



TOWN OF CALEDON
PLANNING
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June 7, 2024

Mayfield West Phase 2 Stage 3

Traffic Impact Study

Brookvalley Project Management Inc.

07 June 2024

Executive Summary

GHD Limited was retained by Brookvalley Project Management Inc. to prepare a Traffic Impact Study in support of the Official Plan Amendment for the proposed Mayfield West Stage 2 Phase 3 lands located within the Mayfield West Community Development Plan Study Area in the area generally bounded by Old School Road to the north, Hurontario Street to the east, Etobicoke Creek to the south and Chinguacousy Road to the west in the Town of Caledon.

This report determines the site related traffic and subsequent traffic related impacts on the adjacent road network during the weekday a.m. and p.m. peak hours. These impacts are based on the projected future traffic and road network conditions derived for a 2026, 2029, 2031, 2036, and 2041 future planning horizon year.

The proposed draft plan of subdivision prepared by Malone Given Parsons consists of a series of single-family homes, townhouses, commercial uses, and a school block. The residential units, commercial retail space, and elementary school blocks are broken down as follows:

- 4,687 dwelling units
- 3 elementary schools (2 Peel District School Board Schools and 1 Dufferin Peel Catholic School Board School)
- 14 hectares of General Commercial lands

Access to the proposed lands from the regional arterial roads is proposed via a series of collector roads intersecting Chinguacousy Road, McLaughlin Road, Hurontario Street and Old School Road.

The Mayfield West Phase 2 Stage 3 is further divided into two phases, with Phase 1 consisting of the lands on the east side of McLaughlin Road and Phase 2 consisting of the lands on the west side of McLaughlin.

Furthermore, the subject lands were further divided into subphases to establish the construction schedule for the lands. Phase 1 of the proposed subdivision east of McLaughlin Road is assumed to be completed by 2026 and is expected to generate a total of 106 new two-way trips consisting of 26 inbound and 80 outbound trips during the weekday a.m. peak hour and 141 new two-way trips consisting of 89 inbound and 52 outbound trips during the weekday p.m. peak hour.

Under the 2029 horizon year, including Phases 1 through 4 built-out east of McLaughlin Road, the subdivision is expected to generate a total of 585 new two-way trips consisting of 142 inbound and 443 outbound trips during weekday a.m. peak hour and 724 new two-way trips consisting of 454 inbound and 270 outbound trips during the weekday p.m. peak hour.

Under the 2031 horizon year, with all phases of the subdivision built out (Phase 1 east of McLaughlin Road and Phase 2 west of McLaughlin Road), a total of 2,940 new two-way trips consisting of 911 inbound and 2,029 outbound trips during weekday a.m. peak hour and 3,809 new two-way trips consisting of 2,237 inbound and 1,571 outbound trips during the weekday p.m. peak hour.

To mitigate capacity issues along the study area roads, the following improvements have been recommended in previous studies and are assumed to be constructed in the latest analysis:

- Widening of Mayfield Road from 2 to 6 lanes (Chinguacousy Road to Hurontario Street), Region of Peel currently tendering the project
- Widening of Old School Road from 2 to 4 lanes (Chinguacousy Road to Hurontario Street), due to corridor growth and full build-out of the site in 2031
- Widening of McLaughlin from 2 to 4 lanes (Old School Road to Etobicoke Creek)
- Widening of Hurontario from 4 to 6 lanes (north of Highway 410), due to corridor growth in 2026
 - An auxiliary right-turn lane in the northbound and southbound directions.
- Signalization of the intersection of Old School Road & Chinguacousy Road, Old School Road & McLaughlin Road, McLaughlin & Street A, Hurontario Street & Street A

Despite the recommended road widening along Hurontario Street, capacity issues are still prevalent at intersections along Hurontario Street due to the high through volumes. The GTA West Corridor project proposes to extend Highway 410 to the proposed Highway 413 and would result in less through volume along Hurontario Street. Further studies will be required to evaluate the impact of the proposed Highway 410 extension on the Hurontario Street corridor within the study area.

We trust that this satisfies your requirements, but do not hesitate to contact the undersigned if you have any questions.

Sincerely,

GHD



William Maria, P. Eng.
Transportation Planning Lead

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1. Introduction

1.1 Retainer and Objective

GHD Limited was retained by Brookvalley Project Management Inc. to prepare a Transportation Impact Study in support of the Official Plan Amendment for the proposed Mayfield West Stage 2 Phase 3 lands located within the Mayfield West Community Development Plan Study Area. The Mayfield West Stage 2 Phase 3 is generally bounded by Old School Road to the north, Hurontario Street to the east, Etobicoke Creek to the south and Chinguacousy Road to the west with the Town of Caledon.

The development boundaries are illustrated in **Figure 1**.

The purpose of this study is to:

- Establish baseline traffic conditions for the study area in 2024 and determine future background operating conditions for a future planning horizon in 2026, 2029, 2031, 2036, and 2041.
- Utilize Institute of Transportation Engineer's (ITE) Trip Generation data and first principles to estimate the site trips generated by the proposed development and distribute the traffic to the adjacent road network.
- Determine future operating traffic conditions during the weekday peak periods through intersection capacity analysis.
- Identify improvements to the transportation infrastructure to accommodate the proposed urban boundary expansion.

1.2 Study Team

The GHD team involved in the preparation of the study are:

- William Maria, P. Eng., Transportation Planning Lead
- Rafael Andrenacci, B.Eng., Transportation Planner

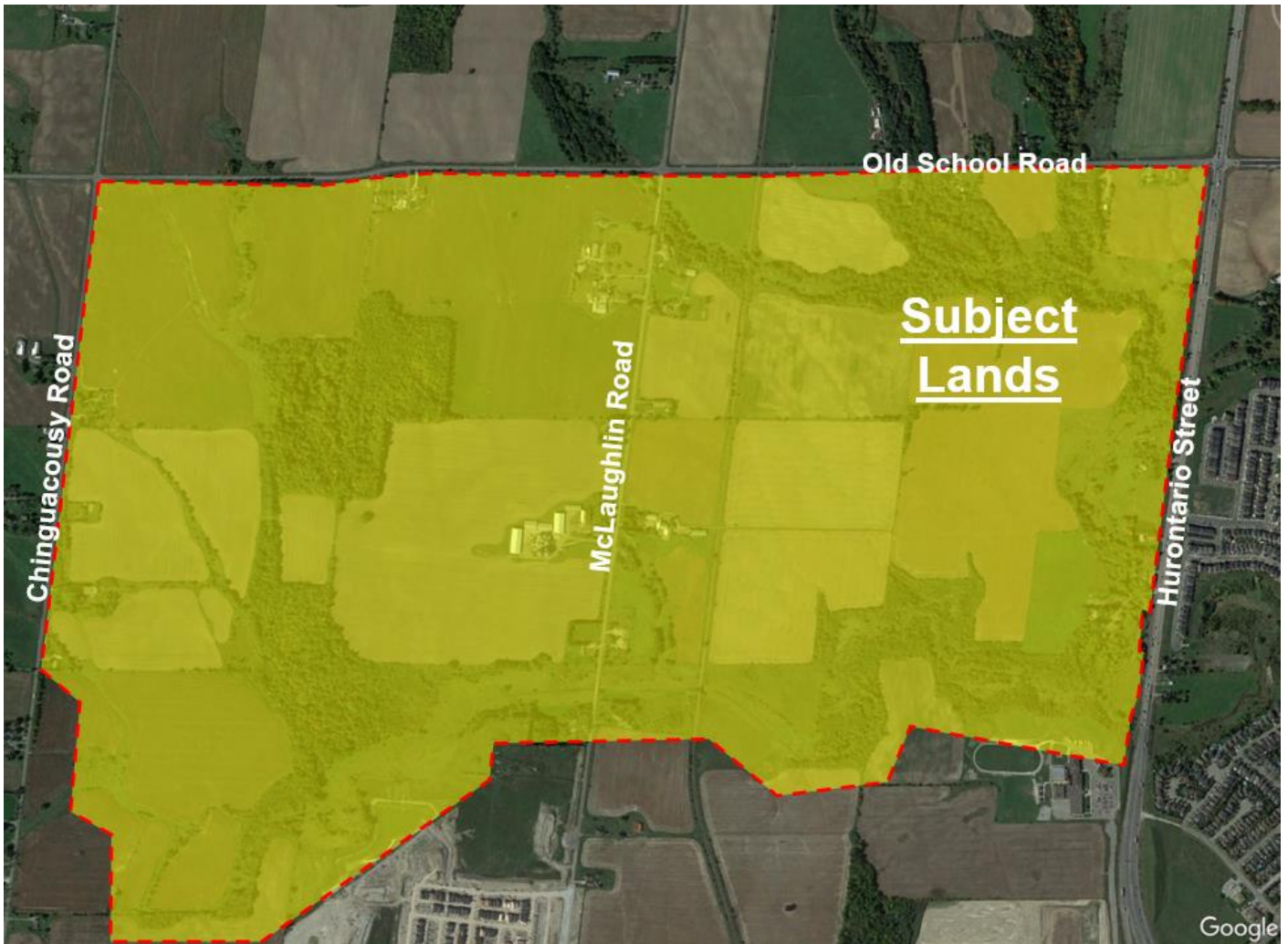


Figure 1 Boundary of the Mayfield West Phase 2 Stage 3 OPA Lands

2. Site Characteristics

2.1 Study Area

The following intersections were included in the study area:

Existing

- Old School Road and Chinguacousy Road
- Old School Road and McLaughlin Road
- Old School Road and Hurontario Street
- Mayfield Road and Chinguacousy Road
- Mayfield Road and McLaughlin Road
- Mayfield Road and Hurontario Street

Proposed

- Hurontario Street and Street 'A'

- McLaughlin and Street 'A'
- Chinguacousy Road and Street 'A'
- Old School Road and Street 'B'
- Old School Road and Street 'D'
- Old School Road and Street 'F'
- McLaughlin and Street 'E'

2.2 Proposed Development Content

A land use plan was prepared by Malone Given Parsons is shown in **Figure 2**. The proposed subdivision consists of the following:

- 4,687 dwelling units
- 3 elementary schools (2 Peel District School Board Schools and 1 Dufferin Peel Catholic School Board School)
- 14 hectares of General Commercial lands

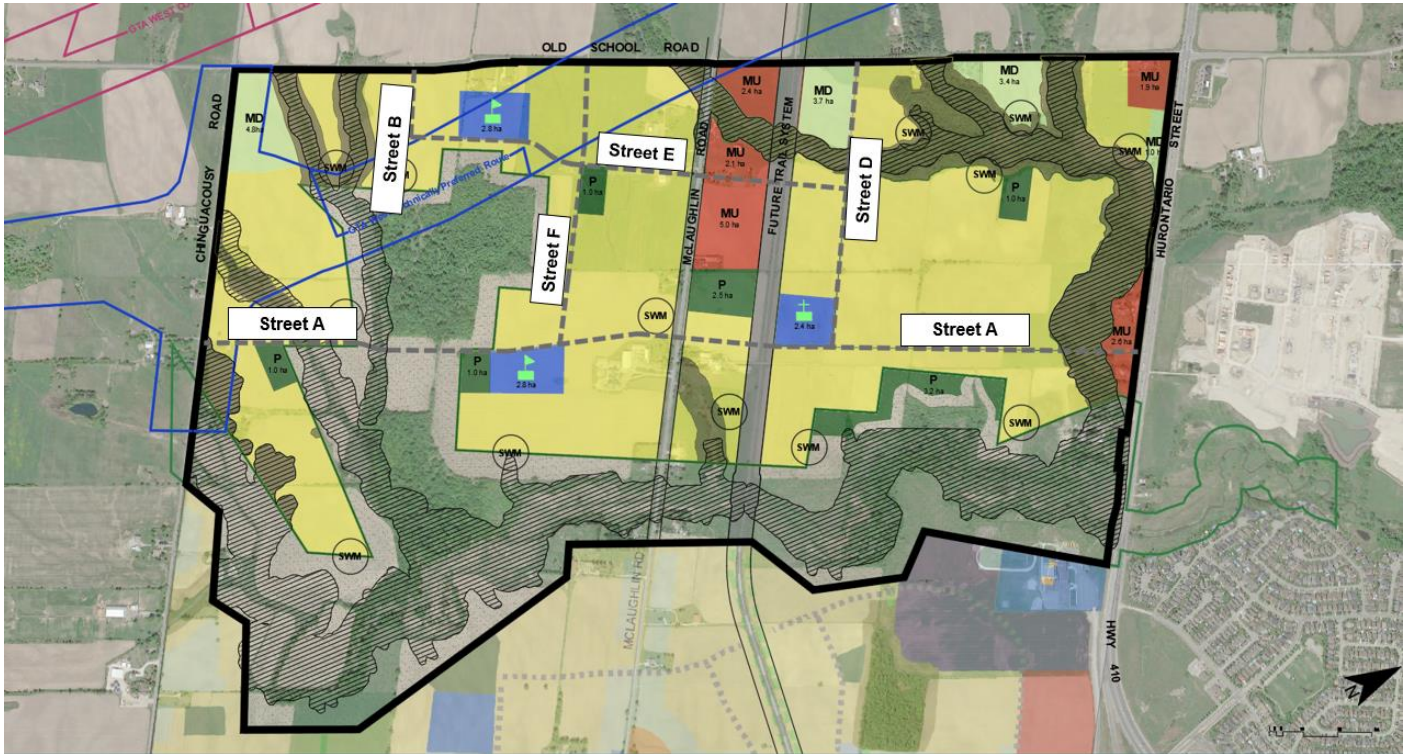


Figure 2 Land Use Plan

Access to the proposed subdivision from the regional arterial roads is proposed via a series of new collector roads intersecting Chinguacousy Road, McLaughlin Road, Hurontario Street and Old School Road. The proposed collector roads are also identified in **Figure 2**.

3. Existing Conditions

3.1 Existing Road Network

Hurontario Street/Highway 10 is a north-south Class III – Special Controlled Highway under the jurisdiction of the MTO generally north of its interchange with Highway 410 and is a major arterial road under the jurisdiction of the City of Brampton south of the interchange. In the study area it has a five-lane cross section with a two-way left-turn lane in the median lane. The intersections of Hurontario Street and Mayfield Road is signalized with auxiliary left-turn and right-turn lanes in both the northbound and southbound directions. The intersection with Old School Road is also signalized, with an auxiliary left-turn lane in both the northbound and southbound directions. The posted speed limit on Hurontario Street is 70 km/h south of the interchange with Highway 410 and increases to 80 km/h north of it.

Chinguacousy Road is a north-south collector road under the jurisdiction of the Town of Caledon. In the study area it has a two-lane rural cross-section. The intersections of Chinguacousy Road and Mayfield Road is signalized, while the intersection with Old School Road is an all-way stop-controlled intersections. The posted speed limit on Chinguacousy Road is 80 km/h.

McLaughlin Road is a north-south collector road under the jurisdiction of the Town of Caledon. In the study area it has a two-lane cross-section generally north of Tim Manley Drive and widened to a four-lane cross-section south of Tim Manley through the Mayfield West Phase 2 Stage 2 lands. The intersections of McLaughlin Road and Mayfield Road is signalized, with an auxiliary left-turn lane in the southbound direction and a right-turn lane in the northbound direction. The intersection with Old School Road is an all-way stop-controlled intersection. The posted speed limit on McLaughlin Road is 80 km/h.

Mayfield Road is an east-west arterial road under the jurisdiction of the Region of Peel. In the study area it has a two-lane cross-section and increases to a four-lane cross-section east of Hurontario Street. All three intersections along Mayfield Road (Chinguacousy Road, McLaughlin Road and Hurontario Street) are signalized. Auxiliary left-turn lanes are provided in both the eastbound and westbound directions at the intersection with McLaughlin Road. At the intersection with Hurontario Street, auxiliary right-turn lanes are provided in both directions, an auxiliary left-turn lane in the eastbound direction and a dual left-turn lane is provided in the westbound direction. The posted speed limit on Mayfield Road is 70 km/h.

Old School Road is an east-west collector road under the jurisdiction of the Town of Caledon. In the study area it has a two-lane cross-section. The intersection of Old School Road with Hurontario Street is signalized, with an auxiliary left-turn lane provided in both the eastbound and westbound directions. The intersections with Chinguacousy Road and McLaughlin Road are both all-way stop-controlled intersections. The posted speed limit on Old School Road is 70 km/h.

The existing lane configurations and traffic controls are illustrated in **Figure 3** below.

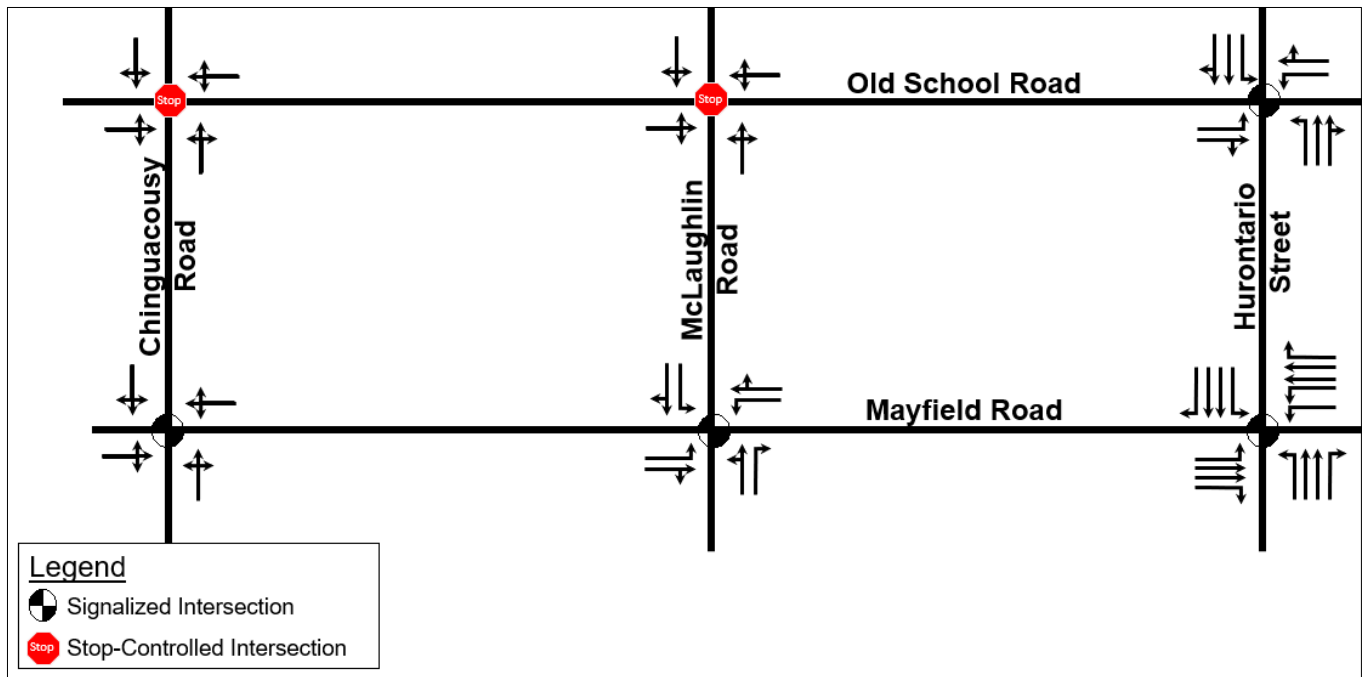


Figure 3 Existing Lane Configurations and Traffic Control

3.2 Pedestrian and Bicycle Routes

Within the study area, pedestrian sidewalks are only provided at the intersection of Hurontario Street and Mayfield Road. Sidewalks are provided on both sides of the road along Hurontario south of Mayfield Road, with a sidewalk only provided on the on the east side of Hurontario Street north of the intersection and end in close proximity to the interchange of Highway 410 and Hurontario Street. Sidewalks are also provided along both sides of Mayfield Road east of Hurontario Street.

The Town of Caledon’s Trails and Cycling Routes Map has identified Old School Road as a Cycling Route.

3.3 Transit Services

Brampton Transit currently offers the following routes within or near the study area:

Route 7 (Kennedy) operates mostly in the north/south direction along Kennedy Road between the intersections of Courtney Park Drive & Hurontario Street and Mayfield Road & Hurontario Street. It currently operates with a headway of 10 minutes or better during the morning and afternoon peak hours.

Route 24 (Van Kirk) operates mostly in the north/south direction along Van Kirk Drive and Royal Orchard Drive between the intersections of Hurontario Street & Mayfield Road and the Peel Memorial Hospital. Courtney Park Drive & Hurontario Street and Mayfield Road & Hurontario Street. It currently operates with a headway of 30-minutes during the morning and afternoon peak hours.

Route 81 (Mayfield West) operates along Kennedy Road, Mayfield Road and Hurontario Street between the intersection of Kennedy Road & Learmont Avenue and the Sandalwood Loop at Sandalwood Loop along Hurontario Street. It currently operates with a headway of 45-minutes during the morning and afternoon peak hours.

GO Transit also operates Route 37 (Orangeville/Brampton) north/south direction along Hurontario Street between the Brampton GO Station and the Orangeville Mall with an hour headway.

3.4 Existing Traffic Data

GHD contracted Ontario Traffic Inc. to collect turning movement counts in February 2024 during the a.m. and p.m. peak hours at the existing study intersections.

The baseline 2024 traffic volumes are provided in **Figure 12** within **Appendix A** with the full turning movement counts provided in **Appendix C**.

4. Future Background Traffic

4.1 Study Horizon Year

The horizon years selected for analysis includes the year of build-out for the first phase in 2026, halfway through the build-out in 2029, full build-out in 2031, and 5-years post build-out in 2036 and 10-years post build-out in 2041.

4.2 Future Road Network Improvements

The January 2018 TMP update estimated that the Hurontario Street Corridor would be significantly over capacity by 2031 as a four-lane road and recommended a monitoring program to review traffic volumes on Hurontario as development proceeds to confirm the need for additional lanes.

4.2.1 GTA West Highway

The GTA West Highway Corridor (Highway 413) is a proposed 52-kilometre Highway that would extend from Highway 400 in the east and to the Highway 401 and 407 interchange to the west. Included within the proposed project is a 4 kilometre extension of Highway 410 to the north to Highway 413, diverting from its current terminus at Hurontario Street that is located between the two study intersections along Hurontario Street.

Two interchanges are proposed in close proximity to the subject site, one along Chinguacousy south of Old School Road and the other located along Hurontario Street north of Old School Road. Due to the proximity to the study area, background traffic and site generated traffic will be impacted by the proposed highway project, resulting in scenarios with and without the highway being evaluated. The location of the study area within the GTA West corridor is provided in **Figure 4**.

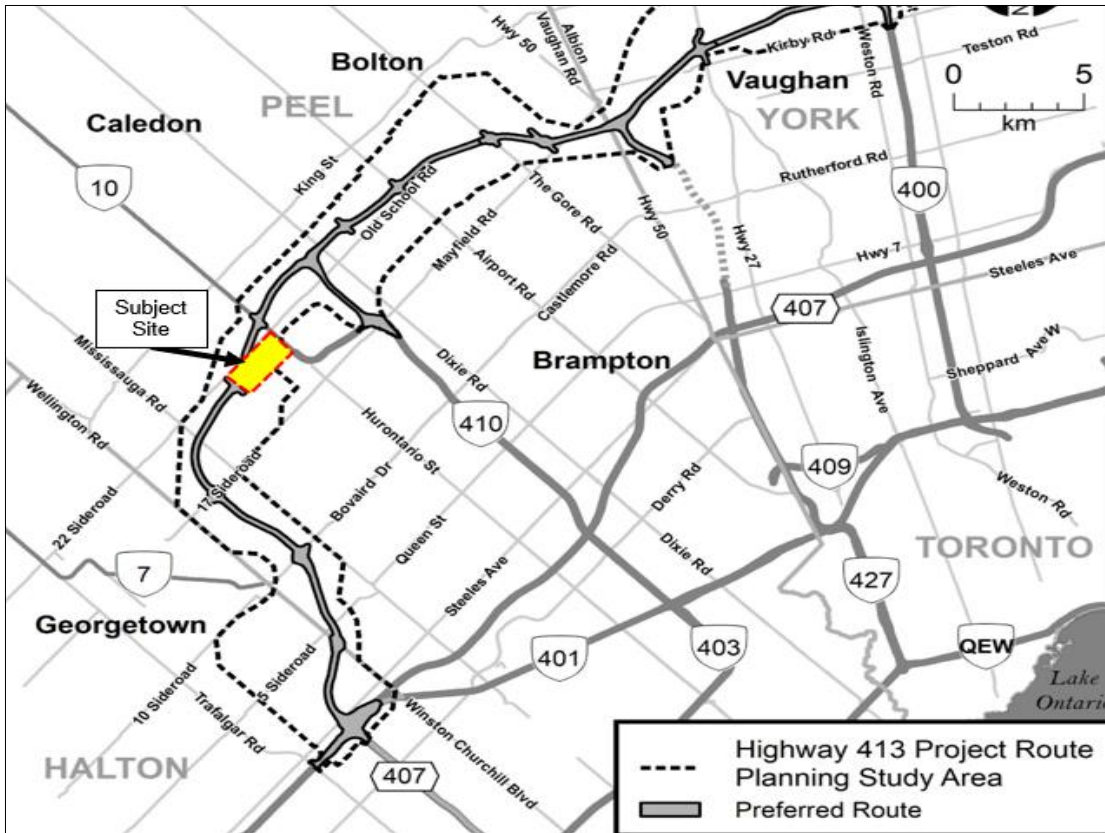


Figure 4 Proposed Highway 413 Corridor (highway413.ca)

Currently the preferred alignment has the proposed highway cutting through the northwest parcel of the subject lands southeast of Chinguacousy Road and Old School Road and includes an interchange at Chinguacousy Road. However, the final alignment of the highway has not yet been determined and a revised alignment to avoid constraining development of the Mayfield West Study Area would be preferred.

The subject site is located within the vicinity of Section 4 of the proposed Highway's corridor with Alternative S4-1 currently proposed to cut through the lands of Mayfield West Phase 2 Stage 3. The preferred alignment would be similar to the Alternative S4-2 design, with the Highway 413 route located just to the north of the subject site. The preferred alternative is shown on **Figure 5**.

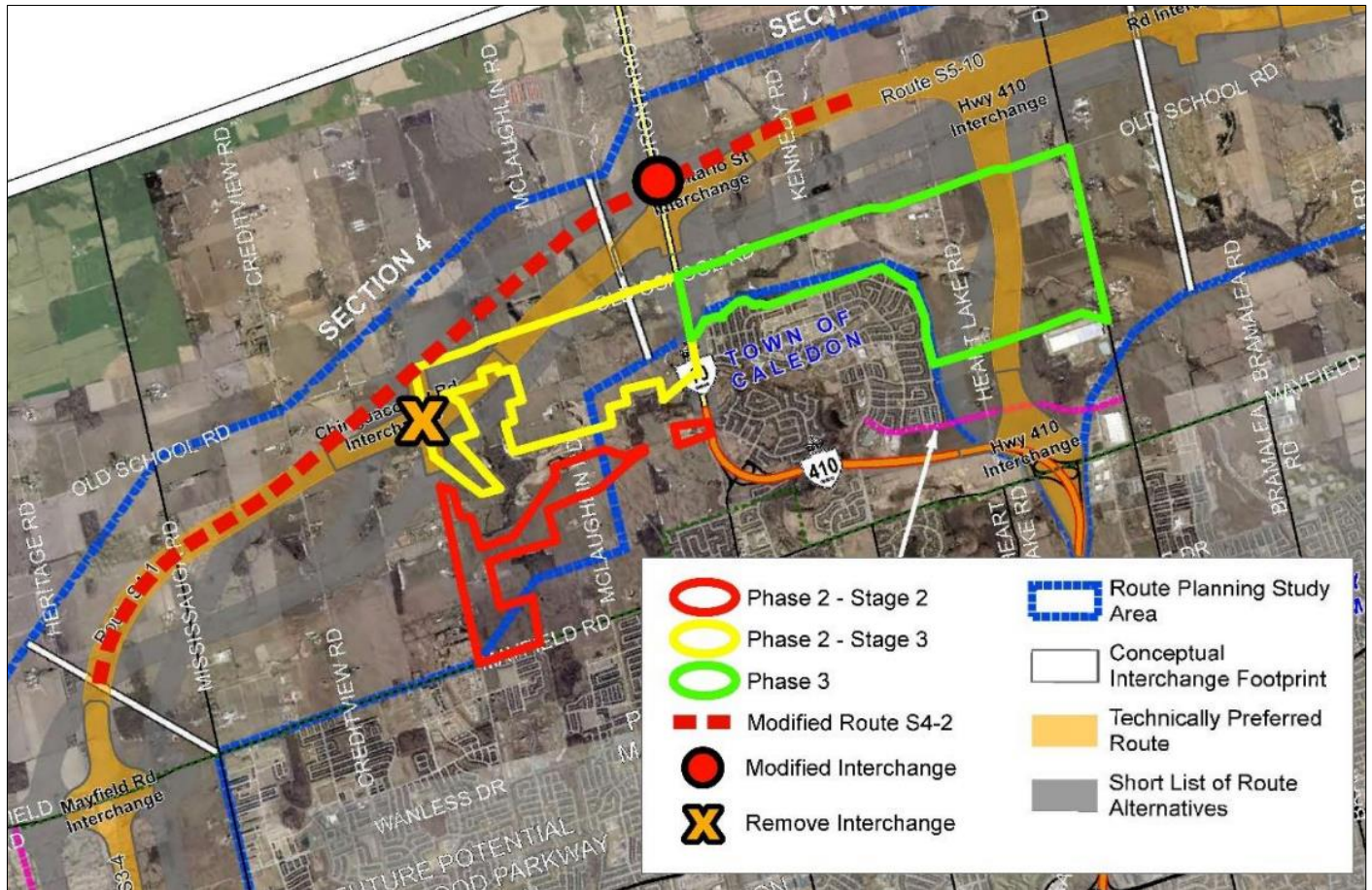


Figure 5 Preferred Alternative Highway 413 Alignment – Section 4

4.2.2 Highway 410/Hurontario Street Interchange

Currently, Highway 410 terminates at Hurontario between Old School Road and Mayfield Road. In 2016, the Town of Caledon initiated a Class Environmental Assessment for the widening of McLaughlin Road from Mayfield Road northerly approximately 1700 metres, the construction of the new east-west Spine Road (Tim Manley Road) from Hurontario Street to Chinguacousy and later extended the study area to include the Highway 410 interchange at Hurontario Street/Valleywood Boulevard.

The modifications to the Highway 410 interchange are necessary to maintain and accommodate the operation of the proposed intersection of the proposed Spine Road (Tim Manley Avenue) with the 410 interchange and the resulting traffic volumes from the proposed road. The interchange also serves to improve the traffic issues on the east side of Hurontario Street along Valleywood Boulevard through the subdivision, The configuration of the proposed interchange is shown in **Figure 6**.

Further discussion is provided in **Section 5.2** regarding the impact of the future Highway 410/Hurontario and Tim Manley interchange on the trip distribution.

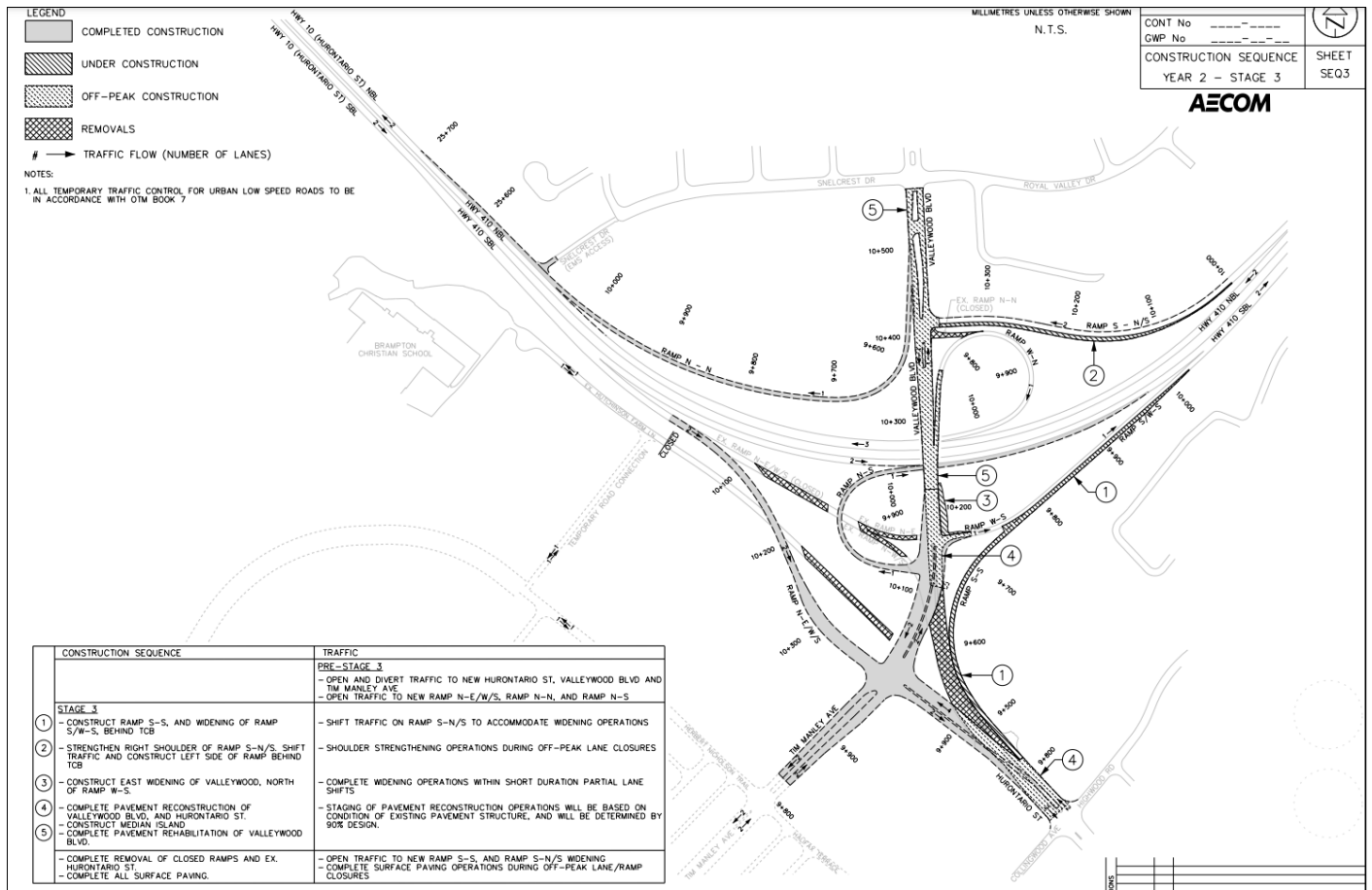


Figure 6 Highway 410/Hurontario Street Interchange Reconfiguration (60% Design)

4.2.3 Mayfield Road Widening

The Region of Peel completed an Environmental Assessment for improvements along Mayfield Road from Chinguacousy Road to Heart Lake Road, dated July 2014.

The EA identified the following alternatives to address the needs of the surrounding area to address future projected growth:

- Do Nothing
- Improve Transportation Systems Management
- Improve Travel Demand Management
- Increase capacity to parallel roadways
- Increase capacity to Mayfield Road

The following design concepts were considered for road widening within several areas along Mayfield Road:

- Do Nothing
- Widen to the North Side only
- Widen to the South Side only
- Widen to both the North Side and South Side

The environmental assessment identified that the preferred option included a widening of Mayfield Road throughout the subject site's study area (not the EA's study area) on both the north and south sides.

The Region's Capital Roads Construction Program (2013) identified the following schedule for roadway improvements:

- From a two-lane to a four-lane cross-section by 2018
- From a four-lane to a six-lane cross-section by 2029

Despite the Region's Capital Roads Construction Program from 2013, the 2023 Region of Peel budget has allocated funds to widen Mayfield Road between Chinguacousy Road and Hurontario Street from a two-lane to a six-lane cross-section. Peel Region is tendering works in 2024 for the approved widening to a six-lane cross-section between Chinguacousy Road and Hurontario Street and construction is anticipated to begin in 2024-2025. As a result, GHD has assumed Mayfield Road to be widened to its ultimate six-lane cross-section under the 2026 horizon year.

The typical cross-section for the six-lane configuration is provided in Figure 6-5 of the EA. The typical cross-section includes six through lanes and a multi-use pathway on each side of the road. Figure 6-5 of the EA is also provided in **Figure 7**.

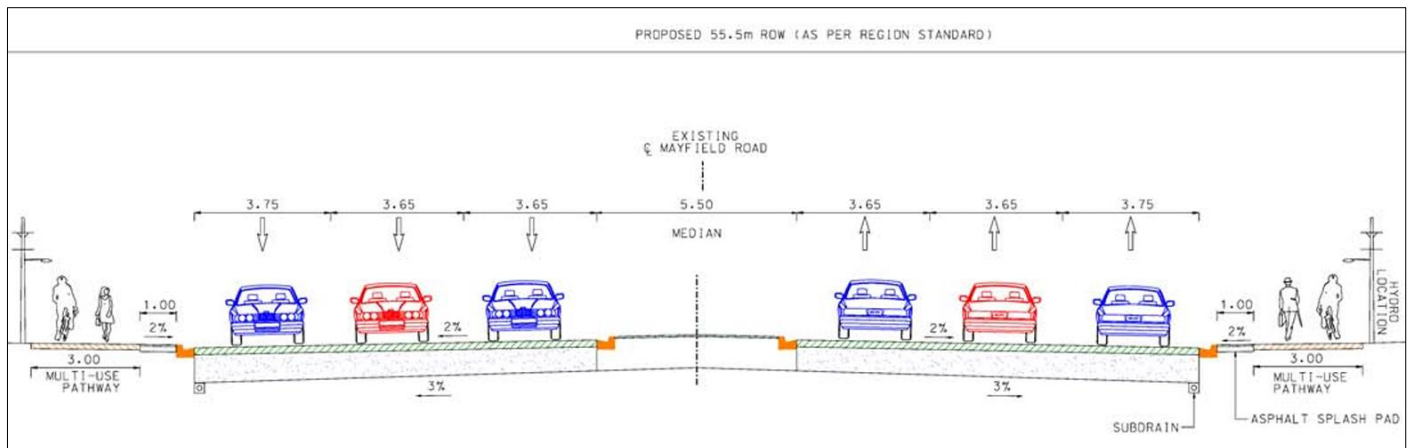


Figure 7 Mayfield Road Widening Cross-Section (Region of Peel)

4.2.4 McLaughlin Road Widening

The Town of Caledon completed an Environmental Assessment for the widening of McLaughlin Road within Mayfield West Phase 2, which also included the construction of a new east/west Spine Road. The environmental assessment confirmed that the preferred option included a widening of McLaughlin Road in addition to improved transit services and active transportation, travel demand management, and the construction of a Spine Road and interchange improvements.

Section 5.1.1 of the EA outlined the various alternatives considered for the widening of McLaughlin, which proposed to widen to a four-lane cross-section, widening to a four-lane cross-section while the shifting the road to the east or the west, or a hybrid of the three alternatives.

The typical cross-section for the widened McLaughlin Road was then discussed in Section 6.1.3 and illustrated in Figure 6-1 of the EA. The typical cross-section includes four through lanes, a left-turn lane as required at all intersections, and a bike lane on each side of the road. Figure 6-1 of the EA is also provided in **Figure 8**.

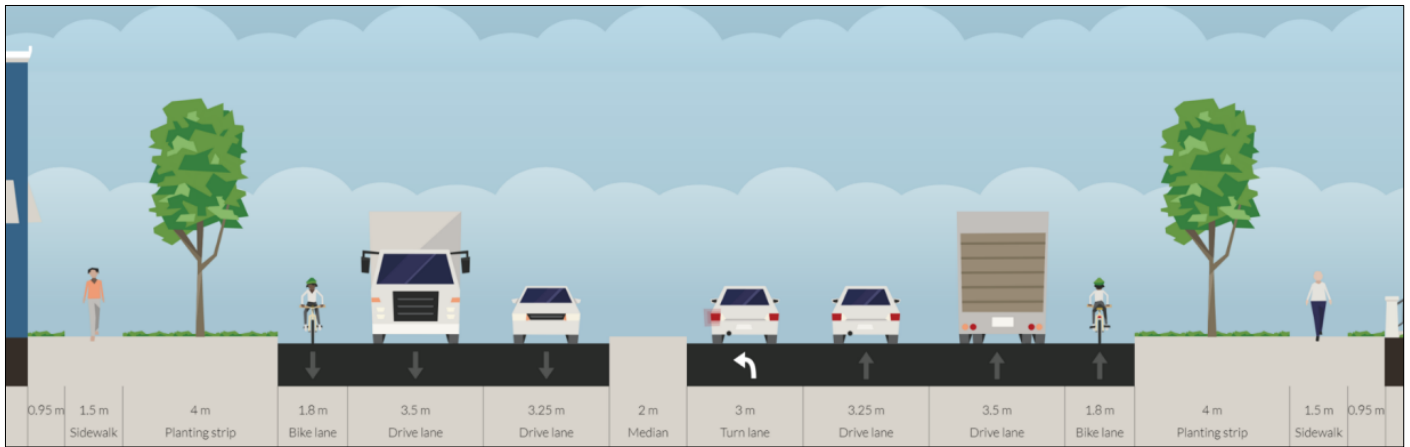


Figure 8 McLaughlin Road Widening Cross-Section (Town of Caledon)

Based on the findings of the EA, GHD will assume that the Town of Caledon will proceed with the widening of the McLaughlin Road through the subdivision. The widening of McLaughlin Road has been completed from the south up to Lippa Drive as part of the Stage 1B / Stage 2 of the subdivision. However, no timeline has been provided for construction to start through the Stage 3 lands and as a result the four-lane cross-section is assumed to be constructed once the traffic volumes along McLaughlin Road warrant it.

4.2.5 Chinguacousy Road Environmental Assessment

The Town of Caledon has initiated a Schedule 'C' Municipal Class Environmental Assessment along Chinguacousy Road, however the Class EA has not been completed. The Class EA is currently contemplating either a two-lane or a four-lane cross-section, and the Phase 2 Stage 1 & 2 Draft Plans have agreed to improve intersections and provide the necessary widenings as part of their Draft Plan Applications. Similarly, GHD will confirm if a widening is warranted along Chinguacousy based on future volumes.

4.3 Future Transit Improvements

The Town of Caledon is currently studying two Major Transit Station Areas within the Town, including the Mayfield West Planned Major Transit Station Area just south of the subject site at Hurontario and Tim Manly Avenue. The location of the planned transit hub is shown in **Figure 9**, retrieved from the Town's website, and is currently proposed to be a bus rapid transit station/stop.

The area allocated to the future transit hub has been included in the approved plan of subdivision for the property known as 12290 Hutchinson Farm Lane located in the Mayfield West Phase 2 Secondary Plan area.

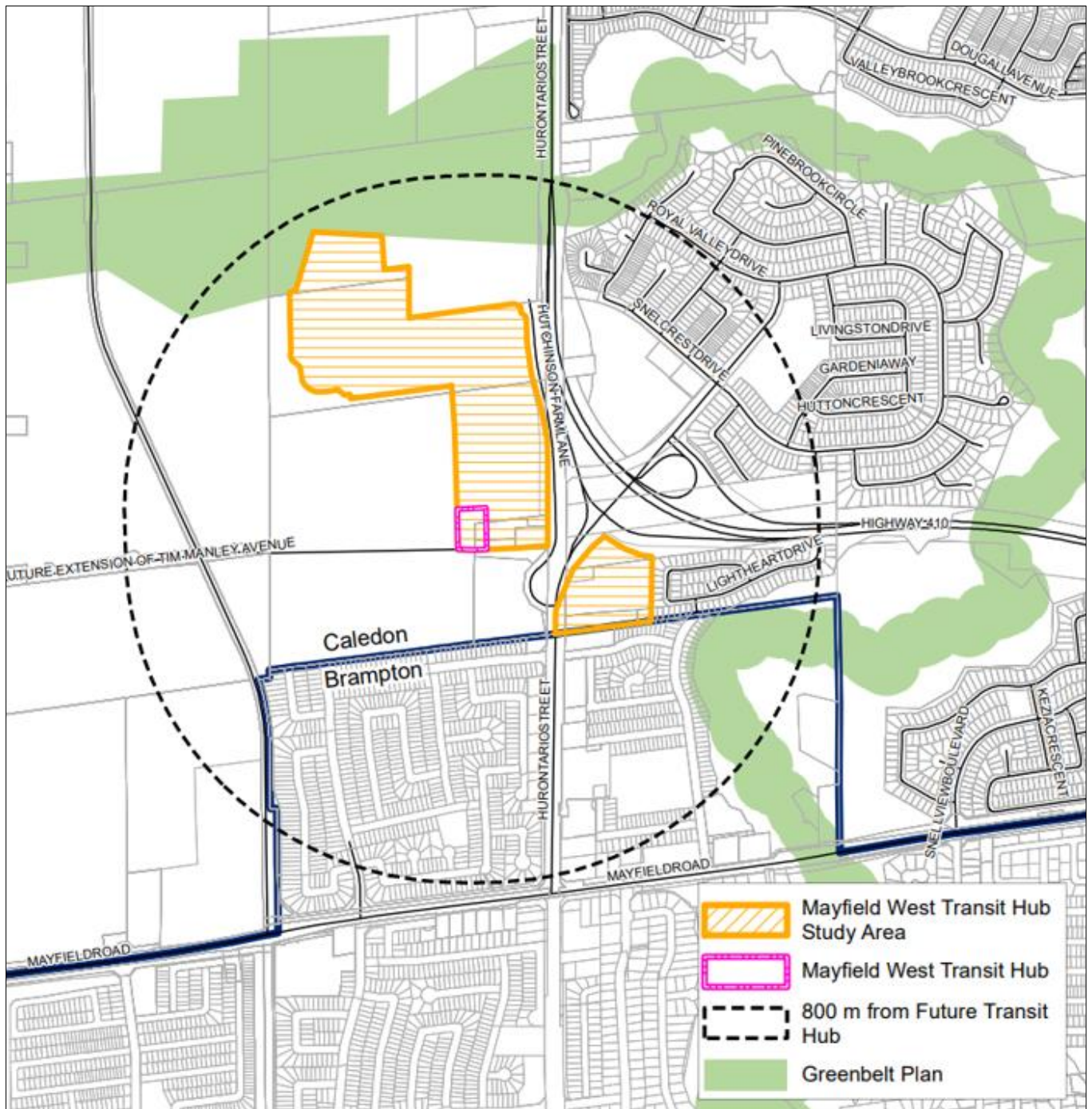


Figure 9 Mayfield West Planned Major Transit Station Area (Caledon.ca)

Although the MTSA is currently at a planning stage, it is important to note that one of two major transit station areas that the Town is currently studying is located a short distance from the subject site. The MTSA would provide future residents and employees of the study area an opportunity to explore alternative modes of travel and reduce their dependency from single occupant vehicle trips.

A staff report completed by the Town of Caledon noted that the Metrolinx Regional Transportation Plan 2041 had designated the portion of Hurontario Street between north of downtown Brampton to Mayfield West as a Priority Bus Corridor. Once the Hurontario LRT is operational, a future Bus Rapid Transit service can link the northern terminus of the LRT to the Town of Caledon in order to integrate the employment areas within the Region of Peel. It is also noted

that a major north/south transit spine would also have the potential to link many east/west rapid transit routes in order to improve higher order transit within the area.

The provision of this transit hub would provide the Town with a great opportunity to encourage public transit usage within the Mayfield West Phase 2 Stage 3 lands by providing residents and employees with a public transit link between their dwellings/workplaces and the hub and further connecting them with other local and regional transit routes.

4.4 Future Active Transportation Improvement

The Region of Peel and its three municipalities (Caledon, Mississauga, and Brampton) purchased the rail line formerly known as the Orangeville Brampton Railway. The line currently runs through the subject lands, just east of McLaughlin Road. The rail line will be converted to a multi-use trail that will provide an active transportation between the three municipalities in addition to connected to the Trans Canada Trail network of trails.

The Town of Caledon has identified the following network recommendations through the Town's Active Transportation Master Plan:

- A signed cycling route and a multi-use path along Old School Road
- A multi-use path along Chinguacousy Road
- A multi-use path along McLaughlin Road
- The Orangeville Brampton Rail multi-use trail

The proposed subdivision includes roads that have 22-metre (Street A and B) and 20-metre (Street C and D) right-of-ways that would require a sidewalk on both sides of the street throughout the subdivision.

As per the Town's Transportation Master Plan, dated October 2017, residential collector roadways are recommended to have a 3-metre off-street multi-use trail or a 1.5 metres striped on-street bike lane. The TMP also states that in the case of new construction, where multi-use paths are proposed, the multi-use path will take the place of the sidewalk.

The active transportation plan for the subdivision and how it will connect to the municipal road network is shown in **Figure 45**, and includes the active transportation network recommended through the Active Transportation Plan, sidewalks along the external road network, a sidewalk on one-side of the road and cycling facilities on the other side on Streets A-D, and a sidewalk on one side of the remaining roads throughout the subdivision.

4.5 Corridor Growth

GHD applied a two percent compounded annually growth rate to all roads within the study area, with the exception of a one percent growth rate on Hurontario Street at the intersection with Old School Road. This approach is consistent with the 2018 Transportation Master Plan Study and consistent with other studies completed in the area. The future volumes with only corridor growth applied is provided in **Appendix E**.

4.6 Background Development Traffic

GHD reviewed the Town's development application web portal to determine which planned or approved background developments located near the subject site would contribute to traffic volumes at the study intersections. The following sites were included as background traffic, and confirmed with Town staff through the Terms of Reference:

- Mayfield West Phase 1 - Stage 2 (BA Group – September 2021)
- Mayfield West Phase 2 - Stage 2 (Paradigm Transportation Solutions Limited – January 2018)

The proposed trip generation from each background development is summarized in the table below, with the trip distribution for each site provided in **Appendix E**. Only the Traffic Impact Study prepared for the Mayfield West Phase 1 lands provided separate trip assignments for scenarios with and without the Highway 413.

Table 1 Background Development Traffic

Background Development	Peak Hour Trips					
	Weekday AM			Weekday PM		
	In	Out	Total	In	Out	Total
Mayfield West Phase 1 - Stage 2	205	625	830	685	400	1,085
Mayfield West Phase 2 - Stage 2	2,687	3,648	6,351	4,216	3,650	7,868

The three developments (the subject site and the two background developments) all have varying timelines for full build-out of their respective subject sites. The follow methodology was provided to Town staff and confirmed to be acceptable to project the background development traffic under the future horizon years, and is based on the assumed build-out years provided in their respective TIS. It is understood that the background developments are at various stages of development and as a result the assumed timelines in each study may have varying build-out dates than what is currently occurring:

- For Mayfield West Phase 1 Stage 2, the TIS assumed a full build-out in 2028. Based on the most recent Google Earth information, the land had not been graded in 2022, so to be consistent we would like to assume that the first units would be occupied by 2024. To attain full build-out by 2028, this would result in 20% being built per year resulting in 60% of the site to be built in 2026 followed by 100% in 2028. For this background development, we would like to assume 60% of the site traffic will be included under the 2026 Future Background traffic with 100% of it added for the remaining horizon years.
- Similarly for Mayfield West Phase 2 Stage 2, the TIS had assumed their traffic to be 100% assigned under the 2031 horizon year. Based on Google Earth images again, it seems like the first units were occupied by 2021. To attain 100% build-out by 2031, this would result in 9% being built per year. As a result, we proposed to include 55% of the site traffic under the 2026 Future Background scenario, 80% under the 2029 Future Background scenario, and 100% for the remaining years.

The total site trips from the two background developments are provided (without and with the GTA West) in **Figure 13** and **Figure 14** for the 2026 horizon year, **Figure 15** and **Figure 16** for the 2029 horizon year, and **Figure 17** and **Figure 18** for the 2031 horizon year and beyond within **Appendix A**.

4.7 Future Background Traffic Volumes

The background traffic volumes for the 2028, 2033, and 2038 horizon years were derived by applying the respective growth rate to the projected 2024 traffic volumes and adding the total background development site traffic provided in their corresponding figure (**Figure 13** through **Figure 18**).

The resulting 2027 and 2032 future background traffic volumes are summarized in **Figure 19**, **Figure 20**, and **Figure 21** for the scenario without the GTA West Highway and in **Figure 24**, **Figure 25**, and **Figure 26** for the scenario with the GTA West Highway.

5. Site Generated Traffic

5.1 Site Traffic Generation

The Mayfield Phase 2 Stage 3 lands consist of a total of 4,687 dwelling units. As some townhouses can be permitted in both low-density and high-density residential designations, the breakdown between single family/semi-detached, townhouse, and mid-rise dwelling has not been finalized. To provide an assessment based on the various dwelling

types, the breakdown has assumed to be consistent with the Draft Plan submission, which generally consisted of 40% single family/semi-detached dwelling units, 30% townhouse dwelling units, and 30% mid-rise dwelling units.

The breakdown results in a total of approximately 1,875 Single/Semi-Detached dwelling units, 1,406 Street/Lane Townhouse dwelling units, and 1,406 dwelling units within Medium Density Blocks.

As the elementary school block is at a very early stage in planning, the anticipated student population is currently unknown. In order to estimate the trip generation for the block, student populations were estimated based on information found in the DPCDSB Education DC Background Study, 2019 and Peel District School Board Education DC Background Study, 2019. The PDSB currently has an average of 606 students per school while the DPCDSB school while the DPCDSB currently has an average of 431 students. Two school blocks have been allocated to the Peel District School Board while the third block was allocated to the Dufferin Peel Catholic District School Boards. As a result, the subject lands are estimated to have a total student capacity of 1,643 students.

Consistent with previously completed studies, in order to estimate the trip generation for the commercial blocks it is assumed that the total GFA of the commercial blocks would correspond to 25% of the 14 hectares, resulting in approximately 376,737 ft² of GFA.

The trip generation for the residential uses was calculated using rates provided in the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition using Land Use Code (LUC) 210 (Single-Family Detached Housing), LUC 220 (Multifamily Housing – Low-Rise), LUC 222 (Multifamily Housing – Mid-Rise) for the residential components, LUC 820 (Shopping Center - >150k) for the commercial component, and LUC 520 (Elementary School) for the elementary school blocks.

A 5% modal split was applied to both the residential and commercial component, and a 35% pass-by rate during the p.m. peak for the commercial component, consistent with the rates used in the 2018 Transportation Master Plan and previously completed studies within the surrounding area.

Although not finalized, it is anticipated that the three school catchment areas will encompass most of the subject site lands. It is expected that most of the trips generated by the school will be diverted trips from the subject lands residential component from parents dropping off students in the morning and proceeding to work as the morning peak hours for both uses typically overlap. A similar pattern is also expected during the afternoon peak hour as parents return home and pick up their kids on the way, however the schools are estimated to generate less trips during the afternoon commuter peak hour as the school peak typically occurs before the afternoon commuter peak hour.

Despite a low volume of new primary trips expected to be generated by the subject land's schools, GHD assumed that only 20% of the school's trip generation would be new primary trips to account for students getting dropped off by parents that are not leaving the study area, staff that typically live outside of the catchment area, and some students that may be located outside of the catchment area.

In order to establish the trip generation for each phase, GHD considered the phasing of each block and how many units would be constructed in each phase. For the commercial blocks and elementary school blocks, despite some of the lands located in earlier phases it was assumed that they would both be built out and operational only by the 2031 horizon year.

Table 2 below summarizes the estimated trip generation for the proposed subdivision.

Table 2 *Estimated Site Trips*

Land Use (LUC)	Dwelling Units/GFA/ School Capacity	Parameters	Peak Hour					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
Single/Semi-Detached, (LUC 210)	1,875 units	Trip Ratio	25%	75%	100%	63%	37%	100%%
		Gross Trips	328	985	1313	1111	652	1763
		Total Mode Split Reduction	-16	-49	-66	-56	-33	-88
		Total New Trips	312	936	1248	1055	619	1674
Street/Lane Townhouse (LUC 220)	1,406 units	Trip Ratio	24%	76%	100%	63%	37%	100%
		Gross Trips	134	428	562	452	265	717
		Total Mode Split Reduction	-7	-21	-28	-23	-13	-36
		Total New Trips	127	407	534	429	252	681
Medium Density Blocks (LUC 221)	1,406 units	Trip Ratio	23%	77%	100%	61%	39%	100%
		Gross Trips	139	468	607	334	215	549
		Total Mode Split Reduction	-7	-23	-30	-17	-11	-27
		Total New Trips	132	445	577	317	204	521
Commercial (LUC 820)	20,800 m ²	Trip Ratio	62%	38%	100%	48%	52%	100%
		Gross Trips	220	136	356	704	763	1467
		Total Mode Split Reduction	-11	-7	-18	-35	-38	-73
		Pass By (35%)	N/A	N/A	N/A	-257	-257	-514
		Total New Trips	209	129	338	412	468	880
Elementary School (LUC 520)	1,643 students	Trip Ratio	54%	46%	100%	46%	54%	100%
		Gross Trips	656	560	1216	121	142	263
		Diverted Trip Reduction	-525	-448	-973	-97	-114	-210
		Total New Trips	<u>131</u>	<u>112</u>	<u>243</u>	<u>24</u>	<u>28</u>	<u>52</u>
Total Pass-By (Full Build-Out)			N/A	N/A	N/A	257	257	514
Total Primary Trips (Phase 1, 2026)			26	80	106	89	52	141
Total Primary Trips (Phases 1-4, 2029)			142	443	585	454	270	724
Total Primary Trips (Full Build-out, 2031 and Beyond)			911	2,029	2,940	2,237	1,571	3,809

The first subphase of the proposed development east of McLaughlin Road is expected to be constructed by 2026 and includes a total of 106 new two-way trips consisting of 26 inbound and 80 outbound trips during weekday a.m. peak hour and 141 new two-way trips consisting of 89 inbound and 52 outbound trips during the weekday p.m. peak hour.

Under the 2029 horizon year, including Phases 1 through 4 built out, the majority of the subject site on the east side of McLaughlin Road is expected to generate 585 new two-way trips consisting of 142 inbound and 443 outbound trips during weekday a.m. peak hour and 724 new two-way trips consisting of 454 inbound and 270 outbound trips during the weekday p.m. peak hour.

Under the 2031 horizon year, with the subject site assumed to be fully built-out, it is expected to generate 2,940 new two-way trips consisting of 911 inbound and 2,029 outbound trips during weekday a.m. peak hour and 3,809 new two-way trips consisting of 2,237 inbound and 1,571 outbound trips during the weekday p.m. peak hour.

5.2 Site Traffic Distribution and Assignment

In order to establish the site traffic distribution for the subject site, GHD considered the phasing of the site based on information from the Draft Plan submission and the anticipated construction of each roadway and is subject to change.

Under the first horizon year in 2026, only the blocks within the vicinity of Street 'A' between McLaughlin Road and the rail line (formerly known as the Orangeville Brampton Railway) are anticipated to be built out. As a result, all site traffic was assumed to enter and exit the site through the intersection of McLaughlin Road and Street 'A'.

Under the 2029 horizon year, it is anticipated that the phasing continues towards the east up to Hurontario Street. Under this horizon year, it is assumed that the entirety of Street 'A' is built-out in addition to a proposed signalized intersection at Street 'A' and Hurontario Street.

As construction is assumed to be completed by 2031, the remaining units and roadways to the east of McLaughlin Road will be built-out providing a third access onto the external road network with Street 'D' providing a north/south connection between Old School Road and Street 'A'. In addition, the entirety of the west portion of the lands to the west of McLaughlin Road are also assumed to be built-out.

The general phasing of the subject site through the three horizon years is shown in **Figure 10**, with the breakdown of each dwelling type per horizon year provided in **Table 3**. The phasing shown in the figure below is not to scale and is only provided to give a general idea of the phasing for the subject lands.

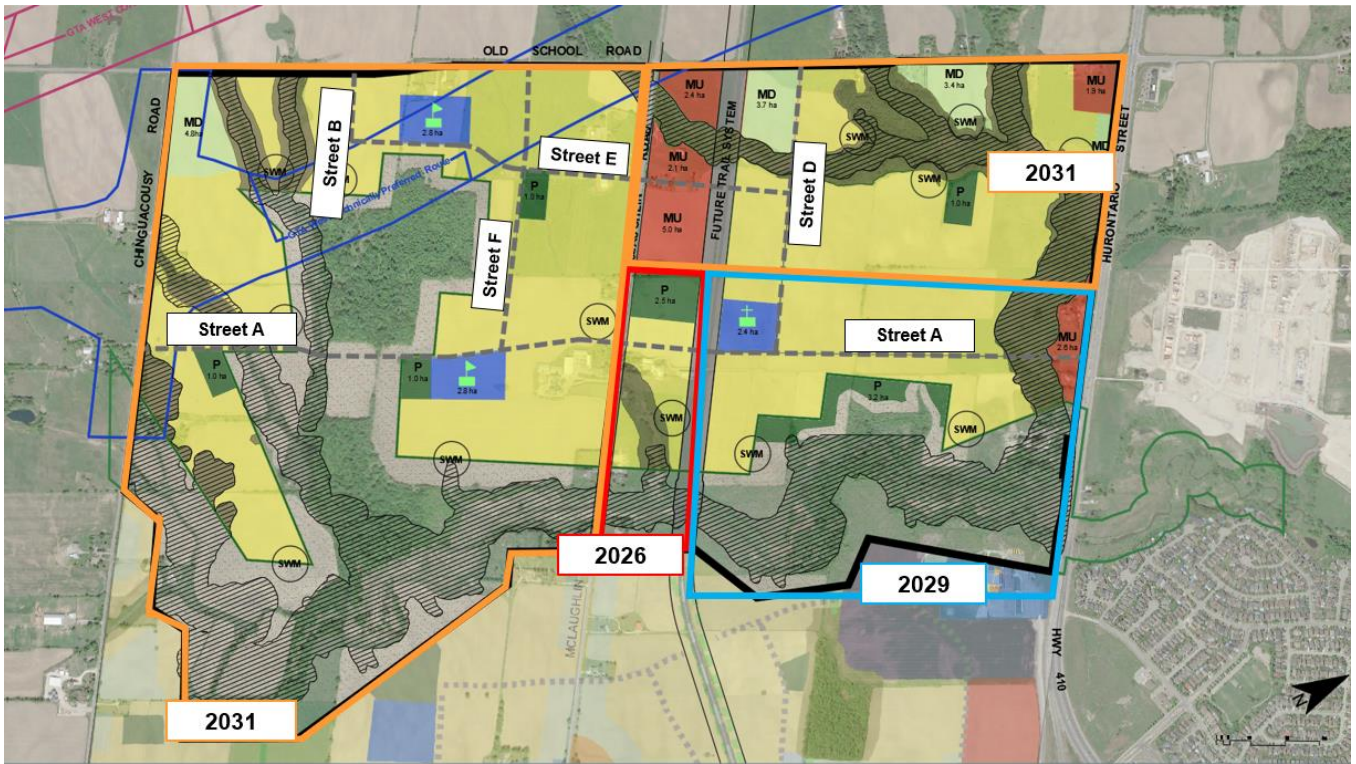


Figure 10 Phasing Breakdown

Table 3 Dwelling Unit Count per Horizon Year

Horizon Year	Detached	Townhouse	Medium Density	Commercial	School
2026	102 units	102 units	N/A	N/A	N/A
2029	482	387	285	N/A	N/A
2031	1,875	1,406	1,406	14 ha	1,643 students

Despite the commercial and elementary school blocks being located within areas identified as being under 2029 phasing, it was assumed that both blocks would only generate site traffic once the entire subdivision is built-out under the 2031 horizon year.

The distribution of the site-generated traffic was based on a review of the 2016 Transportation Tomorrow Survey (TTS) with the trip distribution summarized in **Table 4** (without the GTA West Highway) and **Table 5** (with the GTA West Highway) below.

Table 4 Trips Distribution – Without GTA West Highway

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Percentage of Inbound Trips	Percentage of Outbound Trips	Percentage of Inbound Trips	Percentage of Outbound Trips
South to Highway 410	30%	45%	45%	35%

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Percentage of Inbound Trips	Percentage of Outbound Trips	Percentage of Inbound Trips	Percentage of Outbound Trips
West on Old School Road	4%	4%	4%	5%
East on Old School Road	1%	0%	0%	1%
North on McLaughlin Road	8%	5%	4%	5%
South on McLaughlin Road	16%	13%	14%	16%
North on Hurontario Street	10%	5%	4%	5%
South on Hurontario Street	15%	15%	15%	16%
South on Chinguacousy Road	16%	13%	14%	16%
Total	100%	100%	100%	100%

Table 5 *Trips Distribution – With GTA West Highway*

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Percentage of Inbound Trips	Percentage of Outbound Trips	Percentage of Inbound Trips	Percentage of Outbound Trips
South to Highway 410	25%	35%	33%	30%
West on Old School Road	5%	5%	3%	5%
East on Old School Road	0%	0%	0%	0%
North on McLaughlin Road	8%	5%	3%	5%
South on McLaughlin Road	15%	10%	14%	15%
North on Hurontario Street	8%	5%	4%	5%
South on Hurontario Street	19%	25%	24%	20%
South on Chinguacousy Road	15%	10%	14%	15%

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Percentage of Inbound Trips	Percentage of Outbound Trips	Percentage of Inbound Trips	Percentage of Outbound Trips
North on Hurontario to the GTA West Highway	5%	5%	5%	5%
Total	100%	100%	100%	100%

The estimated site trips generated by the subdivision and distributed to the study area road network for the weekday a.m. and p.m. peak hours are shown in **Figure 29**, **Figure 30**, and **Figure 31** for the 2026, 2029, and 2031 horizon year and beyond for the scenario without the GTA West Highway and **Figure 32**, **Figure 33**, and **Figure 34** for the 2026, 2029, and 2031 horizon year and beyond for the scenario with the proposed GTA West Highway within **Appendix A**.

The portion of the subject lands located to the east of McLaughlin Road has been assumed to have one access onto the external road network under the 2026 horizon year (McLaughlin Road and Street 'A'), a second access under the 2029 horizon year (Hurontario Street and Street 'A'), and a third access under the 2031 horizon year (Old School Road Street 'D'). Once multiple accesses have been constructed for this portion of the subject lands, site traffic was assigned to each access depending on the shortest route between the site and the external road network.

With only one access to the external road network under the 2026 horizon year, the shortest route between the subject site and Highway 410 would be provided through the new Highway 410/Hurontario Street interchange at Tim Manley as discussed in **Section 4.2.2**. Once a connection to Hurontario is established under the 2029 horizon year the site generated traffic would have its shortest route to Highway 410 provided through the new connection.

6. Future Total Traffic

The future total traffic conditions in the weekday a.m. and p.m. peak hours for the 2026, 2029, 2031, 2036, and 2041 planning horizons were derived by combining the projected future background traffic with the corresponding estimated site generated traffic. The resulting traffic volumes are presented in **Figure 36** to **Figure 39** for the scenario without the GTA West Highway and **Figure 40** to **Figure 44** for the scenario with the GTA West Highway within **Appendix A**.

7. Capacity Analysis

The capacity analysis identifies how well the intersections and driveways are operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 procedure within the Synchro Version 11 Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queuing characteristics are reported as the predicted 95th percentile queue for each turning movement. Both pedestrian crossing volumes and heavy vehicle proportions are included in the analyses. The peak hour factors from the existing traffic counts was used to analyze existing and future traffic conditions.

The analysis includes identification and required modifications and improvements (if any) at intersections where the addition of background growth or background growth plus site-generated traffic volumes causes the following:

'Critical' intersections and movements for a signalized or unsignalized intersection include:

- V/C ratios for overall intersections operations, through movements, or shared through/turning movements increase to 0.90 or above;
- V/C ratios for exclusive movements increase to 1.00 or above; or

- 95th percentile queue length for individual movements that are projected to, or exceed, the storage length.

The following tables summarize the HCM capacity results for the study intersections during the weekday a.m. and p.m. peak hours under existing (2024), future background (2026, 2029, 2031, 2036 & 2041) and future total (2026, 2029, 2031, 2036 & 2041) traffic conditions. The detailed calculation sheets are provided in **Appendix D**. The SimTraffic queuing reports are also provided in **Appendix D**.

7.1 Old School Road and Chinguacousy Road

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic condition are summarized in the following table.

Table 6 Capacity analysis of Old School Road and Chinguacousy Road (Without Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	EBTLR = 0.28 (A) 9 WBTLR = 0.21 (A) 9 NBTLR = 0.14 (A) 8 SBTLR = 0.13 (A) 9	EBTLR = 5 m WBTLR = 5 m NBTLR = 5 m SBTLR = 5 m	EBTLR = 0.24 (A) 9 WBTLR = 0.42 (B) 11 NBTLR = 0.18 (A) 9 SBTLR = 0.11 (A) 9	EBTLR = 5 m WBTLR = 5 m NBTLR = 5 m SBTLR = 5 m
Future Background 2026	EBTLR = 0.4 (B) 13 WBL = 0.18 (B) 10 WBTR = 0.31 (A) 11 NBTLR = 0.52 (B) 14 SBTLR = 0.32 (B) 12	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 5 m SBTLR = 5 m	EBTLR = 0.45 (C) 17 WBL = 0.41 (C) 15 WBTR = 0.67 (A) 23 NBTLR = 0.85 (E) 36 SBTLR = 0.41 (C) 16	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 10 m SBTLR = 5 m
Future Total 2026	EBTLR = 0.4 (B) 13 WBL = 0.18 (B) 10 WBTR = 0.32 (A) 11 NBTLR = 0.52 (B) 14 SBTLR = 0.32 (B) 12	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 5 m SBTLR = 5 m	EBTLR = 0.46 (C) 17 WBL = 0.41 (C) 15 WBTR = 0.68 (A) 24 NBTLR = 0.86 (E) 37 SBTLR = 0.41 (C) 16	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 10 m SBTLR = 5 m
Future Background 2029	<u>Overall: 0.45 (A) 9</u> EBTLR = 0.57 (B) 14 WBL = 0.46 (B) 13 WBTR = 0.43 (B) 12 NBTLR = 0.4 (A) 6 SBTLR = 0.25 (A) 5	EBTLR = 25 m WBL = 15 m WBTR = 20 m NBTLR = 25 m SBTLR = 20 m	<u>Overall: 0.67 (C) 21</u> EBTLR = 0.36 (C) 20 WBL = 0.63 (C) 28 WBTR = 0.54 (C) 23 NBTLR = 0.7 (C) 21 SBTLR = 0.32 (B) 14	EBTLR = 45 m WBL = 55 m WBTR = 70 m NBTLR = 105 m SBTLR = 40 m
Future Total 2029	<u>Overall: 0.46 (A) 9</u> EBTLR = 0.58 (B) 14 WBL = 0.49 (B) 13 WBTR = 0.49 (B) 12 NBTLR = 0.41 (A) 6 SBTLR = 0.28 (A) 5	EBTLR = 25 m WBL = 15 m WBTR = 20 m NBTLR = 30 m SBTLR = 20 m	<u>Overall: 0.74 (C) 24</u> EBTLR = 0.43 (C) 21 WBL = 0.75 (D) 36 WBTR = 0.64 (C) 26 NBTLR = 0.73 (C) 22 SBTLR = 0.39 (B) 14	EBTLR = 55 m WBL = 75 m WBTR = 85 m NBTLR = 110 m SBTLR = 45 m
Future Background 2031	<u>Overall: 0.38 (A) 9</u> EBTLR = 0.57 (B) 14 WBL = 0.54 (B) 14 WBTR = 0.44 (B) 12 NBTL = 0.25 (A) 5 NBR = 0.19 (A) 5 SBTLR = 0.29 (A) 6	EBTLR = 25 m WBL = 15 m WBTR = 20 m NBTL = 20 m NBR = 10 m SBTLR = 25 m	<u>Overall: 0.51 (C) 26</u> EBTLR = 0.43 (C) 35 WBL = 0.5 (B) 19 WBTR = 0.43 (C) 21 NBTL = 0.56 (C) 30 NBR = 0.36 (C) 26 SBTLR = 0.49 (C) 29	EBTLR = 80 m WBL = 60 m WBTR = 80 m NBTL = 105 m NBR = 50 m SBTLR = 80 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	Overall: 0.51 (A) 10 EBTLR = 0.46 (A) 10 WBL = 0.68 (B) 16 WBTR = 0.45 (A) 10 NBTL = 0.32 (A) 8 NBR = 0.24 (A) 7 SBTLR = 0.37 (A) 8	EBTLR = 30 m WBL = 35 m WBTR = 25 m NBTL = 25 m NBR = 10 m SBTLR = 25 m	Overall: 0.65 (C) 30 EBTLR = 0.65 (D) 43 WBL = 0.72 (C) 25 WBTR = 0.53 (C) 23 NBTL = 0.59 (C) 31 NBR = 0.49 (C) 29 SBTLR = 0.63 (C) 34	EBTLR = 110 m WBL = 80 m WBTR = 105 m NBTL = 110 m NBR = 75 m SBTLR = 95 m
Future Background 2036	Overall: 0.4 (A) 9 EBTLR = 0.6 (B) 14 WBL = 0.58 (B) 15 WBTR = 0.46 (B) 12 NBTL = 0.26 (A) 5 NBR = 0.19 (A) 5 SBTLR = 0.31 (A) 6	EBTLR = 25 m WBL = 20 m WBTR = 20 m NBTL = 25 m NBR = 10 m SBTLR = 25 m	Overall: 0.53 (C) 27 EBTLR = 0.45 (C) 34 WBL = 0.51 (B) 19 WBTR = 0.45 (C) 21 NBTL = 0.59 (C) 32 NBR = 0.38 (C) 27 SBTLR = 0.53 (C) 31	EBTLR = 80 m WBL = 60 m WBTR = 90 m NBTL = 110 m NBR = 55 m SBTLR = 85 m
Future Total 2036	Overall: 0.54 (A) 10 EBTLR = 0.49 (B) 10 WBL = 0.71 (B) 17 WBTR = 0.46 (A) 10 NBTL = 0.34 (A) 8 NBR = 0.24 (A) 8 SBTLR = 0.4 (A) 9	EBTLR = 30 m WBL = 40 m WBTR = 30 m NBTL = 25 m NBR = 10 m SBTLR = 30 m	Overall: 0.69 (C) 31 EBTLR = 0.67 (D) 43 WBL = 0.74 (C) 25 WBTR = 0.56 (C) 23 NBTL = 0.61 (C) 33 NBR = 0.51 (C) 30 SBTLR = 0.69 (D) 38	EBTLR = 115 m WBL = 80 m WBTR = 115 m NBTL = 115 m NBR = 80 m SBTLR = 100 m
Future Background 2041	Overall: 0.43 (A) 9 EBTLR = 0.54 (B) 11 WBL = 0.49 (B) 11 WBTR = 0.42 (B) 10 NBTL = 0.29 (A) 7 NBR = 0.2 (A) 6 SBTLR = 0.36 (A) 7	EBTLR = 30 m WBL = 20 m WBTR = 20 m NBTL = 25 m NBR = 10 m SBTLR = 30 m	Overall: 0.56 (C) 28 EBTLR = 0.51 (D) 37 WBL = 0.54 (B) 20 WBTR = 0.5 (C) 23 NBTL = 0.59 (C) 31 NBR = 0.38 (C) 27 SBTLR = 0.54 (C) 31	EBTLR = 90 m WBL = 60 m WBTR = 100 m NBTL = 110 m NBR = 55 m SBTLR = 85 m
Future Total 2041	Overall: 0.57 (B) 10 EBTLR = 0.52 (B) 10 WBL = 0.75 (B) 19 WBTR = 0.48 (A) 10 NBTL = 0.35 (A) 8 NBR = 0.27 (A) 8 SBTLR = 0.42 (A) 9	EBTLR = 35 m WBL = 40 m WBTR = 30 m NBTL = 25 m NBR = 15 m SBTLR = 30 m	Overall: 0.73 (C) 33 EBTLR = 0.74 (D) 48 WBL = 0.78 (C) 28 WBTR = 0.61 (C) 25 NBTL = 0.62 (C) 32 NBR = 0.52 (C) 30 SBTLR = 0.7 (D) 38	EBTLR = 135 m WBL = 85 m WBTR = 130 m NBTL = 115 m NBR = 80 m SBTLR = 105 m

Under existing conditions, the unsignalized intersection of Old School Road and Chinguacousy Road is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing. All approaches are operating with delays of 9 seconds or less during the a.m. peak and 11 seconds or less during the p.m. peak.

With the addition of corridor growth and background traffic under the 2026 future background scenario, the intersection continues to operate at satisfactory levels. A westbound left-turn lane was provided in order to mitigate the delays for that movement. With the addition of site traffic from Phase 1 of the development, the intersection continues to operate satisfactory levels.

With the addition of corridor growth and background traffic under the 2029 future background scenario, the signalization of the intersection is required to accommodate future growth at the intersection. As a signalized

intersection, it operates with an overall v/c ratio of 0.45 LOS A during the a.m. peak hour and 0.67 LOS C during the p.m. peak hour with no critical movements.

Under the 2029 future total scenario, with the addition of site generated traffic, the intersection operates with an overall v/c ratio of 0.46 LOS A during the a.m. peak hour and 0.74 LOS C during the p.m. peak hour. The site continues to have a negligible impact on the operation of the intersection.

Under the 2031 future background condition, with the addition of corridor growth, background development traffic, and a northbound right-turn lane, the intersection operates with an overall v/c ratio of 0.38 LOS A during the a.m. peak hour and 0.51 LOS C during the p.m. peak hour.

With the addition of site generated traffic under the future total 2031 condition, the intersection is reported to operate with an overall v/c ratio of 0.51 LOS A during the a.m. peak hour and 0.65 LOS C during the p.m. peak hour. With the proposed northbound right-turn lane, the intersection is reported to continue to operate at satisfactory levels.

Under the ultimate horizon year, the intersection operates with an overall v/c ratio of 0.57 LOS B during the a.m. peak hour and 0.73 LOS C during the p.m. peak hour. Despite the critical operations during the p.m. peak hour, all movements as well as the overall intersection operates below a critical level during both peak hours.

