	4	45	0	0	49	0	6	0	0	6	0	1	0	0	1	0
15:15	4	38	0	0	42	0	7	0	0	7	0	0	0	0	0	0
15:30	8	49	0	0	57	0	11	0	0	11	0	0	0	0	0	0
15:45	5	45	0	0	50	0	6	0	0	6	0	0	0	0	0	0
16:00	3	52	0	0	55	0	5	0	0	5	0	0	0	0	0	0
16:15	8	55	0	0	63	0	8	0	0	8	0	0	0	0	0	0
16:30	7	42	0	0	49	0	6	0	0	6	0	0	0	0	0	1
16:45	5	68	0	0	73	1	5	0	0	6	0	0	0	0	0	0
17:00	8	59	0	0	67	0	8	0	0	8	0	0	0	0	0	0
17:15	3	54	0	0	57	0	2	0	0	2	0	0	0	0	0	0
17:30	4	42	0	0	46	0	5	0	0	5	0	0	0	0	0	0
17:45	5	32	0	0	37	0	2	0	0	2	0	1	0	0	1	0
SUBTOTAL	64	581	0	0	645	1	71	0	0	72	0	2	0	0	2	1
GRAND TOTAL	103	841	0	0	944	1	116	0	0	117	1	2	0	0	3	1

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	06:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Count Date: Oct 04, 2022

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Poplar Sideroad runs E/W

North Approach

	Out	In	Total
Cars	277	204	481
Trucks	9	23	32
Bicycles	0	1	1
	286	**228**	**514**

High St

Bicycles	0	0	0	0
Trucks	0	0	9	0
Cars	17	1	259	0
Totals	**17**	**1**	**268**	**0**

East Approach

	Out	In	Total
Cars	392	370	762
Trucks	61	38	99
Bicycles	2	0	2
	455	**408**	**863**

Peds: 1

Poplar Sideroad

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
1	0	21	**22**
0	29	111	**140**
0	0	0	**0**

Peds: 0

Peds: 0

Poplar Sideroad

Totals	Cars	Trucks	Bicycles
0	0	0	0
206	183	23	0
249	209	38	2
0	0	0	0

Peds: 0

West Approach

	Out	In	Total
Cars	132	226	358
Trucks	29	38	67
Bicycles	1	2	3
	162	**266**	**428**

High St

Totals	**0**	**0**	**0**	**0**
Cars	0	0	0	0
Trucks	0	0	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	0	1	1
Trucks	0	0	0
Bicycles	0	0	0
	0	**1**	**1**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Count Date: Oct 04, 2022
Period: 06:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach High St						South Approach High St						East Approach Poplar Sideroad						West Approach Poplar Sideroad						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
08:00	81	0	5	0	0	86	0	0	0	0	0	0	0	68	54	0	0	122	4	24	0	0	0	28	236
08:15	69	0	1	0	0	70	0	0	0	0	0	0	0	58	49	0	0	107	6	28	0	0	0	34	211
08:30	47	1	5	0	1	53	0	0	0	0	0	0	0	66	55	0	0	121	6	41	0	0	0	47	221
08:45	71	0	6	0	0	77	0	0	0	0	0	0	0	57	48	0	0	105	6	47	0	0	0	53	235
Grand Total	**268**	**1**	**17**	**0**	**1**	**286**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**249**	**206**	**0**	**0**	**455**	**22**	**140**	**0**	**0**	**0**	**162**	**903**
Approach %	93.7	0.3	5.9	0		-	0	0	0	0		-	0	54.7	45.3	0		-	13.6	86.4	0	0		-	
Totals %	29.7	0.1	1.9	0		31.7	0	0	0	0		0	0	27.6	22.8	0		50.4	2.4	15.5	0	0		17.9	
PHF	**0.83**	**0.25**	**0.71**	**0**		**0.83**	**0**	**0**	**0**	**0**		**0**	**0**	**0.92**	**0.94**	**0**		**0.93**	**0.92**	**0.74**	**0**	**0**		**0.76**	**0.96**
Cars	259	1	17	0		277	0	0	0	0		0	0	209	183	0		392	21	111	0	0		132	801
% Cars	96.6	100	100	0		96.9	0	0	0	0		0	0	83.9	88.8	0		86.2	95.5	79.3	0	0		81.5	88.7
Trucks	9	0	0	0		9	0	0	0	0		0	0	38	23	0		61	0	29	0	0		29	99
% Trucks	3.4	0	0	0		3.1	0	0	0	0		0	0	15.3	11.2	0		13.4	0	20.7	0	0		17.9	11
Bicycles	0	0	0	0		0	0	0	0	0		0	0	2	0	0		2	1	0	0	0		1	3
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0.8	0	0		0.4	4.5	0	0	0		0.6	0.3
Peds					1	-					0	-					0	-					0	-	1
% Peds					100	-					0	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Specified Period		One Hour Peak	
From:	15:00:00	From:	16:00:00
To:	18:00:00	To:	17:00:00

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Count Date: Oct 04, 2022

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Poplar Sideroad runs E/W

North Approach

	Out	In	Total
Cars	316	283	599
Trucks	12	11	23
Bicycles	1	0	1
	329	**294**	**623**

High St

Bicycles	0	0	1	0
Trucks	0	0	12	0
Cars	23	1	292	0
Totals	**23**	**1**	**305**	**0**

Peds: 1

East Approach

	Out	In	Total
Cars	435	509	944
Trucks	33	36	69
Bicycles	1	1	2
	469	**546**	**1015**

Poplar Sideroad

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	1	23	**24**
0	24	217	**241**
0	0	0	**0**

Peds: 1

Peds: 0

Poplar Sideroad

Totals	Cars	Trucks	Bicycles
0	0	0	0
270	260	10	0
196	172	23	1
3	3	0	0

Peds: 0

West Approach

	Out	In	Total
Cars	240	195	435
Trucks	25	23	48
Bicycles	0	1	1
	265	**219**	**484**

High St

Totals	**0**	**0**	**0**	**0**
Cars	0	0	0	0
Trucks	0	0	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	0	4	4
Trucks	0	0	0
Bicycles	0	0	0
	0	**4**	**4**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: High St & Poplar Sideroad
Site Code: 2231100001
Count Date: Oct 04, 2022
Period: 15:00 - 18:00

Peak Hour Data (16:00 - 17:00)

Start Time	North Approach High St						South Approach High St						East Approach Poplar Sideroad						West Approach Poplar Sideroad						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	86	0	8	0	0	94	0	0	0	0	0	0	0	49	59	0	0	108	3	57	0	0	0	60	262
16:15	74	0	1	0	0	75	0	0	0	0	0	0	2	50	89	0	0	141	8	63	0	0	0	71	287
16:30	55	1	9	0	0	65	0	0	0	0	0	0	1	45	55	0	0	101	7	48	0	0	1	55	221
16:45	90	0	5	0	1	95	0	0	0	0	0	0	0	52	67	0	0	119	6	73	0	0	0	79	293
Grand Total	**305**	**1**	**23**	**0**	**1**	**329**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**196**	**270**	**0**	**0**	**469**	**24**	**241**	**0**	**0**	**1**	**265**	**1063**
Approach %	92.7	0.3	7	0		-	0	0	0	0		-	0.6	41.8	57.6	0		-	9.1	90.9	0	0		-	
Totals %	28.7	0.1	2.2	0		31	0	0	0	0		0	0.3	18.4	25.4	0		44.1	2.3	22.7	0	0		24.9	
PHF	**0.85**	**0.25**	**0.64**	**0**		**0.87**	**0**	**0**	**0**	**0**		**0**	**0.38**	**0.94**	**0.76**	**0**		**0.83**	**0.75**	**0.83**	**0**	**0**		**0.84**	**0.91**
Cars	292	1	23	0		316	0	0	0	0		0	3	172	260	0		435	23	217	0	0		240	991
% Cars	95.7	100	100	0		96	0	0	0	0		0	100	87.8	96.3	0		92.8	95.8	90	0	0		90.6	93.2
Trucks	12	0	0	0		12	0	0	0	0		0	0	23	10	0		33	1	24	0	0		25	70
% Trucks	3.9	0	0	0		3.6	0	0	0	0		0	0	11.7	3.7	0		7	4.2	10	0	0		9.4	6.6
Bicycles	1	0	0	0		1	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	2
% Bicycles	0.3	0	0	0		0.3	0	0	0	0		0	0	0.5	0	0		0.2	0	0	0	0		0	0.2
Peds					1	-					0	-					0	-					1	-	2
% Peds					50	-					0	-					0	-					50	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #22-311 - RJ Burnside & Associates

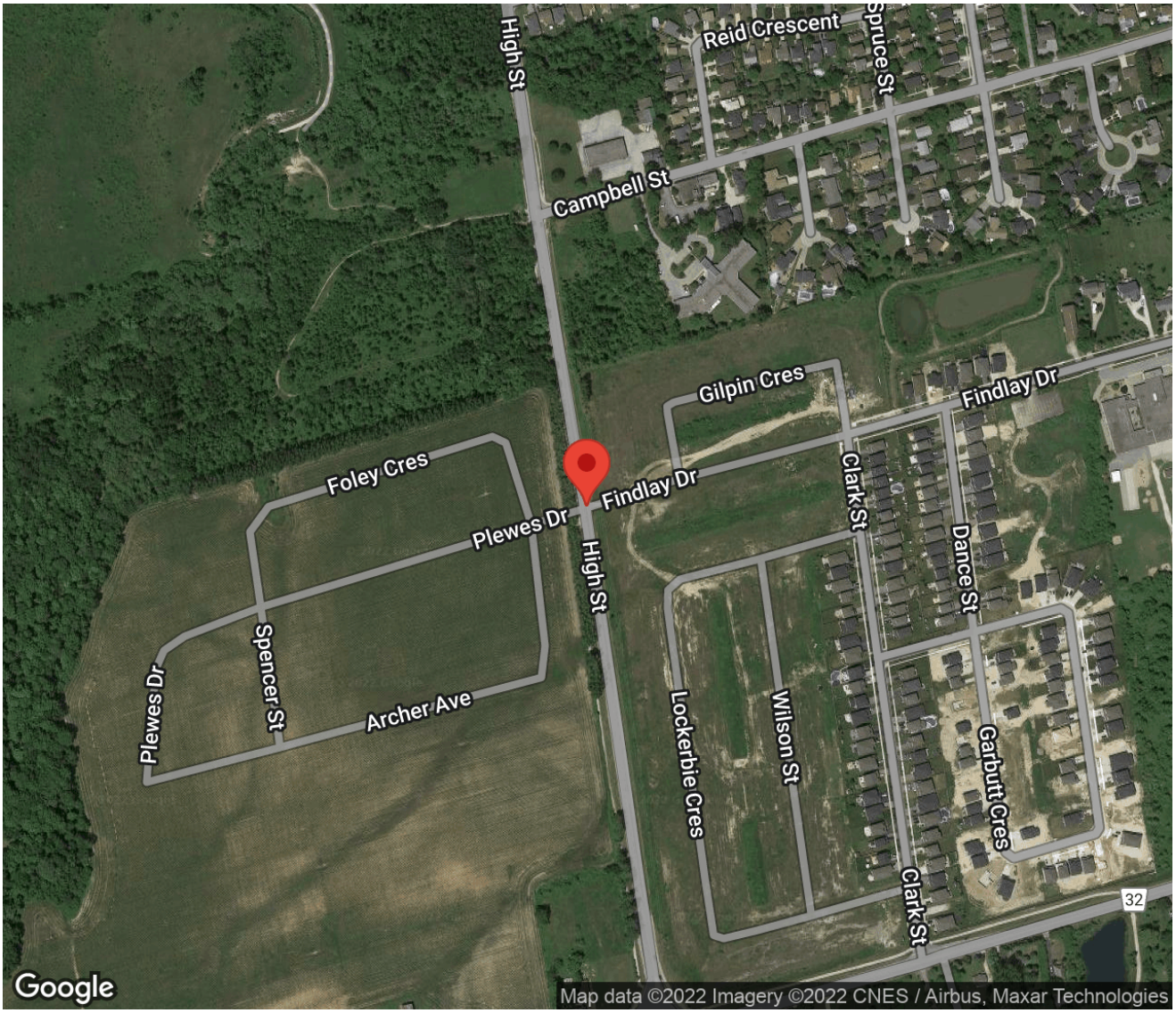
Intersection Count Report

Intersection:	High St & Findlay Dr-Plewes Dr
Municipality:	Collingwood
Count Date:	Tuesday, Oct 04, 2022
Site Code:	2231100002
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	06:00-09:00, 15:00-18:00
Weather:	Clear
Comments:	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	High St & Findlay Dr-Plewes Dr
Site Code:	2231100002
Municipality:	Collingwood
Count Date:	Oct 04, 2022



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

High St - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
06:00 - 07:00	3	59	2	0	64	0	0	73	0	0	73	0	137
07:00 - 08:00	31	143	15	0	189	2	4	135	2	0	141	4	330
08:00 - 09:00	85	266	24	0	375	3	12	211	1	0	224	6	599
BREAK													
15:00 - 16:00	76	295	44	0	415	6	15	262	1	0	278	12	693
16:00 - 17:00	90	293	60	0	443	0	24	266	8	0	298	0	741
17:00 - 18:00	102	287	52	0	441	7	24	231	6	0	261	5	702
GRAND TOTAL	**387**	**1343**	**197**	**0**	**1927**	**18**	**79**	**1178**	**18**	**0**	**1275**	**27**	**3202**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

Findlay Dr - Traffic Summary

Hour	East Approach Totals (Includes Cars, Trucks, Bicycles)						West Approach Totals (Includes Cars, Trucks, Bicycles)						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
06:00 - 07:00	6	4	8	0	18	0	12	0	7	0	19	0	37
07:00 - 08:00	1	1	53	0	55	0	29	2	11	0	42	2	97
08:00 - 09:00	4	4	95	0	103	0	50	22	12	0	84	3	187
BREAK													
15:00 - 16:00	5	8	96	0	109	9	34	9	12	0	55	5	164
16:00 - 17:00	1	9	86	0	96	0	43	19	25	0	87	1	183
17:00 - 18:00	0	5	72	0	77	0	46	4	24	0	74	1	151
GRAND TOTAL	**17**	**31**	**410**	**0**	**458**	**9**	**214**	**56**	**91**	**0**	**361**	**12**	**819**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

North Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
06:00	0	13	0	0	13	0	1	0	0	1	0	0	0	0	0	0
06:15	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0
06:30	1	16	1	0	18	0	1	0	0	1	0	0	0	0	0	0
06:45	2	19	1	0	22	0	0	0	0	0	0	0	0	0	0	0
07:00	2	20	2	0	24	0	0	0	0	0	0	0	0	0	0	1
07:15	8	36	4	0	48	1	2	0	0	3	0	0	0	0	0	1
07:30	6	46	4	0	56	0	0	0	0	0	0	0	0	0	0	0
07:45	10	39	5	0	54	4	0	0	0	4	0	0	0	0	0	0
08:00	13	78	7	0	98	0	1	0	0	1	0	0	0	0	0	1
08:15	17	68	5	0	90	0	3	0	0	3	0	0	0	0	0	0
08:30	35	48	5	0	88	4	2	2	0	8	2	0	0	0	2	2
08:45	9	65	5	0	79	5	1	0	0	6	0	0	0	0	0	0
SUBTOTAL	103	457	39	0	599	14	11	2	0	27	2	0	0	0	2	5

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

North Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
15:00	19	55	4	0	78	0	4	0	0	4	0	3	2	0	5	2
15:15	22	93	13	0	128	0	0	2	0	2	0	0	0	0	0	0
15:30	23	74	13	0	110	0	6	0	0	6	0	0	1	0	1	1
15:45	11	57	9	0	77	1	3	0	0	4	0	0	0	0	0	3
16:00	22	89	11	0	122	0	6	0	0	6	0	0	0	0	0	0
16:15	19	64	9	0	92	2	0	0	0	2	0	0	4	0	4	0
16:30	19	54	16	0	89	3	1	0	0	4	0	1	0	0	1	0
16:45	25	75	20	0	120	0	3	0	0	3	0	0	0	0	0	0
17:00	28	82	11	0	121	3	0	0	0	3	0	0	0	0	0	0
17:15	30	62	11	0	103	0	2	0	0	2	0	0	0	0	0	1
17:30	24	79	20	0	123	0	2	0	0	2	0	0	0	0	0	3
17:45	17	58	10	0	85	0	2	0	0	2	0	0	0	0	0	3
SUBTOTAL	259	842	147	0	1248	9	29	2	0	40	0	4	7	0	11	13
GRAND TOTAL	**362**	**1299**	**186**	**0**	**1847**	**23**	**40**	**4**	**0**	**67**	**2**	**4**	**7**	**0**	**13**	**18**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

South Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
06:00	0	12	0	0	12	0	2	0	0	2	0	0	0	0	0	0
06:15	0	19	0	0	19	0	0	0	0	0	0	0	0	0	0	0
06:30	0	13	0	0	13	0	1	0	0	1	0	0	0	0	0	0
06:45	0	24	0	0	24	0	2	0	0	2	0	0	0	0	0	0
07:00	1	23	0	0	24	0	3	0	0	3	0	0	0	0	0	2
07:15	1	28	1	0	30	0	0	0	0	0	0	0	0	0	0	2
07:30	0	30	0	0	30	0	2	0	0	2	0	0	0	0	0	0
07:45	2	46	1	0	49	0	3	0	0	3	0	0	0	0	0	0
08:00	2	52	0	0	54	0	5	0	0	5	0	0	0	0	0	0
08:15	4	46	0	0	50	0	3	0	0	3	0	0	0	0	0	3
08:30	2	55	0	0	57	0	4	0	0	4	0	0	0	0	0	2
08:45	4	41	1	0	46	0	5	0	0	5	0	0	0	0	0	1
SUBTOTAL	16	389	3	0	408	0	30	0	0	30	0	0	0	0	0	10

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

South Approach - High St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
15:00	0	59	1	0	60	0	0	0	0	0	2	1	0	0	3	3
15:15	4	60	0	0	64	0	2	0	0	2	0	0	0	0	0	5
15:30	4	64	0	0	68	0	1	0	0	1	0	2	0	0	2	2
15:45	5	70	0	0	75	0	2	0	0	2	0	1	0	0	1	2
16:00	2	49	5	0	56	0	5	0	0	5	0	0	0	0	0	0
16:15	11	80	1	0	92	0	2	0	0	2	0	0	0	0	0	0
16:30	6	55	1	0	62	0	0	0	0	0	0	2	0	0	2	0
16:45	5	69	1	0	75	0	2	0	0	2	0	2	0	0	2	0
17:00	9	53	2	0	64	0	1	0	0	1	0	0	0	0	0	1
17:15	4	65	1	0	70	0	0	1	0	1	0	3	0	0	3	3
17:30	5	57	0	0	62	0	1	0	0	1	0	1	0	0	1	1
17:45	6	49	2	0	57	0	0	0	0	0	0	1	0	0	1	0
SUBTOTAL	61	730	14	0	805	0	16	1	0	17	2	13	0	0	15	17
GRAND TOTAL	77	1119	17	0	1213	0	46	1	0	47	2	13	0	0	15	27

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

East Approach - Findlay Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
06:00	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0
06:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
06:30	2	2	4	0	8	0	0	0	0	0	0	0	0	0	0	0
06:45	1	0	4	0	5	0	0	0	0	0	0	0	0	0	0	0
07:00	1	1	8	0	10	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	26	0	26	0	0	0	0	0	0	0	0	0	0	0
08:00	1	0	12	0	13	0	0	0	0	0	0	0	0	0	0	0
08:15	2	3	10	0	15	0	0	0	0	0	0	0	1	0	1	0
08:30	0	1	26	0	27	0	0	1	0	1	0	0	0	0	0	0
08:45	1	0	44	0	45	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	11	9	153	0	173	0	0	2	0	2	0	0	1	0	1	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