7.2 Old School Road and McLaughlin Road

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 7 Capacity analysis of Old School Road and McLaughlin Road (Without Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	EBTLR = 0.41 (B) 12 WBTLR = 0.35 (B) 11 NBTLR = 0.22 (A) 10 SBTLR = 0.24 (B) 10	EBTLR = 5 m WBTLR = 5 m NBTLR = 5 m SBTLR = 5 m	EBTLR = 0.36 (B) 12 WBTLR = 0.61 (C) 16 NBTLR = 0.35 (B) 12 SBTLR = 0.14 (B) 10	EBTLR = 5 m WBTLR = 5 m NBTLR = 5 m SBTLR = 5 m
Future Background 2026	EBTLR = 0.91 (E) 48 WBL = 0.37 (C) 14 WBTR = 0.55 (A) 18 NBTL = 0.18 (C) 12 NBR = 0.56 (A) 18 SBTLR = 0.39 (C) 17	EBTLR = 10 m WBL = 5 m WBTR = 5 m NBTL = 5 m NBR = 5 m SBTLR = 5 m	EBTLR = 0.94 (F) 55 WBL = 0.65 (F) 24 WBTR = 1.04 (A) 78 NBTL = 0.37 (C) 15 NBR = 0.62 (A) 20 SBTLR = 0.21 (B) 15	EBTLR = 15 m WBL = 5 m WBTR = 15 m NBTL = 5 m NBR = 5 m SBTLR = 5 m
Future Total 2026	EBTLR = 0.92 (E) 50 WBL = 0.38 (C) 15 WBTR = 0.56 (A) 19 NBTL = 0.2 (C) 12 NBR = 0.57 (A) 18 SBTLR = 0.4 (C) 17	EBTLR = 15 m WBL = 5 m WBTR = 5 m NBTL = 5 m NBR = 5 m SBTLR = 5 m	EBTLR = 0.96 (F) 60 WBL = 0.67 (F) 25 WBTR = 1.05 (A) 83 NBTL = 0.39 (C) 15 NBR = 0.63 (A) 21 SBTLR = 0.23 (C) 15	EBTLR = 15 m WBL = 5 m WBTR = 15 m NBTL = 5 m NBR = 5 m SBTLR = 5 m
Future Background 2029	<u>Overall: 0.55 (C) 21</u> EBTLR = 0.84 (C) 33 WBL = 0.59 (B) 17 WBTR = 0.36 (B) 13 NBTL = 0.16 (B) 16 NBR = 0.23 (B) 17 SBTLR = 0.27 (B) 18	EBTLR = 105 m WBL = 30 m WBTR = 45 m NBTL = 20 m NBR = 20 m SBTLR = 35 m	<u>Overall: 0.65 (B) 20</u> EBTLR = 0.64 (C) 21 WBL = 0.62 (A) 10 WBTR = 0.45 (A) 7 NBTL = 0.63 (D) 39 NBR = 0.26 (C) 33 SBTLR = 0.3 (C) 34	EBTLR = 125 m WBL = 45 m WBTR = 75 m NBTL = 50 m NBR = 25 m SBTLR = 25 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2029	<u>Overall: 0.61 (C) 23</u> EBTLR = 0.88 (D) 36 WBL = 0.64 (B) 18 WBTR = 0.4 (B) 13 NBTL = 0.25 (B) 19 NBR = 0.3 (B) 19 SBTLR = 0.32 (B) 20	EBTLR = 135 m WBL = 30 m WBTR = 50 m NBTL = 30 m NBR = 25 m SBTLR = 40 m	<u>Overall: 0.8 (C) 25</u> EBTLR = 0.83 (C) 31 WBL = 0.79 (B) 19 WBTR = 0.58 (A) 10 NBTL = 0.7 (D) 42 NBR = 0.47 (C) 35 SBTLR = 0.54 (D) 36	EBTLR = 195 m WBL = 75 m WBTR = 120 m NBTL = 60 m NBR = 45 m SBTLR = 40 m
Future Background 2031	<u>Overall: 0.53 (B) 14</u> EBTLR = 0.58 (B) 16 WBL = 0.47 (A) 7 WBTR = 0.18 (A) 6 NBTL = 0.31 (B) 18 NBR = 0.27 (B) 17 SBTLR = 0.48 (B) 19	EBTLR = 45 m WBL = 25 m WBTR = 15 m NBTL = 25 m NBR = 20 m SBTLR = 35 m	<u>Overall: 0.63 (B) 16</u> EBTLR = 0.64 (C) 22 WBL = 0.72 (B) 11 WBTR = 0.31 (A) 7 NBTL = 0.53 (C) 24 NBR = 0.31 (C) 22 SBTLR = 0.24 (C) 21	EBTLR = 75 m WBL = 65 m WBTR = 40 m NBTL = 55 m NBR = 25 m SBTLR = 30 m
Future Total 2031	<u>Overall: 0.72 (B) 20</u> EBTLR = 0.76 (C) 22 WBL = 0.71 (B) 16 WBTR = 0.24 (A) 7 NBTL = 0.45 (C) 25 NBR = 0.49 (C) 26 SBTLR = 0.63 (C) 29	EBTLR = 105 m WBL = 55 m WBTR = 30 m NBTL = 45 m NBR = 45 m SBTLR = 60 m	<u>Overall: 0.83 (C) 31</u> EBTLR = 0.86 (D) 37 WBL = 0.9 (D) 40 WBTR = 0.43 (A) 8 NBTL = 0.69 (D) 43 NBR = 0.67 (D) 42 SBTLR = 0.72 (D) 47	EBTLR = 140 m WBL = 180 m WBTR = 80 m NBTL = 70 m NBR = 75 m SBTLR = 60 m
Future Background 2036	<u>Overall: 0.55 (B) 14</u> EBTLR = 0.6 (B) 17 WBL = 0.5 (A) 8 WBTR = 0.19 (A) 6 NBTL = 0.33 (B) 18 NBR = 0.28 (B) 18 SBTLR = 0.52 (B) 20	EBTLR = 50 m WBL = 25 m WBTR = 20 m NBTL = 25 m NBR = 20 m SBTLR = 40 m	<u>Overall: 0.65 (B) 17</u> EBTLR = 0.65 (C) 22 WBL = 0.75 (B) 13 WBTR = 0.33 (A) 7 NBTL = 0.56 (C) 25 NBR = 0.31 (C) 23 SBTLR = 0.26 (C) 22	EBTLR = 80 m WBL = 75 m WBTR = 45 m NBTL = 60 m NBR = 25 m SBTLR = 30 m
Future Total 2036	<u>Overall: 0.75 (C) 21</u> EBTLR = 0.78 (C) 24 WBL = 0.74 (B) 19 WBTR = 0.25 (A) 7 NBTL = 0.46 (C) 26 NBR = 0.5 (C) 27 SBTLR = 0.67 (C) 32	EBTLR = 110 m WBL = 60 m WBTR = 30 m NBTL = 45 m NBR = 50 m SBTLR = 70 m	<u>Overall: 0.87 (C) 34</u> EBTLR = 0.87 (D) 38 WBL = 0.94 (D) 50 WBTR = 0.45 (A) 8 NBTL = 0.73 (D) 46 NBR = 0.71 (D) 45 SBTLR = 0.8 (E) 56	EBTLR = 150 m WBL = 190 m WBTR = 80 m NBTL = 80 m NBR = 80 m SBTLR = 65 m
Future Background 2041	<u>Overall: 0.58 (B) 15</u> EBTLR = 0.62 (B) 18 WBL = 0.53 (A) 8 WBTR = 0.2 (A) 6 NBTL = 0.34 (B) 19 NBR = 0.34 (B) 19 SBTLR = 0.56 (C) 21	EBTLR = 60 m WBL = 30 m WBTR = 20 m NBTL = 30 m NBR = 30 m SBTLR = 50 m	<u>Overall: 0.67 (B) 18</u> EBTLR = 0.67 (C) 24 WBL = 0.77 (B) 15 WBTR = 0.34 (A) 8 NBTL = 0.59 (C) 28 NBR = 0.32 (C) 24 SBTLR = 0.29 (C) 24	EBTLR = 90 m WBL = 90 m WBTR = 50 m NBTL = 70 m NBR = 30 m SBTLR = 35 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2041	<u>Overall: 0.78 (C) 24</u> EBTLR = 0.8 (C) 26 WBL = 0.77 (C) 24 WBTR = 0.26 (A) 7 NBTL = 0.48 (C) 28 NBR = 0.56 (C) 29 SBTLR = 0.72 (D) 35	EBTLR = 120 m WBL = 75 m WBTR = 35 m NBTL = 50 m NBR = 60 m SBTLR = 75 m	<u>Overall: 0.93 (D) 39</u> EBTLR = 0.93 (D) 47 WBL = 0.95 (D) 54 WBTR = 0.46 (A) 9 NBTL = 0.78 (D) 53 NBR = 0.65 (D) 44 SBTLR = 0.94 (F) 89	EBTLR = 165 m WBL = 190 m WBTR = 80 m NBTL = 85 m NBR = 75 m SBTLR = 85 m

Under existing conditions, the unsignalized intersection of Old School Road and McLaughlin Road is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing. All approaches are operating with delays of 12 seconds or less during the a.m. peak and 16 seconds or less during the p.m. peak.

With the continued operation of the intersection with an all-way stop-control under the 2026 future background condition, the intersection operates at satisfactory levels with a v/c ratio of 1.04 in the westbound through/right movement during the p.m. peak hour. In order to mitigate some of the delays, an auxiliary left-turn lane has been provided the westbound approach and a right-turn lane in the northbound approach in order to accommodate future volumes generated by corridor growth and background developments.

With the addition of Phase 1 site generated traffic under the 2026 horizon year, the intersection continues to operate at a similar level under the future total scenario as it did under the future background condition.

In order to accommodate future traffic levels, the intersection was converted to a signalized intersection under the 2029 future background scenario. As a signalized intersection, it operates with an overall v/c ratio of 0.55 LOS C during the a.m. peak hour and 0.65 LOS B during the p.m. peak hour without any critical movements.

With the addition of site generated traffic from Phases 1-4, the intersection continues to operate at satisfactory levels with an overall v/c ratio of 0.61 LOS C during the a.m. peak hour and 0.80 LOS C during the p.m. peak hour.

Under the remaining horizon years, with the addition of corridor growth and background development traffic under the future background scenarios and the site generated under the future total scenarios, the intersection continues to operate at satisfactory levels. Under the ultimate future total scenario, the intersection operates at critical levels during the p.m. peak hour, and reports v/c ratios of 0.78 LOS C and 0.93 LOS C respectively, however they remain below the theoretical capacity levels during both peak hours.

7.3 Old School Road and Hurontario Street

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 8 Capacity analysis of Old School Road and Hurontario Street (Without Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	<u>Overall: 0.87 (C) 31</u> EBL = 0.21 (D) 36 EBTR = 0.91 (E) 74 WBL = 0.35 (D) 39 WBTR = 0.47 (D) 43 NBL = 0.52 (C) 26 NBTR = 0.61 (B) 18	EBL = 20 m EBTR = 125 m WBL = 15 m WBTR = 55 m NBL = 15 m NBTR = 115 m	<u>Overall: 0.77 (C) 25</u> EBL = 0.45 (D) 41 EBTR = 0.73 (D) 53 WBL = 0.33 (D) 40 WBTR = 0.72 (D) 52 NBL = 0.46 (B) 11 NBTR = 0.81 (C) 21	EBL = 25 m EBTR = 75 m WBL = 20 m WBTR = 80 m NBL = 25 m NBTR = 215 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
	SBL = 0.15 (B) 12 SBTR = 0.9 (C) 30	SBL = 10 m SBTR = 260 m	SBL = 0.23 (B) 17 SBTR = 0.56 (B) 19	SBL = 5 m SBTR = 110 m
Future Background 2026	<u>Overall: 0.97 (C) 34</u> EBL = 0.86 (D) 52 EBTR = 0.59 (C) 32 WBL = 1.02 (F) 98 WBTR = 0.3 (C) 27 NBL = 0.95 (F) 131 NBT = 0.68 (C) 24 NBR = 0.1 (B) 16 SBL = 0.36 (C) 28 SBT = 0.88 (C) 31 SBR = 0.16 (B) 17	EBL = 130 m EBTR = 105 m WBL = 120 m WBTR = 55 m NBL = 40 m NBT = 115 m NBR = 10 m SBL = 15 m SBT = 190 m SBR = 20 m	<u>Overall: 1.1 (D) 40</u> EBL = 1.09 (F) 105 EBTR = 0.68 (D) 46 WBL = 0.62 (D) 38 WBTR = 0.85 (E) 65 NBL = 0.78 (D) 42 NBT = 0.95 (D) 35 NBR = 0.26 (B) 16 SBL = 0.51 (D) 54 SBT = 0.81 (D) 37 SBR = 0.3 (B) 15	EBL = 145 m EBTR = 90 m WBL = 55 m WBTR = 105 m NBL = 60 m NBT = 245 m NBR = 35 m SBL = 25 m SBT = 135 m SBR = 35 m
Future Total 2026	<u>Overall: 0.97 (C) 34</u> EBL = 0.87 (D) 53 EBTR = 0.59 (C) 32 WBL = 1.02 (F) 98 WBTR = 0.3 (C) 27 NBL = 0.95 (F) 131 NBT = 0.68 (C) 24 NBR = 0.1 (B) 16 SBL = 0.36 (C) 28 SBT = 0.88 (C) 31 SBR = 0.16 (B) 17	EBL = 135 m EBTR = 105 m WBL = 120 m WBTR = 55 m NBL = 40 m NBT = 115 m NBR = 10 m SBL = 15 m SBT = 190 m SBR = 20 m	<u>Overall: 1.09 (D) 41</u> EBL = 1.06 (F) 92 EBTR = 0.65 (D) 44 WBL = 0.6 (D) 37 WBTR = 0.85 (E) 65 NBL = 0.8 (D) 46 NBT = 0.96 (D) 38 NBR = 0.26 (B) 17 SBL = 0.51 (D) 54 SBT = 0.82 (D) 37 SBR = 0.31 (B) 15	EBL = 145 m EBTR = 90 m WBL = 50 m WBTR = 105 m NBL = 65 m NBT = 250 m NBR = 35 m SBL = 25 m SBT = 135 m SBR = 35 m
Future Background 2029	<u>Overall: 1.1 (E) 63</u> EBL = 1.05 (F) 86 EBTR = 1.14 (F) 140 WBL = 1.2 (F) 151 WBTR = 0.85 (E) 72 NBL = 0.97 (F) 138 NBT = 0.83 (C) 31 NBR = 0.16 (B) 18 SBL = 0.62 (E) 66 SBT = 1.03 (E) 58 SBR = 0.24 (B) 19	EBL = 155 m EBTR = 170 m WBL = 155 m WBTR = 95 m NBL = 45 m NBT = 150 m NBR = 20 m SBL = 25 m SBT = 260 m SBR = 35 m	<u>Overall: 1.38 (F) 104</u> EBL = 1.57 (F) 306 EBTR = 0.83 (E) 60 WBL = 0.95 (E) 71 WBTR = 0.86 (E) 66 NBL = 0.89 (E) 66 NBT = 1.24 (F) 145 NBR = 0.47 (C) 25 SBL = 0.28 (C) 29 SBT = 0.85 (D) 36 SBR = 0.46 (C) 29	EBL = 240 m EBTR = 115 m WBL = 105 m WBTR = 115 m NBL = 75 m NBT = 355 m NBR = 75 m SBL = 10 m SBT = 160 m SBR = 60 m
Future Total 2029	<u>Overall: 1.11 (E) 66</u> EBL = 1.07 (F) 93 EBTR = 1.16 (F) 146 WBL = 1.2 (F) 152 WBTR = 0.89 (E) 79 NBL = 0.97 (F) 138 NBT = 0.84 (C) 32 NBR = 0.16 (B) 18 SBL = 0.62 (E) 66	EBL = 160 m EBTR = 175 m WBL = 155 m WBTR = 105 m NBL = 45 m NBT = 155 m NBR = 20 m SBL = 25 m	<u>Overall: 1.4 (F) 109</u> EBL = 1.58 (F) 308 EBTR = 0.89 (E) 67 WBL = 0.95 (E) 71 WBTR = 0.9 (E) 72 NBL = 0.9 (E) 67 NBT = 1.27 (F) 156 NBR = 0.47 (C) 26 SBL = 0.28 (C) 29	EBL = 240 m EBTR = 130 m WBL = 105 m WBTR = 130 m NBL = 75 m NBT = 365 m NBR = 80 m SBL = 10 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
	SBT = 1.04 (E) 62 SBR = 0.24 (B) 19	SBT = 260 m SBR = 35 m	SBT = 0.87 (D) 38 SBR = 0.47 (C) 29	SBT = 165 m SBR = 65 m
Future Background 2031	<u>Overall: 1.12 (E) 63</u> EBL = 1.22 (F) 153 EBTR = 0.65 (D) 47 WBL = 1.17 (F) 140 WBTR = 0.6 (D) 52 NBL = 0.43 (C) 28 NBT = 0.82 (C) 25 NBR = 0.16 (B) 14 SBL = 0.64 (D) 43 SBT = 1.08 (E) 73 SBR = 0.3 (B) 19	EBL = 235 m EBTR = 60 m WBL = 140 m WBTR = 40 m NBL = 15 m NBT = 160 m NBR = 20 m SBL = 30 m SBT = 295 m SBR = 45 m	<u>Overall: 1.28 (F) 109</u> EBL = 1.79 (F) 399 EBTR = 0.58 (D) 46 WBL = 0.99 (F) 83 WBTR = 0.6 (D) 46 NBL = 0.67 (C) 33 NBT = 1.24 (F) 139 NBR = 0.45 (B) 20 SBL = 0.27 (C) 26 SBT = 0.9 (D) 36 SBR = 0.6 (C) 29	EBL = 275 m EBTR = 45 m WBL = 100 m WBTR = 50 m NBL = 50 m NBT = 385 m NBR = 75 m SBL = 10 m SBT = 200 m SBR = 95 m
Future Total 2031	<u>Overall: 1.23 (F) 93</u> EBL = 1.27 (F) 172 EBTR = 1.55dr (F) 172 WBL = 1.32 (F) 202 WBTR = 0.53 (D) 50 NBL = 1.03 (F) 116 NBT = 0.87 (C) 28 NBR = 0.16 (B) 15 SBL = 0.66 (D) 50 SBT = 1.14 (F) 99 SBR = 0.33 (C) 21	EBL = 250 m EBTR = 160 m WBL = 170 m WBTR = 45 m NBL = 65 m NBT = 170 m NBR = 20 m SBL = 30 m SBT = 305 m SBR = 50 m	<u>Overall: 1.59 (F) 140</u> EBL = 1.8 (F) 407 EBTR = 0.74 (D) 51 WBL = 1.08 (F) 113 WBTR = 0.54 (D) 45 NBL = 1.65 (F) 344 NBT = 1.3 (F) 167 NBR = 0.46 (C) 22 SBL = 0.29 (C) 28 SBT = 1.00 (E) 55 SBR = 0.67 (D) 35	EBL = 285 m EBTR = 70 m WBL = 120 m WBTR = 55 m NBL = 225 m NBT = 415 m NBR = 80 m SBL = 10 m SBT = 220 m SBR = 110 m
Future Background 2036	<u>Overall: 1.17 (E) 73</u> EBL = 1.25 (F) 164 EBTR = 0.68 (D) 47 WBL = 1.25 (F) 172 WBTR = 0.63 (D) 53 NBL = 0.45 (C) 28 NBT = 0.84 (C) 26 NBR = 0.16 (B) 14 SBL = 0.67 (D) 49 SBT = 1.12 (F) 90 SBR = 0.31 (B) 19	EBL = 240 m EBTR = 65 m WBL = 150 m WBTR = 45 m NBL = 15 m NBT = 170 m NBR = 20 m SBL = 30 m SBT = 310 m SBR = 45 m	<u>Overall: 1.31 (F) 124</u> EBL = 1.69 (F) 355 EBTR = 0.56 (D) 45 WBL = 0.95 (E) 71 WBTR = 0.62 (D) 47 NBL = 0.7 (D) 36 NBT = 1.33 (F) 180 NBR = 0.48 (C) 22 SBL = 0.28 (C) 27 SBT = 0.98 (D) 49 SBR = 0.64 (C) 33	EBL = 280 m EBTR = 50 m WBL = 95 m WBTR = 55 m NBL = 55 m NBT = 415 m NBR = 80 m SBL = 10 m SBT = 220 m SBR = 105 m
Future Total 2036	<u>Overall: 1.27 (F) 103</u> EBL = 1.31 (F) 188 EBTR = 1.56dr (F) 177 WBL = 1.4 (F) 236 WBTR = 0.57 (D) 50 NBL = 1.05 (F) 122 NBT = 0.89 (C) 30 NBR = 0.17 (B) 15 SBL = 0.7 (E) 56	EBL = 255 m EBTR = 165 m WBL = 175 m WBTR = 45 m NBL = 65 m NBT = 180 m NBR = 20 m SBL = 30 m	<u>Overall: 1.6 (F) 156</u> EBL = 1.75 (F) 380 EBTR = 0.76 (D) 51 WBL = 1.04 (F) 99 WBTR = 0.58 (D) 46 NBL = 1.67 (F) 356 NBT = 1.38 (F) 202 NBR = 0.48 (C) 23 SBL = 0.29 (C) 29	EBL = 290 m EBTR = 70 m WBL = 120 m WBTR = 60 m NBL = 230 m NBT = 435 m NBR = 85 m SBL = 10 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que.
	SBT = 1.18 (F) 116 SBR = 0.34 (C) 21	SBT = 320 m SBR = 50 m	SBT = 1.07 (E) 78 SBR = 0.71 (D) 38	SBT = 235 m SBR = 120 m
Future Background 2041	<u>Overall: 1.23 (F) 86</u> EBL = 1.27 (F) 171 EBTR = 0.7 (D) 46 WBL = 1.32 (F) 203 WBTR = 0.65 (D) 52 NBL = 0.48 (C) 28 NBT = 0.88 (C) 29 NBR = 0.17 (B) 14 SBL = 0.69 (D) 52 SBT = 1.18 (F) 116 SBR = 0.32 (B) 20	EBL = 245 m EBTR = 70 m WBL = 155 m WBTR = 45 m NBL = 15 m NBT = 180 m NBR = 20 m SBL = 30 m SBT = 330 m SBR = 50 m	<u>Overall: 1.36 (F) 135</u> EBL = 1.82 (F) 415 EBTR = 0.63 (D) 47 WBL = 1.01 (F) 89 WBTR = 0.65 (D) 47 NBL = 0.73 (D) 40 NBT = 1.35 (F) 190 NBR = 0.48 (C) 22 SBL = 0.3 (C) 27 SBT = 1.01 (D) 55 SBR = 0.65 (C) 33	EBL = 295 m EBTR = 55 m WBL = 110 m WBTR = 60 m NBL = 65 m NBT = 435 m NBR = 85 m SBL = 10 m SBT = 230 m SBR = 110 m
Future Total 2041	<u>Overall: 1.33 (F) 115</u> EBL = 1.32 (F) 195 EBTR = 1.51dr (F) 161 WBL = 1.48 (F) 273 WBTR = 0.59 (D) 50 NBL = 1.08 (F) 128 NBT = 0.93 (C) 34 NBR = 0.17 (B) 16 SBL = 0.71 (E) 61 SBT = 1.24 (F) 144 SBR = 0.35 (C) 22	EBL = 260 m EBTR = 175 m WBL = 185 m WBTR = 50 m NBL = 70 m NBT = 190 m NBR = 20 m SBL = 30 m SBT = 340 m SBR = 55 m	<u>Overall: 1.64 (F) 175</u> EBL = 1.84 (F) 422 EBTR = 0.8 (D) 53 WBL = 1.07 (F) 106 WBTR = 0.6 (D) 45 NBL = 1.71 (F) 374 NBT = 1.44 (F) 233 NBR = 0.5 (C) 24 SBL = 0.28 (C) 28 SBT = 1.11 (F) 92 SBR = 0.72 (D) 39	EBL = 305 m EBTR = 80 m WBL = 125 m WBTR = 65 m NBL = 235 m NBT = 450 m NBR = 85 m SBL = 10 m SBT = 245 m SBR = 120 m

Under existing conditions, the intersection of Old School Road and Hurontario Street is reported to operate with an overall v/c ratio of 0.87 LOS C during the a.m. peak hour and 0.77 LOS C during the p.m. peak hour. The intersection operates without any critical movements during either the a.m. or p.m. peak hours.

Under the 2026 future background scenario, with the addition of corridor growth and some background development traffic, the intersection operates with an overall v/c ratio of 0.97 LOS C during the a.m. peak hour and 1.10 LOS D during the p.m. peak hour. In order to accommodate the future traffic volumes along Hurontario Street, a widening of Hurontario to a 6-lane cross-section was assumed and is consistent with previously submitted traffic studies from neighbour developments. With the widening, the westbound left-turn lane during the a.m. peak hour and eastbound left-turn lane during the p.m. peak hour are reported to continue to operate above capacity.

With the addition of site generated traffic from Phase 1 of the development, the intersection is reported to operate at a similar level as reported under the future background scenario with an overall v/c ratio of 0.97 LOS C and 1.09 LOS D during the a.m. and p.m. peak hours respectively. Both movements that were reported to operate above capacity continue to operate above capacity with no additional movements above capacity reported.

With continued corridor growth and background development traffic under the 2029 horizon year, the intersection is reported to operate with an overall v/c ratio of 1.10 LOS E during the a.m. peak hour and 1.38 LOS F during the p.m. peak hour with numerous movements reported to operate above capacity. With the addition of site generated traffic from Phases 1 through 4, the intersection continues to operate at similar levels under the 2029 future total scenario.

In order to accommodate further growth and background development traffic, a widening along Old School Road to a four-lane cross-section has been assumed to mitigate some of the delays in the east/west direction under the 2029 horizon year. The proposed development continues to have a marginal impact on the operation of the intersection.

With all background traffic and further corridor growth applied under the remaining horizon years, in addition to site generated traffic from the full build-out of the subject site, the intersection continues to operate above capacity. It is recommended that the MTO continues to monitor the intersection as development proceeds to identify where capacity is required.

7.4 Mayfield Road and Chinguacousy Road

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 9 Capacity analysis of Mayfield Road and Chinguacousy Road (Without Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	Overall: 0.6 (C) 24 EBTLR = 0.51 (A) 8 WBTLR = 0.57 (C) 22 NBTLR = 0.7 (E) 58 SBTLR = 0.43 (D) 48	EBTLR = 75 m WBTLR = 170 m NBTLR = 80 m SBTLR = 50 m	Overall: 0.78 (C) 27 EBTLR = 0.56 (A) 8 WBTLR = 0.79 (C) 29 NBTLR = 0.77 (E) 64 SBTLR = 0.48 (D) 49	EBTLR = 90 m WBTLR = 230 m NBTLR = 90 m SBTLR = 55 m
Future Background 2026	Overall: 0.41 (C) 24 EBTLR = 0.25 (A) 9 WBTLR = 0.3 (C) 24 NBTLR = 0.57 (D) 41 SBTLR = 0.65 (D) 45	EBTLR = 30 m WBTLR = 55 m NBTLR = 85 m SBTLR = 85 m	Overall: 0.52 (C) 31 EBTLR = 0.38 (C) 21 WBTLR = 0.54 (D) 45 NBTLR = 0.5 (C) 25 SBTLR = 0.26 (C) 21	EBTLR = 55 m WBTLR = 90 m NBTLR = 90 m SBTLR = 45 m
Future Total 2026	Overall: 0.42 (C) 24 EBTLR = 0.25 (A) 9 WBTLR = 0.31 (C) 24 NBTLR = 0.58 (D) 41 SBTLR = 0.66 (D) 45	EBTLR = 30 m WBTLR = 55 m NBTLR = 85 m SBTLR = 85 m	Overall: 0.53 (C) 31 EBTLR = 0.38 (C) 21 WBTLR = 0.54 (D) 45 NBTLR = 0.51 (C) 25 SBTLR = 0.26 (C) 21	EBTLR = 55 m WBTLR = 90 m NBTLR = 95 m SBTLR = 45 m
Future Background 2029	Overall: 0.47 (C) 30 EBTLR = 0.41 (C) 24 WBTLR = 0.5 (D) 44 NBTLR = 0.38 (B) 20 SBTLR = 0.44 (C) 21	EBTLR = 55 m WBTLR = 80 m NBTLR = 65 m SBTLR = 75 m	Overall: 0.59 (C) 29 EBTLR = 0.43 (C) 23 WBTLR = 0.61 (D) 38 NBTLR = 0.57 (C) 26 SBTLR = 0.3 (C) 20	EBTLR = 60 m WBTLR = 100 m NBTLR = 110 m SBTLR = 50 m
Future Total 2029	Overall: 0.51 (C) 30 EBTLR = 0.42 (C) 24 WBTLR = 0.88dl (D) 43 NBTLR = 0.42 (C) 20 SBTLR = 0.46 (C) 21	EBTLR = 55 m WBTLR = 85 m NBTLR = 75 m SBTLR = 75 m	Overall: 0.66 (C) 25 EBTLR = 0.44 (C) 23 WBTLR = 0.63 (C) 27 NBTLR = 0.69 (C) 29 SBTLR = 0.33 (C) 21	EBTLR = 60 m WBTLR = 80 m NBTLR = 140 m SBTLR = 55 m
Future Background 2031	Overall: 0.62 (C) 23 EBTLR = 0.43 (B) 18 WBL = 0.38 (A) 9 WBTR = 0.22 (A) 8 NBTLR = 0.63 (C) 26 SBTLR = 0.94 (E) 57	EBTLR = 55 m WBL = 25 m WBTR = 30 m NBTLR = 70 m SBTLR = 100 m	Overall: 0.64 (B) 19 EBTLR = 0.52 (C) 20 WBL = 0.47 (B) 10 WBTR = 0.3 (B) 10 NBTLR = 0.84 (C) 33 SBTLR = 0.45 (C) 20	EBTLR = 60 m WBL = 35 m WBTR = 45 m NBTLR = 110 m SBTLR = 50 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	Overall: <u>0.78 (C) 29</u> EBTLR = 0.58 (C) 30 WBL = 0.58 (B) 19 WBTR = 0.26 (B) 16 NBTLR = 0.62 (C) 23 SBTLR = 0.93 (D) 47	EBTLR = 80 m WBL = 50 m WBTR = 50 m NBTLR = 95 m SBTLR = 155 m	Overall: <u>0.84 (C) 31</u> EBTLR = 0.7 (D) 36 WBL = 0.81 (D) 37 WBTR = 0.4 (C) 23 NBTLR = 0.92 (D) 39 SBTLR = 0.52 (B) 18	EBTLR = 90 m WBL = 80 m WBTR = 65 m NBTLR = 215 m SBTLR = 85 m
Future Background 2036	Overall: <u>0.67 (C) 24</u> EBTLR = 0.49 (B) 20 WBL = 0.44 (B) 10 WBTR = 0.24 (A) 9 NBTLR = 0.66 (C) 27 SBTLR = 0.97 (E) 63	EBTLR = 65 m WBL = 30 m WBTR = 35 m NBTLR = 80 m SBTLR = 115 m	Overall: <u>0.7 (C) 21</u> EBTLR = 0.6 (C) 23 WBL = 0.56 (B) 13 WBTR = 0.33 (B) 12 NBTLR = 0.85 (C) 35 SBTLR = 0.46 (C) 21	EBTLR = 75 m WBL = 40 m WBTR = 50 m NBTLR = 120 m SBTLR = 55 m
Future Total 2036	Overall: <u>0.83 (C) 31</u> EBTLR = 0.65 (C) 34 WBL = 0.67 (C) 24 WBTR = 0.29 (B) 17 NBTLR = 0.64 (C) 24 SBTLR = 0.95 (D) 52	EBTLR = 85 m WBL = 55 m WBTR = 50 m NBTLR = 105 m SBTLR = 175 m	Overall: 0.9 (D) 37 EBTLR = 0.81 (D) 43 WBL = 0.95 (E) 66 WBTR = 0.44 (C) 25 NBTLR = 0.94 (D) 43 SBTLR = 0.53 (B) 18	EBTLR = 100 m WBL = 95 m WBTR = 70 m NBTLR = 260 m SBTLR = 90 m
Future Background 2041	Overall: <u>0.69 (C) 22</u> EBTLR = 0.56 (C) 21 WBL = 0.5 (B) 11 WBTR = 0.26 (A) 9 NBTL = 0.46 (C) 23 NBR = 0.11 (B) 20 SBTLR = 0.93 (D) 53	EBTLR = 70 m WBL = 30 m WBTR = 40 m NBTL = 50 m NBR = 15 m SBTLR = 105 m	Overall: <u>0.69 (C) 21</u> EBTLR = 0.56 (B) 19 WBL = 0.53 (A) 9 WBTR = 0.31 (A) 8 NBTL = 0.8 (D) 38 NBR = 0.14 (C) 24 SBTLR = 0.89 (D) 54	EBTLR = 75 m WBL = 35 m WBTR = 45 m NBTL = 95 m NBR = 15 m SBTLR = 80 m
Future Total 2041	Overall: 0.9 (C) 32 EBTLR = 0.74 (D) 36 WBL = 0.77 (C) 32 WBTR = 0.33 (B) 18 NBTL = 0.45 (B) 20 NBR = 0.12 (B) 16 SBTLR = 0.97 (D) 55	EBTLR = 95 m WBL = 80 m WBTR = 60 m NBTL = 70 m NBR = 10 m SBTLR = 185 m	Overall: <u>0.88 (C) 34</u> EBTLR = 0.82 (D) 44 WBL = 0.88 (D) 51 WBTR = 0.42 (C) 22 NBTL = 0.77 (C) 31 NBR = 0.19 (B) 18 SBTLR = 0.86 (D) 40	EBTLR = 115 m WBL = 105 m WBTR = 75 m NBTL = 170 m NBR = 20 m SBTLR = 150 m

Under existing conditions, the intersection of Mayfield Road and Chinguacousy Road is reported to operate with an overall v/c ratio of 0.60 LOS B during the a.m. peak hour and 0.78 LOS C during the p.m. peak hour with no critical movements.

With the proposed widening along Mayfield Road, along with the addition of corridor growth and background traffic under the 2026 future background scenario, the v/c ratio has been reduced to 0.41 LOS C during the a.m. peak hour and 0.52 LOS C during the p.m. peak hour. With the addition of site generated traffic from Phase 1 of the development, the overall v/c ratio is reported to slightly increase to 0.42 LOS C and 0.53 LOS C during the a.m. and p.m. peak hour, respectively.

A similar trend is observed under the 2029 horizon year, where the overall v/c ratio is reported at 0.47 LOS C during the a.m. peak hour and 0.59 LOS C during the p.m. peak hour. With the addition of site traffic from Phases 1-4, the overall v/c ratio is reported to increase to 0.51 LOS C during the a.m. peak hour and 0.66 LOS C during the p.m. peak hour.

With further growth along Mayfield Road due to corridor growth and background traffic, as well as additional volume added to the westbound left-turn movement from the full build-out of the site, it is projected that a westbound left-turn lane is included in the widening of Mayfield Road to accommodate future traffic at the intersection.

Under the ultimate horizon year, the overall v/c ratio of the intersection is reported 0.69 LOS C and 0.69 LOS C during the a.m. and p.m. peak hour under the 2041 future background scenario and is anticipated to increase to 0.90 LOS C and 0.88 LOS D during the a.m. and p.m. peak hour under the 2041 future total scenario.

7.5 Mayfield Road and McLaughlin Road

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 10 Capacity analysis of Mayfield Road and McLaughlin Road (Without Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	<u>Overall: 0.6 (C) 22</u> EBL = 0.03 (B) 11 EBTR = 0.67 (B) 17 WBL = 0.4 (B) 16 WBTR = 0.6 (B) 16 NBTL = 0.3 (D) 36 NBR = 0.05 (C) 32 SBL = 0.37 (D) 38 SBTR = 0.45 (D) 39	EBL = 5 m EBTR = 145 m WBL = 30 m WBTR = 125 m NBTL = 45 m NBR = 15 m SBL = 40 m SBTR = 70 m	<u>Overall: 0.69 (C) 24</u> EBL = 0.1 (B) 12 EBTR = 0.64 (B) 18 WBL = 0.34 (B) 14 WBTR = 0.75 (C) 20 NBTL = 0.55 (D) 42 NBR = 0.09 (C) 33 SBL = 0.46 (D) 43 SBTR = 0.32 (D) 36	EBL = 5 m EBTR = 145 m WBL = 25 m WBTR = 185 m NBTL = 80 m NBR = 20 m SBL = 40 m SBTR = 50 m
Future Background 2026	<u>Overall: 0.52 (C) 26</u> EBL = 0.04 (B) 17 EBTR = 0.3 (B) 19 WBL = 0.38 (B) 16 WBTR = 0.26 (B) 12 NBTL = 0.59 (D) 42 NBR = 0.06 (C) 30 SBL = 0.78 (E) 58 SBTR = 0.66 (D) 43	EBL = 5 m EBTR = 55 m WBL = 30 m WBTR = 35 m NBTL = 75 m NBR = 15 m SBL = 90 m SBTR = 110 m	<u>Overall: 0.6 (C) 28</u> EBL = 0.27 (C) 31 EBTR = 0.4 (C) 28 WBL = 0.52 (D) 35 WBTR = 0.53 (C) 27 NBTL = 0.68 (D) 37 NBR = 0.11 (C) 24 SBL = 0.48 (C) 25 SBTR = 0.29 (B) 20	EBL = 20 m EBTR = 75 m WBL = 40 m WBTR = 85 m NBTL = 120 m NBR = 20 m SBL = 35 m SBTR = 55 m
Future Total 2026	<u>Overall: 0.52 (C) 26</u> EBL = 0.05 (B) 17 EBTR = 0.3 (B) 19 WBL = 0.38 (B) 16 WBTR = 0.26 (B) 12 NBTL = 0.64 (D) 45 NBR = 0.06 (C) 30 SBL = 0.79 (E) 59 SBTR = 0.7 (D) 45	EBL = 5 m EBTR = 55 m WBL = 30 m WBTR = 35 m NBTL = 75 m NBR = 15 m SBL = 90 m SBTR = 115 m	<u>Overall: 0.61 (C) 28</u> EBL = 0.37 (C) 34 EBTR = 0.4 (C) 28 WBL = 0.52 (D) 35 WBTR = 0.53 (C) 27 NBTL = 0.7 (D) 38 NBR = 0.11 (C) 24 SBL = 0.49 (C) 25 SBTR = 0.31 (B) 20	EBL = 25 m EBTR = 75 m WBL = 40 m WBTR = 85 m NBTL = 125 m NBR = 20 m SBL = 35 m SBTR = 55 m
Future Background 2029	<u>Overall: 0.65 (C) 25</u> EBL = 0.06 (C) 21 EBTR = 0.42 (C) 27 WBL = 0.64 (D) 38 WBTR = 0.35 (B) 20 NBL = 0.14 (C) 23	EBL = 10 m EBTR = 85 m WBL = 55 m WBTR = 50 m NBL = 15 m	<u>Overall: 0.58 (C) 28</u> EBL = 0.43 (D) 47 EBTR = 0.44 (D) 36 WBL = 0.64 (D) 44 WBTR = 0.61 (C) 29 NBL = 0.22 (B) 19	EBL = 25 m EBTR = 85 m WBL = 50 m WBTR = 95 m NBL = 30 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
	NBTR = 0.19 (C) 22 SBL = 0.66 (D) 36 SBTR = 0.3 (C) 24	NBTR = 30 m SBL = 85 m SBTR = 45 m	NBTR = 0.29 (B) 19 SBL = 0.53 (C) 27 SBTR = 0.18 (B) 18	NBTR = 45 m SBL = 55 m SBTR = 30 m
Future Total 2029	<u>Overall: 0.67 (C) 26</u> EBL = 0.18 (C) 24 EBTR = 0.42 (C) 27 WBL = 0.64 (D) 38 WBTR = 0.35 (B) 20 NBL = 0.18 (C) 24 NBTR = 0.23 (C) 23 SBL = 0.71 (D) 39 SBTR = 0.39 (C) 25	EBL = 20 m EBTR = 80 m WBL = 55 m WBTR = 50 m NBL = 15 m NBTR = 35 m SBL = 85 m SBTR = 60 m	<u>Overall: 0.67 (C) 30</u> EBL = 0.63 (C) 26 EBTR = 0.37 (B) 19 WBL = 0.55 (D) 38 WBTR = 0.65 (C) 32 NBL = 0.48 (D) 44 NBTR = 0.66 (D) 43 SBL = 0.65 (C) 30 SBTR = 0.31 (C) 25	EBL = 30 m EBTR = 60 m WBL = 45 m WBTR = 105 m NBL = 45 m NBTR = 90 m SBL = 50 m SBTR = 50 m
Future Background 2031	<u>Overall: 0.65 (C) 32</u> EBL = 0.09 (C) 31 EBTR = 0.72 (D) 41 WBL = 0.55 (C) 32 WBTR = 0.41 (C) 24 NBL = 0.28 (D) 41 NBTR = 0.39 (D) 40 SBL = 0.59 (C) 26 SBTR = 0.3 (C) 20	EBL = 10 m EBTR = 100 m WBL = 30 m WBTR = 60 m NBL = 25 m NBTR = 45 m SBL = 70 m SBTR = 50 m	<u>Overall: 0.7 (C) 29</u> EBL = 0.29 (B) 20 EBTR = 0.52 (C) 26 WBL = 0.42 (B) 16 WBTR = 0.68 (C) 27 NBL = 0.36 (C) 29 NBTR = 0.75 (D) 42 SBL = 0.69 (C) 30 SBTR = 0.35 (C) 30	EBL = 15 m EBTR = 85 m WBL = 25 m WBTR = 115 m NBL = 30 m NBTR = 75 m SBL = 50 m SBTR = 40 m
Future Total 2031	<u>Overall: 0.71 (C) 32</u> EBL = 0.24 (C) 35 EBTR = 0.72 (D) 41 WBL = 0.55 (C) 32 WBTR = 0.42 (C) 24 NBL = 0.37 (D) 46 NBTR = 0.56 (D) 43 SBL = 0.69 (C) 30 SBTR = 0.49 (C) 23	EBL = 20 m EBTR = 100 m WBL = 30 m WBTR = 60 m NBL = 25 m NBTR = 65 m SBL = 75 m SBTR = 85 m	<u>Overall: 0.86 (D) 39</u> EBL = 0.68 (D) 38 EBTR = 0.59 (C) 34 WBL = 0.49 (C) 23 WBTR = 0.9 (D) 44 NBL = 0.4 (C) 27 NBTR = 0.87 (D) 47 SBL = 0.81 (D) 44 SBTR = 0.51 (C) 30	EBL = 40 m EBTR = 90 m WBL = 30 m WBTR = 160 m NBL = 30 m NBTR = 125 m SBL = 70 m SBTR = 75 m
Future Background 2036	<u>Overall: 0.7 (C) 34</u> EBL = 0.12 (C) 33 EBTR = 0.83 (D) 46 WBL = 0.63 (D) 38 WBTR = 0.47 (C) 26 NBL = 0.28 (D) 40 NBTR = 0.39 (D) 39 SBL = 0.6 (C) 25 SBTR = 0.31 (B) 19	EBL = 10 m EBTR = 115 m WBL = 40 m WBTR = 70 m NBL = 25 m NBTR = 50 m SBL = 70 m SBTR = 50 m	<u>Overall: 0.75 (C) 31</u> EBL = 0.35 (C) 22 EBTR = 0.59 (C) 28 WBL = 0.48 (B) 18 WBTR = 0.72 (C) 28 NBL = 0.37 (C) 28 NBTR = 0.76 (D) 43 SBL = 0.75 (C) 34 SBTR = 0.37 (C) 31	EBL = 15 m EBTR = 95 m WBL = 30 m WBTR = 130 m NBL = 30 m NBTR = 80 m SBL = 55 m SBTR = 45 m
Future Total 2036	<u>Overall: 0.77 (C) 34</u> EBL = 0.28 (D) 38 EBTR = 0.83 (D) 46 WBL = 0.63 (D) 38 WBTR = 0.47 (C) 26 NBL = 0.38 (D) 44	EBL = 20 m EBTR = 115 m WBL = 40 m WBTR = 70 m NBL = 25 m	<u>Overall: 0.91 (D) 42</u> EBL = 0.78 (D) 52 EBTR = 0.67 (D) 37 WBL = 0.55 (C) 25 WBTR = 0.93 (D) 47 NBL = 0.43 (C) 27	EBL = 45 m EBTR = 100 m WBL = 30 m WBTR = 170 m NBL = 30 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
	NBTR = 0.54 (D) 42 SBL = 0.71 (C) 30 SBTR = 0.49 (C) 22	NBTR = 70 m SBL = 75 m SBTR = 85 m	NBTR = 0.89 (D) 49 SBL = 0.87 (D) 54 SBTR = 0.54 (C) 31	NBTR = 135 m SBL = 85 m SBTR = 80 m
Future Background 2041	<u>Overall: 0.77 (C) 34</u> EBL = 0.13 (C) 32 EBTR = 0.86 (D) 46 WBL = 0.65 (D) 38 WBTR = 0.49 (C) 25 NBL = 0.33 (D) 43 NBTR = 0.45 (D) 41 SBL = 0.69 (C) 30 SBTR = 0.34 (C) 22	EBL = 10 m EBTR = 120 m WBL = 45 m WBTR = 75 m NBL = 25 m NBTR = 55 m SBL = 75 m SBTR = 55 m	<u>Overall: 0.82 (C) 32</u> EBL = 0.42 (C) 24 EBTR = 0.64 (C) 30 WBL = 0.58 (C) 21 WBTR = 0.77 (C) 30 NBL = 0.39 (C) 28 NBTR = 0.78 (D) 44 SBL = 0.83 (D) 42 SBTR = 0.38 (C) 32	EBL = 15 m EBTR = 105 m WBL = 35 m WBTR = 140 m NBL = 35 m NBTR = 85 m SBL = 70 m SBTR = 45 m
Future Total 2041	<u>Overall: 0.83 (D) 36</u> EBL = 0.31 (D) 38 EBTR = 0.86 (D) 46 WBL = 0.65 (D) 38 WBTR = 0.49 (C) 25 NBL = 0.45 (D) 50 NBTR = 0.61 (D) 45 SBL = 0.81 (D) 39 SBTR = 0.54 (C) 25	EBL = 20 m EBTR = 120 m WBL = 45 m WBTR = 75 m NBL = 30 m NBTR = 75 m SBL = 95 m SBTR = 95 m	<u>Overall: 0.97 (D) 47</u> EBL = 0.9 (F) 82 EBTR = 0.71 (D) 38 WBL = 0.66 (C) 31 WBTR = 0.97 (D) 51 NBL = 0.47 (C) 27 NBTR = 0.92 (D) 53 SBL = 0.94 (E) 71 SBTR = 0.55 (C) 32	EBL = 50 m EBTR = 110 m WBL = 40 m WBTR = 185 m NBL = 35 m NBTR = 150 m SBL = 95 m SBTR = 85 m

Under existing conditions, the intersection of Mayfield Road and McLaughlin Road is reported to operate with an overall v/c ratio of 0.60 LOS C during the a.m. peak hour and 0.69 LOS C during the p.m. peak hour with no critical movements.

With the proposed widening along Mayfield Road assumed to occur under the 2026 horizon year, the intersection operates with an overall v/c ratio of 0.52 LOS C during the a.m. peak hours and 0.60 LOS C during the p.m. peak hour. With the addition of Phase 1 site traffic, the intersection continues to operate at a satisfactory level with a marginal increase to the v/c ratios, delay, and queuing.

With the continued addition of background traffic and corridor growth under the remaining horizon years, the intersection continues to operate at satisfactory levels. With the addition of site traffic from Phases 1-4 under the 2029 horizon year and full build-out of the site under the remaining horizon years, the intersection continues to operate at satisfactory levels.

With the widening of Mayfield Road and the preferred alternative from the Class EA of a widening along McLaughlin Road, no additional geometric changes are recommended for the intersection as a result of the subject site.

7.6 Mayfield Road and Hurontario Street

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 11 Capacity analysis of Mayfield Road and Hurontario Street (Without Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	<u>Overall: 0.52 (D) 37</u> EBL = 0.59 (D) 41 EBT = 0.57 (D) 50 EBR = 0.06 (D) 40 WBL = 0.62 (E) 78 WBT = 0.45 (D) 47 WBR = 0.04 (D) 40 NBL = 0.3 (C) 28 NBT = 0.2 (C) 24 NBR = 0.13 (C) 23 SBL = 0.19 (C) 24 SBT = 0.46 (C) 28 SBR = 0.19 (C) 24	EBL = 65 m EBT = 105 m EBR = 15 m WBL = 45 m WBT = 80 m WBR = 10 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 30 m SBT = 105 m SBR = 15 m	<u>Overall: 0.6 (D) 36</u> EBL = 0.7 (D) 36 EBT = 0.46 (D) 39 EBR = 0.04 (C) 33 WBL = 0.58 (E) 61 WBT = 0.53 (D) 40 WBR = 0.04 (C) 33 NBL = 0.38 (D) 40 NBT = 0.47 (D) 38 NBR = 0.16 (C) 33 SBL = 0.4 (C) 29 SBT = 0.44 (C) 29 SBR = 0.27 (C) 26	EBL = 65 m EBT = 75 m EBR = 5 m WBL = 50 m WBT = 85 m WBR = 5 m NBL = 35 m NBT = 80 m NBR = 20 m SBL = 35 m SBT = 85 m SBR = 25 m
Future Background 2026	<u>Overall: 0.58 (D) 38</u> EBL = 0.54 (C) 34 EBT = 0.51 (D) 46 EBR = 0.06 (D) 38 WBL = 0.64 (E) 80 WBT = 0.4 (D) 49 WBR = 0.09 (D) 44 NBL = 0.35 (C) 31 NBT = 0.21 (C) 25 NBR = 0.14 (C) 25 SBL = 0.58 (D) 37 SBT = 0.49 (C) 30 SBR = 0.2 (C) 26	EBL = 70 m EBT = 90 m EBR = 15 m WBL = 50 m WBT = 65 m WBR = 20 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 90 m SBT = 115 m SBR = 20 m	<u>Overall: 0.81 (D) 44</u> EBL = 0.89 (E) 55 EBT = 0.36 (D) 37 EBR = 0.06 (C) 33 WBL = 0.64 (E) 64 WBT = 0.92 (E) 74 WBR = 0.08 (D) 50 NBL = 0.69 (D) 52 NBT = 0.49 (D) 35 NBR = 0.17 (C) 30 SBL = 0.65 (D) 41 SBT = 0.48 (C) 29 SBR = 0.46 (C) 30	EBL = 170 m EBT = 55 m EBR = 10 m WBL = 50 m WBT = 90 m WBR = 15 m NBL = 70 m NBT = 85 m NBR = 20 m SBL = 50 m SBT = 90 m SBR = 30 m
Future Total 2026	<u>Overall: 0.58 (D) 38</u> EBL = 0.54 (C) 34 EBT = 0.51 (D) 46 EBR = 0.06 (D) 38 WBL = 0.64 (E) 80 WBT = 0.4 (D) 49 WBR = 0.09 (D) 44 NBL = 0.35 (C) 32 NBT = 0.22 (C) 25 NBR = 0.14 (C) 25 SBL = 0.59 (D) 37 SBT = 0.5 (C) 31 SBR = 0.2 (C) 26	EBL = 70 m EBT = 90 m EBR = 15 m WBL = 50 m WBT = 65 m WBR = 20 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 90 m SBT = 115 m SBR = 20 m	<u>Overall: 0.82 (D) 44</u> EBL = 0.89 (E) 55 EBT = 0.36 (D) 37 EBR = 0.06 (C) 33 WBL = 0.64 (E) 64 WBT = 0.92 (E) 74 WBR = 0.08 (D) 50 NBL = 0.69 (D) 53 NBT = 0.5 (D) 35 NBR = 0.17 (C) 30 SBL = 0.66 (D) 42 SBT = 0.48 (C) 29 SBR = 0.46 (C) 30	EBL = 170 m EBT = 55 m EBR = 10 m WBL = 50 m WBT = 90 m WBR = 15 m NBL = 70 m NBT = 90 m NBR = 20 m SBL = 50 m SBT = 90 m SBR = 30 m

<p style="text-align: center;">Future Background 2029</p>	<p><u>Overall: 0.71 (D) 43</u> EBL = 0.71 (D) 52 EBT = 0.81 (E) 65 EBR = 0.07 (D) 48 WBL = 0.68 (F) 81 WBT = 0.74 (E) 70 WBR = 0.11 (E) 58 NBL = 0.3 (C) 22 NBT = 0.19 (B) 18 NBR = 0.15 (B) 18 SBL = 0.65 (C) 31 SBT = 0.44 (C) 22 SBR = 0.22 (B) 18</p>	<p>EBL = 85 m EBT = 120 m EBR = 15 m WBL = 50 m WBT = 85 m WBR = 25 m NBL = 30 m NBT = 40 m NBR = 15 m SBL = 110 m SBT = 100 m SBR = 15 m</p>	<p><u>Overall: 1.01 (D) 51</u> EBL = 1.04 (F) 87 EBT = 0.36 (D) 35 EBR = 0.07 (C) 31 WBL = 0.7 (E) 63 WBT = 1.02 (F) 95 WBR = 0.13 (D) 51 NBL = 0.88 (E) 70 NBT = 0.51 (C) 33 NBR = 0.18 (C) 29 SBL = 0.76 (D) 42 SBT = 0.52 (C) 30 SBR = 0.68 (D) 37</p>	<p>EBL = 225 m EBT = 55 m EBR = 15 m WBL = 55 m WBT = 110 m WBR = 25 m NBL = 95 m NBT = 95 m NBR = 20 m SBL = 55 m SBT = 100 m SBR = 100 m</p>
<p style="text-align: center;">Future Total 2029</p>	<p><u>Overall: 0.74 (D) 43</u> EBL = 0.71 (D) 52 EBT = 0.81 (E) 65 EBR = 0.07 (D) 48 WBL = 0.68 (F) 81 WBT = 0.74 (E) 70 WBR = 0.11 (E) 58 NBL = 0.34 (C) 23 NBT = 0.22 (B) 18 NBR = 0.15 (B) 18 SBL = 0.69 (C) 33 SBT = 0.48 (C) 22 SBR = 0.22 (B) 18</p>	<p>EBL = 85 m EBT = 120 m EBR = 15 m WBL = 50 m WBT = 85 m WBR = 25 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 120 m SBT = 115 m SBR = 15 m</p>	<p><u>Overall: 1.09 (D) 54</u> EBL = 1.04 (F) 87 EBT = 0.36 (D) 35 EBR = 0.07 (C) 31 WBL = 0.7 (E) 63 WBT = 1.02 (F) 95 WBR = 0.13 (D) 51 NBL = 1.05 (F) 123 NBT = 0.59 (D) 35 NBR = 0.22 (C) 29 SBL = 0.89 (E) 65 SBT = 0.58 (C) 31 SBR = 0.68 (D) 37</p>	<p>EBL = 225 m EBT = 55 m EBR = 15 m WBL = 55 m WBT = 110 m WBR = 25 m NBL = 105 m NBT = 110 m NBR = 30 m SBL = 70 m SBT = 115 m SBR = 100 m</p>
<p style="text-align: center;">Future Background 2031</p>	<p><u>Overall: 0.75 (D) 48</u> EBL = 0.67 (D) 42 EBT = 0.79 (E) 60 EBR = 0.07 (D) 45 WBL = 0.62 (E) 76 WBT = 0.57 (E) 57 WBR = 0.13 (D) 50 NBL = 0.33 (D) 42 NBT = 0.42 (D) 50 NBR = 0.15 (D) 46 SBL = 0.69 (C) 32 SBT = 0.59 (D) 36 SBR = 0.24 (C) 30</p>	<p>EBL = 80 m EBT = 130 m EBR = 15 m WBL = 50 m WBT = 80 m WBR = 20 m NBL = 25 m NBT = 70 m NBR = 25 m SBL = 105 m SBT = 135 m SBR = 25 m</p>	<p><u>Overall: 1.22 (F) 89</u> EBL = 1.34 (F) 205 EBT = 0.5 (D) 45 EBR = 0.07 (D) 39 WBL = 0.67 (E) 64 WBT = 1.22 (F) 169 WBR = 0.23 (D) 55 NBL = 0.61 (C) 30 NBT = 0.56 (D) 37 NBR = 0.22 (C) 31 SBL = 0.64 (C) 32 SBT = 0.71 (D) 43 SBR = 1.08 (F) 108</p>	<p>EBL = 295 m EBT = 65 m EBR = 15 m WBL = 55 m WBT = 130 m WBR = 30 m NBL = 50 m NBT = 105 m NBR = 25 m SBL = 55 m SBT = 125 m SBR = 255 m</p>

<p>Future Total 2031</p>	<p><u>Overall: 0.79 (D) 50</u> EBL = 0.67 (D) 42 EBT = 0.79 (E) 60 EBR = 0.08 (D) 45 WBL = 0.62 (E) 76 WBT = 0.57 (E) 57 WBR = 0.13 (D) 50 NBL = 0.52 (D) 50 NBT = 0.54 (D) 53 NBR = 0.17 (D) 46 SBL = 0.74 (D) 36 SBT = 0.77 (D) 43 SBR = 0.3 (C) 31</p>	<p>EBL = 80 m EBT = 130 m EBR = 20 m WBL = 50 m WBT = 80 m WBR = 20 m NBL = 25 m NBT = 90 m NBR = 25 m SBL = 105 m SBT = 195 m SBR = 45 m</p>	<p><u>Overall: 1.36 (F) 102</u> EBL = 1.34 (F) 205 EBT = 0.5 (D) 45 EBR = 0.08 (D) 39 WBL = 0.67 (E) 64 WBT = 1.22 (F) 169 WBR = 0.23 (D) 55 NBL = 1.37 (F) 230 NBT = 0.67 (D) 40 NBR = 0.26 (C) 32 SBL = 0.74 (D) 38 SBT = 0.89 (D) 53 SBR = 1.15 (F) 129</p>	<p>EBL = 295 m EBT = 65 m EBR = 15 m WBL = 55 m WBT = 130 m WBR = 30 m NBL = 190 m NBT = 125 m NBR = 35 m SBL = 55 m SBT = 170 m SBR = 270 m</p>
<p>Future Background 2036</p>	<p><u>Overall: 0.78 (D) 51</u> EBL = 0.72 (D) 46 EBT = 0.84 (E) 63 EBR = 0.08 (D) 45 WBL = 0.73 (F) 83 WBT = 0.74 (E) 67 WBR = 0.19 (E) 56 NBL = 0.42 (D) 47 NBT = 0.49 (D) 53 NBR = 0.17 (D) 48 SBL = 0.7 (C) 32 SBT = 0.63 (D) 36 SBR = 0.28 (C) 29</p>	<p>EBL = 95 m EBT = 140 m EBR = 15 m WBL = 55 m WBT = 95 m WBR = 30 m NBL = 25 m NBT = 80 m NBR = 25 m SBL = 105 m SBT = 150 m SBR = 30 m</p>	<p><u>Overall: 1.34 (F) 101</u> EBL = 1.4 (F) 233 EBT = 0.55 (D) 46 EBR = 0.08 (D) 39 WBL = 0.66 (E) 62 WBT = 1.19 (F) 155 WBR = 0.27 (D) 54 NBL = 0.72 (D) 39 NBT = 0.64 (D) 40 NBR = 0.28 (C) 34 SBL = 0.76 (D) 40 SBT = 0.81 (D) 49 SBR = 1.25 (F) 172</p>	<p>EBL = 315 m EBT = 75 m EBR = 15 m WBL = 60 m WBT = 135 m WBR = 35 m NBL = 65 m NBT = 115 m NBR = 35 m SBL = 60 m SBT = 145 m SBR = 295 m</p>
<p>Future Total 2036</p>	<p><u>Overall: 0.83 (D) 53</u> EBL = 0.72 (D) 46 EBT = 0.84 (E) 63 EBR = 0.13 (D) 46 WBL = 0.73 (F) 83 WBT = 0.74 (E) 67 WBR = 0.19 (E) 56 NBL = 0.66 (E) 63 NBT = 0.62 (E) 56 NBR = 0.23 (D) 49 SBL = 0.76 (D) 36 SBT = 0.81 (D) 43 SBR = 0.34 (C) 31</p>	<p>EBL = 95 m EBT = 140 m EBR = 25 m WBL = 55 m WBT = 95 m WBR = 30 m NBL = 35 m NBT = 100 m NBR = 35 m SBL = 115 m SBT = 215 m SBR = 50 m</p>	<p><u>Overall: 1.46 (F) 117</u> EBL = 1.4 (F) 233 EBT = 0.55 (D) 46 EBR = 0.09 (D) 39 WBL = 0.66 (E) 62 WBT = 1.19 (F) 155 WBR = 0.27 (D) 54 NBL = 1.41 (F) 248 NBT = 0.75 (D) 44 NBR = 0.33 (C) 35 SBL = 0.87 (E) 56 SBT = 1.00 (E) 72 SBR = 1.29 (F) 191</p>	<p>EBL = 315 m EBT = 75 m EBR = 20 m WBL = 60 m WBT = 135 m WBR = 35 m NBL = 195 m NBT = 140 m NBR = 45 m SBL = 85 m SBT = 205 m SBR = 305 m</p>

Future Background 2041	<u>Overall: 0.84 (E) 56</u> EBL = 0.89 (E) 70 EBT = 0.95 (E) 75 EBR = 0.1 (D) 47 WBL = 0.92 (F) 108 WBT = 0.86 (E) 75 WBR = 0.26 (E) 60 NBL = 0.5 (D) 48 NBT = 0.5 (D) 51 NBR = 0.19 (D) 46 SBL = 0.71 (C) 30 SBT = 0.65 (C) 34 SBR = 0.32 (C) 27	EBL = 135 m EBT = 165 m EBR = 20 m WBL = 75 m WBT = 105 m WBR = 35 m NBL = 25 m NBT = 85 m NBR = 25 m SBL = 105 m SBT = 165 m SBR = 35 m	<u>Overall: 1.45 (F) 116</u> EBL = 1.48 (F) 265 EBT = 0.6 (D) 47 EBR = 0.08 (D) 39 WBL = 0.69 (E) 62 WBT = 1.23 (F) 170 WBR = 0.3 (D) 54 NBL = 0.86 (E) 64 NBT = 0.69 (D) 41 NBR = 0.33 (C) 34 SBL = 0.93 (E) 67 SBT = 0.89 (D) 54 SBR = 1.36 (F) 220	EBL = 335 m EBT = 80 m EBR = 15 m WBL = 65 m WBT = 145 m WBR = 35 m NBL = 90 m NBT = 130 m NBR = 45 m SBL = 90 m SBT = 165 m SBR = 330 m
Future Total 2041	<u>Overall: 0.89 (E) 58</u> EBL = 0.89 (E) 70 EBT = 0.95 (E) 75 EBR = 0.17 (D) 48 WBL = 0.92 (F) 108 WBT = 0.86 (E) 75 WBR = 0.26 (E) 60 NBL = 0.81 (E) 80 NBT = 0.62 (D) 54 NBR = 0.27 (D) 48 SBL = 0.76 (C) 34 SBT = 0.82 (D) 41 SBR = 0.37 (C) 28	EBL = 135 m EBT = 165 m EBR = 30 m WBL = 75 m WBT = 105 m WBR = 35 m NBL = 45 m NBT = 110 m NBR = 40 m SBL = 115 m SBT = 225 m SBR = 55 m	<u>Overall: 1.55 (F) 136</u> EBL = 1.48 (F) 265 EBT = 0.6 (D) 47 EBR = 0.09 (D) 39 WBL = 0.69 (E) 62 WBT = 1.23 (F) 170 WBR = 0.3 (D) 54 NBL = 1.53 (F) 300 NBT = 0.79 (D) 45 NBR = 0.37 (D) 35 SBL = 1.09 (F) 113 SBT = 1.08 (F) 96 SBR = 1.39 (F) 232	EBL = 335 m EBT = 80 m EBR = 20 m WBL = 65 m WBT = 145 m WBR = 35 m NBL = 210 m NBT = 155 m NBR = 55 m SBL = 115 m SBT = 230 m SBR = 335 m

Under existing conditions, the intersection of Mayfield Road and Hurontario Street is reported to operate with an overall v/c ratio of 0.52 LOS C during the a.m. peak hour and 0.60 LOS C during the p.m. peak hour. Only the eastbound left movement is reported to operate at a critical level and above capacity during the p.m. peak hour.

With the proposed widening along Mayfield Road, along with the addition of corridor growth and background traffic under future background scenarios, the intersection is reported to operate satisfactorily only under the 2026 horizon year.

As the traffic levels continue to increase at the intersection, the overall intersection begins to operate over capacity during the p.m. peak hour under the 2029 horizon year while remaining below capacity despite being at a critical level during the a.m. peak hour. Similar to the intersection of Hurontario Street and Old School Road, it is recommended that the Region of Peel continue to monitor the operation of the intersection as development in the area proceeds to identify where capacity is needed and possible improvements to the intersection to provide the necessary capacity.

7.7 McLaughlin Road and Street A

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 12 Capacity analysis of McLaughlin Road and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que.
Future Total 2026	EBTLR = 0 (A) 0 WBTLR = 0.2 (C) 15 NBTL = 0 (A) 0 NBTR = 0.12 (A) 0 SBTL = 0.01 (A) 0 SBTR = 0.09 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m	EBTLR = 0 (A) 0 WBTLR = 0.17 (C) 18 NBTL = 0 (A) 0 NBTR = 0.19 (A) 0 SBTL = 0.01 (A) 1 SBTR = 0.11 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m
Future Total 2029	EBTLR = 0.1 (C) 22 WBL = 0.48 (C) 31 WBTR = 0.13 (A) 13 NBTL = 0 (A) 0 NBTR = 0.19 (A) 0 SBTL = 0.02 (A) 1 SBTR = 0.11 (A) 0	EBTLR = 5 m WBL = 20 m WBTR = 5 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m	EBTLR = 0.37 (F) 52 WBL = 0.86 (F) 124 WBTR = 0.46 (A) 34 NBTL = 0 (A) 0 NBTR = 0.29 (A) 0 SBTL = 0.08 (A) 3 SBTR = 0.15 (A) 0	EBTLR = 15 m WBL = 40 m WBTR = 20 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m
Future Total 2031	<u>Overall: 0.58 (B) 17</u> EBTLR = 0.77 (C) 24 WBTLR = 0.68 (C) 23 NBTLR = 0.43 (B) 12 SBTLR = 0.35 (B) 12	EBTLR = 80 m WBTLR = 50 m NBTLR = 50 m SBTLR = 45 m	<u>Overall: 0.94 (C) 34</u> EBTLR = 0.51 (C) 28 WBTLR = 0.97 (E) 67 NBTLR = 0.93 (C) 34 SBTLR = 0.42 (B) 14	EBTLR = 75 m WBTLR = 150 m NBTLR = 155 m SBTLR = 55 m
Future Total 2036	<u>Overall: 0.58 (B) 17</u> EBTLR = 0.77 (C) 24 WBTLR = 0.68 (C) 23 NBTLR = 0.45 (B) 13 SBTLR = 0.36 (B) 12	EBTLR = 80 m WBTLR = 50 m NBTLR = 55 m SBTLR = 45 m	<u>Overall: 0.96 (D) 35</u> EBTLR = 0.51 (C) 28 WBTLR = 0.97 (E) 67 NBTLR = 0.95 (D) 37 SBTLR = 0.43 (B) 14	EBTLR = 75 m WBTLR = 150 m NBTLR = 165 m SBTLR = 55 m
Future Total 2041	<u>Overall: 0.55 (B) 17</u> EBTLR = 0.78 (C) 26 WBTLR = 0.7 (C) 25 NBL = 0.08 (A) 10 NBTR = 0.39 (B) 12 SBTLR = 0.37 (B) 12	EBTLR = 85 m WBTLR = 55 m NBL = 10 m NBTR = 55 m SBTLR = 50 m	<u>Overall: 0.79 (C) 24</u> EBTLR = 0.51 (C) 26 WBTLR = 0.94 (E) 58 NBL = 0.69 (C) 27 NBTR = 0.52 (B) 15 SBTLR = 0.44 (B) 14	EBTLR = 70 m WBTLR = 135 m NBL = 80 m NBTR = 85 m SBTLR = 60 m

Under the future total traffic conditions in 2026 and 2029, the intersection of McLaughlin Road and Street A operates satisfactorily as an unsignalized intersection. With the addition of corridor growth, background development traffic and the site generated traffic under the 2031, 2036, and 2041 horizon years, it is recommended to have the intersection be converted to a signalized intersection in order to mitigate delays.

7.8 Hurontario Street and Street A

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 13 Capacity analysis of Hurontario Street and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2029	Overall: 0.82 (B) 14 EBL = 0.38 (D) 54 EBR = 0.68 (E) 56 NBL = 0.34 (C) 22 NBT = 0.46 (A) 2 SBTR = 0.87 (B) 16	EBL = 15 m EBR = 55 m NBL = 20 m NBT = 50 m SBTR = 285 m	Overall: 0.9 (B) 15 EBL = 0.41 (D) 53 EBR = 0.51 (D) 37 NBL = 0.86 (D) 52 NBT = 0.89 (A) 9 SBTR = 0.73 (B) 17	EBL = 25 m EBR = 50 m NBL = 90 m NBT = 225 m SBTR = 185 m
Future Total 2031	Overall: 1.28 (F) 82 EBL = 0.56 (E) 66 EBR = 1.36 (F) 219 NBL = 0.4 (C) 34 NBT = 0.49 (A) 3 SBTR = 1.16 (F) 105	EBL = 35 m EBR = 310 m NBL = 55 m NBT = 65 m SBTR = 445 m	Overall: 1.02 (C) 34 EBL = 0.52 (D) 55 EBR = 0.7 (D) 35 NBL = 1.05 (F) 86 NBT = 0.98 (B) 18 SBTR = 0.99 (D) 44	EBL = 30 m EBR = 105 m NBL = 225 m NBT = 400 m SBTR = 265 m
Future Total 2036	Overall: 1.3 (F) 88 EBL = 0.56 (E) 66 EBR = 1.39 (F) 233 NBL = 0.41 (D) 35 NBT = 0.51 (A) 3 SBTR = 1.18 (F) 114	EBL = 35 m EBR = 315 m NBL = 55 m NBT = 70 m SBTR = 465 m	Overall: 1.03 (D) 39 EBL = 0.52 (D) 55 EBR = 0.7 (D) 35 NBL = 1.05 (F) 86 NBT = 1.00 (C) 24 SBTR = 1.02 (D) 51	EBL = 30 m EBR = 105 m NBL = 225 m NBT = 415 m SBTR = 275 m
Future Total 2041	Overall: 1.33 (F) 94 EBL = 0.56 (E) 66 EBR = 1.43 (F) 248 NBL = 0.43 (D) 36 NBT = 0.52 (A) 3 SBTR = 1.21 (F) 123	EBL = 35 m EBR = 320 m NBL = 55 m NBT = 70 m SBTR = 485 m	Overall: 1.06 (D) 44 EBL = 0.52 (D) 55 EBR = 0.72 (D) 37 NBL = 1.08 (F) 95 NBT = 1.02 (C) 31 SBTR = 1.03 (D) 54	EBL = 30 m EBR = 105 m NBL = 230 m NBT = 435 m SBTR = 285 m

As per the memorandum provided by the Town of Caledon’s Transportation Engineering Public Works & Transportation Department, dated February 2024, Town Transportation Staff are engaging with MTO staff in discussions on the proposed connection of Dougal Avenue to Highway 10 at the Council's direction and the residents' request. Street A at Hurontario Street is proposed to line up with Dougal Avenue and as a result, GHD modelled the intersection of Street A at Hurontario as a signalized intersection.

Under the 2029 horizon year, the signalized intersection of Street A and Hurontario Street is reported to operate at satisfactory levels with an overall v/c ratio of 0.82 LOS B and 0.90 LOS B during the a.m. and p.m. peak hours. Under the 2031, 2036, and 2041 horizon year, the intersection is reported to operate over capacity with the overall intersection, eastbound right-turn and southbound approach operate over capacity.

With the construction of the new Highway 410/Hurontario Street interchange with Tim Manley, some of the site generated traffic may choose to use an alternate route to access the interchange in order to avoid the 248 second delay reported during the a.m. peak hour under the 2041 future total scenario.

7.9 Chinguacousy Road and Street A

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 14 Capacity analysis of Chinguacousy Road and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	WBL = 0.01 (B) 18 WBR = 0.02 (A) 12 NBTR = 0.33 (A) 0 SBTL = 0.01 (A) 0	WBL = 5 m WBR = 5 m NBTR = 0 m SBTL = 5 m	WBL = 0.01 (C) 28 WBR = 0 (A) 14 NBTR = 0.46 (A) 0 SBTL = 0 (A) 0	WBL = 5 m WBR = 5 m NBTR = 0 m SBTL = 0 m
Future Total 2036	WBL = 0.01 (B) 19 WBR = 0.02 (A) 12 NBTR = 0.34 (A) 0 SBTL = 0.01 (A) 0	WBL = 5 m WBR = 5 m NBTR = 0 m SBTL = 5 m	WBL = 0.01 (C) 29 WBR = 0 (A) 14 NBTR = 0.47 (A) 0 SBTL = 0 (A) 0	WBL = 5 m WBR = 5 m NBTR = 0 m SBTL = 0 m
Future Total 2041	WBL = 0.02 (B) 19 WBR = 0.02 (A) 12 NBTR = 0.35 (A) 0 SBTL = 0.01 (A) 0	WBL = 5 m WBR = 5 m NBTR = 0 m SBTL = 5 m	WBL = 0.01 (C) 30 WBR = 0 (A) 15 NBTR = 0.48 (A) 0 SBTL = 0 (A) 0	WBL = 5 m WBR = 5 m NBTR = 0 m SBTL = 0 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Chinguacousy Road and Street A is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queuing during the a.m. peak hour.

7.10 Old School Road and Street B

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 15 Capacity analysis of Old School Road and Street B

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBT = 0.25 (A) 0 EBTR = 0.15 (A) 0 WBTL = 0.02 (A) 1 WBT = 0.18 (A) 0 NBLR = 0.3 (C) 20	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m	EBT = 0.29 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.04 (A) 2 WBT = 0.31 (A) 0 NBLR = 0.31 (D) 27	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m
Future Total 2036	EBT = 0.26 (A) 0 EBTR = 0.15 (A) 0 WBTL = 0.02 (A) 1 WBT = 0.18 (A) 0 NBLR = 0.32 (C) 22	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m	EBT = 0.3 (A) 0 EBTR = 0.19 (A) 0 WBTL = 0.05 (A) 2 WBT = 0.32 (A) 0 NBLR = 0.33 (D) 29	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m
Future Total 2041	EBT = 0.27 (A) 0 EBTR = 0.16 (A) 0 WBTL = 0.02 (A) 1 WBT = 0.19 (A) 0 NBLR = 0.33 (C) 23	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m	EBT = 0.32 (A) 0 EBTR = 0.19 (A) 0 WBTL = 0.05 (A) 2 WBT = 0.34 (A) 0 NBLR = 0.35 (D) 32	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 15 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Old School Road and Street B is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queuing during the a.m. peak hour.

7.11 Old School Road and Street D

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 16 Capacity analysis of Old School Road and Street D

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBT = 0.47 (A) 0 EBTR = 0.25 (A) 0 WBTL = 0.08 (A) 3 WBT = 0.28 (A) 0 NBL = 0.37 (C) 61 NBR = 0.27 (A) 12	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBL = 15 m NBR = 10 m	EBT = 0.49 (A) 0 EBTR = 0.27 (A) 0 WBTL = 0.26 (A) 7 WBT = 0.49 (A) 0 NBL = 1.25 (F) 445 NBR = 0.15 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBL = 35 m NBR = 5 m
Future Total 2036	EBT = 0.49 (A) 0 EBTR = 0.26 (A) 0 WBTL = 0.08 (A) 3 WBT = 0.29 (A) 0 NBL = 0.4 (C) 69 NBR = 0.26 (A) 12	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBL = 15 m NBR = 10 m	EBT = 0.5 (A) 0 EBTR = 0.28 (A) 0 WBTL = 0.27 (A) 7 WBT = 0.51 (A) 0 NBL = 1.42 (F) 541 NBR = 0.15 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBL = 35 m NBR = 5 m
Future Total 2041	EBT = 0.51 (A) 0 EBTR = 0.27 (A) 0 WBTL = 0.09 (A) 3 WBT = 0.3 (A) 0 NBL = 0.45 (C) 80 NBR = 0.26 (A) 11	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBL = 15 m NBR = 10 m	EBT = 0.52 (A) 0 EBTR = 0.29 (A) 0 WBTL = 0.28 (A) 7 WBT = 0.53 (A) 0 NBL = 1.62 (F) 661 NBR = 0.15 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBL = 40 m NBR = 5 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Old School Road and Street D is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during the a.m. peak hour. During the p.m. peak hour, the northbound approach is operating above capacity. With a signalized intersection to the west, drivers may opt to travel in the westbound direction via McLaughlin Road to then turn left at Old School Road.

7.12 McLaughlin Road and Street E

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 17 Capacity analysis of McLaughlin Road and Street E

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBTLR = 0.12 (B) 13 WBTLR = 0.32 (D) 26 NBT = 0.02 (A) 1 NBT = 0.2 (A) 0 SBT = 0.01 (A) 0 SBT = 0.15 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m	EBTLR = 0.11 (B) 15 WBTLR = 0.31 (D) 34 NBT = 0.06 (A) 2 NBT = 0.27 (A) 0 SBT = 0.03 (A) 1 SBT = 0.21 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2036	EBTLR = 0.13 (B) 13 WBTLR = 0.33 (D) 28 NBT = 0.02 (A) 1 NBT = 0.2 (A) 0 SBT = 0.01 (A) 0 SBT = 0.16 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m	EBTLR = 0.11 (B) 15 WBTLR = 0.32 (E) 36 NBT = 0.06 (A) 2 NBT = 0.28 (A) 0 SBT = 0.03 (A) 1 SBT = 0.21 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m
Future Total 2041	EBTLR = 0.13 (B) 14 WBTLR = 0.34 (D) 29 NBT = 0.02 (A) 1 NBT = 0.21 (A) 0 SBT = 0.01 (A) 0 SBT = 0.16 (A) 0	EBTLR = 5 m WBTLR = 15 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m	EBTLR = 0.11 (C) 15 WBTLR = 0.35 (E) 40 NBT = 0.06 (A) 2 NBT = 0.28 (A) 0 SBT = 0.03 (A) 1 SBT = 0.22 (A) 0	EBTLR = 5 m WBTLR = 15 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of McLaughlin Road and Street E is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during both peak hours.

7.13 Old School Road and Street F

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 18 Capacity analysis of Old School Road and Street F

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBT = 0.28 (A) 0 EBTR = 0.14 (A) 0 WBTL = 0.08 (A) 3 WBT = 0.2 (A) 0 NBLR = 0.44 (C) 16	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 20 m	EBT = 0.33 (A) 0 EBTR = 0.17 (A) 0 WBTL = 0.27 (A) 7 WBT = 0.35 (A) 0 NBLR = 0.4 (C) 24	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBLR = 15 m
Future Total 2036	EBT = 0.29 (A) 0 EBTR = 0.15 (A) 0 WBTL = 0.08 (A) 3 WBT = 0.21 (A) 0 NBLR = 0.45 (C) 17	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 20 m	EBT = 0.34 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.28 (A) 7 WBT = 0.36 (A) 0 NBLR = 0.42 (D) 25	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBLR = 15 m
Future Total 2041	EBT = 0.31 (A) 0 EBTR = 0.16 (A) 0 WBTL = 0.08 (A) 3 WBT = 0.22 (A) 0 NBLR = 0.47 (C) 18	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 20 m	EBT = 0.35 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.28 (A) 7 WBT = 0.38 (A) 0 NBLR = 0.45 (D) 27	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBLR = 20 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Old School Road and Street F is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during both peak hours.

8. Sensitivity Analysis with the Highway 413

GHD also completed a sensitivity analysis for the capacity analysis of the study intersections assuming construction of the planned Highway 413 is completed. Based on the trip distribution in **Table 4** (without Highway 413) and **Table 5** (with Highway 413), the provision of the highway would result in a slight change in the distribution for the site generated traffic as well as for the traffic generated by the Mayfield West Phase 1 Stage 2 background development. The sensitivity analysis did not consider the reduction in traffic along Hurontario Street at Old School Road that is likely to occur should the northerly extension of Highway 410 towards Highway 413 be completed to the east of Hurontario Street.

8.1 Old School Road and Chinguacousy Road

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic condition are summarized in the following table.

Table 19 Capacity analysis of Old School Road and Chinguacousy Road

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	EBTLR = 0.28 (A) 9 WBTLR = 0.21 (A) 9 NBTLR = 0.14 (A) 8 SBTLR = 0.13 (A) 9	EBTLR = 5 m WBTLR = 5 m NBTLR = 5 m SBTLR = 5 m	EBTLR = 0.24 (A) 9 WBTLR = 0.42 (B) 11 NBTLR = 0.18 (A) 9 SBTLR = 0.11 (A) 9	EBTLR = 5 m WBTLR = 5 m NBTLR = 5 m SBTLR = 5 m
Future Background 2026	EBTLR = 0.38 (B) 13 WBL = 0.18 (B) 10 WBTR = 0.29 (A) 11 NBTLR = 0.51 (B) 14 SBTLR = 0.31 (B) 12	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 5 m SBTLR = 5 m	EBTLR = 0.43 (C) 16 WBL = 0.4 (C) 15 WBTR = 0.66 (A) 22 NBTLR = 0.84 (E) 35 SBTLR = 0.41 (C) 16	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 10 m SBTLR = 5 m
Future Total 2026	EBTLR = 0.39 (B) 13 WBL = 0.18 (B) 10 WBTR = 0.31 (A) 11 NBTLR = 0.52 (B) 14 SBTLR = 0.32 (B) 12	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 5 m SBTLR = 5 m	EBTLR = 0.44 (C) 17 WBL = 0.41 (C) 15 WBTR = 0.68 (A) 24 NBTLR = 0.85 (E) 37 SBTLR = 0.42 (C) 16	EBTLR = 5 m WBL = 5 m WBTR = 5 m NBTLR = 10 m SBTLR = 5 m
Future Background 2029	<u>Overall: 0.44 (A) 9</u> EBTLR = 0.55 (B) 13 WBL = 0.45 (B) 13 WBTR = 0.39 (B) 12 NBTLR = 0.4 (A) 6 SBTLR = 0.25 (A) 5	EBTLR = 25 m WBL = 15 m WBTR = 15 m NBTLR = 25 m SBTLR = 20 m	<u>Overall: 0.66 (C) 21</u> EBTLR = 0.34 (B) 20 WBL = 0.61 (C) 27 WBTR = 0.54 (C) 23 NBTLR = 0.7 (C) 21 SBTLR = 0.32 (B) 14	EBTLR = 45 m WBL = 55 m WBTR = 70 m NBTLR = 105 m SBTLR = 40 m
Future Total 2029	<u>Overall: 0.45 (A) 9</u> EBTLR = 0.56 (B) 13 WBL = 0.46 (B) 13 WBTR = 0.45 (B) 12 NBTLR = 0.4 (A) 6 SBTLR = 0.25 (A) 5	EBTLR = 25 m WBL = 15 m WBTR = 20 m NBTLR = 25 m SBTLR = 20 m	<u>Overall: 0.67 (C) 21</u> EBTLR = 0.36 (C) 20 WBL = 0.63 (C) 28 WBTR = 0.56 (C) 24 NBTLR = 0.7 (C) 21 SBTLR = 0.32 (B) 14	EBTLR = 45 m WBL = 55 m WBTR = 70 m NBTLR = 105 m SBTLR = 40 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Background 2031	Overall: 0.37 (A) 8 EBTLR = 0.56 (B) 13 WBL = 0.54 (B) 14 WBTR = 0.41 (B) 12 NBTL = 0.25 (A) 5 NBR = 0.19 (A) 5 SBTLR = 0.29 (A) 5	EBTLR = 25 m WBL = 15 m WBTR = 20 m NBTL = 20 m NBR = 10 m SBTLR = 25 m	Overall: 0.51 (C) 26 EBTLR = 0.4 (C) 34 WBL = 0.49 (B) 19 WBTR = 0.43 (C) 21 NBTL = 0.56 (C) 30 NBR = 0.36 (C) 26 SBTLR = 0.49 (C) 29	EBTLR = 75 m WBL = 60 m WBTR = 80 m NBTL = 105 m NBR = 50 m SBTLR = 80 m
Future Total 2031	Overall: 0.47 (A) 9 EBTLR = 0.48 (B) 10 WBL = 0.63 (B) 14 WBTR = 0.47 (B) 10 NBTL = 0.33 (A) 8 NBR = 0.22 (A) 7 SBTLR = 0.36 (A) 8	EBTLR = 30 m WBL = 25 m WBTR = 25 m NBTL = 25 m NBR = 10 m SBTLR = 25 m	Overall: 0.62 (C) 30 EBTLR = 0.58 (D) 41 WBL = 0.68 (C) 24 WBTR = 0.53 (C) 23 NBTL = 0.59 (C) 31 NBR = 0.49 (C) 29 SBTLR = 0.64 (C) 34	EBTLR = 100 m WBL = 80 m WBTR = 105 m NBTL = 110 m NBR = 75 m SBTLR = 95 m
Future Background 2036	Overall: 0.4 (A) 9 EBTLR = 0.59 (B) 14 WBL = 0.57 (B) 15 WBTR = 0.43 (B) 12 NBTL = 0.26 (A) 5 NBR = 0.19 (A) 5 SBTLR = 0.31 (A) 6	EBTLR = 25 m WBL = 20 m WBTR = 20 m NBTL = 25 m NBR = 10 m SBTLR = 25 m	Overall: 0.53 (C) 27 EBTLR = 0.45 (D) 36 WBL = 0.52 (B) 20 WBTR = 0.47 (C) 22 NBTL = 0.56 (C) 30 NBR = 0.36 (C) 26 SBTLR = 0.5 (C) 28	EBTLR = 80 m WBL = 60 m WBTR = 90 m NBTL = 105 m NBR = 50 m SBTLR = 80 m
Future Total 2036	Overall: 0.5 (A) 10 EBTLR = 0.51 (B) 10 WBL = 0.66 (B) 15 WBTR = 0.49 (B) 10 NBTL = 0.34 (A) 8 NBR = 0.23 (A) 7 SBTLR = 0.38 (A) 8	EBTLR = 30 m WBL = 30 m WBTR = 30 m NBTL = 25 m NBR = 10 m SBTLR = 30 m	Overall: 0.65 (C) 30 EBTLR = 0.64 (D) 43 WBL = 0.72 (C) 26 WBTR = 0.58 (C) 25 NBTL = 0.59 (C) 31 NBR = 0.49 (C) 28 SBTLR = 0.64 (C) 34	EBTLR = 105 m WBL = 80 m WBTR = 120 m NBTL = 110 m NBR = 75 m SBTLR = 95 m
Future Background 2041	Overall: 0.43 (A) 9 EBTLR = 0.63 (B) 14 WBL = 0.61 (B) 16 WBTR = 0.46 (B) 12 NBTL = 0.27 (A) 6 NBR = 0.2 (A) 5 SBTLR = 0.33 (A) 6	EBTLR = 30 m WBL = 20 m WBTR = 20 m NBTL = 25 m NBR = 10 m SBTLR = 30 m	Overall: 0.56 (C) 28 EBTLR = 0.48 (D) 36 WBL = 0.53 (B) 20 WBTR = 0.5 (C) 23 NBTL = 0.59 (C) 31 NBR = 0.38 (C) 27 SBTLR = 0.54 (C) 31	EBTLR = 85 m WBL = 60 m WBTR = 100 m NBTL = 110 m NBR = 55 m SBTLR = 85 m
Future Total 2041	Overall: 0.53 (A) 10 EBTLR = 0.54 (B) 11 WBL = 0.69 (B) 17 WBTR = 0.5 (B) 10 NBTL = 0.35 (A) 8 NBR = 0.24 (A) 7 SBTLR = 0.41 (A) 9	EBTLR = 35 m WBL = 35 m WBTR = 30 m NBTL = 25 m NBR = 10 m SBTLR = 30 m	Overall: 0.7 (C) 32 EBTLR = 0.67 (D) 44 WBL = 0.73 (C) 26 WBTR = 0.61 (C) 25 NBTL = 0.62 (C) 32 NBR = 0.52 (C) 30 SBTLR = 0.71 (D) 38	EBTLR = 110 m WBL = 80 m WBTR = 130 m NBTL = 115 m NBR = 80 m SBTLR = 105 m

Under existing conditions, the unsignalized intersection of Old School Road and Chinguacousy Road is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing. All approaches are operating with delays of 9 seconds or less during the a.m. peak and 11 seconds or less during the p.m. peak.

With the addition of corridor growth and background traffic under the 2026 future background scenario, the intersection continues to operate at satisfactory levels. With the addition of site traffic from Phase 1 of the development.

With the addition of corridor growth and background traffic under the 2029 future background scenario, the signalization of the intersection is required to accommodate future growth at the intersection. As a signalized intersection, it operates with an overall v/c ratio of 0.44 LOS A during the a.m. peak hour and 0.66 LOS C during the p.m. peak hour with no critical movements.

Under the 2029 future total scenario, with the addition of site generated traffic, the intersection operates with an overall v/c ratio of 0.45 LOS A during the a.m. peak hour and 0.67 LOS C during the p.m. peak hour. The site continues to have a negligible impact on the operation of the intersection.

Under the 2031 future background condition, with the addition of corridor growth, background development traffic, and a northbound right-turn lane to further mitigate delays, the intersection operates with an overall v/c ratio of 0.37 LOS C during the a.m. peak hour and 0.51 LOS C during the p.m. peak hour.

With the addition of site generated traffic under the future total 2031 condition, the intersection is reported to operate with an overall v/c ratio of 0.47 LOS A during the a.m. peak hour and 0.62 LOS C during the p.m. peak hour.

Under the ultimate horizon year, the intersection operates with an overall v/c ratio of 0.53 LOS A during the a.m. peak hour and 0.70 LOS C during the p.m. peak hour.

8.2 Old School Road and McLaughlin Road

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 20 Capacity analysis of Old School Road and McLaughlin Road (With Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	EBTLR = 0.41 (B) 12 WBTLR = 0.35 (B) 11 NBTLR = 0.22 (A) 10 SBTLR = 0.24 (B) 10	EBTLR = 0 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.36 (B) 12 WBTLR = 0.61 (C) 16 NBTLR = 0.35 (B) 12 SBTLR = 0.14 (B) 10	EBTLR = 0 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m
Future Background 2026	EBTLR = 0.89 (E) 45 WBL = 0.36 (C) 14 WBTR = 0.53 (A) 18 NBTL = 0.18 (C) 12 NBR = 0.56 (A) 18 SBTLR = 0.38 (C) 17	EBTLR = 10 m WBL = 5 m WBTR = 5 m NBTL = 5 m NBR = 5 m SBTLR = 5 m	EBTLR = 0.92 (F) 51 WBL = 0.65 (F) 24 WBTR = 1.04 (A) 77 NBTL = 0.37 (C) 15 NBR = 0.61 (A) 20 SBTLR = 0.21 (B) 15	EBTLR = 15 m WBL = 5 m WBTR = 15 m NBTL = 5 m NBR = 5 m SBTLR = 5 m
Future Total 2026	EBTLR = 0.91 (E) 48 WBL = 0.37 (C) 15 WBTR = 0.54 (A) 18 NBTL = 0.21 (C) 12 NBR = 0.57 (A) 18 SBTLR = 0.39 (C) 17	EBTLR = 15 m WBL = 5 m WBTR = 5 m NBTL = 5 m NBR = 5 m SBTLR = 5 m	EBTLR = 0.94 (F) 56 WBL = 0.67 (F) 25 WBTR = 1.05 (A) 81 NBTL = 0.39 (C) 15 NBR = 0.62 (A) 21 SBTLR = 0.22 (C) 15	EBTLR = 15 m WBL = 5 m WBTR = 15 m NBTL = 5 m NBR = 5 m SBTLR = 5 m

Future Background 2029	<u>Overall: 0.54 (C) 21</u> EBTLR = 0.83 (C) 32 WBL = 0.59 (B) 17 WBTR = 0.35 (B) 13 NBTL = 0.16 (B) 16 NBR = 0.23 (B) 17 SBTLR = 0.26 (B) 17	EBTLR = 100 m WBL = 30 m WBTR = 40 m NBTL = 20 m NBR = 20 m SBTLR = 35 m	<u>Overall: 0.64 (B) 19</u> EBTLR = 0.62 (C) 20 WBL = 0.61 (A) 10 WBTR = 0.45 (A) 7 NBTL = 0.63 (D) 39 NBR = 0.26 (C) 33 SBTLR = 0.3 (C) 34	EBTLR = 120 m WBL = 45 m WBTR = 75 m NBTL = 50 m NBR = 25 m SBTLR = 25 m
Future Total 2029	<u>Overall: 0.56 (C) 21</u> EBTLR = 0.84 (C) 32 WBL = 0.59 (B) 17 WBTR = 0.35 (B) 13 NBTL = 0.25 (B) 17 NBR = 0.23 (B) 17 SBTLR = 0.29 (B) 18	EBTLR = 105 m WBL = 30 m WBTR = 40 m NBTL = 30 m NBR = 20 m SBTLR = 35 m	<u>Overall: 0.67 (C) 21</u> EBTLR = 0.66 (C) 23 WBL = 0.64 (B) 11 WBTR = 0.46 (A) 8 NBTL = 0.68 (D) 41 NBR = 0.26 (C) 32 SBTLR = 0.32 (C) 33	EBTLR = 130 m WBL = 50 m WBTR = 85 m NBTL = 60 m NBR = 25 m SBTLR = 30 m
Future Background 2031	<u>Overall: 0.53 (B) 14</u> EBTLR = 0.58 (B) 16 WBL = 0.46 (A) 7 WBTR = 0.17 (A) 6 NBTL = 0.31 (B) 18 NBR = 0.27 (B) 17 SBTLR = 0.48 (B) 19	EBTLR = 45 m WBL = 25 m WBTR = 15 m NBTL = 25 m NBR = 20 m SBTLR = 35 m	<u>Overall: 0.62 (B) 16</u> EBTLR = 0.63 (C) 21 WBL = 0.71 (B) 11 WBTR = 0.31 (A) 7 NBTL = 0.53 (C) 24 NBR = 0.31 (C) 22 SBTLR = 0.23 (C) 21	EBTLR = 70 m WBL = 60 m WBTR = 40 m NBTL = 55 m NBR = 25 m SBTLR = 25 m
Future Total 2031	<u>Overall: 0.7 (B) 19</u> EBTLR = 0.75 (C) 22 WBL = 0.69 (B) 14 WBTR = 0.23 (A) 7 NBTL = 0.43 (C) 24 NBR = 0.48 (C) 25 SBTLR = 0.62 (C) 28	EBTLR = 105 m WBL = 50 m WBTR = 30 m NBTL = 45 m NBR = 45 m SBTLR = 60 m	<u>Overall: 0.81 (C) 29</u> EBTLR = 0.85 (D) 37 WBL = 0.86 (C) 34 WBTR = 0.43 (A) 8 NBTL = 0.7 (D) 44 NBR = 0.58 (D) 39 SBTLR = 0.68 (D) 45	EBTLR = 135 m WBL = 165 m WBTR = 75 m NBTL = 75 m NBR = 60 m SBTLR = 60 m
Future Background 2036	<u>Overall: 0.55 (B) 14</u> EBTLR = 0.6 (B) 17 WBL = 0.49 (A) 8 WBTR = 0.18 (A) 6 NBTL = 0.33 (B) 18 NBR = 0.28 (B) 18 SBTLR = 0.52 (B) 20	EBTLR = 50 m WBL = 25 m WBTR = 15 m NBTL = 25 m NBR = 20 m SBTLR = 40 m	<u>Overall: 0.64 (B) 17</u> EBTLR = 0.65 (C) 22 WBL = 0.74 (B) 13 WBTR = 0.33 (A) 7 NBTL = 0.55 (C) 25 NBR = 0.31 (C) 22 SBTLR = 0.26 (C) 22	EBTLR = 80 m WBL = 70 m WBTR = 45 m NBTL = 60 m NBR = 25 m SBTLR = 30 m
Future Total 2036	<u>Overall: 0.73 (C) 21</u> EBTLR = 0.77 (C) 24 WBL = 0.72 (B) 18 WBTR = 0.24 (A) 7 NBTL = 0.44 (C) 26 NBR = 0.51 (C) 26 SBTLR = 0.66 (C) 30	EBTLR = 110 m WBL = 60 m WBTR = 30 m NBTL = 45 m NBR = 50 m SBTLR = 65 m	<u>Overall: 0.84 (C) 32</u> EBTLR = 0.87 (D) 38 WBL = 0.92 (D) 44 WBTR = 0.45 (A) 8 NBTL = 0.71 (D) 44 NBR = 0.7 (D) 44 SBTLR = 0.72 (D) 47	EBTLR = 145 m WBL = 185 m WBTR = 85 m NBTL = 75 m NBR = 80 m SBTLR = 60 m

Future Background 2041	<u>Overall: 0.58 (B) 15</u> EBTLR = 0.62 (B) 18 WBL = 0.53 (A) 8 WBTR = 0.19 (A) 6 NBTL = 0.33 (B) 19 NBR = 0.33 (B) 19 SBTLR = 0.56 (C) 21	EBTLR = 55 m WBL = 30 m WBTR = 20 m NBTL = 30 m NBR = 25 m SBTLR = 50 m	<u>Overall: 0.67 (B) 18</u> EBTLR = 0.67 (C) 24 WBL = 0.77 (B) 14 WBTR = 0.35 (A) 8 NBTL = 0.59 (C) 27 NBR = 0.32 (C) 24 SBTLR = 0.29 (C) 24	EBTLR = 90 m WBL = 85 m WBTR = 50 m NBTL = 70 m NBR = 30 m SBTLR = 35 m
Future Total 2041	<u>Overall: 0.76 (C) 23</u> EBTLR = 0.8 (C) 26 WBL = 0.75 (C) 22 WBTR = 0.25 (A) 7 NBTL = 0.46 (C) 27 NBR = 0.54 (C) 28 SBTLR = 0.71 (C) 34	EBTLR = 120 m WBL = 65 m WBTR = 35 m NBTL = 45 m NBR = 55 m SBTLR = 75 m	<u>Overall: 0.9 (D) 36</u> EBTLR = 0.91 (D) 45 WBL = 0.93 (D) 48 WBTR = 0.46 (A) 9 NBTL = 0.77 (D) 51 NBR = 0.65 (D) 44 SBTLR = 0.85 (E) 68	EBTLR = 160 m WBL = 185 m WBTR = 80 m NBTL = 85 m NBR = 75 m SBTLR = 75 m

Under existing conditions, the unsignalized intersection of Old School Road and McLaughlin Road is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing. All approaches are operating with delays of 12 seconds or less during the a.m. peak and 16 seconds or less during the p.m. peak.

With the continued operation of the intersection with an all-way stop-control under the 2026 future background condition, the intersection operates at satisfactory levels with a v/c ratio of 1.04 in the westbound through/right movement during the p.m. peak hour. In order to mitigate some of the delays, an auxiliary left-turn lane has been provided the westbound approach and a right-turn lane in the northbound approach in order to accommodate future volumes generated by corridor growth and background developments.

With the addition of Phase 1 site generated traffic under the 2026 horizon year, the intersection continues to operate at a similar level under the future total scenario as it did under the future background condition.

In order to accommodate future traffic levels, the intersection was converted to a signalized intersection under the 2029 future background scenario. As a signalized intersection, it operates with an overall v/c ratio of 0.54 LOS C during the a.m. peak hour and 0.64 LOS B during the p.m. peak hour without any critical movements.

With the addition of site generated traffic from Phases 1-4, the intersection continues to operate at satisfactory levels with an overall v/c ratio of 0.56 LOS C during the a.m. peak hour and 0.67 LOS C during the p.m. peak hour.

Under the remaining horizon years, with the addition of corridor growth and background development traffic under the future background scenarios and the site generated under the future total scenarios, the intersection continues to operate at satisfactory levels. Under the ultimate future total scenario, the intersection operates just below critical levels during both peak hours with v/c ratios of 0.76 LOS C and 0.90 LOS D respectively, however they remain below the theoretical capacity levels during both peak hours.

8.3 Old School Road and Hurontario Street

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 21 Capacity analysis of Old School Road and Hurontario Street (With Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	<u>Overall: 0.87 (C) 31</u> EBL = 0.21 (D) 36 EBTR = 0.91 (E) 74 WBL = 0.35 (D) 39 WBTR = 0.47 (D) 43 NBL = 0.52 (C) 26 NBTR = 0.61 (B) 18 SBL = 0.15 (B) 12 SBTR = 0.9 (C) 30	EBL = 20 m EBTR = 125 m WBL = 15 m WBTR = 55 m NBL = 15 m NBTR = 115 m SBL = 10 m SBTR = 260 m	<u>Overall: 0.77 (C) 25</u> EBL = 0.45 (D) 41 EBTR = 0.73 (D) 53 WBL = 0.33 (D) 40 WBTR = 0.72 (D) 52 NBL = 0.46 (B) 11 NBTR = 0.81 (C) 21 SBL = 0.23 (B) 17 SBTR = 0.56 (B) 19	EBL = 25 m EBTR = 75 m WBL = 20 m WBTR = 80 m NBL = 25 m NBTR = 215 m SBL = 5 m SBTR = 110 m
Future Background 2026	<u>Overall: 0.96 (C) 34</u> EBL = 0.99 (F) 82 EBTR = 0.58 (C) 32 WBL = 0.85 (E) 57 WBTR = 0.4 (C) 29 NBL = 0.95 (F) 131 NBT = 0.68 (C) 24 NBR = 0.09 (B) 16 SBL = 0.63 (D) 50 SBT = 0.88 (C) 31 SBR = 0.16 (B) 17	EBL = 145 m EBTR = 100 m WBL = 95 m WBTR = 70 m NBL = 40 m NBT = 115 m NBR = 10 m SBL = 35 m SBT = 190 m SBR = 20 m	<u>Overall: 1.5 (D) 54</u> EBL = 1.16 (F) 135 EBTR = 0.62 (D) 43 WBL = 0.63 (D) 38 WBTR = 0.98 (F) 90 NBL = 0.78 (D) 44 NBT = 0.96 (D) 39 NBR = 0.22 (B) 16 SBL = 1.81 (F) 458 SBT = 0.82 (D) 38 SBR = 0.31 (B) 16	EBL = 160 m EBTR = 85 m WBL = 55 m WBTR = 140 m NBL = 60 m NBT = 245 m NBR = 30 m SBL = 65 m SBT = 135 m SBR = 35 m
Future Total 2026	<u>Overall: 0.97 (C) 34</u> EBL = 1.00 (F) 86 EBTR = 0.58 (C) 32 WBL = 0.85 (E) 57 WBTR = 0.4 (C) 29 NBL = 0.95 (F) 131 NBT = 0.68 (C) 24 NBR = 0.09 (B) 16 SBL = 0.63 (D) 50 SBT = 0.88 (C) 31 SBR = 0.16 (B) 17	EBL = 145 m EBTR = 100 m WBL = 95 m WBTR = 70 m NBL = 40 m NBT = 115 m NBR = 10 m SBL = 35 m SBT = 190 m SBR = 20 m	<u>Overall: 1.49 (D) 55</u> EBL = 1.12 (F) 120 EBTR = 0.6 (D) 42 WBL = 0.61 (D) 37 WBTR = 0.97 (F) 89 NBL = 0.81 (D) 48 NBT = 0.98 (D) 42 NBR = 0.23 (B) 17 SBL = 1.84 (F) 471 SBT = 0.83 (D) 39 SBR = 0.32 (B) 16	EBL = 155 m EBTR = 85 m WBL = 55 m WBTR = 140 m NBL = 65 m NBT = 250 m NBR = 30 m SBL = 65 m SBT = 135 m SBR = 35 m
Future Background 2029	<u>Overall: 1.31 (E) 69</u> EBL = 1.15 (F) 124 EBTR = 1.09 (F) 122 WBL = 1.00 (F) 86 WBTR = 1.22 (F) 179 NBL = 0.97 (F) 138 NBT = 0.83 (C) 31 NBR = 0.14 (B) 18 SBL = 1.39 (F) 287 SBT = 1.03 (E) 58 SBR = 0.24 (B) 19	EBL = 180 m EBTR = 165 m WBL = 120 m WBTR = 150 m NBL = 45 m NBT = 150 m NBR = 20 m SBL = 45 m SBT = 260 m SBR = 35 m	<u>Overall: 1.41 (F) 123</u> EBL = 1.55 (F) 296 EBTR = 0.76 (D) 52 WBL = 0.95 (E) 69 WBTR = 1.11 (F) 127 NBL = 0.88 (E) 62 NBT = 1.32 (F) 182 NBR = 0.41 (C) 26 SBL = 1.13 (F) 140 SBT = 0.88 (D) 39 SBR = 0.47 (C) 30	EBL = 240 m EBTR = 105 m WBL = 110 m WBTR = 175 m NBL = 70 m NBT = 355 m NBR = 65 m SBL = 80 m SBT = 160 m SBR = 60 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2029	<u>Overall: 1.31 (E) 70</u> EBL = 1.15 (F) 124 EBTR = 1.09 (F) 122 WBL = 1.00 (F) 86 WBTR = 1.22 (F) 180 NBL = 0.97 (F) 138 NBT = 0.85 (C) 32 NBR = 0.14 (B) 18 SBL = 1.39 (F) 287 SBT = 1.04 (E) 61 SBR = 0.24 (B) 19	EBL = 180 m EBTR = 165 m WBL = 120 m WBTR = 150 m NBL = 45 m NBT = 155 m NBR = 20 m SBL = 45 m SBT = 260 m SBR = 35 m	<u>Overall: 1.42 (F) 125</u> EBL = 1.55 (F) 296 EBTR = 0.76 (D) 52 WBL = 0.95 (E) 69 WBTR = 1.11 (F) 127 NBL = 0.88 (E) 62 NBT = 1.34 (F) 188 NBR = 0.41 (C) 26 SBL = 1.13 (F) 140 SBT = 0.9 (D) 40 SBR = 0.48 (C) 30	EBL = 240 m EBTR = 105 m WBL = 110 m WBTR = 175 m NBL = 70 m NBT = 360 m NBR = 65 m SBL = 80 m SBT = 165 m SBR = 65 m
Future Background 2031	<u>Overall: 1.32 (E) 70</u> EBL = 1.36 (F) 211 EBTR = 0.49 (D) 41 WBL = 1.11 (F) 125 WBTR = 0.79 (E) 60 NBL = 0.44 (C) 28 NBT = 0.82 (C) 25 NBR = 0.14 (B) 14 SBL = 1.4 (F) 289 SBT = 1.08 (E) 74 SBR = 0.3 (B) 19	EBL = 215 m EBTR = 55 m WBL = 105 m WBTR = 60 m NBL = 15 m NBT = 155 m NBR = 15 m SBL = 45 m SBT = 290 m SBR = 45 m	<u>Overall: 1.34 (F) 140</u> EBL = 1.63 (F) 327 EBTR = 0.46 (D) 43 WBL = 0.86 (D) 50 WBTR = 0.66 (D) 47 NBL = 0.7 (D) 36 NBT = 1.42 (F) 221 NBR = 0.43 (C) 24 SBL = 1.09 (F) 126 SBT = 1.01 (E) 57 SBR = 0.66 (D) 35	EBL = 285 m EBTR = 45 m WBL = 95 m WBTR = 60 m NBL = 55 m NBT = 415 m NBR = 70 m SBL = 80 m SBT = 220 m SBR = 110 m
Future Total 2031	<u>Overall: 1.43 (F) 95</u> EBL = 1.52 (F) 280 EBTR = 1.34 ^{dr} (F) 90 WBL = 1.44 (F) 261 WBTR = 0.8 (E) 60 NBL = 1.00 (F) 107 NBT = 0.88 (C) 29 NBR = 0.14 (B) 14 SBL = 1.43 (F) 300 SBT = 1.12 (F) 92 SBR = 0.33 (C) 20	EBL = 250 m EBTR = 140 m WBL = 155 m WBTR = 65 m NBL = 60 m NBT = 175 m NBR = 15 m SBL = 45 m SBT = 300 m SBR = 50 m	<u>Overall: 1.54 (F) 169</u> EBL = 1.68 (F) 349 EBTR = 0.71 (D) 49 WBL = 0.96 (E) 70 WBTR = 0.66 (D) 47 NBL = 1.62 (F) 330 NBT = 1.46 (F) 240 NBR = 0.43 (C) 24 SBL = 1.11 (F) 132 SBT = 1.13 (F) 102 SBR = 0.77 (D) 43	EBL = 295 m EBTR = 65 m WBL = 120 m WBTR = 65 m NBL = 215 m NBT = 425 m NBR = 70 m SBL = 80 m SBT = 240 m SBR = 145 m
Future Background 2036	<u>Overall: 1.36 (E) 79</u> EBL = 1.4 (F) 227 EBTR = 0.55 (D) 42 WBL = 1.14 (F) 134 WBTR = 0.83 (E) 63 NBL = 0.46 (C) 29 NBT = 0.85 (C) 26 NBR = 0.14 (B) 14 SBL = 1.44 (F) 303 SBT = 1.12 (F) 90 SBR = 0.31 (B) 20	EBL = 225 m EBTR = 60 m WBL = 110 m WBTR = 65 m NBL = 15 m NBT = 165 m NBR = 15 m SBL = 50 m SBT = 305 m SBR = 45 m	<u>Overall: 1.37 (F) 154</u> EBL = 1.67 (F) 344 EBTR = 0.49 (D) 43 WBL = 0.89 (D) 53 WBTR = 0.68 (D) 47 NBL = 0.73 (D) 39 NBT = 1.47 (F) 245 NBR = 0.44 (C) 25 SBL = 1.11 (F) 131 SBT = 1.05 (E) 71 SBR = 0.68 (D) 37	EBL = 295 m EBTR = 50 m WBL = 95 m WBTR = 65 m NBL = 60 m NBT = 430 m NBR = 70 m SBL = 80 m SBT = 225 m SBR = 110 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2036	<u>Overall: 1.47 (F) 105</u> EBL = 1.57 (F) 301 EBTR = 1.39dr (F) 107 WBL = 1.46 (F) 268 WBTR = 0.84 (E) 65 NBL = 1.02 (F) 113 NBT = 0.9 (C) 30 NBR = 0.15 (B) 14 SBL = 1.46 (F) 315 SBT = 1.16 (F) 108 SBR = 0.34 (C) 20	EBL = 260 m EBTR = 150 m WBL = 155 m WBTR = 70 m NBL = 65 m NBT = 185 m NBR = 20 m SBL = 50 m SBT = 315 m SBR = 50 m	<u>Overall: 1.58 (F) 185</u> EBL = 1.73 (F) 372 EBTR = 0.74 (D) 50 WBL = 0.98 (E) 75 WBTR = 0.68 (D) 47 NBL = 1.67 (F) 351 NBT = 1.51 (F) 264 NBR = 0.44 (C) 25 SBL = 1.11 (F) 135 SBT = 1.17 (F) 119 SBR = 0.79 (D) 45	EBL = 305 m EBTR = 70 m WBL = 125 m WBTR = 70 m NBL = 225 m NBT = 445 m NBR = 70 m SBL = 80 m SBT = 250 m SBR = 150 m
Future Background 2041	<u>Overall: 1.39 (F) 89</u> EBL = 1.44 (F) 245 EBTR = 0.61 (D) 43 WBL = 1.2 (F) 159 WBTR = 0.87 (E) 68 NBL = 0.49 (C) 29 NBT = 0.87 (C) 28 NBR = 0.15 (B) 14 SBL = 1.46 (F) 310 SBT = 1.16 (F) 108 SBR = 0.31 (B) 20	EBL = 235 m EBTR = 70 m WBL = 120 m WBTR = 75 m NBL = 15 m NBT = 175 m NBR = 15 m SBL = 50 m SBT = 325 m SBR = 45 m	<u>Overall: 1.42 (F) 169</u> EBL = 1.74 (F) 374 EBTR = 0.53 (D) 43 WBL = 0.92 (E) 60 WBTR = 0.71 (D) 48 NBL = 0.76 (D) 42 NBT = 1.52 (F) 267 NBR = 0.45 (C) 25 SBL = 1.13 (F) 138 SBT = 1.1 (F) 88 SBR = 0.7 (D) 38	EBL = 305 m EBTR = 50 m WBL = 105 m WBTR = 70 m NBL = 65 m NBT = 450 m NBR = 75 m SBL = 80 m SBT = 240 m SBR = 115 m
Future Total 2041	<u>Overall: 1.49 (F) 117</u> EBL = 1.62 (F) 323 EBTR = 1.44dr (F) 131 WBL = 1.48 (F) 278 WBTR = 0.89 (E) 71 NBL = 1.05 (F) 120 NBT = 0.93 (C) 33 NBR = 0.15 (B) 14 SBL = 1.48 (F) 322 SBT = 1.2 (F) 126 SBR = 0.35 (C) 21	EBL = 270 m EBTR = 165 m WBL = 160 m WBTR = 80 m NBL = 65 m NBT = 195 m NBR = 20 m SBL = 50 m SBT = 335 m SBR = 50 m	<u>Overall: 1.62 (F) 200</u> EBL = 1.8 (F) 402 EBTR = 0.78 (D) 51 WBL = 1.01 (F) 82 WBTR = 0.72 (D) 48 NBL = 1.71 (F) 371 NBT = 1.56 (F) 286 NBR = 0.46 (C) 26 SBL = 1.13 (F) 142 SBT = 1.21 (F) 136 SBR = 0.81 (D) 46	EBL = 315 m EBTR = 75 m WBL = 130 m WBTR = 75 m NBL = 230 m NBT = 460 m NBR = 75 m SBL = 80 m SBT = 260 m SBR = 155 m

Under existing conditions, the intersection of Old School Road and Hurontario Street is reported to operate with an overall v/c ratio of 0.87 LOS C during the a.m. peak hour and 0.77 LOS C during the p.m. peak hour. The intersection operates without any critical movements during either the a.m. or p.m. peak hours.

Under the 2026 future background scenario, with the addition of corridor growth and some background development traffic, the intersection operates with an overall v/c ratio of 0.96 LOS C during the a.m. peak hour and 1.5 LOS D during the p.m. peak hour. In order to accommodate the future traffic volumes along Hurontario Street, a widening of Hurontario to a 6-lane cross-section was assumed and is consistent with previously submitted traffic studies from neighbour developments. With the widening, the westbound left-turn lane during the a.m. peak hour and eastbound left-turn lane during the p.m. peak hour are reported to continue to operate above capacity.

With the addition of site generated traffic from Phase 1 of the development, the intersection is reported to operate at a similar level as reported under the future background scenario with an overall v/c ratio of 0.97 LOS C and 1.49 LOS D

during the a.m. and p.m. peak hours respectively. Both movements that were reported to operate above capacity continue to operate above capacity with no additional movements above capacity reported.

With continued corridor growth and background development traffic, the intersection is reported to operate with an overall v/c ratio of 1.31 LOS E during the a.m. peak hour and 1.41 LOS F during the p.m. peak hour with numerous movements reported to operate above capacity. With the addition of site generated traffic from Phases 1 through 4, the intersection continues to operate at similar levels under the 2029 future total scenario.

In order to accommodate further growth and background development traffic, a widening along Old School Road to a four-lane cross-section has been assumed to mitigate some of the delays in the east/west direction under the 2029 horizon year. The proposed development continues to have a marginal impact on the operation of the intersection.

With all background traffic and further corridor growth applied under the remaining horizon years, in addition to site generated traffic from the full build-out of the subject site, the intersection continues to operate above capacity. It is recommended that the MTO continues to monitor the operation of the intersection and provide mitigations once the intersection begins to operate above capacity.

Included within the proposed Highway 413 construction project (GTA West Corridor), Highway 410 is proposed to be extended north to the proposed Highway and will no longer terminate at Hurontario Street. As a result, through volumes and the north/south direction should reduce if this new alignment is constructed. Further study will be required to evaluate the impact of the Highway 413 project along Hurontario Street corridor within the study area.

8.4 Mayfield Road and Chinguacousy Road

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 22 Capacity analysis of Mayfield Road and Chinguacousy Road (With Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	Overall: 0.6 (C) 24 EBTLR = 0.51 (A) 8 WBTLR = 0.57 (C) 22 NBTLR = 0.7 (E) 58 SBTLR = 0.43 (D) 48	EBTLR = 75 m WBTLR = 170 m NBTLR = 80 m SBTLR = 50 m	Overall: 0.78 (C) 27 EBTLR = 0.56 (A) 8 WBTLR = 0.79 (C) 29 NBTLR = 0.77 (E) 64 SBTLR = 0.48 (D) 49	EBTLR = 90 m WBTLR = 230 m NBTLR = 90 m SBTLR = 55 m
Future Background 2026	Overall: 0.41 (C) 24 EBTLR = 0.25 (A) 9 WBTLR = 0.3 (C) 24 NBTLR = 0.57 (D) 41 SBTLR = 0.65 (D) 45	EBTLR = 30 m WBTLR = 55 m NBTLR = 85 m SBTLR = 85 m	Overall: 0.52 (C) 31 EBTLR = 0.38 (C) 21 WBTLR = 0.54 (D) 45 NBTLR = 0.5 (C) 25 SBTLR = 0.26 (C) 21	EBTLR = 55 m WBTLR = 90 m NBTLR = 90 m SBTLR = 45 m
Future Total 2026	Overall: 0.41 (C) 24 EBTLR = 0.25 (A) 9 WBTLR = 0.31 (C) 24 NBTLR = 0.58 (D) 41 SBTLR = 0.66 (D) 45	EBTLR = 30 m WBTLR = 55 m NBTLR = 85 m SBTLR = 85 m	Overall: 0.53 (C) 31 EBTLR = 0.38 (C) 21 WBTLR = 0.54 (D) 45 NBTLR = 0.51 (C) 25 SBTLR = 0.26 (C) 21	EBTLR = 55 m WBTLR = 90 m NBTLR = 95 m SBTLR = 45 m
Future Background 2029	Overall: 0.47 (C) 30 EBTLR = 0.41 (C) 24 WBTLR = 0.5 (D) 44 NBTLR = 0.38 (B) 20 SBTLR = 0.44 (C) 21	EBTLR = 55 m WBTLR = 80 m NBTLR = 65 m SBTLR = 75 m	Overall: 0.59 (C) 29 EBTLR = 0.43 (C) 23 WBTLR = 0.61 (D) 38 NBTLR = 0.57 (C) 26 SBTLR = 0.3 (C) 20	EBTLR = 60 m WBTLR = 100 m NBTLR = 110 m SBTLR = 50 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2029	Overall: 0.49 (C) 30 EBTLR = 0.41 (C) 24 WBTLR = 0.55 (D) 43 NBTLR = 0.4 (C) 20 SBTLR = 0.45 (C) 21	EBTLR = 55 m WBTLR = 85 m NBTLR = 70 m SBTLR = 75 m	Overall: 0.65 (C) 25 EBTLR = 0.43 (C) 23 WBTLR = 0.97dl (C) 27 NBTLR = 0.66 (C) 28 SBTLR = 0.3 (C) 20	EBTLR = 60 m WBTLR = 80 m NBTLR = 130 m SBTLR = 50 m
Future Background 2031	Overall: 0.62 (C) 24 EBTLR = 0.42 (B) 18 WBL = 0.38 (A) 9 WBTR = 0.21 (A) 9 NBTLR = 0.64 (C) 27 SBTLR = 0.96 (E) 62	EBTLR = 55 m WBL = 25 m WBTR = 30 m NBTLR = 75 m SBTLR = 110 m	Overall: 0.63 (C) 21 EBTLR = 0.5 (C) 22 WBL = 0.45 (B) 11 WBTR = 0.29 (B) 11 NBTLR = 0.86 (D) 38 SBTLR = 0.46 (C) 23	EBTLR = 70 m WBL = 40 m WBTR = 45 m NBTLR = 125 m SBTLR = 55 m
Future Total 2031	Overall: 0.75 (C) 28 EBTLR = 0.52 (C) 27 WBL = 0.55 (B) 17 WBTR = 0.25 (B) 14 NBTLR = 0.64 (C) 25 SBTLR = 0.94 (D) 52	EBTLR = 75 m WBL = 45 m WBTR = 45 m NBTLR = 95 m SBTLR = 150 m	Overall: 0.84 (C) 34 EBTLR = 0.73 (D) 41 WBL = 0.68 (C) 28 WBTR = 0.38 (C) 23 NBTLR = 0.96 (D) 49 SBTLR = 0.53 (C) 21	EBTLR = 90 m WBL = 55 m WBTR = 60 m NBTLR = 265 m SBTLR = 95 m
Future Background 2036	Overall: 0.67 (C) 24 EBTLR = 0.49 (B) 20 WBL = 0.44 (B) 10 WBTR = 0.24 (A) 9 NBTLR = 0.66 (C) 27 SBTLR = 0.97 (E) 63	EBTLR = 65 m WBL = 30 m WBTR = 35 m NBTLR = 80 m SBTLR = 115 m	Overall: 0.7 (C) 21 EBTLR = 0.6 (C) 23 WBL = 0.56 (B) 13 WBTR = 0.33 (B) 12 NBTLR = 0.85 (C) 35 SBTLR = 0.46 (C) 21	EBTLR = 75 m WBL = 40 m WBTR = 50 m NBTLR = 120 m SBTLR = 55 m
Future Total 2036	Overall: 0.8 (C) 29 EBTLR = 0.61 (C) 30 WBL = 0.62 (C) 20 WBTR = 0.28 (B) 16 NBTLR = 0.66 (C) 25 SBTLR = 0.95 (D) 52	EBTLR = 85 m WBL = 55 m WBTR = 50 m NBTLR = 105 m SBTLR = 155 m	Overall: 0.9 (D) 37 EBTLR = 0.81 (D) 43 WBL = 0.94 (E) 64 WBTR = 0.44 (C) 25 NBTLR = 0.94 (D) 43 SBTLR = 0.52 (B) 18	EBTLR = 100 m WBL = 95 m WBTR = 70 m NBTLR = 260 m SBTLR = 90 m
Future Background 2041	Overall: 0.69 (C) 23 EBTLR = 0.54 (C) 20 WBL = 0.5 (B) 11 WBTR = 0.26 (A) 10 NBTL = 0.46 (C) 24 NBR = 0.11 (C) 21 SBTLR = 0.95 (E) 58	EBTLR = 75 m WBL = 35 m WBTR = 40 m NBTL = 55 m NBR = 15 m SBTLR = 110 m	Overall: 0.69 (C) 21 EBTLR = 0.56 (B) 19 WBL = 0.53 (A) 9 WBTR = 0.31 (A) 8 NBTL = 0.8 (D) 38 NBR = 0.14 (C) 24 SBTLR = 0.89 (D) 54	EBTLR = 75 m WBL = 35 m WBTR = 45 m NBTL = 95 m NBR = 15 m SBTLR = 80 m
Future Total 2041	Overall: 0.86 (C) 31 EBTLR = 0.69 (C) 33 WBL = 0.71 (C) 26 WBTR = 0.31 (B) 17 NBTL = 0.46 (C) 21 NBR = 0.12 (B) 18 SBTLR = 0.97 (E) 57	EBTLR = 95 m WBL = 65 m WBTR = 55 m NBTL = 70 m NBR = 15 m SBTLR = 185 m	Overall: 0.87 (C) 34 EBTLR = 0.81 (D) 43 WBL = 0.86 (D) 45 WBTR = 0.42 (C) 22 NBTL = 0.78 (C) 31 NBR = 0.19 (B) 19 SBTLR = 0.87 (D) 42	EBTLR = 115 m WBL = 100 m WBTR = 75 m NBTL = 170 m NBR = 20 m SBTLR = 150 m

Under existing conditions, the intersection of Mayfield Road and Chinguacousy Road is reported to operate with an overall v/c ratio of 0.60 LOS B during the a.m. peak hour and 0.78 LOS C during the p.m. peak hour with no critical movements.

With the proposed widening along Mayfield Road, along with the addition of corridor growth and background traffic under the 2026 future background scenario, the v/c ratio has been reduced to 0.41 LOS C during the a.m. peak hour and 0.52 LOS C during the p.m. peak hour. With the addition of site generated traffic from Phase 1 of the development, the overall v/c ratio is reported to slightly increase to 0.41 LOS C and 0.53 LOS C during the a.m. and p.m. peak hour, respectively.

A similar trend is observed under the 2029 horizon year, where the overall v/c ratio is reported at 0.47 LOS C during the a.m. peak hour and 0.59 LOS C during the p.m. peak hour under the 2029 future background condition. With the addition of site traffic from Phases 1-4, the overall v/c ratio is reported to increase to 0.49 LOS C during the a.m. peak hour and 0.65 LOS C during the p.m. peak hour.

With further growth along Mayfield Road due to corridor growth and background traffic, as well as additional volume added to the westbound left-turn movement from the full build-out of the site, it is projected that a westbound left-turn lane is included in the widening of Mayfield Road to accommodate future traffic at the intersection.

Under the ultimate horizon year, the overall v/c ratio of the intersection is reported 0.69 LOS C and 0.69 LOS C during the a.m. and p.m. peak hour under the 2041 future background scenario and is anticipated to increase to 0.86 LOS C and 0.87 LOS C during the a.m. and p.m. peak hour under the 2041 future total scenario.

8.5 Mayfield Road and McLaughlin Road

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 23 Capacity analysis of Mayfield Road and McLaughlin Road (With Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	<u>Overall: 0.6 (C) 22</u>		<u>Overall: 0.69 (C) 24</u>	
	EBL = 0.03 (B) 11	EBL = 5 m	EBL = 0.1 (B) 12	EBL = 5 m
	EBTR = 0.67 (B) 17	EBTR = 145 m	EBTR = 0.64 (B) 18	EBTR = 145 m
	WBL = 0.4 (B) 16	WBL = 30 m	WBL = 0.34 (B) 14	WBL = 25 m
	WBTR = 0.6 (B) 16	WBTR = 125 m	WBTR = 0.75 (C) 20	WBTR = 185 m
	NBTL = 0.3 (D) 36	NBTL = 45 m	NBTL = 0.55 (D) 42	NBTL = 80 m
	NBR = 0.05 (C) 32	NBR = 15 m	NBR = 0.09 (C) 33	NBR = 20 m
	SBL = 0.37 (D) 38	SBL = 40 m	SBL = 0.46 (D) 43	SBL = 40 m
	SBTR = 0.45 (D) 39	SBTR = 70 m	SBTR = 0.32 (D) 36	SBTR = 50 m
Future Background 2026	<u>Overall: 0.52 (C) 26</u>		<u>Overall: 0.6 (C) 28</u>	
	EBL = 0.04 (B) 17	EBL = 5 m	EBL = 0.27 (C) 31	EBL = 20 m
	EBTR = 0.3 (B) 19	EBTR = 55 m	EBTR = 0.4 (C) 28	EBTR = 75 m
	WBL = 0.38 (B) 16	WBL = 30 m	WBL = 0.52 (D) 35	WBL = 40 m
	WBTR = 0.26 (B) 12	WBTR = 35 m	WBTR = 0.53 (C) 27	WBTR = 85 m
	NBTL = 0.59 (D) 42	NBTL = 75 m	NBTL = 0.68 (D) 37	NBTL = 120 m
	NBR = 0.06 (C) 30	NBR = 15 m	NBR = 0.11 (C) 24	NBR = 20 m
	SBL = 0.78 (E) 58	SBL = 90 m	SBL = 0.48 (C) 25	SBL = 35 m
	SBTR = 0.66 (D) 43	SBTR = 110 m	SBTR = 0.29 (B) 20	SBTR = 55 m

Future Total 2026	<u>Overall: 0.52 (C) 26</u> EBL = 0.05 (B) 17 EBTR = 0.3 (B) 19 WBL = 0.38 (B) 16 WBTR = 0.26 (B) 12 NBTL = 0.63 (D) 44 NBR = 0.06 (C) 30 SBL = 0.79 (E) 59 SBTR = 0.69 (D) 44	EBL = 5 m EBTR = 55 m WBL = 30 m WBTR = 35 m NBTL = 75 m NBR = 15 m SBL = 90 m SBTR = 115 m	<u>Overall: 0.61 (C) 28</u> EBL = 0.37 (C) 34 EBTR = 0.4 (C) 28 WBL = 0.52 (D) 35 WBTR = 0.53 (C) 27 NBTL = 0.7 (D) 38 NBR = 0.11 (C) 24 SBL = 0.49 (C) 25 SBTR = 0.31 (B) 20	EBL = 25 m EBTR = 75 m WBL = 40 m WBTR = 85 m NBTL = 125 m NBR = 20 m SBL = 35 m SBTR = 55 m
Future Background 2029	<u>Overall: 0.65 (C) 25</u> EBL = 0.06 (C) 21 EBTR = 0.42 (C) 27 WBL = 0.64 (D) 38 WBTR = 0.35 (B) 20 NBL = 0.14 (C) 23 NBTR = 0.19 (C) 22 SBL = 0.66 (D) 36 SBTR = 0.3 (C) 24	EBL = 10 m EBTR = 85 m WBL = 55 m WBTR = 50 m NBL = 15 m NBTR = 30 m SBL = 85 m SBTR = 45 m	<u>Overall: 0.58 (C) 28</u> EBL = 0.43 (D) 47 EBTR = 0.44 (D) 36 WBL = 0.64 (D) 44 WBTR = 0.61 (C) 29 NBL = 0.22 (B) 19 NBTR = 0.29 (B) 19 SBL = 0.53 (C) 27 SBTR = 0.18 (B) 18	EBL = 25 m EBTR = 85 m WBL = 50 m WBTR = 95 m NBL = 30 m NBTR = 45 m SBL = 55 m SBTR = 30 m
Future Total 2029	<u>Overall: 0.66 (C) 25</u> EBL = 0.14 (C) 23 EBTR = 0.42 (C) 27 WBL = 0.64 (D) 38 WBTR = 0.35 (B) 20 NBL = 0.17 (C) 23 NBTR = 0.21 (C) 23 SBL = 0.68 (D) 38 SBTR = 0.36 (C) 25	EBL = 15 m EBTR = 80 m WBL = 55 m WBTR = 50 m NBL = 15 m NBTR = 35 m SBL = 85 m SBTR = 55 m	<u>Overall: 0.64 (C) 30</u> EBL = 0.53 (C) 22 EBTR = 0.37 (B) 19 WBL = 0.54 (D) 38 WBTR = 0.65 (C) 32 NBL = 0.44 (D) 42 NBTR = 0.61 (D) 42 SBL = 0.62 (C) 29 SBTR = 0.26 (C) 24	EBL = 25 m EBTR = 60 m WBL = 45 m WBTR = 105 m NBL = 45 m NBTR = 85 m SBL = 50 m SBTR = 40 m
Future Background 2031	<u>Overall: 0.64 (C) 32</u> EBL = 0.09 (C) 31 EBTR = 0.72 (D) 41 WBL = 0.55 (C) 32 WBTR = 0.41 (C) 24 NBL = 0.3 (D) 44 NBTR = 0.42 (D) 42 SBL = 0.57 (C) 26 SBTR = 0.3 (C) 20	EBL = 10 m EBTR = 100 m WBL = 30 m WBTR = 60 m NBL = 25 m NBTR = 50 m SBL = 70 m SBTR = 50 m	<u>Overall: 0.7 (C) 29</u> EBL = 0.31 (C) 20 EBTR = 0.54 (C) 26 WBL = 0.41 (B) 16 WBTR = 0.68 (C) 26 NBL = 0.35 (C) 28 NBTR = 0.75 (D) 42 SBL = 0.69 (C) 29 SBTR = 0.35 (C) 31	EBL = 15 m EBTR = 85 m WBL = 25 m WBTR = 115 m NBL = 30 m NBTR = 75 m SBL = 45 m SBTR = 40 m
Future Total 2031	<u>Overall: 0.71 (C) 33</u> EBL = 0.24 (C) 35 EBTR = 0.72 (D) 41 WBL = 0.55 (C) 32 WBTR = 0.42 (C) 24 NBL = 0.38 (D) 48 NBTR = 0.59 (D) 46 SBL = 0.7 (C) 31 SBTR = 0.45 (C) 23	EBL = 20 m EBTR = 100 m WBL = 30 m WBTR = 60 m NBL = 25 m NBTR = 65 m SBL = 75 m SBTR = 75 m	<u>Overall: 0.83 (D) 37</u> EBL = 0.74 (D) 44 EBTR = 0.61 (C) 34 WBL = 0.48 (C) 23 WBTR = 0.79 (D) 37 NBL = 0.38 (C) 26 NBTR = 0.86 (D) 46 SBL = 0.82 (D) 45 SBTR = 0.51 (C) 30	EBL = 45 m EBTR = 90 m WBL = 30 m WBTR = 125 m NBL = 30 m NBTR = 125 m SBL = 75 m SBTR = 70 m
Future Background 2036	<u>Overall: 0.69 (C) 34</u> EBL = 0.12 (C) 33 EBTR = 0.83 (D) 46	EBL = 10 m EBTR = 115 m WBL = 40 m	<u>Overall: 0.76 (C) 31</u> EBL = 0.31 (C) 22 EBTR = 0.6 (C) 29	EBL = 15 m EBTR = 100 m WBL = 30 m

	WBL = 0.63 (D) 38 WBTR = 0.47 (C) 26 NBL = 0.31 (D) 43 NBTR = 0.43 (D) 42 SBL = 0.59 (C) 25 SBTR = 0.31 (B) 19	WBTR = 70 m NBL = 25 m NBTR = 50 m SBL = 70 m SBTR = 50 m	WBL = 0.49 (B) 18 WBTR = 0.76 (C) 30 NBL = 0.38 (C) 28 NBTR = 0.76 (D) 42 SBL = 0.72 (C) 31 SBTR = 0.35 (C) 30	WBTR = 135 m NBL = 30 m NBTR = 80 m SBL = 50 m SBTR = 40 m
Future Total 2036	<u>Overall: 0.77 (C) 35</u> EBL = 0.28 (D) 38 EBTR = 0.83 (D) 46 WBL = 0.63 (D) 38 WBTR = 0.48 (C) 26 NBL = 0.39 (D) 48 NBTR = 0.59 (D) 45 SBL = 0.71 (C) 30 SBTR = 0.45 (C) 21	EBL = 20 m EBTR = 115 m WBL = 40 m WBTR = 70 m NBL = 25 m NBTR = 70 m SBL = 80 m SBTR = 75 m	<u>Overall: 0.87 (D) 41</u> EBL = 0.66 (D) 36 EBTR = 0.68 (D) 37 WBL = 0.55 (C) 26 WBTR = 0.88 (D) 44 NBL = 0.42 (C) 27 NBTR = 0.9 (D) 51 SBL = 0.83 (D) 48 SBTR = 0.51 (C) 30	EBL = 40 m EBTR = 105 m WBL = 30 m WBTR = 150 m NBL = 30 m NBTR = 145 m SBL = 80 m SBTR = 75 m
Future Background 2041	<u>Overall: 0.75 (C) 35</u> EBL = 0.13 (C) 32 EBTR = 0.86 (D) 46 WBL = 0.69 (D) 41 WBTR = 0.5 (C) 25 NBL = 0.36 (D) 46 NBTR = 0.48 (D) 43 SBL = 0.66 (C) 28 SBTR = 0.34 (C) 21	EBL = 10 m EBTR = 120 m WBL = 50 m WBTR = 75 m NBL = 25 m NBTR = 55 m SBL = 75 m SBTR = 55 m	<u>Overall: 0.82 (C) 33</u> EBL = 0.37 (C) 24 EBTR = 0.67 (C) 31 WBL = 0.59 (C) 22 WBTR = 0.81 (C) 32 NBL = 0.38 (C) 28 NBTR = 0.77 (D) 42 SBL = 0.78 (C) 35 SBTR = 0.37 (C) 30	EBL = 15 m EBTR = 110 m WBL = 35 m WBTR = 160 m NBL = 30 m NBTR = 85 m SBL = 60 m SBTR = 45 m
Future Total 2041	<u>Overall: 0.83 (D) 36</u> EBL = 0.3 (D) 37 EBTR = 0.86 (D) 46 WBL = 0.69 (D) 41 WBTR = 0.5 (C) 26 NBL = 0.45 (D) 52 NBTR = 0.65 (D) 47 SBL = 0.79 (D) 36 SBTR = 0.49 (C) 23	EBL = 20 m EBTR = 120 m WBL = 50 m WBTR = 75 m NBL = 30 m NBTR = 75 m SBL = 100 m SBTR = 85 m	<u>Overall: 0.93 (D) 44</u> EBL = 0.8 (E) 55 EBTR = 0.76 (D) 40 WBL = 0.68 (C) 33 WBTR = 0.94 (D) 49 NBL = 0.44 (C) 26 NBTR = 0.9 (D) 50 SBL = 0.88 (E) 57 SBTR = 0.52 (C) 30	EBL = 45 m EBTR = 115 m WBL = 40 m WBTR = 165 m NBL = 30 m NBTR = 140 m SBL = 90 m SBTR = 80 m

Under existing conditions, the intersection of Mayfield Road and McLaughlin Road is reported to operate with an overall v/c ratio of 0.60 LOS C during the a.m. peak hour and 0.69 LOS C during the p.m. peak hour with no critical movements.

With the proposed widening along Mayfield Road assumed to occur under the 2026 horizon year, the intersection operates with an overall v/c ratio of 0.52 LOS C during the a.m. peak hours and 0.60 LOS C during the p.m. peak hour. With the addition of Phase 1 site traffic, the intersection continues to operate at a satisfactory level with a marginal increase to the v/c ratios, delay, and queuing.

With the continued addition of background traffic and corridor growth under the remaining horizon years, the intersection continues to operate at satisfactory levels. With the addition of site traffic from Phases 1-4 under the 2029 horizon year and full build-out of the site under the remaining horizon years, the intersection continues to operate at satisfactory levels.

With the widening of Mayfield Road and the preferred alternative from the Class EA of a widening along McLaughlin Road, no additional geometric changes are recommended for the intersection as a result of the subject site.

8.6 Mayfield Road and Hurontario Street

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 24 Capacity analysis of Mayfield Road and Hurontario Street (With Highway 413)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2024	<u>Overall: 0.52 (D) 37</u> EBL = 0.59 (D) 41 EBT = 0.57 (D) 50 EBR = 0.06 (D) 40 WBL = 0.62 (E) 78 WBT = 0.45 (D) 47 WBR = 0.04 (D) 40 NBL = 0.3 (C) 28 NBT = 0.2 (C) 24 NBR = 0.13 (C) 23 SBL = 0.19 (C) 24 SBT = 0.46 (C) 28 SBR = 0.19 (C) 24	EBL = 65 m EBT = 105 m EBR = 15 m WBL = 45 m WBT = 80 m WBR = 10 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 30 m SBT = 105 m SBR = 15 m	<u>Overall: 0.6 (D) 36</u> EBL = 0.7 (D) 36 EBT = 0.46 (D) 39 EBR = 0.04 (C) 33 WBL = 0.58 (E) 61 WBT = 0.53 (D) 40 WBR = 0.04 (C) 33 NBL = 0.38 (D) 40 NBT = 0.47 (D) 38 NBR = 0.16 (C) 33 SBL = 0.4 (C) 29 SBT = 0.44 (C) 29 SBR = 0.27 (C) 26	EBL = 65 m EBT = 75 m EBR = 5 m WBL = 50 m WBT = 85 m WBR = 5 m NBL = 35 m NBT = 80 m NBR = 20 m SBL = 35 m SBT = 85 m SBR = 25 m
Future Background 2026	<u>Overall: 0.58 (D) 38</u> EBL = 0.54 (C) 34 EBT = 0.51 (D) 46 EBR = 0.06 (D) 38 WBL = 0.64 (E) 80 WBT = 0.4 (D) 49 WBR = 0.09 (D) 44 NBL = 0.35 (C) 31 NBT = 0.21 (C) 25 NBR = 0.14 (C) 25 SBL = 0.58 (D) 37 SBT = 0.49 (C) 30 SBR = 0.2 (C) 26	EBL = 70 m EBT = 90 m EBR = 15 m WBL = 50 m WBT = 65 m WBR = 20 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 90 m SBT = 115 m SBR = 20 m	<u>Overall: 0.81 (D) 44</u> EBL = 0.89 (E) 55 EBT = 0.36 (D) 37 EBR = 0.06 (C) 33 WBL = 0.64 (E) 64 WBT = 0.92 (E) 74 WBR = 0.08 (D) 50 NBL = 0.69 (D) 52 NBT = 0.49 (D) 35 NBR = 0.17 (C) 30 SBL = 0.65 (D) 41 SBT = 0.48 (C) 29 SBR = 0.46 (C) 30	EBL = 170 m EBT = 55 m EBR = 10 m WBL = 50 m WBT = 90 m WBR = 15 m NBL = 70 m NBT = 85 m NBR = 20 m SBL = 50 m SBT = 90 m SBR = 30 m
Future Total 2026	<u>Overall: 0.58 (D) 38</u> EBL = 0.54 (C) 34 EBT = 0.51 (D) 46 EBR = 0.06 (D) 38 WBL = 0.64 (E) 80 WBT = 0.4 (D) 49 WBR = 0.09 (D) 44 NBL = 0.36 (C) 32 NBT = 0.22 (C) 26 NBR = 0.14 (C) 25 SBL = 0.59 (D) 37 SBT = 0.5 (C) 31 SBR = 0.2 (C) 26	EBL = 70 m EBT = 90 m EBR = 15 m WBL = 50 m WBT = 65 m WBR = 20 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 90 m SBT = 115 m SBR = 20 m	<u>Overall: 0.83 (D) 44</u> EBL = 0.89 (E) 55 EBT = 0.36 (D) 37 EBR = 0.06 (C) 33 WBL = 0.64 (E) 64 WBT = 0.92 (E) 74 WBR = 0.08 (D) 50 NBL = 0.7 (D) 54 NBT = 0.5 (D) 36 NBR = 0.17 (C) 30 SBL = 0.67 (D) 43 SBT = 0.49 (C) 29 SBR = 0.46 (C) 30	EBL = 170 m EBT = 55 m EBR = 10 m WBL = 50 m WBT = 90 m WBR = 15 m NBL = 70 m NBT = 90 m NBR = 20 m SBL = 50 m SBT = 90 m SBR = 30 m

<p style="text-align: center;">Future Background 2029</p>	<p><u>Overall: 0.71 (D) 43</u> EBL = 0.71 (D) 52 EBT = 0.81 (E) 65 EBR = 0.07 (D) 48 WBL = 0.68 (F) 81 WBT = 0.74 (E) 70 WBR = 0.11 (E) 58 NBL = 0.3 (C) 22 NBT = 0.19 (B) 18 NBR = 0.15 (B) 18 SBL = 0.65 (C) 31 SBT = 0.44 (C) 22 SBR = 0.22 (B) 18</p>	<p>EBL = 85 m EBT = 120 m EBR = 15 m WBL = 50 m WBT = 85 m WBR = 25 m NBL = 30 m NBT = 40 m NBR = 15 m SBL = 110 m SBT = 100 m SBR = 15 m</p>	<p><u>Overall: 1.01 (D) 51</u> EBL = 1.04 (F) 87 EBT = 0.36 (D) 35 EBR = 0.07 (C) 31 WBL = 0.7 (E) 63 WBT = 1.02 (F) 95 WBR = 0.13 (D) 51 NBL = 0.88 (E) 70 NBT = 0.51 (C) 33 NBR = 0.18 (C) 29 SBL = 0.76 (D) 42 SBT = 0.52 (C) 30 SBR = 0.68 (D) 37</p>	<p>EBL = 225 m EBT = 55 m EBR = 15 m WBL = 55 m WBT = 110 m WBR = 25 m NBL = 95 m NBT = 95 m NBR = 20 m SBL = 55 m SBT = 100 m SBR = 100 m</p>
<p style="text-align: center;">Future Total 2029</p>	<p><u>Overall: 0.73 (D) 43</u> EBL = 0.71 (D) 52 EBT = 0.81 (E) 65 EBR = 0.08 (D) 48 WBL = 0.68 (F) 81 WBT = 0.74 (E) 70 WBR = 0.11 (E) 58 NBL = 0.36 (C) 24 NBT = 0.21 (B) 18 NBR = 0.15 (B) 18 SBL = 0.68 (C) 32 SBT = 0.5 (C) 23 SBR = 0.22 (B) 18</p>	<p>EBL = 85 m EBT = 120 m EBR = 20 m WBL = 50 m WBT = 85 m WBR = 25 m NBL = 30 m NBT = 45 m NBR = 15 m SBL = 115 m SBT = 120 m SBR = 15 m</p>	<p><u>Overall: 1.06 (D) 53</u> EBL = 1.04 (F) 87 EBT = 0.36 (D) 35 EBR = 0.07 (C) 31 WBL = 0.7 (E) 63 WBT = 1.02 (F) 95 WBR = 0.13 (D) 51 NBL = 0.98 (F) 98 NBT = 0.59 (D) 35 NBR = 0.22 (C) 29 SBL = 0.89 (E) 65 SBT = 0.56 (C) 30 SBR = 0.68 (D) 37</p>	<p>EBL = 225 m EBT = 55 m EBR = 15 m WBL = 55 m WBT = 110 m WBR = 25 m NBL = 100 m NBT = 110 m NBR = 30 m SBL = 70 m SBT = 110 m SBR = 100 m</p>
<p style="text-align: center;">Future Background 2031</p>	<p><u>Overall: 0.72 (D) 49</u> EBL = 0.68 (D) 47 EBT = 0.83 (E) 63 EBR = 0.07 (D) 46 WBL = 0.75 (F) 88 WBT = 0.73 (E) 68 WBR = 0.15 (E) 57 NBL = 0.36 (D) 44 NBT = 0.41 (D) 50 NBR = 0.15 (D) 45 SBL = 0.63 (C) 27 SBT = 0.54 (C) 31 SBR = 0.23 (C) 25</p>	<p>EBL = 85 m EBT = 130 m EBR = 15 m WBL = 55 m WBT = 85 m WBR = 25 m NBL = 20 m NBT = 70 m NBR = 25 m SBL = 95 m SBT = 125 m SBR = 20 m</p>	<p><u>Overall: 1.27 (F) 84</u> EBL = 1.37 (F) 220 EBT = 0.52 (D) 46 EBR = 0.07 (D) 40 WBL = 0.57 (E) 58 WBT = 1.04 (F) 100 WBR = 0.2 (D) 52 NBL = 0.66 (C) 34 NBT = 0.58 (D) 38 NBR = 0.22 (C) 32 SBL = 0.68 (C) 34 SBT = 0.71 (D) 43 SBR = 1.13 (F) 124</p>	<p>EBL = 300 m EBT = 70 m EBR = 15 m WBL = 55 m WBT = 115 m WBR = 30 m NBL = 50 m NBT = 105 m NBR = 25 m SBL = 55 m SBT = 125 m SBR = 265 m</p>

<p>Future Total 2031</p>	<p><u>Overall: 0.81 (D) 51</u> EBL = 0.68 (D) 47 EBT = 0.83 (E) 63 EBR = 0.15 (D) 48 WBL = 0.75 (F) 88 WBT = 0.73 (E) 68 WBR = 0.15 (E) 57 NBL = 0.66 (E) 62 NBT = 0.55 (D) 53 NBR = 0.18 (D) 46 SBL = 0.69 (C) 30 SBT = 0.8 (D) 40 SBR = 0.3 (C) 27</p>	<p>EBL = 85 m EBT = 130 m EBR = 25 m WBL = 55 m WBT = 85 m WBR = 25 m NBL = 30 m NBT = 95 m NBR = 30 m SBL = 95 m SBT = 220 m SBR = 45 m</p>	<p><u>Overall: 1.41 (F) 102</u> EBL = 1.37 (F) 220 EBT = 0.52 (D) 46 EBR = 0.09 (D) 40 WBL = 0.57 (E) 58 WBT = 1.04 (F) 100 WBR = 0.2 (D) 52 NBL = 1.52 (F) 293 NBT = 0.82 (D) 46 NBR = 0.31 (C) 34 SBL = 0.94 (E) 74 SBT = 0.92 (E) 56 SBR = 1.18 (F) 143</p>	<p>EBL = 300 m EBT = 70 m EBR = 15 m WBL = 55 m WBT = 115 m WBR = 30 m NBL = 200 m NBT = 160 m NBR = 45 m SBL = 95 m SBT = 185 m SBR = 285 m</p>
<p>Future Background 2036</p>	<p><u>Overall: 0.78 (D) 52</u> EBL = 0.78 (D) 53 EBT = 0.89 (E) 67 EBR = 0.08 (D) 46 WBL = 0.84 (F) 96 WBT = 0.79 (E) 71 WBR = 0.21 (E) 58 NBL = 0.42 (D) 46 NBT = 0.46 (D) 50 NBR = 0.17 (D) 46 SBL = 0.67 (C) 29 SBT = 0.59 (C) 32 SBR = 0.26 (C) 26</p>	<p>EBL = 100 m EBT = 145 m EBR = 20 m WBL = 65 m WBT = 95 m WBR = 30 m NBL = 25 m NBT = 80 m NBR = 25 m SBL = 100 m SBT = 145 m SBR = 25 m</p>	<p><u>Overall: 1.34 (F) 100</u> EBL = 1.4 (F) 233 EBT = 0.55 (D) 46 EBR = 0.08 (D) 39 WBL = 0.66 (E) 62 WBT = 1.19 (F) 155 WBR = 0.14 (D) 51 NBL = 0.72 (D) 39 NBT = 0.62 (D) 38 NBR = 0.27 (C) 32 SBL = 0.79 (D) 44 SBT = 0.81 (D) 49 SBR = 1.24 (F) 169</p>	<p>EBL = 315 m EBT = 75 m EBR = 15 m WBL = 60 m WBT = 135 m WBR = 25 m NBL = 65 m NBT = 115 m NBR = 35 m SBL = 65 m SBT = 145 m SBR = 290 m</p>
<p>Future Total 2036</p>	<p><u>Overall: 0.88 (D) 54</u> EBL = 0.78 (D) 53 EBT = 0.89 (E) 67 EBR = 0.18 (D) 48 WBL = 0.84 (F) 96 WBT = 0.79 (E) 71 WBR = 0.21 (E) 58 NBL = 0.83 (F) 87 NBT = 0.6 (D) 54 NBR = 0.23 (D) 47 SBL = 0.73 (C) 32 SBT = 0.86 (D) 43 SBR = 0.34 (C) 28</p>	<p>EBL = 100 m EBT = 145 m EBR = 30 m WBL = 65 m WBT = 95 m WBR = 30 m NBL = 50 m NBT = 105 m NBR = 35 m SBL = 105 m SBT = 245 m SBR = 55 m</p>	<p><u>Overall: 1.46 (F) 119</u> EBL = 1.4 (F) 233 EBT = 0.55 (D) 46 EBR = 0.09 (D) 39 WBL = 0.66 (E) 62 WBT = 1.19 (F) 155 WBR = 0.14 (D) 51 NBL = 1.41 (F) 249 NBT = 0.85 (D) 47 NBR = 0.35 (C) 34 SBL = 1.11 (F) 128 SBT = 1.03 (F) 82 SBR = 1.28 (F) 187</p>	<p>EBL = 315 m EBT = 75 m EBR = 20 m WBL = 60 m WBT = 135 m WBR = 25 m NBL = 195 m NBT = 170 m NBR = 50 m SBL = 115 m SBT = 220 m SBR = 305 m</p>

Future Background 2041	<u>Overall: 0.84 (E) 56</u> EBL = 0.89 (E) 70 EBT = 0.95 (E) 75 EBR = 0.1 (D) 47 WBL = 0.92 (F) 108 WBT = 0.86 (E) 75 WBR = 0.26 (E) 60 NBL = 0.5 (D) 48 NBT = 0.5 (D) 51 NBR = 0.19 (D) 46 SBL = 0.71 (C) 30 SBT = 0.65 (C) 34 SBR = 0.32 (C) 27	EBL = 135 m EBT = 165 m EBR = 20 m WBL = 75 m WBT = 105 m WBR = 35 m NBL = 25 m NBT = 85 m NBR = 25 m SBL = 105 m SBT = 165 m SBR = 35 m	<u>Overall: 1.46 (F) 115</u> EBL = 1.52 (F) 283 EBT = 0.62 (D) 48 EBR = 0.08 (D) 40 WBL = 0.69 (E) 62 WBT = 1.23 (F) 170 WBR = 0.3 (D) 54 NBL = 0.86 (E) 62 NBT = 0.69 (D) 41 NBR = 0.33 (C) 34 SBL = 0.89 (E) 57 SBT = 0.85 (D) 50 SBR = 1.34 (F) 208	EBL = 340 m EBT = 80 m EBR = 15 m WBL = 65 m WBT = 145 m WBR = 35 m NBL = 90 m NBT = 130 m NBR = 45 m SBL = 85 m SBT = 160 m SBR = 330 m
Future Total 2041	<u>Overall: 0.95 (E) 60</u> EBL = 0.89 (E) 70 EBT = 0.95 (E) 75 EBR = 0.21 (D) 49 WBL = 0.92 (F) 108 WBT = 0.86 (E) 75 WBR = 0.26 (E) 60 NBL = 0.91 (F) 105 NBT = 0.64 (E) 55 NBR = 0.29 (D) 48 SBL = 0.77 (D) 37 SBT = 0.92 (D) 49 SBR = 0.39 (C) 29	EBL = 135 m EBT = 165 m EBR = 35 m WBL = 75 m WBT = 105 m WBR = 35 m NBL = 60 m NBT = 110 m NBR = 45 m SBL = 120 m SBT = 275 m SBR = 65 m	<u>Overall: 1.57 (F) 137</u> EBL = 1.52 (F) 283 EBT = 0.62 (D) 48 EBR = 0.1 (D) 40 WBL = 0.69 (E) 62 WBT = 1.23 (F) 170 WBR = 0.3 (D) 54 NBL = 1.61 (F) 333 NBT = 0.93 (E) 55 NBR = 0.41 (D) 36 SBL = 1.13 (F) 138 SBT = 1.06 (F) 90 SBR = 1.37 (F) 221	EBL = 340 m EBT = 80 m EBR = 20 m WBL = 65 m WBT = 145 m WBR = 35 m NBL = 215 m NBT = 200 m NBR = 60 m SBL = 125 m SBT = 235 m SBR = 340 m

Under existing conditions, the intersection of Mayfield Road and Hurontario Street is reported to operate with an overall v/c ratio of 0.52 LOS C during the a.m. peak hour and 0.60 LOS C during the p.m. peak hour. Only the eastbound left movement is reported to operate at a critical level and above capacity during the p.m. peak hour.

With the proposed widening along Mayfield Road, along with the addition of corridor growth and background traffic under future background scenarios, the intersection is reported to operate satisfactorily only under the 2026 horizon year.

As the traffic levels continue to increase at this intersection, the overall intersection begins to operate over capacity during the p.m. peak hour under the 2029 horizon year while remaining below capacity despite being at a critical level during the a.m. peak hour. Similar to the intersection of Hurontario Street and Old School Road, it is recommended that the Region of Peel continue to monitor the operation of the intersection as development proceeds to identify where capacity constraints are introduced and potential mitigation measures.

8.7 McLaughlin Road and Street A

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 25 Capacity analysis of McLaughlin Road and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que.
Future Total 2026	EBTLR = 0 (A) 0 WBTLR = 0.19 (B) 15 NBTL = 0 (A) 0 NBTR = 0.12 (A) 0 SBTL = 0.01 (A) 0 SBTR = 0.09 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m	EBTLR = 0 (A) 0 WBTLR = 0.17 (C) 18 NBTL = 0 (A) 0 NBTR = 0.19 (A) 0 SBTL = 0.01 (A) 1 SBTR = 0.11 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m
Future Total 2029	EBTLR = 0 (A) 0 WBL = 0.32 (C) 22 WBTR = 0.07 (A) 10 NBTL = 0 (A) 0 NBTR = 0.17 (A) 0 SBTL = 0.02 (A) 1 SBTR = 0.11 (A) 0	EBTLR = 0 m WBL = 10 m WBTR = 5 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m	EBTLR = 0 (A) 0 WBL = 0.43 (D) 36 WBTR = 0.05 (A) 11 NBTL = 0 (A) 0 NBTR = 0.26 (A) 0 SBTL = 0.03 (A) 1 SBTR = 0.14 (A) 0	EBTLR = 0 m WBL = 15 m WBTR = 5 m NBTL = 0 m NBTR = 0 m SBTL = 5 m SBTR = 0 m
Future Total 2031	<u>Overall: 0.56 (B) 16</u> EBTLR = 0.77 (C) 26 WBTLR = 0.55 (B) 20 NBTLR = 0.41 (B) 12 SBTLR = 0.32 (B) 11	EBTLR = 80 m WBTLR = 40 m NBTLR = 50 m SBTLR = 40 m	<u>Overall: 0.92 (C) 31</u> EBTLR = 0.53 (C) 29 WBTLR = 0.96 (E) 66 NBTLR = 0.9 (C) 29 SBTLR = 0.4 (B) 13	EBTLR = 75 m WBTLR = 140 m NBTLR = 155 m SBTLR = 50 m
Future Total 2036	<u>Overall: 0.57 (B) 16</u> EBTLR = 0.77 (C) 26 WBTLR = 0.55 (B) 20 NBTLR = 0.43 (B) 12 SBTLR = 0.33 (B) 11	EBTLR = 80 m WBTLR = 40 m NBTLR = 55 m SBTLR = 40 m	<u>Overall: 0.93 (C) 32</u> EBTLR = 0.53 (C) 29 WBTLR = 0.96 (E) 66 NBTLR = 0.92 (C) 31 SBTLR = 0.41 (B) 13	EBTLR = 75 m WBTLR = 140 m NBTLR = 160 m SBTLR = 55 m
Future Total 2041	<u>Overall: 0.54 (B) 16</u> EBTLR = 0.77 (C) 26 WBTLR = 0.55 (B) 20 NBL = 0.07 (A) 10 NBTR = 0.39 (B) 12 SBTLR = 0.35 (B) 11	EBTLR = 80 m WBTLR = 40 m NBL = 10 m NBTR = 50 m SBTLR = 45 m	<u>Overall: 0.73 (C) 24</u> EBTLR = 0.52 (C) 26 WBTLR = 0.93 (E) 56 NBL = 0.57 (B) 14 NBTR = 0.51 (B) 13 SBTLR = 0.58 (C) 23	EBTLR = 65 m WBTLR = 110 m NBL = 40 m NBTR = 90 m SBTLR = 85 m

Under the future total traffic conditions in 2026 and 2029, the intersection of McLaughlin Road and Street A operates satisfactorily as an unsignalized intersection. With the addition of corridor growth, background development traffic and the site generated traffic under the 2031, 2036, and 2041 horizon years, it is recommended to have the intersection converted to a signalized intersection in order to mitigate delays.