East Approach - Findlay Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
15:00	1	2	23	0	26	1	1	2	0	4	0	0	1	0	1	0
15:15	2	1	25	0	28	0	0	1	0	1	0	0	0	0	0	9
15:30	1	1	19	0	21	0	0	2	0	2	0	3	0	0	3	0
15:45	0	0	22	0	22	0	0	0	0	0	0	0	1	0	1	0
16:00	0	2	20	0	22	0	0	0	0	0	0	0	0	0	0	0
16:15	0	4	18	0	22	0	0	0	0	0	0	0	0	0	0	0
16:30	0	3	26	0	29	0	0	0	0	0	0	0	1	0	1	0
16:45	1	0	21	0	22	0	0	0	0	0	0	0	0	0	0	0
17:00	0	1	16	0	17	0	0	0	0	0	0	0	0	0	0	0
17:15	0	1	22	0	23	0	0	0	0	0	0	0	0	0	0	0
17:30	0	1	20	0	21	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	13	0	14	0	0	0	0	0	0	1	1	0	2	0
SUBTOTAL	5	17	245	0	267	1	1	5	0	7	0	4	4	0	8	9
GRAND TOTAL	16	26	398	0	440	1	1	7	0	9	0	4	5	0	9	9

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

West Approach - Plewes Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
06:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
06:15	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0
06:30	6	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0
06:45	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
07:00	4	0	4	0	8	0	0	0	0	0	0	0	0	0	0	0
07:15	4	0	2	0	6	0	0	0	0	0	0	0	0	0	0	2
07:30	6	1	2	0	9	0	0	0	0	0	0	1	0	0	1	0
07:45	15	0	3	0	18	0	0	0	0	0	0	0	0	0	0	0
08:00	15	1	3	0	19	0	0	0	0	0	0	3	0	0	3	0
08:15	10	4	2	0	16	0	0	0	0	0	0	0	0	0	0	0
08:30	18	7	3	0	28	0	1	0	0	1	0	3	0	0	3	1
08:45	5	3	4	0	12	1	0	0	0	1	1	0	0	0	1	2
SUBTOTAL	89	16	30	0	135	1	1	0	0	2	1	7	0	0	8	5

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Municipality: Collingwood
Count Date: Oct 04, 2022

West Approach - Plewes Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
15:00	11	0	5	0	16	0	0	0	0	0	0	3	0	0	3	2
15:15	9	2	4	0	15	3	0	0	0	3	0	0	0	0	0	1
15:30	5	2	0	0	7	0	0	0	0	0	0	0	0	0	0	0
15:45	6	2	3	0	11	0	0	0	0	0	0	0	0	0	0	2
16:00	7	2	3	0	12	0	0	0	0	0	0	0	0	0	0	0
16:15	10	8	4	0	22	0	0	0	0	0	0	0	0	0	0	1
16:30	12	5	6	0	23	0	0	0	0	0	1	0	0	0	1	0
16:45	13	4	12	0	29	0	0	0	0	0	0	0	0	0	0	0
17:00	11	0	8	0	19	0	0	0	0	0	0	0	0	0	0	0
17:15	9	1	5	0	15	0	0	0	0	0	0	0	0	0	0	0
17:30	12	2	7	0	21	0	0	0	0	0	0	0	0	0	0	0
17:45	12	1	4	0	17	2	0	0	0	2	0	0	0	0	0	1
SUBTOTAL	117	29	61	0	207	5	0	0	0	5	1	3	0	0	4	7
GRAND TOTAL	206	45	91	0	342	6	1	0	0	7	2	10	0	0	12	12

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	06:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Count Date: Oct 04, 2022

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: High St runs N/S

North Approach

	Out	In	Total
Cars	355	334	689
Trucks	18	20	38
Bicycles	2	2	4
	375	**356**	**731**

High St

Bicycles	0	0	2	0
Trucks	2	7	9	0
Cars	22	259	74	0
Totals	**24**	**266**	**85**	**0**

East Approach

	Out	In	Total
Cars	100	90	190
Trucks	2	10	12
Bicycles	1	8	9
	103	**108**	**211**

Peds: 3

Plewes Dr

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
1	1	48	**50**
6	1	15	**22**
0	0	12	**12**

Peds: 3

Peds: 0

Findlay Dr

Totals	Cars	Trucks	Bicycles
0	0	0	0
95	92	2	1
4	4	0	0
4	4	0	0

Peds: 6

West Approach

	Out	In	Total
Cars	75	38	113
Trucks	2	2	4
Bicycles	7	0	7
	84	**40**	**124**

Totals	**12**	**211**	**1**	**0**
Cars	12	194	1	0
Trucks	0	17	0	0
Bicycles	0	0	0	0

High St

South Approach

	Out	In	Total
Cars	207	275	482
Trucks	17	7	24
Bicycles	0	0	0
	224	**282**	**506**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Count Date: Oct 04, 2022
Period: 06:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach High St						South Approach High St						East Approach Findlay Dr						West Approach Plewes Dr						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	13	79	7	0	1	99	2	57	0	0	0	59	1	0	12	0	0	13	15	4	3	0	0	22	193
08:15	17	71	5	0	0	93	4	49	0	0	3	53	2	3	11	0	0	16	10	4	2	0	0	16	178
08:30	41	50	7	0	2	98	2	59	0	0	2	61	0	1	27	0	0	28	18	11	3	0	1	32	219
08:45	14	66	5	0	0	85	4	46	1	0	1	51	1	0	45	0	0	46	7	3	4	0	2	14	196
Grand Total	**85**	**266**	**24**	**0**	**3**	**375**	**12**	**211**	**1**	**0**	**6**	**224**	**4**	**4**	**95**	**0**	**0**	**103**	**50**	**22**	**12**	**0**	**3**	**84**	**786**
Approach %	22.7	70.9	6.4	0		-	5.4	94.2	0.4	0		-	3.9	3.9	92.2	0		-	59.5	26.2	14.3	0		-	
Totals %	10.8	33.8	3.1	0		47.7	1.5	26.8	0.1	0		28.5	0.5	0.5	12.1	0		13.1	6.4	2.8	1.5	0		10.7	
PHF	**0.52**	**0.84**	**0.86**	**0**		**0.95**	**0.75**	**0.89**	**0.25**	**0**		**0.92**	**0.5**	**0.33**	**0.53**	**0**		**0.56**	**0.69**	**0.5**	**0.75**	**0**		**0.66**	**0.9**
Cars	74	259	22	0		355	12	194	1	0		207	4	4	92	0		100	48	15	12	0		75	737
% Cars	87.1	97.4	91.7	0		94.7	100	91.9	100	0		92.4	100	100	96.8	0		97.1	96	68.2	100	0		89.3	93.8
Trucks	9	7	2	0		18	0	17	0	0		17	0	0	2	0		2	1	1	0	0		2	39
% Trucks	10.6	2.6	8.3	0		4.8	0	8.1	0	0		7.6	0	0	2.1	0		1.9	2	4.5	0	0		2.4	5
Bicycles	2	0	0	0		2	0	0	0	0		0	0	0	1	0		1	1	6	0	0		7	10
% Bicycles	2.4	0	0	0		0.5	0	0	0	0		0	0	0	1.1	0		1	2	27.3	0	0		8.3	1.3
Peds					3	-					6	-					0	-					3	-	12
% Peds					25	-					50	-					0	-					25	-	

Ontario Traffic Inc.
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Peak Hour Diagram

Specified Period		One Hour Peak	
From:	15:00:00	From:	16:15:00
To:	18:00:00	To:	17:15:00

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Count Date: Oct 04, 2022

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: High St runs N/S

North Approach

	Out	In	Total
Cars	422	384	806
Trucks	12	5	17
Bicycles	5	6	11
	439	**395**	**834**

High St

Bicycles	4	1	0	0
Trucks	0	4	8	0
Cars	56	275	91	0
Totals	**60**	**280**	**99**	**0**

East Approach

	Out	In	Total
Cars	90	113	203
Trucks	0	8	8
Bicycles	1	0	1
	91	**121**	**212**

Peds: 0

Plewes Dr

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
1	0	46	**47**
0	0	17	**17**
0	0	30	**30**

Peds: 1

Peds: 0

Findlay Dr

Totals	Cars	Trucks	Bicycles
0	0	0	0
82	81	0	1
8	8	0	0
1	1	0	0

Peds: 1

West Approach

	Out	In	Total
Cars	93	95	188
Trucks	0	0	0
Bicycles	1	4	5
	94	**99**	**193**

High St

Totals	**31**	**266**	**5**	**0**
Cars	31	257	5	0
Trucks	0	5	0	0
Bicycles	0	4	0	0

South Approach

	Out	In	Total
Cars	293	306	599
Trucks	5	4	9
Bicycles	4	1	5
	302	**311**	**613**

Cars - Trucks - Bicycles

Comments

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Peak Hour Summary

Intersection: High St & Findlay Dr-Plewes Dr
Site Code: 2231100002
Count Date: Oct 04, 2022
Period: 15:00 - 18:00

Peak Hour Data (16:15 - 17:15)

Start Time	North Approach High St						South Approach High St						East Approach Findlay Dr						West Approach Plewes Dr						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:15	21	64	13	0	0	98	11	82	1	0	0	94	0	4	18	0	0	22	10	8	4	0	1	22	236
16:30	22	56	16	0	0	94	6	57	1	0	0	64	0	3	27	0	0	30	13	5	6	0	0	24	212
16:45	25	78	20	0	0	123	5	73	1	0	0	79	1	0	21	0	0	22	13	4	12	0	0	29	253
17:00	31	82	11	0	0	124	9	54	2	0	1	65	0	1	16	0	0	17	11	0	8	0	0	19	225
Grand Total	**99**	**280**	**60**	**0**	**0**	**439**	**31**	**266**	**5**	**0**	**1**	**302**	**1**	**8**	**82**	**0**	**0**	**91**	**47**	**17**	**30**	**0**	**1**	**94**	**926**
Approach %	22.6	63.8	13.7	0		-	10.3	88.1	1.7	0		-	1.1	8.8	90.1	0		-	50	18.1	31.9	0		-	
Totals %	10.7	30.2	6.5	0		47.4	3.3	28.7	0.5	0		32.6	0.1	0.9	8.9	0		9.8	5.1	1.8	3.2	0		10.2	
PHF	**0.8**	**0.85**	**0.75**	**0**		**0.89**	**0.7**	**0.81**	**0.63**	**0**		**0.8**	**0.25**	**0.5**	**0.76**	**0**		**0.76**	**0.9**	**0.53**	**0.63**	**0**		**0.81**	**0.92**
Cars	91	275	56	0		422	31	257	5	0		293	1	8	81	0		90	46	17	30	0		93	898
% Cars	91.9	98.2	93.3	0		96.1	100	96.6	100	0		97	100	100	98.8	0		98.9	97.9	100	100	0		98.9	97
Trucks	8	4	0	0		12	0	5	0	0		5	0	0	0	0		0	0	0	0	0		0	17
% Trucks	8.1	1.4	0	0		2.7	0	1.9	0	0		1.7	0	0	0	0		0	0	0	0	0		0	1.8
Bicycles	0	1	4	0		5	0	4	0	0		4	0	0	1	0		1	1	0	0	0		1	11
% Bicycles	0	0.4	6.7	0		1.1	0	1.5	0	0		1.3	0	0	1.2	0		1.1	2.1	0	0	0		1.1	1.2
Peds					0	-					1	-					0	-					1	-	2
% Peds					0	-					50	-					0	-					50	-	

Appendix C:
LOS Definitions

TATHAM ENGINEERING

Level of Service – Unsignalized Intersections

Level of Service (LOS) for unsignalized intersections is defined in terms of control delay for each critical lane. Control delay includes initial deceleration, queue move-up time, stopped delay and final acceleration delay, and is a function of the service rate or capacity of the approach and degree of saturation.

The following table describes in detail the characteristics of each level of service, with A being the best and F being the worst.

LOS	EXPECTED DELAY TO STREET TRAFFIC	DELAY (sec/veh)
A	Little or no delays	$0 < d \leq 10$
B	Short traffic delays	$10 < d \leq 15$
C	Average traffic delays	$15 < d \leq 25$
D	Long traffic delays	$25 < d \leq 35$
E	Very long traffic delays	$35 < d \leq 50$
F	Extreme delays with queuing which may cause congestion affecting other traffic movements in the intersection	$50 < d$

source: 2010 Highway Capacity Manual

TATHAM ENGINEERING

Level of Service – Signalized Intersections

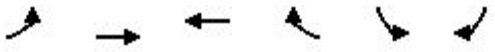
Level of Service (LOS) for signalized intersections is defined in terms of delay, which is made up of a number of factors that relate to control, geometrics, traffic and incidents. Only the portion of total delay attributed to the control facility is quantified. This control delay includes initial deceleration, queue move-up time, stopped delay and final acceleration delay.

The following table describes in detail the characteristics of each level of service, with A being the best and F being the worst.

LOS	EXPECTED DELAY TO STREET TRAFFIC	DELAY (sec/veh)
A	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all at this LOS. Short cycle lengths may also contribute to low delay.	$0 < d \leq 10$
B	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop at this level than at LOS A, causing longer average delays.	$10 < d \leq 20$
C	These higher delays may result from fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	$20 < d \leq 35$
D	At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavourable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures become noticeable.	$35 < d \leq 55$
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.	$55 < d \leq 80$
F	At this level, oversaturation occurs when arrival flow rates exceed the design capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such high delay levels. LOS F is considered to be unacceptable to most drivers.	$80 < d$

source: 2010 Highway Capacity Manual

Appendix D:
Existing Traffic Operations



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	158	264	21	13	8
Future Volume (Veh/h)	2	158	264	21	13	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	172	287	23	14	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	310				474	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310				474	298
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	99
cM capacity (veh/h)	1250				548	741

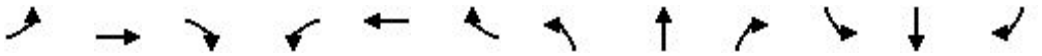
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	174	310	23
Volume Left	2	0	14
Volume Right	0	23	9
cSH	1250	1700	610
Volume to Capacity	0.00	0.18	0.04
Queue Length 95th (m)	0.0	0.0	0.9
Control Delay (s)	0.1	0.0	11.1
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	11.1
Approach LOS			B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	34	75	321	59	63	357
Future Volume (vph)	34	75	321	59	63	357
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	82	349	64	68	388

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	119	413	68	388
Volume Left (vph)	37	0	68	0
Volume Right (vph)	82	64	0	0
Hadj (s)	-0.32	-0.06	0.53	0.03
Departure Headway (s)	5.6	4.8	5.8	5.3
Degree Utilization, x	0.18	0.55	0.11	0.57
Capacity (veh/h)	573	726	607	670
Control Delay (s)	9.8	13.7	8.3	13.7
Approach Delay (s)	9.8	13.7	12.9	
Approach LOS	A	B	B	

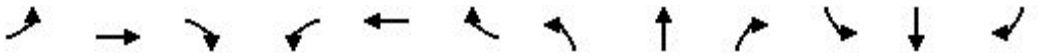
Intersection Summary			
Delay	12.9		
Level of Service	B		
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	14	19	2	6	109	11	229	1	87	270	34
Future Volume (Veh/h)	42	14	19	2	6	109	11	229	1	87	270	34
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	46	15	21	2	7	118	12	249	1	95	293	37
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	878	757	293	785	794	250	330			250		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	878	757	293	785	794	250	330			250		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	78	95	97	99	98	85	99			93		
cM capacity (veh/h)	210	310	746	272	295	789	1229			1316		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	82	127	12	250	95	293	37
Volume Left	46	2	12	0	95	0	0
Volume Right	21	118	0	1	0	0	37
cSH	278	703	1229	1700	1316	1700	1700
Volume to Capacity	0.30	0.18	0.01	0.15	0.07	0.17	0.02
Queue Length 95th (m)	9.1	5.0	0.2	0.0	1.8	0.0	0.0
Control Delay (s)	23.3	11.2	8.0	0.0	7.9	0.0	0.0
Lane LOS	C	B	A		A		
Approach Delay (s)	23.3	11.2	0.4		1.8		
Approach LOS	C	B					

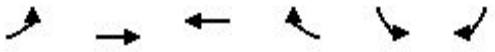
Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	38.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	332	102	45	313	179	154	183	76	161	125	28
Future Volume (vph)	59	332	102	45	313	179	154	183	76	161	125	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1817		1789	1883	1601	1789	1883	1601	1789	1832	
Flt Permitted	0.36	1.00		0.23	1.00	1.00	0.54	1.00	1.00	0.63	1.00	
Satd. Flow (perm)	681	1817		431	1883	1601	1011	1883	1601	1192	1832	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	361	111	49	340	195	167	199	83	175	136	30
RTOR Reduction (vph)	0	17	0	0	0	141	0	0	44	0	11	0
Lane Group Flow (vph)	64	455	0	49	340	54	167	199	39	175	155	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	20.3	17.5		20.3	17.5	17.5	29.3	29.3	29.3	20.9	20.9	
Effective Green, g (s)	20.3	17.5		20.3	17.5	17.5	29.3	29.3	29.3	20.9	20.9	
Actuated g/C Ratio	0.32	0.28		0.32	0.28	0.28	0.46	0.46	0.46	0.33	0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	268	503		198	522	444	517	874	743	394	606	
v/s Ratio Prot	0.01	c0.25		c0.01	0.18		c0.02	0.11			0.08	
v/s Ratio Perm	0.07			0.07		0.03	0.13		0.02	c0.15		
v/c Ratio	0.24	0.90		0.25	0.65	0.12	0.32	0.23	0.05	0.44	0.26	
Uniform Delay, d1	15.4	22.0		16.1	20.1	17.1	10.2	10.1	9.3	16.5	15.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	19.5		0.7	2.9	0.1	0.4	0.6	0.1	3.6	1.0	
Delay (s)	15.8	41.5		16.7	23.0	17.2	10.5	10.7	9.4	20.1	16.4	
Level of Service	B	D		B	C	B	B	B	A	C	B	
Approach Delay (s)		38.4			20.5			10.4			18.3	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	63.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	255	211	12	18	3
Future Volume (Veh/h)	4	255	211	12	18	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	277	229	13	20	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	242				520	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	242				520	236
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				96	100
cM capacity (veh/h)	1324				514	804

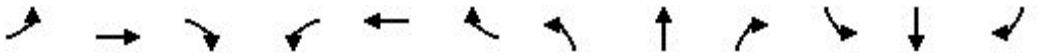
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	281	242	23
Volume Left	4	0	20
Volume Right	0	13	3
cSH	1324	1700	540
Volume to Capacity	0.00	0.14	0.04
Queue Length 95th (m)	0.1	0.0	1.0
Control Delay (s)	0.1	0.0	12.0
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	12.0
Approach LOS			B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	28	69	376	29	99	456
Future Volume (vph)	28	69	376	29	99	456
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	75	409	32	108	496

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	105	441	108	496
Volume Left (vph)	30	0	108	0
Volume Right (vph)	75	32	0	0
Hadj (s)	-0.34	-0.01	0.53	0.03
Departure Headway (s)	5.9	5.0	5.8	5.3
Degree Utilization, x	0.17	0.61	0.17	0.73
Capacity (veh/h)	548	706	610	667
Control Delay (s)	10.1	15.6	8.8	19.8
Approach Delay (s)	10.1	15.6	17.8	
Approach LOS	B	C	C	

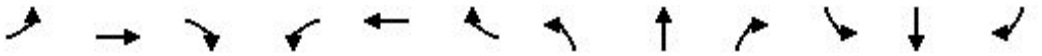
Intersection Summary			
Delay	16.3		
Level of Service	C		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	5	7	3	4	84	15	279	6	103	325	56
Future Volume (Veh/h)	42	5	7	3	4	84	15	279	6	103	325	56
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	46	5	8	3	4	91	16	303	7	112	353	61
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1005	919	353	926	976	306	414			310		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1005	919	353	926	976	306	414			310		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	74	98	99	99	98	88	99			91		
cM capacity (veh/h)	175	243	691	223	225	733	1145			1250		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	59	98	16	310	112	353	61
Volume Left	46	3	16	0	112	0	0
Volume Right	8	91	0	7	0	0	61
cSH	200	631	1145	1700	1250	1700	1700
Volume to Capacity	0.29	0.16	0.01	0.18	0.09	0.21	0.04
Queue Length 95th (m)	8.9	4.2	0.3	0.0	2.2	0.0	0.0
Control Delay (s)	30.3	11.7	8.2	0.0	8.2	0.0	0.0
Lane LOS	D	B	A		A		
Approach Delay (s)	30.3	11.7	0.4		1.7		
Approach LOS	D	B					