8.8 Hurontario Street and Street A

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 26 Capacity analysis of Hurontario Street and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2029	Overall: <u>0.8 (B) 14</u> EBL = 0.42 (D) 53 EBR = 0.63 (E) 56 NBL = 0.26 (B) 20 NBT = 0.47 (A) 3 SBTR = 0.86 (B) 16	EBL = 25 m EBR = 50 m NBL = 10 m NBT = 55 m SBTR = 285 m	Overall: <u>0.87 (B) 12</u> EBL = 0.38 (D) 54 EBR = 0.47 (D) 40 NBL = 0.83 (D) 50 NBT = 0.85 (A) 7 SBTR = 0.69 (B) 13	EBL = 15 m EBR = 40 m NBL = 70 m NBT = 185 m SBTR = 170 m
Future Total 2031	Overall: <u>1.25 (E) 77</u> EBL = 0.72 (E) 73 EBR = 1.33 (F) 205 NBL = 0.44 (D) 38 NBT = 0.5 (A) 4 SBTR = 1.14 (F) 97	EBL = 60 m EBR = 315 m NBL = 55 m NBT = 70 m SBTR = 430 m	Overall: <u>1.01 (C) 30</u> EBL = 0.48 (D) 54 EBR = 0.74 (D) 40 NBL = 1.07 (F) 94 NBT = 0.95 (B) 14 SBTR = 0.97 (D) 38	EBL = 30 m EBR = 105 m NBL = 215 m NBT = 380 m SBTR = 265 m
Future Total 2036	Overall: <u>1.27 (F) 85</u> EBL = 0.72 (E) 73 EBR = 1.33 (F) 205 NBL = 0.44 (D) 38 NBT = 0.52 (A) 5 SBTR = 1.18 (F) 112	EBL = 60 m EBR = 315 m NBL = 55 m NBT = 70 m SBTR = 455 m	Overall: <u>1.03 (C) 34</u> EBL = 0.48 (D) 54 EBR = 0.74 (D) 40 NBL = 1.07 (F) 94 NBT = 0.97 (B) 18 SBTR = 1.00 (D) 44	EBL = 30 m EBR = 105 m NBL = 215 m NBT = 395 m SBTR = 280 m
Future Total 2041	Overall: <u>1.29 (F) 90</u> EBL = 0.65 (E) 64 EBR = 1.31 (F) 196 NBL = 0.46 (D) 37 NBT = 0.54 (A) 5 SBT = 1.21 (F) 126 SBR = 0.05 (B) 14	EBL = 55 m EBR = 300 m NBL = 55 m NBT = 90 m SBT = 470 m SBR = 15 m	Overall: <u>1.03 (C) 29</u> EBL = 0.48 (D) 54 EBR = 0.74 (D) 40 NBL = 1.07 (F) 94 NBT = 0.98 (B) 18 SBT = 0.94 (C) 32 SBR = 0.11 (B) 14	EBL = 30 m EBR = 105 m NBL = 215 m NBT = 405 m SBT = 260 m SBR = 15 m

Under the 2029 horizon year, the signalized intersection of Street A and Hurontario Street is reported to operate at satisfactory levels with an overall v/c ratio of 0.80 LOS B and 0.87 LOS B during the a.m. and p.m. peak hours. Under the 2031, 2036, and 2041 horizon year, the intersection is reported to operate over capacity with the overall intersection, eastbound right-turn and southbound approach operate over capacity.

With the construction of the new Highway 410/Hurontario Street interchange with Tim Manley, some of the site generated traffic may choose to use an alternate route to access the interchange in order to avoid the 196 second delay reported during the a.m. peak hour under the 2041 future total scenario.

8.9 Chinguacousy Road and Street A

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 27 Capacity analysis of Chinguacousy Road and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	WBL = 0.44 (D) 32 WBR = 0.08 (A) 13 NBTR = 0.38 (A) 0 SBTL = 0.02 (A) 0	WBL = 15 m WBR = 5 m NBTR = 0 m SBTL = 5 m	WBL = 0.84 (F) 123 WBR = 0.06 (A) 17 NBTR = 0.6 (A) 0 SBTL = 0.03 (A) 1	WBL = 40 m WBR = 5 m NBTR = 0 m SBTL = 5 m
Future Total 2036	WBL = 0.45 (D) 34 WBR = 0.08 (A) 13 NBTR = 0.38 (A) 0 SBTL = 0.02 (A) 0	WBL = 20 m WBR = 5 m NBTR = 0 m SBTL = 5 m	WBL = 0.88 (F) 136 WBR = 0.06 (A) 18 NBTR = 0.61 (A) 0 SBTL = 0.03 (A) 1	WBL = 40 m WBR = 5 m NBTR = 0 m SBTL = 5 m
Future Total 2041	WBL = 0.47 (D) 36 WBR = 0.08 (A) 13 NBTR = 0.39 (A) 0 SBTL = 0.02 (A) 0	WBL = 20 m WBR = 5 m NBTR = 0 m SBTL = 5 m	WBL = 0.92 (F) 151 WBR = 0.07 (A) 18 NBTR = 0.62 (A) 0 SBTL = 0.03 (A) 1	WBL = 40 m WBR = 5 m NBTR = 0 m SBTL = 5 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Chinguacousy Road and Street A is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during the a.m. peak hour.

8.10 Old School Road and Street B

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 28 Capacity analysis of Old School Road and Street B

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBT = 0.24 (A) 0 EBTR = 0.13 (A) 0 WBTL = 0.01 (A) 1 WBT = 0.17 (A) 0 NBLR = 0.2 (C) 18	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 5 m	EBT = 0.28 (A) 0 EBTR = 0.17 (A) 0 WBTL = 0.04 (A) 1 WBT = 0.31 (A) 0 NBLR = 0.27 (C) 25	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m
Future Total 2036	EBT = 0.26 (A) 0 EBTR = 0.14 (A) 0 WBTL = 0.01 (A) 1 WBT = 0.18 (A) 0 NBLR = 0.21 (C) 19	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m	EBT = 0.29 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.04 (A) 1 WBT = 0.32 (A) 0 NBLR = 0.28 (D) 27	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m
Future Total 2041	EBT = 0.27 (A) 0 EBTR = 0.15 (A) 0 WBTL = 0.01 (A) 1 WBT = 0.19 (A) 0 NBLR = 0.22 (C) 20	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m	EBT = 0.31 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.04 (A) 1 WBT = 0.34 (A) 0 NBLR = 0.3 (D) 29	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Old School Road and Street B is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during the a.m. peak hour.

8.11 Old School Road and Street D

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 29 Capacity analysis of Old School Road and Street D

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBT = 0.47 (A) 0 EBTR = 0.25 (A) 0 WBTL = 0.08 (A) 3 WBT = 0.26 (A) 0 NBL = 0.38 (C) 60 NBR = 0.29 (A) 12	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBL = 15 m NBR = 10 m	EBT = 0.44 (A) 0 EBTR = 0.24 (A) 0 WBTL = 0.25 (A) 6 WBT = 0.51 (A) 0 NBL = 1.09 (F) 355 NBR = 0.15 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBL = 30 m NBR = 5 m
Future Total 2036	EBT = 0.49 (A) 0 EBTR = 0.26 (A) 0 WBTL = 0.08 (A) 3 WBT = 0.27 (A) 0 NBL = 0.41 (C) 68 NBR = 0.28 (A) 12	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBL = 15 m NBR = 10 m	EBT = 0.46 (A) 0 EBTR = 0.25 (A) 0 WBTL = 0.25 (A) 6 WBT = 0.53 (A) 0 NBL = 1.23 (F) 430 NBR = 0.15 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBL = 35 m NBR = 5 m
Future Total 2041	EBT = 0.51 (A) 0 EBTR = 0.27 (A) 0 WBTL = 0.09 (A) 3 WBT = 0.29 (A) 0 NBL = 0.46 (C) 78 NBR = 0.28 (A) 12	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBL = 15 m NBR = 10 m	EBT = 0.47 (A) 0 EBTR = 0.26 (A) 0 WBTL = 0.26 (A) 7 WBT = 0.55 (A) 0 NBL = 1.39 (F) 525 NBR = 0.14 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBL = 35 m NBR = 5 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Old School Road and Street D is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during the a.m. peak hour. During the p.m. peak hour, the northbound approach is operating above capacity. With a signalized intersection to the west, drivers may opt to travel in the westbound direction via McLaughlin Road to then turn left at Old School Road.

8.12 McLaughlin Road and Street E

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 30 Capacity analysis of McLaughlin Road and Street E

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBTLR = 0.11 (B) 13 WBTLR = 0.25 (C) 22 NBT = 0.02 (A) 1 NBT = 0.19 (A) 0 SBT = 0.01 (A) 0 SBT = 0.15 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m	EBTLR = 0.11 (A) 0 WBTLR = 0.25 (A) 0 NBT = 0 (A) 0 NBT = 0.19 (A) 0 SBT = 0 (A) 0 SBT = 0.15 (A) 0	EBTLR = 0 m WBTLR = 0 m NBT = 0 m NBT = 0 m SBT = 0 m SBT = 0 m

Future Total 2036	EBTLR = 0.11 (B) 14 WBTLR = 0.26 (C) 23 NBT = 0.02 (A) 1 NBT = 0.2 (A) 0 SBT = 0.01 (A) 0 SBT = 0.15 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m	EBTLR = 0.1 (B) 15 WBTLR = 0.3 (D) 34 NBT = 0.06 (A) 2 NBT = 0.28 (A) 0 SBT = 0.02 (A) 1 SBT = 0.21 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m
Future Total 2041	EBTLR = 0.11 (B) 14 WBTLR = 0.27 (C) 24 NBT = 0.02 (A) 1 NBT = 0.21 (A) 0 SBT = 0.01 (A) 0 SBT = 0.16 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m	EBTLR = 0.11 (C) 15 WBTLR = 0.33 (E) 38 NBT = 0.06 (A) 2 NBT = 0.28 (A) 0 SBT = 0.02 (A) 1 SBT = 0.22 (A) 0	EBTLR = 5 m WBTLR = 10 m NBT = 5 m NBT = 0 m SBT = 5 m SBT = 0 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of McLaughlin Road and Street E is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during both peak hours.

8.13 Old School Road and Street F

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic condition are summarized in the following table.

Table 31 Capacity analysis of McLaughlin Road and Street F

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2031	EBT = 0.27 (A) 0 EBTR = 0.14 (A) 0 WBTL = 0.08 (A) 4 WBT = 0.19 (A) 0 NBLR = 0.48 (C) 18	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 20 m	EBT = 0.32 (A) 0 EBTR = 0.17 (A) 0 WBTL = 0.27 (A) 7 WBT = 0.34 (A) 0 NBLR = 0.38 (C) 23	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBLR = 15 m
Future Total 2036	EBT = 0.27 (A) 0 EBTR = 0.14 (A) 0 WBTL = 0.08 (A) 4 WBT = 0.19 (A) 0 NBLR = 0.48 (C) 18	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 20 m	EBT = 0.32 (A) 0 EBTR = 0.17 (A) 0 WBTL = 0.27 (A) 7 WBT = 0.34 (A) 0 NBLR = 0.38 (C) 23	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBLR = 15 m
Future Total 2041	EBT = 0.3 (A) 0 EBTR = 0.16 (A) 0 WBTL = 0.09 (A) 4 WBT = 0.21 (A) 0 NBLR = 0.52 (C) 19	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 25 m	EBT = 0.34 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.28 (A) 7 WBT = 0.38 (A) 0 NBLR = 0.43 (D) 26	EBT = 0 m EBTR = 0 m WBTL = 10 m WBT = 0 m NBLR = 15 m

Under all future total traffic conditions (2031, 2036, and 2041), the intersection of Old School Road and Street F is reported to operate satisfactorily with substantial reserve capacity, low levels of delay and negligible queueing during both peak hours.

9. Proposed Improvements

The proposed improvements along all study area roads is provided in the figure below, and includes the lane configuration at the study intersections as well as the intersections that have been proposed to be signalized.

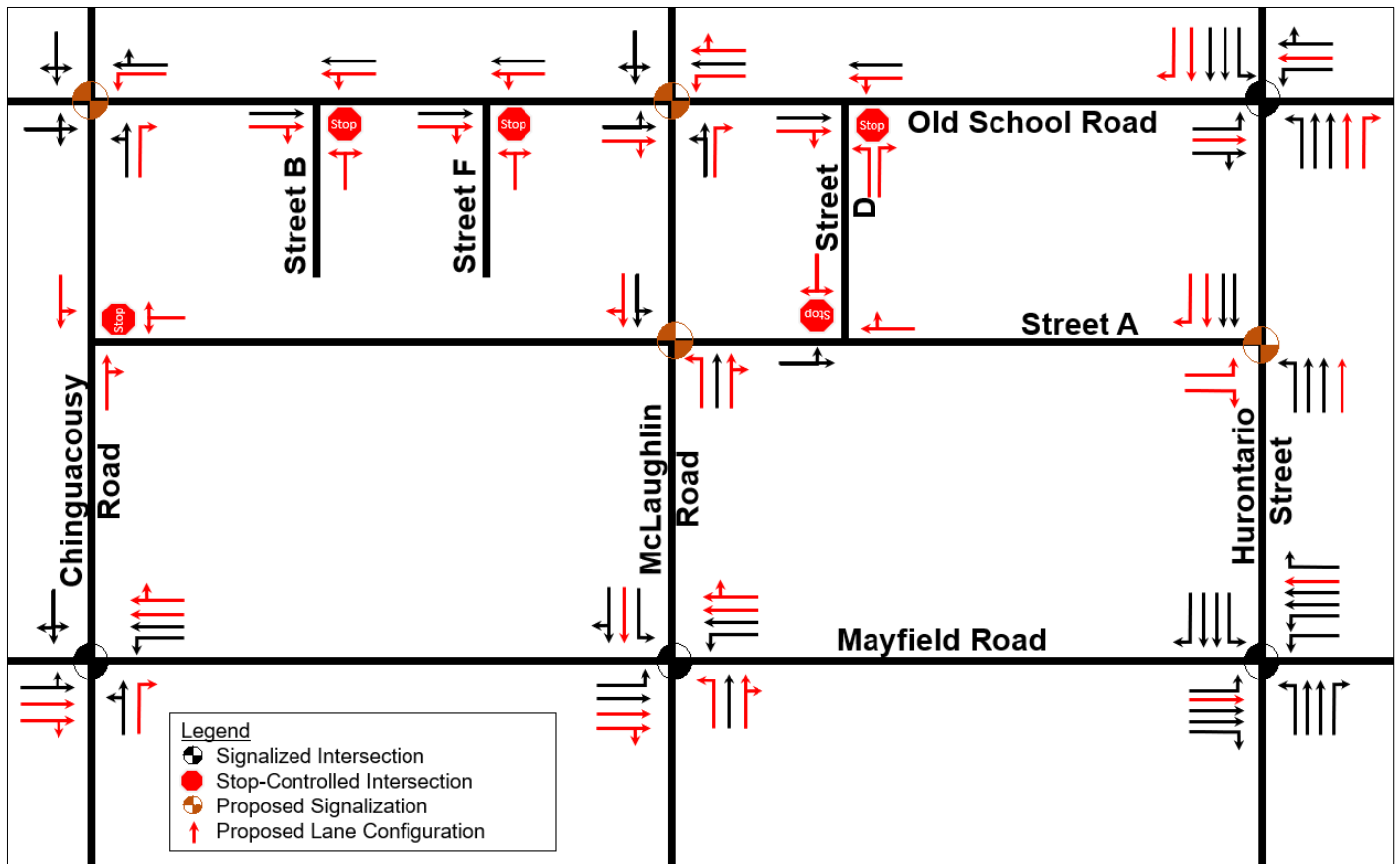


Figure 11 Proposed Lane Configurations and Intersection Traffic Control

9.1 Active Transportation Plan

An Active Transportation Plan was prepared for the proposed development and includes the proposed sidewalks within the development lands, the planned cycling routes, the recommended multi-use paths and trails, as well as potential cycling facilities within the proposed development.

Sidewalks are proposed to be provided along one side of the road throughout the development, consistent with the surrounding developments. The planned and recommended cycling infrastructure (cycling route, multi-use path, and multi-use trail) are consistent with the Town of Caledon’s Active Transportation Master Plan Network Recommendations map.

The Active Transportation Plan map is provided in **Figure 45** and in **Appendix F**.

10. Parking

The minimum parking requirements are found in the Town of Caledon Zoning By-law, Section 5.2.2., Table 5.1 for the residential parking requirements and Section 5.2.3 Table 5.2 for the non-residential uses.

Although a site plan has not been finalized, parking will generally be provided for the residential and non-residential uses to satisfy the zoning by-law requirements.

11. Conclusion

The proposed land use plan prepared by Malone Given Parsons consists of a series of single-family homes, townhouses, commercial uses, and school blocks. The residential units, commercial retail space, and elementary school blocks are broken down as follows:

- 4,687 dwelling units
- 3 elementary schools (2 Peel District School Board Schools and 1 Dufferin Peel Catholic School Board School)
- 14 hectares of General Commercial lands

Access to the proposed lands from the regional arterial roads is proposed via a series of collector roads intersecting Chinguacousy Road, McLaughlin Road, Hurontario Street and Old School Road.

The proposed subdivision is expected to generate under Phase 1 in 2026 a total of 106 new two-way trips consisting of 26 inbound and 80 outbound trips during the weekday a.m. peak hour and 141 new two-way trips consisting of 89 inbound and 52 outbound trips during the weekday p.m. peak hour.

Under the 2029 horizon year, including Phases 1 through 4 built-out east of McLaughlin Road, the subdivision is expected to generate a total of 585 new two-way trips consisting of 142 inbound and 443 outbound trips during weekday a.m. peak hour and 724 new two-way trips consisting of 454 inbound and 270 outbound trips during the weekday p.m. peak hour.

Under the 2031 horizon year, with all phases of the subdivision built out (Phase 1 east of McLaughlin Road and Phase 2 west of McLaughlin Road), a total of 2,940 new two-way trips consisting of 911 inbound and 2,029 outbound trips during weekday a.m. peak hour and 3,809 new two-way trips consisting of 2,237 inbound and 1,571 outbound trips during the weekday p.m. peak hour.

To mitigate capacity issues along the study area roads, the following improvements have been recommended in previous studies and are assumed to be constructed in the latest analysis:

- Widening of Mayfield Road from 2 to 6 lanes (Chinguacousy Road to Hurontario Street), Region of Peel currently tendering the project
- Widening of Old School Road from 2 to 4 lanes (Chinguacousy Road to Hurontario Street), due to corridor growth and full build-out of the site in 2031
- Widening of McLaughlin from 2 to 4 lanes (Old School Road to Etobicoke Creek)
- Widening of Hurontario from 4 to 6 lanes (north of Highway 410), due to corridor growth in 2026
 - An auxiliary right-turn lane in the northbound and southbound directions.
- Signalization of the intersection of Old School Road & Chinguacousy Road, Old School Road & McLaughlin Road, McLaughlin & Street A, Hurontario Street & Street A

Despite the recommended road widening along Hurontario Street, capacity issues are still prevalent at intersections along Hurontario Street due to the high through volumes. The GTA West Corridor project proposes to extend Highway 410 to the proposed Highway 413 and would result in less through volume along Hurontario Street. Further studies will be required to evaluate the impact of the proposed Highway 410 extension on the Hurontario Street corridor within the study area.

Appendices

Appendix A

Figures

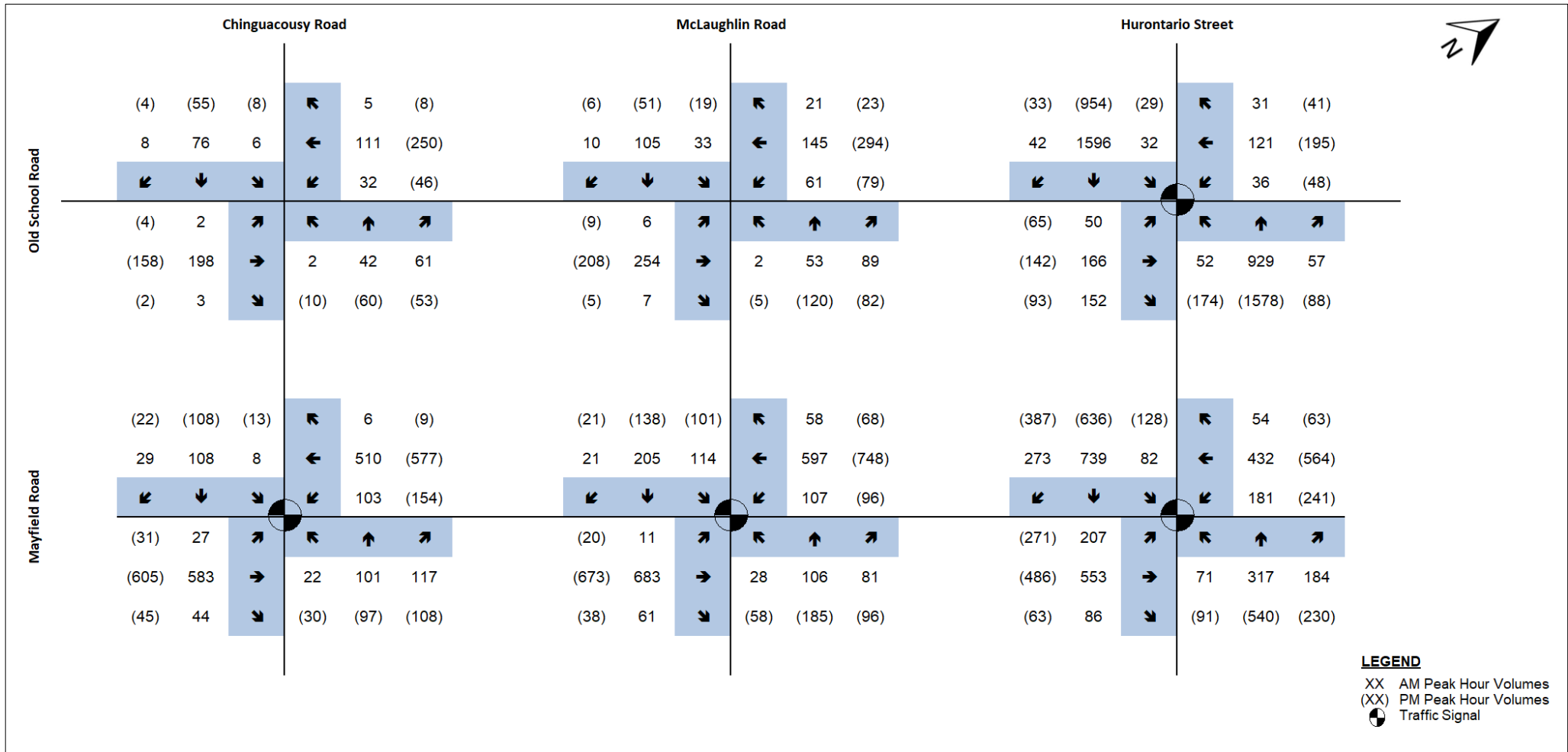


Figure 12 Baseline 2024 Existing Traffic Volumes

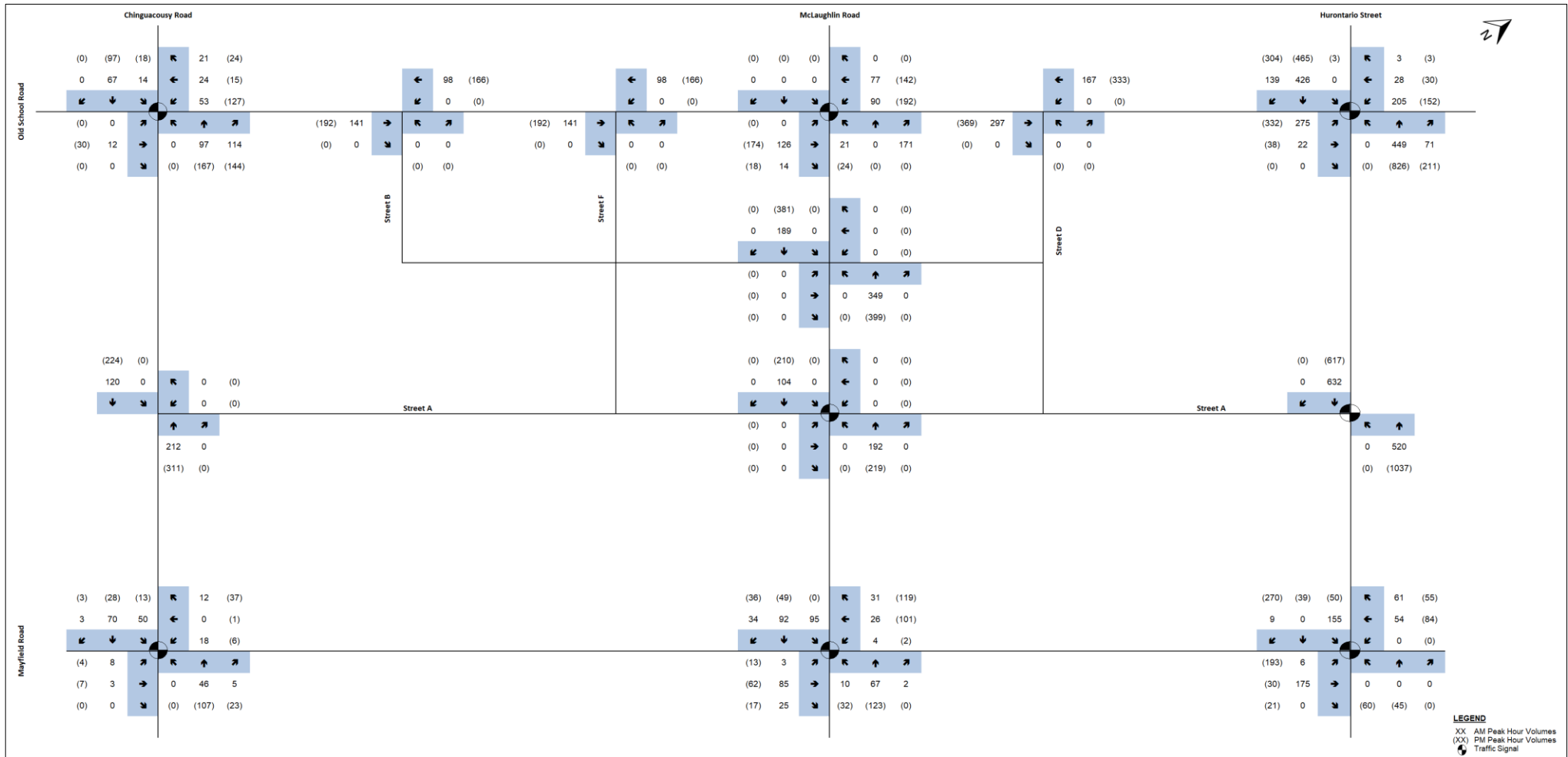


Figure 13 Total Background Development Site Traffic – Without GTA West Highway (2026)

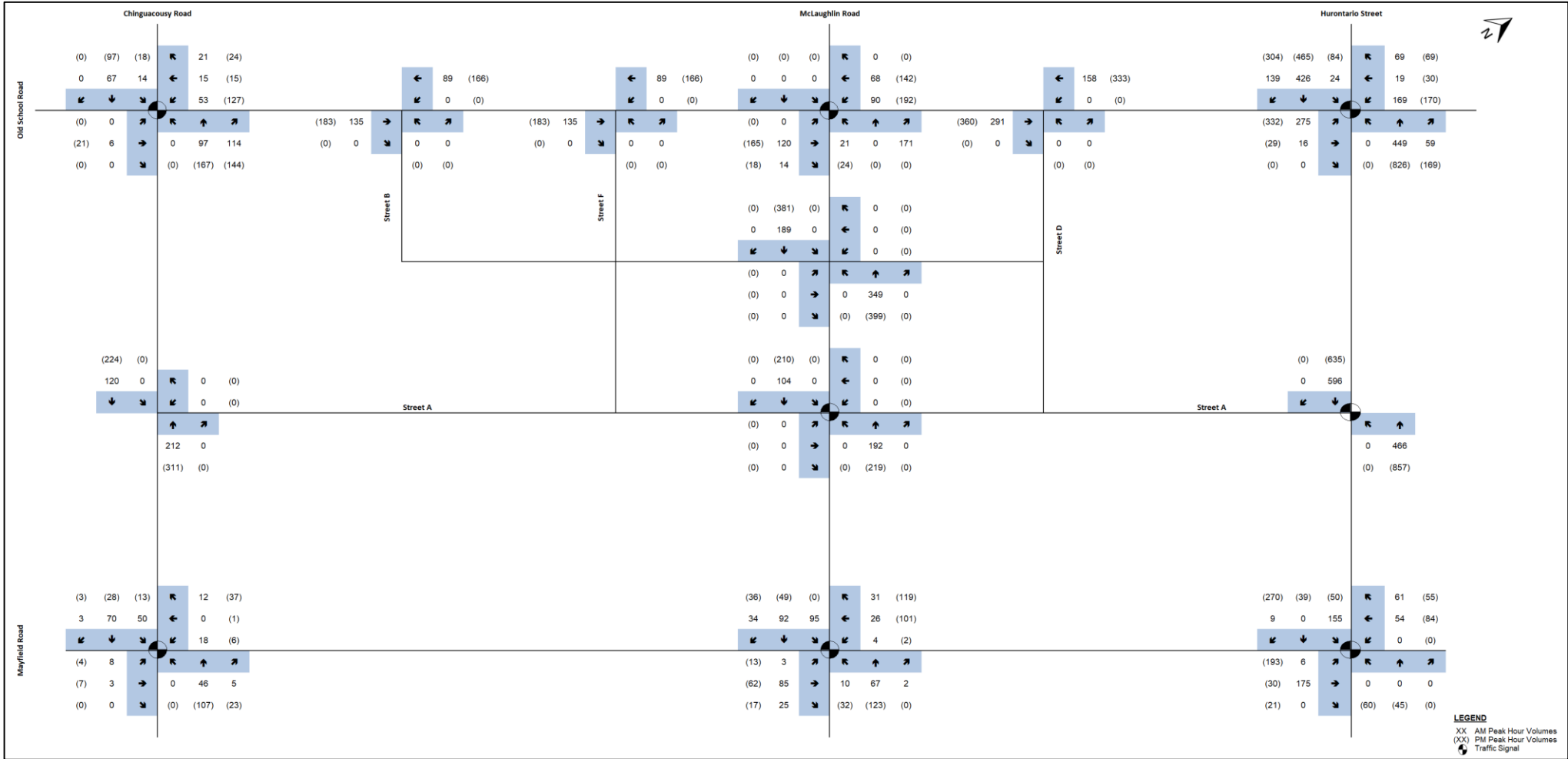


Figure 14 Total Background Development Site Traffic – With GTA West Highway (2026)

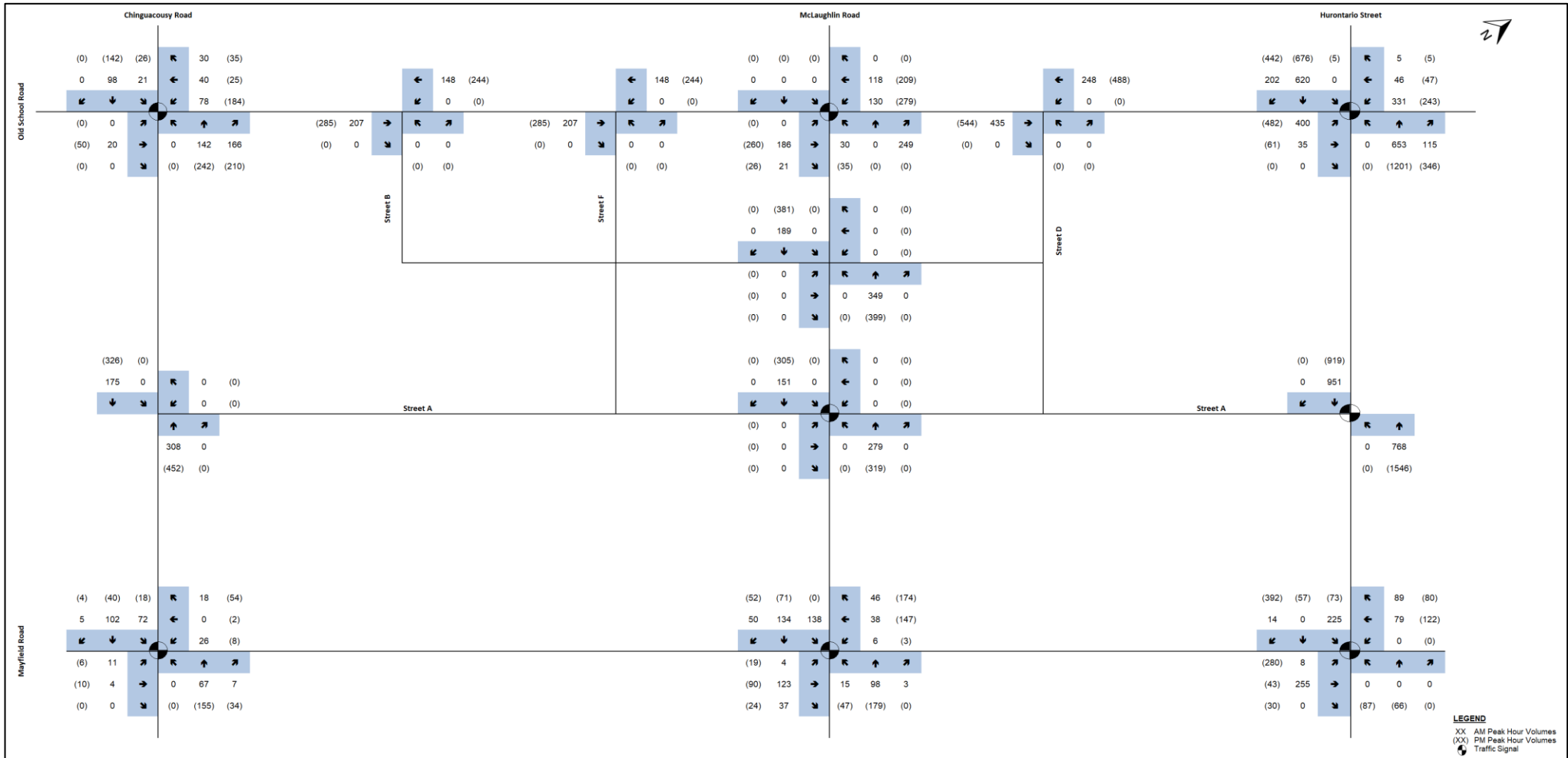


Figure 15 Total Background Development Site Traffic – Without GTA West Highway (2029)

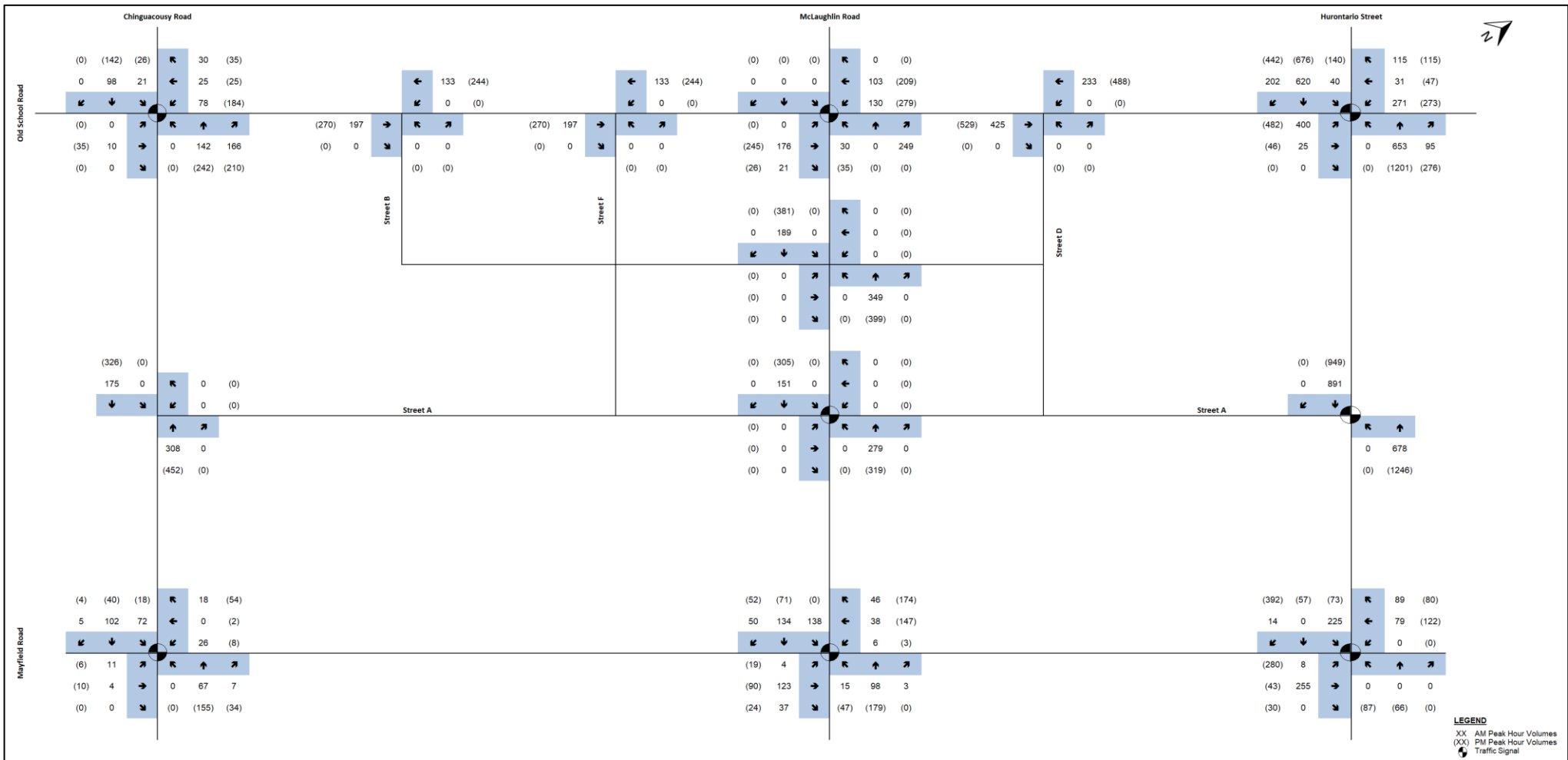


Figure 16 Total Background Development Site Traffic – With GTA West Highway (2029)

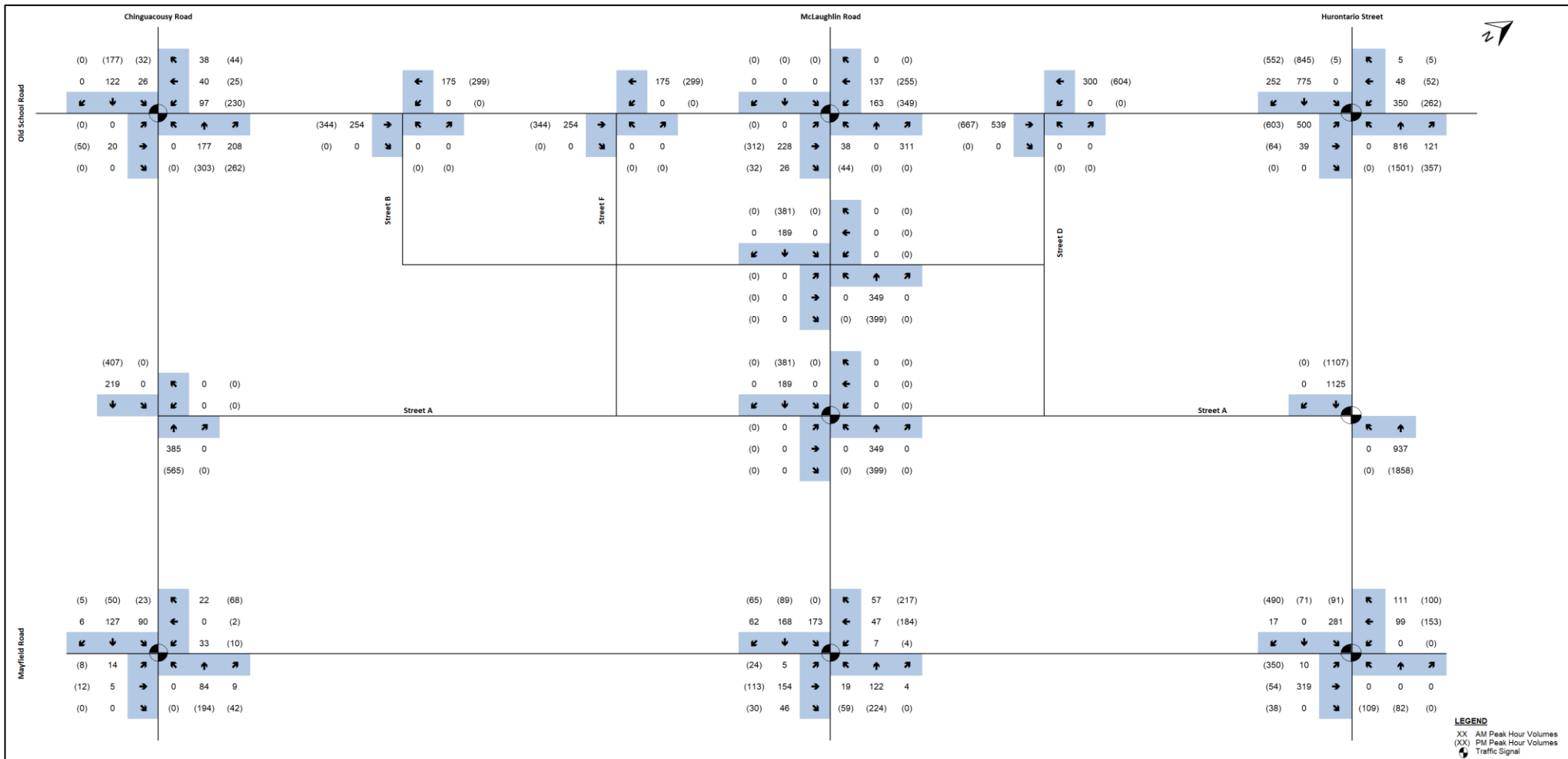


Figure 17 Total Background Development Site Traffic – Without GTA West Highway (2031)

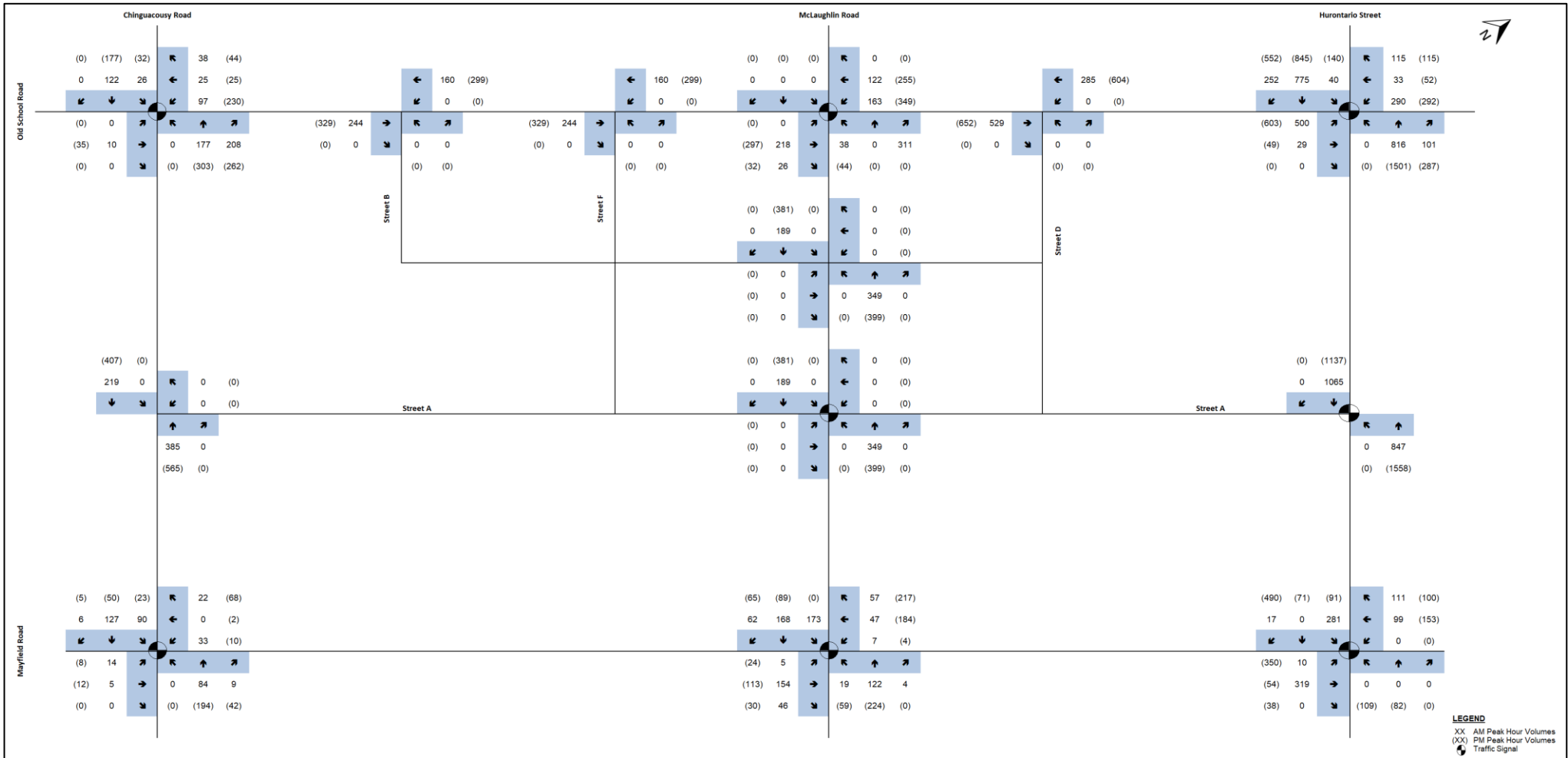


Figure 18 Total Background Development Site Traffic – With GTA West Highway (2031)

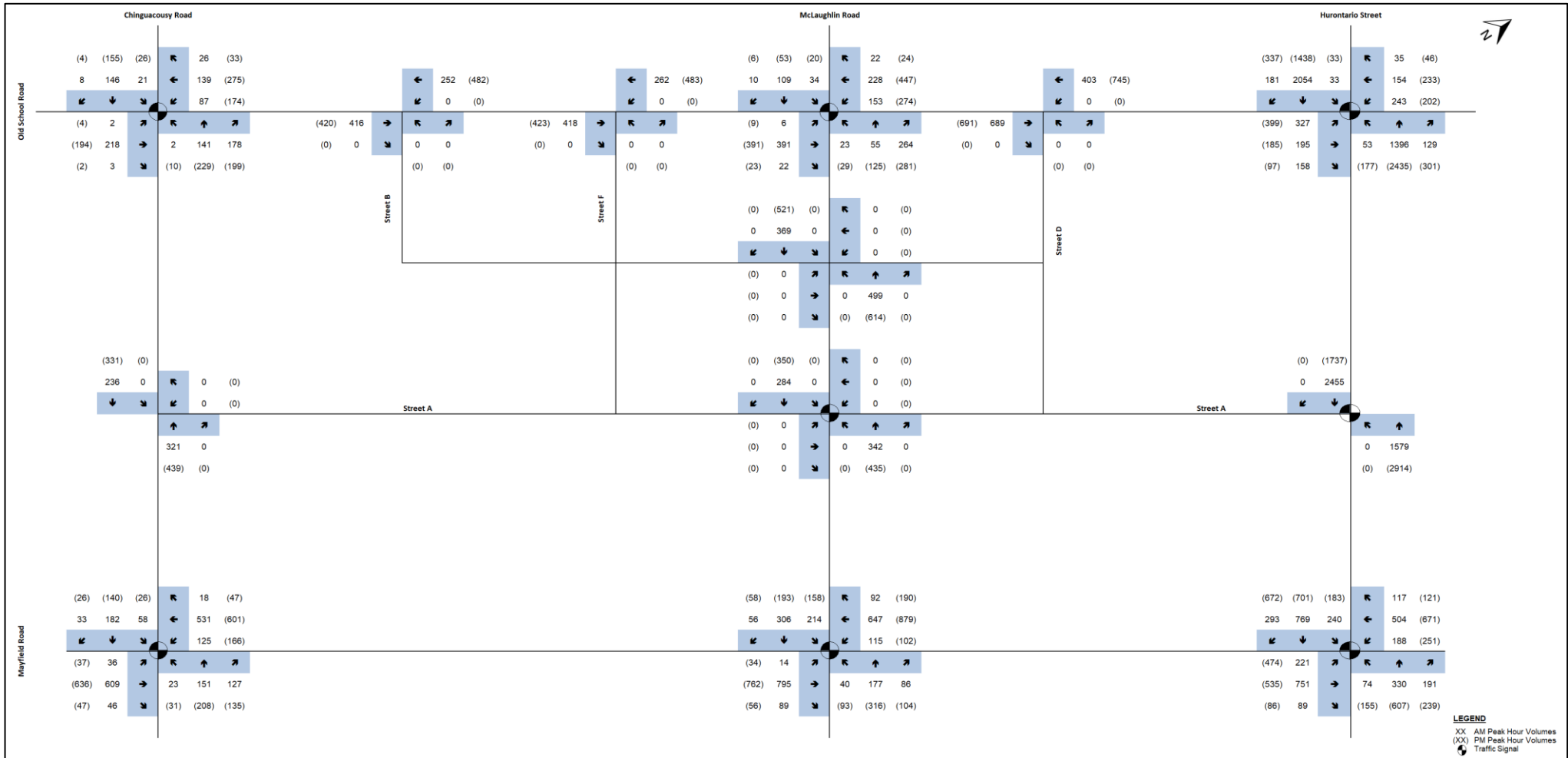


Figure 19 2026 Future Background Traffic Volumes – Without GTA West Highway

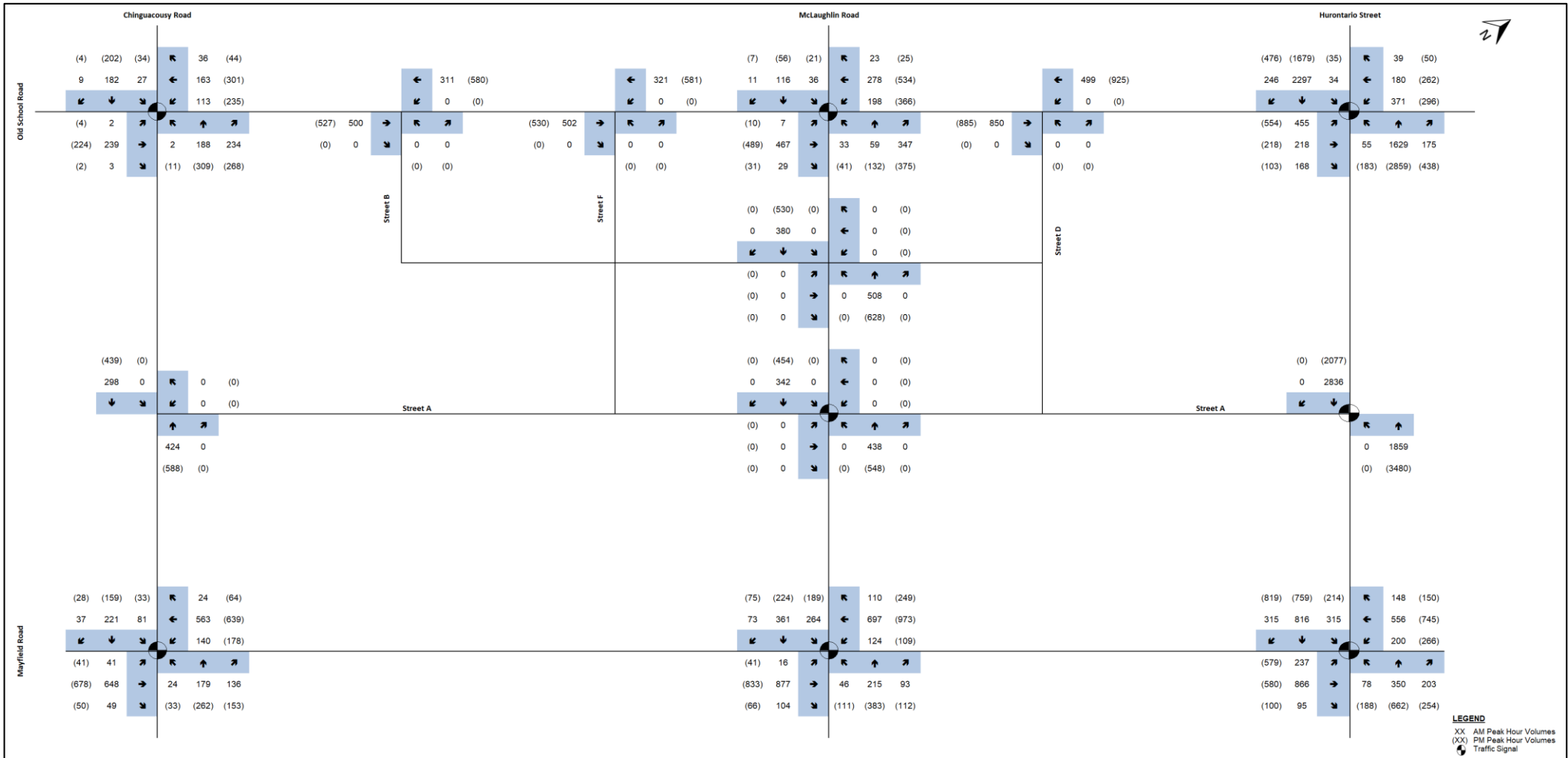


Figure 20 2029 Future Background Traffic Volumes – Without GTA West Highway

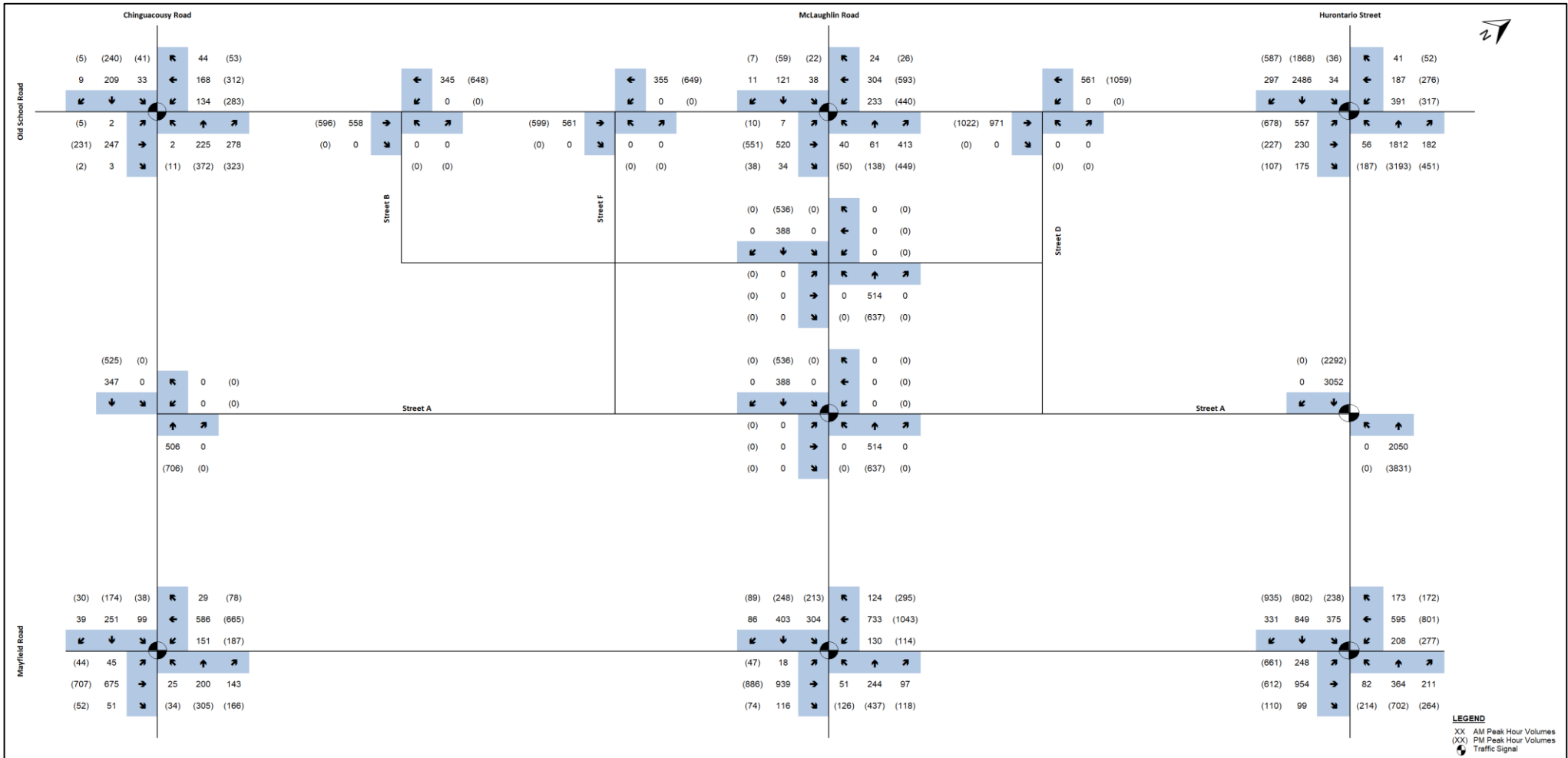


Figure 21 2031 Future Background Traffic Volumes – Without GTA West Highway

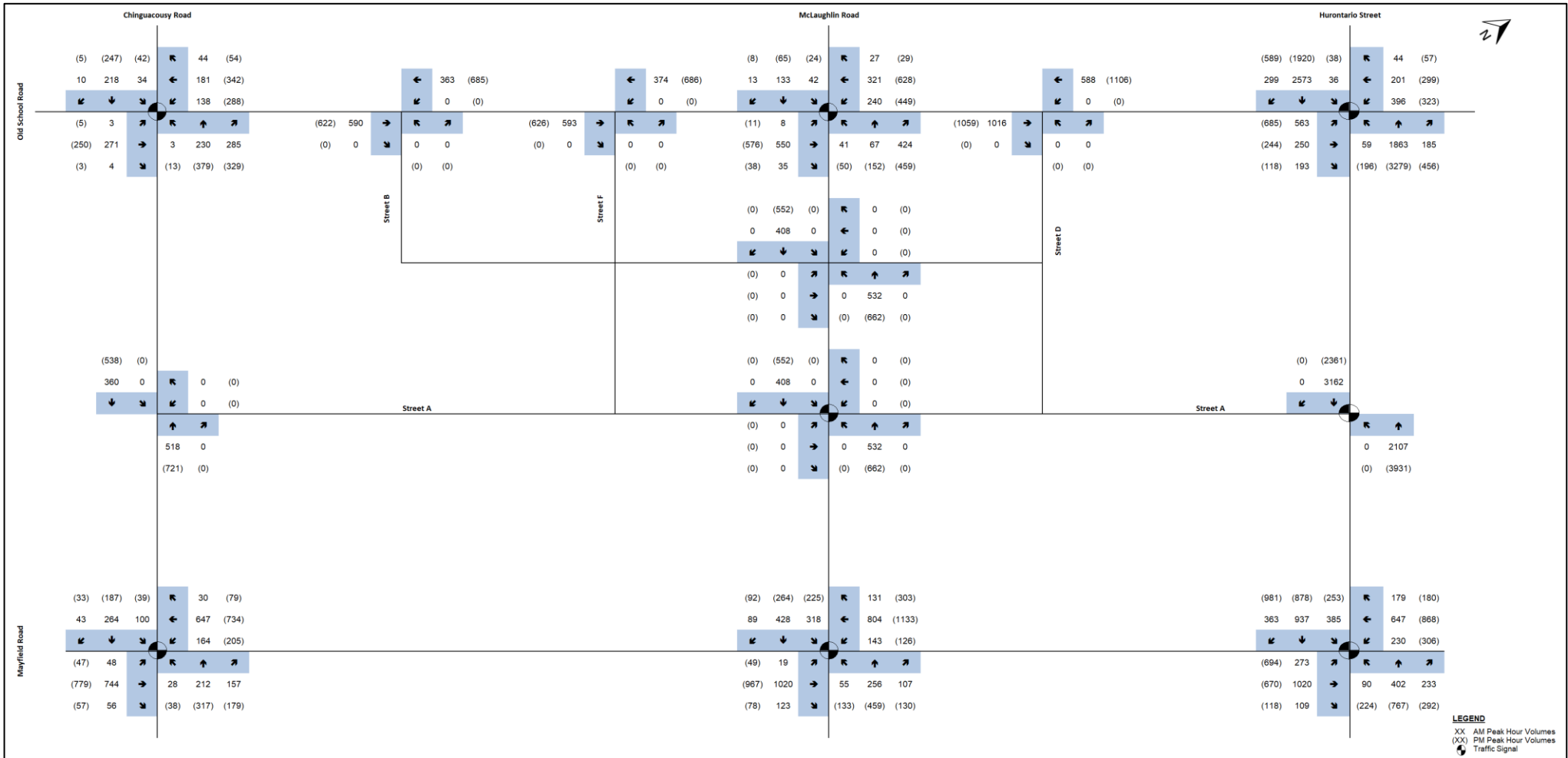


Figure 22 2036 Future Background Traffic Volumes – Without GTA West Highway

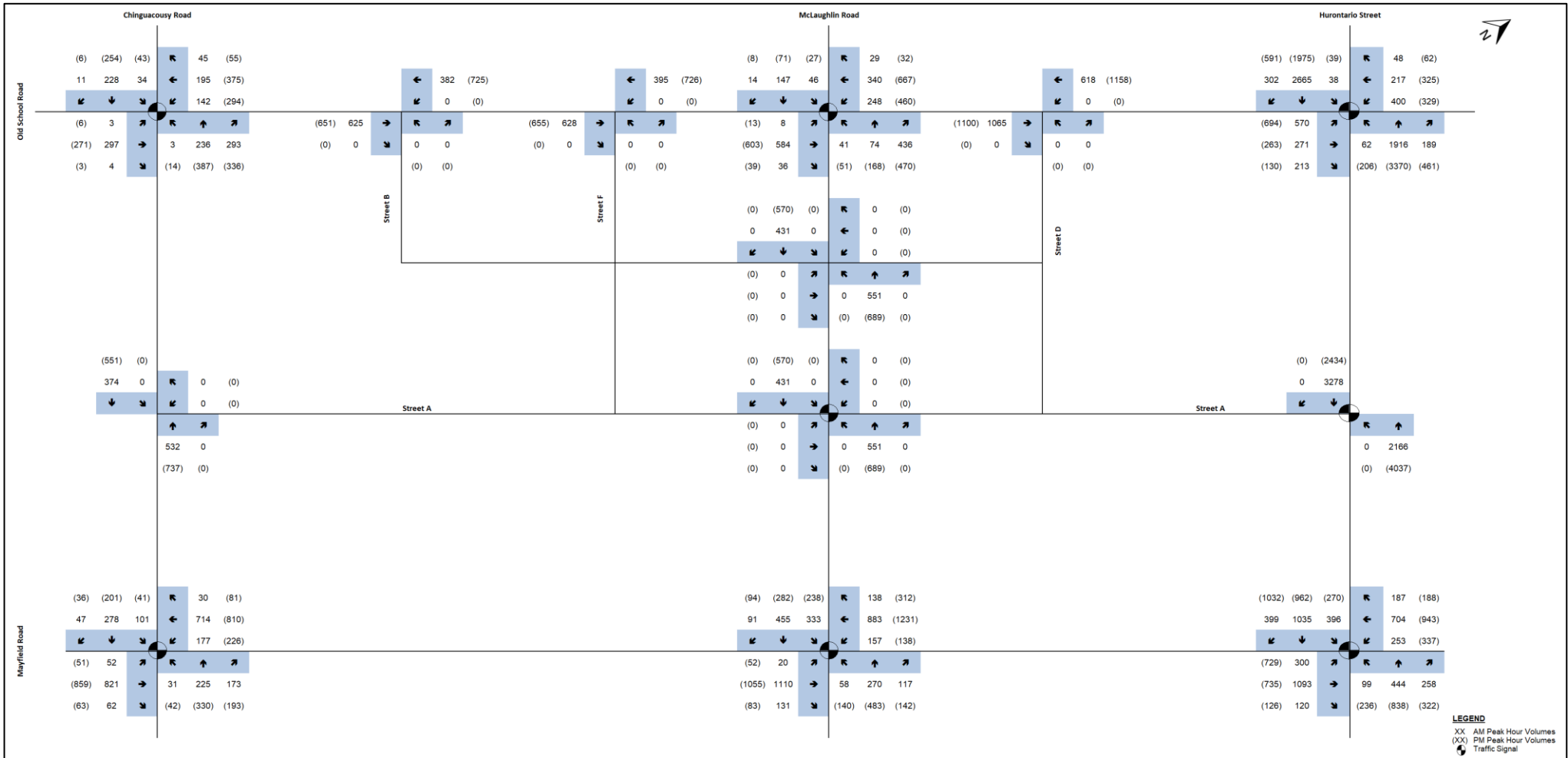


Figure 23 2041 Future Background Traffic Volumes – Without GTA West Highway

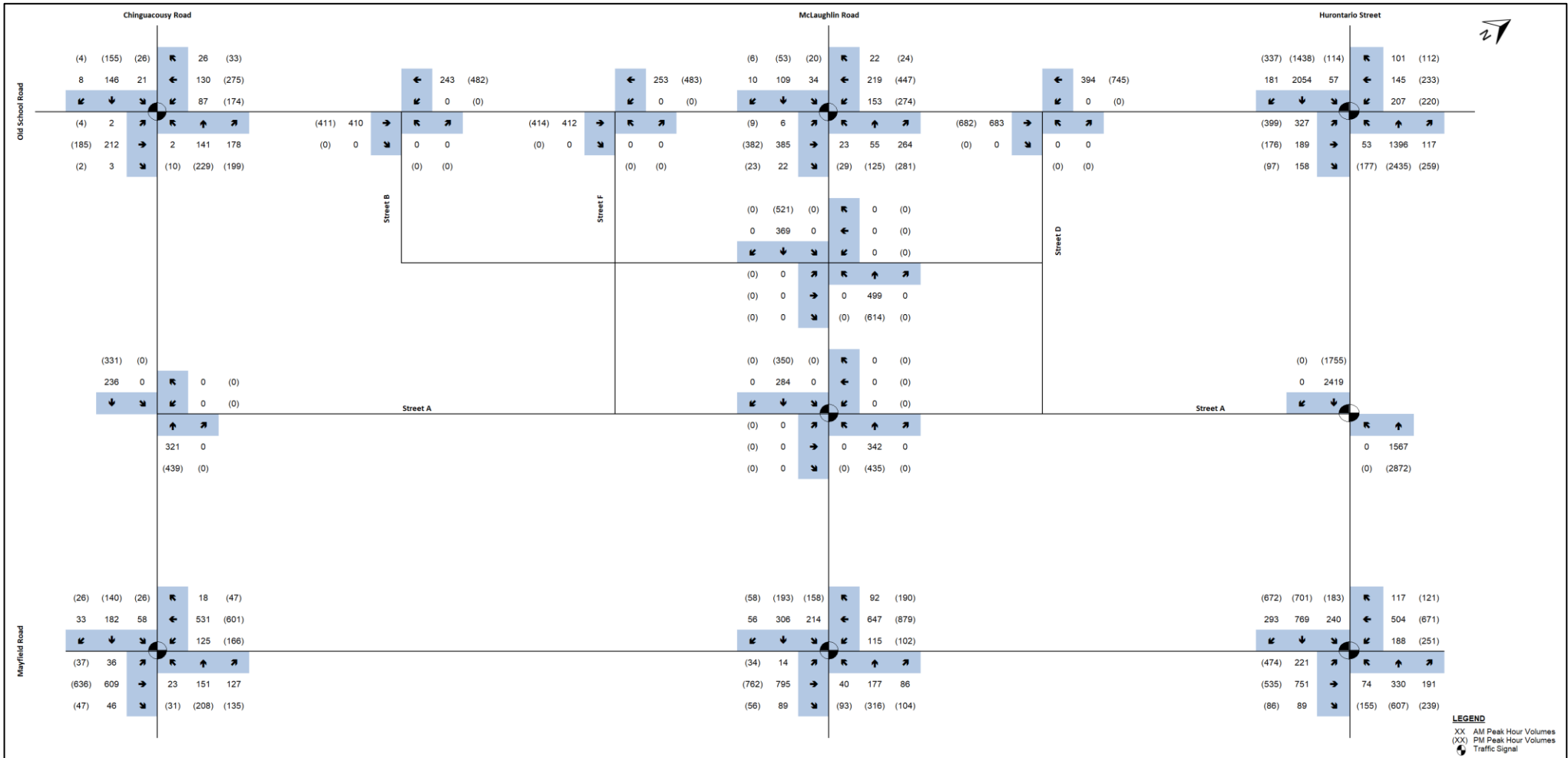


Figure 24 2026 Future Background Traffic Volumes – With GTA West Highway

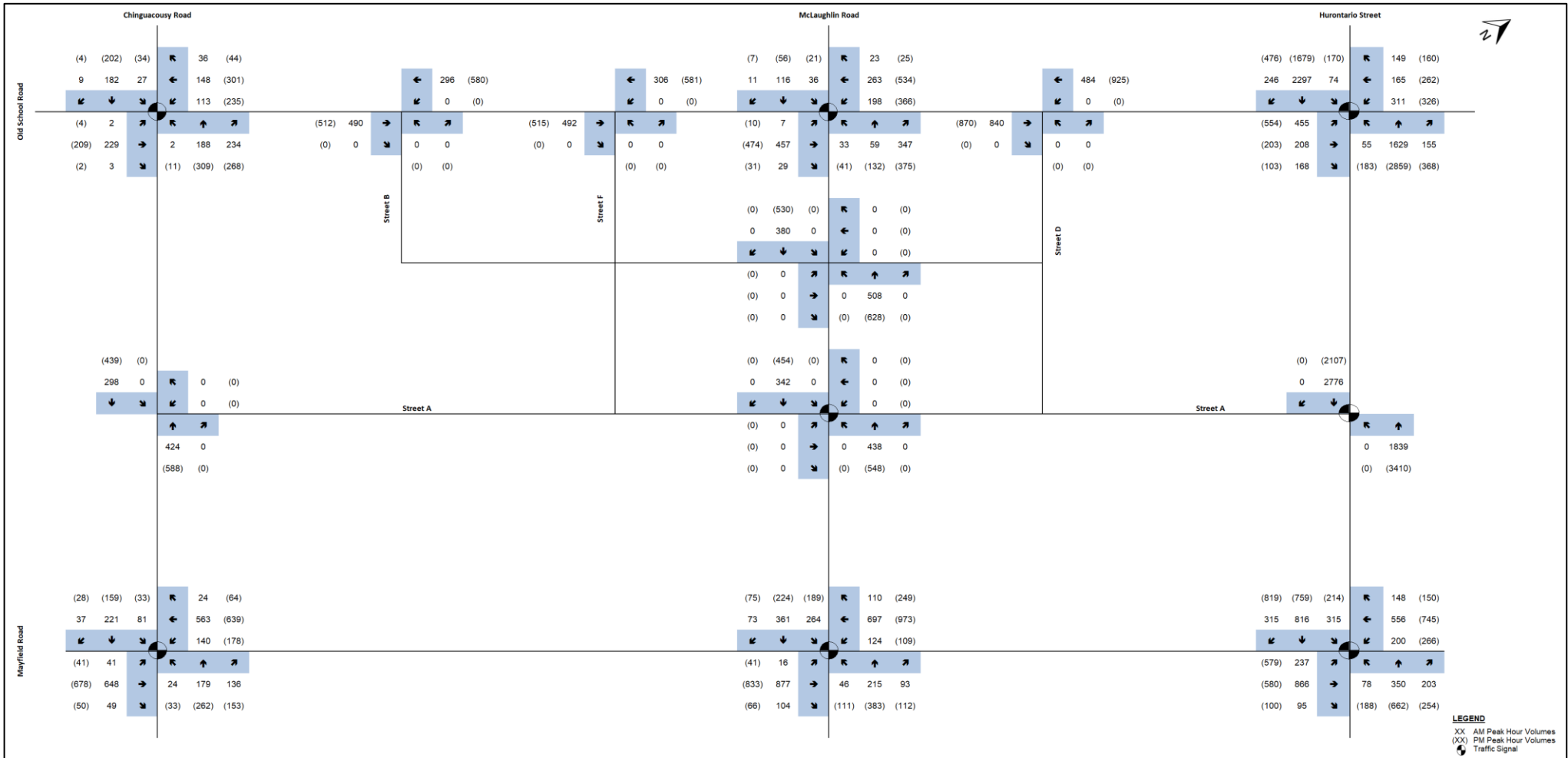


Figure 25 2029 Future Background Traffic Volumes – With GTA West Highway

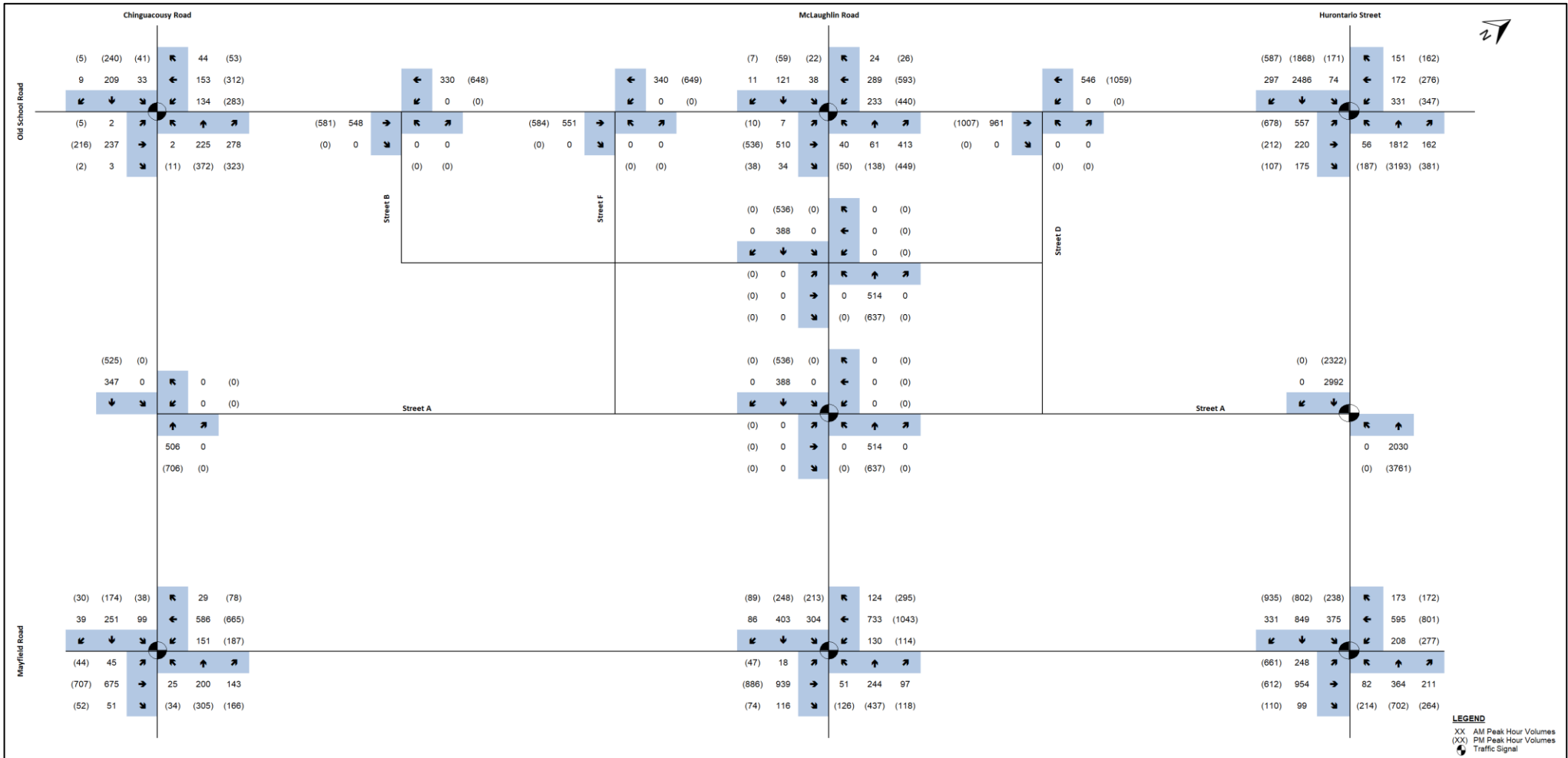


Figure 26 2031 Future Background Traffic Volumes – With GTA West Highway

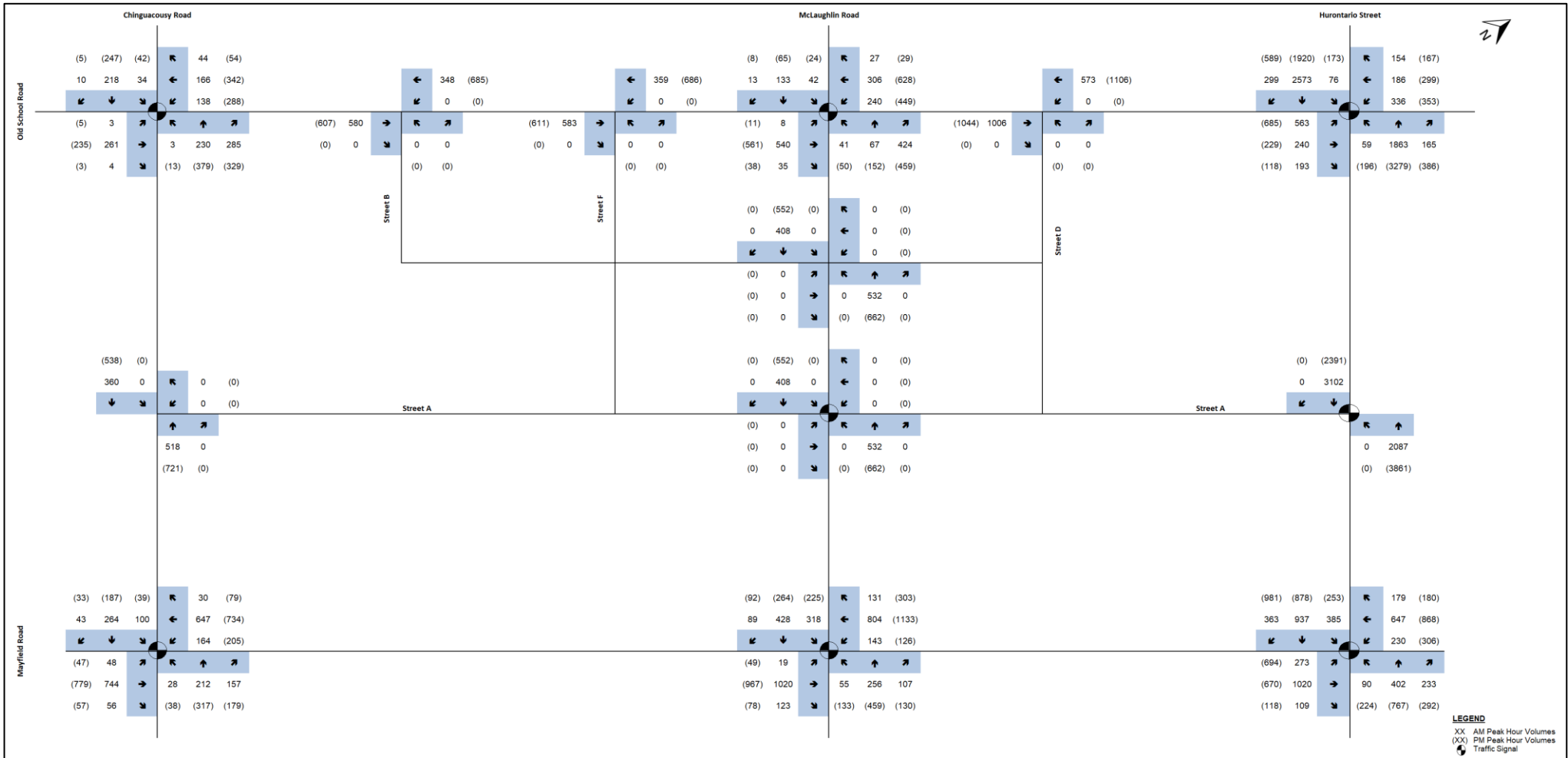


Figure 27 2036 Future Background Traffic Volumes – With GTA West Highway

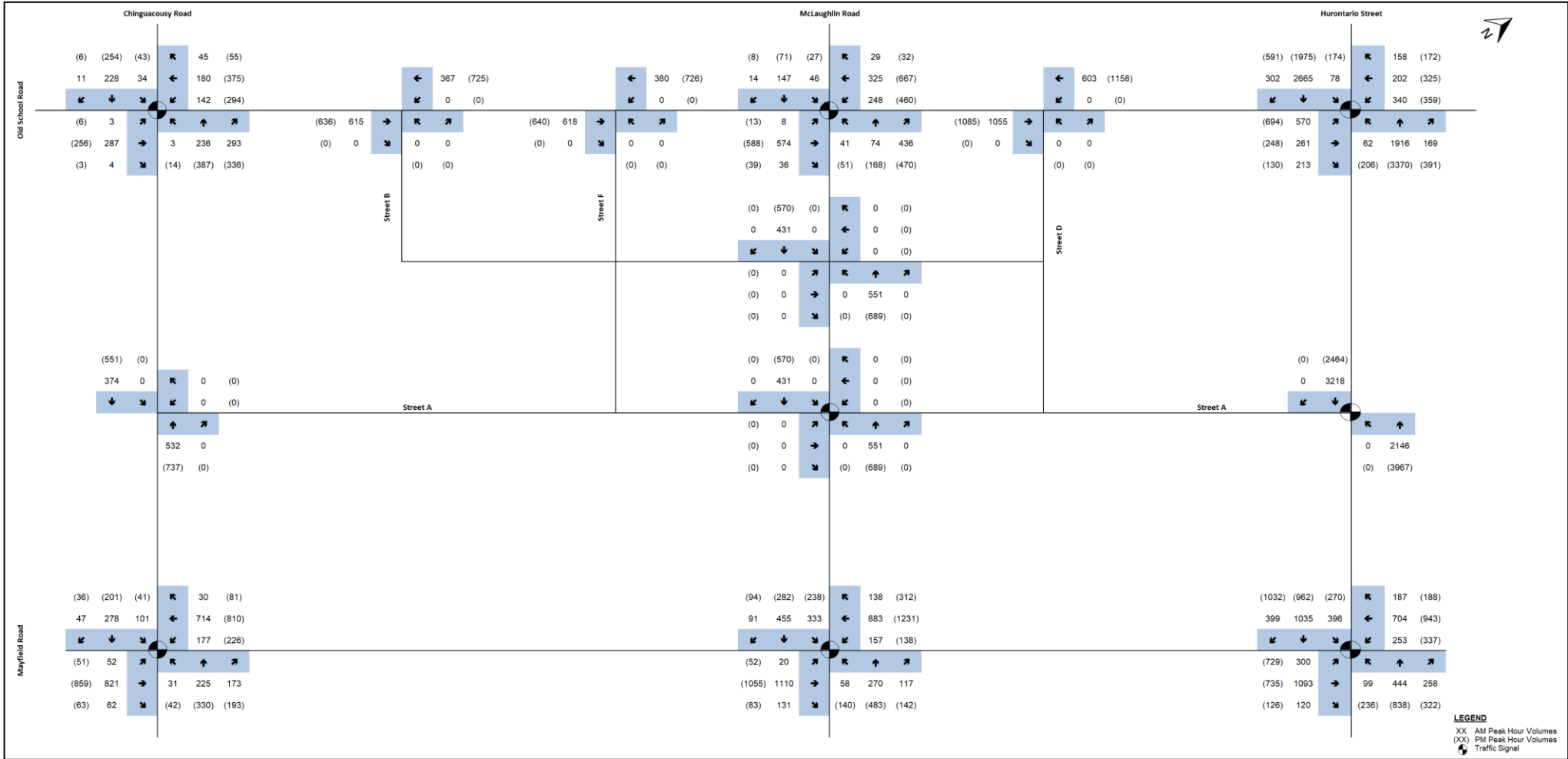


Figure 28 2041 Future Background Traffic Volumes – With GTA West Highway

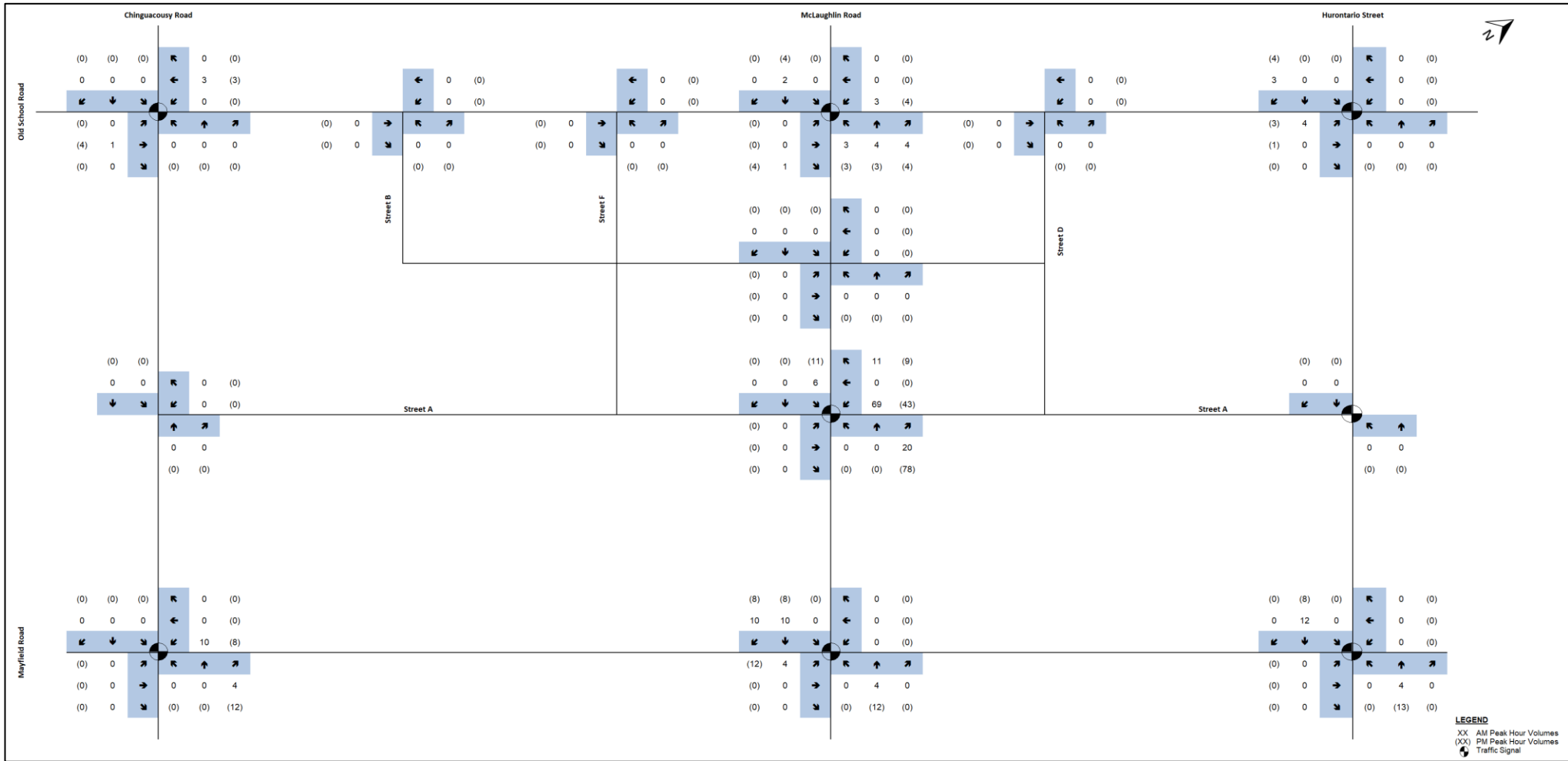


Figure 29 Total Site Trips – Without GTA West Highway (2026)

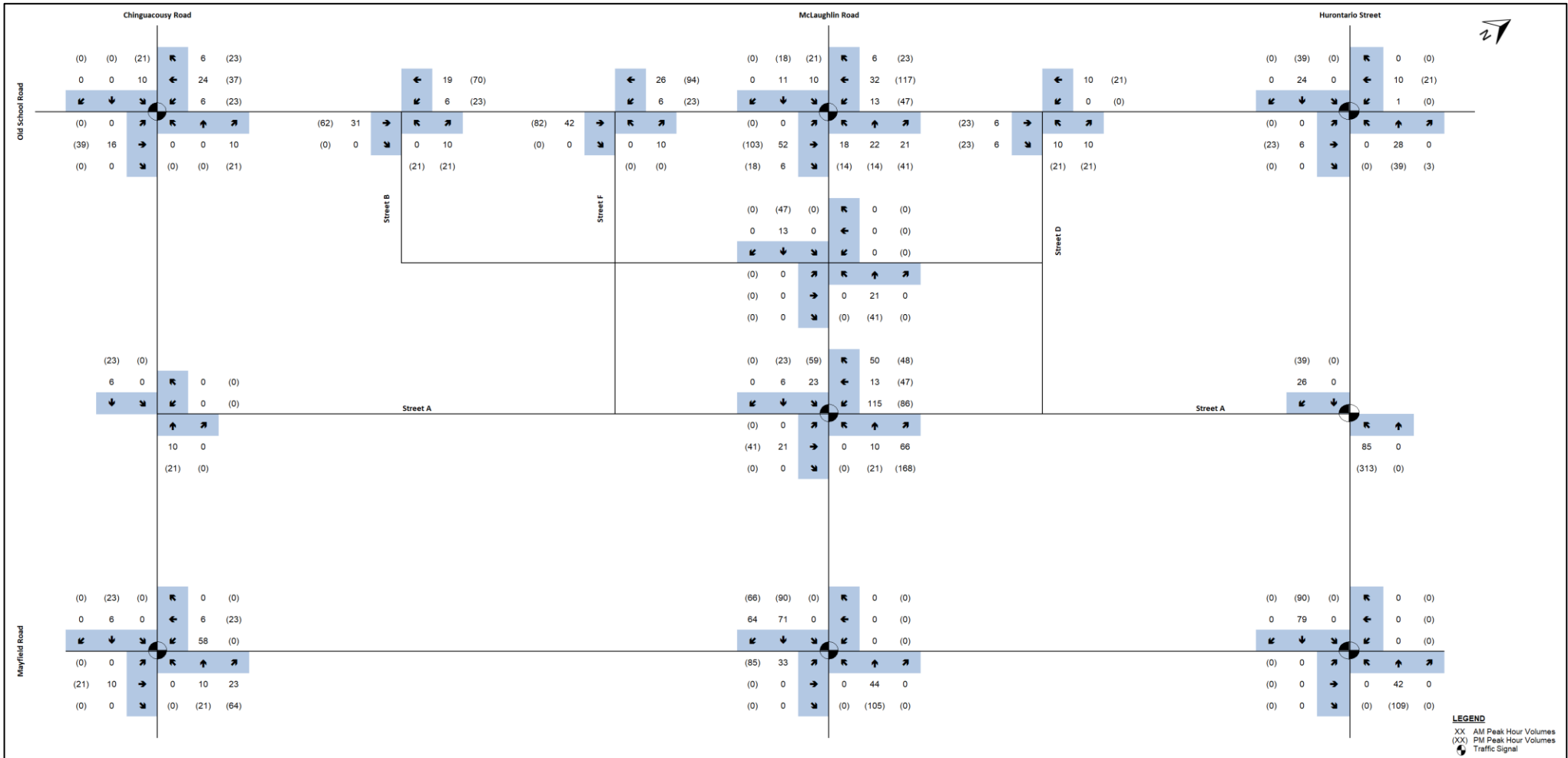


Figure 30 Total Site Trips – Without GTA West Highway (2029)

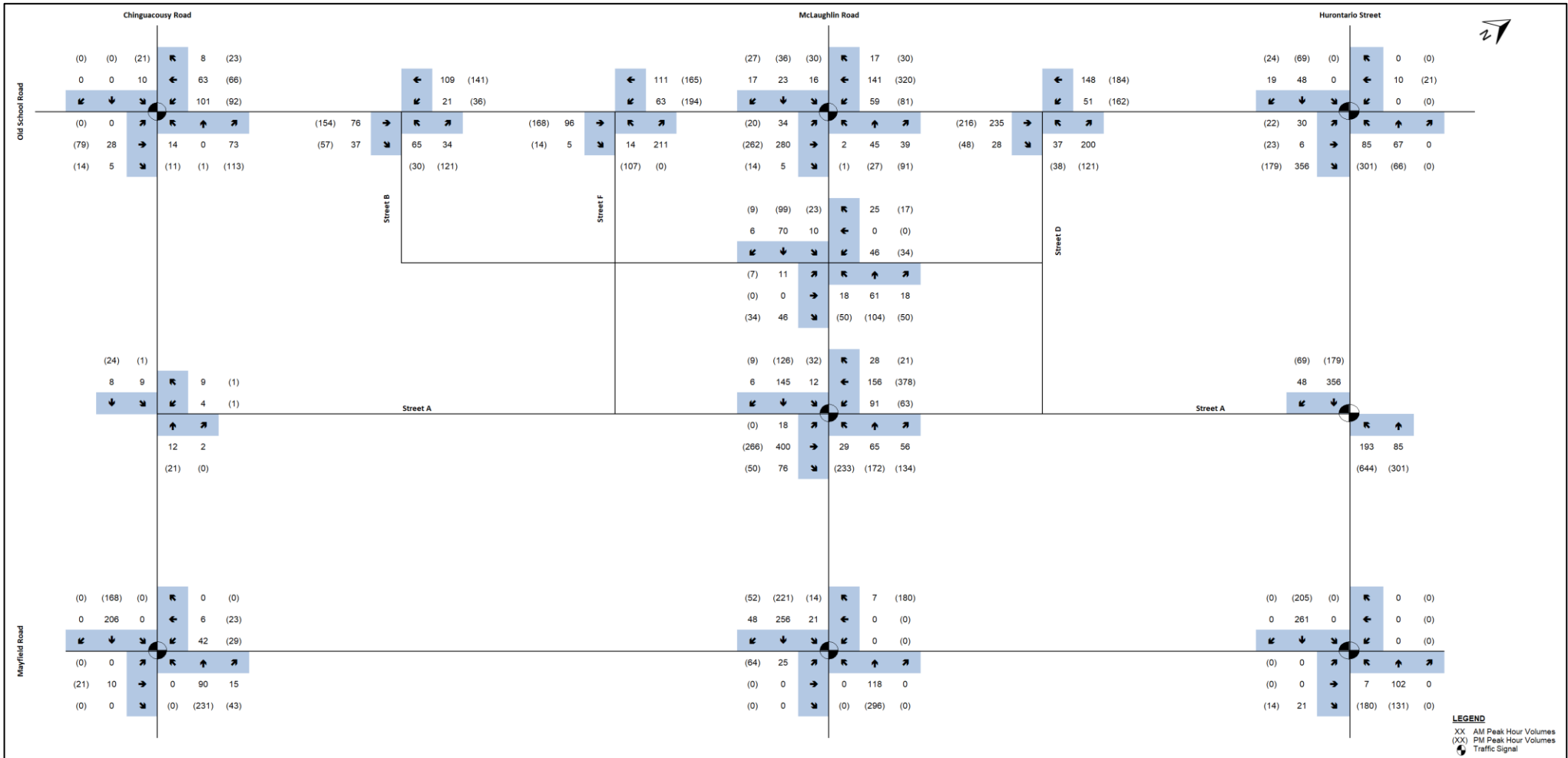


Figure 31 Total Site Trips – Without GTA West Highway (2031)

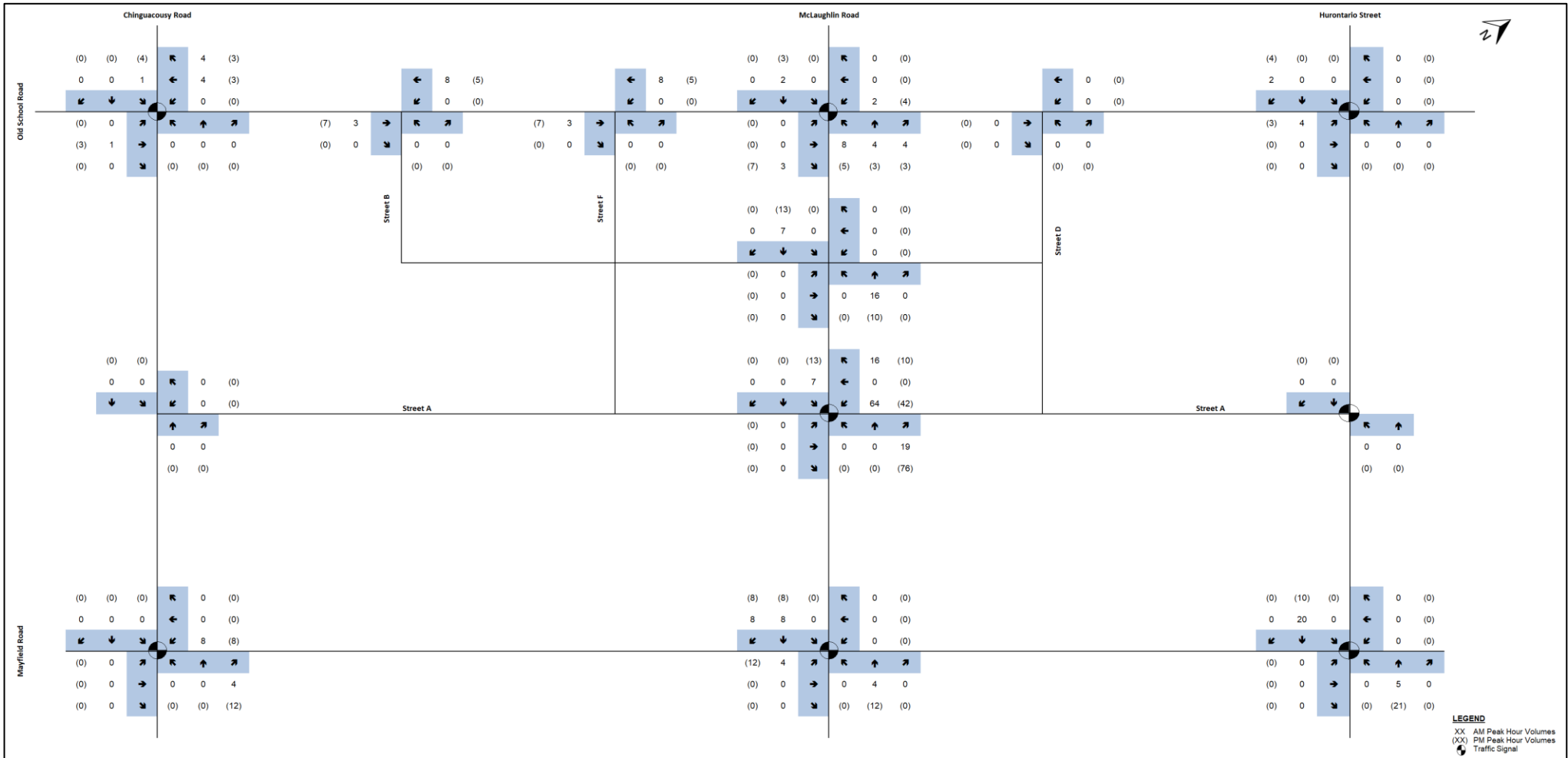


Figure 32 Total Site Trips – With GTA West Highway (2026)

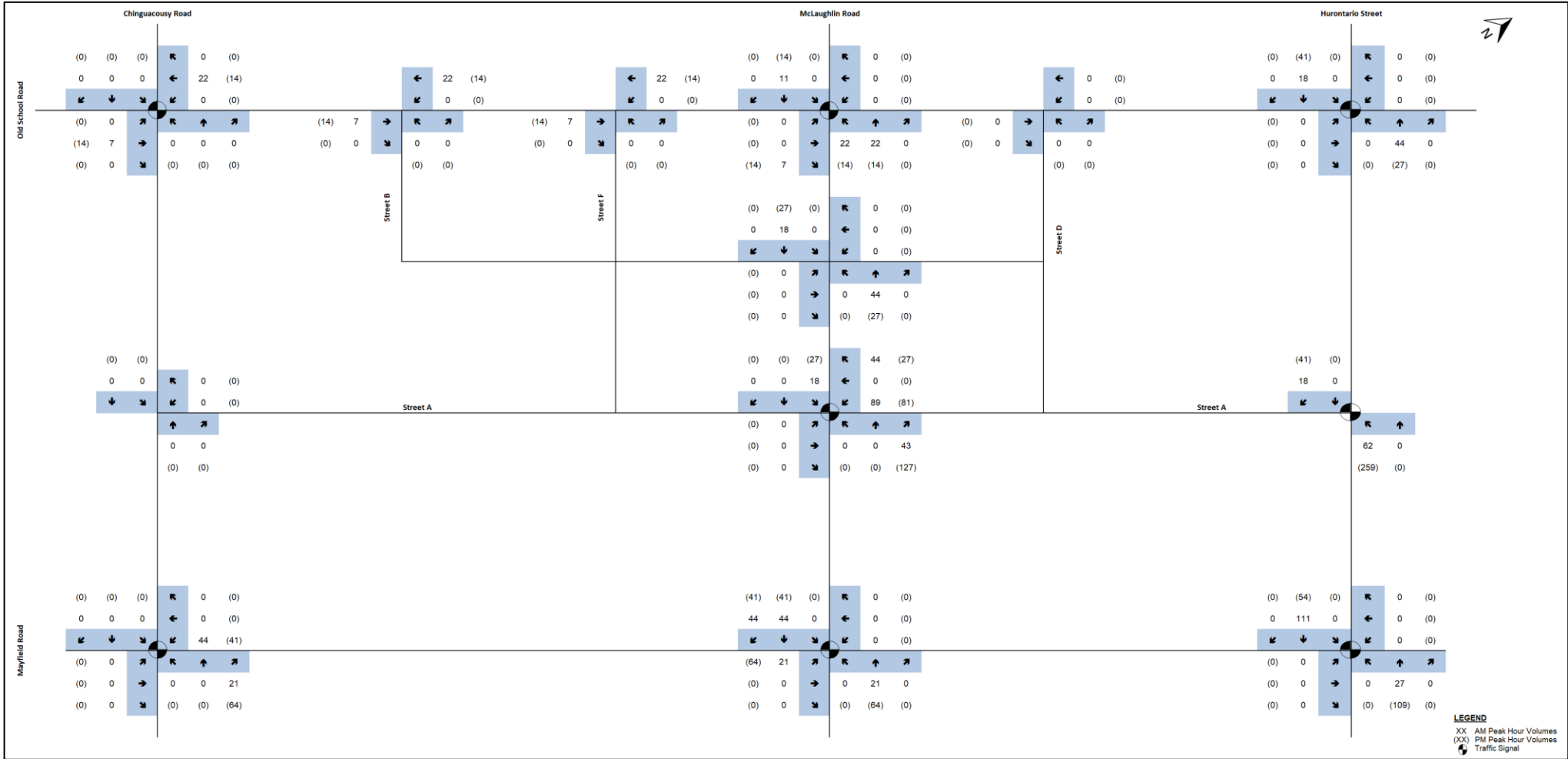


Figure 33 Total Site Trips – With GTA West Highway (2029)

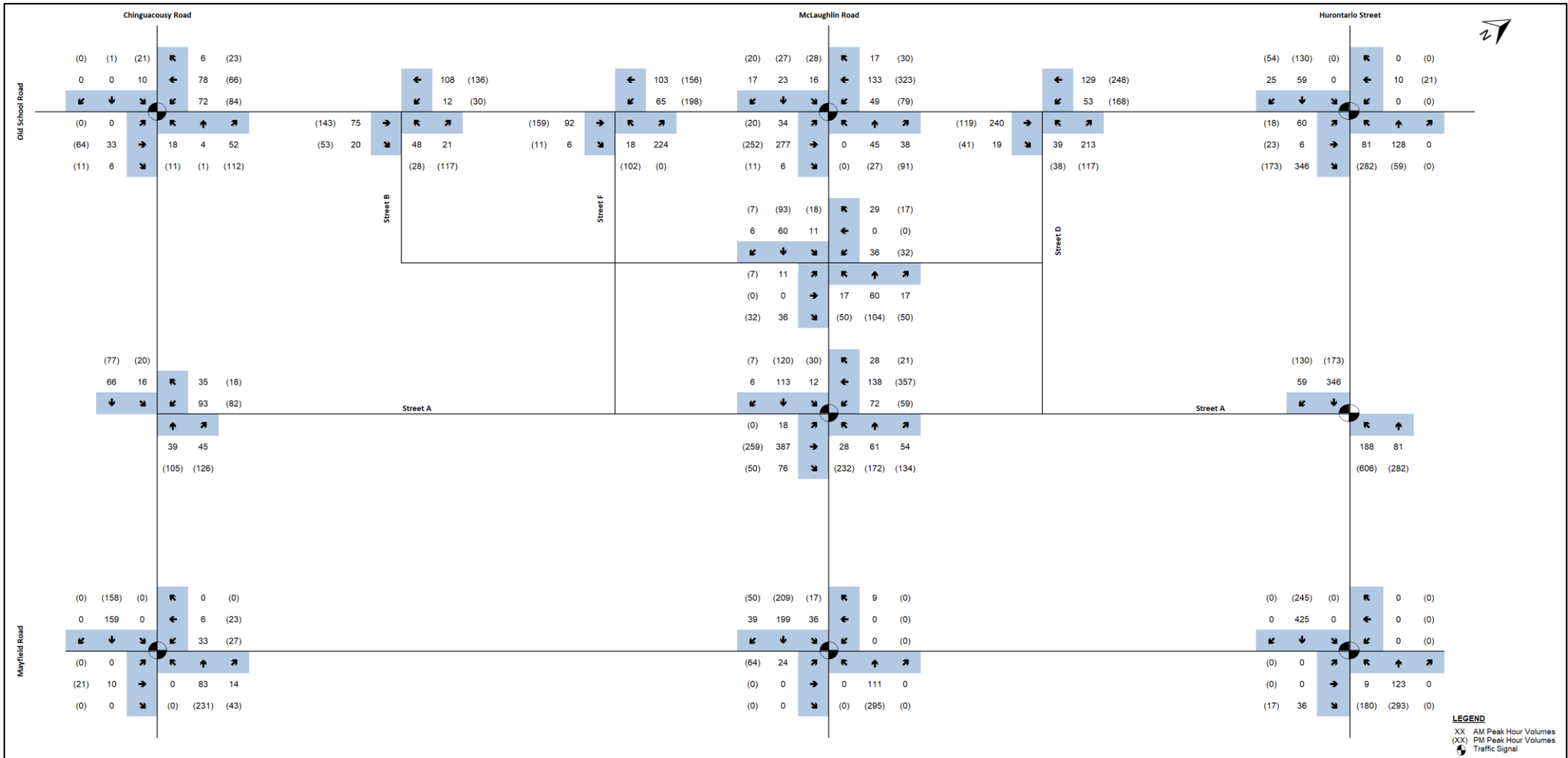


Figure 34 Total Site Trips – With GTA West Highway (2031)

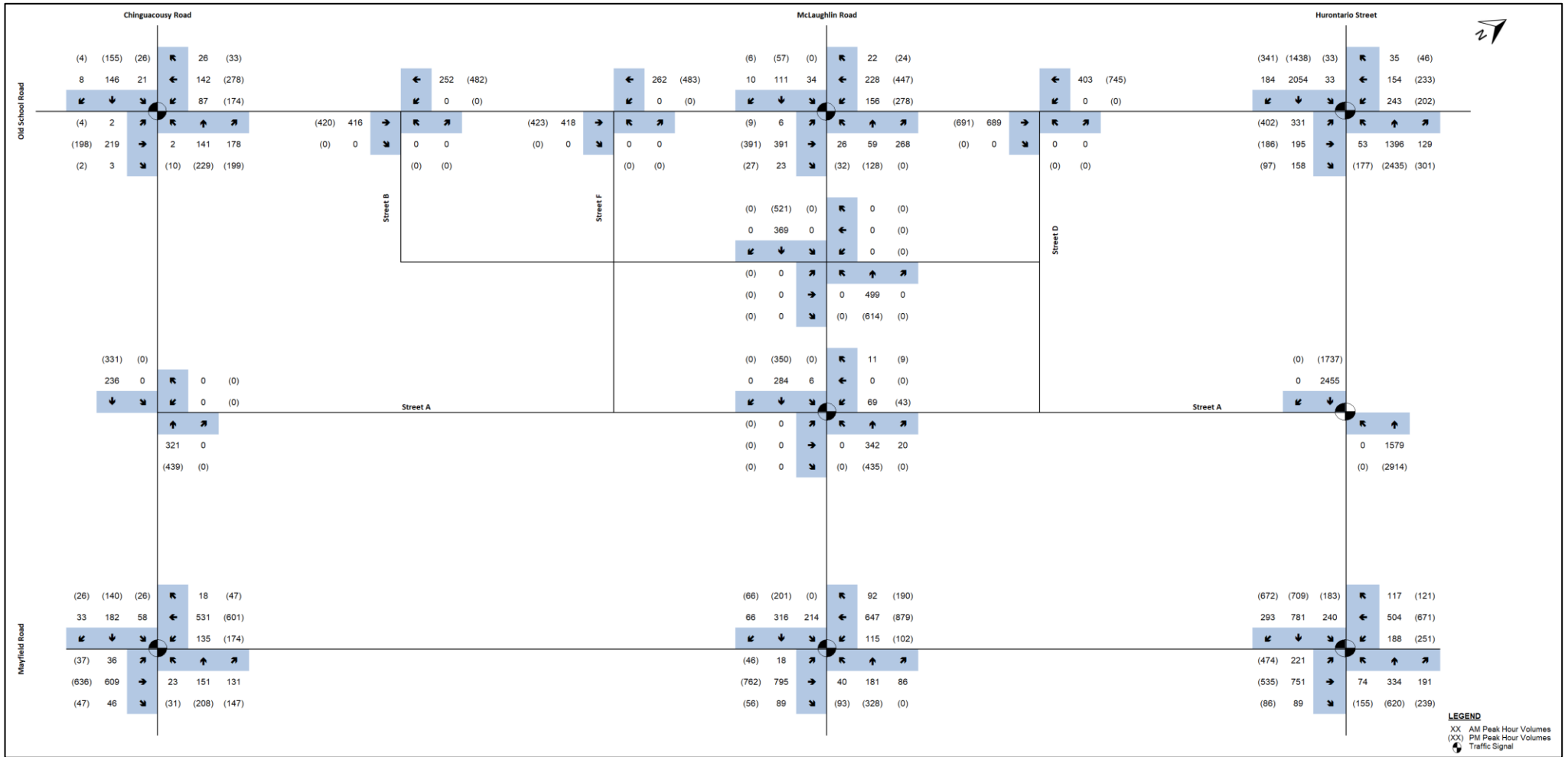


Figure 35 2026 Future Total Traffic Volumes – Without GTA West Highway

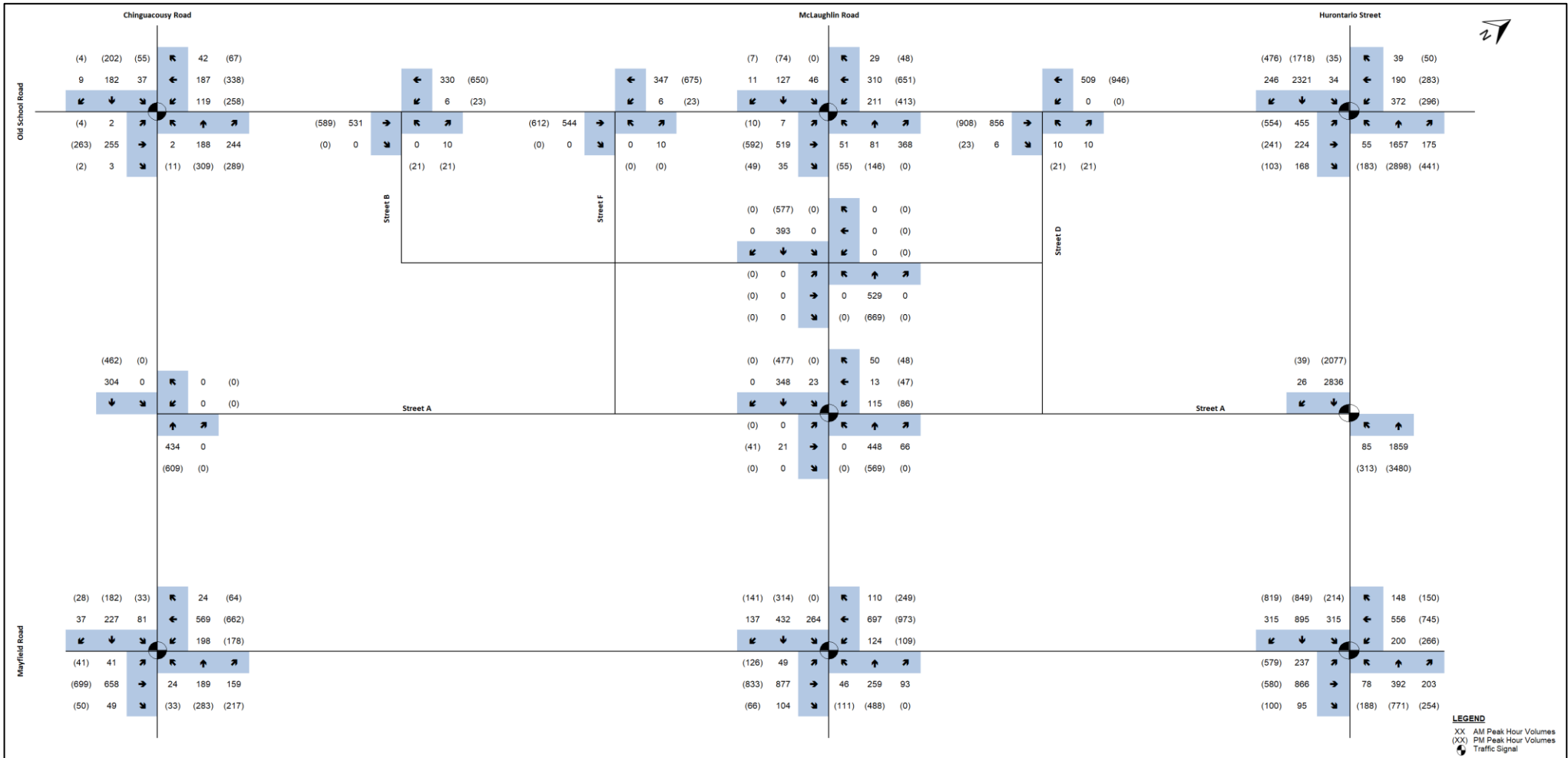


Figure 36 2029 Future Total Traffic Volumes – Without GTA West Highway

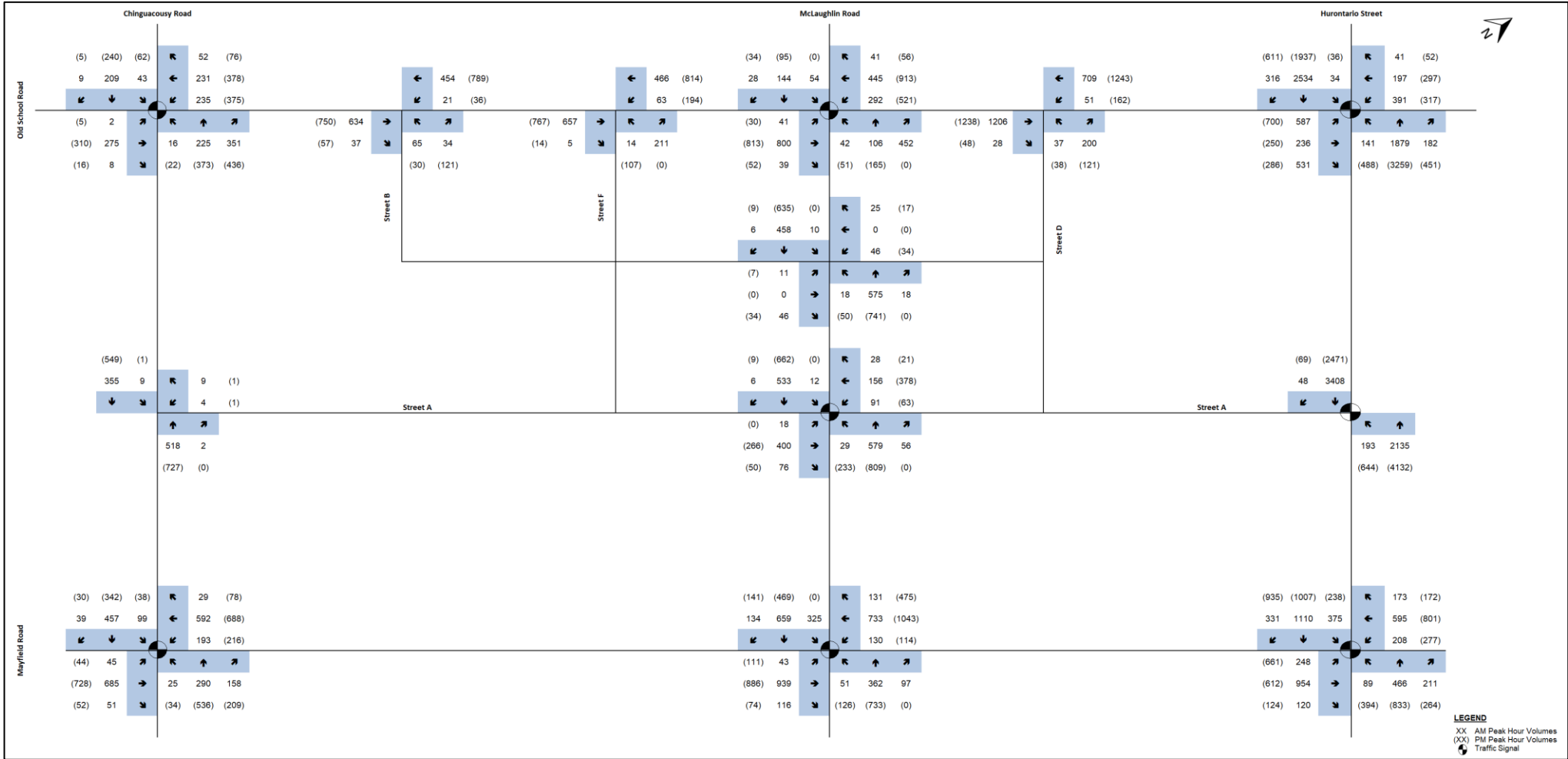


Figure 37 2031 Future Total Traffic Volumes – Without GTA West Highway

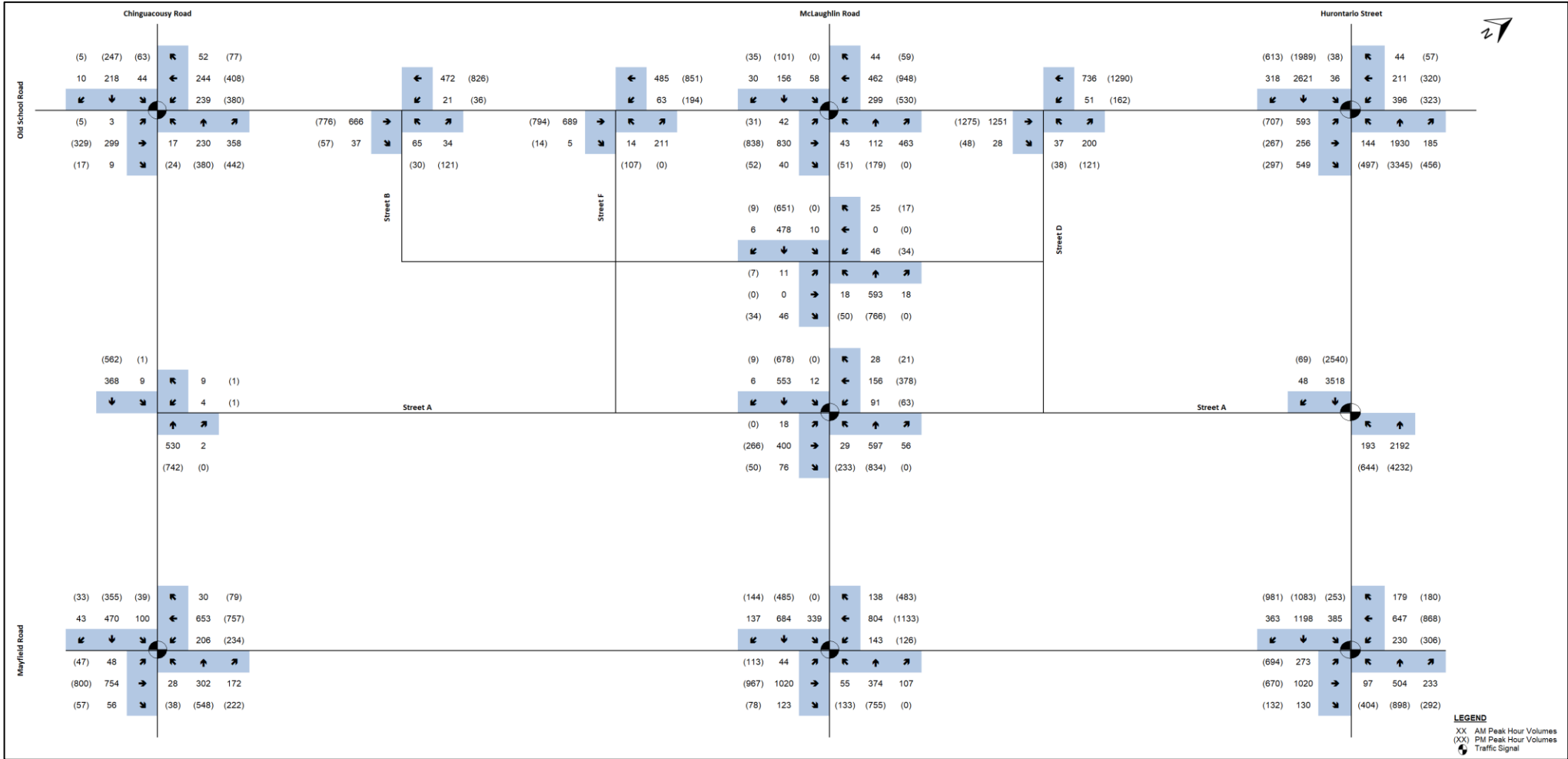


Figure 38 2036 Future Total Traffic Volumes – Without GTA West Highway

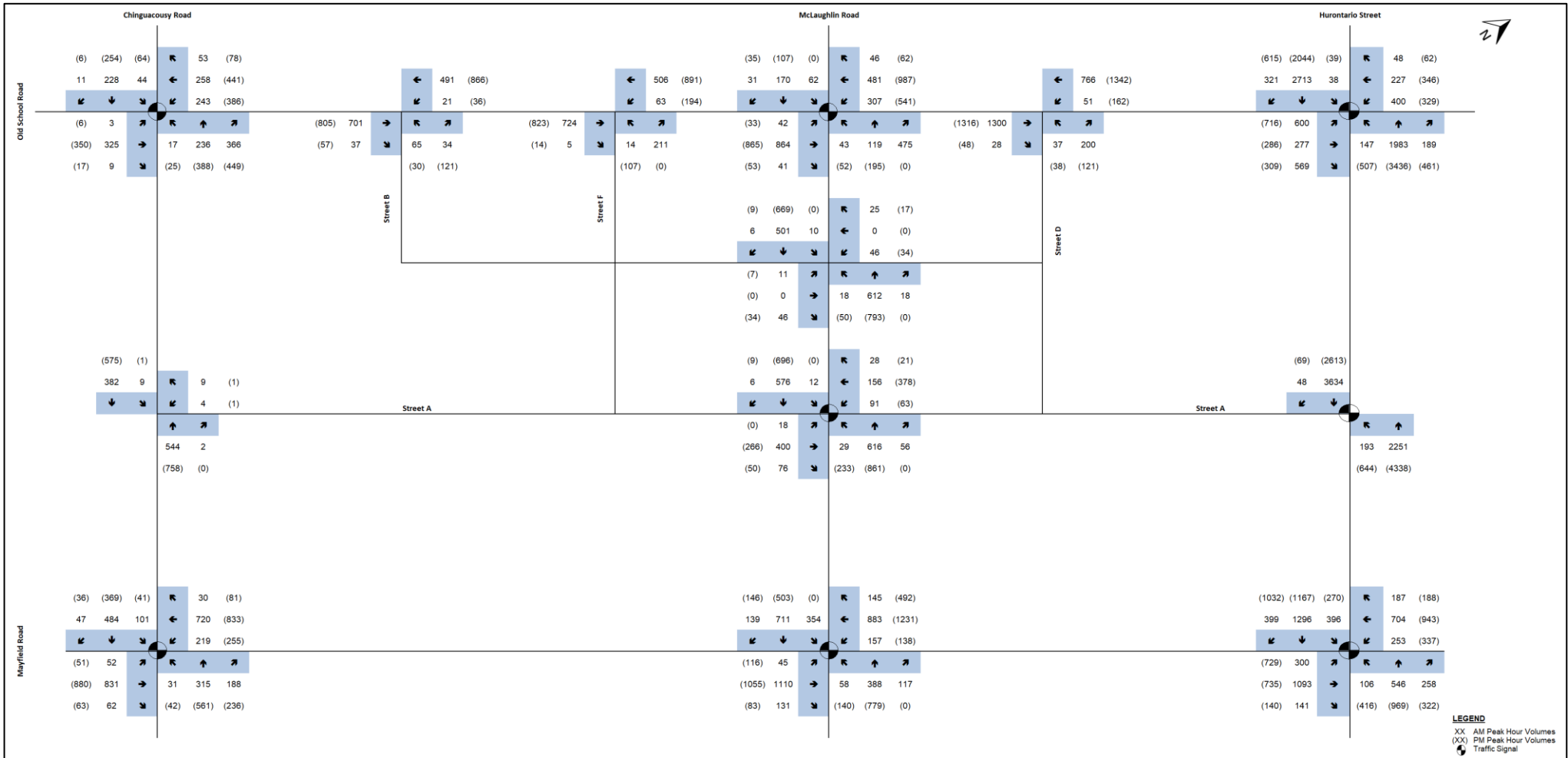


Figure 39 2041 Future Total Traffic Volumes – Without GTA West Highway

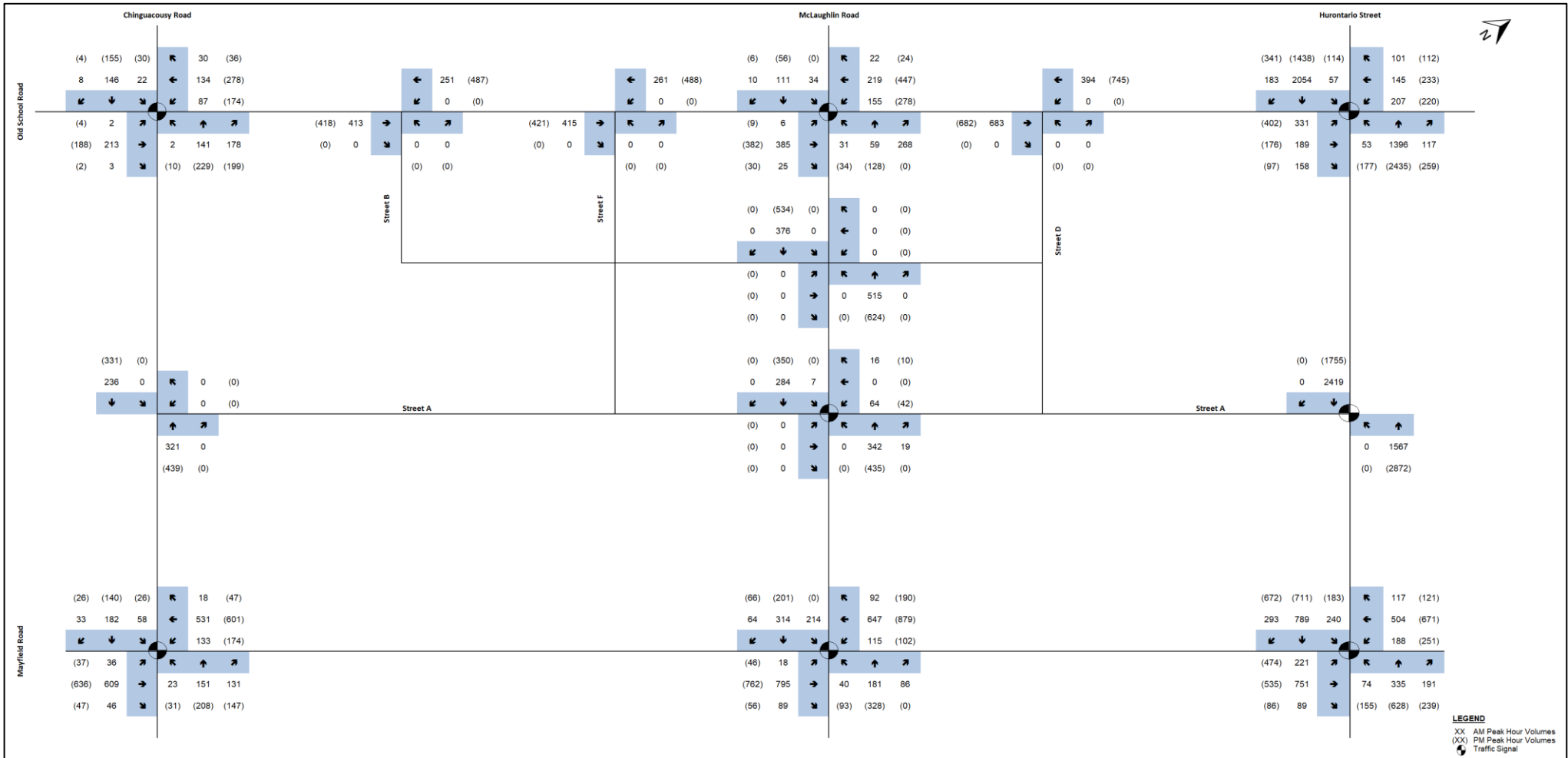


Figure 40 2026 Future Total Traffic Volumes – With GTA West Highway

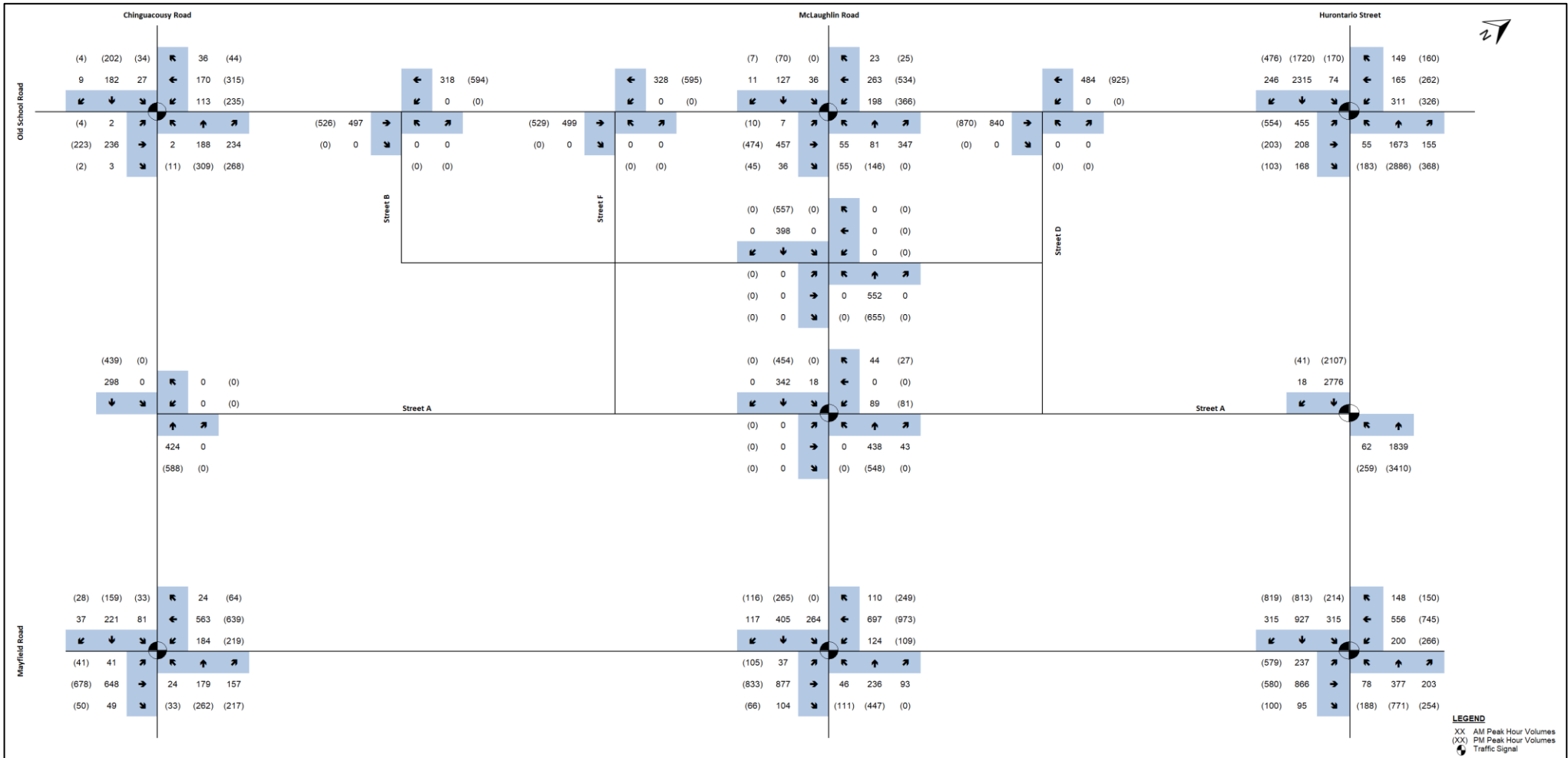


Figure 41 2029 Future Total Traffic Volumes – With GTA West Highway

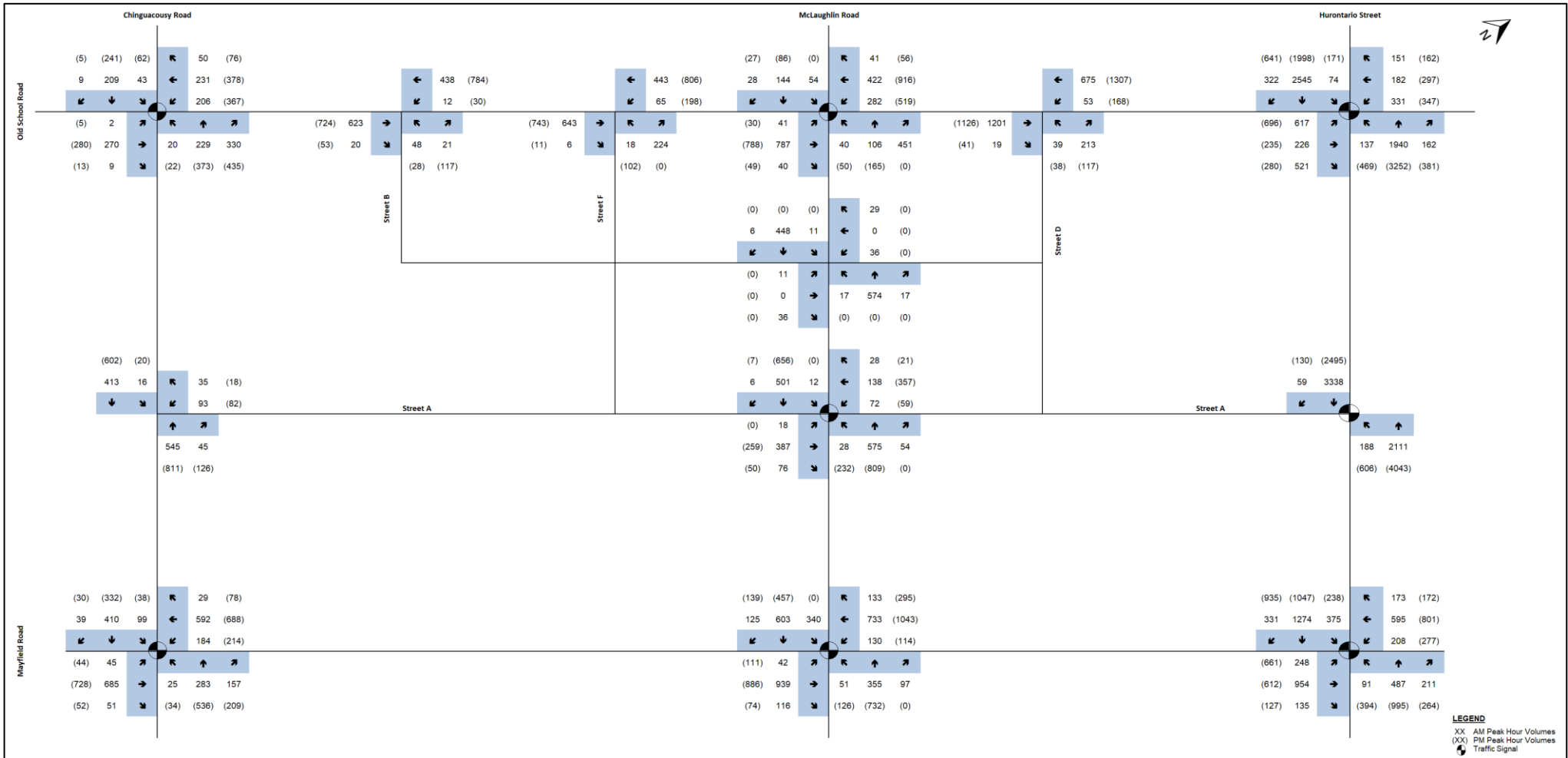


Figure 42 2031 Future Total Traffic Volumes – With GTA West Highway

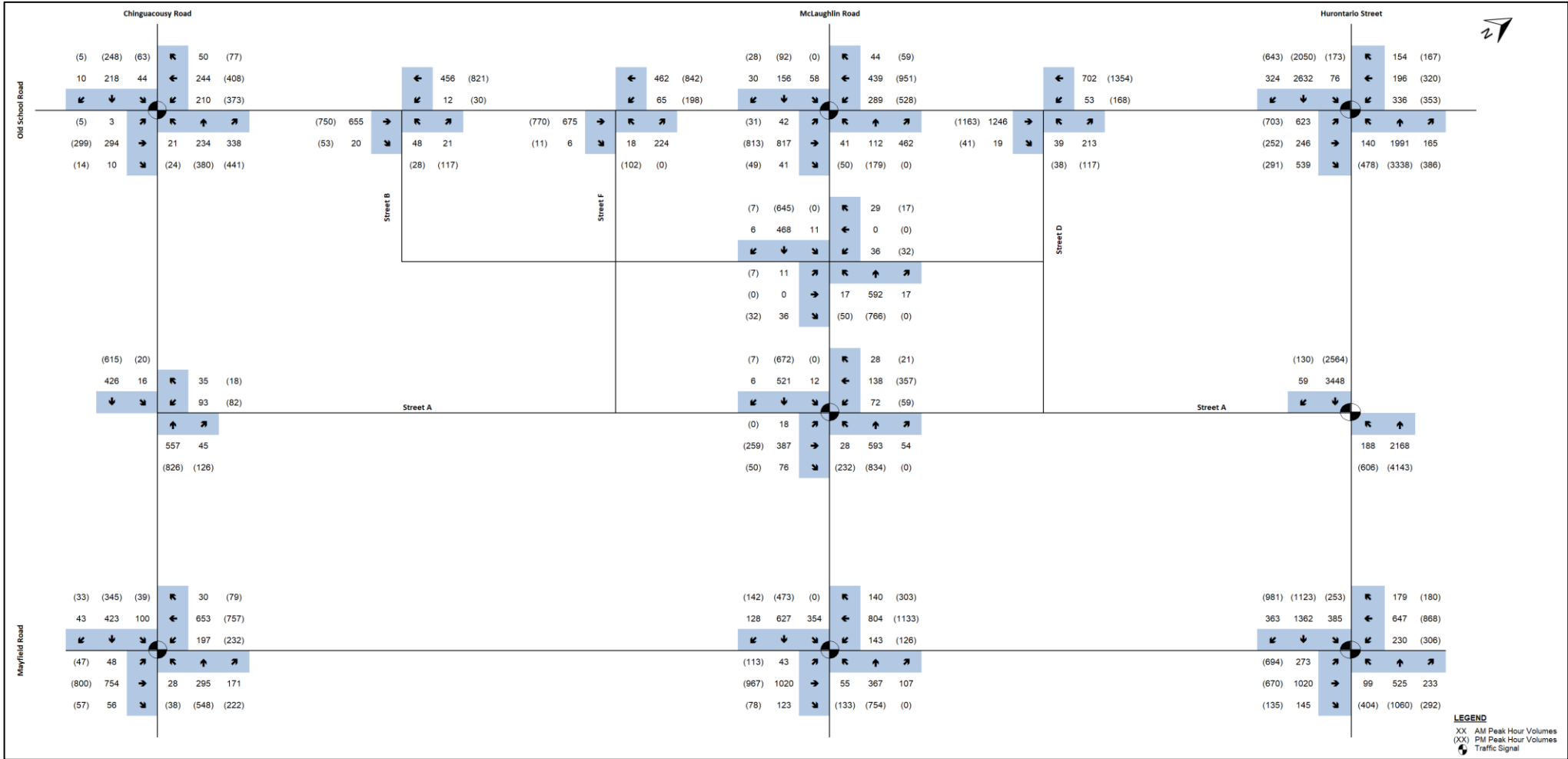


Figure 43 2036 Future Total Traffic Volumes – With GTA West Highway

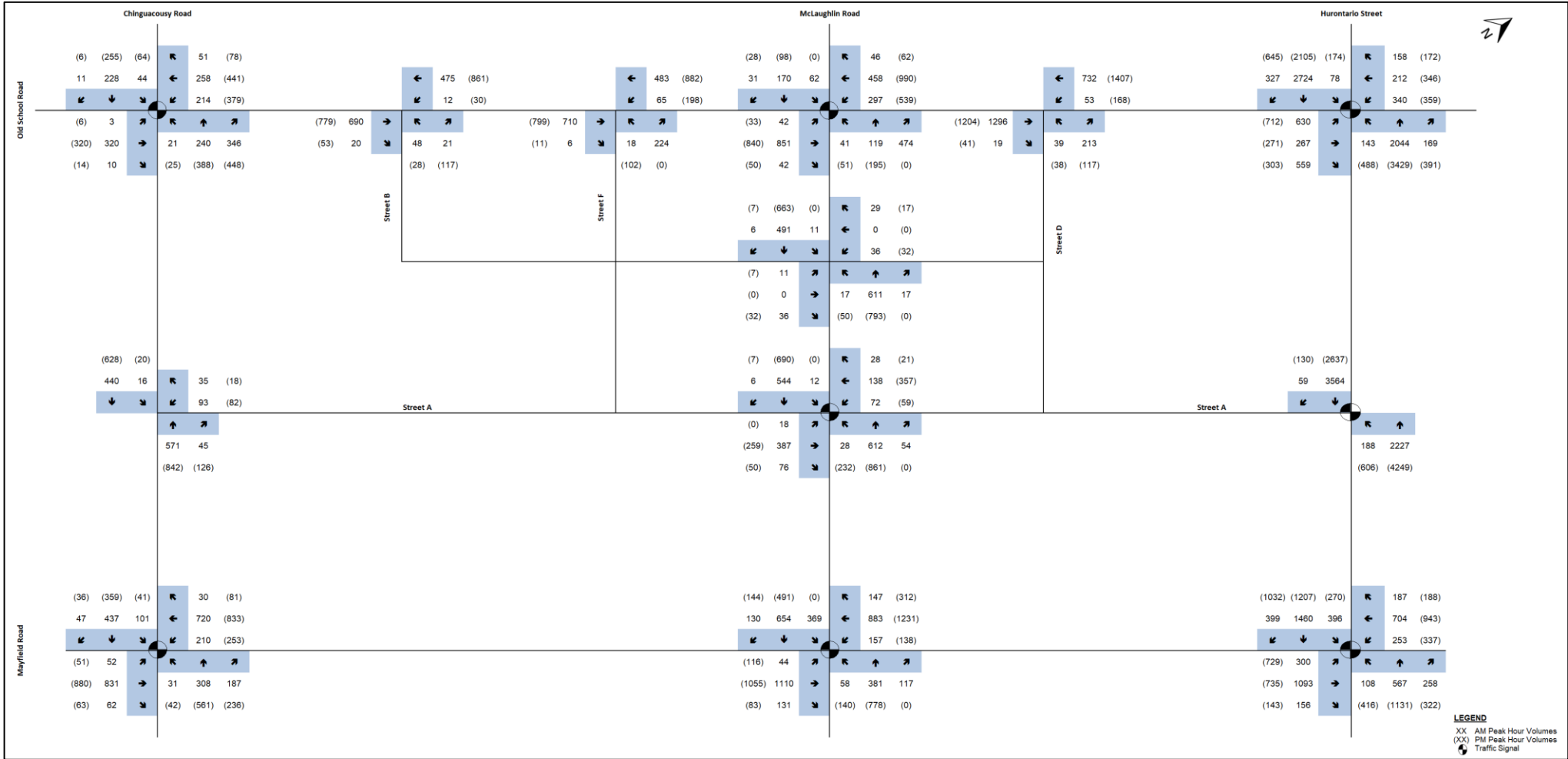


Figure 44 2041 Future Total Traffic Volumes – With GTA West Highway

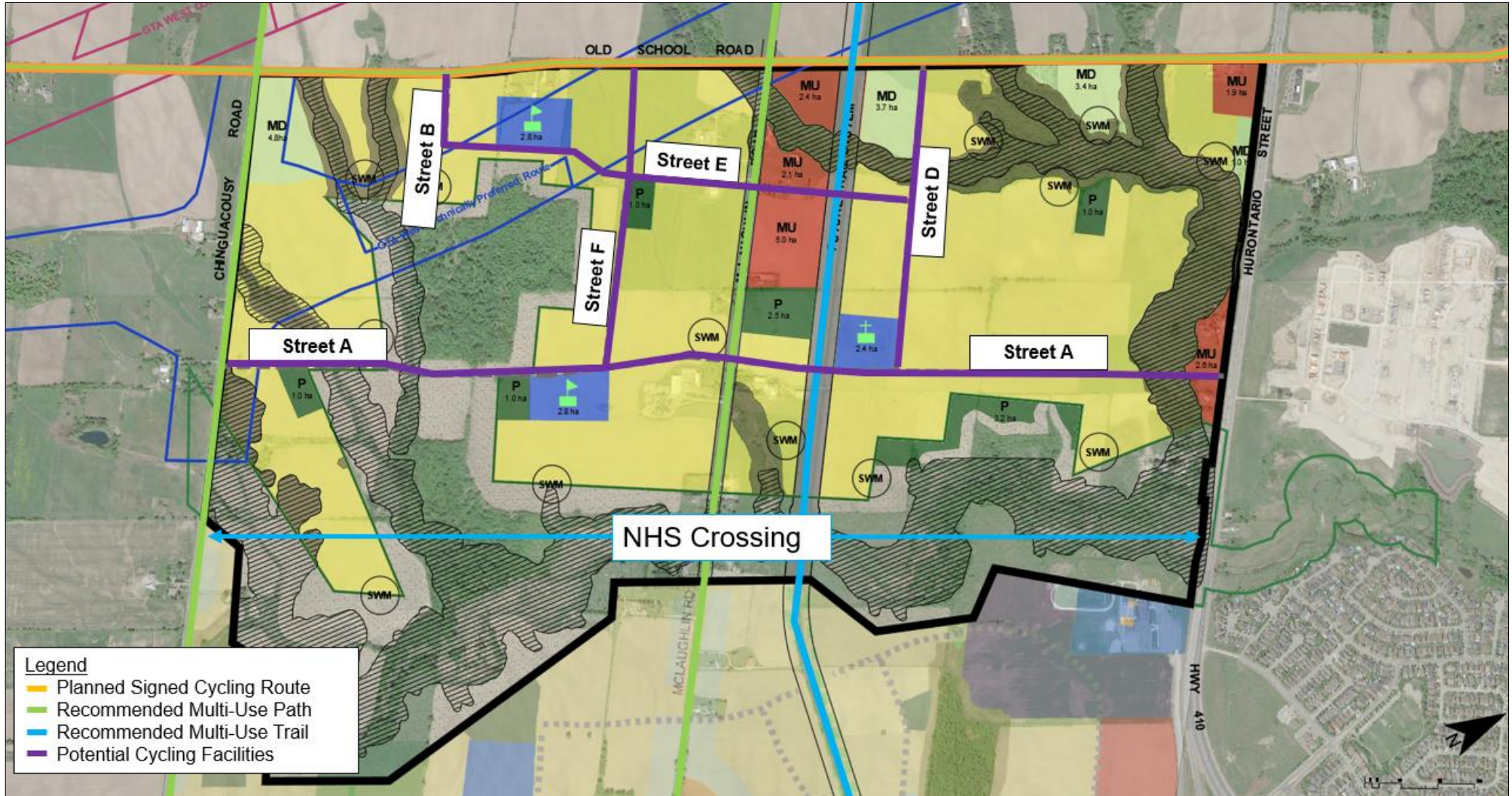


Figure 45 Active Transportation Plan

Appendix B

Response to Comments



Brookvalley Project Management Inc. - Mayfield West Phase 2 – Stage 3

Official Plan Amendment Application

File Number: POPA 2023-0006

Response to Town and Agency Comments

1st Re-submission

Last Updated: May 23, 2024

Town of Caledon – Regional Municipality of York Comments – TRCA – Other Agencies – Peer Review

#	Comment	Consultant	Response
<p>Town of Caledon - Transportation Engineering, Public Works, & Transportation Department Kavleen S. Younan, Transportation Engineer February 9, 2024</p>			
1.	<p>Town Transportation Staff are engaging with MTO staff in discussions on the proposed connection of Dougal Avenue to Hwy 10 at the Council's direction and the residents' request. Applicant to confirm the proposed roadway connections will not have negative impacts.</p> <p>a) Applicant to confirm that 'Street E' aligns with Dougal Avenue. The applicant should confirm the requirements to support this four-way intersection with the MTO. b) Applicant to confirm that 'Street H' meets MTO requirements such that the proposed Dougal Avenue connection to Highway 10 is not adversely impacted. c) Applicant to confirm the internal proposed intersections along Street E follow the MTO's requirements such that MTO approval for the future 4-way intersection with Highway 10 and Dougal Avenue is not adversely impacted.</p>	GHD	<p>As per the memorandum provided by the Town of Caledon's Transportation Engineering Public Works & Transportation Department, dated February 2024, Town Transportation Staff are engaging with MTO staff in discussions on the proposed connection of Dougal Avenue to Highway 10 at the Council's direction and the residents' request. Street A at Hurontario Street is proposed to line up with Dougal Avenue and as a result, GHD modeled the intersection of Street A at Hurontario as a single signalized intersection.</p> <p>The design of this road/intersection will be determined through the draft plan of the subdivision process, but initial analysis confirms the preliminary designs can meet MTO requirements.</p>
2.	<p>Applicant to identify a defined internal collector road transportation network to accommodate all modes of transportation. This includes internal traffic controls and an active transportation network (along collector roadways, policies only on local roadways at this stage).</p>	GHD	<p>The collector road network and traffic controls are identified in the Traffic Impact Study and on the schedules to the OPA.</p>
3.	<p>Applicant to provide a proposed Active Transportation Circulation Plan within the Transportation Study that includes the following items:</p> <p>a) Boundary Connections: Please develop a map that identifies all existing and planned pedestrian, cycling, trail, and community facilities (including current development applications) within the vicinity of the site (including along the boundary of the site) and demonstrate how the site will be connected to them through active transportation. b) Internal Circulation: The facilities roadway map should also include the proposed circulation for pedestrians, cyclists, and trails on the site, in accordance with the draft Active Transportation Master Plan:</p> <p>i. Cycling Facilities: The applicant should identify the location of all cycling facilities within road ROW's. Facility selection should be in accordance with the draft ATMP, MMTMP, and OTM Book 18. ii. Trails: The applicant should identify all trails. Facility locations should be in accordance with the network recommendations of the draft ATMP. iii. Pedestrian Walkways & Crossings: The applicant must identify all pedestrian walkways and proposed crossings. iv. Additional Items: Any additional proposed pedestrian, cycling, and trail facilities or amenities should be identified in the Pedestrian and Cyclist Circulation Plan.</p>	<p>GHD GHD GHD</p>	<p>The active transportation plan is provided in the Traffic Impact Study.</p>
<p>Technical Comments: Transportation Study</p>			
4.	<p>Section 1.1-For greater accuracy, the existing study horizon year and the full built-out horizon year should be updated to reflect the current date and proposed unit counts.</p>	GHD	<p>The horizon years have been updated.</p>

#	Comment	Consultant	Response
5.	<p>Section 3.4– At the time of the study completion, pre-Covid TMCs were preferred by the Town. However, considering the evolving traffic congestion concerns within this area and the many changes since the pre-Covid TMCs, the Town requests the applicant to collect new traffic data which will address the following concerns:</p> <ul style="list-style-type: none"> i. Connection of Queen Mary Drive to the boundary road network ii. The majority of the unaccounted-for development in Brampton (to be confirmed by the applicant in consultation with the City of Brampton) iii. The unconstructed units in Mayfield West 1 Stage 1 and 2 (approximately a quarter of the proposed development was unconstructed in 2018) 	GHD	Traffic turning movement counts were collected in February 2024, and baseline traffic volumes for 2024 are provided in the Traffic Impact Study.
6.	Section 4.2 - Please confirm the findings of the Chinguacousy Road EA impact the findings of this report. Specifically, please confirm when the signalization of Old School Road and Chinguacousy Road is warranted.	GHD	Confirmed.
7.	Section 4.4 - Background Developments	GHD	
8.	<ul style="list-style-type: none"> i. Confirm with the City of Brampton if any background developments should be included. 	GHD	GHD reviewed the City’s development application portal and did not identify any additional background developments to include from the City of Brampton.
9.	<ul style="list-style-type: none"> ii. Please confirm whether the GTA West Corridor project's impact on the projected volumes of the background developments for Mayfield West 2 Stages 1 and 2 was considered when establishing the background volumes. 	GHD	The background developments that provided site trips with and without the GTA West Corridor project were included in the TIS to establish future background volumes with and without the proposed highway.
10.	Clarify whether, based on the forecasted traffic volumes, the already proposed improvements on existing roadways (Chinguacousy Road and Mclaughlin Road) with the Mayfield West 2 Stages 1 and 2 collectors roads (i.e. Tim Manley Avenue, Tweedhill Avenue, etc.) accommodate the additional traffic anticipated from Stage 3?	GHD	The intersections of Chinguacousy Road and Mclaughlin Road with Tim Manley Avenue, Tweedhill Avenue were not included as study intersections and cannot confirm if the Stage 3 lands would impact the operation of the intersections.
11.	Section 5.1 – Please confirm whether the proposed school trips have been included in the application or revise the information if necessary.	GHD	The updated trip generation included school trips, however it is anticipated that most students will live within the subject lands and would result in most trips generated by the school being diverted trips from the residential component. As a result, GHD assumed that the school would generate 20% of the trips estimated by the ITE trip generation.
12.	<p>Section 5.2</p> <ul style="list-style-type: none"> i. Prior studies for Mayfield West Stage 2 proposed different trip distributions for commercial and residential trips. In contrast, this study seems to have used the same distribution model for all types of generators. It is suggested that the rationale behind this decision be discussed and justified. ii. Town Transportation Engineering Staff recommend basing trip distributions on Caledon TTS data. Applicant should review 2006 GTA west zones and make necessary revisions. 	GHD	<ul style="list-style-type: none"> i. The trip distribution was based on the TTS data without specifying the type of trip being completed (i.e. home, school, work, leisure) and thus provided an overall trip distribution for all uses on the subject lands. ii. GHD used zones adjacent to the subject site that were built at the time of the 2016 TTS data collection to establish a trip distribution for trips to and from an area near the subject site rather than the entire Town of Caledon.