Intersection Summary				
Average Delay	3.9			
Intersection Capacity Utilization	40.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	409	136	65	319	165	97	157	45	196	249	21
Future Volume (vph)	41	409	136	65	319	165	97	157	45	196	249	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1813		1789	1883	1601	1789	1883	1601	1789	1861	
Flt Permitted	0.44	1.00		0.15	1.00	1.00	0.35	1.00	1.00	0.65	1.00	
Satd. Flow (perm)	829	1813		276	1883	1601	659	1883	1601	1223	1861	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	445	148	71	347	179	105	171	49	213	271	23
RTOR Reduction (vph)	0	17	0	0	0	112	0	0	29	0	4	0
Lane Group Flow (vph)	45	576	0	71	347	67	105	171	20	213	290	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	29.0	26.2		31.2	27.3	27.3	29.5	29.5	29.5	21.1	21.1	
Effective Green, g (s)	29.0	26.2		31.2	27.3	27.3	29.5	29.5	29.5	21.1	21.1	
Actuated g/C Ratio	0.40	0.36		0.43	0.37	0.37	0.40	0.40	0.40	0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	365	649		198	703	597	326	759	646	353	537	
v/s Ratio Prot	0.00	c0.32		c0.02	0.18		c0.02	0.09			0.16	
v/s Ratio Perm	0.04			0.13		0.04	0.11		0.01	c0.17		
v/c Ratio	0.12	0.89		0.36	0.49	0.11	0.32	0.23	0.03	0.60	0.54	
Uniform Delay, d1	13.8	22.1		15.3	17.6	15.0	14.6	14.3	13.2	22.4	21.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	13.9		1.1	0.5	0.1	0.6	0.7	0.1	7.4	3.9	
Delay (s)	14.0	36.0		16.5	18.1	15.1	15.2	15.0	13.3	29.8	25.8	
Level of Service	B	D		B	B	B	B	B	B	C	C	
Approach Delay (s)		34.4			17.0			14.8			27.5	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	73.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Poplar SR & High Street - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.14	1.87	0.2	0.5	A
2 - Poplar Sideroad	0.11	2.41	0.1	0.5	A
3 - Poplar Sideroad	0.25	2.31	0.3	1.4	A

Poplar SR & High Street - 2024, PM

Data Errors and Warnings

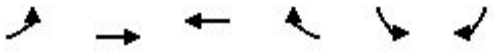
Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.16	1.86	0.2	0.5	A
2 - Poplar Sideroad	0.18	2.66	0.2	0.5	A
3 - Poplar Sideroad	0.25	2.29	0.3	1.3	A

Appendix E: Future Background Traffic Operations



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	181	303	26	27	14
Future Volume (Veh/h)	4	181	303	26	27	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	197	329	28	29	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	357				548	343
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	357				548	343
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	98
cM capacity (veh/h)	1202				496	700

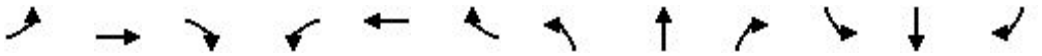
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	201	357	44
Volume Left	4	0	29
Volume Right	0	28	15
cSH	1202	1700	550
Volume to Capacity	0.00	0.21	0.08
Queue Length 95th (m)	0.1	0.0	2.0
Control Delay (s)	0.2	0.0	12.1
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	40	85	401	72	71	425
Future Volume (vph)	40	85	401	72	71	425
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	92	436	78	77	462

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	135	514	77	462
Volume Left (vph)	43	0	77	0
Volume Right (vph)	92	78	0	0
Hadj (s)	-0.31	-0.06	0.53	0.03
Departure Headway (s)	6.0	5.1	6.0	5.5
Degree Utilization, x	0.23	0.72	0.13	0.70
Capacity (veh/h)	537	694	586	639
Control Delay (s)	10.8	20.0	8.7	19.2
Approach Delay (s)	10.8	20.0	17.7	
Approach LOS	B	C	C	

Intersection Summary			
Delay	17.9		
Level of Service	C		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	17	19	2	7	127	11	271	1	99	320	46
Future Volume (Veh/h)	75	17	19	2	7	127	11	271	1	99	320	46
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	18	21	2	8	138	12	295	1	108	348	50
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1025	884	348	914	934	296	398			296		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1025	884	348	914	934	296	398			296		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	48	93	97	99	97	81	99			91		
cM capacity (veh/h)	157	257	695	216	241	744	1161			1265		

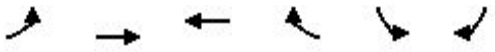
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	121	148	12	296	108	348	50
Volume Left	82	2	12	0	108	0	0
Volume Right	21	138	0	1	0	0	50
cSH	195	649	1161	1700	1265	1700	1700
Volume to Capacity	0.62	0.23	0.01	0.17	0.09	0.20	0.03
Queue Length 95th (m)	27.0	6.6	0.2	0.0	2.1	0.0	0.0
Control Delay (s)	49.9	12.2	8.1	0.0	8.1	0.0	0.0
Lane LOS	E	B	A		A		
Approach Delay (s)	49.9	12.2	0.3		1.7		
Approach LOS	E	B					

Intersection Summary				
Average Delay	8.1			
Intersection Capacity Utilization	48.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	401	130	51	361	202	179	206	86	181	141	34
Future Volume (vph)	71	401	130	51	361	202	179	206	86	181	141	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1814		1789	1883	1601	1789	1883	1601	1789	1828	
Flt Permitted	0.31	1.00		0.18	1.00	1.00	0.48	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	585	1814		346	1883	1601	913	1883	1601	1165	1828	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	436	141	55	392	220	195	224	93	197	153	37
RTOR Reduction (vph)	0	17	0	0	0	150	0	0	53	0	12	0
Lane Group Flow (vph)	77	560	0	55	392	70	195	224	40	197	178	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	26.7	22.8		24.7	21.8	21.8	29.1	29.1	29.1	19.5	19.5	
Effective Green, g (s)	26.7	22.8		24.7	21.8	21.8	29.1	29.1	29.1	19.5	19.5	
Actuated g/C Ratio	0.39	0.33		0.36	0.32	0.32	0.43	0.43	0.43	0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	297	605		186	601	511	454	802	682	332	521	
v/s Ratio Prot	c0.01	c0.31		0.01	0.21		c0.03	0.12			0.10	
v/s Ratio Perm	0.09			0.09		0.04	0.15		0.02	c0.17		
v/c Ratio	0.26	0.93		0.30	0.65	0.14	0.43	0.28	0.06	0.59	0.34	
Uniform Delay, d1	13.9	21.9		16.3	20.0	16.6	12.9	12.8	11.5	21.0	19.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	20.2		0.9	2.5	0.1	0.7	0.9	0.2	7.6	1.8	
Delay (s)	14.4	42.2		17.2	22.5	16.7	13.6	13.6	11.7	28.6	21.1	
Level of Service	B	D		B	C	B	B	B	B	C	C	
Approach Delay (s)		38.9			20.2			13.3			24.9	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	294	242	28	27	7
Future Volume (Veh/h)	10	294	242	28	27	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	320	263	30	29	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	293				620	278
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	293				620	278
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	99
cM capacity (veh/h)	1269				448	761

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	331	293	37
Volume Left	11	0	29
Volume Right	0	30	8
cSH	1269	1700	491
Volume to Capacity	0.01	0.17	0.08
Queue Length 95th (m)	0.2	0.0	1.8
Control Delay (s)	0.3	0.0	12.9
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	12.9
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	37	78	456	36	111	559
Future Volume (vph)	37	78	456	36	111	559
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	85	496	39	121	608

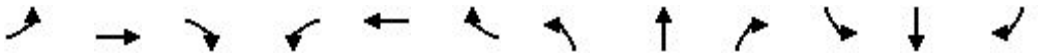
Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	125	535	121	608
Volume Left (vph)	40	0	121	0
Volume Right (vph)	85	39	0	0
Hadj (s)	-0.31	-0.01	0.53	0.03
Departure Headway (s)	6.4	5.3	6.0	5.5
Degree Utilization, x	0.22	0.78	0.20	0.93
Capacity (veh/h)	535	669	588	641
Control Delay (s)	11.2	24.7	9.3	42.4
Approach Delay (s)	11.2	24.7	36.9	
Approach LOS	B	C	E	

Intersection Summary			
Delay	29.9		
Level of Service	D		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	7	7	3	7	96	15	332	7	120	383	94
Future Volume (Veh/h)	64	7	7	3	7	96	15	332	7	120	383	94
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	70	8	8	3	8	104	16	361	8	130	416	102
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1177	1077	416	1085	1175	365	518			369		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1177	1077	416	1085	1175	365	518			369		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	44	96	99	98	95	85	98			89		
cM capacity (veh/h)	124	192	637	168	168	680	1048			1190		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	86	115	16	369	130	416	102
Volume Left	70	3	16	0	130	0	0
Volume Right	8	104	0	8	0	0	102
cSH	139	527	1048	1700	1190	1700	1700
Volume to Capacity	0.62	0.22	0.02	0.22	0.11	0.24	0.06
Queue Length 95th (m)	24.7	6.3	0.4	0.0	2.8	0.0	0.0
Control Delay (s)	65.6	13.7	8.5	0.0	8.4	0.0	0.0
Lane LOS	F	B	A		A		
Approach Delay (s)	65.6	13.7	0.4		1.7		
Approach LOS	F	B					

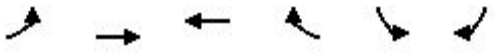
Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	45.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	479	163	73	387	186	126	177	51	221	280	40
Future Volume (vph)	49	479	163	73	387	186	126	177	51	221	280	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1812		1789	1883	1601	1789	1883	1601	1789	1848	
Flt Permitted	0.35	1.00		0.11	1.00	1.00	0.27	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	657	1812		216	1883	1601	507	1883	1601	1199	1848	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	521	177	79	421	202	137	192	55	240	304	43
RTOR Reduction (vph)	0	14	0	0	0	121	0	0	33	0	6	0
Lane Group Flow (vph)	53	684	0	79	421	81	137	192	22	240	341	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	38.7	34.8		38.7	34.8	34.8	34.3	34.3	34.3	24.4	24.4	
Effective Green, g (s)	38.7	34.8		38.7	34.8	34.8	34.3	34.3	34.3	24.4	24.4	
Actuated g/C Ratio	0.45	0.40		0.45	0.40	0.40	0.40	0.40	0.40	0.28	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	344	728		167	757	644	281	746	634	338	521	
v/s Ratio Prot	0.01	c0.38		c0.02	0.22		c0.03	0.10			0.18	
v/s Ratio Perm	0.06			0.19		0.05	0.16		0.01	c0.20		
v/c Ratio	0.15	0.94		0.47	0.56	0.13	0.49	0.26	0.03	0.71	0.66	
Uniform Delay, d1	14.4	24.8		18.8	19.9	16.3	18.5	17.5	16.0	27.9	27.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	19.8		2.1	0.9	0.1	1.3	0.8	0.1	11.9	6.3	
Delay (s)	14.6	44.7		20.9	20.8	16.4	19.9	18.4	16.1	39.8	33.6	
Level of Service	B	D		C	C	B	B	B	B	D	C	
Approach Delay (s)		42.5			19.5			18.6			36.2	
Approach LOS		D			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	86.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	181	303	26	27	14
Future Volume (Veh/h)	4	181	303	26	27	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	197	329	28	29	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	357				548	343
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	357				548	343
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	98
cM capacity (veh/h)	1202				496	700

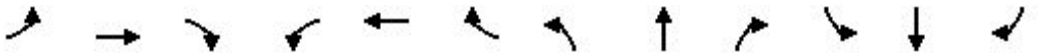
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	201	357	44
Volume Left	4	0	29
Volume Right	0	28	15
cSH	1202	1700	550
Volume to Capacity	0.00	0.21	0.08
Queue Length 95th (m)	0.1	0.0	2.0
Control Delay (s)	0.2	0.0	12.1
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	40	85	401	72	71	425
Future Volume (vph)	40	85	401	72	71	425
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	92	436	78	77	462

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	135	514	77	462
Volume Left (vph)	43	0	77	0
Volume Right (vph)	92	78	0	0
Hadj (s)	-0.31	-0.06	0.53	0.03
Departure Headway (s)	6.0	5.1	6.0	5.5
Degree Utilization, x	0.23	0.72	0.13	0.70
Capacity (veh/h)	537	694	586	639
Control Delay (s)	10.8	20.0	8.7	19.2
Approach Delay (s)	10.8	20.0	17.7	
Approach LOS	B	C	C	

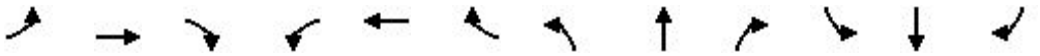
Intersection Summary			
Delay	17.9		
Level of Service	C		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	17	19	2	7	127	11	271	1	99	320	46
Future Volume (vph)	75	17	19	2	7	127	11	271	1	99	320	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1779			1645		1789	1882		1789	1883	1601
Flt Permitted		0.82			0.99		0.55	1.00		0.58	1.00	1.00
Satd. Flow (perm)		1513			1637		1040	1882		1091	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	18	21	2	8	138	12	295	1	108	348	50
RTOR Reduction (vph)	0	17	0	0	112	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	104	0	0	36	0	12	296	0	108	348	29
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		7.0			7.0		21.3	21.3		21.3	21.3	21.3
Effective Green, g (s)		7.0			7.0		21.3	21.3		21.3	21.3	21.3
Actuated g/C Ratio		0.19			0.19		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		283			307		593	1074		623	1075	914
v/s Ratio Prot								0.16			c0.18	
v/s Ratio Perm		c0.07			0.02		0.01			0.10		0.02
v/c Ratio		0.37			0.12		0.02	0.28		0.17	0.32	0.03
Uniform Delay, d1		13.2			12.6		3.5	4.1		3.8	4.2	3.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.2		0.1	0.6		0.6	0.8	0.1
Delay (s)		14.0			12.8		3.5	4.7		4.4	5.0	3.6
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		14.0			12.8			4.7			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	37.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

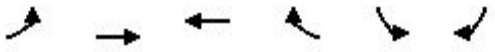
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	401	130	51	361	202	179	206	86	181	141	34
Future Volume (vph)	71	401	130	51	361	202	179	206	86	181	141	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1814		1789	1883	1601	1789	1883	1601	1789	1828	
Flt Permitted	0.31	1.00		0.18	1.00	1.00	0.48	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	585	1814		346	1883	1601	913	1883	1601	1165	1828	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	436	141	55	392	220	195	224	93	197	153	37
RTOR Reduction (vph)	0	17	0	0	0	150	0	0	53	0	12	0
Lane Group Flow (vph)	77	560	0	55	392	70	195	224	40	197	178	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	26.7	22.8		24.7	21.8	21.8	29.1	29.1	29.1	19.5	19.5	
Effective Green, g (s)	26.7	22.8		24.7	21.8	21.8	29.1	29.1	29.1	19.5	19.5	
Actuated g/C Ratio	0.39	0.33		0.36	0.32	0.32	0.43	0.43	0.43	0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	297	605		186	601	511	454	802	682	332	521	
v/s Ratio Prot	c0.01	c0.31		0.01	0.21		c0.03	0.12			0.10	
v/s Ratio Perm	0.09			0.09		0.04	0.15		0.02	c0.17		
v/c Ratio	0.26	0.93		0.30	0.65	0.14	0.43	0.28	0.06	0.59	0.34	
Uniform Delay, d1	13.9	21.9		16.3	20.0	16.6	12.9	12.8	11.5	21.0	19.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	20.2		0.9	2.5	0.1	0.7	0.9	0.2	7.6	1.8	
Delay (s)	14.4	42.2		17.2	22.5	16.7	13.6	13.6	11.7	28.6	21.1	
Level of Service	B	D		B	C	B	B	B	B	C	C	
Approach Delay (s)		38.9			20.2			13.3			24.9	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	294	242	28	27	7
Future Volume (Veh/h)	10	294	242	28	27	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	320	263	30	29	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	293				620	278
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	293				620	278
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	99
cM capacity (veh/h)	1269				448	761

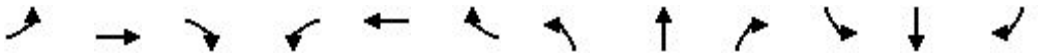
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	331	293	37
Volume Left	11	0	29
Volume Right	0	30	8
cSH	1269	1700	491
Volume to Capacity	0.01	0.17	0.08
Queue Length 95th (m)	0.2	0.0	1.8
Control Delay (s)	0.3	0.0	12.9
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	12.9
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	37	78	456	36	111	559
Future Volume (vph)	37	78	456	36	111	559
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	85	496	39	121	608

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	125	535	121	608
Volume Left (vph)	40	0	121	0
Volume Right (vph)	85	39	0	0
Hadj (s)	-0.31	-0.01	0.53	0.03
Departure Headway (s)	6.4	5.3	6.0	5.5
Degree Utilization, x	0.22	0.78	0.20	0.93
Capacity (veh/h)	535	669	588	641
Control Delay (s)	11.2	24.7	9.3	42.4
Approach Delay (s)	11.2	24.7	36.9	
Approach LOS	B	C	E	

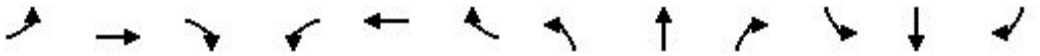
Intersection Summary			
Delay	29.9		
Level of Service	D		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	7	7	3	7	96	15	332	7	120	383	94
Future Volume (vph)	64	7	7	3	7	96	15	332	7	120	383	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.99			0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787			1651		1789	1877		1789	1883	1601
Flt Permitted		0.85			0.99		0.52	1.00		0.54	1.00	1.00
Satd. Flow (perm)		1588			1633		977	1877		1020	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	8	8	3	8	104	16	361	8	130	416	102
RTOR Reduction (vph)	0	7	0	0	90	0	0	1	0	0	0	36
Lane Group Flow (vph)	0	79	0	0	25	0	16	368	0	130	416	66
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		5.2			5.2		23.7	23.7		23.7	23.7	23.7
Effective Green, g (s)		5.2			5.2		23.7	23.7		23.7	23.7	23.7
Actuated g/C Ratio		0.14			0.14		0.63	0.63		0.63	0.63	0.63
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		217			224		610	1173		637	1177	1001
v/s Ratio Prot								0.20			c0.22	
v/s Ratio Perm		c0.05			0.02		0.02			0.13		0.04
v/c Ratio		0.36			0.11		0.03	0.31		0.20	0.35	0.07
Uniform Delay, d1		14.8			14.3		2.7	3.3		3.0	3.4	2.8
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0			0.2		0.1	0.7		0.7	0.8	0.1
Delay (s)		15.9			14.6		2.8	4.0		3.8	4.2	2.9
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		15.9			14.6			4.0			3.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	37.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

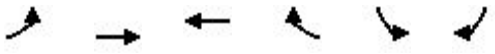
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	479	163	73	387	186	126	177	51	221	280	40
Future Volume (vph)	49	479	163	73	387	186	126	177	51	221	280	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1812		1789	1883	1601	1789	1883	1601	1789	1848	
Flt Permitted	0.35	1.00		0.11	1.00	1.00	0.27	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	657	1812		216	1883	1601	507	1883	1601	1199	1848	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	521	177	79	421	202	137	192	55	240	304	43
RTOR Reduction (vph)	0	14	0	0	0	121	0	0	33	0	6	0
Lane Group Flow (vph)	53	684	0	79	421	81	137	192	22	240	341	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	38.7	34.8		38.7	34.8	34.8	34.3	34.3	34.3	24.4	24.4	
Effective Green, g (s)	38.7	34.8		38.7	34.8	34.8	34.3	34.3	34.3	24.4	24.4	
Actuated g/C Ratio	0.45	0.40		0.45	0.40	0.40	0.40	0.40	0.40	0.28	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	344	728		167	757	644	281	746	634	338	521	
v/s Ratio Prot	0.01	c0.38		c0.02	0.22		c0.03	0.10			0.18	
v/s Ratio Perm	0.06			0.19		0.05	0.16		0.01	c0.20		
v/c Ratio	0.15	0.94		0.47	0.56	0.13	0.49	0.26	0.03	0.71	0.66	
Uniform Delay, d1	14.4	24.8		18.8	19.9	16.3	18.5	17.5	16.0	27.9	27.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	19.8		2.1	0.9	0.1	1.3	0.8	0.1	11.9	6.3	
Delay (s)	14.6	44.7		20.9	20.8	16.4	19.9	18.4	16.1	39.8	33.6	
Level of Service	B	D		C	C	B	B	B	B	D	C	
Approach Delay (s)		42.5			19.5			18.6			36.2	
Approach LOS		D			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	86.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	199	334	26	27	14
Future Volume (Veh/h)	4	199	334	26	27	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	216	363	28	29	15
Pedestrians			18			
Lane Width (m)			3.7			
Walking Speed (m/s)			1.1			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	391				619	377
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				619	377
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				93	98
cM capacity (veh/h)	1168				443	670