#	Comment	Consultant	Response
13.	Section 6: Queuing reports appear to be missing for the unsignalized intersections in existing and future background conditions, as there are cases where the v/c ratio exceeds 1, and the operations are failing, yet no queue was reported. Applicant should review where the queues were stated to be 0 meters and revise as required.	GHD	Queuing reports were updated to review any queuing reported as 0 metres.
14.	<p>General:</p> <ul style="list-style-type: none"> i. Applicant to summarize Transportation Demand Management measures, initiatives, and Parking policies to achieve the Town’s future goals. ii. Applicant to reference Pedestrian and Cyclist Circulation plan. <p>Applicant to identify other transportation infrastructure improvements and missing links for all modes of transportation required above and beyond those identified in the Region and Town Transportation Master Plans and construction programs to connect the proposed development to the existing active transportation facilities.</p> <ul style="list-style-type: none"> iii. Applicant to confirm that the proposed collector roads are supportable by the relevant jurisdictions, including but not limited to corner clearance and anticipated sight distance. Corner clearances, as specified in TAC, are met for collector roadways within the Town's jurisdiction; for Roadways within the Regions and MTO Jurisdiction, please take note of the Peel Road Characterization study and the MTO Corridor Management Manual, respectively. Should justification be required, ideally, information would be included in the Transportation Study. 	GHD	Noted. TDM measures will be confirmed at the draft plan submission as will the detailed review of the collector roads once the road network has been further defined.
Advisory Comments: Transportation Study			
15.	Section 2.1 - Applicant should consult with the MTO regarding, but not limited to, the interchange with Highway 10 and Spine Road.	GHD	Noted. MTO was circulated the Terms of Reference.
16.	Section 3.4 – Traffic Volumes were not balanced; it would be preferred to discuss this in Methodology.	GHD	Traffic volumes at each intersection were based on their respective peak hours, providing traffic volumes for the “worst-case” scenarios. Volumes were not balanced in order to maintain the peak hour volumes.
17.	Section 3.2, Section 3.3 and Figure 3 - These sections differ from existing conditions. Should the report require revisions for other reasons, these sections should be updated to reflect current conditions.	GHD	Noted.
18.	Section 3.3 - Please be advised that a Go Transit route runs north-south on Highway 10.	GHD	The GO Transit bus route was added.
19.	Section 4.3 Separated figures for background growth volumes in the appendix would assist the review.	GHD	Background growth volumes have been appended.
20.	Section 5.2 - It would be preferred for the applicant to discuss the logic and impacts of the trip assignment with the GTA west corridor. It is noted that approximately the same traffic was assigned to Chinguacousy Road with the GTA west corridor despite the proposed interchange.	GHD	The trip distribution assumptions with the GTA West were based on the applicant’s preferred location of the GTA West Highway interchange at Hurontario Street.
21.	<p>Appendix</p> <ul style="list-style-type: none"> i. Synchro taper lengths appear to be 2.5 meters. ii. Please note that the signal timings in the Mayfield West 2 Stage 2 report may differ from the current signal timings, particularly regarding the All Red and Yellow Times, which may not be relevant based on the posted speed limit. It is recommended that the applicant confirms the signal timings with the Region of Peel and MTO for intersections within their respective jurisdictions. 	GHD	<ul style="list-style-type: none"> i. Taper lengths were updated to the appropriate lengths ii. The signal timings were based on the field observations conducted at each study intersection based on existing conditions.
22.	Draft Official Plan Amendment: Town Transportation Staff recommend adding site-specific policies with the below considerations		

#	Comment	Consultant	Response
23.	<p>a) Section 7.14.5.1.4; consideration should be given to add prohibitions to restrict residential accesses onto arterial and collector roadways to improve safety.</p> <p>b) Section 7.14.4.3.9</p> <p>i. The applicant should consider the transition from railway to trail and modify this section. It is imperative that the project aligns with the community's current needs and contributes to the area's overall development.</p> <p>ii. Was any consideration given to how the proposed development would impact future crossing treatment requirements of the proposed trailway?</p> <p>c) Section 7.14.15.4.2; while Town Transportation will work to support transit, Staff may request the applicant provide a high-level route(S).</p>	GHD	C) if staff requested a high level route for transit, GHD can provide at the Draft Plan submission stage.

#	Comment	Consultant	Response
<p>Peel Region – Development Services Patrick Amaral, Principal Planner February 13, 2024</p>			
<p>Planning and Development</p>			
<p>Transportation Planning</p>			
24.	Schedule F-1 shows that the Conceptual GTA West (GTAW) Corridor and Transitway Corridor bisects the subject lands. Please note that the provided land use plan incorrectly shows the location of the GTAW corridor to the northwest of the subject lands, which should be rectified.	MGP/GHD	The final alignment of the Highway has not been determined. As per submissions and ongoing discussions with the Highway 413 project team, a review of the final alignment and our comments dating back 6 years is being undertaken, where we have recommended the highway be in the SR-2 alignment to the north. This is reflected on the proposed OPA schedules. Nevertheless, we have included a policy, and at the request of staff an alternative land use plan, to allow development to proceed based on the current alignment being considered by the Highway 413 team.
25.	<ul style="list-style-type: none"> Portions of the subject lands as shown on the Conceptual Development Plan are within the Focused Analysis Area (FAA 2020) land protection boundary for the Highway 413 project. Lands within the FAA are being protected as they may be directly impacted by the Highway 413 transportation corridor, ancillary uses, or if refinements are made to the route during the preliminary design stage. 	MGP/GHD	Noted.
26.	<ul style="list-style-type: none"> The application will need to be circulated to the Ministry of Transportation and Ministry of Energy for review and input. 	MGP/GHD	Noted.
27.	<ul style="list-style-type: none"> Consistent wording and policies set out as per 5.6.20.14.21.1 of the Region Official Plan regarding the GTA West Preliminary Route Planning Study Area will need to be included in the Secondary Plan policies. 	MGP/GHD	Noted.
28.	The Region's 2019 Long Range Transportation Plan does not anticipate the road widenings identified in the Traffic Impact Study (authored by GHD) dated July 2022, it only forecasts widening Mayfield Road between Chinguacousy Rd and Hurontario St from 2 lanes to 4 lanes. Furthermore, an ongoing Transportation Master Plan is being developed to contribute insights for potential regional road enhancements in Caledon as part of the growth scenario analysis.	GHD	Noted. GHD reviewed all planned, proposed, and studied roadway improvements to provided consistency in what roadway improvements would be required to accommodate the subject lands.

Appendix C

Traffic Data



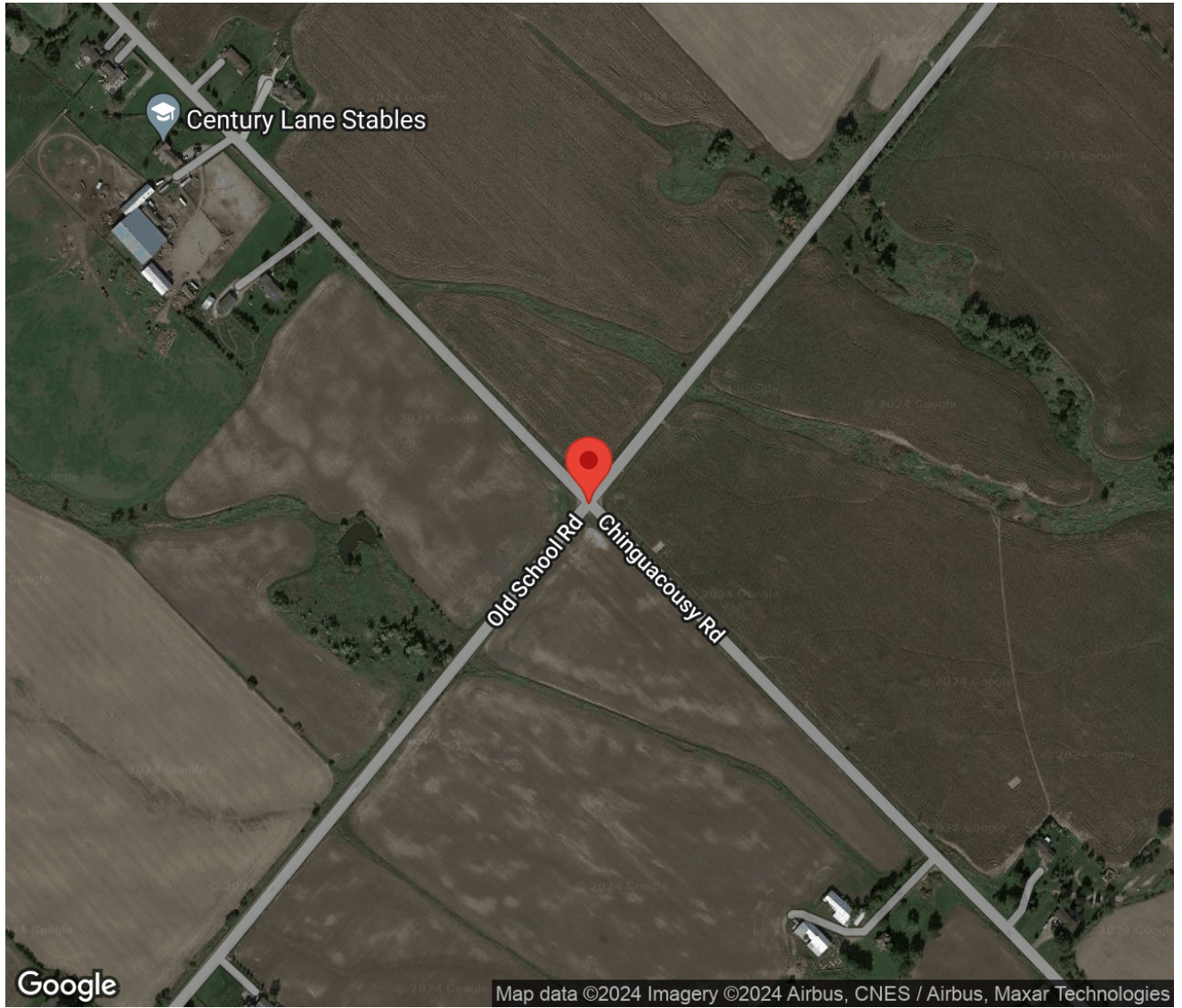
Project #24-021 - GHD

Intersection Count Report

Intersection: Old School Rd & Chinguacousy Rd
Municipality: Caledon
Count Date: Wednesday, Jan 17, 2024
Site Code: 2402100001
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Old School Rd & Chinguacousy Rd
Site Code: 2402100001
Municipality: Caledon
Count Date: Jan 17, 2024





Traffic Count Summary

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

Chinguacousy Rd - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	9	59	5	0	73	0	0	35	49	0	84	0	157
08:00 - 09:00	4	52	5	0	61	0	4	54	44	0	102	0	163
BREAK													
16:00 - 17:00	8	52	4	0	64	0	10	60	53	0	123	0	187
17:00 - 18:00	3	50	3	0	56	0	6	41	41	0	88	0	144
GRAND TOTAL	24	213	17	0	254	0	20	190	187	0	397	0	651



Traffic Count Summary

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

Old School Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	28	93	4	0	125	0	2	189	7	0	198	0	323
08:00 - 09:00	32	118	2	0	152	0	1	155	3	0	159	0	311
BREAK													
16:00 - 17:00	46	250	8	0	304	0	4	158	2	0	164	0	468
17:00 - 18:00	50	222	6	0	278	0	5	157	0	0	162	0	440
GRAND TOTAL	156	683	20	0	859	0	12	659	12	0	683	0	1542



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	2	5	0	0	7	0	0	1	0	1	0	0	0	0	0	0
07:15	3	13	1	0	17	1	0	0	0	1	0	0	0	0	0	0
07:30	0	18	1	0	19	0	0	0	0	0	0	0	0	0	0	0
07:45	3	20	1	0	24	0	3	1	0	4	0	0	0	0	0	0
08:00	1	14	2	0	17	0	1	0	0	1	0	0	0	0	0	0
08:15	2	19	2	0	23	0	1	1	0	2	0	0	0	0	0	0
08:30	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
08:45	1	7	0	0	8	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	12	106	7	0	125	1	5	3	0	9	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	1	11	1	0	13	2	1	1	0	4	0	0	0	0	0	0
16:15	2	15	2	0	19	0	0	0	0	0	0	0	0	0	0	0
16:30	1	15	0	0	16	0	0	0	0	0	0	0	0	0	0	0
16:45	2	10	0	0	12	0	0	0	0	0	0	0	0	0	0	0
17:00	1	15	1	0	17	0	0	0	0	0	0	0	0	0	0	0
17:15	0	12	1	0	13	0	0	0	0	0	0	0	0	0	0	0
17:30	2	16	0	0	18	0	0	0	0	0	0	0	0	0	0	0
17:45	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	9	101	6	0	116	2	1	1	0	4	0	0	0	0	0	0
GRAND TOTAL	21	207	13	0	241	3	6	4	0	13	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	9	8	0	17	0	1	0	0	1	0	0	0	0	0	0
07:15	0	8	11	0	19	0	1	0	0	1	0	0	0	0	0	0
07:30	0	3	14	0	17	0	1	0	0	1	0	0	0	0	0	0
07:45	0	12	16	0	28	0	0	0	0	0	0	0	0	0	0	0
08:00	2	11	13	0	26	0	1	0	0	1	0	0	0	0	0	0
08:15	0	14	16	0	30	0	0	2	0	2	0	0	0	0	0	0
08:30	0	14	7	0	21	0	0	1	0	1	0	0	0	0	0	0
08:45	2	14	4	0	20	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	4	85	89	0	178	0	4	4	0	8	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	1	17	10	0	28	0	1	0	0	1	0	0	0	0	0	0
16:15	3	9	16	0	28	0	2	1	0	3	0	0	0	0	0	0
16:30	4	16	18	0	38	0	1	0	0	1	0	0	0	0	0	0
16:45	2	14	8	0	24	0	0	0	0	0	0	0	0	0	0	0
17:00	3	11	10	0	24	0	0	0	0	0	0	0	0	0	0	0
17:15	1	8	6	0	15	0	0	0	0	0	0	0	0	0	0	0
17:30	1	17	11	0	29	1	0	0	0	1	0	0	0	0	0	0
17:45	0	5	14	0	19	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	15	97	93	0	205	1	4	1	0	6	0	0	0	0	0	0
GRAND TOTAL	19	182	182	0	383	1	8	5	0	14	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	2	14	0	0	16	1	1	0	0	2	0	0	0	0	0	0
07:15	9	23	0	0	32	0	2	0	0	2	0	0	0	0	0	0
07:30	6	23	1	0	30	0	2	1	0	3	0	0	0	0	0	0
07:45	10	28	2	0	40	0	0	0	0	0	0	0	0	0	0	0
08:00	11	22	0	0	33	0	0	1	0	1	0	0	0	0	0	0
08:15	4	36	0	0	40	1	0	0	0	1	0	0	0	0	0	0
08:30	8	33	0	0	41	1	0	1	0	2	0	0	0	0	0	0
08:45	7	26	0	0	33	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	57	205	3	0	265	3	6	3	0	12	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	11	64	1	0	76	0	1	0	0	1	0	0	0	0	0	0
16:15	13	67	1	0	81	0	1	0	0	1	0	0	0	0	0	0
16:30	11	50	0	0	61	0	1	1	0	2	0	0	0	0	0	0
16:45	11	66	5	0	82	0	0	0	0	0	0	0	0	0	0	0
17:00	6	60	3	0	69	1	0	0	0	1	0	0	0	0	0	0
17:15	17	65	1	0	83	0	0	0	0	0	0	0	0	0	0	0
17:30	13	44	1	0	58	0	0	0	0	0	0	0	0	0	0	0
17:45	13	52	0	0	65	0	1	1	0	2	0	0	0	0	0	0
SUBTOTAL	95	468	12	0	575	1	4	2	0	7	0	0	0	0	0	0
GRAND TOTAL	152	673	15	0	840	4	10	5	0	19	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	31	1	0	32	0	2	1	0	3	0	0	0	0	0	0
07:15	0	47	2	0	49	0	2	1	0	3	0	0	0	0	0	0
07:30	2	60	0	0	62	0	0	0	0	0	0	0	0	0	0	0
07:45	0	47	2	0	49	0	0	0	0	0	0	0	0	0	0	0
08:00	0	49	1	0	50	0	0	0	0	0	0	0	0	0	0	0
08:15	0	41	0	0	41	0	1	0	0	1	0	0	0	0	0	0
08:30	0	39	1	0	40	0	1	0	0	1	0	0	0	0	0	0
08:45	1	23	1	0	25	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	3	337	8	0	348	0	7	2	0	9	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	1	43	1	0	45	0	2	0	0	2	0	0	0	0	0	0
16:15	1	40	0	0	41	0	1	0	0	1	0	0	0	0	0	0
16:30	0	30	1	0	31	0	1	0	0	1	0	0	0	0	0	0
16:45	2	40	0	0	42	0	1	0	0	1	0	0	0	0	0	0
17:00	1	39	0	0	40	0	1	0	0	1	0	0	0	0	0	0
17:15	0	35	0	0	35	0	0	0	0	0	0	0	0	0	0	0
17:30	2	47	0	0	49	0	2	0	0	2	0	0	0	0	0	0
17:45	2	31	0	0	33	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	9	305	2	0	316	0	10	0	0	10	0	0	0	0	0	0
GRAND TOTAL	12	642	10	0	664	0	17	2	0	19	0	0	0	0	0	0

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Old School Rd & Chinguacousy Rd
Site Code: 2402100001
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Old School Rd runs E/W

North Approach

	Out	In	Total
	83	45	128
	7	4	11
	0	0	0
Totals	90	49	139

Chinguacousy Rd

	0	0	0	0
	2	5	0	0
	6	71	6	0
Totals	8	76	6	0

East Approach

	Out	In	Total
	143	262	405
	5	3	8
	0	0	0
Totals	148	265	413

Old School Rd

				Totals
	0	0	0	0
	0	0	2	2
	0	1	197	198
	0	0	3	3

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Old School Rd

Totals			
	0	0	0
	5	3	2
	111	109	2
	32	31	1

West Approach

	Out	In	Total
	202	117	319
	1	4	5
	0	0	0
Totals	203	121	324

Totals				
	2	40	59	0
	0	2	2	0
	0	0	0	0

Chinguacousy Rd

South Approach

	Out	In	Total
	101	105	206
	4	6	10
	0	0	0
Totals	105	111	216

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Count Date: Jan 17, 2024
 Period: 07:00 - 09:00

Peak Hour Data (07:30 - 08:30)

Start Time	North Approach Chinguacousy Rd						South Approach Chinguacousy Rd						East Approach Old School Rd						West Approach Old School Rd						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:30	0	18	1	0	0	19	0	4	14	0	0	18	6	25	2	0	0	33	2	60	0	0	0	62	132
07:45	3	23	2	0	0	28	0	12	16	0	0	28	10	28	2	0	0	40	0	47	2	0	0	49	145
08:00	1	15	2	0	0	18	2	12	13	0	0	27	11	22	1	0	0	34	0	49	1	0	0	50	129
08:15	2	20	3	0	0	25	0	14	18	0	0	32	5	36	0	0	0	41	0	42	0	0	0	42	140
Grand Total	6	76	8	0	0	90	2	42	61	0	0	105	32	111	5	0	0	148	2	198	3	0	0	203	546
Approach %	6.7	84.4	8.9	0	-	-	1.9	40	58.1	0	-	-	21.6	75	3.4	0	-	-	1	97.5	1.5	0	-	-	
Totals %	1.1	13.9	1.5	0	16.5	19.2	0.4	7.7	11.2	0	19.2	27.1	5.9	20.3	0.9	0	27.1	37.2	0.4	36.3	0.5	0	37.2		
PHF	0.5	0.83	0.67	0	0.8	0.82	0.25	0.75	0.85	0	0.82	0.73	0.77	0.63	0	0.9	0.25	0.83	0.38	0	0.82	0.94			
Cars	6	71	6	0	83	101	2	40	59	0	101	31	109	3	0	143	2	197	3	0	202	529			
% Cars	100	93.4	75	0	92.2	96.2	100	95.2	96.7	0	96.2	96.9	98.2	60	0	96.6	100	99.5	100	0	99.5	96.9			
Trucks	0	5	2	0	7	4	0	2	2	0	4	1	2	2	0	5	0	1	0	0	1	17			
% Trucks	0	6.6	25	0	7.8	3.8	0	4.8	3.3	0	3.8	3.1	1.8	40	0	3.4	0	0.5	0	0	0.5	3.1			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Peds					0	-					0	-					0	-					0	-	
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:00:00
To: 17:00:00

Intersection: Old School Rd & Chinguacousy Rd
Site Code: 2402100001
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Old School Rd runs E/W

North Approach

	Out	In	Total
	60	67	127
	4	5	9
	0	0	0
Totals	64	72	136

Chinguacousy Rd

	0	0	0	0
	1	1	2	0
	3	51	6	0
Totals	4	52	8	0

East Approach

	Out	In	Total
	300	211	511
	4	8	12
	0	0	0
Totals	304	219	523

Old School Rd

				Totals
	0	0	0	0
	0	0	4	4
	0	5	153	158
	0	0	2	2

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Old School Rd

Totals			
	0	0	0
	8	7	1
	250	247	3
	46	46	0

West Approach

	Out	In	Total
	159	260	419
	5	4	9
	0	0	0
Totals	164	264	428

Totals				
	10	56	52	0
	0	4	1	0
	0	0	0	0

Chinguacousy Rd

South Approach

	Out	In	Total
	118	99	217
	5	1	6
	0	0	0
Totals	123	100	223

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Old School Rd & Chinguacousy Rd
 Site Code: 2402100001
 Count Date: Jan 17, 2024
 Period: 16:00 - 18:00

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

Start Time	North Approach Chinguacousy Rd						South Approach Chinguacousy Rd						East Approach Old School Rd						West Approach Old School Rd						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
16:00	3	12	2	0	0	17	1	18	10	0	0	29	11	65	1	0	0	77	1	45	1	0	0	47	170
16:15	2	15	2	0	0	19	3	11	17	0	0	31	13	68	1	0	0	82	1	41	0	0	0	42	174
16:30	1	15	0	0	0	16	4	17	18	0	0	39	11	51	1	0	0	63	0	31	1	0	0	32	150
16:45	2	10	0	0	0	12	2	14	8	0	0	24	11	66	5	0	0	82	2	41	0	0	0	43	161
Grand Total	8	52	4	0	0	64	10	60	53	0	0	123	46	250	8	0	0	304	4	158	2	0	0	164	655
Approach %	12.5	81.3	6.3	0	-	-	8.1	48.8	43.1	0	-	-	15.1	82.2	2.6	0	-	-	2.4	96.3	1.2	0	-	-	-
Totals %	1.2	7.9	0.6	0	9.8	18.8	1.5	9.2	8.1	0	18.8	7	38.2	1.2	0	46.4	0.6	24.1	0.3	0	25	-	-	-	-
PHF	0.67	0.87	0.5	0	0.84	0.79	0.63	0.83	0.74	0	0.79	0.88	0.92	0.4	0	0.93	0.5	0.88	0.5	0	0.87	0.94	0.87	0.94	
Cars	6	51	3	0	60	118	10	56	52	0	118	46	247	7	0	300	4	153	2	0	159	637	637		
% Cars	75	98.1	75	0	93.8	95.9	100	93.3	98.1	0	95.9	100	98.8	87.5	0	98.7	100	96.8	100	0	97	97.3	97.3		
Trucks	2	1	1	0	4	5	0	4	1	0	5	0	3	1	0	4	0	5	0	0	5	18	18		
% Trucks	25	1.9	25	0	6.3	4.1	0	6.7	1.9	0	4.1	0	1.2	12.5	0	1.3	0	3.2	0	0	3	2.7	2.7		
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	0



Project #24-021 - GHD

Intersection Count Report

Intersection: Old School Rd & McLaughlin Rd
Municipality: Caledon
Count Date: Wednesday, Jan 17, 2024
Site Code: 2402100002
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Old School Rd & McLaughlin Rd
Site Code: 2402100002
Municipality: Caledon
Count Date: Jan 17, 2024





Traffic Count Summary

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

McLaughlin Rd - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	39	95	9	0	143	0	3	45	68	0	116	0	259
08:00 - 09:00	20	65	9	0	94	0	2	56	78	0	136	0	230
BREAK													
16:00 - 17:00	19	51	6	0	76	0	5	120	82	0	207	0	283
17:00 - 18:00	30	54	6	0	90	0	3	80	73	0	156	0	246
GRAND TOTAL	108	265	30	0	403	0	13	301	301	0	615	0	1018



Traffic Count Summary

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

Old School Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	46	117	12	1	176	0	6	242	4	0	252	0	428
08:00 - 09:00	53	147	29	0	229	0	10	185	8	1	204	0	433
BREAK													
16:00 - 17:00	79	294	23	0	396	0	9	208	5	0	222	0	618
17:00 - 18:00	89	266	10	0	365	0	8	187	4	0	199	0	564
GRAND TOTAL	267	824	74	1	1166	0	33	822	21	1	877	0	2043



Traffic Count Data

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	9	15	0	0	24	1	1	1	0	3	0	0	0	0	0	0
07:15	7	14	2	0	23	1	1	0	0	2	0	0	0	0	0	0
07:30	9	27	1	0	37	0	0	0	0	0	0	0	0	0	0	0
07:45	11	37	5	0	53	1	0	0	0	1	0	0	0	0	0	0
08:00	5	22	2	0	29	0	0	0	0	0	0	0	0	0	0	0
08:15	7	19	1	0	27	0	0	1	0	1	0	0	0	0	0	0
08:30	4	12	3	0	19	0	0	0	0	0	0	0	0	0	0	0
08:45	4	12	1	0	17	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	56	158	15	0	229	3	2	3	0	8	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	8	19	1	0	28	0	0	0	0	0	0	0	0	0	0	0
16:15	0	7	2	0	9	0	1	0	0	1	0	0	0	0	0	0
16:30	6	9	0	0	15	0	1	0	0	1	0	0	0	0	0	0
16:45	5	13	3	0	21	0	1	0	0	1	0	0	0	0	0	0
17:00	5	14	0	0	19	0	0	0	0	0	0	0	0	0	0	0
17:15	7	11	1	0	19	0	0	0	0	0	0	0	0	0	0	0
17:30	11	20	2	0	33	0	0	0	0	0	0	0	0	0	0	0
17:45	7	9	3	0	19	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	49	102	12	0	163	0	3	0	0	3	0	0	0	0	0	0
GRAND TOTAL	105	260	27	0	392	3	5	3	0	11	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	1	12	13	0	26	0	0	1	0	1	0	0	0	0	0	0
07:15	0	7	11	0	18	0	1	2	0	3	0	0	0	0	0	0
07:30	2	11	17	0	30	0	0	1	0	1	0	0	0	0	0	0
07:45	0	14	23	0	37	0	0	0	0	0	0	0	0	0	0	0
08:00	0	13	22	0	35	0	1	0	0	1	0	0	0	0	0	0
08:15	0	14	26	0	40	0	0	0	0	0	0	0	0	0	0	0
08:30	0	15	11	0	26	0	0	1	0	1	0	0	0	0	0	0
08:45	2	13	16	0	31	0	0	2	0	2	0	0	0	0	0	0
SUBTOTAL	5	99	139	0	243	0	2	7	0	9	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	1	28	13	0	42	0	1	3	0	4	0	0	0	0	0	0
16:15	1	24	22	0	47	1	0	0	0	1	0	0	0	0	0	0
16:30	1	30	16	0	47	0	0	1	0	1	0	0	0	0	0	0
16:45	1	36	27	0	64	0	1	0	0	1	0	0	0	0	0	0
17:00	2	29	17	0	48	0	0	2	0	2	0	0	0	0	0	0
17:15	0	21	25	0	46	0	0	1	0	1	0	0	0	0	0	0
17:30	1	20	12	0	33	0	0	0	0	0	0	0	0	0	0	0
17:45	0	10	15	0	25	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	7	198	147	0	352	1	2	8	0	11	0	0	0	0	0	0
GRAND TOTAL	12	297	286	0	595	1	4	15	0	20	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	5	17	1	0	23	0	2	0	0	2	0	0	0	0	0	0
07:15	12	29	4	0	45	0	1	0	0	1	0	0	0	0	0	0
07:30	14	32	4	1	51	1	3	0	0	4	0	0	0	0	0	0
07:45	14	33	3	0	50	0	0	0	0	0	0	0	0	0	0	0
08:00	18	35	6	0	59	0	1	2	0	3	0	0	0	0	0	0
08:15	13	40	6	0	59	0	1	0	0	1	0	0	0	0	0	0
08:30	13	38	8	0	59	1	1	0	0	2	0	0	0	0	0	0
08:45	7	30	7	0	44	1	1	0	0	2	0	0	0	0	0	0
SUBTOTAL	96	254	39	1	390	3	10	2	0	15	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	1	42	0	0	43	0	1	0	0	1	0	0	0	0	0	0
07:15	2	54	2	0	58	1	2	1	0	4	0	0	0	0	0	0
07:30	0	76	1	0	77	0	0	0	0	0	0	0	0	0	0	0
07:45	2	67	0	0	69	0	0	0	0	0	0	0	0	0	0	0
08:00	2	58	3	1	64	0	0	0	0	0	0	0	0	0	0	0
08:15	1	51	2	0	54	0	2	1	0	3	0	0	0	0	0	0
08:30	2	49	0	0	51	0	1	1	0	2	0	0	0	0	0	0
08:45	5	22	0	0	27	0	2	1	0	3	0	0	0	0	0	0
SUBTOTAL	15	419	8	1	443	1	8	4	0	13	0	0	0	0	0	0

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Old School Rd & McLaughlin Rd
Site Code: 2402100002
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Old School Rd runs E/W

North Approach

	Out	In	Total
	146	76	222
	2	3	5
	0	0	0
Totals	148	79	227

McLaughlin Rd

	0	0	0	0
	1	0	1	0
	9	105	32	0
Totals	10	105	33	0

East Approach

	Out	In	Total
	219	373	592
	8	4	12
	0	0	0
Totals	227	377	604

Old School Rd

			Totals	
0	0	1	1	
0	0	5	5	
0	2	252	254	
0	1	6	7	

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Old School Rd

Totals			
1	1	0	0
21	19	2	0
145	140	5	0
60	59	1	0

West Approach

	Out	In	Total
	264	152	416
	3	6	9
	0	0	0
Totals	267	158	425

Totals				
2	53	89	0	
	2	52	88	0
	0	1	1	0
	0	0	0	0

McLaughlin Rd

South Approach

	Out	In	Total
	142	170	312
	2	2	4
	0	0	0
Totals	144	172	316

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Count Date: Jan 17, 2024
 Period: 07:00 - 09:00

Peak Hour Data (07:30 - 08:30)

Start Time	North Approach McLaughlin Rd						South Approach McLaughlin Rd						East Approach Old School Rd						West Approach Old School Rd						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:30	9	27	1	0	0	37	2	11	18	0	0	31	15	35	4	1	0	55	0	76	1	0	0	77	200
07:45	12	37	5	0	0	54	0	14	23	0	0	37	14	33	3	0	0	50	2	67	0	0	0	69	210
08:00	5	22	2	0	0	29	0	14	22	0	0	36	18	36	8	0	0	62	2	58	3	1	0	64	191
08:15	7	19	2	0	0	28	0	14	26	0	0	40	13	41	6	0	0	60	1	53	3	0	0	57	185
Grand Total	33	105	10	0	0	148	2	53	89	0	0	144	60	145	21	1	0	227	5	254	7	1	0	267	786
Approach %	22.3	70.9	6.8	0	-	-	1.4	36.8	61.8	0	-	-	26.4	63.9	9.3	0.4	-	-	1.9	95.1	2.6	0.4	-	-	
Totals %	4.2	13.4	1.3	0	18.8		0.3	6.7	11.3	0	18.3		7.6	18.4	2.7	0.1	28.9		0.6	32.3	0.9	0.1		34	
PHF	0.69	0.71	0.5	0	0.69		0.25	0.95	0.86	0	0.9		0.83	0.88	0.66	0.25	0.92		0.63	0.84	0.58	0.25		0.87	0.94
Cars	32	105	9	0		146	2	52	88	0	142	59	140	19	1	219	5	252	6	1		264	771		
% Cars	97	100	90	0		98.6	100	98.1	98.9	0	98.6	98.3	96.6	90.5	100	96.5	100	99.2	85.7	100		98.9	98.1		
Trucks	1	0	1	0		2	0	1	1	0	2	1	5	2	0	8	0	2	1	0		3	15		
% Trucks	3	0	10	0		1.4	0	1.9	1.1	0	1.4	1.7	3.4	9.5	0	3.5	0	0.8	14.3	0		1.1	1.9		
Bicycles	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0		
% Bicycles	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0		
Peds					0	-				0	-					0	-					0	-	0	
% Peds					0	-				0	-					0	-					0	-	0	

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:00:00
To: 17:00:00

Intersection: Old School Rd & McLaughlin Rd
Site Code: 2402100002
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Old School Rd runs E/W

North Approach

	Out	In	Total
	73	149	222
	3	3	6
	0	0	0
Totals	76	152	228

McLaughlin Rd

	0	0	0	0
	0	3	0	0
	6	48	19	0
Totals	6	51	19	0

East Approach

	Out	In	Total
	390	296	686
	6	13	19
	0	0	0
Totals	396	309	705

Old School Rd

			Totals	
0	0	0	0	
0	0	9	9	
0	9	199	208	
0	1	4	5	

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Old School Rd

Totals			
0	0	0	0
23	22	1	0
294	292	2	0
79	76	3	0

West Approach

	Out	In	Total
	212	302	514
	10	3	13
	0	0	0
Totals	222	305	527

Totals				
5	120	82	0	
	4	118	78	0
	1	2	4	0
	0	0	0	0

McLaughlin Rd

South Approach

	Out	In	Total
	200	128	328
	7	7	14
	0	0	0
Totals	207	135	342

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Old School Rd & McLaughlin Rd
 Site Code: 2402100002
 Count Date: Jan 17, 2024
 Period: 16:00 - 18:00

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

Start Time	North Approach McLaughlin Rd						South Approach McLaughlin Rd						East Approach Old School Rd						West Approach Old School Rd						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
16:00	8	19	1	0	0	28	1	29	16	0	0	46	15	73	3	0	0	91	1	56	2	0	0	59	224
16:15	0	8	2	0	0	10	2	24	22	0	0	48	27	71	8	0	0	106	1	59	1	0	0	61	225
16:30	6	10	0	0	0	16	1	30	17	0	0	48	18	70	11	0	0	99	1	48	1	0	0	50	213
16:45	5	14	3	0	0	22	1	37	27	0	0	65	19	80	1	0	0	100	6	45	1	0	0	52	239
Grand Total	19	51	6	0	0	76	5	120	82	0	0	207	79	294	23	0	0	396	9	208	5	0	0	222	901
Approach %	25	67.1	7.9	0	-	-	2.4	58	39.6	0	-	-	19.9	74.2	5.8	0	-	-	4.1	93.7	2.3	0	-	-	
Totals %	2.1	5.7	0.7	0	8.4	23	0.6	13.3	9.1	0	44	8.8	32.6	2.6	0	24.6	1	23.1	0.6	0	0	24.6			
PHF	0.59	0.67	0.5	0	0.68	0.63	0.81	0.76	0	0.8	0.73	0.92	0.52	0	0.93	0.38	0.88	0.63	0	0.91	0.94				
Cars	19	48	6	0	73	4	118	78	0	200	76	292	22	0	390	9	199	4	0	212	875				
% Cars	100	94.1	100	0	96.1	80	98.3	95.1	0	96.6	96.2	99.3	95.7	0	98.5	100	95.7	80	0	95.5	97.1				
Trucks	0	3	0	0	3	1	2	4	0	7	3	2	1	0	6	0	9	1	0	10	26				
% Trucks	0	5.9	0	0	3.9	20	1.7	4.9	0	3.4	3.8	0.7	4.3	0	1.5	0	4.3	20	0	4.5	2.9				
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Peds					0	-				0	-				0	-				0	-	0			
% Peds					0	-				0	-				0	-				0	-	0			



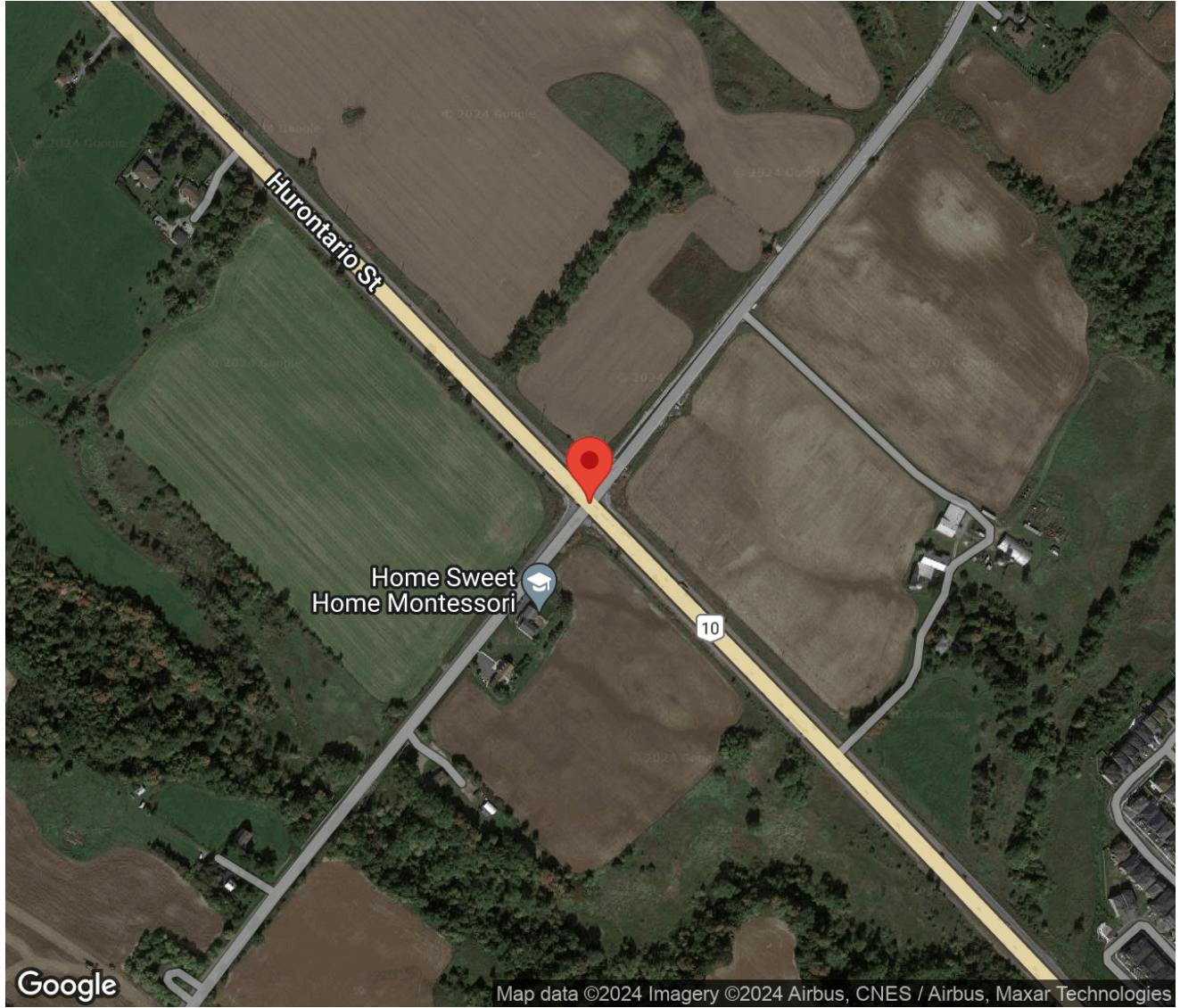
Project #24-021 - GHD

Intersection Count Report

Intersection: Old School Rd & Hurontario St
Municipality: Caledon
Count Date: Wednesday, Jan 17, 2024
Site Code: 2402100003
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Old School Rd & Hurontario St
Site Code: 2402100003
Municipality: Caledon
Count Date: Jan 17, 2024



Traffic Count Summary

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

Hurontario St - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	22	1635	41	0	1698	0	45	862	47	0	954	0	2652
08:00 - 09:00	28	1288	27	0	1343	0	70	839	61	0	970	0	2313
BREAK													
16:00 - 17:00	29	954	33	0	1016	0	174	1578	88	0	1840	1	2856
17:00 - 18:00	38	839	38	0	915	0	142	1307	75	0	1524	0	2439
GRAND TOTAL	117	4716	139	0	4972	0	431	4586	271	0	5288	1	10260



Traffic Count Summary

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

Old School Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	30	98	21	0	149	0	43	162	146	0	351	0	500
08:00 - 09:00	61	133	38	0	232	0	43	132	100	0	275	0	507
BREAK													
16:00 - 17:00	48	195	41	0	284	0	65	142	93	0	300	0	584
17:00 - 18:00	54	182	32	0	268	0	38	148	103	0	289	0	557
GRAND TOTAL	193	608	132	0	933	0	189	584	442	0	1215	0	2148



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - Hurontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	1	393	6	0	400	1	14	0	0	15	0	0	0	0	0	0
07:15	0	396	9	0	405	1	21	0	0	22	0	0	0	0	0	0
07:30	7	391	14	0	412	1	22	0	0	23	0	0	0	0	0	0
07:45	10	389	12	0	411	1	9	0	0	10	0	0	0	0	0	0
08:00	11	359	7	0	377	1	9	0	0	10	0	0	0	0	0	0
08:15	7	310	8	0	325	0	16	0	0	16	0	0	0	0	0	0
08:30	3	293	7	0	303	1	22	1	0	24	0	0	0	0	0	0
08:45	5	266	4	0	275	0	13	0	0	13	0	0	0	0	0	0
SUBTOTAL	44	2797	67	0	2908	6	126	1	0	133	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - Hurontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	5	216	5	0	226	0	27	2	0	29	0	0	0	0	0	0
16:15	8	218	4	0	230	0	19	0	0	19	0	0	0	0	0	0
16:30	6	213	11	0	230	0	25	0	0	25	0	0	0	0	0	0
16:45	10	217	11	0	238	0	19	0	0	19	0	0	0	0	0	0
17:00	12	225	15	0	252	0	22	0	0	22	0	0	0	0	0	0
17:15	9	186	8	0	203	0	10	0	0	10	0	0	0	0	0	0
17:30	8	190	9	0	207	0	10	0	0	10	0	0	0	0	0	0
17:45	9	184	6	0	199	0	12	0	0	12	0	0	0	0	0	0
SUBTOTAL	67	1649	69	0	1785	0	144	2	0	146	0	0	0	0	0	0
GRAND TOTAL	111	4446	136	0	4693	6	270	3	0	279	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Hurontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	6	129	6	0	141	1	28	0	0	29	0	0	0	0	0	0
07:15	14	163	12	0	189	1	33	2	0	36	0	0	0	0	0	0
07:30	12	194	12	0	218	1	41	1	0	43	0	0	0	0	0	0
07:45	9	222	13	0	244	1	52	1	0	54	0	0	0	0	0	0
08:00	14	185	14	0	213	0	39	2	0	41	0	0	0	0	0	0
08:15	22	179	14	0	215	1	37	1	0	39	0	0	0	0	0	0
08:30	16	157	13	0	186	0	37	1	0	38	0	0	0	0	0	0
08:45	17	177	13	0	207	0	28	3	0	31	0	0	0	0	0	0
SUBTOTAL	110	1406	97	0	1613	5	295	11	0	311	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Hurontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	38	347	25	0	410	1	14	0	0	15	0	0	0	0	0	0
16:15	42	409	17	0	468	0	12	0	0	12	0	0	0	0	0	0
16:30	43	403	20	0	466	0	21	0	0	21	0	0	0	0	0	0
16:45	50	362	26	0	438	0	10	0	0	10	0	0	0	0	0	1
17:00	45	341	22	0	408	0	9	0	0	9	0	0	0	0	0	0
17:15	43	362	18	0	423	1	11	0	0	12	0	0	0	0	0	0
17:30	25	284	19	0	328	0	6	0	0	6	0	0	0	0	0	0
17:45	26	291	16	0	333	2	3	0	0	5	0	0	0	0	0	0
SUBTOTAL	312	2799	163	0	3274	4	86	0	0	90	0	0	0	0	0	1
GRAND TOTAL	422	4205	260	0	4887	9	381	11	0	401	0	0	0	0	0	1



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	5	14	1	0	20	1	2	1	0	4	0	0	0	0	0	0
07:15	9	23	9	0	41	0	0	0	0	0	0	0	0	0	0	0
07:30	6	23	1	0	30	0	3	0	0	3	0	0	0	0	0	0
07:45	8	33	9	0	50	1	0	0	0	1	0	0	0	0	0	0
08:00	11	36	11	0	58	1	3	1	0	5	0	0	0	0	0	0
08:15	15	32	9	0	56	0	0	0	0	0	0	0	0	0	0	0
08:30	23	36	10	0	69	1	1	0	0	2	0	0	0	0	0	0
08:45	10	23	7	0	40	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	87	220	57	0	364	4	11	2	0	17	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	9	49	10	0	68	0	1	0	0	1	0	0	0	0	0	0
16:15	13	52	9	0	74	0	0	0	0	0	0	0	0	0	0	0
16:30	10	43	14	0	67	1	1	0	0	2	0	0	0	0	0	0
16:45	15	49	8	0	72	0	0	0	0	0	0	0	0	0	0	0
17:00	14	38	9	0	61	0	0	0	0	0	0	0	0	0	0	0
17:15	20	51	5	0	76	0	0	0	0	0	0	0	0	0	0	0
17:30	13	57	7	0	77	0	0	0	0	0	0	0	0	0	0	0
17:45	7	36	11	0	54	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	101	375	73	0	549	1	2	0	0	3	0	0	0	0	0	0
GRAND TOTAL	188	595	130	0	913	5	13	2	0	20	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	7	34	24	0	65	0	1	1	0	2	0	0	0	0	0	0
07:15	10	28	31	0	69	2	3	0	0	5	0	0	0	0	0	0
07:30	11	47	45	0	103	0	1	1	0	2	0	0	0	0	0	0
07:45	13	46	43	0	102	0	2	1	0	3	0	0	0	0	0	0
08:00	14	39	31	0	84	0	0	0	0	0	0	0	0	0	0	0
08:15	13	38	30	0	81	0	1	0	0	1	0	0	0	0	0	0
08:30	5	37	26	0	68	1	0	0	0	1	0	0	0	0	0	0
08:45	8	15	13	0	36	2	2	0	0	4	0	0	0	0	0	0
SUBTOTAL	81	284	243	0	608	5	10	3	0	18	0	0	0	0	0	0



Traffic Count Data

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Old School Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	15	26	30	0	71	0	1	7	0	8	0	0	0	0	0	0
16:15	18	37	17	0	72	0	1	0	0	1	0	0	0	0	0	0
16:30	17	38	19	0	74	0	2	0	0	2	0	0	0	0	0	0
16:45	15	37	19	0	71	0	0	1	0	1	0	0	0	0	0	0
17:00	12	31	20	0	63	0	1	0	0	1	0	0	0	0	0	0
17:15	12	39	22	0	73	0	0	1	0	1	0	0	0	0	0	0
17:30	7	43	35	0	85	0	0	2	0	2	0	0	0	0	0	0
17:45	7	30	22	0	59	0	4	1	0	5	0	0	0	0	0	0
SUBTOTAL	103	281	184	0	568	0	9	12	0	21	0	0	0	0	0	0
GRAND TOTAL	184	565	427	0	1176	5	19	15	0	39	0	0	0	0	0	0

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:15:00
To: 08:15:00

Intersection: Old School Rd & Hurontario St
Site Code: 2402100003
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S

North Approach

	Out	In	Total
	1605	842	2447
	65	168	233
	0	0	0
Totals	1670	1010	2680

Hurontario St

	0	0	0	0
	0	61	4	0
	42	1535	28	0
Totals	42	1596	32	0

East Approach

	Out	In	Total
	179	239	418
	9	16	25
	0	0	0
Totals	188	255	443

Old School Rd

				Totals
	0	0	0	0
	0	2	48	50
	0	6	160	166
Totals	0	2	150	152

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Old School Rd

Totals			
	0	0	0
	31	30	1
	121	115	6
Totals	36	34	2

West Approach

	Out	In	Total
	358	206	564
	10	9	19
	0	0	0
Totals	368	215	583

Totals				
	52	929	57	0
	49	764	51	0
	3	165	6	0
Totals	0	0	0	0

Hurontario St

South Approach

	Out	In	Total
	864	1719	2583
	174	65	239
	0	0	0
Totals	1038	1784	2822

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Count Date: Jan 17, 2024
 Period: 07:00 - 09:00

Peak Hour Data (07:15 - 08:15)

Start Time	North Approach Hurontario St						South Approach Hurontario St						East Approach Old School Rd						West Approach Old School Rd						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:15	1	417	9	0	0	427	15	196	14	0	0	225	9	23	9	0	0	41	12	31	31	0	0	74	767
07:30	8	413	14	0	0	435	13	235	13	0	0	261	6	26	1	0	0	33	11	48	46	0	0	105	834
07:45	11	398	12	0	0	421	10	274	14	0	0	298	9	33	9	0	0	51	13	48	44	0	0	105	875
08:00	12	368	7	0	0	387	14	224	16	0	0	254	12	39	12	0	0	63	14	39	31	0	0	84	788
Grand Total	32	1596	42	0	0	1670	52	929	57	0	0	1038	36	121	31	0	0	188	50	166	152	0	0	368	3264
Approach %	1.9	95.6	2.5	0	-	-	5	89.5	5.5	0	-	-	19.1	64.4	16.5	0	-	-	13.6	45.1	41.3	0	-	-	-
Totals %	1	48.9	1.3	0	-	51.2	1.6	28.5	1.7	0	-	31.8	1.1	3.7	0.9	0	-	5.8	1.5	5.1	4.7	0	-	11.3	-
PHF	0.67	0.96	0.75	0	-	0.96	0.87	0.85	0.89	0	-	0.87	0.75	0.78	0.65	0	-	0.75	0.89	0.86	0.83	0	-	0.88	0.93
Cars	28	1535	42	0	-	1605	49	764	51	0	-	864	34	115	30	0	-	179	48	160	150	0	-	358	3006
% Cars	87.5	96.2	100	0	-	96.1	94.2	82.2	89.5	0	-	83.2	94.4	95	96.8	0	-	95.2	96	96.4	98.7	0	-	97.3	92.1
Trucks	4	61	0	0	-	65	3	165	6	0	-	174	2	6	1	0	-	9	2	6	2	0	-	10	258
% Trucks	12.5	3.8	0	0	-	3.9	5.8	17.8	10.5	0	-	16.8	5.6	5	3.2	0	-	4.8	4	3.6	1.3	0	-	2.7	7.9
Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Peds	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0
% Peds	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:00:00
To: 17:00:00

Intersection: Old School Rd & Hurontario St
Site Code: 2402100003
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S

North Approach

	Out	In	Total
	924	1627	2551
	92	57	149
	0	0	0
Totals	1016	1684	2700

Hurontario St

	0	0	0	0
	2	90	0	0
	31	864	29	0
Totals	33	954	29	0

East Approach

	Out	In	Total
	281	255	536
	3	4	7
	0	0	0
Totals	284	259	543

Old School Rd

			Totals	
0	0	0	0	
0	0	65	65	
0	4	138	142	
0	8	85	93	

Peds: 0

Peds: 0



Peds: 0

Peds: 1

Old School Rd

Totals			
0	0	0	0
41	41	0	0
195	193	2	0
48	47	1	0

West Approach

	Out	In	Total
	288	397	685
	12	5	17
	0	0	0
Totals	300	402	702

Totals				
174	1578	88	0	
	173	1521	88	0
	1	57	0	0
	0	0	0	0

Hurontario St

South Approach

	Out	In	Total
	1782	996	2778
	58	99	157
	0	0	0
Totals	1840	1095	2935

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Old School Rd & Hurontario St
 Site Code: 2402100003
 Count Date: Jan 17, 2024
 Period: 16:00 - 18:00

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

Start Time	North Approach Hurontario St						South Approach Hurontario St						East Approach Old School Rd						West Approach Old School Rd						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
16:00	5	243	7	0	0	255	39	361	25	0	0	425	9	50	10	0	0	69	15	27	37	0	0	79	828
16:15	8	237	4	0	0	249	42	421	17	0	0	480	13	52	9	0	0	74	18	38	17	0	0	73	876
16:30	6	238	11	0	0	255	43	424	20	0	0	487	11	44	14	0	0	69	17	40	19	0	0	76	887
16:45	10	236	11	0	0	257	50	372	26	0	1	448	15	49	8	0	0	72	15	37	20	0	0	72	849
Grand Total	29	954	33	0	0	1016	174	1578	88	0	1	1840	48	195	41	0	0	284	65	142	93	0	0	300	3440
Approach %	2.9	93.9	3.2	0	-	-	9.5	85.8	4.8	0	-	-	16.9	68.7	14.4	0	-	-	21.7	47.3	31	0	-	-	-
Totals %	0.8	27.7	1	0	29.5	5.1	45.9	2.6	0	53.5	1.4	5.7	1.2	0	8.3	1.9	4.1	2.7	0	8.7					
PHF	0.73	0.98	0.75	0	0.99	0.87	0.93	0.85	0	0.94	0.8	0.94	0.73	0	0.96	0.9	0.89	0.63	0	0.95	0.97				
Cars	29	864	31	0	924	173	1521	88	0	1782	47	193	41	0	281	65	138	85	0	288	3275				
% Cars	100	90.6	93.9	0	90.9	99.4	96.4	100	0	96.8	97.9	99	100	0	98.9	100	97.2	91.4	0	96	95.2				
Trucks	0	90	2	0	92	1	57	0	0	58	1	2	0	0	3	0	4	8	0	12	165				
% Trucks	0	9.4	6.1	0	9.1	0.6	3.6	0	0	3.2	2.1	1	0	0	1.1	0	2.8	8.6	0	4	4.8				
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peds					0	-				1	-				0	-			0	-	1				
% Peds					0	-				100	-				0	-			0	-					



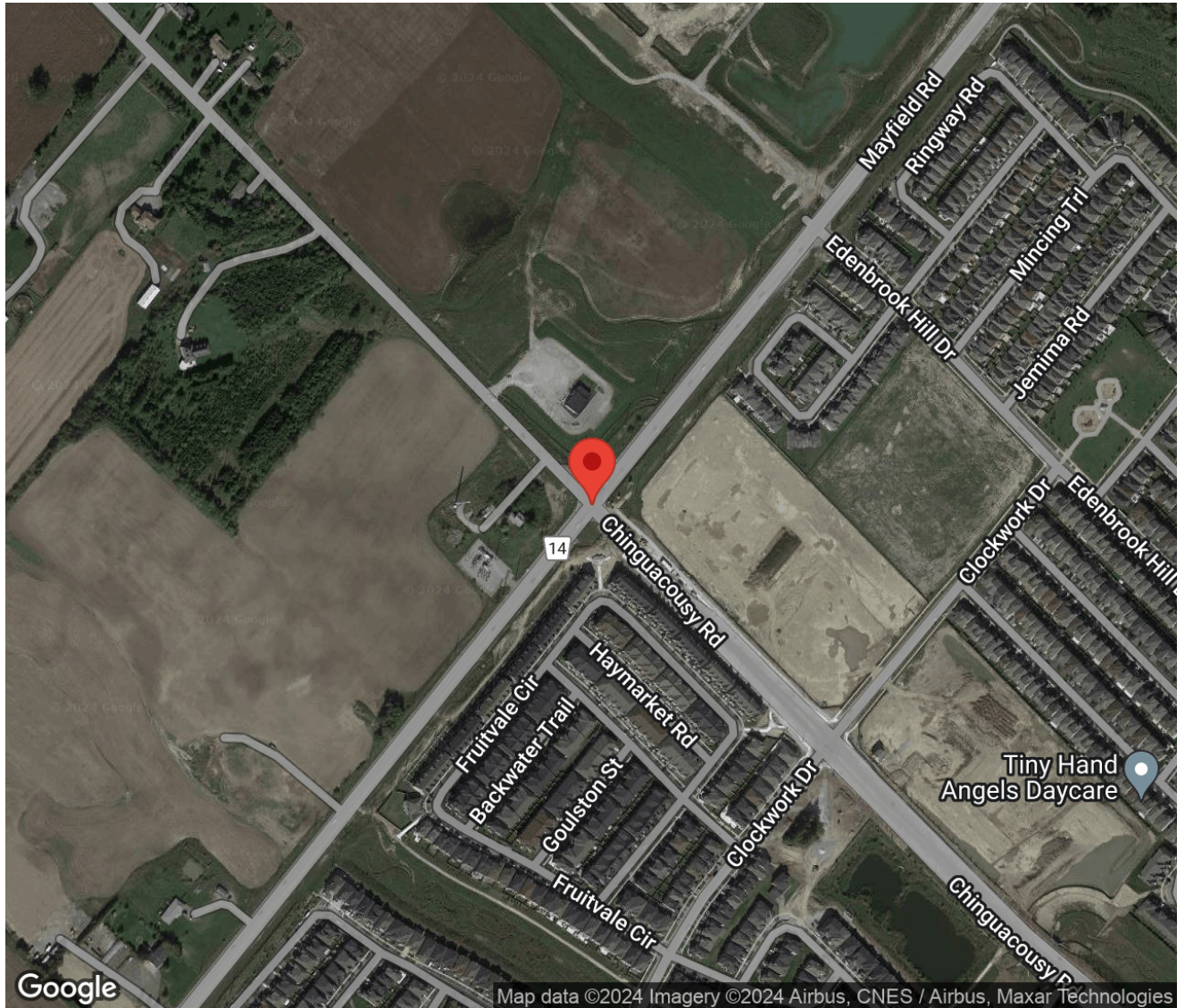
Project #24-021 - GHD

Intersection Count Report

Intersection: Mayfield Rd & Chinguacousy Rd
Municipality: Caledon
Count Date: Wednesday, Jan 17, 2024
Site Code: 2402100004
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Mayfield Rd & Chinguacousy Rd
Site Code: 2402100004
Municipality: Caledon
Count Date: Jan 17, 2024





Traffic Count Summary

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

Chinguacousy Rd - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	8	83	24	0	115	0	22	81	104	0	207	0	322
08:00 - 09:00	10	97	33	0	140	0	46	90	113	0	249	0	389
BREAK													
16:00 - 17:00	9	115	18	0	142	0	26	114	94	0	234	0	376
17:00 - 18:00	15	105	22	0	142	0	30	94	105	0	229	0	371
GRAND TOTAL	42	400	97	0	539	0	124	379	416	0	919	0	1458

Traffic Count Summary

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

Mayfield Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	83	470	5	0	558	0	19	562	28	0	609	0	1167
08:00 - 09:00	105	514	13	0	632	0	25	539	38	0	602	0	1234
BREAK													
16:00 - 17:00	156	563	11	0	730	0	30	583	37	0	650	1	1380
17:00 - 18:00	162	585	7	0	754	0	33	571	40	0	644	1	1398
GRAND TOTAL	506	2132	36	0	2674	0	107	2255	143	0	2505	2	5179



Traffic Count Data

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	1	7	4	0	12	0	1	2	0	3	0	0	0	0	0	0
07:15	2	22	4	0	28	0	0	0	0	0	0	0	0	0	0	0
07:30	2	24	8	0	34	0	0	0	0	0	0	0	0	0	0	0
07:45	2	28	6	0	36	1	1	0	0	2	0	0	0	0	0	0
08:00	1	28	7	0	36	1	2	0	0	3	0	0	0	0	0	0
08:15	1	24	8	0	33	0	1	0	0	1	0	0	0	0	0	0
08:30	2	19	5	0	26	0	0	0	0	0	0	0	0	0	0	0
08:45	5	23	10	0	38	0	0	3	0	3	0	0	0	0	0	0
SUBTOTAL	16	175	52	0	243	2	5	5	0	12	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
16:00	3	29	4	0	36	0	0	0	0	0	0	0	0	0	0	0	0
16:15	3	30	9	0	42	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	27	2	0	29	1	0	1	0	2	0	0	0	0	0	0	0
16:45	2	29	2	0	33	0	0	0	0	0	0	0	0	0	0	0	0
17:00	4	20	6	0	30	0	0	1	0	1	0	0	0	0	0	0	0
17:15	5	27	7	0	39	0	1	1	0	2	0	0	0	0	0	0	0
17:30	2	31	5	0	38	0	0	0	0	0	0	0	0	0	0	0	0
17:45	4	26	2	0	32	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	23	219	37	0	279	1	1	3	0	5	0	0	0	0	0	0	0
GRAND TOTAL	39	394	89	0	522	3	6	8	0	17	0	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	6	14	28	0	48	0	2	2	0	4	0	0	0	0	0	0
07:15	5	18	19	0	42	0	1	0	0	1	0	0	0	0	0	0
07:30	5	20	34	0	59	0	2	0	0	2	0	0	0	0	0	0
07:45	5	24	21	0	50	1	0	0	0	1	0	0	0	0	0	0
08:00	4	21	22	0	47	1	0	2	0	3	0	0	0	0	0	0
08:15	6	32	37	0	75	0	2	1	0	3	0	0	0	0	0	0
08:30	11	15	21	0	47	1	0	4	0	5	0	0	0	0	0	0
08:45	19	19	24	0	62	4	1	2	0	7	0	0	0	0	0	0
SUBTOTAL	61	163	206	0	430	7	8	11	0	26	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Chinguacousy Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	7	26	21	0	54	1	0	2	0	3	0	0	0	0	0	0
16:15	6	25	15	0	46	1	3	1	0	5	0	0	0	0	0	0
16:30	5	34	27	0	66	0	1	2	0	3	0	0	0	0	0	0
16:45	6	25	26	0	57	0	0	0	0	0	0	0	0	0	0	0
17:00	7	26	23	0	56	0	0	2	0	2	0	0	0	0	0	0
17:15	8	20	26	0	54	0	1	1	0	2	0	0	0	0	0	0
17:30	9	25	28	0	62	0	0	2	0	2	0	0	0	0	0	0
17:45	6	19	23	0	48	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	54	200	189	0	443	2	8	10	0	20	0	0	0	0	0	0
GRAND TOTAL	115	363	395	0	873	9	16	21	0	46	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	14	81	1	0	96	3	13	1	0	17	0	0	0	0	0	0
07:15	17	99	0	0	116	2	13	1	0	16	0	0	0	0	0	0
07:30	23	122	0	0	145	1	13	0	0	14	0	0	0	0	0	0
07:45	18	124	2	0	144	5	5	0	0	10	0	0	0	0	0	0
08:00	24	124	1	0	149	3	6	0	0	9	0	0	0	0	0	0
08:15	28	114	2	0	144	1	2	1	0	4	0	0	0	0	0	0
08:30	22	127	1	0	150	0	9	1	0	10	0	0	0	0	0	0
08:45	27	114	5	0	146	0	18	2	0	20	0	0	0	0	0	0
SUBTOTAL	173	905	12	0	1090	15	79	6	0	100	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	1	135	4	0	140	0	2	0	0	2	0	0	0	0	0	0
07:15	3	123	5	0	131	0	4	0	0	4	0	0	0	0	0	0
07:30	6	141	11	0	158	0	4	0	0	4	0	0	0	0	0	0
07:45	9	146	8	0	163	0	7	0	0	7	0	0	0	0	0	0
08:00	7	125	12	0	144	0	21	0	0	21	0	0	0	0	0	0
08:15	5	129	11	0	145	0	10	2	0	12	0	0	0	0	0	0
08:30	4	115	7	0	126	1	10	1	0	12	0	0	0	0	0	0
08:45	8	113	5	0	126	0	16	0	0	16	0	0	0	0	0	0
SUBTOTAL	43	1027	63	0	1133	1	74	3	0	78	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	7	113	4	0	124	1	14	1	0	16	0	0	0	0	0	1
16:15	5	137	14	0	156	2	10	1	0	13	0	0	0	0	0	0
16:30	9	151	5	0	165	1	10	0	0	11	0	0	0	0	0	0
16:45	5	145	12	0	162	0	3	0	0	3	0	0	0	0	0	0
17:00	6	142	12	0	160	0	2	0	0	2	0	0	0	0	0	0
17:15	12	139	10	0	161	0	4	1	0	5	0	0	0	0	0	0
17:30	8	164	10	0	182	0	6	0	0	6	0	0	0	0	0	1
17:45	7	113	7	0	127	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	59	1104	74	0	1237	4	50	3	0	57	0	0	0	0	0	2
GRAND TOTAL	102	2131	137	0	2370	5	124	6	0	135	0	0	0	0	0	2

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Mayfield Rd & Chinguacousy Rd
Site Code: 2402100004
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Mayfield Rd runs E/W

North Approach

	Out	In	Total
	139	129	268
	6	5	11
	0	0	0
Totals	145	134	279

Chinguacousy Rd

	0	0	0	0
	0	4	2	0
	29	104	6	0
Totals	29	108	8	0

East Approach

	Out	In	Total
	582	661	1243
	37	47	84
	0	0	0
Totals	619	708	1327

Mayfield Rd

				Totals
	0	0	0	0
	0	0	27	27
	0	42	541	583
	0	2	42	44

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Mayfield Rd

Totals			
0	0	0	0
6	5	1	0
510	484	26	0
103	93	10	0

West Approach

	Out	In	Total
	610	533	1143
	44	28	72
	0	0	0
Totals	654	561	1215

Totals				
22	20	97	114	0
2	2	4	3	0
0	0	0	0	0

Chinguacousy Rd

South Approach

	Out	In	Total
	231	239	470
	9	16	25
	0	0	0
Totals	240	255	495

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Count Date: Jan 17, 2024
 Period: 07:00 - 09:00

Peak Hour Data (07:30 - 08:30)

Start Time	North Approach Chinguacousy Rd						South Approach Chinguacousy Rd						East Approach Mayfield Rd						West Approach Mayfield Rd						Total Vehic es
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:30	2	24	8	0	0	34	5	22	34	0	0	61	24	135	0	0	0	159	6	145	11	0	0	162	416
07:45	3	29	6	0	0	38	6	24	21	0	0	51	23	129	2	0	0	154	9	153	8	0	0	170	413
08:00	2	30	7	0	0	39	5	21	24	0	0	50	27	130	1	0	0	158	7	146	12	0	0	165	412
08:15	1	25	8	0	0	34	6	34	38	0	0	78	29	116	3	0	0	148	5	139	13	0	0	157	417
Grand Total	8	108	29	0	0	145	22	101	117	0	0	240	103	510	6	0	0	619	27	583	44	0	0	654	1658
Approach %	5.5	74.5	20	0	-	-	9.2	42.1	48.8	0	-	-	16.6	82.4	1	0	-	4.1	89.1	6.7	0	-	-		
Totals %	0.5	6.5	1.7	0	8.7	14.5	1.3	6.1	7.1	0	14.5	6.2	30.8	0.4	0	37.3	1.6	35.2	2.7	0	39.4				
PHF	0.67	0.9	0.91	0	0.93	0.77	0.92	0.74	0.77	0	0.77	0.89	0.94	0.5	0	0.97	0.75	0.95	0.85	0	0.96	0.99			
Cars	6	104	29	0	139	231	20	97	114	0	231	93	484	5	0	582	27	541	42	0	610	1562			
% Cars	75	96.3	100	0	95.9	96.3	90.9	96	97.4	0	96.3	90.3	94.9	83.3	0	94	100	92.8	95.5	0	93.3	94.2			
Trucks	2	4	0	0	6	9	2	4	3	0	9	10	26	1	0	37	0	42	2	0	44	96			
% Trucks	25	3.7	0	0	4.1	3.8	9.1	4	2.6	0	3.8	9.7	5.1	16.7	0	6	0	7.2	4.5	0	6.7	5.8			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Peds					0	-					0	-					0	-					0	-	
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:45:00
To: 17:45:00




Intersection: Mayfield Rd & Chinguacousy Rd
Site Code: 2402100004
Count Date: Jan 17, 2024

Weather conditions: Clear




**** Signalized Intersection ****

Major Road: Mayfield Rd runs E/W




North Approach

	Out	In	Total
	140	136	276
	3	1	4
	0	0	0
Totals	143	137	280








Chinguacousy Rd

	0	0	0	0
	2	1	0	0
	20	107	13	0
Totals	22	108	13	0

East Approach

	Out	In	Total
	723	706	1429
	17	20	37
	0	0	0
Totals	740	726	1466

Mayfield Rd

				Totals
	0	0	0	0
	0	0	31	31
	0	15	590	605
	0	1	44	45

Peds: 0




Peds: 1






Peds: 0








Peds: 0

Mayfield Rd

Totals			
0	0	0	0
9	9	0	0
577	560	17	0
154	154	0	0




West Approach

	Out	In	Total
	665	610	1275
	16	19	35
	0	0	0
Totals	681	629	1310


Totals				
	30	96	103	0
	0	1	5	0
	0	0	0	0

Chinguacousy Rd

South Approach

	Out	In	Total
	229	305	534
	6	2	8
	0	0	0
Totals	235	307	542

 - Cars

 - Trucks

 - Bicycles

Comments



Peak Hour Summary

Intersection: Mayfield Rd & Chinguacousy Rd
 Site Code: 2402100004
 Count Date: Jan 17, 2024
 Period: 16:00 - 18:00

Peak Hour Data (16:45 - 17:45)

Start Time	North Approach Chinguacousy Rd						South Approach Chinguacousy Rd						East Approach Mayfield Rd						West Approach Mayfield Rd						Total Vehi es
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
16:45	2	29	2	0	0	33	6	25	26	0	0	57	37	131	3	0	0	171	5	148	12	0	0	165	426
17:00	4	20	7	0	0	31	7	26	25	0	0	58	44	144	1	0	0	189	6	144	12	0	0	162	440
17:15	5	28	8	0	0	41	8	21	27	0	0	56	33	146	3	0	0	182	12	143	11	0	0	166	445
17:30	2	31	5	0	0	38	9	25	30	0	0	64	40	156	2	0	0	198	8	170	10	0	1	188	488
Grand Total	13	108	22	0	0	143	30	97	108	0	0	235	154	577	9	0	0	740	31	605	45	0	1	681	1799
Approach %	9.1	75.5	15.4	0	-	-	12.8	41.3	46	0	-	-	20.8	78	1.2	0	-	-	4.6	88.8	6.6	0	-	-	
Totals %	0.7	6	1.2	0	7.9	13.1	1.7	5.4	6	0	13.1	8.6	32.1	0.5	0	41.1	1.7	33.6	2.5	0	37.9				
PHF	0.65	0.87	0.69	0	0.87	0.92	0.83	0.93	0.9	0	0.92	0.88	0.92	0.75	0	0.93	0.65	0.89	0.94	0	0.91	0.92			
Cars	13	107	20	0	140	229	30	96	103	0	229	154	560	9	0	723	31	590	44	0	665	1757			
% Cars	100	99.1	90.9	0	97.9	97.4	100	99	95.4	0	97.4	100	97.1	100	0	97.7	100	97.5	97.8	0	97.7	97.7			
Trucks	0	1	2	0	3	6	0	1	5	0	6	0	17	0	0	17	0	15	1	0	16	42			
% Trucks	0	0.9	9.1	0	2.1	2.6	0	1	4.6	0	2.6	0	2.9	0	0	2.3	0	2.5	2.2	0	2.3	2.3			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Peds					0	-					0	-					0	-					1	-	1
% Peds					0	-					0	-					0	-					100	-	



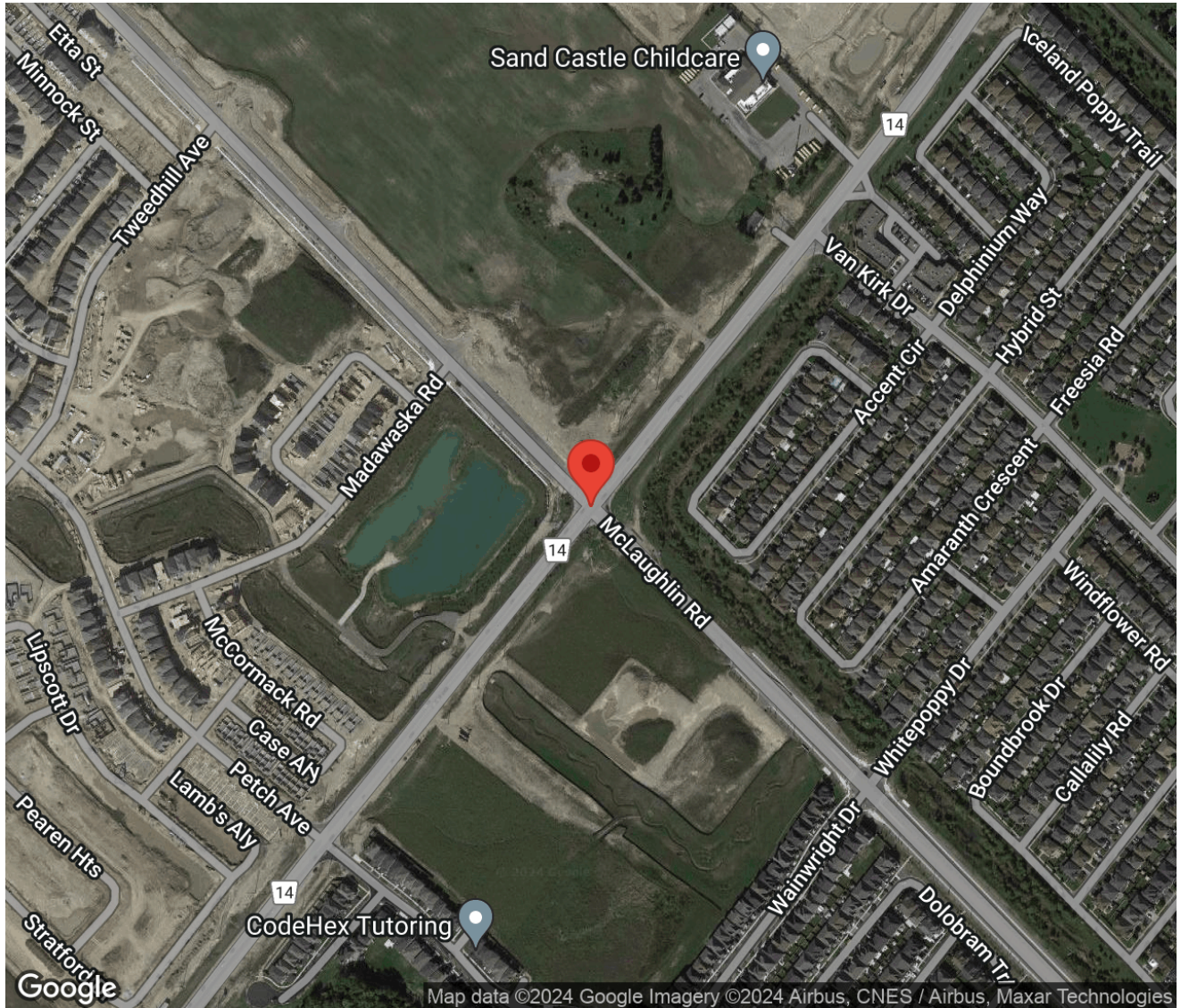
Project #24-021 - GHD

Intersection Count Report

Intersection: Mayfield Rd & McLaughlin Rd
Municipality: Caledon
Count Date: Wednesday, Jan 17, 2024
Site Code: 2402100005
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Mayfield Rd & McLaughlin Rd
Site Code: 2402100005
Municipality: Caledon
Count Date: Jan 17, 2024





Traffic Count Summary

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

McLaughlin Rd - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	117	167	19	0	303	0	35	80	90	0	205	0	508
08:00 - 09:00	94	170	27	0	291	0	38	102	94	0	234	0	525
BREAK													
16:00 - 17:00	108	135	19	0	262	0	62	176	105	0	343	2	605
17:00 - 18:00	80	132	22	0	234	0	48	165	93	0	306	0	540
GRAND TOTAL	399	604	87	0	1090	0	183	523	382	0	1088	2	2178



Traffic Count Summary

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

Mayfield Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	85	549	63	0	697	0	8	685	51	0	744	2	1441
08:00 - 09:00	104	598	60	0	762	0	15	640	61	0	716	1	1478
BREAK													
16:00 - 17:00	105	744	79	0	928	0	13	632	35	0	680	0	1608
17:00 - 18:00	97	780	60	0	937	0	16	678	45	0	739	0	1676
GRAND TOTAL	391	2671	262	0	3324	0	52	2635	192	0	2879	3	6203



Traffic Count Data

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	28	27	2	0	57	2	2	1	0	5	0	0	0	0	0	0
07:15	24	33	3	0	60	0	4	2	0	6	0	0	0	0	0	0
07:30	36	50	4	0	90	4	1	0	0	5	0	1	0	0	1	0
07:45	22	49	5	0	76	1	0	2	0	3	0	0	0	0	0	0
08:00	22	52	4	0	78	2	0	0	0	2	0	0	0	0	0	0
08:15	25	49	6	0	80	2	3	0	0	5	0	0	0	0	0	0
08:30	22	38	7	0	67	2	0	2	0	4	0	0	0	0	0	0
08:45	18	28	6	0	52	1	0	2	0	3	0	0	0	0	0	0
SUBTOTAL	197	326	37	0	560	14	10	9	0	33	0	1	0	0	1	0



Traffic Count Data

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	26	32	3	0	61	3	0	2	0	5	0	0	0	0	0	0
16:15	24	31	4	0	59	3	1	0	0	4	0	0	0	0	0	0
16:30	27	34	6	0	67	0	1	0	0	1	0	0	0	0	0	0
16:45	23	34	4	0	61	2	2	0	0	4	0	0	0	0	0	0
17:00	23	33	5	0	61	1	0	0	0	1	0	0	0	0	0	0
17:15	23	33	5	0	61	2	1	1	0	4	0	0	0	0	0	0
17:30	14	37	7	0	58	1	0	0	0	1	0	0	0	0	0	0
17:45	16	28	4	0	48	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	176	262	38	0	476	12	5	3	0	20	0	0	0	0	0	0
GRAND TOTAL	373	588	75	0	1036	26	15	12	0	53	0	1	0	0	1	0



Traffic Count Data

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	9	19	19	0	47	0	1	0	0	1	0	0	0	0	0	0
07:15	9	11	30	0	50	0	1	3	0	4	0	0	0	0	0	0
07:30	8	19	19	0	46	2	0	0	0	2	0	0	0	0	0	0
07:45	7	29	19	0	55	0	0	0	0	0	0	0	0	0	0	0
08:00	4	33	23	0	60	0	0	2	0	2	0	0	0	0	0	0
08:15	6	23	17	0	46	1	2	1	0	4	0	0	0	0	0	0
08:30	8	24	19	0	51	1	2	2	0	5	0	0	0	0	0	0
08:45	12	17	28	0	57	6	1	2	0	9	0	0	0	0	0	0
SUBTOTAL	63	175	174	0	412	10	7	10	0	27	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - McLaughlin Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	14	45	32	0	91	0	1	4	0	5	0	0	0	0	0	2
16:15	13	34	16	0	63	1	0	1	0	2	0	0	0	0	0	0
16:30	18	54	27	0	99	0	0	1	0	1	0	0	0	0	0	0
16:45	16	42	23	0	81	0	0	1	0	1	0	0	0	0	0	0
17:00	9	43	18	0	70	0	2	1	0	3	0	0	0	0	0	0
17:15	15	44	25	0	84	0	0	0	0	0	0	0	0	0	0	0
17:30	12	36	23	0	71	0	0	0	0	0	0	0	0	0	0	0
17:45	12	40	26	0	78	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	109	338	190	0	637	1	3	8	0	12	0	0	0	0	0	2
GRAND TOTAL	172	513	364	0	1049	11	10	18	0	39	0	0	0	0	0	2



Traffic Count Data

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	14	95	8	0	117	0	19	4	0	23	0	0	0	0	0	0
07:15	19	122	16	0	157	1	15	3	0	19	0	0	0	0	0	0
07:30	26	135	15	0	176	3	15	3	0	21	0	0	0	0	0	0
07:45	22	137	11	0	170	0	11	3	0	14	0	0	0	0	0	0
08:00	26	143	11	0	180	3	9	0	0	12	0	0	0	0	0	0
08:15	26	144	15	0	185	1	3	0	0	4	0	0	0	0	0	0
08:30	23	141	15	0	179	2	8	1	0	11	0	0	0	0	0	0
08:45	23	137	18	0	178	0	13	0	0	13	0	0	0	0	0	0
SUBTOTAL	179	1054	109	0	1342	10	93	14	0	117	0	0	0	0	0	0



Traffic Count Data

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	164	11	0	175	0	4	0	0	4	0	0	0	0	0	1
07:15	2	159	9	0	170	1	6	0	0	7	0	0	0	0	0	1
07:30	4	159	11	0	174	0	3	0	0	3	0	0	0	0	0	0
07:45	1	184	20	0	205	0	6	0	0	6	0	0	0	0	0	0
08:00	3	138	12	0	153	0	21	0	0	21	0	0	0	0	0	0
08:15	3	162	17	0	182	0	10	1	0	11	0	0	0	0	0	0
08:30	5	137	18	0	160	2	7	2	0	11	0	0	0	0	0	1
08:45	2	147	10	0	159	0	18	1	0	19	0	0	0	0	0	0
SUBTOTAL	20	1250	108	0	1378	3	75	4	0	82	0	0	0	0	0	3



Traffic Count Data

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	0	124	10	0	134	0	12	0	0	12	0	0	0	0	0	0
16:15	3	154	10	0	167	0	14	0	0	14	0	0	0	0	0	0
16:30	6	164	8	0	178	1	8	0	0	9	0	0	0	0	0	0
16:45	3	151	7	0	161	0	5	0	0	5	0	0	0	0	0	0
17:00	6	155	8	0	169	0	6	1	0	7	0	0	0	0	0	0
17:15	4	180	14	0	198	0	4	0	0	4	0	0	0	0	0	0
17:30	3	160	10	0	173	0	7	0	0	7	0	0	0	0	0	0
17:45	2	161	12	0	175	1	5	0	0	6	0	0	0	0	0	0
SUBTOTAL	27	1249	79	0	1355	2	61	1	0	64	0	0	0	0	0	0
GRAND TOTAL	47	2499	187	0	2733	5	136	5	0	146	0	0	0	0	0	3

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Mayfield Rd & McLaughlin Rd
Site Code: 2402100005
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Mayfield Rd runs E/W

North Approach

	Out	In	Total
	324	167	491
	15	8	23
	1	0	1
Totals	340	175	515

McLaughlin Rd

	0	1	0	0
	2	4	9	0
	19	200	105	0
Totals	21	205	114	0

East Approach

	Out	In	Total
	711	826	1537
	51	52	103
	0	0	0
Totals	762	878	1640

Mayfield Rd

				Totals
	0	0	0	0
	0	0	11	11
	0	40	643	683
	0	1	60	61

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Mayfield Rd

Totals			
0	0	0	0
58	52	6	0
597	559	38	0
107	100	7	0

West Approach

	Out	In	Total
	714	603	1317
	41	43	84
	0	0	0
Totals	755	646	1401

Totals				
28	25	104	78	0
3	3	2	3	0
0	0	0	0	0

McLaughlin Rd

South Approach

	Out	In	Total
	207	360	567
	8	12	20
	0	1	1
Totals	215	373	588

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Count Date: Jan 17, 2024
 Period: 07:00 - 09:00

Peak Hour Data (07:30 - 08:30)

Start Time	North Approach McLaughlin Rd						South Approach McLaughlin Rd						East Approach Mayfield Rd						West Approach Mayfield Rd						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:30	40	52	4	0	0	96	10	19	19	0	0	48	29	150	18	0	0	197	4	162	11	0	0	177	518
07:45	23	49	7	0	0	79	7	29	19	0	0	55	22	148	14	0	0	184	1	190	20	0	0	211	529
08:00	24	52	4	0	0	80	4	33	25	0	0	62	29	152	11	0	0	192	3	159	12	0	0	174	508
08:15	27	52	6	0	0	85	7	25	18	0	0	50	27	147	15	0	0	189	3	172	18	0	0	193	517
Grand Total	114	205	21	0	0	340	28	106	81	0	0	215	107	597	58	0	0	762	11	683	61	0	0	755	2072
Approach %	33.5	60.3	6.2	0	-	-	13	49.3	37.7	0	-	-	14	78.3	7.6	0	-	-	1.5	90.5	8.1	0	-	-	-
Totals %	5.5	9.9	1	0	16.4	10.4	1.4	5.1	3.9	0	10.4	5.2	28.8	2.8	0	36.8	0.5	33	2.9	0	36.4				
PHF	0.71	0.99	0.75	0	0.89	0.87	0.7	0.8	0.81	0	0.87	0.92	0.98	0.81	0	0.97	0.69	0.9	0.76	0	0.89	0.98			
Cars	105	200	19	0	324	207	25	104	78	0	207	711	100	559	52	0	711	714	11	643	60	0	714	1956	
% Cars	92.1	97.6	90.5	0	95.3	96.3	89.3	98.1	96.3	0	96.3	93.3	93.5	93.6	89.7	0	93.3	94.6	100	94.1	98.4	0	94.6	94.4	
Trucks	9	4	2	0	15	8	3	2	3	0	8	51	7	38	6	0	51	41	0	40	1	0	41	115	
% Trucks	7.9	2	9.5	0	4.4	3.7	10.7	1.9	3.7	0	3.7	6.7	6.5	6.4	10.3	0	6.7	5.4	0	5.9	1.6	0	5.4	5.6	
Bicycles	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
% Bicycles	0	0.5	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	0

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:30:00
To: 17:30:00

Intersection: Mayfield Rd & McLaughlin Rd
Site Code: 2402100005
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Mayfield Rd runs E/W

North Approach

	Out	In	Total
	250	270	520
	10	3	13
	0	0	0
Totals	260	273	533

McLaughlin Rd

	0	0	0	0
	1	4	5	0
	20	134	96	0
Totals	21	138	101	0

East Approach

	Out	In	Total
	869	839	1708
	43	31	74
	0	0	0
Totals	912	870	1782

Mayfield Rd

				Totals
	0	0	0	0
	0	1	19	20
	0	23	650	673
	0	1	37	38

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Mayfield Rd

Totals			
0	0	0	0
68	68	0	0
748	709	39	0
96	92	4	0

West Approach

	Out	In	Total
	706	787	1493
	25	40	65
	0	0	0
Totals	731	827	1558

Totals				
58	58	183	93	0
0	0	2	3	0
0	0	0	0	0

McLaughlin Rd

South Approach

	Out	In	Total
	334	263	597
	5	9	14
	0	0	0
Totals	339	272	611

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Mayfield Rd & McLaughlin Rd
 Site Code: 2402100005
 Count Date: Jan 17, 2024
 Period: 16:00 - 18:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach McLaughlin Rd						South Approach McLaughlin Rd						East Approach Mayfield Rd						West Approach Mayfield Rd						Total Vehic es
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
16:30	27	35	6	0	0	68	18	54	28	0	0	100	24	184	19	0	0	227	7	172	8	0	0	187	582
16:45	25	36	4	0	0	65	16	42	24	0	0	82	26	188	21	0	0	235	3	156	7	0	0	166	548
17:00	24	33	5	0	0	62	9	45	19	0	0	73	23	186	13	0	0	222	6	161	9	0	0	176	533
17:15	25	34	6	0	0	65	15	44	25	0	0	84	23	190	15	0	0	228	4	184	14	0	0	202	579
Grand Total	101	138	21	0	0	260	58	185	96	0	0	339	96	748	68	0	0	912	20	673	38	0	0	731	2242
Approach %	38.8	53.1	8.1	0	-	-	17.1	54.6	28.3	0	-	-	10.5	82	7.5	0	-	-	2.7	92.1	5.2	0	-	-	-
Totals %	4.5	6.2	0.9	0	11.6	2.6	8.3	4.3	0	15.1	4.3	33.4	3	0	40.7	0.9	30	1.7	0	32.6					
PHF	0.94	0.96	0.88	0	0.96	0.81	0.86	0.86	0	0.85	0.92	0.98	0.81	0	0.97	0.71	0.91	0.68	0	0.9	0.96				
Cars	96	134	20	0	250	58	183	93	0	334	92	709	68	0	869	19	650	37	0	706	2159				
% Cars	95	97.1	95.2	0	96.2	100	98.9	96.9	0	98.5	95.8	94.8	100	0	95.3	95	96.6	97.4	0	96.6	96.3				
Trucks	5	4	1	0	10	0	2	3	0	5	4	39	0	0	43	1	23	1	0	25	83				
% Trucks	5	2.9	4.8	0	3.8	0	1.1	3.1	0	1.5	4.2	5.2	0	0	4.7	5	3.4	2.6	0	3.4	3.7				
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Peds					0	-				0	-				0	-				0	-			0	
% Peds					0	-				0	-				0	-				0	-			0	



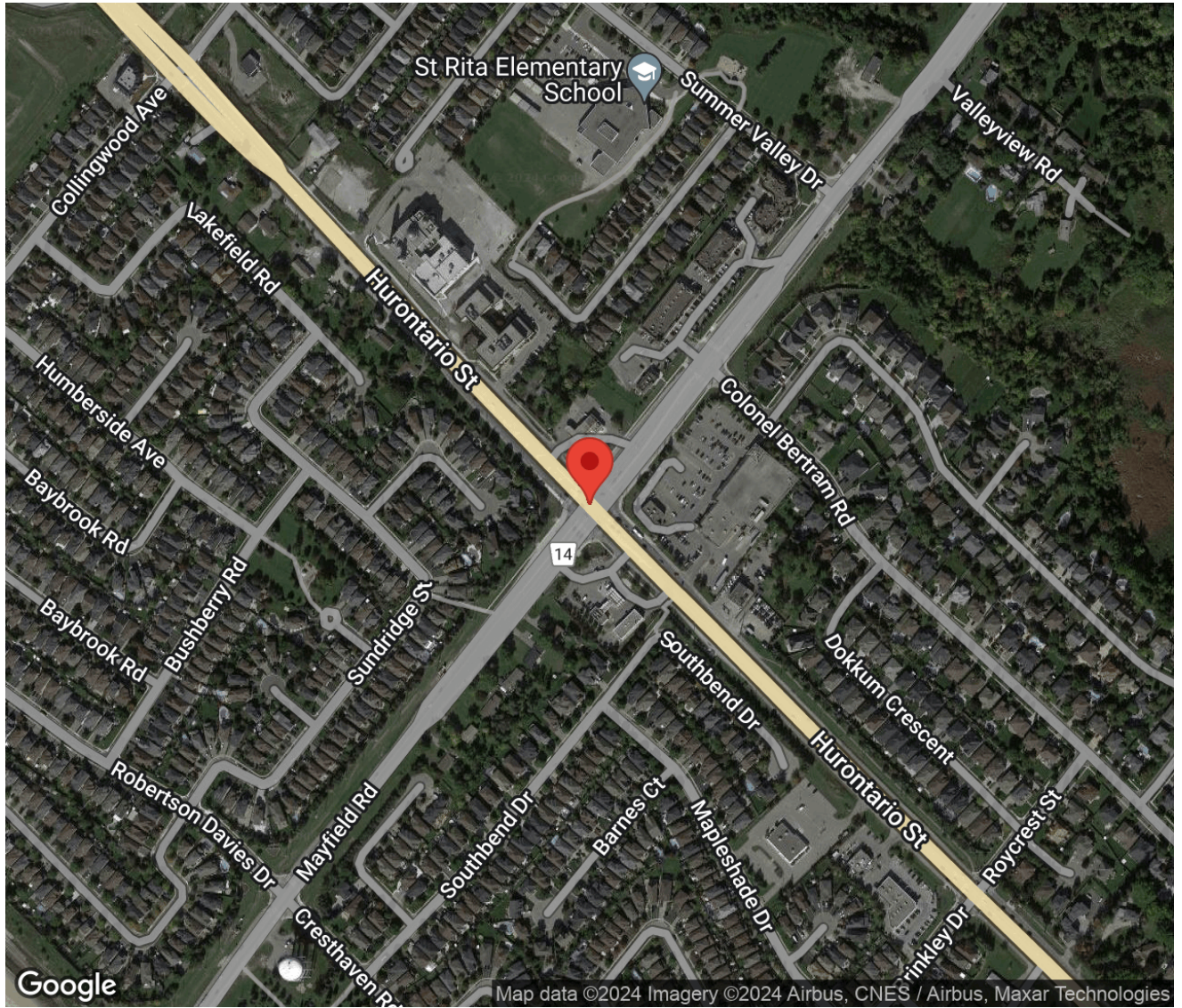
Project #24-021 - GHD

Intersection Count Report

Intersection: Mayfield Rd & Hurontario St
Municipality: Caledon
Count Date: Wednesday, Jan 17, 2024
Site Code: 2402100006
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Mayfield Rd & Hurontario St
Site Code: 2402100006
Municipality: Caledon
Count Date: Jan 17, 2024





Traffic Count Summary

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

Hurontario St - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	67	680	223	0	970	2	63	253	173	0	489	5	1459
08:00 - 09:00	116	687	283	0	1086	2	69	334	194	0	597	6	1683
BREAK													
16:00 - 17:00	151	596	369	0	1116	3	79	511	239	2	831	12	1947
17:00 - 18:00	110	691	397	0	1198	9	79	524	240	0	843	9	2041
GRAND TOTAL	444	2654	1272	0	4370	16	290	1622	846	2	2760	32	7130



Traffic Count Summary

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

Mayfield Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	125	377	23	0	525	5	225	576	82	0	883	8	1408
08:00 - 09:00	169	399	65	0	633	7	196	549	77	0	822	3	1455
BREAK													
16:00 - 17:00	242	577	58	1	878	14	271	482	60	0	813	4	1691
17:00 - 18:00	229	569	56	0	854	12	268	471	49	2	790	2	1644
GRAND TOTAL	765	1922	202	1	2890	38	960	2078	268	2	3308	17	6198



Traffic Count Data

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

North Approach - Hurontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	10	103	41	0	154	1	3	4	0	8	0	0	0	0	0	1
07:15	12	171	62	0	245	5	1	3	0	9	0	0	0	0	0	1
07:30	22	193	49	0	264	1	8	2	0	11	0	0	0	0	0	0
07:45	16	196	57	0	269	0	5	5	0	10	0	0	0	0	0	0
08:00	19	186	68	0	273	3	4	2	0	9	0	0	0	0	0	0
08:15	11	156	65	0	232	0	5	1	0	6	0	0	0	0	0	0
08:30	30	179	74	0	283	3	8	1	0	12	0	0	0	0	0	2
08:45	48	145	71	0	264	2	4	1	0	7	0	0	0	0	0	0
SUBTOTAL	168	1329	487	0	1984	15	38	19	0	72	0	0	0	0	0	4



Traffic Count Data

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Hurontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	10	38	25	0	73	0	3	1	0	4	0	0	0	0	0	2
07:15	14	65	45	0	124	0	5	3	0	8	0	0	0	0	0	1
07:30	21	65	42	0	128	1	5	4	0	10	0	0	0	0	0	1
07:45	17	68	49	0	134	0	4	4	0	8	0	0	0	0	0	1
08:00	17	70	37	0	124	0	6	2	0	8	0	0	0	0	0	1
08:15	10	71	38	0	119	0	3	3	0	6	0	0	0	0	0	0
08:30	26	91	46	0	163	1	4	5	0	10	0	0	0	0	0	1
08:45	15	86	53	0	154	0	3	10	0	13	0	0	0	0	0	4
SUBTOTAL	130	554	335	0	1019	2	33	32	0	67	0	0	0	0	0	11



Traffic Count Data

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

South Approach - Hurontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	13	106	52	2	173	0	3	6	0	9	0	0	0	0	0	5
16:15	28	138	52	0	218	1	2	3	0	6	0	0	0	0	0	4
16:30	20	134	54	0	208	0	1	4	0	5	0	0	1	0	1	1
16:45	17	125	65	0	207	0	2	2	0	4	0	0	0	0	0	2
17:00	24	136	46	0	206	1	2	3	0	6	0	0	0	0	0	4
17:15	15	148	62	0	225	1	2	4	0	7	0	0	0	0	0	3
17:30	19	117	49	0	185	1	3	7	0	11	0	0	0	0	0	0
17:45	17	115	64	0	196	1	1	5	0	7	0	0	0	0	0	2
SUBTOTAL	153	1019	444	2	1618	5	16	34	0	55	0	0	1	0	1	21
GRAND TOTAL	283	1573	779	2	2637	7	49	66	0	122	0	0	1	0	1	32



Traffic Count Data

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

East Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	17	69	5	0	91	4	15	1	0	20	0	0	0	0	0	1
07:15	19	57	1	0	77	2	10	3	0	15	0	0	0	0	0	2
07:30	34	108	2	0	144	5	15	1	0	21	0	0	0	0	0	0
07:45	39	97	7	0	143	5	6	3	0	14	0	0	0	0	0	2
08:00	38	100	13	0	151	1	7	1	0	9	0	0	0	0	0	1
08:15	54	119	7	0	180	2	2	1	0	5	0	0	0	0	0	2
08:30	39	90	19	0	148	3	11	3	0	17	0	0	0	0	0	1
08:45	30	63	21	0	114	2	7	0	0	9	0	0	0	0	0	3
SUBTOTAL	270	703	75	0	1048	24	73	13	0	110	0	0	0	0	0	12



Traffic Count Data

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	62	115	12	0	189	2	5	0	0	7	0	0	0	0	0	3
07:15	58	130	20	0	208	1	6	2	0	9	0	0	0	0	0	4
07:30	40	163	22	0	225	3	3	2	0	8	0	0	0	0	0	1
07:45	56	151	24	0	231	3	3	0	0	6	0	0	0	0	0	0
08:00	38	104	16	0	158	4	15	1	0	20	0	0	0	0	0	0
08:15	51	132	18	0	201	1	12	2	0	15	0	0	0	0	0	0
08:30	51	129	23	0	203	3	7	2	0	12	0	0	0	0	0	2
08:45	46	134	14	0	194	2	16	1	0	19	0	0	0	0	0	1
SUBTOTAL	402	1058	149	0	1609	19	67	10	0	96	0	0	0	0	0	11



Traffic Count Data

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Municipality: Caledon
 Count Date: Jan 17, 2024

West Approach - Mayfield Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	66	101	10	0	177	1	11	0	0	12	0	0	0	0	0	3
16:15	63	93	26	0	182	5	14	1	0	20	0	0	0	0	0	0
16:30	59	119	10	0	188	3	7	0	0	10	0	0	0	0	0	1
16:45	73	134	13	0	220	1	3	0	0	4	0	0	0	0	0	0
17:00	64	115	13	0	192	3	1	0	0	4	0	0	0	0	0	2
17:15	54	121	12	0	187	2	6	0	0	8	0	0	0	0	0	0
17:30	67	130	10	0	207	1	3	0	2	6	0	0	0	0	0	0
17:45	76	93	14	0	183	1	2	0	0	3	0	0	0	0	0	0
SUBTOTAL	522	906	108	0	1536	17	47	1	2	67	0	0	0	0	0	6
GRAND TOTAL	924	1964	257	0	3145	36	114	11	2	163	0	0	0	0	0	17

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:45:00
To: 08:45:00

Intersection: Mayfield Rd & Hurontario St
Site Code: 2402100006
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S

North Approach

	Out	In	Total
	1057	542	1599
	37	36	73
	0	0	0
Totals	1094	578	1672

Hurontario St

	0	0	0	0
	9	22	6	0
	264	717	76	0
Totals	273	739	82	0

East Approach

	Out	In	Total
	622	762	1384
	45	57	102
	0	0	0
Totals	667	819	1486

Mayfield Rd

				Totals
	0	0	0	0
	0	11	196	207
	0	37	516	553
	0	5	81	86

Peds: 2

Peds: 2



Peds: 6

Mayfield Rd

Totals			
0	0	0	0
54	46	8	0
432	406	26	0
181	170	11	0

Peds: 3

West Approach

	Out	In	Total
	793	740	1533
	53	36	89
	0	0	0
Totals	846	776	1622

Totals				
71	317	184	0	
	70	300	170	0
	1	17	14	0
	0	0	0	0

Hurontario St

South Approach

	Out	In	Total
	540	968	1508
	32	38	70
	0	0	0
Totals	572	1006	1578

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Count Date: Jan 17, 2024
 Period: 07:00 - 09:00

Peak Hour Data (07:45 - 08:45)

Start Time	North Approach Hurontario St						South Approach Hurontario St						East Approach Mayfield Rd						West Approach Mayfield Rd						Total Vehic es
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:45	16	201	62	0	0	279	17	72	53	0	1	142	44	103	10	0	2	157	59	154	24	0	0	237	815
08:00	22	190	70	0	0	282	17	76	39	0	1	132	39	107	14	0	1	160	42	119	17	0	0	178	752
08:15	11	161	66	0	0	238	10	74	41	0	0	125	56	121	8	0	2	185	52	144	20	0	0	216	764
08:30	33	187	75	0	2	295	27	95	51	0	1	173	42	101	22	0	1	165	54	136	25	0	2	215	848
Grand Total	82	739	273	0	2	1094	71	317	184	0	3	572	181	432	54	0	6	667	207	553	86	0	2	846	3179
Approach %	7.5	67.6	25	0	-	-	12.4	55.4	32.2	0	-	-	27.1	64.8	8.1	0	-	-	24.5	65.4	10.2	0	-	-	-
Totals %	2.6	23.2	8.6	0	34.4		2.2	10	5.8	0	18		5.7	13.6	1.7	0	21		6.5	17.4	2.7	0	26.6		
PHF	0.62	0.92	0.91	0	0.93		0.66	0.83	0.87	0	0.83		0.81	0.89	0.61	0	0.9		0.88	0.9	0.86	0	0.89	0.94	
Cars	76	717	264	0		1057	70	300	170	0	540		170	406	46	0	622		196	516	81	0	793	3012	
% Cars	92.7	97	96.7	0	96.6		98.6	94.6	92.4	0	94.4		93.9	94	85.2	0	93.3		94.7	93.3	94.2	0	93.7	94.7	
Trucks	6	22	9	0		37	1	17	14	0	32		11	26	8	0	45		11	37	5	0	53	167	
% Trucks	7.3	3	3.3	0	3.4		1.4	5.4	7.6	0	5.6		6.1	6	14.8	0	6.7		5.3	6.7	5.8	0	6.3	5.3	
Bicycles	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0	
% Bicycles	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0	
Peds					2	-					3	-					6	-					2	-	13
% Peds					15.4	-					23.1	-					46.2	-					15.4	-	

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:15:00
To: 17:15:00

Intersection: Mayfield Rd & Hurontario St
Site Code: 2402100006
Count Date: Jan 17, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S

North Approach

	Out	In	Total
	1114	853	1967
	37	21	58
	0	0	0
Totals	1151	874	2025

Hurontario St

	0	0	0	0
	13	24	0	0
	374	612	128	0
Totals	387	636	128	0

East Approach

	Out	In	Total
	842	807	1649
	26	37	63
	0	1	1
Totals	868	845	1713

Mayfield Rd

				Totals
	0	0	0	0
	0	12	259	271
	0	25	461	486
	0	1	62	63

Peds: 1

Peds: 3



Peds: 13

Peds: 11

Mayfield Rd

Totals			
1	1	0	0
63	61	2	0
564	549	15	0
240	231	9	0

West Approach

	Out	In	Total
	782	1012	1794
	38	30	68
	0	0	0
Totals	820	1042	1862

Totals				
91	540	230	0	
	89	533	217	0
	2	7	12	0
	0	0	1	0

Hurontario St

South Approach

	Out	In	Total
	839	905	1744
	21	34	55
	1	0	1
Totals	861	939	1800

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Mayfield Rd & Hurontario St
 Site Code: 2402100006
 Count Date: Jan 17, 2024
 Period: 16:00 - 18:00

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

Start Time	North Approach Hurontario St						South Approach Hurontario St						East Approach Mayfield Rd						West Approach Mayfield Rd						Total Vehic es
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
16:15	33	175	99	0	0	307	29	140	55	0	4	224	71	129	21	1	8	222	68	107	27	0	0	202	955
16:30	37	143	105	0	0	285	20	135	59	0	1	214	48	141	13	0	0	202	62	126	10	0	1	198	899
16:45	30	129	85	0	0	244	17	127	67	0	2	211	56	148	12	0	2	216	74	137	13	0	0	224	895
17:00	28	189	98	0	1	315	25	138	49	0	4	212	65	146	17	0	3	228	67	116	13	0	2	196	951
Grand Total	128	636	387	0	1	1151	91	540	230	0	11	861	240	564	63	1	13	868	271	486	63	0	3	820	3700
Approach %	11.1	55.3	33.6	0	-	-	10.6	62.7	26.7	0	-	-	27.6	65	7.3	0.1	-	-	33	59.3	7.7	0	-	-	
Totals %	3.5	17.2	10.5	0	31.1	23.3	2.5	14.6	6.2	0	23.3	6.5	15.2	1.7	0	23.5	7.3	13.1	1.7	0	22.2				
PHF	0.86	0.84	0.92	0	0.91	0.96	0.78	0.96	0.86	0	0.96	0.85	0.95	0.75	0.25	0.95	0.92	0.89	0.58	0	0.92	0.97			
Cars	128	612	374	0	1114	839	89	533	217	0	839	231	549	61	1	842	259	461	62	0	782	3577			
% Cars	100	96.2	96.6	0	96.8	97.4	97.8	98.7	94.3	0	97.4	96.3	97.3	96.8	100	97	95.6	94.9	98.4	0	95.4	96.7			
Trucks	0	24	13	0	37	21	2	7	12	0	21	9	15	2	0	26	12	25	1	0	38	122			
% Trucks	0	3.8	3.4	0	3.2	2.4	2.2	1.3	5.2	0	2.4	3.8	2.7	3.2	0	3	4.4	5.1	1.6	0	4.6	3.3			
Bicycles	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1			
% Bicycles	0	0	0	0	0	0.1	0	0	0.4	0	0.1	0	0	0	0	0	0	0	0	0	0	0			
Peds					1	-					11	-					13	-					3	-	28
% Peds					3.6	-					39.3	-					46.4	-					10.7	-	

Appendix D

Synchro Outputs

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

Existing 2024
AM Peak Hour



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	2	198	3	32	111	5	2	42	61	6	76	8
Future Volume (vph)	2	198	3	32	111	5	2	42	61	6	76	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.998			0.996			0.922			0.987	
Fl _t Protected					0.989			0.999			0.997	
Satd. Flow (prot)	0	1917	0	0	1847	0	0	1706	0	0	1769	0
Fl _t Permitted					0.989			0.999			0.997	
Satd. Flow (perm)	0	1917	0	0	1847	0	0	1706	0	0	1769	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	211	3	34	118	5	2	45	65	6	81	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	216	0	0	157	0	0	112	0	0	96	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 1: Chinguacousy Road & Old School Road

Existing 2024
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	198	3	32	111	5	2	42	61	6	76	8
Future Volume (vph)	2	198	3	32	111	5	2	42	61	6	76	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	2	211	3	34	118	5	2	45	65	6	81	9
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	216	157	112	96								
Volume Left (vph)	2	34	2	6								
Volume Right (vph)	3	5	65	9								
Hadj (s)	-0.01	0.07	-0.28	0.07								
Departure Headway (s)	4.6	4.8	4.7	5.0								
Degree Utilization, x	0.28	0.21	0.14	0.13								
Capacity (veh/h)	735	712	708	654								
Control Delay (s)	9.4	9.0	8.4	8.8								
Approach Delay (s)	9.4	9.0	8.4	8.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.0									
Level of Service			A									
Intersection Capacity Utilization			36.4%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

Existing 2024
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	254	7	61	145	21	2	53	89	33	105	10
Future Volume (vph)	6	254	7	61	145	21	2	53	89	33	105	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.997			0.988			0.916			0.991	
Fl _t Protected		0.999			0.987			0.999			0.989	
Satd. Flow (prot)	0	1889	0	0	1812	0	0	1735	0	0	1858	0
Fl _t Permitted		0.999			0.987			0.999			0.989	
Satd. Flow (perm)	0	1889	0	0	1812	0	0	1735	0	0	1858	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			1356.9			3084.5			263.1	
Travel Time (s)		71.1			69.8			138.8			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	270	7	65	154	22	2	56	95	35	112	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	0	241	0	0	153	0	0	158	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.1%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

Existing 2024
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	254	7	61	145	21	2	53	89	33	105	10
Future Volume (vph)	6	254	7	61	145	21	2	53	89	33	105	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	270	7	65	154	22	2	56	95	35	112	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	283	241	153	158
Volume Left (vph)	6	65	2	35
Volume Right (vph)	7	22	95	11
Hadj (s)	0.01	0.06	-0.35	0.03
Departure Headway (s)	5.2	5.3	5.2	5.6
Degree Utilization, x	0.41	0.35	0.22	0.24
Capacity (veh/h)	654	639	608	580
Control Delay (s)	11.6	11.1	9.7	10.4
Approach Delay (s)	11.6	11.1	9.7	10.4
Approach LOS	B	B	A	B

Intersection Summary			
Delay		10.9	
Level of Service		B	
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)		15	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

Existing 2024
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	166	152	36	121	31	52	929	57	32	1596	42
Future Volume (vph)	50	166	152	36	121	31	52	929	57	32	1596	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		0.0	35.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.928			0.970			0.991			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1738	0	1722	1782	0	1722	3076	0	1615	3499	0
Flt Permitted	0.654			0.329			0.085			0.232		
Satd. Flow (perm)	1208	1738	0	596	1782	0	154	3076	0	394	3499	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			15			13			6	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1356.9			440.4			427.7			282.2	
Travel Time (s)		69.8			22.6			19.2			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	54	178	163	39	130	33	56	999	61	34	1716	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	341	0	39	163	0	56	1060	0	34	1761	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

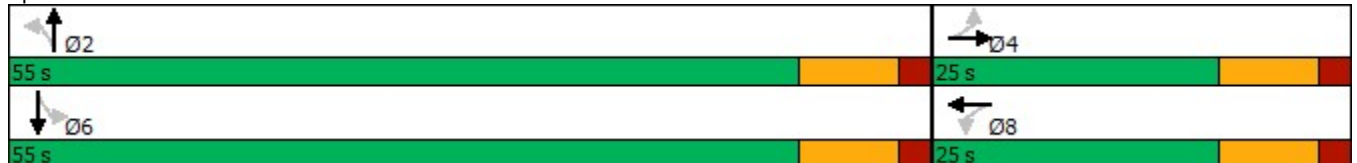
Existing 2024
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		29.0	29.0		29.0	29.0	
Total Split (s)	25.0	25.0		25.0	25.0		55.0	55.0		55.0	55.0	
Total Split (%)	31.3%	31.3%		31.3%	31.3%		68.8%	68.8%		68.8%	68.8%	
Maximum Green (s)	17.0	17.0		17.0	17.0		47.0	47.0		47.0	47.0	
Yellow Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	16.5	16.5		16.5	16.5		47.0	47.0		47.0	47.0	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.59	0.59		0.59	0.59	
v/c Ratio	0.22	0.90		0.32	0.43		0.62	0.58		0.15	0.85	
Control Delay	28.7	58.8		34.6	28.7		46.2	11.7		9.4	18.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.7	58.8		34.6	28.7		46.2	11.7		9.4	18.7	
LOS	C	E		C	C		D	B		A	B	
Approach Delay		54.7			29.8			13.4			18.6	
Approach LOS		D			C			B			B	

Intersection Summary

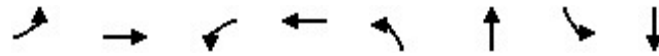
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	79.5
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	21.6
Intersection LOS:	C
Intersection Capacity Utilization:	86.8%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues
3: Hurontario Street & Old School Road

Existing 2024
AM Peak Hour

























Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	54	341	39	163	56	1060	34	1761
v/c Ratio	0.22	0.90	0.32	0.43	0.62	0.58	0.15	0.85
Control Delay	28.7	58.8	34.6	28.7	46.2	11.7	9.4	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	58.8	34.6	28.7	46.2	11.7	9.4	18.7
Queue Length 50th (m)	6.8	47.8	5.0	19.4	5.0	47.8	2.1	105.9
Queue Length 95th (m)	16.3	#94.1	13.9	36.6	#25.6	64.7	6.5	140.2
Internal Link Dist (m)		1332.9		416.4		403.7		258.2
Turn Bay Length (m)	40.0		65.0		35.0		35.0	
Base Capacity (vph)	258	387	127	392	91	1823	232	2071
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.88	0.31	0.42	0.62	0.58	0.15	0.85

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Old School Road

Existing 2024
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	50	166	152	36	121	31	52	929	57	32	1596	42
Future Volume (vph)	50	166	152	36	121	31	52	929	57	32	1596	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1755	1739		1722	1781		1722	3077		1615	3500	
Flt Permitted	0.65	1.00		0.33	1.00		0.09	1.00		0.23	1.00	
Satd. Flow (perm)	1208	1739		597	1781		154	3077		395	3500	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	178	163	39	130	33	56	999	61	34	1716	45
RTOR Reduction (vph)	0	16	0	0	12	0	0	5	0	0	2	0
Lane Group Flow (vph)	54	325	0	39	151	0	56	1055	0	34	1759	0
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	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)	16.5	16.5		16.5	16.5		47.0	47.0		47.0	47.0	
Effective Green, g (s)	16.5	16.5		16.5	16.5		47.0	47.0		47.0	47.0	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.59	0.59		0.59	0.59	
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	250	360		123	369		91	1819		233	2069	
v/s Ratio Prot		c0.19			0.08			0.34			c0.50	
v/s Ratio Perm	0.04			0.07			0.36			0.09		
v/c Ratio	0.22	0.90		0.32	0.41		0.62	0.58		0.15	0.85	
Uniform Delay, d1	26.1	30.7		26.7	27.3		10.4	10.1		7.3	13.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	24.9		1.5	0.7		27.3	1.4		1.3	4.6	
Delay (s)	26.6	55.6		28.2	28.0		37.8	11.5		8.6	18.0	
Level of Service	C	E		C	C		D	B		A	B	
Approach Delay (s)		51.7			28.1			12.8			17.8	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			20.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			79.5				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			86.8%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

Existing 2024
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	27	583	44	103	510	6	22	101	117	8	108	29
Future Volume (vph)	27	583	44	103	510	6	22	101	117	8	108	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.991			0.999			0.934			0.973	
Fl _t Protected		0.998			0.992			0.995			0.997	
Satd. Flow (prot)	0	1783	0	0	1797	0	0	1717	0	0	1800	0
Fl _t Permitted		0.963			0.804			0.968			0.977	
Satd. Flow (perm)	0	1720	0	0	1456	0	0	1671	0	0	1764	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			1			35			9	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	27	589	44	104	515	6	22	102	118	8	109	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	660	0	0	625	0	0	242	0	0	146	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	94.0	94.0		94.0	94.0		26.0	26.0		26.0	26.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	90.0	90.0		90.0	90.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		90.0			90.0			22.0			22.0	
Actuated g/C Ratio		0.75			0.75			0.18			0.18	
v/c Ratio		0.51			0.57			0.72			0.44	
Control Delay		7.6			23.2			52.9			45.6	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

Existing 2024
 AM Peak Hour

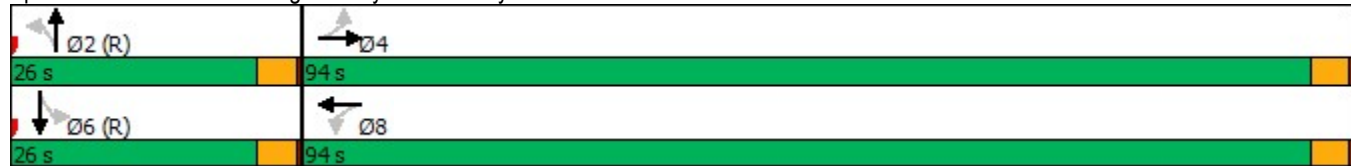


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		7.6			23.2			52.9			45.6	
LOS		A			C			D			D	
Approach Delay		7.6			23.2			52.9			45.6	
Approach LOS		A			C			D			D	

Intersection Summary

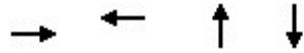
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	23.3
Intersection LOS:	C
Intersection Capacity Utilization	97.0%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues
4: Chinguacousy Road & Mayfield Road

Existing 2024
AM Peak Hour



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	660	625	242	146
v/c Ratio	0.51	0.57	0.72	0.44
Control Delay	7.6	23.2	52.9	45.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.6	23.2	52.9	45.6
Queue Length 50th (m)	53.4	126.3	46.5	28.9
Queue Length 95th (m)	75.2	167.6	#79.4	49.3
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1292	1092	334	330
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.57	0.72	0.44

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
4: Chinguacousy Road & Mayfield Road

Existing 2024
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕			↕		
Traffic Volume (vph)	27	583	44	103	510	6	22	101	117	8	108	29	
Future Volume (vph)	27	583	44	103	510	6	22	101	117	8	108	29	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		1.00			1.00			1.00			1.00		
Frt		0.99			1.00			0.93			0.97		
Flt Protected		1.00			0.99			1.00			1.00		
Satd. Flow (prot)		1783			1796			1718			1801		
Flt Permitted		0.96			0.80			0.97			0.98		
Satd. Flow (perm)		1721			1456			1670			1764		
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	27	589	44	104	515	6	22	102	118	8	109	29	
RTOR Reduction (vph)	0	2	0	0	0	0	0	29	0	0	7	0	
Lane Group Flow (vph)	0	658	0	0	625	0	0	213	0	0	139	0	
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		90.0			90.0			22.0			22.0		
Effective Green, g (s)		90.0			90.0			22.0			22.0		
Actuated g/C Ratio		0.75			0.75			0.18			0.18		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Lane Grp Cap (vph)		1290			1092			306			323		
v/s Ratio Prot													
v/s Ratio Perm		0.38			c0.43			c0.13			0.08		
v/c Ratio		0.51			0.57			0.70			0.43		
Uniform Delay, d1		6.1			6.6			45.9			43.4		
Progression Factor		1.00			3.10			1.00			1.00		
Incremental Delay, d2		1.4			1.8			12.4			4.1		
Delay (s)		7.5			22.2			58.3			47.6		
Level of Service		A			C			E			D		
Approach Delay (s)		7.5			22.2			58.3			47.6		
Approach LOS		A			C			E			D		
Intersection Summary													
HCM 2000 Control Delay			23.8									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.60										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			97.0%									ICU Level of Service	F
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

Existing 2024
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	683	61	107	597	58	28	106	81	114	205	21
Future Volume (vph)	11	683	61	107	597	58	28	106	81	114	205	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.987				0.850		0.986	
Flt Protected	0.950			0.950				0.990		0.950		
Satd. Flow (prot)	1825	1796	0	1706	1770	0	0	1830	1570	1690	1844	0
Flt Permitted	0.298			0.243				0.897		0.646		
Satd. Flow (perm)	572	1796	0	436	1770	0	0	1658	1570	1149	1844	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			8				83		4	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			3084.5	
Travel Time (s)		73.0			65.0			15.4			138.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	11	697	62	109	609	59	29	108	83	116	209	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	759	0	109	668	0	0	137	83	116	230	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	23.0	23.0	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0	39.0	39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%	32.5%	32.5%	32.5%	
Maximum Green (s)	75.0	75.0		75.0	75.0		33.0	33.0	33.0	33.0	33.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)	75.0	75.0		75.0	75.0			33.0	33.0	33.0	33.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62			0.28	0.28	0.28	0.28	

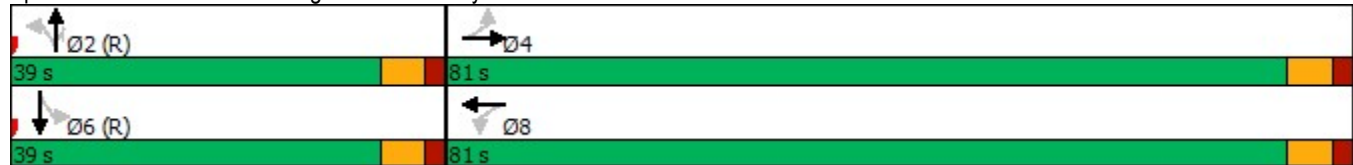
Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

Existing 2024
 AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.67		0.40	0.60			0.30	0.17	0.37	0.45	
Control Delay	11.0	17.6		16.7	16.2			36.6	7.8	39.2	38.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	11.0	17.6		16.7	16.2			36.6	7.8	39.2	38.8	
LOS	B	B		B	B			D	A	D	D	
Approach Delay		17.5			16.3			25.8			38.9	
Approach LOS		B			B			C			D	

Intersection Summary	
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	21.4
Intersection LOS:	C
Intersection Capacity Utilization	84.8%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues
5: McLaughlin Road & Mayfield Road

Existing 2024
AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	11	759	109	668	137	83	116	230
v/c Ratio	0.03	0.67	0.40	0.60	0.30	0.17	0.37	0.45
Control Delay	11.0	17.6	16.7	16.2	36.6	7.8	39.2	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	17.6	16.7	16.2	36.6	7.8	39.2	38.8
Queue Length 50th (m)	0.9	94.1	12.0	87.2	25.6	0.0	22.1	44.1
Queue Length 95th (m)	m1.9	142.6	26.0	121.9	42.9	11.8	39.4	67.9
Internal Link Dist (m)		1395.4		1239.7	317.6			3060.5
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	357	1125	272	1109	455	491	315	510
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.67	0.40	0.60	0.30	0.17	0.37	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

Existing 2024
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	683	61	107	597	58	28	106	81	114	205	21
Future Volume (vph)	11	683	61	107	597	58	28	106	81	114	205	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1825	1796		1706	1769			1830	1570	1690	1844	
Flt Permitted	0.30	1.00		0.24	1.00			0.90	1.00	0.65	1.00	
Satd. Flow (perm)	573	1796		436	1769			1658	1570	1149	1844	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	11	697	62	109	609	59	29	108	83	116	209	21
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	60	0	3	0
Lane Group Flow (vph)	11	756	0	109	665	0	0	137	23	116	227	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	75.0	75.0		75.0	75.0			33.0	33.0	33.0	33.0	
Effective Green, g (s)	75.0	75.0		75.0	75.0			33.0	33.0	33.0	33.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62			0.28	0.28	0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	358	1122		272	1105			455	431	315	507	
v/s Ratio Prot		c0.42			0.38						c0.12	
v/s Ratio Perm	0.02			0.25				0.08	0.01	0.10		
v/c Ratio	0.03	0.67		0.40	0.60			0.30	0.05	0.37	0.45	
Uniform Delay, d1	8.6	14.6		11.3	13.5			34.4	32.0	35.1	36.0	
Progression Factor	1.24	0.98		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	2.8		4.4	2.4			1.7	0.2	3.3	2.8	
Delay (s)	10.8	17.2		15.6	16.0			36.1	32.2	38.4	38.8	
Level of Service	B	B		B	B			D	C	D	D	
Approach Delay (s)		17.1			15.9			34.6			38.7	
Approach LOS		B			B			C			D	

























Intersection Summary

HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

Existing 2024
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	553	86	181	432	54	71	317	184	82	739	273
Future Volume (vph)	207	553	86	181	432	54	71	317	184	82	739	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	0.99		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	3411	1541	3340	3444	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.382			0.950			0.275			0.535		
Satd. Flow (perm)	697	3411	1508	3318	3444	1395	523	3476	1467	950	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			61			196			290
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	220	588	91	193	460	57	76	337	196	87	786	290
Shared Lane Traffic (%)												
Lane Group Flow (vph)	220	588	91	193	460	57	76	337	196	87	786	290
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	85.0	85.0	85.0	85.0	85.0	85.0
Total Split (%)	12.5%	34.4%	34.4%	12.5%	34.4%	34.4%	53.1%	53.1%	53.1%	53.1%	53.1%	53.1%
Maximum Green (s)	15.0	48.0	48.0	15.0	48.0	48.0	78.0	78.0	78.0	78.0	78.0	78.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

Existing 2024
AM Peak Hour

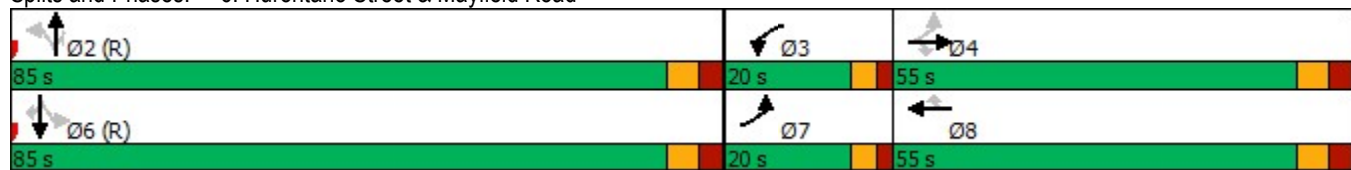


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	65.0	48.0	48.0	15.0	48.0	48.0	78.0	78.0	78.0	78.0	78.0	78.0
Actuated g/C Ratio	0.41	0.30	0.30	0.09	0.30	0.30	0.49	0.49	0.49	0.49	0.49	0.49
v/c Ratio	0.58	0.57	0.18	0.62	0.45	0.12	0.30	0.20	0.24	0.19	0.46	0.32
Control Delay	36.4	50.0	8.1	78.9	46.9	8.6	28.7	23.7	3.4	24.5	28.1	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	50.0	8.1	78.9	46.9	8.6	28.7	23.7	3.4	24.5	28.1	3.2
LOS	D	D	A	E	D	A	C	C	A	C	C	A
Approach Delay		42.5			52.5			17.8			21.6	
Approach LOS		D			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	33.0
Intersection LOS:	C
Intersection Capacity Utilization	70.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues
6: Hurontario Street & Mayfield Road

Existing 2024
AM Peak Hour



























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	220	588	91	193	460	57	76	337	196	87	786	290
v/c Ratio	0.58	0.57	0.18	0.62	0.45	0.12	0.30	0.20	0.24	0.19	0.46	0.32
Control Delay	36.4	50.0	8.1	78.9	46.9	8.6	28.7	23.7	3.4	24.5	28.1	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	50.0	8.1	78.9	46.9	8.6	28.7	23.7	3.4	24.5	28.1	3.2
Queue Length 50th (m)	44.7	83.7	0.0	30.9	62.5	0.0	14.3	31.5	0.0	15.4	85.2	0.0
Queue Length 95th (m)	64.9	103.5	13.5	44.6	79.4	9.9	27.8	41.6	13.4	27.2	102.7	15.5
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	380	1023	516	313	1033	461	254	1694	815	463	1727	907
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.57	0.18	0.62	0.45	0.12	0.30	0.20	0.24	0.19	0.46	0.32

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

Existing 2024
AM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	207	553	86	181	432	54	71	317	184	82	739	273	
Future Volume (vph)	207	553	86	181	432	54	71	317	184	82	739	273	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1737	3411	1508	3340	3444	1395	1807	3476	1467	1688	3544	1557	
Flt Permitted	0.38	1.00	1.00	0.95	1.00	1.00	0.27	1.00	1.00	0.54	1.00	1.00	
Satd. Flow (perm)	698	3411	1508	3340	3444	1395	523	3476	1467	950	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	220	588	91	193	460	57	76	337	196	87	786	290	
RTOR Reduction (vph)	0	0	64	0	0	40	0	0	100	0	0	149	
Lane Group Flow (vph)	220	588	27	193	460	17	76	337	96	87	786	141	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	63.0	48.0	48.0	15.0	48.0	48.0	78.0	78.0	78.0	78.0	78.0	78.0	
Effective Green, g (s)	63.0	48.0	48.0	15.0	48.0	48.0	78.0	78.0	78.0	78.0	78.0	78.0	
Actuated g/C Ratio	0.39	0.30	0.30	0.09	0.30	0.30	0.49	0.49	0.49	0.49	0.49	0.49	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	372	1023	452	313	1033	418	254	1694	715	463	1727	759	
v/s Ratio Prot	0.06	0.17		c0.06	0.13			0.10			c0.22		
v/s Ratio Perm	c0.18		0.02			0.01	0.15		0.07	0.09		0.09	
v/c Ratio	0.59	0.57	0.06	0.62	0.45	0.04	0.30	0.20	0.13	0.19	0.46	0.19	
Uniform Delay, d1	34.1	47.4	39.9	69.7	45.2	39.7	24.6	23.3	22.5	23.1	27.0	23.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.8	2.3	0.3	8.8	1.4	0.2	3.0	0.3	0.4	0.9	0.9	0.5	
Delay (s)	40.9	49.7	40.2	78.5	46.6	39.9	27.6	23.5	22.9	24.0	27.9	23.7	
Level of Service	D	D	D	E	D	D	C	C	C	C	C	C	
Approach Delay (s)		46.6			54.8			23.8			26.5		
Approach LOS		D			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			37.3									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.52										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	19.0
Intersection Capacity Utilization			70.8%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	198	3	32	111	5	2	42	61	6	76	8
Future Vol, veh/h	2	198	3	32	111	5	2	42	61	6	76	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	3	2	10	0	5	3	0	7	10
Mvmt Flow	2	211	3	34	118	5	2	45	65	6	81	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	9	8.3	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	1%	22%	7%
Vol Thru, %	40%	98%	75%	84%
Vol Right, %	58%	1%	3%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	203	148	90
LT Vol	2	2	32	6
Through Vol	42	198	111	76
RT Vol	61	3	5	8
Lane Flow Rate	112	216	157	96
Geometry Grp	1	1	1	1
Degree of Util (X)	0.141	0.274	0.206	0.129
Departure Headway (Hd)	4.55	4.569	4.713	4.868
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	784	759	733
Service Time	2.595	2.609	2.756	2.916
HCM Lane V/C Ratio	0.143	0.276	0.207	0.131
HCM Control Delay	8.3	9.3	9	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	1.1	0.8	0.4

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	254	7	61	145	21	2	53	89	33	105	10
Future Vol, veh/h	6	254	7	61	145	21	2	53	89	33	105	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	1	14	2	3	10	0	2	1	3	0	10
Mvmt Flow	6	270	7	65	154	22	2	56	95	35	112	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.6	11	9.7	10.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	2%	27%	22%
Vol Thru, %	37%	95%	64%	71%
Vol Right, %	62%	3%	9%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	144	267	227	148
LT Vol	2	6	61	33
Through Vol	53	254	145	105
RT Vol	89	7	21	10
Lane Flow Rate	153	284	241	157
Geometry Grp	1	1	1	1
Degree of Util (X)	0.221	0.403	0.35	0.244
Departure Headway (Hd)	5.183	5.11	5.212	5.583
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	692	704	691	642
Service Time	3.221	3.143	3.245	3.621
HCM Lane V/C Ratio	0.221	0.403	0.349	0.245
HCM Control Delay	9.7	11.6	11	10.4
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.8	2	1.6	1

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

Existing 2024
PM Peak Hour



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	158	2	46	250	8	10	60	53	8	55	4
Future Volume (vph)	4	158	2	46	250	8	10	60	53	8	55	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.996			0.942			0.992	
Flt Protected		0.999			0.992			0.996			0.994	
Satd. Flow (prot)	0	1861	0	0	1876	0	0	1729	0	0	1831	0
Flt Permitted		0.999			0.992			0.996			0.994	
Satd. Flow (perm)	0	1861	0	0	1876	0	0	1729	0	0	1831	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	168	2	49	266	9	11	64	56	9	59	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	0	0	324	0	0	131	0	0	72	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

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

HCM Unsignalized Intersection Capacity Analysis
 1: Chinguacousy Road & Old School Road

Existing 2024
 PM Peak Hour

															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR			
Lane Configurations															
Sign Control		Stop			Stop			Stop			Stop				
Traffic Volume (vph)	4	158	2	46	250	8	10	60	53	8	55	4			
Future Volume (vph)	4	158	2	46	250	8	10	60	53	8	55	4			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Hourly flow rate (vph)	4	168	2	49	266	9	11	64	56	9	59	4			
Direction, Lane #	EB 1	WB 1	NB 1	SB 1											
Volume Total (vph)	174	324	131	72											
Volume Left (vph)	4	49	11	9											
Volume Right (vph)	2	9	56	4											
Hadj (s)	0.05	0.03	-0.17	0.05											
Departure Headway (s)	4.9	4.7	5.1	5.4											
Degree Utilization, x	0.24	0.42	0.18	0.11											
Capacity (veh/h)	686	731	644	596											
Control Delay (s)	9.4	11.1	9.2	9.0											
Approach Delay (s)	9.4	11.1	9.2	9.0											
Approach LOS	A	B	A	A											
Intersection Summary															
Delay			10.1												
Level of Service			B												
Intersection Capacity Utilization			43.3%				ICU Level of Service				A				
Analysis Period (min)			15												

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

Existing 2024
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	208	5	79	294	23	5	120	82	19	51	6
Future Volume (vph)	9	208	5	79	294	23	5	120	82	19	51	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.992			0.947			0.990	
Flt Protected		0.998			0.990			0.999			0.988	
Satd. Flow (prot)	0	1839	0	0	1854	0	0	1758	0	0	1806	0
Flt Permitted		0.998			0.990			0.999			0.988	
Satd. Flow (perm)	0	1839	0	0	1854	0	0	1758	0	0	1806	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			1356.9			3084.5			263.1	
Travel Time (s)		71.1			69.8			138.8			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	221	5	84	313	24	5	128	87	20	54	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	236	0	0	421	0	0	220	0	0	80	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.7%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

Existing 2024
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	208	5	79	294	23	5	120	82	19	51	6
Future Volume (vph)	9	208	5	79	294	23	5	120	82	19	51	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	221	5	84	313	24	5	128	87	20	54	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	236	421	220	80
Volume Left (vph)	10	84	5	20
Volume Right (vph)	5	24	87	6
Hadj (s)	0.06	0.04	-0.18	0.07
Departure Headway (s)	5.5	5.2	5.6	6.2
Degree Utilization, x	0.36	0.61	0.35	0.14
Capacity (veh/h)	604	661	571	482
Control Delay (s)	11.6	16.1	11.6	10.2
Approach Delay (s)	11.6	16.1	11.6	10.2
Approach LOS	B	C	B	B

Intersection Summary			
Delay		13.5	
Level of Service		B	
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)		15	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

Existing 2024
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	142	93	48	195	41	174	1578	88	29	954	33
Future Volume (vph)	65	142	93	48	195	41	174	1578	88	29	954	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		0.0	35.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.940			0.974			0.992			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1714	0	1789	1856	0	1807	3489	0	1825	3335	0
Flt Permitted	0.253			0.256			0.188			0.063		
Satd. Flow (perm)	486	1714	0	482	1856	0	358	3489	0	121	3335	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			8			8			4	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1356.9			440.4			427.7			282.2	
Travel Time (s)		69.8			22.6			19.2			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	67	146	96	49	201	42	179	1627	91	30	984	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	242	0	49	243	0	179	1718	0	30	1018	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

Existing 2024
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0		10.0	29.0	
Total Split (s)	10.0	29.0		10.0	29.0		17.0	71.0		10.0	64.0	
Total Split (%)	8.3%	24.2%		8.3%	24.2%		14.2%	59.2%		8.3%	53.3%	
Maximum Green (s)	6.0	23.0		6.0	23.0		11.0	65.0		4.0	58.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.3	20.7		25.3	20.7		76.3	70.6		66.7	60.7	
Actuated g/C Ratio	0.22	0.18		0.22	0.18		0.68	0.63		0.59	0.54	
v/c Ratio	0.37	0.72		0.28	0.70		0.46	0.79		0.19	0.57	
Control Delay	37.9	52.4		35.6	53.7		11.6	21.5		11.0	20.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.9	52.4		35.6	53.7		11.6	21.5		11.0	20.2	
LOS	D	D		D	D		B	C		B	C	
Approach Delay		49.2			50.7			20.6			19.9	
Approach LOS		D			D			C			B	

Intersection Summary

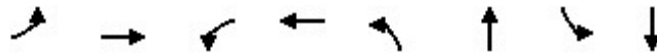
Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 112.7
 Natural Cycle: 100
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 25.4
 Intersection LOS: C
 Intersection Capacity Utilization 79.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues
3: Hurontario Street & Old School Road

Existing 2024
PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	242	49	243	179	1718	30	1018
v/c Ratio	0.37	0.72	0.28	0.70	0.46	0.79	0.19	0.57
Control Delay	37.9	52.4	35.6	53.7	11.6	21.5	11.0	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	52.4	35.6	53.7	11.6	21.5	11.0	20.2
Queue Length 50th (m)	11.6	47.1	8.4	50.7	14.3	165.1	2.2	81.1
Queue Length 95th (m)	22.8	74.6	17.8	77.7	24.8	212.7	5.8	108.5
Internal Link Dist (m)		1332.9		416.4		403.7		258.2
Turn Bay Length (m)	40.0		65.0		35.0		35.0	
Base Capacity (vph)	180	402	178	421	410	2188	162	1797
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.60	0.28	0.58	0.44	0.79	0.19	0.57

Intersection Summary

HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Old School Road

Existing 2024
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	142	93	48	195	41	174	1578	88	29	954	33
Future Volume (vph)	65	142	93	48	195	41	174	1578	88	29	954	33
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	1715		1789	1856		1807	3489		1825	3335	
Flt Permitted	0.25	1.00		0.26	1.00		0.19	1.00		0.06	1.00	
Satd. Flow (perm)	487	1715		482	1856		357	3489		121	3335	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	67	146	96	49	201	42	179	1627	91	30	984	34
RTOR Reduction (vph)	0	21	0	0	7	0	0	3	0	0	2	0
Lane Group Flow (vph)	67	221	0	49	236	0	179	1715	0	30	1016	0
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.3	18.7		23.3	18.7		76.9	68.6		63.6	61.3	
Effective Green, g (s)	23.3	20.7		23.3	20.7		78.9	70.6		67.6	63.3	
Actuated g/C Ratio	0.20	0.18		0.20	0.18		0.68	0.61		0.58	0.54	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	150	305		148	330		387	2119		133	1816	
v/s Ratio Prot	c0.02	c0.13		0.01	0.13		c0.05	c0.49		0.01	0.30	
v/s Ratio Perm	0.07			0.05			0.27			0.12		
v/c Ratio	0.45	0.73		0.33	0.72		0.46	0.81		0.23	0.56	
Uniform Delay, d1	39.1	45.1		38.7	45.0		9.9	17.6		16.2	17.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	8.3		1.3	7.2		0.9	3.5		0.9	1.3	
Delay (s)	41.2	53.4		40.0	52.2		10.8	21.1		17.0	18.6	
Level of Service	D	D		D	D		B	C		B	B	
Approach Delay (s)		50.8			50.2			20.1			18.5	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	116.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

Existing 2024
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	31	605	45	154	577	9	30	97	108	13	108	22
Future Volume (vph)	31	605	45	154	577	9	30	97	108	13	108	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.998			0.938			0.979	
Flt Protected		0.998			0.990			0.994			0.996	
Satd. Flow (prot)	0	1848	0	0	1855	0	0	1744	0	0	1824	0
Flt Permitted		0.943			0.726			0.924			0.928	
Satd. Flow (perm)	0	1746	0	0	1360	0	0	1621	0	0	1700	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			2			31			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	34	658	49	167	627	10	33	105	117	14	117	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	741	0	0	804	0	0	255	0	0	155	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	94.0	94.0		94.0	94.0		26.0	26.0		26.0	26.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	90.0	90.0		90.0	90.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		90.0			90.0			22.0			22.0	
Actuated g/C Ratio		0.75			0.75			0.18			0.18	
v/c Ratio		0.57			0.79			0.79			0.49	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

Existing 2024
 PM Peak Hour

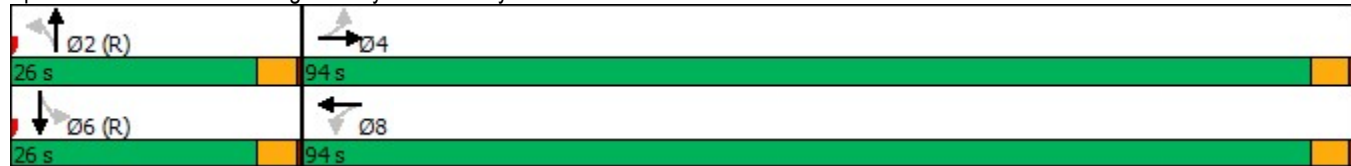


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		8.4			31.8			59.6			47.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		8.4			31.8			59.6			47.9	
LOS		A			C			E			D	
Approach Delay		8.4			31.8			59.6			47.9	
Approach LOS		A			C			E			D	

Intersection Summary

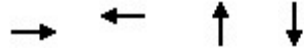
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	27.8
Intersection LOS:	C
Intersection Capacity Utilization	105.3%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues
4: Chinguacousy Road & Mayfield Road

Existing 2024
PM Peak Hour



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	741	804	255	155
v/c Ratio	0.57	0.79	0.79	0.49
Control Delay	8.4	31.8	59.6	47.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.4	31.8	59.6	47.9
Queue Length 50th (m)	64.5	185.9	51.2	31.5
Queue Length 95th (m)	90.4	228.6	#90.8	52.6
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1311	1020	322	317
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.79	0.79	0.49

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
4: Chinguacousy Road & Mayfield Road

Existing 2024
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕			↕		
Traffic Volume (vph)	31	605	45	154	577	9	30	97	108	13	108	22	
Future Volume (vph)	31	605	45	154	577	9	30	97	108	13	108	22	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		1.00			1.00			1.00			1.00		
Frbp, ped/bikes		1.00			1.00			1.00			1.00		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		0.99			1.00			0.94			0.98		
Flt Protected		1.00			0.99			0.99			1.00		
Satd. Flow (prot)		1848			1855			1743			1824		
Flt Permitted		0.94			0.73			0.92			0.93		
Satd. Flow (perm)		1747			1361			1621			1701		
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)	34	658	49	167	627	10	33	105	117	14	117	24	
RTOR Reduction (vph)	0	2	0	0	1	0	0	25	0	0	6	0	
Lane Group Flow (vph)	0	739	0	0	804	0	0	230	0	0	149	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
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)		90.0			90.0			22.0			22.0		
Effective Green, g (s)		90.0			90.0			22.0			22.0		
Actuated g/C Ratio		0.75			0.75			0.18			0.18		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Lane Grp Cap (vph)		1310			1020			297			311		
v/s Ratio Prot													
v/s Ratio Perm		0.42			0.59			0.14			0.09		
v/c Ratio		0.56			0.79			0.77			0.48		
Uniform Delay, d1		6.5			9.2			46.6			43.9		
Progression Factor		1.00			2.71			1.00			1.00		
Incremental Delay, d2		1.8			4.2			17.6			5.2		
Delay (s)		8.3			29.0			64.3			49.1		
Level of Service		A			C			E			D		
Approach Delay (s)		8.3			29.0			64.3			49.1		
Approach LOS		A			C			E			D		
Intersection Summary													
HCM 2000 Control Delay			27.3									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.78										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			105.3%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

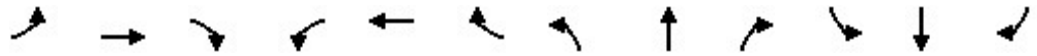
Existing 2024
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	673	38	96	748	68	58	185	96	101	138	21
Future Volume (vph)	20	673	38	96	748	68	58	185	96	101	138	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.987				0.850		0.980	
Flt Protected	0.950			0.950				0.988		0.950		
Satd. Flow (prot)	1738	1850	0	1755	1813	0	0	1884	1585	1738	1823	0
Flt Permitted	0.188			0.253				0.876		0.452		
Satd. Flow (perm)	344	1850	0	467	1813	0	0	1670	1585	827	1823	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			7				81		6	
Link Speed (k/h)		70			70			80		80		
Link Distance (m)		1419.4			1263.7			341.6		3084.5		
Travel Time (s)		73.0			65.0			15.4		138.8		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	21	701	40	100	779	71	60	193	100	105	144	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	741	0	100	850	0	0	253	100	105	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7		3.7		
Link Offset(m)		0.0			0.0			0.0		0.0		
Crosswalk Width(m)		1.6			1.6			1.6		1.6		
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0	39.0	39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%	32.5%	32.5%	32.5%	
Maximum Green (s)	75.0	75.0		75.0	75.0		33.0	33.0	33.0	33.0	33.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)	75.0	75.0		75.0	75.0		33.0	33.0	33.0	33.0	33.0	
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.28	0.28	0.28	0.28	0.28	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

Existing 2024
PM Peak Hour

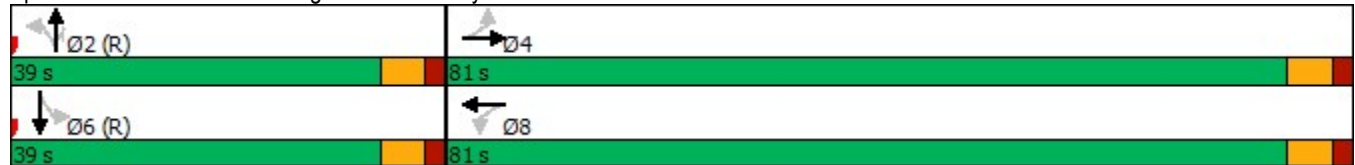


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.10	0.64		0.34	0.75			0.55	0.20	0.46	0.33	
Control Delay	12.9	18.0		14.8	21.0			42.6	11.2	44.1	35.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	12.9	18.0		14.8	21.0			42.6	11.2	44.1	35.6	
LOS	B	B		B	C			D	B	D	D	
Approach Delay		17.9			20.3			33.7			38.9	
Approach LOS		B			C			C			D	

Intersection Summary

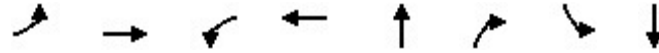
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	23.7
Intersection LOS:	C
Intersection Capacity Utilization	88.3%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues
5: McLaughlin Road & Mayfield Road

Existing 2024
PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	21	741	100	850	253	100	105	166
v/c Ratio	0.10	0.64	0.34	0.75	0.55	0.20	0.46	0.33
Control Delay	12.9	18.0	14.8	21.0	42.6	11.2	44.1	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	18.0	14.8	21.0	42.6	11.2	44.1	35.6
Queue Length 50th (m)	1.9	96.9	10.5	130.6	51.0	3.3	20.6	30.0
Queue Length 95th (m)	m4.0	145.0	22.2	183.3	77.4	16.3	38.5	49.2
Internal Link Dist (m)		1395.4		1239.7	317.6			3060.5
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	215	1158	291	1135	459	494	227	505
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.64	0.34	0.75	0.55	0.20	0.46	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

Existing 2024
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	20	673	38	96	748	68	58	185	96	101	138	21	
Future Volume (vph)	20	673	38	96	748	68	58	185	96	101	138	21	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0		
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00		
Frt	1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00		
Satd. Flow (prot)	1738	1850		1755	1814			1884	1585	1738	1823		
Flt Permitted	0.19	1.00		0.25	1.00			0.88	1.00	0.45	1.00		
Satd. Flow (perm)	345	1850		468	1814			1671	1585	827	1823		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	21	701	40	100	779	71	60	193	100	105	144	22	
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	59	0	4	0	
Lane Group Flow (vph)	21	739	0	100	847	0	0	253	41	105	162	0	
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)	75.0	75.0		75.0	75.0			33.0	33.0	33.0	33.0		
Effective Green, g (s)	75.0	75.0		75.0	75.0			33.0	33.0	33.0	33.0		
Actuated g/C Ratio	0.62	0.62		0.62	0.62			0.28	0.28	0.28	0.28		
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0		
Lane Grp Cap (vph)	215	1156		292	1133			459	435	227	501		
v/s Ratio Prot		0.40			c0.47							0.09	
v/s Ratio Perm	0.06			0.21				c0.15	0.03	0.13			
v/c Ratio	0.10	0.64		0.34	0.75			0.55	0.09	0.46	0.32		
Uniform Delay, d1	9.0	14.1		10.7	15.8			37.2	32.4	36.1	34.6		
Progression Factor	1.28	1.10		1.00	1.00			1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.7	2.2		3.2	4.5			4.7	0.4	6.6	1.7		
Delay (s)	12.2	17.6		13.9	20.4			41.9	32.8	42.8	36.3		
Level of Service	B	B		B	C			D	C	D	D		
Approach Delay (s)		17.5			19.7			39.3			38.8		
Approach LOS		B			B			D			D		
Intersection Summary													
HCM 2000 Control Delay			24.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	12.0
Intersection Capacity Utilization			88.3%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

Existing 2024
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	486	63	241	564	63	91	540	230	128	636	387
Future Volume (vph)	271	486	63	241	564	63	91	540	230	128	636	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.96	0.98		0.99	1.00		0.96	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3476	1601	3404	3544	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.309			0.950			0.402			0.308		
Satd. Flow (perm)	570	3476	1538	3326	3544	1562	755	3614	1486	587	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			105			237			379
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	279	501	65	248	581	65	94	557	237	132	656	399
Shared Lane Traffic (%)												
Lane Group Flow (vph)	279	501	65	248	581	65	94	557	237	132	656	399
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	22.0	49.0	49.0	22.0	49.0	49.0	51.0	51.0	51.0	13.0	64.0	64.0
Total Split (%)	16.3%	36.3%	36.3%	16.3%	36.3%	36.3%	37.8%	37.8%	37.8%	9.6%	47.4%	47.4%
Maximum Green (s)	17.0	42.0	42.0	17.0	42.0	42.0	44.0	44.0	44.0	9.0	57.0	57.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

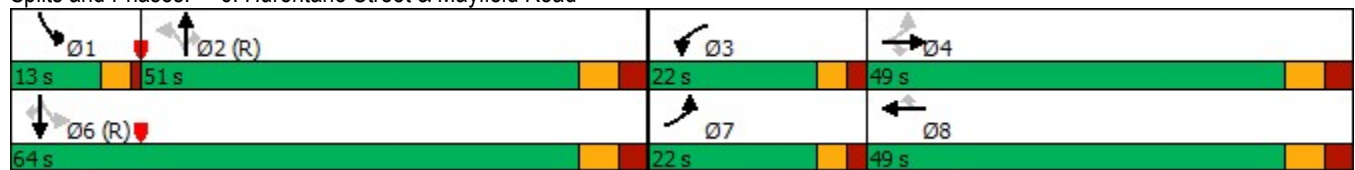
Existing 2024
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	61.0	42.0	42.0	17.0	42.0	42.0	44.0	44.0	44.0	60.0	57.0	57.0
Actuated g/C Ratio	0.45	0.31	0.31	0.13	0.31	0.31	0.33	0.33	0.33	0.44	0.42	0.42
v/c Ratio	0.69	0.46	0.12	0.58	0.53	0.12	0.38	0.47	0.37	0.38	0.44	0.46
Control Delay	31.2	39.1	1.7	61.6	40.4	1.7	40.7	37.9	5.6	26.0	28.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	39.1	1.7	61.6	40.4	1.7	40.7	37.9	5.6	26.0	28.9	4.8
LOS	C	D	A	E	D	A	D	D	A	C	C	A
Approach Delay		33.6			43.5			29.6			20.5	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	30.9
Intersection LOS:	C
Intersection Capacity Utilization	74.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues
6: Hurontario Street & Mayfield Road

Existing 2024
PM Peak Hour



























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	279	501	65	248	581	65	94	557	237	132	656	399
v/c Ratio	0.69	0.46	0.12	0.58	0.53	0.12	0.38	0.47	0.37	0.38	0.44	0.46
Control Delay	31.2	39.1	1.7	61.6	40.4	1.7	40.7	37.9	5.6	26.0	28.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	39.1	1.7	61.6	40.4	1.7	40.7	37.9	5.6	26.0	28.9	4.8
Queue Length 50th (m)	44.2	56.5	0.0	32.5	67.1	0.0	19.3	62.1	0.0	20.7	64.5	3.1
Queue Length 95th (m)	64.4	73.2	2.8	46.6	85.3	2.8	35.8	79.2	18.0	34.0	81.2	23.0
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	406	1081	550	428	1102	558	246	1177	644	343	1482	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.46	0.12	0.58	0.53	0.12	0.38	0.47	0.37	0.38	0.44	0.46

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: Hurontario Street & Mayfield Road

Existing 2024
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	486	63	241	564	63	91	540	230	128	636	387
Future Volume (vph)	271	486	63	241	564	63	91	540	230	128	636	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	3476	1538	3404	3544	1562	1784	3614	1486	1821	3510	1555
Flt Permitted	0.31	1.00	1.00	0.95	1.00	1.00	0.40	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	571	3476	1538	3404	3544	1562	756	3614	1486	589	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	279	501	65	248	581	65	94	557	237	132	656	399
RTOR Reduction (vph)	0	0	45	0	0	45	0	0	160	0	0	219
Lane Group Flow (vph)	279	501	20	248	581	20	94	557	77	132	656	180
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	59.0	42.0	42.0	17.0	42.0	42.0	44.0	44.0	44.0	57.0	57.0	57.0
Effective Green, g (s)	59.0	42.0	42.0	17.0	42.0	42.0	44.0	44.0	44.0	57.0	57.0	57.0
Actuated g/C Ratio	0.44	0.31	0.31	0.13	0.31	0.31	0.33	0.33	0.33	0.42	0.42	0.42
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	398	1081	478	428	1102	485	246	1177	484	330	1482	656
v/s Ratio Prot	c0.09	0.14		0.07	0.16			c0.15		0.03	c0.19	
v/s Ratio Perm	c0.22		0.01			0.01	0.12		0.05	0.14		0.12
v/c Ratio	0.70	0.46	0.04	0.58	0.53	0.04	0.38	0.47	0.16	0.40	0.44	0.27
Uniform Delay, d1	26.3	37.4	32.5	55.6	38.3	32.5	35.0	36.3	32.4	25.2	27.7	25.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.9	1.4	0.2	5.6	1.8	0.2	4.5	1.4	0.7	3.6	1.0	1.0
Delay (s)	36.1	38.9	32.6	61.3	40.1	32.6	39.5	37.6	33.1	28.8	28.7	26.5
Level of Service	D	D	C	E	D	C	D	D	C	C	C	C
Approach Delay (s)		37.5			45.4			36.6			28.0	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			36.2			HCM 2000 Level of Service		D				
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			135.0			Sum of lost time (s)		23.0				
Intersection Capacity Utilization			74.9%			ICU Level of Service		D				
Analysis Period (min)			15									
c Critical Lane Group												

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	158	2	46	250	8	10	60	53	8	55	4
Future Vol, veh/h	4	158	2	46	250	8	10	60	53	8	55	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	3	0	0	1	13	0	7	2	10	2	10
Mvmt Flow	4	168	2	49	266	9	11	64	56	9	59	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	11	9.1	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	2%	15%	12%
Vol Thru, %	49%	96%	82%	82%
Vol Right, %	43%	1%	3%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	164	304	67
LT Vol	10	4	46	8
Through Vol	60	158	250	55
RT Vol	53	2	8	4
Lane Flow Rate	131	174	323	71
Geometry Grp	1	1	1	1
Degree of Util (X)	0.179	0.232	0.416	0.107
Departure Headway (Hd)	4.916	4.787	4.633	5.4
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	724	745	773	658
Service Time	2.987	2.851	2.688	3.48
HCM Lane V/C Ratio	0.181	0.234	0.418	0.108
HCM Control Delay	9.1	9.3	11	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.9	2.1	0.4

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	208	5	79	294	23	5	120	82	19	51	6
Future Vol, veh/h	9	208	5	79	294	23	5	120	82	19	51	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	4	10	4	1	4	10	2	5	0	6	0
Mvmt Flow	10	221	5	84	313	24	5	128	87	20	54	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	16.3	11.9	10.1
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	4%	20%	25%
Vol Thru, %	58%	94%	74%	67%
Vol Right, %	40%	2%	6%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	222	396	76
LT Vol	5	9	79	19
Through Vol	120	208	294	51
RT Vol	82	5	23	6
Lane Flow Rate	220	236	421	81
Geometry Grp	1	1	1	1
Degree of Util (X)	0.351	0.357	0.614	0.137
Departure Headway (Hd)	5.734	5.438	5.244	6.102
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	625	659	687	585
Service Time	3.789	3.488	3.287	4.169
HCM Lane V/C Ratio	0.352	0.358	0.613	0.138
HCM Control Delay	11.9	11.5	16.3	10.1
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	1.6	1.6	4.2	0.5

Synchro Outputs - No GTA West

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	217	3	86	139	26	2	141	177	20	146	8
Future Volume (vph)	2	217	3	86	139	26	2	141	177	20	146	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.976			0.925				0.993
Flt Protected				0.950								0.994
Satd. Flow (prot)	0	1917	0	1772	1816	0	0	1711	0	0	1783	0
Flt Permitted				0.950								0.994
Satd. Flow (perm)	0	1917	0	1772	1816	0	0	1711	0	0	1783	0
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	231	3	91	148	28	2	150	188	21	155	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	236	0	91	176	0	0	340	0	0	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop				Stop


















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	217	3	86	139	26	2	141	177	20	146	8
Future Volume (vph)	2	217	3	86	139	26	2	141	177	20	146	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	2	231	3	91	148	28	2	150	188	21	155	9
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	236	91	176	340	185							
Volume Left (vph)	2	91	0	2	21							
Volume Right (vph)	3	0	28	188	9							
Hadj (s)	-0.01	0.55	-0.06	-0.26	0.10							
Departure Headway (s)	6.1	7.0	6.4	5.5	6.2							
Degree Utilization, x	0.40	0.18	0.31	0.52	0.32							
Capacity (veh/h)	539	472	506	608	524							
Control Delay (s)	13.1	10.3	11.1	14.3	12.0							
Approach Delay (s)	13.1	10.8		14.3	12.0							
Approach LOS	B	B		B	B							
Intersection Summary												
Delay			12.7									
Level of Service			B									
Intersection Capacity Utilization			53.3%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	6	390	21	153	228	21	22	55	263	34	109	10
Future Volume (vph)	6	390	21	153	228	21	22	55	263	34	109	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.986			0.989	
Satd. Flow (prot)	0	1875	0	1789	1832	0	0	1867	1617	0	1858	0
Flt Permitted		0.999		0.950				0.986			0.989	
Satd. Flow (perm)	0	1875	0	1789	1832	0	0	1867	1617	0	1858	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			1356.9			588.2			263.1	
Travel Time (s)		71.1			69.8			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	415	22	163	243	22	23	59	280	36	116	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	443	0	163	265	0	0	82	280	0	163	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	



















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.3%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
