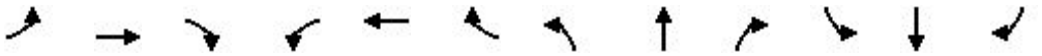
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	220	391	44
Volume Left	4	0	29
Volume Right	0	28	15
cSH	1168	1700	501
Volume to Capacity	0.00	0.23	0.09
Queue Length 95th (m)	0.1	0.0	2.2
Control Delay (s)	0.2	0.0	12.9
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	12.9
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	44	94	434	79	79	463
Future Volume (vph)	44	94	434	79	79	463
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	102	472	86	86	503

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	150	558	86	503
Volume Left (vph)	48	0	86	0
Volume Right (vph)	102	86	0	0
Hadj (s)	-0.31	-0.06	0.53	0.03
Departure Headway (s)	6.3	5.2	6.1	5.6
Degree Utilization, x	0.26	0.81	0.15	0.79
Capacity (veh/h)	535	680	574	627
Control Delay (s)	11.4	26.2	9.0	24.9
Approach Delay (s)	11.4	26.2	22.6	
Approach LOS	B	D	C	

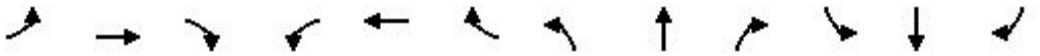
Intersection Summary			
Delay	22.9		
Level of Service	C		
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	17	19	2	7	140	11	298	1	109	352	46
Future Volume (vph)	75	17	19	2	7	140	11	298	1	109	352	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1779			1644		1789	1883		1789	1883	1601
Flt Permitted		0.81			1.00		0.53	1.00		0.56	1.00	1.00
Satd. Flow (perm)		1493			1637		1007	1883		1062	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	18	21	2	8	152	12	324	1	118	383	50
RTOR Reduction (vph)	0	17	0	0	123	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	104	0	0	39	0	12	325	0	118	383	28
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		7.0			7.0		21.1	21.1		21.1	21.1	21.1
Effective Green, g (s)		7.0			7.0		21.1	21.1		21.1	21.1	21.1
Actuated g/C Ratio		0.19			0.19		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		281			308		572	1070		603	1070	910
v/s Ratio Prot								0.17			c0.20	
v/s Ratio Perm		c0.07			0.02		0.01			0.11		0.02
v/c Ratio		0.37			0.13		0.02	0.30		0.20	0.36	0.03
Uniform Delay, d1		13.1			12.5		3.5	4.2		3.9	4.3	3.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.2		0.1	0.7		0.7	0.9	0.1
Delay (s)		14.0			12.7		3.6	4.9		4.6	5.3	3.6
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		14.0			12.7			4.9			5.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	37.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

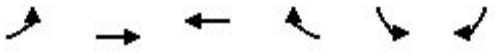
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	440	142	56	398	223	197	228	94	200	155	37
Future Volume (vph)	78	440	142	56	398	223	197	228	94	200	155	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1815		1789	1883	1601	1789	1883	1601	1789	1829	
Flt Permitted	0.31	1.00		0.14	1.00	1.00	0.45	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	577	1815		269	1883	1601	847	1883	1601	1140	1829	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	478	154	61	433	242	214	248	102	217	168	40
RTOR Reduction (vph)	0	15	0	0	0	154	0	0	61	0	11	0
Lane Group Flow (vph)	85	617	0	61	433	88	214	248	41	217	197	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	32.5	28.3		31.9	28.0	28.0	31.3	31.3	31.3	21.2	21.2	
Effective Green, g (s)	32.5	28.3		31.9	28.0	28.0	31.3	31.3	31.3	21.2	21.2	
Actuated g/C Ratio	0.42	0.37		0.41	0.36	0.36	0.41	0.41	0.41	0.28	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	309	667		188	684	582	412	765	650	313	503	
v/s Ratio Prot	0.01	c0.34		c0.02	0.23		c0.04	0.13			0.11	
v/s Ratio Perm	0.10			0.12		0.05	0.17		0.03	c0.19		
v/c Ratio	0.28	0.93		0.32	0.63	0.15	0.52	0.32	0.06	0.69	0.39	
Uniform Delay, d1	14.4	23.3		16.9	20.3	16.5	16.4	15.6	13.9	25.0	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	18.8		1.0	1.9	0.1	1.1	1.1	0.2	12.0	2.3	
Delay (s)	14.9	42.1		17.9	22.2	16.6	17.5	16.7	14.1	37.0	25.0	
Level of Service	B	D		B	C	B	B	B	B	D	C	
Approach Delay (s)		38.9			20.0			16.5			31.1	
Approach LOS		D			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	324	267	28	27	7
Future Volume (Veh/h)	10	324	267	28	27	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	352	290	30	29	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	320				679	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320				679	305
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				93	99
cM capacity (veh/h)	1240				413	735

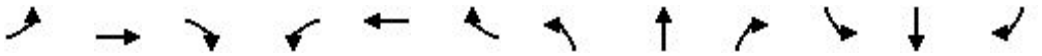
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	363	320	37
Volume Left	11	0	29
Volume Right	0	30	8
cSH	1240	1700	457
Volume to Capacity	0.01	0.19	0.08
Queue Length 95th (m)	0.2	0.0	2.0
Control Delay (s)	0.3	0.0	13.6
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	13.6
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	41	86	495	39	123	606
Future Volume (vph)	41	86	495	39	123	606
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	93	538	42	134	659

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	138	580	134	659
Volume Left (vph)	45	0	134	0
Volume Right (vph)	93	42	0	0
Hadj (s)	-0.31	-0.01	0.53	0.03
Departure Headway (s)	6.5	5.3	6.1	5.6
Degree Utilization, x	0.25	0.86	0.23	1.03
Capacity (veh/h)	534	666	578	643
Control Delay (s)	11.7	32.4	9.8	66.6
Approach Delay (s)	11.7	32.4	57.0	
Approach LOS	B	D	F	

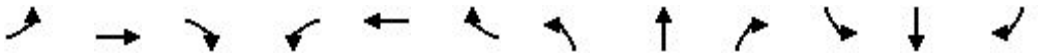
Intersection Summary			
Delay	43.4		
Level of Service	E		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	7	7	4	7	106	15	364	8	132	421	94
Future Volume (vph)	64	7	7	4	7	106	15	364	8	132	421	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.99			0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787			1651		1789	1877		1789	1883	1601
Flt Permitted		0.88			0.98		0.49	1.00		0.52	1.00	1.00
Satd. Flow (perm)		1634			1627		928	1877		987	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	8	8	4	8	115	16	396	9	143	458	102
RTOR Reduction (vph)	0	7	0	0	99	0	0	1	0	0	0	33
Lane Group Flow (vph)	0	79	0	0	28	0	16	404	0	143	458	69
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		5.1			5.1		23.4	23.4		23.4	23.4	23.4
Effective Green, g (s)		5.1			5.1		23.4	23.4		23.4	23.4	23.4
Actuated g/C Ratio		0.14			0.14		0.62	0.62		0.62	0.62	0.62
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		222			221		579	1171		615	1174	999
v/s Ratio Prot								0.22			c0.24	
v/s Ratio Perm		c0.05			0.02		0.02			0.14		0.04
v/c Ratio		0.36			0.13		0.03	0.34		0.23	0.39	0.07
Uniform Delay, d1		14.7			14.2		2.7	3.4		3.1	3.5	2.8
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0			0.3		0.1	0.8		0.9	1.0	0.1
Delay (s)		15.7			14.5		2.8	4.2		4.0	4.5	2.9
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		15.7			14.5			4.1			4.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

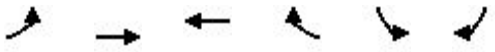
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	527	179	81	424	205	137	195	56	244	310	43
Future Volume (vph)	54	527	179	81	424	205	137	195	56	244	310	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1812		1789	1883	1601	1789	1883	1601	1789	1849	
Flt Permitted	0.33	1.00		0.11	1.00	1.00	0.20	1.00	1.00	0.63	1.00	
Satd. Flow (perm)	615	1812		200	1883	1601	376	1883	1601	1178	1849	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	573	195	88	461	223	149	212	61	265	337	47
RTOR Reduction (vph)	0	14	0	0	0	128	0	0	38	0	6	0
Lane Group Flow (vph)	59	754	0	88	461	95	149	212	23	265	378	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	41.6	37.6		41.6	37.6	37.6	33.1	33.1	33.1	23.5	23.5	
Effective Green, g (s)	41.6	37.6		41.6	37.6	37.6	33.1	33.1	33.1	23.5	23.5	
Actuated g/C Ratio	0.47	0.43		0.47	0.43	0.43	0.38	0.38	0.38	0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	343	772		166	802	682	222	706	600	313	492	
v/s Ratio Prot	0.01	c0.42		c0.02	0.24		c0.04	0.11			0.20	
v/s Ratio Perm	0.07			0.23		0.06	0.21		0.01	c0.23		
v/c Ratio	0.17	0.98		0.53	0.57	0.14	0.67	0.30	0.04	0.85	0.77	
Uniform Delay, d1	13.7	24.9		19.5	19.2	15.4	20.8	19.4	17.5	30.6	29.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	26.5		3.2	1.0	0.1	7.7	1.1	0.1	23.6	11.0	
Delay (s)	14.0	51.4		22.7	20.2	15.5	28.6	20.5	17.6	54.3	40.8	
Level of Service	B	D		C	C	B	C	C	B	D	D	
Approach Delay (s)		48.7			19.2			22.9			46.3	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	199	334	26	27	14
Future Volume (Veh/h)	4	199	334	26	27	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	216	363	28	29	15
Pedestrians			18			
Lane Width (m)			3.7			
Walking Speed (m/s)			1.1			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	391				619	377
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				619	377
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				93	98
cM capacity (veh/h)	1168				443	670

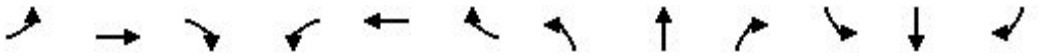
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	220	391	44
Volume Left	4	0	29
Volume Right	0	28	15
cSH	1168	1700	501
Volume to Capacity	0.00	0.23	0.09
Queue Length 95th (m)	0.1	0.0	2.2
Control Delay (s)	0.2	0.0	12.9
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	12.9
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	94	434	79	79	463
Future Volume (vph)	44	94	434	79	79	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1844		1789	1883
Flt Permitted	0.95	1.00	1.00		0.42	1.00
Satd. Flow (perm)	1789	1601	1844		800	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	102	472	86	86	503
RTOR Reduction (vph)	0	89	13	0	0	0
Lane Group Flow (vph)	48	13	545	0	86	503
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		3			6	
Actuated Green, G (s)	5.5	5.5	30.1		30.1	30.1
Effective Green, g (s)	5.5	5.5	30.1		30.1	30.1
Actuated g/C Ratio	0.12	0.12	0.67		0.67	0.67
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	220	197	1244		539	1270
v/s Ratio Prot	c0.03		c0.30			0.27
v/s Ratio Perm		0.01			0.11	
v/c Ratio	0.22	0.06	0.44		0.16	0.40
Uniform Delay, d1	17.6	17.3	3.3		2.6	3.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.1	1.1		0.6	0.9
Delay (s)	18.1	17.4	4.5		3.3	4.1
Level of Service	B	B	A		A	A
Approach Delay (s)	17.6		4.5			4.0
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	44.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

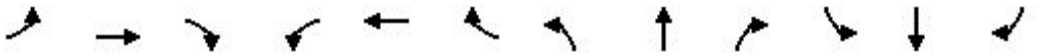
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	17	19	2	7	140	11	298	1	109	352	46
Future Volume (vph)	75	17	19	2	7	140	11	298	1	109	352	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1779			1644		1789	1883		1789	1883	1601
Flt Permitted		0.81			1.00		0.53	1.00		0.56	1.00	1.00
Satd. Flow (perm)		1493			1637		1007	1883		1062	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	18	21	2	8	152	12	324	1	118	383	50
RTOR Reduction (vph)	0	17	0	0	123	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	104	0	0	39	0	12	325	0	118	383	28
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		7.0			7.0		21.1	21.1		21.1	21.1	21.1
Effective Green, g (s)		7.0			7.0		21.1	21.1		21.1	21.1	21.1
Actuated g/C Ratio		0.19			0.19		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		281			308		572	1070		603	1070	910
v/s Ratio Prot								0.17			c0.20	
v/s Ratio Perm		c0.07			0.02		0.01			0.11		0.02
v/c Ratio		0.37			0.13		0.02	0.30		0.20	0.36	0.03
Uniform Delay, d1		13.1			12.5		3.5	4.2		3.9	4.3	3.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.2		0.1	0.7		0.7	0.9	0.1
Delay (s)		14.0			12.7		3.6	4.9		4.6	5.3	3.6
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		14.0			12.7			4.9			5.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	37.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

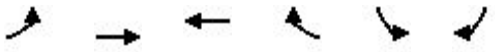
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	440	142	56	398	223	197	228	94	200	155	37
Future Volume (vph)	78	440	142	56	398	223	197	228	94	200	155	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1815		1789	1883	1601	1789	1883	1601	1789	1829	
Flt Permitted	0.31	1.00		0.14	1.00	1.00	0.45	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	577	1815		269	1883	1601	847	1883	1601	1140	1829	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	478	154	61	433	242	214	248	102	217	168	40
RTOR Reduction (vph)	0	15	0	0	0	154	0	0	61	0	11	0
Lane Group Flow (vph)	85	617	0	61	433	88	214	248	41	217	197	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	32.5	28.3		31.9	28.0	28.0	31.3	31.3	31.3	21.2	21.2	
Effective Green, g (s)	32.5	28.3		31.9	28.0	28.0	31.3	31.3	31.3	21.2	21.2	
Actuated g/C Ratio	0.42	0.37		0.41	0.36	0.36	0.41	0.41	0.41	0.28	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	309	667		188	684	582	412	765	650	313	503	
v/s Ratio Prot	0.01	c0.34		c0.02	0.23		c0.04	0.13			0.11	
v/s Ratio Perm	0.10			0.12		0.05	0.17		0.03	c0.19		
v/c Ratio	0.28	0.93		0.32	0.63	0.15	0.52	0.32	0.06	0.69	0.39	
Uniform Delay, d1	14.4	23.3		16.9	20.3	16.5	16.4	15.6	13.9	25.0	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	18.8		1.0	1.9	0.1	1.1	1.1	0.2	12.0	2.3	
Delay (s)	14.9	42.1		17.9	22.2	16.6	17.5	16.7	14.1	37.0	25.0	
Level of Service	B	D		B	C	B	B	B	B	D	C	
Approach Delay (s)		38.9			20.0			16.5			31.1	
Approach LOS		D			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	324	267	28	27	7
Future Volume (Veh/h)	10	324	267	28	27	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	352	290	30	29	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	320				679	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320				679	305
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				93	99
cM capacity (veh/h)	1240				413	735

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	363	320	37
Volume Left	11	0	29
Volume Right	0	30	8
cSH	1240	1700	457
Volume to Capacity	0.01	0.19	0.08
Queue Length 95th (m)	0.2	0.0	2.0
Control Delay (s)	0.3	0.0	13.6
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	13.6
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	41	86	495	39	123	606
Future Volume (vph)	41	86	495	39	123	606
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1865		1789	1883
Flt Permitted	0.95	1.00	1.00		0.42	1.00
Satd. Flow (perm)	1789	1601	1865		795	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	93	538	42	134	659
RTOR Reduction (vph)	0	85	5	0	0	0
Lane Group Flow (vph)	45	8	575	0	134	659
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		3			6	
Actuated Green, G (s)	4.0	4.0	31.4		31.4	31.4
Effective Green, g (s)	4.0	4.0	31.4		31.4	31.4
Actuated g/C Ratio	0.09	0.09	0.71		0.71	0.71
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	161	144	1318		562	1331
v/s Ratio Prot	c0.03		0.31			c0.35
v/s Ratio Perm		0.01			0.17	
v/c Ratio	0.28	0.06	0.44		0.24	0.50
Uniform Delay, d1	18.9	18.5	2.8		2.3	2.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.2	1.1		1.0	1.3
Delay (s)	19.8	18.6	3.8		3.3	4.2
Level of Service	B	B	A		A	A
Approach Delay (s)	19.0		3.8			4.1
Approach LOS	B		A			A

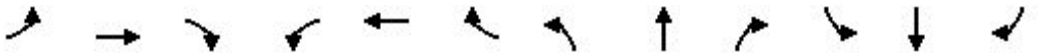
Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	7	7	4	7	106	15	364	8	132	421	94
Future Volume (vph)	64	7	7	4	7	106	15	364	8	132	421	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.99			0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787			1651		1789	1877		1789	1883	1601
Flt Permitted		0.88			0.98		0.49	1.00		0.52	1.00	1.00
Satd. Flow (perm)		1634			1627		928	1877		987	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	8	8	4	8	115	16	396	9	143	458	102
RTOR Reduction (vph)	0	7	0	0	99	0	0	1	0	0	0	33
Lane Group Flow (vph)	0	79	0	0	28	0	16	404	0	143	458	69
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		5.1			5.1		23.4	23.4		23.4	23.4	23.4
Effective Green, g (s)		5.1			5.1		23.4	23.4		23.4	23.4	23.4
Actuated g/C Ratio		0.14			0.14		0.62	0.62		0.62	0.62	0.62
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		222			221		579	1171		615	1174	999
v/s Ratio Prot								0.22			c0.24	
v/s Ratio Perm		c0.05			0.02		0.02			0.14		0.04
v/c Ratio		0.36			0.13		0.03	0.34		0.23	0.39	0.07
Uniform Delay, d1		14.7			14.2		2.7	3.4		3.1	3.5	2.8
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0			0.3		0.1	0.8		0.9	1.0	0.1
Delay (s)		15.7			14.5		2.8	4.2		4.0	4.5	2.9
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		15.7			14.5			4.1			4.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

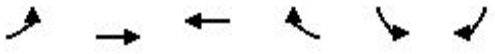
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	527	179	81	424	205	137	195	56	244	310	43
Future Volume (vph)	54	527	179	81	424	205	137	195	56	244	310	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1812		1789	1883	1601	1789	1883	1601	1789	1849	
Flt Permitted	0.33	1.00		0.11	1.00	1.00	0.20	1.00	1.00	0.63	1.00	
Satd. Flow (perm)	615	1812		200	1883	1601	376	1883	1601	1178	1849	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	573	195	88	461	223	149	212	61	265	337	47
RTOR Reduction (vph)	0	14	0	0	0	128	0	0	38	0	6	0
Lane Group Flow (vph)	59	754	0	88	461	95	149	212	23	265	378	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	41.6	37.6		41.6	37.6	37.6	33.1	33.1	33.1	23.5	23.5	
Effective Green, g (s)	41.6	37.6		41.6	37.6	37.6	33.1	33.1	33.1	23.5	23.5	
Actuated g/C Ratio	0.47	0.43		0.47	0.43	0.43	0.38	0.38	0.38	0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	343	772		166	802	682	222	706	600	313	492	
v/s Ratio Prot	0.01	c0.42		c0.02	0.24		c0.04	0.11			0.20	
v/s Ratio Perm	0.07			0.23		0.06	0.21		0.01	c0.23		
v/c Ratio	0.17	0.98		0.53	0.57	0.14	0.67	0.30	0.04	0.85	0.77	
Uniform Delay, d1	13.7	24.9		19.5	19.2	15.4	20.8	19.4	17.5	30.6	29.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	26.5		3.2	1.0	0.1	7.7	1.1	0.1	23.6	11.0	
Delay (s)	14.0	51.4		22.7	20.2	15.5	28.6	20.5	17.6	54.3	40.8	
Level of Service	B	D		C	C	B	C	C	B	D	D	
Approach Delay (s)		48.7			19.2			22.9			46.3	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	220	368	26	27	14
Future Volume (Veh/h)	4	220	368	26	27	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	239	400	28	29	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	428				661	414
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	428				661	414
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				93	98
cM capacity (veh/h)	1131				426	638

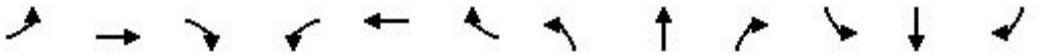
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	243	428	44
Volume Left	4	0	29
Volume Right	0	28	15
cSH	1131	1700	480
Volume to Capacity	0.00	0.25	0.09
Queue Length 95th (m)	0.1	0.0	2.3
Control Delay (s)	0.2	0.0	13.2
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	13.2
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	48	104	470	87	87	505
Future Volume (vph)	48	104	470	87	87	505
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1844		1789	1883
Flt Permitted	0.95	1.00	1.00		0.40	1.00
Satd. Flow (perm)	1789	1601	1844		746	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	113	511	95	95	549
RTOR Reduction (vph)	0	100	14	0	0	0
Lane Group Flow (vph)	52	13	592	0	95	549
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		3			6	
Actuated Green, G (s)	5.3	5.3	30.6		30.6	30.6
Effective Green, g (s)	5.3	5.3	30.6		30.6	30.6
Actuated g/C Ratio	0.12	0.12	0.68		0.68	0.68
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	211	188	1256		508	1283
v/s Ratio Prot	c0.03		c0.32			0.29
v/s Ratio Perm		0.01			0.13	
v/c Ratio	0.25	0.07	0.47		0.19	0.43
Uniform Delay, d1	18.0	17.6	3.4		2.6	3.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.2	1.3		0.8	1.0
Delay (s)	18.6	17.8	4.6		3.4	4.3
Level of Service	B	B	A		A	A
Approach Delay (s)	18.0		4.6			4.1
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

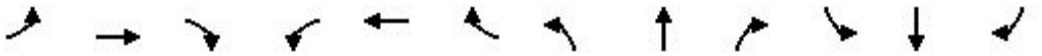
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	17	19	3	7	154	11	328	1	120	387	46
Future Volume (vph)	75	17	19	3	7	154	11	328	1	120	387	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1779			1644		1789	1883		1789	1883	1601
Flt Permitted		0.79			0.99		0.51	1.00		0.55	1.00	1.00
Satd. Flow (perm)		1455			1634		955	1883		1031	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	18	21	3	8	167	12	357	1	130	421	50
RTOR Reduction (vph)	0	17	0	0	135	0	0	0	0	0	0	20
Lane Group Flow (vph)	0	104	0	0	43	0	12	358	0	130	421	30
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		7.0			7.0		20.9	20.9		20.9	20.9	20.9
Effective Green, g (s)		7.0			7.0		20.9	20.9		20.9	20.9	20.9
Actuated g/C Ratio		0.19			0.19		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		276			309		540	1066		583	1066	906
v/s Ratio Prot								0.19			c0.22	
v/s Ratio Perm		c0.07			0.03		0.01			0.13		0.02
v/c Ratio		0.38			0.14		0.02	0.34		0.22	0.39	0.03
Uniform Delay, d1		13.0			12.4		3.5	4.3		4.0	4.5	3.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9			0.2		0.1	0.9		0.9	1.1	0.1
Delay (s)		13.9			12.6		3.6	5.1		4.9	5.6	3.6
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		13.9			12.6			5.1			5.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	36.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

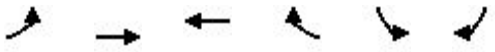
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	483	155	62	438	246	217	251	104	221	172	40
Future Volume (vph)	86	483	155	62	438	246	217	251	104	221	172	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1815		1789	1883	1601	1789	1883	1601	1789	1831	
Flt Permitted	0.27	1.00		0.12	1.00	1.00	0.43	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	510	1815		224	1883	1601	805	1883	1601	1114	1831	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	525	168	67	476	267	236	273	113	240	187	43
RTOR Reduction (vph)	0	13	0	0	0	164	0	0	67	0	9	0
Lane Group Flow (vph)	93	680	0	67	476	103	236	273	46	240	221	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	38.9	34.3		37.5	33.6	33.6	35.3	35.3	35.3	25.2	25.2	
Effective Green, g (s)	38.9	34.3		37.5	33.6	33.6	35.3	35.3	35.3	25.2	25.2	
Actuated g/C Ratio	0.45	0.39		0.43	0.39	0.39	0.41	0.41	0.41	0.29	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	295	715		166	727	618	389	764	649	322	530	
v/s Ratio Prot	0.02	c0.37		c0.02	0.25		c0.04	0.14			0.12	
v/s Ratio Perm	0.12			0.16		0.06	0.21		0.03	c0.22		
v/c Ratio	0.32	0.95		0.40	0.65	0.17	0.61	0.36	0.07	0.75	0.42	
Uniform Delay, d1	15.5	25.5		19.3	21.9	17.5	20.4	18.0	15.8	28.0	25.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	22.3		1.6	2.1	0.1	2.7	1.3	0.2	14.5	2.4	
Delay (s)	16.2	47.8		20.9	24.1	17.6	23.0	19.3	16.0	42.5	27.4	
Level of Service	B	D		C	C	B	C	B	B	D	C	
Approach Delay (s)		44.1			21.7			20.1			35.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	357	295	28	27	7
Future Volume (Veh/h)	10	357	295	28	27	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	388	321	30	29	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	351				746	336
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	351				746	336
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				92	99
cM capacity (veh/h)	1208				378	706

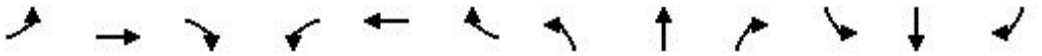
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	399	351	37
Volume Left	11	0	29
Volume Right	0	30	8
cSH	1208	1700	420
Volume to Capacity	0.01	0.21	0.09
Queue Length 95th (m)	0.2	0.0	2.2
Control Delay (s)	0.3	0.0	14.4
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	14.4
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	95	539	43	136	658
Future Volume (vph)	44	95	539	43	136	658
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1865		1789	1883
Flt Permitted	0.95	1.00	1.00		0.38	1.00
Satd. Flow (perm)	1789	1601	1865		724	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	103	586	47	148	715
RTOR Reduction (vph)	0	92	6	0	0	0
Lane Group Flow (vph)	48	11	627	0	148	715
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		3			6	
Actuated Green, G (s)	4.8	4.8	31.7		31.7	31.7
Effective Green, g (s)	4.8	4.8	31.7		31.7	31.7
Actuated g/C Ratio	0.11	0.11	0.70		0.70	0.70
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	188	168	1299		504	1311
v/s Ratio Prot	c0.03		0.34			c0.38
v/s Ratio Perm		0.01			0.20	
v/c Ratio	0.26	0.06	0.48		0.29	0.55
Uniform Delay, d1	18.7	18.3	3.2		2.6	3.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.2	1.3		1.5	1.6
Delay (s)	19.4	18.5	4.4		4.1	5.0
Level of Service	B	B	A		A	A
Approach Delay (s)	18.8		4.4			4.9
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	45.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

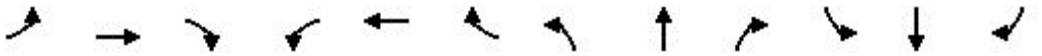
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	7	7	4	7	117	15	400	8	145	463	94
Future Volume (vph)	64	7	7	4	7	117	15	400	8	145	463	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.99			0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787			1649		1789	1878		1789	1883	1601
Flt Permitted		0.83			0.99		0.45	1.00		0.49	1.00	1.00
Satd. Flow (perm)		1549			1632		842	1878		929	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	8	8	4	8	127	16	435	9	158	503	102
RTOR Reduction (vph)	0	7	0	0	105	0	0	1	0	0	0	33
Lane Group Flow (vph)	0	79	0	0	34	0	16	443	0	158	503	69
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		6.4			6.4		22.1	22.1		22.1	22.1	22.1
Effective Green, g (s)		6.4			6.4		22.1	22.1		22.1	22.1	22.1
Actuated g/C Ratio		0.17			0.17		0.59	0.59		0.59	0.59	0.59
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		264			278		496	1106		547	1109	943
v/s Ratio Prot								0.24			c0.27	
v/s Ratio Perm		c0.05			0.02		0.02			0.17		0.04
v/c Ratio		0.30			0.12		0.03	0.40		0.29	0.45	0.07
Uniform Delay, d1		13.6			13.2		3.2	4.1		3.8	4.3	3.3
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.6			0.2		0.1	1.1		1.3	1.3	0.2
Delay (s)		14.2			13.4		3.3	5.2		5.1	5.7	3.5
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		14.2			13.4			5.2			5.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

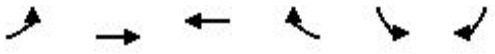
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	580	196	89	466	227	150	216	62	269	342	47
Future Volume (vph)	59	580	196	89	466	227	150	216	62	269	342	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1812		1789	1883	1601	1789	1883	1601	1789	1849	
Flt Permitted	0.29	1.00		0.09	1.00	1.00	0.15	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	553	1812		170	1883	1601	288	1883	1601	1153	1849	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	630	213	97	507	247	163	235	67	292	372	51
RTOR Reduction (vph)	0	12	0	0	0	136	0	0	42	0	5	0
Lane Group Flow (vph)	64	831	0	97	507	111	163	235	25	292	418	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	48.8	44.6		48.4	44.4	44.4	37.0	37.0	37.0	27.0	27.0	
Effective Green, g (s)	48.8	44.6		48.4	44.4	44.4	37.0	37.0	37.0	27.0	27.0	
Actuated g/C Ratio	0.49	0.45		0.49	0.45	0.45	0.37	0.37	0.37	0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	324	815		148	843	717	190	703	597	314	503	
v/s Ratio Prot	0.01	c0.46		c0.03	0.27		c0.05	0.12			0.23	
v/s Ratio Perm	0.09			0.29		0.07	c0.27		0.02	0.25		
v/c Ratio	0.20	1.02		0.66	0.60	0.15	0.86	0.33	0.04	0.93	0.83	
Uniform Delay, d1	14.8	27.2		22.4	20.7	16.2	26.3	22.2	19.8	35.1	33.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	36.5		10.0	1.2	0.1	29.7	1.3	0.1	35.7	14.7	
Delay (s)	15.1	63.8		32.4	21.9	16.3	56.0	23.5	19.9	70.8	48.6	
Level of Service	B	E		C	C	B	E	C	B	E	D	
Approach Delay (s)		60.3			21.5			34.4			57.7	
Approach LOS		E			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	44.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	220	368	26	27	14
Future Volume (Veh/h)	4	220	368	26	27	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	239	400	28	29	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	428				661	414
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	428				661	414
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				93	98
cM capacity (veh/h)	1131				426	638

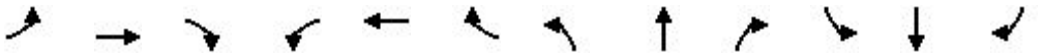
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	243	428	44
Volume Left	4	0	29
Volume Right	0	28	15
cSH	1131	1700	480
Volume to Capacity	0.00	0.25	0.09
Queue Length 95th (m)	0.1	0.0	2.3
Control Delay (s)	0.2	0.0	13.2
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	13.2
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	48	104	470	87	87	505
Future Volume (vph)	48	104	470	87	87	505
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1844		1789	1883
Flt Permitted	0.95	1.00	1.00		0.40	1.00
Satd. Flow (perm)	1789	1601	1844		746	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	113	511	95	95	549
RTOR Reduction (vph)	0	100	14	0	0	0
Lane Group Flow (vph)	52	13	592	0	95	549
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		3			6	
Actuated Green, G (s)	5.3	5.3	30.6		30.6	30.6
Effective Green, g (s)	5.3	5.3	30.6		30.6	30.6
Actuated g/C Ratio	0.12	0.12	0.68		0.68	0.68
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	211	188	1256		508	1283
v/s Ratio Prot	c0.03		c0.32			0.29
v/s Ratio Perm		0.01			0.13	
v/c Ratio	0.25	0.07	0.47		0.19	0.43
Uniform Delay, d1	18.0	17.6	3.4		2.6	3.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.2	1.3		0.8	1.0
Delay (s)	18.6	17.8	4.6		3.4	4.3
Level of Service	B	B	A		A	A
Approach Delay (s)	18.0		4.6			4.1
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	17	19	3	7	154	11	328	1	120	387	46
Future Volume (vph)	75	17	19	3	7	154	11	328	1	120	387	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1779			1644		1789	1883		1789	1883	1601
Flt Permitted		0.79			0.99		0.51	1.00		0.55	1.00	1.00
Satd. Flow (perm)		1455			1634		955	1883		1031	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	18	21	3	8	167	12	357	1	130	421	50
RTOR Reduction (vph)	0	17	0	0	135	0	0	0	0	0	0	20
Lane Group Flow (vph)	0	104	0	0	43	0	12	358	0	130	421	30
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		7.0			7.0		20.9	20.9		20.9	20.9	20.9
Effective Green, g (s)		7.0			7.0		20.9	20.9		20.9	20.9	20.9
Actuated g/C Ratio		0.19			0.19		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		276			309		540	1066		583	1066	906
v/s Ratio Prot								0.19			c0.22	
v/s Ratio Perm		c0.07			0.03		0.01			0.13		0.02
v/c Ratio		0.38			0.14		0.02	0.34		0.22	0.39	0.03
Uniform Delay, d1		13.0			12.4		3.5	4.3		4.0	4.5	3.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9			0.2		0.1	0.9		0.9	1.1	0.1
Delay (s)		13.9			12.6		3.6	5.1		4.9	5.6	3.6
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		13.9			12.6			5.1			5.2	
Approach LOS		B			B			A			A	

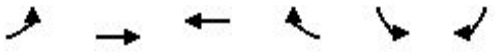
Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	36.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	483	155	62	438	246	217	251	104	221	172	40
Future Volume (vph)	86	483	155	62	438	246	217	251	104	221	172	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1883	1601	1789	1883	1601	1789	1883	1601	1789	1831	
Flt Permitted	0.20	1.00	1.00	0.18	1.00	1.00	0.45	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	375	1883	1601	335	1883	1601	843	1883	1601	1114	1831	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	525	168	67	476	267	236	273	113	240	187	43
RTOR Reduction (vph)	0	0	116	0	0	184	0	0	62	0	11	0
Lane Group Flow (vph)	93	525	52	67	476	83	236	273	51	240	219	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	26.3	22.5	22.5	26.3	22.5	22.5	32.4	32.4	32.4	22.3	22.3	
Effective Green, g (s)	26.3	22.5	22.5	26.3	22.5	22.5	32.4	32.4	32.4	22.3	22.3	
Actuated g/C Ratio	0.36	0.31	0.31	0.36	0.31	0.31	0.45	0.45	0.45	0.31	0.31	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	586	498	198	586	498	451	845	718	344	565	
v/s Ratio Prot	c0.02	c0.28		0.02	0.25		c0.04	0.14			0.12	
v/s Ratio Perm	0.14		0.03	0.11		0.05	0.19		0.03	c0.22		
v/c Ratio	0.44	0.90	0.11	0.34	0.81	0.17	0.52	0.32	0.07	0.70	0.39	
Uniform Delay, d1	16.8	23.7	17.7	17.0	22.9	18.0	13.5	12.8	11.3	22.0	19.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.5	16.2	0.1	1.0	8.4	0.2	1.1	1.0	0.2	11.2	2.0	
Delay (s)	18.2	39.9	17.8	18.1	31.3	18.2	14.6	13.8	11.5	33.1	21.6	
Level of Service	B	D	B	B	C	B	B	B	B	C	C	
Approach Delay (s)		32.6			25.9			13.7			27.5	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	72.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	357	295	28	27	7
Future Volume (Veh/h)	10	357	295	28	27	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	388	321	30	29	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	351				746	336
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	351				746	336
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				92	99
cM capacity (veh/h)	1208				378	706

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	399	351	37
Volume Left	11	0	29
Volume Right	0	30	8
cSH	1208	1700	420
Volume to Capacity	0.01	0.21	0.09
Queue Length 95th (m)	0.2	0.0	2.2
Control Delay (s)	0.3	0.0	14.4
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	14.4
Approach LOS			B

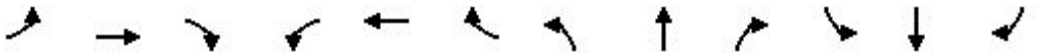
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	95	539	43	136	658
Future Volume (vph)	44	95	539	43	136	658
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			4.5
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	0.99			1.00
Flt Protected	0.95	1.00	1.00			0.99
Satd. Flow (prot)	1789	1601	3539			3548
Flt Permitted	0.95	1.00	1.00			0.76
Satd. Flow (perm)	1789	1601	3539			2717
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	103	586	47	148	715
RTOR Reduction (vph)	0	93	7	0	0	0
Lane Group Flow (vph)	48	10	626	0	0	863
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	4.3	4.3	29.2			29.2
Effective Green, g (s)	4.3	4.3	29.2			29.2
Actuated g/C Ratio	0.10	0.10	0.69			0.69
Clearance Time (s)	4.5	4.5	4.5			4.5
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	181	161	2431			1866
v/s Ratio Prot	c0.03		0.18			
v/s Ratio Perm		0.01				c0.32
v/c Ratio	0.27	0.06	0.26			0.46
Uniform Delay, d1	17.6	17.3	2.5			3.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.8	0.2	0.3			0.8
Delay (s)	18.4	17.5	2.8			3.9
Level of Service	B	B	A			A
Approach Delay (s)	17.8		2.8			3.9
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

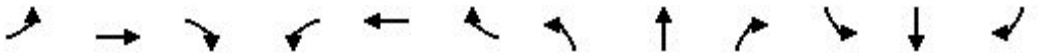
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	7	7	4	7	117	15	400	8	145	463	94
Future Volume (vph)	64	7	7	4	7	117	15	400	8	145	463	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			0.88			1.00			0.98	
Flt Protected		0.96			1.00			1.00			0.99	
Satd. Flow (prot)		1787			1649			3562			3471	
Flt Permitted		0.83			0.99			0.93			0.77	
Satd. Flow (perm)		1549			1632			3308			2715	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	8	8	4	8	127	16	435	9	158	503	102
RTOR Reduction (vph)	0	7	0	0	105	0	0	2	0	0	18	0
Lane Group Flow (vph)	0	79	0	0	34	0	0	458	0	0	745	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.4			6.4			22.1			22.1	
Effective Green, g (s)		6.4			6.4			22.1			22.1	
Actuated g/C Ratio		0.17			0.17			0.59			0.59	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		264			278			1949			1600	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.02			0.14			c0.27	
v/c Ratio		0.30			0.12			0.23			0.47	
Uniform Delay, d1		13.6			13.2			3.7			4.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.6			0.2			0.3			1.0	
Delay (s)		14.2			13.4			4.0			5.3	
Level of Service		B			B			A			A	
Approach Delay (s)		14.2			13.4			4.0			5.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	483	155	89	466	227	150	216	62	269	342	47
Future Volume (vph)	86	483	155	89	466	227	150	216	62	269	342	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1815		1789	1883	1601	1789	1883	1601	1789	1849	
Flt Permitted	0.24	1.00		0.12	1.00	1.00	0.21	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	457	1815		221	1883	1601	392	1883	1601	1153	1849	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	525	168	97	507	247	163	235	67	292	372	51
RTOR Reduction (vph)	0	13	0	0	0	152	0	0	39	0	6	0
Lane Group Flow (vph)	93	680	0	97	507	95	163	235	28	292	417	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	37.9	34.0		38.1	34.1	34.1	36.9	36.9	36.9	27.1	27.1	
Effective Green, g (s)	37.9	34.0		38.1	34.1	34.1	36.9	36.9	36.9	27.1	27.1	
Actuated g/C Ratio	0.43	0.38		0.43	0.39	0.39	0.42	0.42	0.42	0.31	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	254	698		166	726	617	247	786	668	353	566	
v/s Ratio Prot	0.02	c0.37		c0.03	0.27		c0.04	0.12			0.23	
v/s Ratio Perm	0.14			0.23		0.06	0.24		0.02	c0.25		
v/c Ratio	0.37	0.97		0.58	0.70	0.15	0.66	0.30	0.04	0.83	0.74	
Uniform Delay, d1	17.0	26.8		20.4	22.8	17.7	18.9	17.1	15.3	28.5	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	27.5		5.2	2.9	0.1	6.2	1.0	0.1	19.5	8.3	
Delay (s)	17.9	54.3		25.6	25.8	17.9	25.2	18.1	15.4	48.0	35.8	
Level of Service	B	D		C	C	B	C	B	B	D	D	
Approach Delay (s)		50.0			23.4			20.2			40.8	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked						
vC, conflicting volume	0	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	1023	1084	1622			

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

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

Poplar SR & High Street - 2030BG, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.17	1.97	0.2	0.5	A
2 - Poplar Sideroad	0.14	2.54	0.2	0.5	A
3 - Poplar Sideroad	0.29	2.45	0.4	1.5	A

Poplar SR & High Street - 2030BG, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.19	1.97	0.2	0.5	A
2 - Poplar Sideroad	0.22	2.86	0.3	1.2	A
3 - Poplar Sideroad	0.30	2.46	0.4	1.6	A

Poplar SR & High Street - 2035BG, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.19	2.04	0.2	0.5	A
2 - Poplar Sideroad	0.15	2.62	0.2	0.5	A
3 - Poplar Sideroad	0.32	2.56	0.5	1.9	A

Poplar SR & High Street - 2035BG, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.21	2.04	0.3	0.8	A
2 - Poplar Sideroad	0.24	3.01	0.3	1.3	A
3 - Poplar Sideroad	0.32	2.56	0.5	2.0	A

Poplar SR & High Street - 2040BG, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.21	2.12	0.3	0.8	A
2 - Poplar Sideroad	0.17	2.72	0.2	0.5	A
3 - Poplar Sideroad	0.35	2.69	0.5	2.1	A

Poplar SR & High Street - 2040BG, PM

Data Errors and Warnings

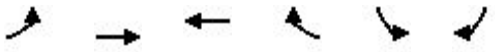
Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.23	2.12	0.3	1.2	A
2 - Poplar Sideroad	0.27	3.19	0.4	1.2	A
3 - Poplar Sideroad	0.36	2.69	0.6	2.1	A

Appendix F:
Future Total Traffic Operations



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	182	305	23	24	16
Future Volume (Veh/h)	5	182	305	23	24	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	198	332	25	26	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	357				552	344
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	357				552	344
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	98
cM capacity (veh/h)	1202				492	698

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	203	357	43
Volume Left	5	0	26
Volume Right	0	25	17
cSH	1202	1700	557
Volume to Capacity	0.00	0.21	0.08
Queue Length 95th (m)	0.1	0.0	1.9
Control Delay (s)	0.2	0.0	12.0
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	12.0
Approach LOS			B

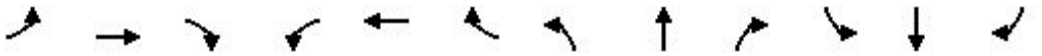
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	42	85	424	77	71	435
Future Volume (vph)	42	85	424	77	71	435
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	46	92	461	84	77	473

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	138	545	77	473
Volume Left (vph)	46	0	77	0
Volume Right (vph)	92	84	0	0
Hadj (s)	-0.30	-0.06	0.53	0.03
Departure Headway (s)	6.1	5.1	6.0	5.5
Degree Utilization, x	0.24	0.77	0.13	0.73
Capacity (veh/h)	536	692	581	633
Control Delay (s)	11.0	23.1	8.7	20.7
Approach Delay (s)	11.0	23.1	19.0	
Approach LOS	B	C	C	

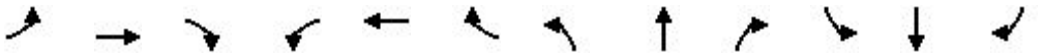
Intersection Summary			
Delay	19.9		
Level of Service	C		
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	17	17	3	7	127	10	306	3	99	337	41
Future Volume (vph)	68	17	17	3	7	127	10	306	3	99	337	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1782			1646		1789	1881		1789	1883	1601
Flt Permitted		0.83			0.99		0.54	1.00		0.56	1.00	1.00
Satd. Flow (perm)		1521			1634		1023	1881		1052	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	18	18	3	8	138	11	333	3	108	366	45
RTOR Reduction (vph)	0	15	0	0	113	0	0	0	0	0	0	19
Lane Group Flow (vph)	0	95	0	0	36	0	11	336	0	108	366	26
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		6.8			6.8		21.4	21.4		21.4	21.4	21.4
Effective Green, g (s)		6.8			6.8		21.4	21.4		21.4	21.4	21.4
Actuated g/C Ratio		0.18			0.18		0.58	0.58		0.58	0.58	0.58
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		278			298		588	1082		605	1083	921
v/s Ratio Prot								0.18			c0.19	
v/s Ratio Perm		c0.06			0.02		0.01			0.10		0.02
v/c Ratio		0.34			0.12		0.02	0.31		0.18	0.34	0.03
Uniform Delay, d1		13.3			12.7		3.4	4.1		3.7	4.2	3.4
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.7			0.2		0.1	0.7		0.6	0.8	0.1
Delay (s)		14.0			12.9		3.5	4.8		4.4	5.0	3.5
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		14.0			12.9			4.8			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	37.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	408	134	51	364	202	181	206	86	181	141	34
Future Volume (vph)	71	408	134	51	364	202	181	206	86	181	141	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1813		1789	1883	1601	1789	1883	1601	1789	1828	
Flt Permitted	0.31	1.00		0.17	1.00	1.00	0.48	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	591	1813		319	1883	1601	898	1883	1601	1165	1828	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	443	146	55	396	220	197	224	93	197	153	37
RTOR Reduction (vph)	0	16	0	0	0	146	0	0	54	0	12	0
Lane Group Flow (vph)	77	573	0	55	396	74	197	224	39	197	178	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	29.2	25.0		26.4	23.6	23.6	29.3	29.3	29.3	19.4	19.4	
Effective Green, g (s)	29.2	25.0		26.4	23.6	23.6	29.3	29.3	29.3	19.4	19.4	
Actuated g/C Ratio	0.41	0.35		0.37	0.33	0.33	0.42	0.42	0.42	0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	315	641		177	629	535	440	781	664	320	502	
v/s Ratio Prot	c0.01	c0.32		0.01	0.21		c0.03	0.12			0.10	
v/s Ratio Perm	0.09			0.10		0.05	0.15		0.02	c0.17		
v/c Ratio	0.24	0.89		0.31	0.63	0.14	0.45	0.29	0.06	0.62	0.36	
Uniform Delay, d1	13.5	21.5		16.3	19.8	16.4	13.9	13.7	12.4	22.3	20.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	14.8		1.0	2.0	0.1	0.7	0.9	0.2	8.6	2.0	
Delay (s)	13.9	36.4		17.3	21.8	16.5	14.6	14.6	12.5	30.9	22.5	
Level of Service	B	D		B	C	B	B	B	B	C	C	
Approach Delay (s)		33.8			19.7			14.2			26.8	
Approach LOS		C			B			B			C	

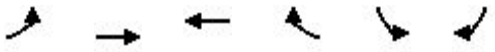
Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	18	10	282	340	18
Future Volume (Veh/h)	37	18	10	282	340	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	20	11	307	370	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked						
vC, conflicting volume	709	380	390			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	709	380	390			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	97	99			
cM capacity (veh/h)	397	667	1169			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	60	318	390
Volume Left	40	11	0
Volume Right	20	0	20
cSH	459	1169	1700
Volume to Capacity	0.13	0.01	0.23
Queue Length 95th (m)	3.4	0.2	0.0
Control Delay (s)	14.0	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	14.0	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	296	244	25	25	8
Future Volume (Veh/h)	13	296	244	25	25	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	322	265	27	27	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	292				628	278
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	292				628	278
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	99
cM capacity (veh/h)	1270				442	760

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	336	292	36
Volume Left	14	0	27
Volume Right	0	27	9
cSH	1270	1700	493
Volume to Capacity	0.01	0.17	0.07
Queue Length 95th (m)	0.3	0.0	1.8
Control Delay (s)	0.4	0.0	12.9
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	12.9
Approach LOS			B

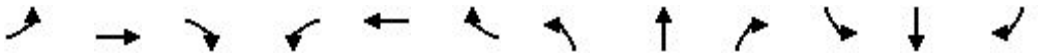
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	42	78	473	39	111	581
Future Volume (vph)	42	78	473	39	111	581
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	46	85	514	42	121	632

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	131	556	121	632
Volume Left (vph)	46	0	121	0
Volume Right (vph)	85	42	0	0
Hadj (s)	-0.29	-0.01	0.53	0.03
Departure Headway (s)	6.5	5.4	6.1	5.6
Degree Utilization, x	0.24	0.83	0.20	0.98
Capacity (veh/h)	533	663	582	632
Control Delay (s)	11.6	28.6	9.4	52.7
Approach Delay (s)	11.6	28.6	45.8	
Approach LOS	B	D	E	

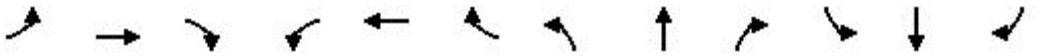
Intersection Summary			
Delay	36.0		
Level of Service	E		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	7	6	6	7	96	14	358	9	120	418	85
Future Volume (vph)	58	7	6	6	7	96	14	358	9	120	418	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.99			0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1788			1656		1789	1876		1789	1883	1601
Flt Permitted		0.87			0.97		0.50	1.00		0.53	1.00	1.00
Satd. Flow (perm)		1624			1614		935	1876		993	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	8	7	7	8	104	15	389	10	130	454	92
RTOR Reduction (vph)	0	6	0	0	90	0	0	1	0	0	0	30
Lane Group Flow (vph)	0	72	0	0	29	0	15	398	0	130	454	62
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		5.0			5.0		23.7	23.7		23.7	23.7	23.7
Effective Green, g (s)		5.0			5.0		23.7	23.7		23.7	23.7	23.7
Actuated g/C Ratio		0.13			0.13		0.63	0.63		0.63	0.63	0.63
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		215			214		587	1179		624	1183	1006
v/s Ratio Prot								0.21			c0.24	
v/s Ratio Perm		c0.04			0.02		0.02			0.13		0.04
v/c Ratio		0.33			0.13		0.03	0.34		0.21	0.38	0.06
Uniform Delay, d1		14.8			14.4		2.6	3.3		3.0	3.4	2.7
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9			0.3		0.1	0.8		0.8	0.9	0.1
Delay (s)		15.8			14.7		2.7	4.1		3.7	4.4	2.8
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		15.8			14.7			4.0			4.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	37.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	484	166	73	394	186	130	177	51	221	280	40
Future Volume (vph)	49	484	166	73	394	186	130	177	51	221	280	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1811		1789	1883	1601	1789	1883	1601	1789	1848	
Flt Permitted	0.34	1.00		0.11	1.00	1.00	0.27	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	649	1811		215	1883	1601	505	1883	1601	1199	1848	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	526	180	79	428	202	141	192	55	240	304	43
RTOR Reduction (vph)	0	14	0	0	0	120	0	0	33	0	6	0
Lane Group Flow (vph)	53	692	0	79	428	82	141	192	22	240	341	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	38.8	35.0		39.0	35.1	35.1	34.3	34.3	34.3	24.4	24.4	
Effective Green, g (s)	38.8	35.0		39.0	35.1	35.1	34.3	34.3	34.3	24.4	24.4	
Actuated g/C Ratio	0.45	0.40		0.45	0.40	0.40	0.40	0.40	0.40	0.28	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	340	731		167	762	648	279	744	633	337	520	
v/s Ratio Prot	0.01	c0.38		c0.02	0.23		c0.03	0.10			0.18	
v/s Ratio Perm	0.06			0.19		0.05	0.17		0.01	c0.20		
v/c Ratio	0.16	0.95		0.47	0.56	0.13	0.51	0.26	0.03	0.71	0.66	
Uniform Delay, d1	14.4	25.0		18.9	19.9	16.2	18.7	17.6	16.1	28.0	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	21.1		2.1	1.0	0.1	1.4	0.8	0.1	12.1	6.3	
Delay (s)	14.7	46.1		21.0	20.8	16.3	20.1	18.5	16.2	40.1	33.8	
Level of Service	B	D		C	C	B	C	B	B	D	C	
Approach Delay (s)		43.9			19.5			18.7			36.4	
Approach LOS		D			B			B			D	

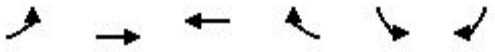
Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	14	18	352	392	38
Future Volume (Veh/h)	28	14	18	352	392	38
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	15	20	383	426	41
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked						
vC, conflicting volume	870	446	467			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	870	446	467			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	98	98			
cM capacity (veh/h)	316	612	1094			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	45	403	467
Volume Left	30	20	0
Volume Right	15	0	41
cSH	377	1094	1700
Volume to Capacity	0.12	0.02	0.27
Queue Length 95th (m)	3.1	0.4	0.0
Control Delay (s)	15.8	0.6	0.0
Lane LOS	C	A	
Approach Delay (s)	15.8	0.6	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	200	336	23	24	16
Future Volume (Veh/h)	5	200	336	23	24	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	217	365	25	26	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	390				604	378
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	390				604	378
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	97
cM capacity (veh/h)	1169				459	669

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	222	390	43
Volume Left	5	0	26
Volume Right	0	25	17
cSH	1169	1700	524
Volume to Capacity	0.00	0.23	0.08
Queue Length 95th (m)	0.1	0.0	2.0
Control Delay (s)	0.2	0.0	12.5
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	12.5
Approach LOS			B

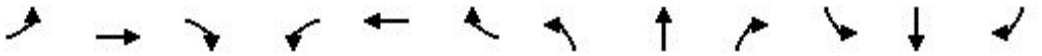
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	46	94	457	84	79	473
Future Volume (vph)	46	94	457	84	79	473
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1844		1789	1883
Flt Permitted	0.95	1.00	1.00		0.40	1.00
Satd. Flow (perm)	1789	1601	1844		759	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	102	497	91	86	514
RTOR Reduction (vph)	0	89	8	0	0	0
Lane Group Flow (vph)	50	13	580	0	86	514
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	5.7	5.7	29.5		29.5	29.5
Effective Green, g (s)	5.7	5.7	29.5		29.5	29.5
Actuated g/C Ratio	0.13	0.13	0.67		0.67	0.67
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	230	206	1230		506	1256
v/s Ratio Prot	c0.03		c0.31			0.27
v/s Ratio Perm		0.01			0.11	
v/c Ratio	0.22	0.06	0.47		0.17	0.41
Uniform Delay, d1	17.3	16.9	3.6		2.8	3.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.1	1.3		0.7	1.0
Delay (s)	17.7	17.0	4.9		3.5	4.4
Level of Service	B	B	A		A	A
Approach Delay (s)	17.3		4.9			4.2
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

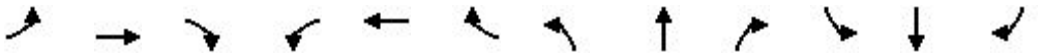
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	17	17	3	7	140	10	333	4	109	369	41
Future Volume (vph)	68	17	17	3	7	140	10	333	4	109	369	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1782			1645		1789	1880		1789	1883	1601
Flt Permitted		0.81			0.99		0.53	1.00		0.54	1.00	1.00
Satd. Flow (perm)		1499			1634		989	1880		1023	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	18	18	3	8	152	11	362	4	118	401	45
RTOR Reduction (vph)	0	15	0	0	124	0	0	0	0	0	0	19
Lane Group Flow (vph)	0	95	0	0	39	0	11	366	0	118	401	26
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		6.8			6.8		21.2	21.2		21.2	21.2	21.2
Effective Green, g (s)		6.8			6.8		21.2	21.2		21.2	21.2	21.2
Actuated g/C Ratio		0.18			0.18		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		275			300		566	1077		586	1078	917
v/s Ratio Prot								0.19			c0.21	
v/s Ratio Perm		c0.06			0.02		0.01			0.12		0.02
v/c Ratio		0.35			0.13		0.02	0.34		0.20	0.37	0.03
Uniform Delay, d1		13.2			12.6		3.4	4.2		3.8	4.3	3.4
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.2		0.1	0.9		0.8	1.0	0.1
Delay (s)		13.9			12.8		3.5	5.0		4.6	5.3	3.5
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		13.9			12.8			5.0			5.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	37.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	447	146	56	401	223	199	228	94	200	155	37
Future Volume (vph)	78	447	146	56	401	223	199	228	94	200	155	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1814		1789	1883	1601	1789	1883	1601	1789	1829	
Flt Permitted	0.31	1.00		0.14	1.00	1.00	0.45	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	575	1814		266	1883	1601	845	1883	1601	1140	1829	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	486	159	61	436	242	216	248	102	217	168	40
RTOR Reduction (vph)	0	15	0	0	0	153	0	0	61	0	11	0
Lane Group Flow (vph)	85	630	0	61	436	89	216	248	41	217	197	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	32.8	28.6		32.2	28.3	28.3	31.3	31.3	31.3	21.2	21.2	
Effective Green, g (s)	32.8	28.6		32.2	28.3	28.3	31.3	31.3	31.3	21.2	21.2	
Actuated g/C Ratio	0.42	0.37		0.42	0.37	0.37	0.40	0.40	0.40	0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	309	671		187	689	586	410	762	648	312	501	
v/s Ratio Prot	0.01	c0.35		c0.02	0.23		c0.04	0.13			0.11	
v/s Ratio Perm	0.10			0.12		0.06	0.17		0.03	c0.19		
v/c Ratio	0.28	0.94		0.33	0.63	0.15	0.53	0.33	0.06	0.70	0.39	
Uniform Delay, d1	14.4	23.5		17.0	20.2	16.4	16.6	15.8	14.0	25.2	22.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	20.8		1.0	1.9	0.1	1.2	1.1	0.2	12.1	2.3	
Delay (s)	14.9	44.3		18.1	22.1	16.6	17.8	16.9	14.2	37.3	25.1	
Level of Service	B	D		B	C	B	B	B	B	D	C	
Approach Delay (s)		40.9			20.0			16.8			31.3	
Approach LOS		D			B			B			C	

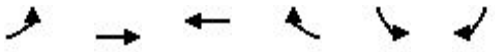
Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	18	10	309	372	18
Future Volume (Veh/h)	37	18	10	309	372	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	20	11	336	404	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked						
vC, conflicting volume	772	414	424			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	772	414	424			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	97	99			
cM capacity (veh/h)	364	638	1135			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	60	347	424
Volume Left	40	11	0
Volume Right	20	0	20
cSH	425	1135	1700
Volume to Capacity	0.14	0.01	0.25
Queue Length 95th (m)	3.7	0.2	0.0
Control Delay (s)	14.9	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	14.9	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	318	211	25	25	8
Future Volume (Veh/h)	13	318	211	25	25	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	346	229	27	27	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	256				616	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	256				616	242
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	99
cM capacity (veh/h)	1309				449	796

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	360	256	36
Volume Left	14	0	27
Volume Right	0	27	9
cSH	1309	1700	504
Volume to Capacity	0.01	0.15	0.07
Queue Length 95th (m)	0.2	0.0	1.7
Control Delay (s)	0.4	0.0	12.7
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	12.7
Approach LOS			B

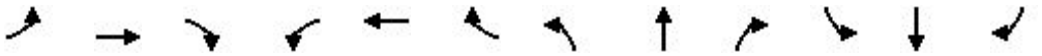
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	86	405	43	123	532
Future Volume (vph)	45	86	405	43	123	532
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1859		1789	1883
Flt Permitted	0.95	1.00	1.00		0.47	1.00
Satd. Flow (perm)	1789	1601	1859		887	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	93	440	47	134	578
RTOR Reduction (vph)	0	81	5	0	0	0
Lane Group Flow (vph)	49	12	482	0	134	578
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	5.6	5.6	29.8		29.8	29.8
Effective Green, g (s)	5.6	5.6	29.8		29.8	29.8
Actuated g/C Ratio	0.13	0.13	0.67		0.67	0.67
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	225	201	1247		595	1263
v/s Ratio Prot	c0.03		0.26			c0.31
v/s Ratio Perm		0.01			0.15	
v/c Ratio	0.22	0.06	0.39		0.23	0.46
Uniform Delay, d1	17.4	17.1	3.2		2.8	3.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.1	0.9		0.9	1.2
Delay (s)	17.9	17.2	4.1		3.7	4.7
Level of Service	B	B	A		A	A
Approach Delay (s)	17.4		4.1			4.5
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

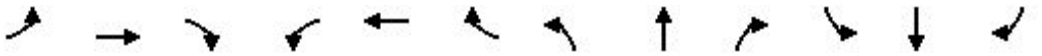
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	7	6	6	7	75	14	315	9	128	364	85
Future Volume (vph)	58	7	6	6	7	75	14	315	9	128	364	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.99			0.89		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1788			1662		1789	1875		1789	1883	1601
Flt Permitted		0.72			0.97		0.53	1.00		0.55	1.00	1.00
Satd. Flow (perm)		1345			1611		995	1875		1036	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	8	7	7	8	82	15	342	10	139	396	92
RTOR Reduction (vph)	0	6	0	0	71	0	0	1	0	0	0	34
Lane Group Flow (vph)	0	72	0	0	26	0	15	351	0	139	396	58
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		5.0			5.0		23.9	23.9		23.9	23.9	23.9
Effective Green, g (s)		5.0			5.0		23.9	23.9		23.9	23.9	23.9
Actuated g/C Ratio		0.13			0.13		0.63	0.63		0.63	0.63	0.63
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		177			212		627	1182		653	1187	1009
v/s Ratio Prot								0.19			c0.21	
v/s Ratio Perm		c0.05			0.02		0.02			0.13		0.04
v/c Ratio		0.41			0.12		0.02	0.30		0.21	0.33	0.06
Uniform Delay, d1		15.1			14.5		2.6	3.2		3.0	3.3	2.7
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		1.5			0.3		0.1	0.6		0.7	0.8	0.1
Delay (s)		16.6			14.8		2.7	3.8		3.7	4.0	2.8
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		16.6			14.8			3.8			3.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	37.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	407	177	55	379	209	128	199	49	249	316	27
Future Volume (vph)	44	407	177	55	379	209	128	199	49	249	316	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1798		1789	1883	1601	1789	1883	1601	1789	1861	
Flt Permitted	0.36	1.00		0.12	1.00	1.00	0.28	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	670	1798		224	1883	1601	521	1883	1601	1173	1861	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	442	192	60	412	227	139	216	53	271	343	29
RTOR Reduction (vph)	0	18	0	0	0	140	0	0	30	0	3	0
Lane Group Flow (vph)	48	616	0	60	412	87	139	216	23	271	369	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	35.3	32.5		37.5	33.6	33.6	37.3	37.3	37.3	27.4	27.4	
Effective Green, g (s)	35.3	32.5		37.5	33.6	33.6	37.3	37.3	37.3	27.4	27.4	
Actuated g/C Ratio	0.40	0.37		0.43	0.39	0.39	0.43	0.43	0.43	0.31	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	307	670		166	725	616	301	805	684	368	584	
v/s Ratio Prot	0.01	c0.34		c0.02	0.22		c0.03	0.11			0.20	
v/s Ratio Perm	0.06			0.14		0.05	0.17		0.01	c0.23		
v/c Ratio	0.16	0.92		0.36	0.57	0.14	0.46	0.27	0.03	0.74	0.63	
Uniform Delay, d1	16.5	26.1		18.9	21.1	17.4	17.1	16.1	14.5	26.7	25.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	18.0		1.3	1.0	0.1	1.1	0.8	0.1	12.4	5.1	
Delay (s)	16.8	44.1		20.2	22.1	17.5	18.2	16.9	14.6	39.1	30.7	
Level of Service	B	D		C	C	B	B	B	B	D	C	
Approach Delay (s)		42.2			20.5			17.1			34.2	
Approach LOS		D			C			B			C	

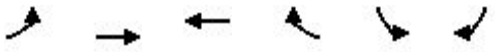
Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	87.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	14	18	308	337	40
Future Volume (Veh/h)	29	14	18	308	337	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	15	20	335	366	43
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked						
vC, conflicting volume	762	388	409			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762	388	409			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	98	98			
cM capacity (veh/h)	366	661	1150			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	47	355	409
Volume Left	32	20	0
Volume Right	15	0	43
cSH	427	1150	1700
Volume to Capacity	0.11	0.02	0.24
Queue Length 95th (m)	2.8	0.4	0.0
Control Delay (s)	14.5	0.6	0.0
Lane LOS	B	A	
Approach Delay (s)	14.5	0.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	221	370	23	24	16
Future Volume (Veh/h)	5	221	370	23	24	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	240	402	25	26	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	427				664	414
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427				664	414
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	97
cM capacity (veh/h)	1132				423	638

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	245	427	43
Volume Left	5	0	26
Volume Right	0	25	17
cSH	1132	1700	488
Volume to Capacity	0.00	0.25	0.09
Queue Length 95th (m)	0.1	0.0	2.2
Control Delay (s)	0.2	0.0	13.1
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	13.1
Approach LOS			B

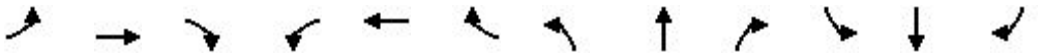
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	104	493	91	87	515
Future Volume (vph)	50	104	493	91	87	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1789	1601	1844		1789	1883
Flt Permitted	0.95	1.00	1.00		0.38	1.00
Satd. Flow (perm)	1789	1601	1844		714	1883
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	113	536	99	95	560
RTOR Reduction (vph)	0	99	8	0	0	0
Lane Group Flow (vph)	54	14	627	0	95	560
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	5.9	5.9	34.2		34.2	34.2
Effective Green, g (s)	5.9	5.9	34.2		34.2	34.2
Actuated g/C Ratio	0.12	0.12	0.70		0.70	0.70
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	214	192	1284		497	1311
v/s Ratio Prot	c0.03		c0.34			0.30
v/s Ratio Perm		0.01			0.13	
v/c Ratio	0.25	0.07	0.49		0.19	0.43
Uniform Delay, d1	19.6	19.2	3.4		2.6	3.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.2	1.3		0.9	1.0
Delay (s)	20.2	19.3	4.8		3.5	4.2
Level of Service	C	B	A		A	A
Approach Delay (s)	19.6		4.8			4.1
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

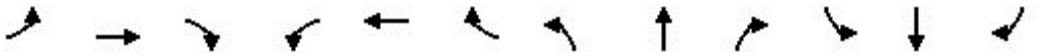
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	17	17	4	7	154	10	362	4	120	404	41
Future Volume (vph)	68	17	17	4	7	154	10	362	4	120	404	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt		0.98			0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1782			1644		1789	1881		1789	1883	1601
Flt Permitted		0.79			0.99		0.49	1.00		0.53	1.00	1.00
Satd. Flow (perm)		1459			1631		929	1881		994	1883	1601
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	18	18	4	8	167	11	393	4	130	439	45
RTOR Reduction (vph)	0	15	0	0	136	0	0	0	0	0	0	18
Lane Group Flow (vph)	0	95	0	0	43	0	11	397	0	130	439	27
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		6.8			6.8		21.0	21.0		21.0	21.0	21.0
Effective Green, g (s)		6.8			6.8		21.0	21.0		21.0	21.0	21.0
Actuated g/C Ratio		0.18			0.18		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		269			301		530	1073		567	1074	913
v/s Ratio Prot								0.21			c0.23	
v/s Ratio Perm		c0.07			0.03		0.01			0.13		0.02
v/c Ratio		0.35			0.14		0.02	0.37		0.23	0.41	0.03
Uniform Delay, d1		13.1			12.6		3.4	4.3		3.9	4.4	3.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8			0.2		0.1	1.0		0.9	1.2	0.1
Delay (s)		13.9			12.8		3.5	5.3		4.8	5.6	3.5
Level of Service		B			B		A	A		A	A	A
Approach Delay (s)		13.9			12.8			5.2			5.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	36.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	489	159	62	442	246	219	251	104	221	172	40
Future Volume (vph)	86	489	159	62	442	246	219	251	104	221	172	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1883	1601	1789	1883	1601	1789	1883	1601	1789	1831	
Flt Permitted	0.20	1.00	1.00	0.18	1.00	1.00	0.45	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	370	1883	1601	332	1883	1601	841	1883	1601	1114	1831	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	532	173	67	480	267	238	273	113	240	187	43
RTOR Reduction (vph)	0	0	119	0	0	183	0	0	62	0	11	0
Lane Group Flow (vph)	93	532	54	67	480	84	238	273	51	240	219	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	26.5	22.7	22.7	26.5	22.7	22.7	32.4	32.4	32.4	22.3	22.3	
Effective Green, g (s)	26.5	22.7	22.7	26.5	22.7	22.7	32.4	32.4	32.4	22.3	22.3	
Actuated g/C Ratio	0.37	0.31	0.31	0.37	0.31	0.31	0.45	0.45	0.45	0.31	0.31	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	209	590	501	197	590	501	449	842	716	343	563	
v/s Ratio Prot	c0.02	c0.28		0.02	0.25		c0.04	0.14			0.12	
v/s Ratio Perm	0.14		0.03	0.11		0.05	0.20		0.03	c0.22		
v/c Ratio	0.44	0.90	0.11	0.34	0.81	0.17	0.53	0.32	0.07	0.70	0.39	
Uniform Delay, d1	16.8	23.8	17.7	17.1	22.9	18.0	13.7	12.9	11.4	22.1	19.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.5	17.0	0.1	1.0	8.4	0.2	1.2	1.0	0.2	11.3	2.0	
Delay (s)	18.3	40.8	17.8	18.1	31.3	18.2	14.9	13.9	11.6	33.4	21.7	
Level of Service	B	D	B	B	C	B	B	B	B	C	C	
Approach Delay (s)		33.2			25.9			13.9			27.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	18	10	339	407	18
Future Volume (Veh/h)	37	18	10	339	407	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	20	11	368	442	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked						
vC, conflicting volume	842	452	462			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	842	452	462			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	97	99			
cM capacity (veh/h)	331	608	1099			

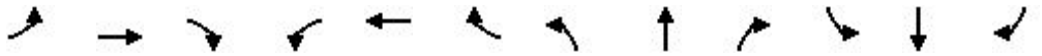
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	60	379	462
Volume Left	40	11	0
Volume Right	20	0	20
cSH	390	1099	1700
Volume to Capacity	0.15	0.01	0.27
Queue Length 95th (m)	4.1	0.2	0.0
Control Delay (s)	15.9	0.3	0.0
Lane LOS	C	A	
Approach Delay (s)	15.9	0.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	95	555	46	136	680
Future Volume (vph)	49	95	555	46	136	680
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			4.5
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	0.99			1.00
Flt Protected	0.95	1.00	1.00			0.99
Satd. Flow (prot)	1789	1601	3537			3549
Flt Permitted	0.95	1.00	1.00			0.76
Satd. Flow (perm)	1789	1601	3537			2703
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	103	603	50	148	739
RTOR Reduction (vph)	0	90	8	0	0	0
Lane Group Flow (vph)	53	13	645	0	0	887
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	5.7	5.7	29.5			29.5
Effective Green, g (s)	5.7	5.7	29.5			29.5
Actuated g/C Ratio	0.13	0.13	0.67			0.67
Clearance Time (s)	4.5	4.5	4.5			4.5
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	230	206	2360			1804
v/s Ratio Prot	c0.03		0.18			
v/s Ratio Perm		0.01				c0.33
v/c Ratio	0.23	0.06	0.27			0.49
Uniform Delay, d1	17.3	16.9	3.0			3.6
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.5	0.1	0.3			1.0
Delay (s)	17.8	17.0	3.3			4.6
Level of Service	B	B	A			A
Approach Delay (s)	17.3		3.3			4.6
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

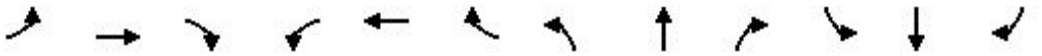
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	7	6	6	7	117	14	427	10	145	499	85
Future Volume (vph)	58	7	6	6	7	117	14	427	10	145	499	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			0.88			1.00			0.98	
Flt Protected		0.96			1.00			1.00			0.99	
Satd. Flow (prot)		1788			1652			3561			3481	
Flt Permitted		0.83			0.98			0.93			0.77	
Satd. Flow (perm)		1551			1621			3316			2712	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	8	7	7	8	127	15	464	11	158	542	92
RTOR Reduction (vph)	0	6	0	0	106	0	0	2	0	0	15	0
Lane Group Flow (vph)	0	72	0	0	36	0	0	488	0	0	777	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.2			6.2			22.2			22.2	
Effective Green, g (s)		6.2			6.2			22.2			22.2	
Actuated g/C Ratio		0.17			0.17			0.59			0.59	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		257			268			1968			1609	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.02			0.15			c0.29	
v/c Ratio		0.28			0.13			0.25			0.48	
Uniform Delay, d1		13.6			13.3			3.6			4.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.6			0.2			0.3			1.0	
Delay (s)		14.2			13.5			3.9			5.4	
Level of Service		B			B			A			A	
Approach Delay (s)		14.2			13.5			3.9			5.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	37.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	585	200	89	472	227	154	216	62	269	342	47
Future Volume (vph)	59	585	200	89	472	227	154	216	62	269	342	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1789	1812		1789	1883	1601	1789	1883	1601	1789	1849	
Flt Permitted	0.31	1.00		0.08	1.00	1.00	0.15	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	584	1812		144	1883	1601	274	1883	1601	1153	1849	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	636	217	97	513	247	167	235	67	292	372	51
RTOR Reduction (vph)	0	11	0	0	0	127	0	0	42	0	4	0
Lane Group Flow (vph)	64	842	0	97	513	120	167	235	25	292	419	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	55.5	51.4		57.5	52.4	52.4	40.9	40.9	40.9	30.1	30.1	
Effective Green, g (s)	55.5	51.4		57.5	52.4	52.4	40.9	40.9	40.9	30.1	30.1	
Actuated g/C Ratio	0.50	0.46		0.52	0.47	0.47	0.37	0.37	0.37	0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	336	839		150	889	756	187	694	590	312	501	
v/s Ratio Prot	0.01	c0.46		c0.03	0.27		c0.05	0.12			0.23	
v/s Ratio Perm	0.09			0.31		0.08	c0.28		0.02	0.25		
v/c Ratio	0.19	1.00		0.65	0.58	0.16	0.89	0.34	0.04	0.94	0.84	
Uniform Delay, d1	15.9	29.8		24.7	21.2	16.7	30.1	25.2	22.4	39.5	38.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	31.9		9.2	0.9	0.1	37.3	1.3	0.1	36.9	15.2	
Delay (s)	16.2	61.6		33.9	22.1	16.8	67.4	26.6	22.6	76.4	53.2	
Level of Service	B	E		C	C	B	E	C	C	E	D	
Approach Delay (s)		58.4			21.9			40.6			62.7	
Approach LOS		E			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Poplar SR & High Street - 2030TT, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.18	1.99	0.2	0.5	A
2 - Poplar Sideroad	0.14	2.56	0.2	0.5	A
3 - Poplar Sideroad	0.30	2.46	0.4	1.6	A

Poplar SR & High Street - 2030TT, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.19	1.98	0.2	0.5	A
2 - Poplar Sideroad	0.22	2.88	0.3	1.2	A
3 - Poplar Sideroad	0.30	2.48	0.4	1.7	A

Poplar SR & High Street - 2035TT, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.20	2.06	0.2	0.5	A
2 - Poplar Sideroad	0.15	2.64	0.2	0.5	A
3 - Poplar Sideroad	0.32	2.57	0.5	2.0	A

Poplar SR & High Street - 2035TT, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.22	2.05	0.3	1.0	A
2 - Poplar Sideroad	0.24	3.03	0.3	1.3	A
3 - Poplar Sideroad	0.33	2.59	0.5	2.0	A

Poplar SR & High Street - 2040TT, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.22	2.14	0.3	1.0	A
2 - Poplar Sideroad	0.17	2.74	0.2	0.5	A
3 - Poplar Sideroad	0.36	2.70	0.6	2.1	A

Poplar SR & High Street - 2040TT, PM

Data Errors and Warnings

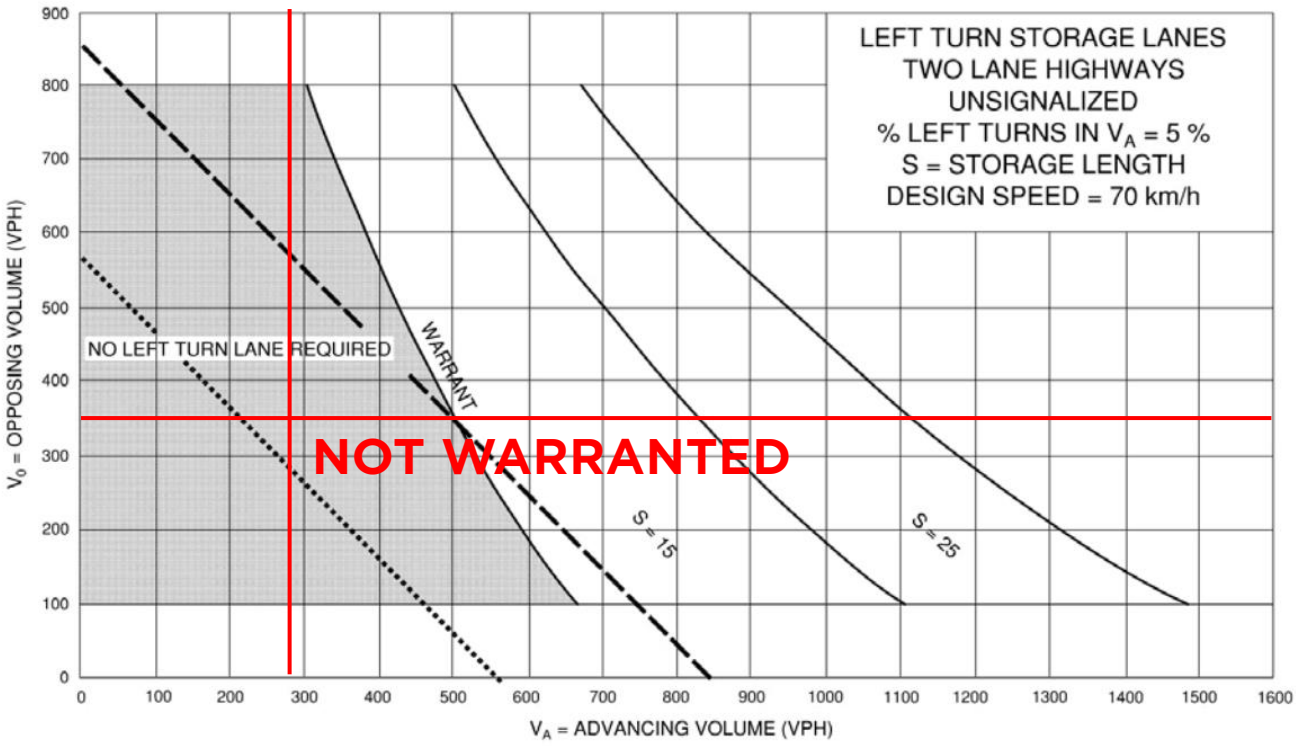
Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Results

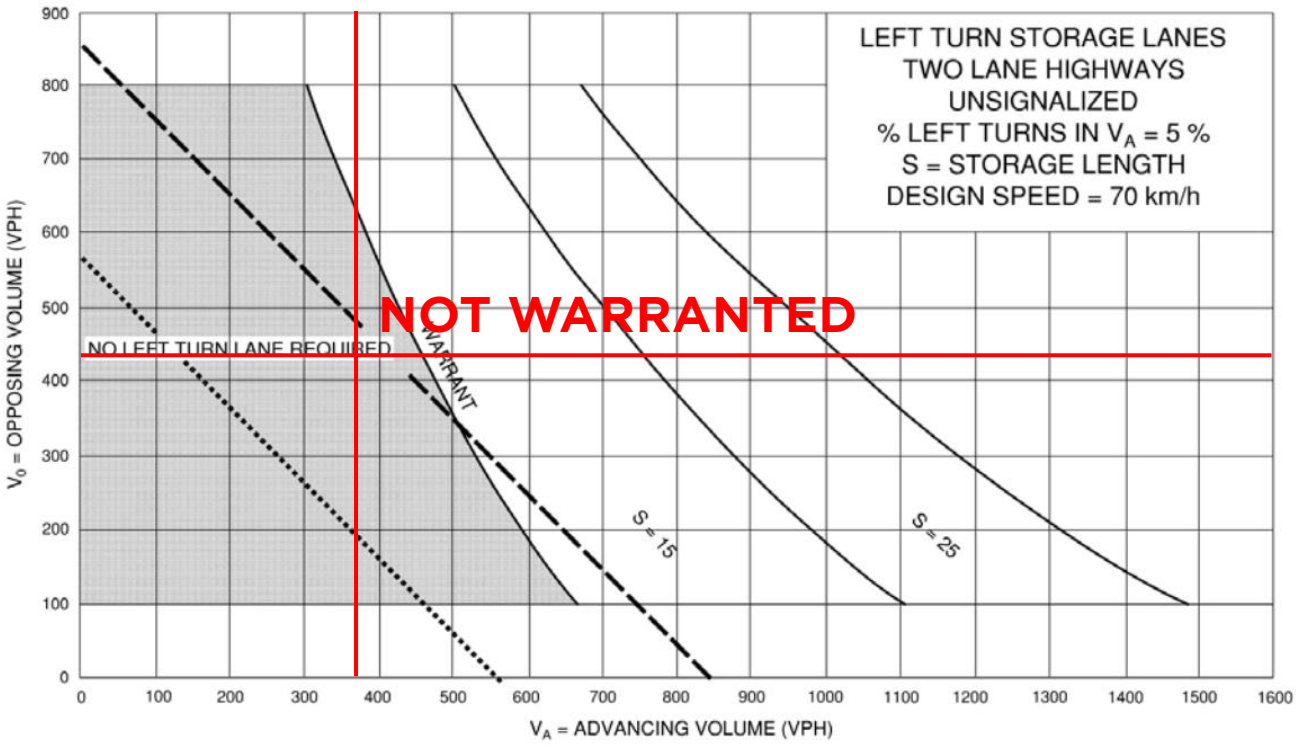
Results Summary for whole modelled period

Leg	Max V/C	Max Delay (s)	Max Q (Veh)	Max Q95 (Veh)	Max LOS
1 - High Street	0.24	2.13	0.3	1.3	A
2 - Poplar Sideroad	0.27	3.21	0.4	1.2	A
3 - Poplar Sideroad	0.36	2.72	0.6	2.1	A

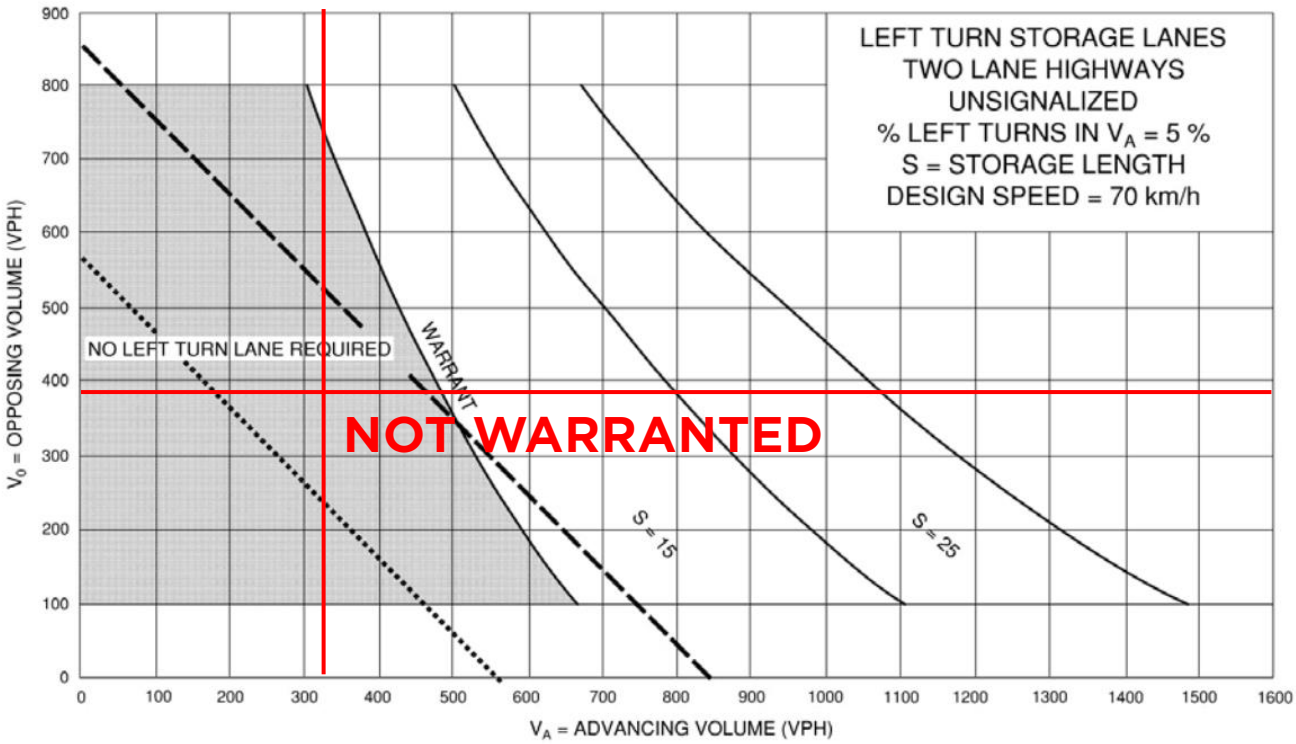
Appendix G:
Left Turn Warrants



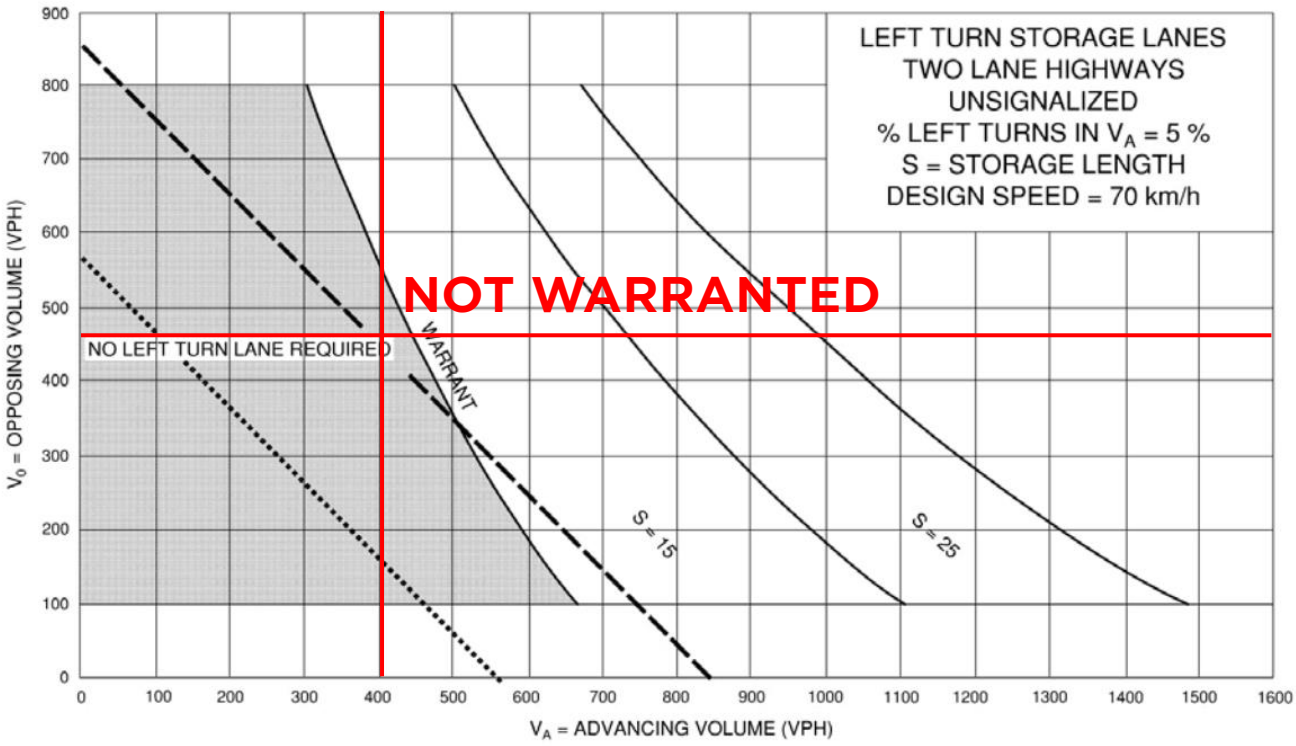
2030 Total Conditions – AM Peak Hour



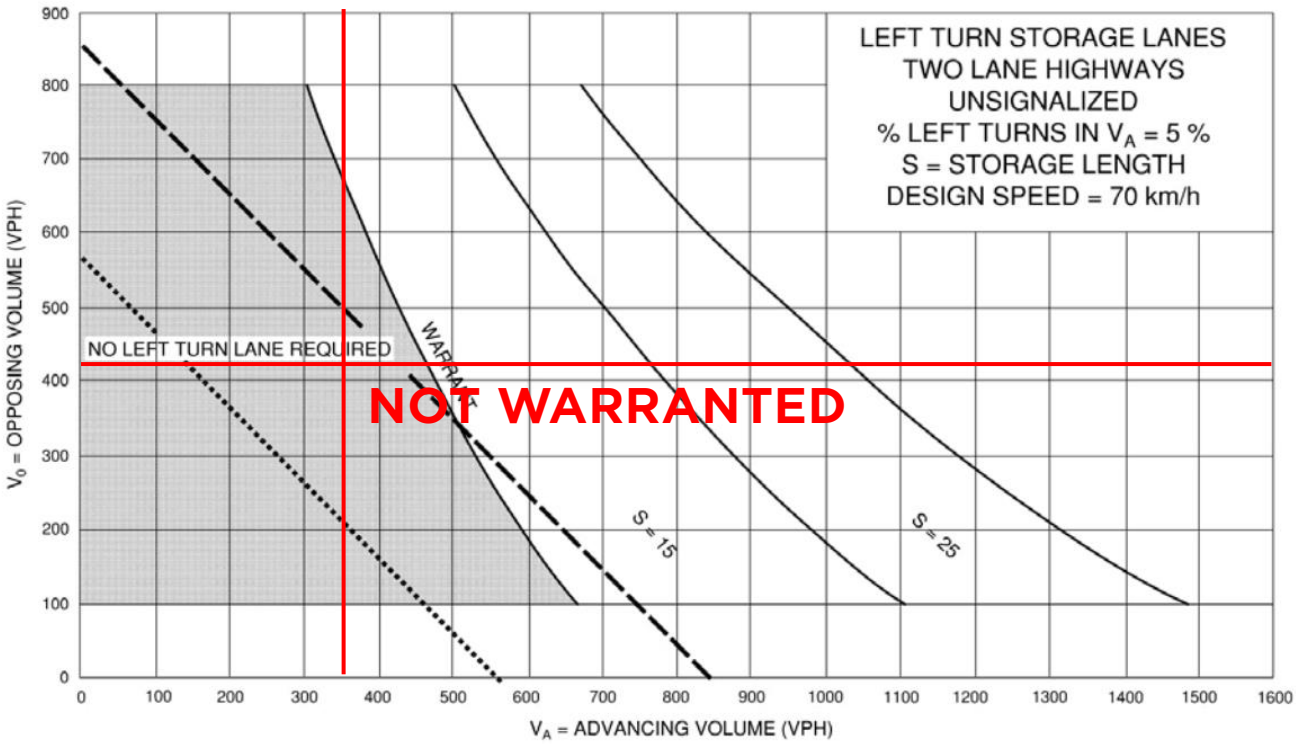
2030 Total Conditions - PM



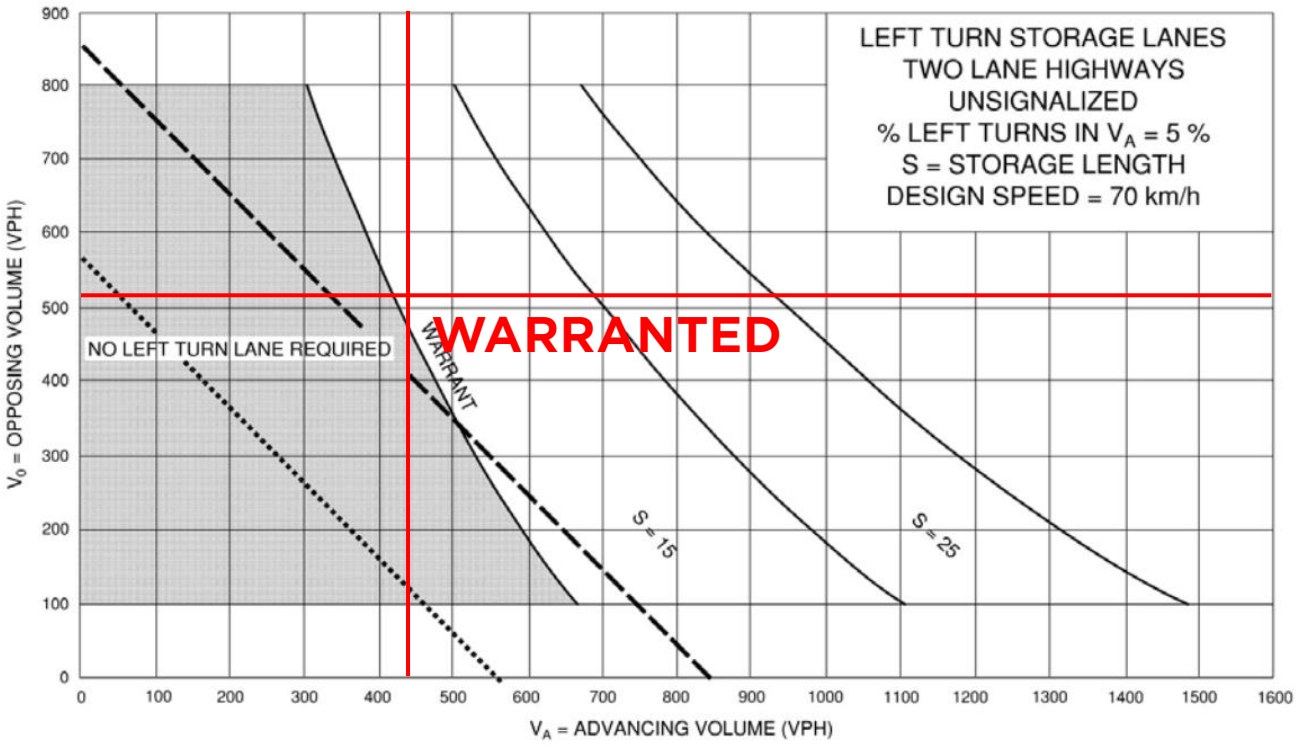
2035 Total Conditions – AM Peak Hour



2035 Total Conditions - PM

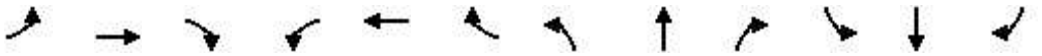


2040 Total Conditions – AM Peak Hour



2040 Total Conditions - PM

Appendix H:
Future Total Traffic Operations - Sensitivity Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	17	17	4	7	150	10	651	4	119	510	41
Future Volume (vph)	68	17	17	4	7	150	10	651	4	119	510	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.87			1.00			0.99	
Flt Protected		0.97			1.00			1.00			0.99	
Satd. Flow (prot)		1782			1645			3573			3514	
Flt Permitted		0.65			0.99			0.94			0.74	
Satd. Flow (perm)		1192			1632			3378			2611	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	18	18	4	8	163	11	708	4	129	554	45
RTOR Reduction (vph)	0	14	0	0	139	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	96	0	0	36	0	0	723	0	0	723	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.7			7.7			35.6			35.6	
Effective Green, g (s)		7.7			7.7			35.6			35.6	
Actuated g/C Ratio		0.15			0.15			0.68			0.68	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		175			240			2299			1777	
v/s Ratio Prot												
v/s Ratio Perm		c0.08			0.02			0.21			c0.28	
v/c Ratio		0.55			0.15			0.31			0.41	
Uniform Delay, d1		20.7			19.4			3.4			3.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.5			0.3			0.4			0.7	
Delay (s)		24.1			19.7			3.8			4.4	
Level of Service		C			B			A			A	
Approach Delay (s)		24.1			19.7			3.8			4.4	
Approach LOS		C			B			A			A	

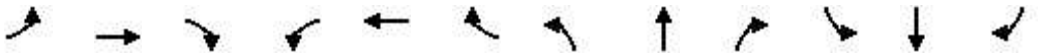
Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	19	10	627	512	18
Future Volume (Veh/h)	39	19	10	627	512	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	21	11	682	557	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked						
vC, conflicting volume	930	288	577			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	930	288	577			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	84	97	99			
cM capacity (veh/h)	263	708	993			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	63	238	455	371	206
Volume Left	42	11	0	0	0
Volume Right	21	0	0	0	20
cSH	333	993	1700	1700	1700
Volume to Capacity	0.19	0.01	0.27	0.22	0.12
Queue Length 95th (m)	5.2	0.3	0.0	0.0	0.0
Control Delay (s)	18.3	0.5	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	18.3	0.2		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	7	6	7	7	83	14	809	10	141	832	85
Future Volume (vph)	58	7	6	7	7	83	14	809	10	141	832	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			0.89			1.00			0.99	
Flt Protected		0.96			1.00			1.00			0.99	
Satd. Flow (prot)		1788			1661			3569			3512	
Flt Permitted		0.81			0.97			0.93			0.71	
Satd. Flow (perm)		1501			1617			3333			2527	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	8	7	8	8	90	15	879	11	153	904	92
RTOR Reduction (vph)	0	6	0	0	78	0	0	1	0	0	7	0
Lane Group Flow (vph)	0	72	0	0	28	0	0	904	0	0	1142	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.1			7.1			38.3			38.3	
Effective Green, g (s)		7.1			7.1			38.3			38.3	
Actuated g/C Ratio		0.13			0.13			0.70			0.70	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		195			211			2346			1779	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.02			0.27			c0.45	
v/c Ratio		0.37			0.13			0.39			0.64	
Uniform Delay, d1		21.6			20.9			3.3			4.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.2			0.3			0.5			1.8	
Delay (s)		22.8			21.2			3.7			6.1	
Level of Service		C			C			A			A	
Approach Delay (s)		22.8			21.2			3.7			6.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	14	18	804	805	40
Future Volume (Veh/h)	29	14	18	804	805	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	15	20	874	875	43
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					297	
pX, platoon unblocked	1.00	1.00	1.00			
vC, conflicting volume	1374	459	918			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1371	455	915			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	76	97	97			
cM capacity (veh/h)	133	551	740			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	47	311	583	583	335
Volume Left	32	20	0	0	0
Volume Right	15	0	0	0	43
cSH	176	740	1700	1700	1700
Volume to Capacity	0.27	0.03	0.34	0.34	0.20
Queue Length 95th (m)	7.8	0.6	0.0	0.0	0.0
Control Delay (s)	32.8	0.9	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	32.8	0.3		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		