2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	390	21	153	228	21	22	55	263	34	109	10
Future Volume (vph)	6	390	21	153	228	21	22	55	263	34	109	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	415	22	163	243	22	23	59	280	36	116	11
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	443	163	265	82	280	163						
Volume Left (vph)	6	163	0	23	0	36						
Volume Right (vph)	22	0	22	0	280	11						
Hadj (s)	0.00	0.53	0.00	0.16	-0.68	0.03						
Departure Headway (s)	7.4	8.1	7.5	8.1	7.2	8.6						
Degree Utilization, x	0.91	0.37	0.55	0.18	0.56	0.39						
Capacity (veh/h)	473	416	450	430	473	401						
Control Delay (s)	47.8	14.5	18.3	11.7	17.9	16.9						
Approach Delay (s)	47.8	16.9		16.5		16.9						
Approach LOS	E	C		C		C						
Intersection Summary												
Delay			26.6									
Level of Service			D									
Intersection Capacity Utilization			60.3%		ICU Level of Service				B			
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	327	195	158	242	154	35	53	1396	129	32	2054	181	
Future Volume (vph)	327	195	158	242	154	35	53	1396	129	32	2054	181	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.933			0.972				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1755	1746	0	1722	1785	0	1722	4445	1471	1615	5043	1633	
Flt Permitted	0.605			0.386			0.067			0.112			
Satd. Flow (perm)	1118	1746	0	700	1785	0	121	4445	1471	190	5043	1633	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		2			11				135			129	
Link Speed (k/h)		70			70			80				80	
Link Distance (m)		1356.9			440.4			586.0				282.2	
Travel Time (s)		69.8			22.6			26.4				12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Adj. Flow (vph)	352	210	170	260	166	38	57	1501	139	34	2209	195	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	352	380	0	260	204	0	57	1501	139	34	2209	195	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7				3.7	
Link Offset(m)		0.0			0.0			0.0				0.0	
Crosswalk Width(m)		1.6			1.6			1.6				1.6	
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7				28.7	
Detector 2 Size(m)		1.8			1.8			1.8				1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex	
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0				0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm	
Protected Phases		4			8			2				6	

Lanes, Volumes, Timings
 3: Hurontario Street & Old School Road

06/07/2024

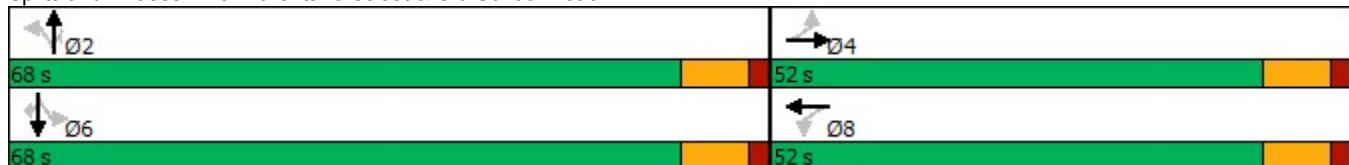


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	24.0	24.0		24.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	52.0	52.0		52.0	52.0		68.0	68.0	68.0	68.0	68.0	68.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%	56.7%	56.7%	56.7%	56.7%
Maximum Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Yellow Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50
v/c Ratio	0.86	0.59		1.02	0.31		0.95	0.68	0.17	0.36	0.88	0.22
Control Delay	56.9	35.2		99.2	27.2		138.1	24.6	3.4	31.7	31.7	6.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	35.2		99.2	27.2		138.1	24.6	3.4	31.7	31.7	6.6
LOS	E	D		F	C		F	C	A	C	C	A
Approach Delay		45.6			67.5			26.6				29.7
Approach LOS		D			E			C				C

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.02
Intersection Signal Delay:	34.2
Intersection LOS:	C
Intersection Capacity Utilization:	97.4%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	352	380	260	204	57	1501	139	34	2209	195
v/c Ratio	0.86	0.59	1.02	0.31	0.95	0.68	0.17	0.36	0.88	0.22
Control Delay	56.9	35.2	99.2	27.2	138.1	24.6	3.4	31.7	31.7	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	35.2	99.2	27.2	138.1	24.6	3.4	31.7	31.7	6.6
Queue Length 50th (m)	76.0	71.4	~62.5	32.0	12.3	94.6	0.5	4.7	164.2	7.8
Queue Length 95th (m)	#129.4	103.1	#116.0	51.2	#40.6	111.1	10.4	15.1	186.5	20.2
Internal Link Dist (m)		1332.9		416.4		562.0			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	409	641	256	661	60	2222	803	95	2521	881
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.59	1.02	0.31	0.95	0.68	0.17	0.36	0.88	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	327	195	158	242	154	35	53	1396	129	32	2054	181
Future Volume (vph)	327	195	158	242	154	35	53	1396	129	32	2054	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.93		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	1746		1722	1785		1722	4445	1471	1615	5043	1633
Flt Permitted	0.61	1.00		0.39	1.00		0.07	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	1118	1746		699	1785		121	4445	1471	191	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	352	210	170	260	166	38	57	1501	139	34	2209	195
RTOR Reduction (vph)	0	1	0	0	7	0	0	0	68	0	0	65
Lane Group Flow (vph)	352	379	0	260	197	0	57	1501	72	34	2209	131
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2		2	6	6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Effective Green, g (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
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)	409	640		256	654		60	2222	735	95	2521	816
v/s Ratio Prot		0.22			0.11			0.34			0.44	
v/s Ratio Perm	0.31			c0.37			c0.47		0.05	0.18		0.08
v/c Ratio	0.86	0.59		1.02	0.30		0.95	0.68	0.10	0.36	0.88	0.16
Uniform Delay, d1	35.2	30.7		38.0	27.1		28.6	22.7	15.8	18.3	26.7	16.3
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	16.7	1.5		60.3	0.3		102.6	1.7	0.3	10.2	4.7	0.4
Delay (s)	51.8	32.2		98.3	27.3		131.1	24.3	16.0	28.5	31.4	16.7
Level of Service	D	C		F	C		F	C	B	C	C	B
Approach Delay (s)		41.6			67.1			27.2			30.1	
Approach LOS		D			E			C			C	
Intersection Summary												
HCM 2000 Control Delay			34.0									C
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			120.0								16.0	
Intersection Capacity Utilization			97.4%									F
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕			↕	
Traffic Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Future Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.996			0.943			0.984	
Fl _t Protected		0.997			0.991			0.996			0.990	
Satd. Flow (prot)	0	4860	0	0	4872	0	0	1736	0	0	1786	0
Fl _t Permitted		0.874			0.719			0.967			0.789	
Satd. Flow (perm)	0	4260	0	0	3535	0	0	1685	0	0	1423	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			7			31			6	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	35	615	45	126	535	18	22	153	127	58	184	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	695	0	0	679	0	0	302	0	0	275	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Maximum Green (s)	77.0	77.0		77.0	77.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
v/c Ratio		0.25			0.30			0.59			0.66	
Control Delay		9.2			23.9			37.9			45.1	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

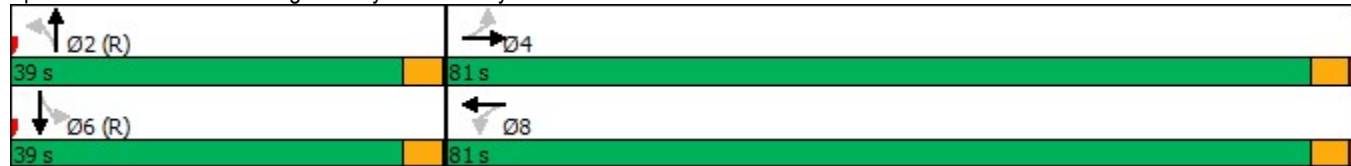


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		9.2			23.9			37.9			45.1	
LOS		A			C			D			D	
Approach Delay		9.2			23.9			37.9			45.1	
Approach LOS		A			C			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	23.8
Intersection LOS:	C
Intersection Capacity Utilization	66.0%
ICU Level of Service	C
Analysis Period (min)	15

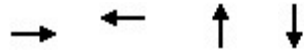
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	695	679	302	275
v/c Ratio	0.25	0.30	0.59	0.66
Control Delay	9.2	23.9	37.9	45.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.2	23.9	37.9	45.1
Queue Length 50th (m)	23.0	42.5	54.6	55.6
Queue Length 95th (m)	29.1	54.9	83.9	85.7
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2739	2270	513	419
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.30	0.59	0.66
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔			↔↔↔			↔			↔	
Traffic Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Future Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		0.99			1.00			0.94			0.98	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		4864			4871			1737			1785	
Flt Permitted		0.87			0.72			0.97			0.79	
Satd. Flow (perm)		4260			3536			1686			1423	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	615	45	126	535	18	22	153	127	58	184	33
RTOR Reduction (vph)	0	6	0	0	3	0	0	22	0	0	4	0
Lane Group Flow (vph)	0	689	0	0	676	0	0	280	0	0	271	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		77.0			77.0			35.0			35.0	
Effective Green, g (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		2733			2268			491			415	
v/s Ratio Prot												
v/s Ratio Perm		0.16			0.19			0.17			0.19	
v/c Ratio		0.25			0.30			0.57			0.65	
Uniform Delay, d1		9.2			9.5			36.1			37.2	
Progression Factor		1.00			2.48			1.00			1.00	
Incremental Delay, d2		0.2			0.3			4.7			7.8	
Delay (s)		9.4			23.9			40.9			44.9	
Level of Service		A			C			D			D	
Approach Delay (s)		9.4			23.9			40.9			44.9	
Approach LOS		A			C			D			D	

Intersection Summary

HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Future Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.981				0.850		0.977	
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1825	4892	0	1706	4781	0	0	1837	1570	1690	1818	0
Flt Permitted	0.341			0.284				0.671		0.521		
Satd. Flow (perm)	655	4892	0	510	4781	0	0	1244	1570	927	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			38				84			8
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1054.6			341.6			2496.3	
Travel Time (s)		73.0			54.2			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	14	811	90	117	659	93	40	181	88	217	311	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	901	0	117	752	0	0	221	88	217	367	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	23.0	23.0	
Total Split (s)	78.0	78.0		78.0	78.0		42.0	42.0	42.0	42.0	42.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	72.0	72.0		72.0	72.0		36.0	36.0	36.0	36.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

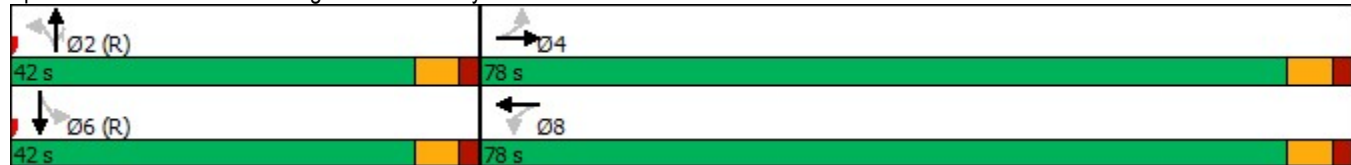


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.31		0.38	0.26			0.59	0.17	0.78	0.67	
Control Delay	17.5	18.9		17.0	11.0			43.5	8.0	59.1	42.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.5	18.9		17.0	11.0			43.5	8.0	59.1	42.9	
LOS	B	B		B	B			D	A	E	D	
Approach Delay		18.9			11.8			33.4			48.9	
Approach LOS		B			B			C			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	24.8
Intersection LOS:	C
Intersection Capacity Utilization	74.6%
ICU Level of Service	D
Analysis Period (min)	15

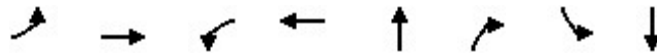
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	14	901	117	752	221	88	217	367
v/c Ratio	0.04	0.31	0.38	0.26	0.59	0.17	0.78	0.67
Control Delay	17.5	18.9	17.0	11.0	43.5	8.0	59.1	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	18.9	17.0	11.0	43.5	8.0	59.1	42.9
Queue Length 50th (m)	1.6	44.1	13.5	27.3	44.3	0.7	46.7	73.9
Queue Length 95th (m)	m4.8	55.0	27.6	34.2	71.0	12.4	#86.2	107.3
Internal Link Dist (m)		1395.4		1030.6	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	393	2946	306	2883	373	529	278	551
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.31	0.38	0.26	0.59	0.17	0.78	0.67

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑			↑	↗	↖	↑	↘
Traffic Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Future Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1825	4892		1706	4783			1837	1570	1690	1819	
Flt Permitted	0.34	1.00		0.28	1.00			0.67	1.00	0.52	1.00	
Satd. Flow (perm)	656	4892		510	4783			1244	1570	927	1819	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	14	811	90	117	659	93	40	181	88	217	311	56
RTOR Reduction (vph)	0	11	0	0	15	0	0	0	59	0	6	0
Lane Group Flow (vph)	14	890	0	117	737	0	0	221	29	217	361	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Effective Green, g (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	393	2935		306	2869			373	471	278	545	
v/s Ratio Prot		0.18			0.15							0.20
v/s Ratio Perm	0.02			c0.23				0.18	0.02	c0.23		
v/c Ratio	0.04	0.30		0.38	0.26			0.59	0.06	0.78	0.66	
Uniform Delay, d1	9.8	11.7		12.5	11.3			35.8	30.0	38.4	36.7	
Progression Factor	1.72	1.63		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.3		3.6	0.2			6.8	0.3	19.3	6.2	
Delay (s)	17.1	19.4		16.1	11.6			42.5	30.2	57.7	42.9	
Level of Service	B	B		B	B			D	C	E	D	
Approach Delay (s)		19.4			12.2			39.0			48.4	
Approach LOS		B			B			D			D	

Intersection Summary		
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.52	C
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	74.6%	12.0
Analysis Period (min)	15	ICU Level of Service
		D

c Critical Lane Group

Lanes, Volumes, Timings

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293
Future Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.329			0.950			0.253			0.523		
Satd. Flow (perm)	601	4902	1508	3324	4948	1395	481	3476	1467	929	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			124			203			312
Link Speed (k/h)		70			70			70				70
Link Distance (m)		351.2			749.9			381.1				609.4
Travel Time (s)		18.1			38.6			19.6				31.3
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	28.0	58.0	58.0	20.0	50.0	50.0	82.0	82.0	82.0	82.0	82.0	82.0
Total Split (%)	17.5%	36.3%	36.3%	12.5%	31.3%	31.3%	51.3%	51.3%	51.3%	51.3%	51.3%	51.3%
Maximum Green (s)	23.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

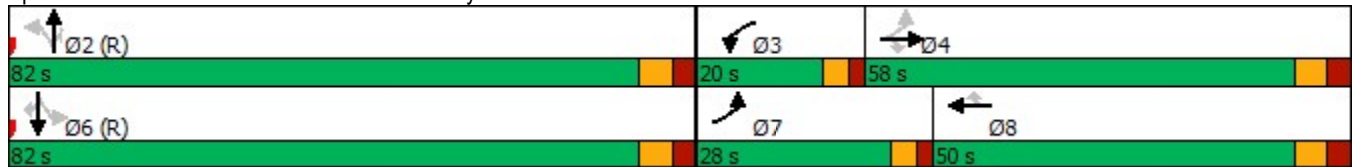


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	73.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Actuated g/C Ratio	0.46	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.21	0.26	0.58	0.49	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
LOS	C	D	A	E	D	A	C	C	A	D	C	A
Approach Delay		39.7			50.4			19.4			25.8	
Approach LOS		D			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	34.0
Intersection LOS:	C
Intersection Capacity Utilization	73.8%
ICU Level of Service	D
Analysis Period (min)	15

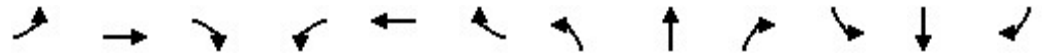
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.21	0.26	0.58	0.49	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
Queue Length 50th (m)	46.3	75.9	0.0	32.1	51.5	0.0	15.6	34.1	0.0	58.3	93.2	0.0
Queue Length 95th (m)	66.6	89.7	13.4	46.0	63.5	16.3	30.4	44.9	14.1	89.5	111.7	16.5
Internal Link Dist (m)		327.2			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	437	1562	545	313	1329	465	225	1629	795	435	1661	895
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.21	0.26	0.58	0.49	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293
Future Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1737	4902	1508	3340	4948	1395	1807	3476	1467	1688	3544	1557
Flt Permitted	0.33	1.00	1.00	0.95	1.00	1.00	0.25	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	602	4902	1508	3340	4948	1395	482	3476	1467	929	3544	1557
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312
RTOR Reduction (vph)	0	0	65	0	0	91	0	0	108	0	0	166
Lane Group Flow (vph)	234	798	30	200	535	33	78	350	95	254	817	146
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Effective Green, g (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Actuated g/C Ratio	0.44	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Grp Cap (vph)	430	1562	480	313	1329	374	225	1629	687	435	1661	729
v/s Ratio Prot	c0.08	0.16		c0.06	0.11			0.10			0.23	
v/s Ratio Perm	c0.16		0.02			0.02	0.16		0.06	c0.27		0.09
v/c Ratio	0.54	0.51	0.06	0.64	0.40	0.09	0.35	0.21	0.14	0.58	0.49	0.20
Uniform Delay, d1	29.3	44.4	37.9	69.9	48.0	43.8	27.0	25.1	24.1	31.1	29.3	24.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	1.2	0.3	9.6	0.9	0.5	4.2	0.3	0.4	5.6	1.0	0.6
Delay (s)	34.2	45.5	38.1	79.5	48.9	44.3	31.1	25.4	24.6	36.7	30.4	25.5
Level of Service	C	D	D	E	D	D	C	C	C	D	C	C
Approach Delay (s)		42.6			55.3			25.8			30.5	
Approach LOS		D			E			C			C	
Intersection Summary												
HCM 2000 Control Delay			38.5								HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			160.0							19.0		
Intersection Capacity Utilization			73.8%								ICU Level of Service	D
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024




















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↙	↘			↕			↕	
Traffic Volume (vph)	4	194	2	174	275	32	10	229	199	25	154	4
Future Volume (vph)	4	194	2	174	275	32	10	229	199	25	154	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.984			0.939			0.997	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1849	0	0	1723	0	0	1842	0
Flt Permitted		0.999		0.950				0.999			0.993	
Satd. Flow (perm)	0	1863	0	1825	1849	0	0	1723	0	0	1842	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	206	2	185	293	34	11	244	212	27	164	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	0	185	327	0	0	467	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 62.9% ICU Level of Service B
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	194	2	174	275	32	10	229	199	25	154	4
Future Volume (vph)	4	194	2	174	275	32	10	229	199	25	154	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	206	2	185	293	34	11	244	212	27	164	4
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	212	185	327	467	195							
Volume Left (vph)	4	185	0	11	27							
Volume Right (vph)	2	0	34	212	4							
Hadj (s)	0.05	0.50	-0.03	-0.19	0.07							
Departure Headway (s)	7.7	7.9	7.4	6.6	7.6							
Degree Utilization, x	0.45	0.41	0.67	0.85	0.41							
Capacity (veh/h)	435	435	466	528	429							
Control Delay (s)	16.8	15.1	22.8	36.4	15.8							
Approach Delay (s)	16.8	20.0		36.4	15.8							
Approach LOS	C	C		E	C							
Intersection Summary												
Delay			24.5									
Level of Service			C									
Intersection Capacity Utilization			62.9%		ICU Level of Service				B			
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	9	390	22	274	447	23	29	124	280	19	53	6
Future Volume (vph)	9	390	22	274	447	23	29	124	280	19	53	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.993				0.850		0.990	
Flt Protected		0.999		0.950				0.991			0.988	
Satd. Flow (prot)	0	1829	0	1755	1886	0	0	1839	1555	0	1805	0
Flt Permitted		0.999		0.950				0.991			0.988	
Satd. Flow (perm)	0	1829	0	1755	1886	0	0	1839	1555	0	1805	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			1356.9			588.2			263.1	
Travel Time (s)		71.1			69.8			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	415	23	291	476	24	31	132	298	20	56	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	448	0	291	500	0	0	163	298	0	82	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.9%
ICU Level of Service	C
Analysis Period (min)	15
























HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	390	22	274	447	23	29	124	280	19	53	6
Future Volume (vph)	9	390	22	274	447	23	29	124	280	19	53	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	415	23	291	476	24	31	132	298	20	56	6
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	448	291	500	163	298	82						
Volume Left (vph)	10	291	0	31	0	20						
Volume Right (vph)	23	0	24	0	298	6						
Hadj (s)	0.05	0.57	-0.01	0.15	-0.61	0.07						
Departure Headway (s)	7.6	8.1	7.5	8.2	7.4	9.4						
Degree Utilization, x	0.94	0.65	1.04	0.37	0.62	0.21						
Capacity (veh/h)	471	434	484	430	467	367						
Control Delay (s)	55.4	23.9	78.5	14.8	20.4	14.9						
Approach Delay (s)	55.4	58.5		18.4		14.9						
Approach LOS	F	F		C		B						
Intersection Summary												
Delay			45.3									
Level of Service			E									
Intersection Capacity Utilization			72.9%		ICU Level of Service		C					
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	399	185	96	202	232	45	177	2435	301	32	1437	337	
Future Volume (vph)	399	185	96	202	232	45	177	2435	301	32	1437	337	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.949			0.976				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1825	1736	0	1789	1859	0	1807	5043	1633	1825	4812	1541	
Flt Permitted	0.204			0.450			0.078			0.089			
Satd. Flow (perm)	392	1736	0	848	1859	0	148	5043	1633	171	4812	1541	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		21			7				186			203	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1356.9			440.4			586.0			282.2		
Travel Time (s)		69.8			22.6			26.4			12.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%	
Adj. Flow (vph)	411	191	99	208	239	46	182	2510	310	33	1481	347	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	411	290	0	208	285	0	182	2510	310	33	1481	347	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	
Protected Phases	7	4		3	8		5	2			6	7	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	29.0	29.0	10.0
Total Split (s)	23.0	35.0		17.0	29.0		18.0	68.0	68.0	50.0	50.0	23.0
Total Split (%)	19.2%	29.2%		14.2%	24.2%		15.0%	56.7%	56.7%	41.7%	41.7%	19.2%
Maximum Green (s)	19.0	29.0		13.0	23.0		12.0	62.0	62.0	44.0	44.0	19.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	Max	Max	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0			0	0	0	0	
Act Effct Green (s)	45.9	27.6		35.3	20.9		62.0	62.0	62.0	45.0	45.0	70.0
Actuated g/C Ratio	0.39	0.23		0.30	0.18		0.53	0.53	0.53	0.38	0.38	0.59
v/c Ratio	1.07	0.69		0.59	0.85		0.78	0.95	0.33	0.52	0.81	0.35
Control Delay	96.5	47.7		33.2	69.2		48.0	35.9	7.3	61.6	37.4	6.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.5	47.7		33.2	69.2		48.0	35.9	7.3	61.6	37.4	6.2
LOS	F	D		C	E		D	D	A	E	D	A
Approach Delay		76.3			54.0			33.7			32.0	
Approach LOS		E			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	118
Natural Cycle:	100
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.07
Intersection Signal Delay:	39.8
Intersection LOS:	D
Intersection Capacity Utilization:	105.8%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	411	290	208	285	182	2510	310	33	1481	347
v/c Ratio	1.07	0.69	0.59	0.85	0.78	0.95	0.33	0.52	0.81	0.35
Control Delay	96.5	47.7	33.2	69.2	48.0	35.9	7.3	61.6	37.4	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.5	47.7	33.2	69.2	48.0	35.9	7.3	61.6	37.4	6.2
Queue Length 50th (m)	~83.6	57.7	32.8	63.0	26.2	200.9	14.8	6.0	115.7	15.1
Queue Length 95th (m)	#145.4	87.7	51.1	#102.7	#59.5	#244.5	31.8	#22.4	135.2	31.8
Internal Link Dist (m)		1332.9		416.4		562.0			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	383	442	362	368	246	2651	946	64	1834	996
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.66	0.57	0.77	0.74	0.95	0.33	0.52	0.81	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	399	185	96	202	232	45	177	2435	301	32	1437	337
Future Volume (vph)	399	185	96	202	232	45	177	2435	301	32	1437	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1735		1789	1859		1807	5043	1633	1825	4812	1541
Flt Permitted	0.20	1.00		0.45	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	393	1735		847	1859		149	5043	1633	171	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	411	191	99	208	239	46	182	2510	310	33	1481	347
RTOR Reduction (vph)	0	16	0	0	6	0	0	0	88	0	0	93
Lane Group Flow (vph)	411	274	0	208	279	0	182	2510	222	33	1481	254
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.0	27.6		33.4	21.0		62.1	62.1	62.1	45.0	45.0	64.0
Effective Green, g (s)	44.0	27.6		33.4	21.0		62.1	62.1	62.1	45.0	45.0	64.0
Actuated g/C Ratio	0.37	0.23		0.28	0.18		0.53	0.53	0.53	0.38	0.38	0.54
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
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)	376	405		338	330		234	2651	858	65	1833	835
v/s Ratio Prot	c0.18	0.16		0.06	0.15		0.07	c0.50			0.31	0.05
v/s Ratio Perm	c0.23			0.11			0.34		0.14	0.19		0.12
v/c Ratio	1.09	0.68		0.62	0.85		0.78	0.95	0.26	0.51	0.81	0.30
Uniform Delay, d1	31.1	41.2		34.5	47.0		27.2	26.4	15.4	28.0	32.7	14.8
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	73.8	4.4		3.3	17.8		14.9	8.8	0.7	25.6	4.0	0.2
Delay (s)	104.9	45.6		37.8	64.8		42.2	35.3	16.1	53.6	36.6	15.0
Level of Service	F	D		D	E		D	D	B	D	D	B
Approach Delay (s)		80.4			53.4			33.7			32.9	
Approach LOS		F			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			40.5				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			1.10									
Actuated Cycle Length (s)			118.1			Sum of lost time (s)				22.0		
Intersection Capacity Utilization			105.8%			ICU Level of Service				G		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕				↕
Traffic Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25
Future Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				1.00
Frt		0.990			0.991			0.951				0.982
Flt Protected		0.998			0.990			0.996				0.993
Satd. Flow (prot)	0	5041	0	0	5034	0	0	1778	0	0	1832	0
Flt Permitted		0.849			0.676			0.962				0.918
Satd. Flow (perm)	0	4289	0	0	3437	0	0	1717	0	0	1694	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			10			31				8
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				3083.5
Travel Time (s)		14.1			73.0			15.5				138.8
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	39	691	50	179	653	50	34	225	147	28	151	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	780	0	0	882	0	0	406	0	0	206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0				0.0
Total Lost Time (s)		4.0			4.0			4.0				4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		57.0			57.0			55.0				55.0
Actuated g/C Ratio		0.48			0.48			0.46				0.46
v/c Ratio		0.38			0.54			0.51				0.26

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

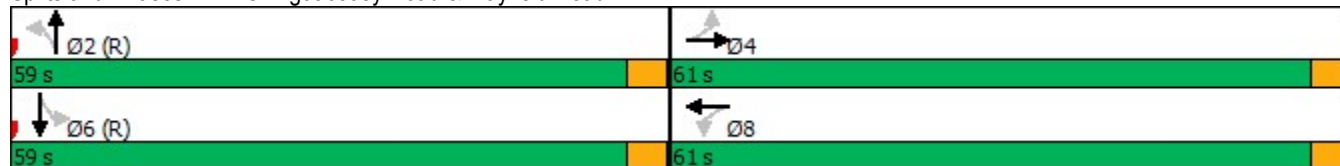


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		20.5			44.8			23.7			20.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.5			44.8			23.7			20.3	
LOS		C			D			C			C	
Approach Delay		20.5			44.8			23.7			20.3	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	30.5
Intersection LOS:	C
Intersection Capacity Utilization	64.8%
ICU Level of Service	C
Analysis Period (min)	15

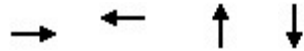
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

























06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	780	882	406	206
v/c Ratio	0.38	0.54	0.51	0.26
Control Delay	20.5	44.8	23.7	20.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.5	44.8	23.7	20.3
Queue Length 50th (m)	41.3	73.8	60.7	28.0
Queue Length 95th (m)	51.5	87.8	89.2	44.5
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2043	1637	803	780
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.54	0.51	0.26
Intersection Summary				

HCM Signalized Intersection Capacity Analysis
4: Chinguacousy Road & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			  			  				  	
Traffic Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25	
Future Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		0.91			0.91			1.00			1.00		
Frbp, ped/bikes		1.00			1.00			1.00			1.00		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		0.99			0.99			0.95			0.98		
Flt Protected		1.00			0.99			1.00			0.99		
Satd. Flow (prot)		5041			5036			1777			1833		
Flt Permitted		0.85			0.68			0.96			0.92		
Satd. Flow (perm)		4288			3438			1717			1694		
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)	39	691	50	179	653	50	34	225	147	28	151	27	
RTOR Reduction (vph)	0	6	0	0	5	0	0	17	0	0	4	0	
Lane Group Flow (vph)	0	774	0	0	877	0	0	389	0	0	202	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
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)		57.0			57.0			55.0			55.0		
Effective Green, g (s)		57.0			57.0			55.0			55.0		
Actuated g/C Ratio		0.48			0.48			0.46			0.46		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Lane Grp Cap (vph)		2036			1633			786			776		
v/s Ratio Prot													
v/s Ratio Perm		0.18			c0.26			c0.23			0.12		
v/c Ratio		0.38			0.54			0.50			0.26		
Uniform Delay, d1		20.2			22.2			22.8			20.0		
Progression Factor		1.00			1.97			1.00			1.00		
Incremental Delay, d2		0.5			1.1			2.2			0.8		
Delay (s)		20.7			44.8			25.0			20.8		
Level of Service		C			D			C			C		
Approach Delay (s)		20.7			44.8			25.0			20.8		
Approach LOS		C			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			30.8									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.52										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			64.8%									ICU Level of Service	C
Analysis Period (min)			15										
c	Critical Lane Group												

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Future Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.973				0.850		0.966	
Flt Protected	0.950			0.950				0.989		0.950		
Satd. Flow (prot)	1738	5041	0	1755	4902	0	0	1885	1585	1738	1794	0
Flt Permitted	0.173			0.264				0.852		0.301		
Satd. Flow (perm)	317	5041	0	488	4902	0	0	1624	1585	551	1794	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			48				64			17
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1054.6			341.6			2496.3	
Travel Time (s)		73.0			54.2			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	35	794	58	106	916	198	96	328	108	165	200	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	852	0	106	1114	0	0	424	108	165	259	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	8.0	22.0	
Total Split (s)	56.0	56.0		56.0	56.0		52.0	52.0	52.0	12.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		43.3%	43.3%	43.3%	10.0%	53.3%	
Maximum Green (s)	50.0	50.0		50.0	50.0		46.0	46.0	46.0	8.0	58.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	3.5	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	50.0	50.0		50.0	50.0			46.0	46.0	60.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.50	0.48	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

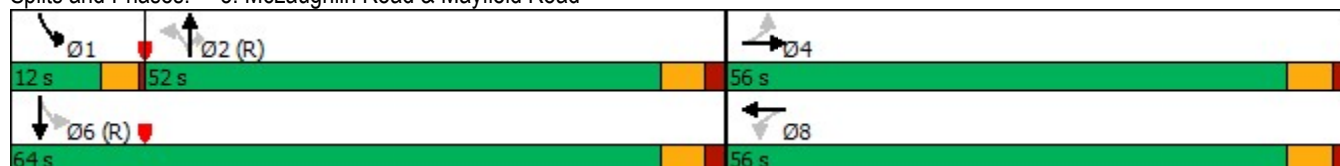


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.27	0.40		0.52	0.54			0.68	0.17	0.47	0.30	
Control Delay	32.8	28.1		37.4	26.2			37.6	11.7	21.3	18.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	32.8	28.1		37.4	26.2			37.6	11.7	21.3	18.5	
LOS	C	C		D	C			D	B	C	B	
Approach Delay		28.3			27.2			32.4			19.6	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Pretimed
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	27.4
Intersection LOS:	C
Intersection Capacity Utilization	79.8%
ICU Level of Service	D
Analysis Period (min)	15

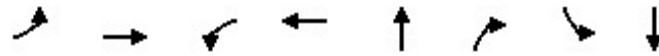
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	35	852	106	1114	424	108	165	259
v/c Ratio	0.27	0.40	0.52	0.54	0.68	0.17	0.47	0.30
Control Delay	32.8	28.1	37.4	26.2	37.6	11.7	21.3	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	28.1	37.4	26.2	37.6	11.7	21.3	18.5
Queue Length 50th (m)	6.6	62.1	18.3	67.9	82.4	6.5	20.8	33.2
Queue Length 95th (m)	m16.5	75.4	38.2	81.6	119.1	18.3	33.8	51.2
Internal Link Dist (m)		1395.4		1030.6	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	132	2107	203	2070	622	647	354	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.40	0.52	0.54	0.68	0.17	0.47	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑			↑	↗	↖	↑	↘
Traffic Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Future Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1738	5040		1755	4903			1885	1585	1738	1793	
Flt Permitted	0.17	1.00		0.26	1.00			0.85	1.00	0.30	1.00	
Satd. Flow (perm)	316	5040		488	4903			1623	1585	550	1793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	35	794	58	106	916	198	96	328	108	165	200	59
RTOR Reduction (vph)	0	7	0	0	28	0	0	0	39	0	9	0
Lane Group Flow (vph)	35	845	0	106	1086	0	0	424	69	165	250	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		2	1	6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Effective Green, g (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.48	0.48	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	131	2100		203	2042			622	607	345	866	
v/s Ratio Prot		0.17			c0.22					c0.03	0.14	
v/s Ratio Perm	0.11			0.22				c0.26	0.04	0.20		
v/c Ratio	0.27	0.40		0.52	0.53			0.68	0.11	0.48	0.29	
Uniform Delay, d1	23.0	24.5		26.1	26.2			30.9	23.8	19.9	18.6	
Progression Factor	1.13	1.14		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.6	0.5		9.3	1.0			5.9	0.4	4.7	0.8	
Delay (s)	30.7	28.4		35.4	27.2			36.8	24.2	24.6	19.5	
Level of Service	C	C		D	C			D	C	C	B	
Approach Delay (s)		28.5			27.9			34.3			21.4	
Approach LOS		C			C			C			C	

Intersection Summary		
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.60	C
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	79.8%	16.0
Analysis Period (min)	15	ICU Level of Service
		D

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672
Future Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99	1.00		0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.160			0.950			0.349			0.284		
Satd. Flow (perm)	296	4995	1538	3331	5092	1562	656	3614	1486	546	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			145			246			680
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		351.2			749.9			381.1			609.4	
Travel Time (s)		18.1			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693
Shared Lane Traffic (%)												
Lane Group Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	43.0	49.0	49.0	21.0	27.0	27.0	55.0	55.0	55.0	10.0	65.0	65.0
Total Split (%)	31.9%	36.3%	36.3%	15.6%	20.0%	20.0%	40.7%	40.7%	40.7%	7.4%	48.1%	48.1%
Maximum Green (s)	38.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	6.0	58.0	58.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

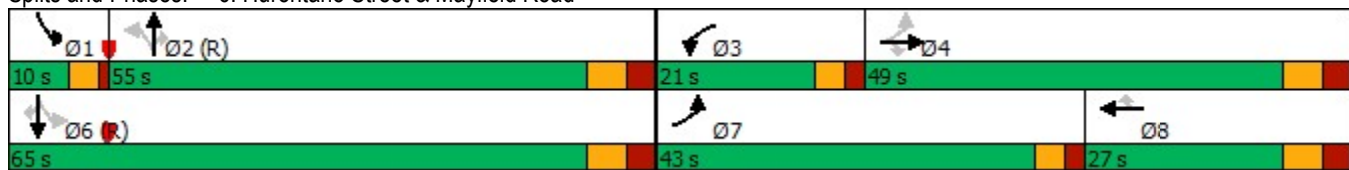


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	65.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	61.0	58.0	58.0
Actuated g/C Ratio	0.48	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.45	0.43	0.43
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.68	0.49	0.36	0.62	0.48	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
LOS	D	D	A	E	E	A	D	D	A	C	C	A
Approach Delay		41.3			64.4			31.1			19.4	
Approach LOS		D			E			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	37.0
Intersection LOS:	D
Intersection Capacity Utilization	89.1%
ICU Level of Service	E
Analysis Period (min)	15

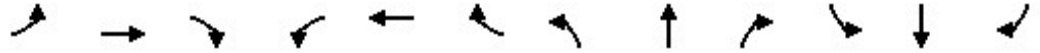
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.68	0.49	0.36	0.62	0.48	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
Queue Length 50th (m)	106.9	41.7	0.0	34.3	67.3	0.0	35.9	68.0	0.0	30.3	71.7	2.0
Queue Length 95th (m)	#167.5	52.7	8.9	48.7	#90.3	12.4	#67.7	85.5	17.4	46.5	89.1	28.0
Internal Link Dist (m)		327.2			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	553	1554	550	403	754	354	233	1284	686	303	1508	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.68	0.49	0.36	0.62	0.48	0.66

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672	
Future Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1785	3614	1486	1825	3510	1555	
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.35	1.00	1.00	0.28	1.00	1.00	
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	655	3614	1486	545	3510	1555	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693	
RTOR Reduction (vph)	0	0	61	0	0	106	0	0	159	0	0	388	
Lane Group Flow (vph)	489	552	28	258	691	18	159	625	87	189	722	305	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3	
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8			2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Effective Green, g (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.47	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.43	0.43	0.43	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	548	1554	478	403	754	231	232	1284	528	291	1508	668	
v/s Ratio Prot	c0.25	0.11		0.08	0.14			0.17		c0.03	0.21		
v/s Ratio Perm	c0.17		0.02			0.01	0.24		0.06	c0.25		0.20	
v/c Ratio	0.89	0.36	0.06	0.64	0.92	0.08	0.69	0.49	0.17	0.65	0.48	0.46	
Uniform Delay, d1	35.9	36.0	32.6	56.8	56.7	49.6	37.1	33.9	29.8	30.3	27.6	27.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.4	0.6	0.2	7.6	17.8	0.7	15.3	1.3	0.7	10.7	1.1	2.2	
Delay (s)	55.4	36.6	32.9	64.3	74.5	50.2	52.3	35.2	30.5	41.0	28.7	29.6	
Level of Service	E	D	C	E	E	D	D	D	C	D	C	C	
Approach Delay (s)		44.4			69.2			36.7			30.5		
Approach LOS		D			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			43.7									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.81										
Actuated Cycle Length (s)			135.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			89.1%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	218	3	86	142	26	2	141	177	20	146	8
Future Volume (vph)	2	218	3	86	142	26	2	141	177	20	146	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.977			0.925				0.993
Flt Protected				0.950								0.994
Satd. Flow (prot)	0	1917	0	1772	1818	0	0	1711	0	0	1783	0
Flt Permitted				0.950								0.994
Satd. Flow (perm)	0	1917	0	1772	1818	0	0	1711	0	0	1783	0
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	232	3	91	151	28	2	150	188	21	155	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	237	0	91	179	0	0	340	0	0	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop				Stop


















Intersection Summary

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

HCM Unsignalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	218	3	86	142	26	2	141	177	20	146	8
Future Volume (vph)	2	218	3	86	142	26	2	141	177	20	146	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	2	232	3	91	151	28	2	150	188	21	155	9
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	237	91	179	340	185							
Volume Left (vph)	2	91	0	2	21							
Volume Right (vph)	3	0	28	188	9							
Hadj (s)	-0.01	0.55	-0.05	-0.26	0.10							
Departure Headway (s)	6.1	7.0	6.4	5.5	6.2							
Degree Utilization, x	0.40	0.18	0.32	0.52	0.32							
Capacity (veh/h)	538	471	505	606	523							
Control Delay (s)	13.1	10.3	11.2	14.4	12.0							
Approach Delay (s)	13.1	10.9		14.4	12.0							
Approach LOS	B	B		B	B							
Intersection Summary												
Delay			12.8									
Level of Service			B									
Intersection Capacity Utilization			53.5%		ICU Level of Service		A					
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	6	390	22	156	228	21	25	59	267	34	111	10
Future Volume (vph)	6	390	22	156	228	21	25	59	267	34	111	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.985			0.989	
Satd. Flow (prot)	0	1875	0	1789	1832	0	0	1866	1617	0	1858	0
Flt Permitted		0.999		0.950				0.985			0.989	
Satd. Flow (perm)	0	1875	0	1789	1832	0	0	1866	1617	0	1858	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			1356.9			588.2			263.1	
Travel Time (s)		71.1			69.8			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	415	23	166	243	22	27	63	284	36	118	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	444	0	166	265	0	0	90	284	0	165	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

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

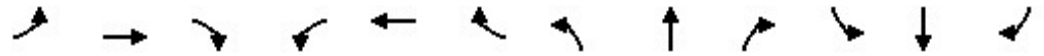
HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	390	22	156	228	21	25	59	267	34	111	10
Future Volume (vph)	6	390	22	156	228	21	25	59	267	34	111	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	415	23	166	243	22	27	63	284	36	118	11
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	444	166	265	90	284	165						
Volume Left (vph)	6	166	0	27	0	36						
Volume Right (vph)	23	0	22	0	284	11						
Hadj (s)	0.00	0.53	0.00	0.17	-0.68	0.03						
Departure Headway (s)	7.4	8.2	7.6	8.2	7.3	8.6						
Degree Utilization, x	0.92	0.38	0.56	0.20	0.57	0.40						
Capacity (veh/h)	470	412	446	429	472	399						
Control Delay (s)	49.9	14.8	18.7	12.0	18.4	17.2						
Approach Delay (s)	49.9	17.2		16.9		17.2						
Approach LOS	E	C		C		C						
Intersection Summary												
Delay			27.4									
Level of Service			D									
Intersection Capacity Utilization			60.5%		ICU Level of Service		B					
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	331	195	158	242	154	35	53	1396	129	32	2054	184
Future Volume (vph)	331	195	158	242	154	35	53	1396	129	32	2054	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.933			0.972				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1746	0	1722	1785	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.605			0.386			0.067			0.112		
Satd. Flow (perm)	1118	1746	0	700	1785	0	121	4445	1471	190	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			11				135			131
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1356.9			440.4			586.0			282.2	
Travel Time (s)		69.8			22.6			26.4			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	356	210	170	260	166	38	57	1501	139	34	2209	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	356	380	0	260	204	0	57	1501	139	34	2209	198
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	24.0	24.0		24.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	52.0	52.0		52.0	52.0		68.0	68.0	68.0	68.0	68.0	68.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%	56.7%	56.7%	56.7%	56.7%
Maximum Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Yellow Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50
v/c Ratio	0.87	0.59		1.02	0.31		0.95	0.68	0.17	0.36	0.88	0.22
Control Delay	58.1	35.2		99.2	27.2		138.1	24.6	3.4	31.7	31.7	6.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	35.2		99.2	27.2		138.1	24.6	3.4	31.7	31.7	6.6
LOS	E	D		F	C		F	C	A	C	C	A
Approach Delay		46.3			67.5			26.6				29.7
Approach LOS		D			E			C				C

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.02
Intersection Signal Delay:	34.3
Intersection LOS:	C
Intersection Capacity Utilization:	97.4%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	356	380	260	204	57	1501	139	34	2209	198
v/c Ratio	0.87	0.59	1.02	0.31	0.95	0.68	0.17	0.36	0.88	0.22
Control Delay	58.1	35.2	99.2	27.2	138.1	24.6	3.4	31.7	31.7	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	35.2	99.2	27.2	138.1	24.6	3.4	31.7	31.7	6.6
Queue Length 50th (m)	77.2	71.4	~62.5	32.0	12.3	94.6	0.5	4.7	164.2	8.0
Queue Length 95th (m)	#131.3	103.1	#116.0	51.2	#40.6	111.1	10.4	15.1	186.5	20.5
Internal Link Dist (m)		1332.9		416.4		562.0			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	409	641	256	661	60	2222	803	95	2521	882
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.59	1.02	0.31	0.95	0.68	0.17	0.36	0.88	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.



























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

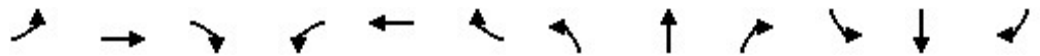
3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	331	195	158	242	154	35	53	1396	129	32	2054	184
Future Volume (vph)	331	195	158	242	154	35	53	1396	129	32	2054	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.93		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	1746		1722	1785		1722	4445	1471	1615	5043	1633
Flt Permitted	0.61	1.00		0.39	1.00		0.07	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	1118	1746		699	1785		121	4445	1471	191	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	356	210	170	260	166	38	57	1501	139	34	2209	198
RTOR Reduction (vph)	0	1	0	0	7	0	0	0	68	0	0	66
Lane Group Flow (vph)	356	379	0	260	197	0	57	1501	72	34	2209	133
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2		2	6	6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Effective Green, g (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
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)	409	640		256	654		60	2222	735	95	2521	816
v/s Ratio Prot		0.22			0.11			0.34			0.44	
v/s Ratio Perm	0.32			c0.37			c0.47		0.05	0.18		0.08
v/c Ratio	0.87	0.59		1.02	0.30		0.95	0.68	0.10	0.36	0.88	0.16
Uniform Delay, d1	35.3	30.7		38.0	27.1		28.6	22.7	15.8	18.3	26.7	16.3
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	17.9	1.5		60.3	0.3		102.6	1.7	0.3	10.2	4.7	0.4
Delay (s)	53.3	32.2		98.3	27.3		131.1	24.3	16.0	28.5	31.4	16.8
Level of Service	D	C		F	C		F	C	B	C	C	B
Approach Delay (s)		42.4			67.1			27.2			30.1	
Approach LOS		D			E			C			C	
Intersection Summary												
HCM 2000 Control Delay			34.1									C
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			120.0								16.0	
Intersection Capacity Utilization			97.4%									F
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

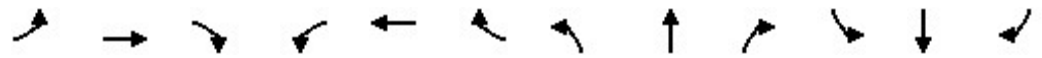
06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔↔			↔↔↔				↔			↔	
Traffic Volume (vph)	35	609	45	135	530	18	22	151	130	57	182	33
Future Volume (vph)	35	609	45	135	530	18	22	151	130	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.996			0.942				0.984
Fl _t Protected		0.997			0.990			0.996				0.990
Satd. Flow (prot)	0	4860	0	0	4865	0	0	1734	0	0	1786	0
Fl _t Permitted		0.873			0.710			0.968				0.785
Satd. Flow (perm)	0	4255	0	0	3489	0	0	1686	0	0	1416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			6			32				6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				3083.5
Travel Time (s)		14.1			73.0			15.5				138.8
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	35	615	45	136	535	18	22	153	131	58	184	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	695	0	0	689	0	0	306	0	0	275	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Maximum Green (s)	77.0	77.0		77.0	77.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
v/c Ratio		0.25			0.31			0.60			0.66	
Control Delay		9.2			23.7			38.0			45.3	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		9.2			23.7			38.0			45.3	
LOS		A			C			D			D	
Approach Delay		9.2			23.7			38.0			45.3	
Approach LOS		A			C			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	23.8
Intersection LOS:	C
Intersection Capacity Utilization	66.4%
ICU Level of Service	C
Analysis Period (min)	15

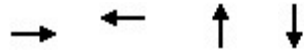
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	695	689	306	275
v/c Ratio	0.25	0.31	0.60	0.66
Control Delay	9.2	23.7	38.0	45.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.2	23.7	38.0	45.3
Queue Length 50th (m)	23.0	42.8	55.4	55.6
Queue Length 95th (m)	29.1	55.2	85.0	85.8
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2736	2240	514	417
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.31	0.60	0.66
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔			↔↕↔			↕			↕	
Traffic Volume (vph)	35	609	45	135	530	18	22	151	130	57	182	33
Future Volume (vph)	35	609	45	135	530	18	22	151	130	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		0.99			1.00			0.94			0.98	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		4864			4866			1735			1785	
Flt Permitted		0.87			0.71			0.97			0.78	
Satd. Flow (perm)		4255			3488			1686			1416	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	615	45	136	535	18	22	153	131	58	184	33
RTOR Reduction (vph)	0	6	0	0	2	0	0	23	0	0	4	0
Lane Group Flow (vph)	0	689	0	0	687	0	0	283	0	0	271	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		77.0			77.0			35.0			35.0	
Effective Green, g (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		2730			2238			491			413	
v/s Ratio Prot												
v/s Ratio Perm		0.16			0.20			0.17			0.19	
v/c Ratio		0.25			0.31			0.58			0.66	
Uniform Delay, d1		9.2			9.6			36.2			37.2	
Progression Factor		1.00			2.44			1.00			1.00	
Incremental Delay, d2		0.2			0.3			4.9			7.9	
Delay (s)		9.4			23.8			41.1			45.1	
Level of Service		A			C			D			D	
Approach Delay (s)		9.4			23.8			41.1			45.1	
Approach LOS		A			C			D			D	

Intersection Summary

HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	795	88	115	646	91	39	181	86	213	315	65
Future Volume (vph)	18	795	88	115	646	91	39	181	86	213	315	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.981				0.850		0.974	
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1825	4892	0	1706	4781	0	0	1838	1570	1690	1810	0
Flt Permitted	0.341			0.284				0.634		0.515		
Satd. Flow (perm)	655	4892	0	510	4781	0	0	1176	1570	916	1810	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			38				83			9
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1054.6			341.6			2496.3	
Travel Time (s)		73.0			54.2			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	18	811	90	117	659	93	40	185	88	217	321	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	901	0	117	752	0	0	225	88	217	387	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	23.0	23.0	
Total Split (s)	78.0	78.0		78.0	78.0		42.0	42.0	42.0	42.0	42.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	72.0	72.0		72.0	72.0		36.0	36.0	36.0	36.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

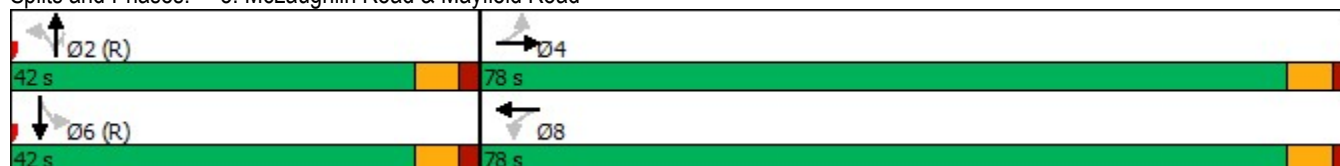


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.31		0.38	0.26			0.64	0.17	0.79	0.70	
Control Delay	17.3	18.8		17.0	11.0			46.0	8.2	60.5	44.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.3	18.8		17.0	11.0			46.0	8.2	60.5	44.5	
LOS	B	B		B	B			D	A	E	D	
Approach Delay		18.8			11.8			35.4			50.3	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	25.5
Intersection LOS:	C
Intersection Capacity Utilization	75.9%
ICU Level of Service	D
Analysis Period (min)	15

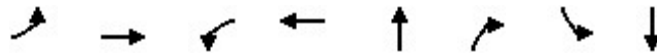
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	901	117	752	225	88	217	387
v/c Ratio	0.05	0.31	0.38	0.26	0.64	0.17	0.79	0.70
Control Delay	17.3	18.8	17.0	11.0	46.0	8.2	60.5	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	18.8	17.0	11.0	46.0	8.2	60.5	44.5
Queue Length 50th (m)	2.1	43.9	13.5	27.3	45.8	0.8	46.8	79.1
Queue Length 95th (m)	m5.7	54.9	27.6	34.2	73.6	12.6	#87.0	114.1
Internal Link Dist (m)		1395.4		1030.6	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	393	2946	306	2883	352	529	274	549
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.31	0.38	0.26	0.64	0.17	0.79	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑			↑	↗	↖	↑	↘
Traffic Volume (vph)	18	795	88	115	646	91	39	181	86	213	315	65
Future Volume (vph)	18	795	88	115	646	91	39	181	86	213	315	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1825	4892		1706	4783			1838	1570	1690	1811	
Flt Permitted	0.34	1.00		0.28	1.00			0.63	1.00	0.51	1.00	
Satd. Flow (perm)	656	4892		510	4783			1176	1570	916	1811	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	18	811	90	117	659	93	40	185	88	217	321	66
RTOR Reduction (vph)	0	11	0	0	15	0	0	0	58	0	6	0
Lane Group Flow (vph)	18	890	0	117	737	0	0	225	30	217	381	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Effective Green, g (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	393	2935		306	2869			352	471	274	543	
v/s Ratio Prot		0.18			0.15							0.21
v/s Ratio Perm	0.03			c0.23				0.19	0.02	c0.24		
v/c Ratio	0.05	0.30		0.38	0.26			0.64	0.06	0.79	0.70	
Uniform Delay, d1	9.9	11.7		12.5	11.3			36.4	30.0	38.6	37.2	
Progression Factor	1.68	1.63		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.3		3.6	0.2			8.6	0.3	20.5	7.4	
Delay (s)	16.8	19.3		16.1	11.6			45.0	30.2	59.1	44.6	
Level of Service	B	B		B	B			D	C	E	D	
Approach Delay (s)		19.3			12.2			40.8			49.8	
Approach LOS		B			B			D			D	

Intersection Summary		
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.52	
Actuated Cycle Length (s)	120.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service D
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	750	89	188	503	117	73	333	191	239	780	293
Future Volume (vph)	220	750	89	188	503	117	73	333	191	239	780	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.329			0.950			0.248			0.520		
Satd. Flow (perm)	601	4902	1508	3324	4948	1395	472	3476	1467	924	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			124			203			312
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		351.2			749.9			381.1			609.4	
Travel Time (s)		18.1			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	234	798	95	200	535	124	78	354	203	254	830	312
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	798	95	200	535	124	78	354	203	254	830	312
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	28.0	58.0	58.0	20.0	50.0	50.0	82.0	82.0	82.0	82.0	82.0	82.0
Total Split (%)	17.5%	36.3%	36.3%	12.5%	31.3%	31.3%	51.3%	51.3%	51.3%	51.3%	51.3%	51.3%
Maximum Green (s)	23.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

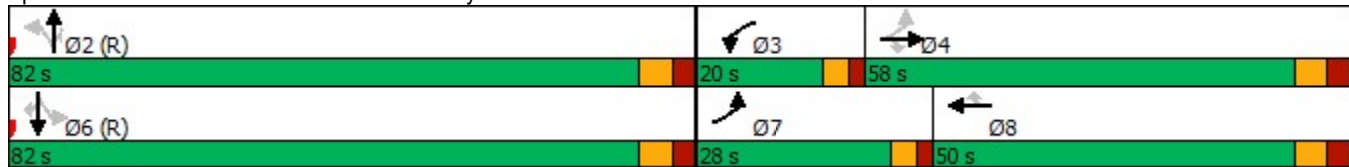


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	73.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Actuated g/C Ratio	0.46	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.22	0.26	0.59	0.50	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.9	25.6	3.7	38.0	30.8	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.9	25.6	3.7	38.0	30.8	3.4
LOS	C	D	A	E	D	A	C	C	A	D	C	A
Approach Delay		39.7			50.4			19.5			26.0	
Approach LOS		D			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	34.0
Intersection LOS:	C
Intersection Capacity Utilization	73.8%
ICU Level of Service	D
Analysis Period (min)	15

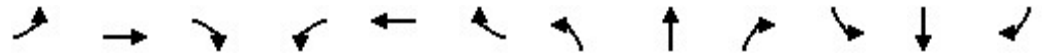
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024




































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	798	95	200	535	124	78	354	203	254	830	312
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.22	0.26	0.59	0.50	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.9	25.6	3.7	38.0	30.8	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.9	25.6	3.7	38.0	30.8	3.4
Queue Length 50th (m)	46.3	75.9	0.0	32.1	51.5	0.0	15.6	34.5	0.0	58.5	95.1	0.0
Queue Length 95th (m)	66.6	89.7	13.4	46.0	63.5	16.3	30.6	45.4	14.1	89.7	113.9	16.5
Internal Link Dist (m)		327.2			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	437	1562	545	313	1329	465	221	1629	795	433	1661	895
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.22	0.26	0.59	0.50	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

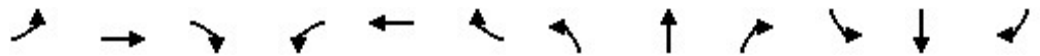
6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 		 	 		
Traffic Volume (vph)	220	750	89	188	503	117	73	333	191	239	780	293	
Future Volume (vph)	220	750	89	188	503	117	73	333	191	239	780	293	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1737	4902	1508	3340	4948	1395	1807	3476	1467	1689	3544	1557	
Flt Permitted	0.33	1.00	1.00	0.95	1.00	1.00	0.25	1.00	1.00	0.52	1.00	1.00	
Satd. Flow (perm)	602	4902	1508	3340	4948	1395	471	3476	1467	924	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	234	798	95	200	535	124	78	354	203	254	830	312	
RTOR Reduction (vph)	0	0	65	0	0	91	0	0	108	0	0	166	
Lane Group Flow (vph)	234	798	30	200	535	33	78	354	95	254	830	146	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0	
Effective Green, g (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0	
Actuated g/C Ratio	0.44	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	430	1562	480	313	1329	374	220	1629	687	433	1661	729	
v/s Ratio Prot	c0.08	0.16		c0.06	0.11			0.10			0.23		
v/s Ratio Perm	c0.16		0.02			0.02	0.17		0.06	c0.28		0.09	
v/c Ratio	0.54	0.51	0.06	0.64	0.40	0.09	0.35	0.22	0.14	0.59	0.50	0.20	
Uniform Delay, d1	29.3	44.4	37.9	69.9	48.0	43.8	27.1	25.1	24.1	31.1	29.5	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.9	1.2	0.3	9.6	0.9	0.5	4.4	0.3	0.4	5.7	1.1	0.6	
Delay (s)	34.2	45.5	38.1	79.5	48.9	44.3	31.5	25.4	24.6	36.9	30.6	25.5	
Level of Service	C	D	D	E	D	D	C	C	C	D	C	C	
Approach Delay (s)		42.6			55.3			25.9			30.6		
Approach LOS		D			E			C			C		
Intersection Summary													
HCM 2000 Control Delay			38.5									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	19.0
Intersection Capacity Utilization			73.8%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	0	69	0	11	0	341	20	6	283	0
Future Volume (vph)	0	0	0	69	0	11	0	341	20	6	283	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t					0.981			0.992				
Fl _t Protected					0.959						0.999	
Satd. Flow (prot)	0	1883	0	0	1772	0	0	3550	0	0	3575	0
Fl _t Permitted					0.959						0.999	
Satd. Flow (perm)	0	1883	0	0	1772	0	0	3550	0	0	3575	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			201.5			2496.3			588.2	
Travel Time (s)		15.4			15.1			112.3			26.5	
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
Adj. Flow (vph)	0	0	0	75	0	12	0	371	22	7	308	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	87	0	0	393	0	0	315	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	69	0	11	0	341	20	6	283	0
Future Volume (Veh/h)	0	0	0	69	0	11	0	341	20	6	283	0
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)	0	0	0	75	0	12	0	371	22	7	308	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)												
pX, platoon unblocked												
vC, conflicting volume	520	715	154	550	704	196	308			393		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	520	715	154	550	704	196	308			393		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	100	100	100	82	100	99	100			99		
cM capacity (veh/h)	431	353	864	416	358	812	1249			1162		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	0	87	186	208	161	154						
Volume Left	0	75	0	0	7	0						
Volume Right	0	12	0	22	0	0						
cSH	1700	446	1249	1700	1162	1700						
Volume to Capacity	0.00	0.20	0.00	0.12	0.01	0.09						
Queue Length 95th (m)	0.0	5.4	0.0	0.0	0.1	0.0						
Control Delay (s)	0.0	15.0	0.0	0.0	0.4	0.0						
Lane LOS	A	C			A							
Approach Delay (s)	0.0	15.0	0.0		0.2							
Approach LOS	A	C										
Intersection Summary												
Average Delay				1.7								
Intersection Capacity Utilization			23.3%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↙	↘			↕			↕	
Traffic Volume (vph)	4	198	2	174	278	32	10	229	199	25	154	4
Future Volume (vph)	4	198	2	174	278	32	10	229	199	25	154	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.985			0.939			0.997	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1851	0	0	1723	0	0	1842	0
Flt Permitted		0.999		0.950				0.999			0.993	
Satd. Flow (perm)	0	1863	0	1825	1851	0	0	1723	0	0	1842	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	211	2	185	296	34	11	244	212	27	164	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	217	0	185	330	0	0	467	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	


















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	63.3%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	198	2	174	278	32	10	229	199	25	154	4
Future Volume (vph)	4	198	2	174	278	32	10	229	199	25	154	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	211	2	185	296	34	11	244	212	27	164	4
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	217	185	330	467	195							
Volume Left (vph)	4	185	0	11	27							
Volume Right (vph)	2	0	34	212	4							
Hadj (s)	0.05	0.50	-0.03	-0.19	0.07							
Departure Headway (s)	7.7	8.0	7.4	6.6	7.7							
Degree Utilization, x	0.46	0.41	0.68	0.86	0.41							
Capacity (veh/h)	434	434	465	526	427							
Control Delay (s)	17.1	15.1	23.5	37.2	16.0							
Approach Delay (s)	17.1	20.5		37.2	16.0							
Approach LOS	C	C		E	C							
Intersection Summary												
Delay			24.9									
Level of Service			C									
Intersection Capacity Utilization			63.3%		ICU Level of Service				B			
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	9	390	26	278	447	23	32	127	284	19	57	6
Future Volume (vph)	9	390	26	278	447	23	32	127	284	19	57	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.993				0.850		0.991	
Flt Protected		0.999		0.950				0.990			0.989	
Satd. Flow (prot)	0	1826	0	1755	1886	0	0	1836	1555	0	1807	0
Flt Permitted		0.999		0.950				0.990			0.989	
Satd. Flow (perm)	0	1826	0	1755	1886	0	0	1836	1555	0	1807	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			1356.9			588.2			263.1	
Travel Time (s)		71.1			69.8			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	415	28	296	476	24	34	135	302	20	61	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	453	0	296	500	0	0	169	302	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.7%
ICU Level of Service	D
Analysis Period (min)	15
























HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	390	26	278	447	23	32	127	284	19	57	6
Future Volume (vph)	9	390	26	278	447	23	32	127	284	19	57	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	415	28	296	476	24	34	135	302	20	61	6
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	453	296	500	169	302	87						
Volume Left (vph)	10	296	0	34	0	20						
Volume Right (vph)	28	0	24	0	302	6						
Hadj (s)	0.04	0.57	-0.01	0.16	-0.61	0.08						
Departure Headway (s)	7.6	8.2	7.6	8.3	7.5	9.4						
Degree Utilization, x	0.96	0.67	1.05	0.39	0.63	0.23						
Capacity (veh/h)	467	430	480	428	465	366						
Control Delay (s)	59.7	25.3	82.9	15.2	21.1	15.2						
Approach Delay (s)	59.7	61.4		19.0		15.2						
Approach LOS	F	F		C		C						
Intersection Summary												
Delay			47.7									
Level of Service			E									
Intersection Capacity Utilization			73.7%		ICU Level of Service		D					
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	402	186	96	202	232	45	177	2435	301	32	1437	341	
Future Volume (vph)	402	186	96	202	232	45	177	2435	301	32	1437	341	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.949			0.976				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1825	1736	0	1789	1859	0	1807	5043	1633	1825	4812	1541	
Flt Permitted	0.203			0.484			0.079			0.090			
Satd. Flow (perm)	390	1736	0	912	1859	0	150	5043	1633	173	4812	1541	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		21			7				183			197	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1356.9			440.4			586.0			282.2		
Travel Time (s)		69.8			22.6			26.4			12.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%	
Adj. Flow (vph)	414	192	99	208	239	46	182	2510	310	33	1481	352	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	414	291	0	208	285	0	182	2510	310	33	1481	352	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	
Protected Phases	7	4		3	8		5	2			6	7	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

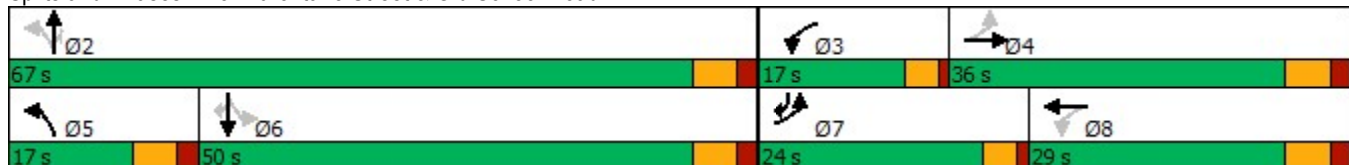


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	29.0	29.0	10.0
Total Split (s)	24.0	36.0		17.0	29.0		17.0	67.0	67.0	50.0	50.0	24.0
Total Split (%)	20.0%	30.0%		14.2%	24.2%		14.2%	55.8%	55.8%	41.7%	41.7%	20.0%
Maximum Green (s)	20.0	30.0		13.0	23.0		11.0	61.0	61.0	44.0	44.0	20.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	Max	Max	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0			0	0	0	0	
Act Effct Green (s)	46.9	28.6		35.3	20.9		61.0	61.0	61.0	44.5	44.5	70.5
Actuated g/C Ratio	0.40	0.24		0.30	0.18		0.52	0.52	0.52	0.38	0.38	0.60
v/c Ratio	1.04	0.67		0.57	0.85		0.81	0.96	0.33	0.51	0.82	0.35
Control Delay	85.8	45.9		31.9	69.2		51.4	38.8	7.7	61.2	38.1	6.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.8	45.9		31.9	69.2		51.4	38.8	7.7	61.2	38.1	6.3
LOS	F	D		C	E		D	D	A	E	D	A
Approach Delay		69.3			53.5			36.3				32.5
Approach LOS		E			D			D				C

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	118
Natural Cycle:	100
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.04
Intersection Signal Delay:	40.4
Intersection LOS:	D
Intersection Capacity Utilization:	105.9%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	414	291	208	285	182	2510	310	33	1481	352
v/c Ratio	1.04	0.67	0.57	0.85	0.81	0.96	0.33	0.51	0.82	0.35
Control Delay	85.8	45.9	31.9	69.2	51.4	38.8	7.7	61.2	38.1	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.8	45.9	31.9	69.2	51.4	38.8	7.7	61.2	38.1	6.3
Queue Length 50th (m)	~81.5	57.2	32.3	63.0	26.4	204.8	15.4	6.0	115.7	16.0
Queue Length 95th (m)	#142.8	87.3	50.3	#102.7	#62.9	#248.2	32.9	#22.2	135.2	32.7
Internal Link Dist (m)		1332.9		416.4		562.0			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	398	457	374	368	232	2608	933	65	1812	1000
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.64	0.56	0.77	0.78	0.96	0.33	0.51	0.82	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	186	96	202	232	45	177	2435	301	32	1437	341
Future Volume (vph)	402	186	96	202	232	45	177	2435	301	32	1437	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1736		1789	1859		1807	5043	1633	1825	4812	1541
Flt Permitted	0.20	1.00		0.48	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	391	1736		911	1859		151	5043	1633	173	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	414	192	99	208	239	46	182	2510	310	33	1481	352
RTOR Reduction (vph)	0	16	0	0	6	0	0	0	88	0	0	89
Lane Group Flow (vph)	414	275	0	208	279	0	182	2510	222	33	1481	263
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.9	28.6		33.2	20.9		61.0	61.0	61.0	44.4	44.4	64.4
Effective Green, g (s)	44.9	28.6		33.2	20.9		61.0	61.0	61.0	44.4	44.4	64.4
Actuated g/C Ratio	0.38	0.24		0.28	0.18		0.52	0.52	0.52	0.38	0.38	0.55
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
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)	392	421		348	329		227	2609	844	65	1812	841
v/s Ratio Prot	c0.18	0.16		0.06	0.15		0.07	c0.50			0.31	0.05
v/s Ratio Perm	c0.22			0.11			0.34		0.14	0.19		0.12
v/c Ratio	1.06	0.65		0.60	0.85		0.80	0.96	0.26	0.51	0.82	0.31
Uniform Delay, d1	30.6	40.2		34.5	47.0		27.4	27.3	15.9	28.3	33.1	14.6
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	61.0	3.6		2.8	18.1		18.1	10.7	0.8	25.6	4.2	0.2
Delay (s)	91.6	43.8		37.2	65.0		45.5	38.1	16.6	53.9	37.3	14.8
Level of Service	F	D		D	E		D	D	B	D	D	B
Approach Delay (s)		71.9			53.3			36.3			33.4	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	117.9	Sum of lost time (s)	22.0
Intersection Capacity Utilization	105.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕				↕
Traffic Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25
Future Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.990			0.992			0.948			0.982	
Flt Protected		0.998			0.990			0.996			0.993	
Satd. Flow (prot)	0	5041	0	0	5040	0	0	1771	0	0	1832	0
Flt Permitted		0.848			0.674			0.963			0.916	
Satd. Flow (perm)	0	4284	0	0	3431	0	0	1712	0	0	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			10			34			8	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	39	691	50	188	653	50	34	225	160	28	151	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	780	0	0	891	0	0	419	0	0	206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		57.0			57.0			55.0			55.0	
Actuated g/C Ratio		0.48			0.48			0.46			0.46	
v/c Ratio		0.38			0.55			0.52			0.26	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

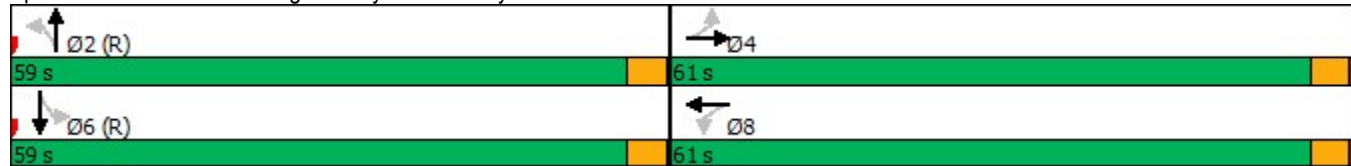


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		20.5			44.6			23.9			20.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.5			44.6			23.9			20.3	
LOS		C			D			C			C	
Approach Delay		20.5			44.6			23.9			20.3	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	30.5
Intersection LOS:	C
Intersection Capacity Utilization	65.7%
ICU Level of Service	C
Analysis Period (min)	15

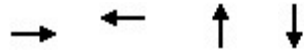
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	780	891	419	206
v/c Ratio	0.38	0.55	0.52	0.26
Control Delay	20.5	44.6	23.9	20.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.5	44.6	23.9	20.3
Queue Length 50th (m)	41.3	74.5	63.0	28.0
Queue Length 95th (m)	51.6	88.4	92.4	44.5
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2041	1634	803	778
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.55	0.52	0.26
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↔↔			↔↔↔			↔			↔		
Traffic Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25	
Future Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		0.91			0.91			1.00			1.00		
Frb, ped/bikes		1.00			1.00			1.00			1.00		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		0.99			0.99			0.95			0.98		
Flt Protected		1.00			0.99			1.00			0.99		
Satd. Flow (prot)		5041			5035			1771			1833		
Flt Permitted		0.85			0.67			0.96			0.92		
Satd. Flow (perm)		4283			3428			1713			1691		
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)	39	691	50	188	653	50	34	225	160	28	151	27	
RTOR Reduction (vph)	0	6	0	0	5	0	0	18	0	0	4	0	
Lane Group Flow (vph)	0	774	0	0	886	0	0	401	0	0	202	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
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)		57.0			57.0			55.0			55.0		
Effective Green, g (s)		57.0			57.0			55.0			55.0		
Actuated g/C Ratio		0.48			0.48			0.46			0.46		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Lane Grp Cap (vph)		2034			1628			785			775		
v/s Ratio Prot													
v/s Ratio Perm		0.18			0.26			0.23			0.12		
v/c Ratio		0.38			0.54			0.51			0.26		
Uniform Delay, d1		20.2			22.3			23.0			20.0		
Progression Factor		1.00			1.95			1.00			1.00		
Incremental Delay, d2		0.5			1.1			2.4			0.8		
Delay (s)		20.7			44.7			25.3			20.8		
Level of Service		C			D			C			C		
Approach Delay (s)		20.7			44.7			25.3			20.8		
Approach LOS		C			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			30.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			65.7%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Future Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.973				0.850		0.963	
Flt Protected	0.950			0.950				0.989		0.950		
Satd. Flow (prot)	1738	5041	0	1755	4902	0	0	1885	1585	1738	1788	0
Flt Permitted	0.173			0.264				0.851		0.288		
Satd. Flow (perm)	317	5041	0	488	4902	0	0	1622	1585	527	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			48				64			19
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1054.6			341.6				2496.3
Travel Time (s)		73.0			54.2			15.4				112.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	48	794	58	106	916	198	96	341	108	165	208	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	852	0	106	1114	0	0	437	108	165	276	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1		6
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	8.0		22.0
Total Split (s)	56.0	56.0		56.0	56.0		52.0	52.0	52.0	12.0		64.0
Total Split (%)	46.7%	46.7%		46.7%	46.7%		43.3%	43.3%	43.3%	10.0%		53.3%
Maximum Green (s)	50.0	50.0		50.0	50.0		46.0	46.0	46.0	8.0		58.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	3.5		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	0.5		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0		6.0
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0			5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0			0
Act Effct Green (s)	50.0	50.0		50.0	50.0			46.0	46.0	60.0		58.0
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.50		0.48

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

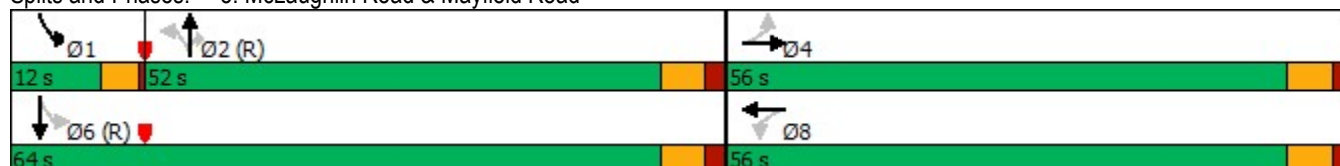


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.36	0.40		0.52	0.54			0.70	0.17	0.48	0.32	
Control Delay	37.1	28.0		37.4	26.2			38.6	11.7	21.7	18.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	37.1	28.0		37.4	26.2			38.6	11.7	21.7	18.7	
LOS	D	C		D	C			D	B	C	B	
Approach Delay		28.5			27.2			33.3			19.9	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Pretimed
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	27.6
Intersection LOS:	C
Intersection Capacity Utilization	81.3%
ICU Level of Service	D
Analysis Period (min)	15

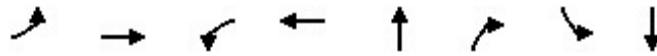
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	852	106	1114	437	108	165	276
v/c Ratio	0.36	0.40	0.52	0.54	0.70	0.17	0.48	0.32
Control Delay	37.1	28.0	37.4	26.2	38.6	11.7	21.7	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	28.0	37.4	26.2	38.6	11.7	21.7	18.7
Queue Length 50th (m)	9.6	61.6	18.3	67.9	85.8	6.5	20.8	35.7
Queue Length 95th (m)	m21.3	74.9	38.2	81.6	123.9	18.3	33.8	54.5
Internal Link Dist (m)		1395.4		1030.6	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	132	2107	203	2070	621	647	344	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.40	0.52	0.54	0.70	0.17	0.48	0.32

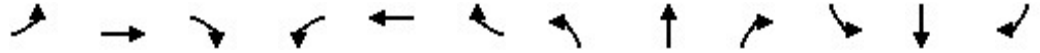
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑			↑	↗	↖	↑	↘
Traffic Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Future Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1738	5040		1755	4903			1886	1585	1738	1788	
Flt Permitted	0.17	1.00		0.26	1.00			0.85	1.00	0.29	1.00	
Satd. Flow (perm)	316	5040		488	4903			1621	1585	526	1788	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	48	794	58	106	916	198	96	341	108	165	208	68
RTOR Reduction (vph)	0	7	0	0	28	0	0	0	39	0	10	0
Lane Group Flow (vph)	48	845	0	106	1086	0	0	437	69	165	266	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		2	1	6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Effective Green, g (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.48	0.48	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	131	2100		203	2042			621	607	335	864	
v/s Ratio Prot		0.17			c0.22					c0.03	0.15	
v/s Ratio Perm	0.15			0.22				c0.27	0.04	0.21		
v/c Ratio	0.37	0.40		0.52	0.53			0.70	0.11	0.49	0.31	
Uniform Delay, d1	24.1	24.5		26.1	26.2			31.2	23.8	20.1	18.8	
Progression Factor	1.13	1.13		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.3	0.5		9.3	1.0			6.6	0.4	5.1	0.9	
Delay (s)	34.5	28.2		35.4	27.2			37.8	24.2	25.2	19.7	
Level of Service	C	C		D	C			D	C	C	B	
Approach Delay (s)		28.5			27.9			35.1			21.8	
Approach LOS		C			C			D			C	

Intersection Summary		
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.61	
Actuated Cycle Length (s)	120.0	Sum of lost time (s) 16.0
Intersection Capacity Utilization	81.3%	ICU Level of Service D
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	474	535	86	250	670	120	154	619	239	183	708	672
Future Volume (vph)	474	535	86	250	670	120	154	619	239	183	708	672
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99	1.00		0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.160			0.950			0.344			0.276		
Satd. Flow (perm)	296	4995	1538	3331	5092	1562	646	3614	1486	530	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			145			246			680
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		351.2			749.9			381.1			609.4	
Travel Time (s)		18.1			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	489	552	89	258	691	124	159	638	246	189	730	693
Shared Lane Traffic (%)												
Lane Group Flow (vph)	489	552	89	258	691	124	159	638	246	189	730	693
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	43.0	49.0	49.0	21.0	27.0	27.0	55.0	55.0	55.0	10.0	65.0	65.0
Total Split (%)	31.9%	36.3%	36.3%	15.6%	20.0%	20.0%	40.7%	40.7%	40.7%	7.4%	48.1%	48.1%
Maximum Green (s)	38.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	6.0	58.0	58.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

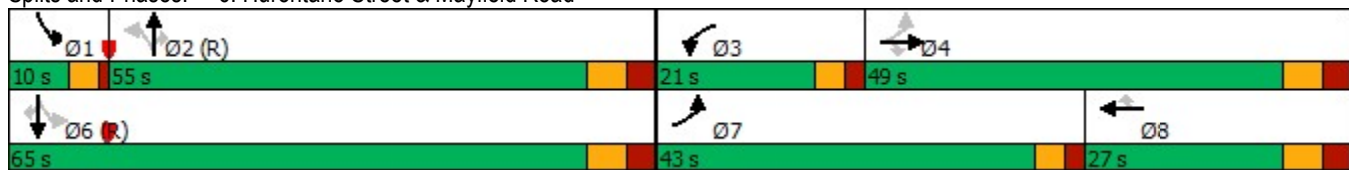


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	65.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	61.0	58.0	58.0
Actuated g/C Ratio	0.48	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.45	0.43	0.43
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.69	0.50	0.36	0.64	0.48	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.1	35.7	5.1	35.4	29.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.1	35.7	5.1	35.4	29.1	5.4
LOS	D	D	A	E	E	A	E	D	A	D	C	A
Approach Delay		41.3			64.4			31.4			19.6	
Approach LOS		D			E			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	37.1
Intersection LOS:	D
Intersection Capacity Utilization	89.4%
ICU Level of Service	E
Analysis Period (min)	15

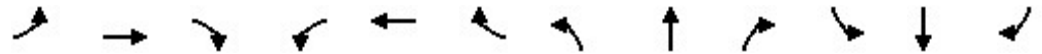
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	552	89	258	691	124	159	638	246	189	730	693
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.69	0.50	0.36	0.64	0.48	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.1	35.7	5.1	35.4	29.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.1	35.7	5.1	35.4	29.1	5.4
Queue Length 50th (m)	106.9	41.7	0.0	34.3	67.3	0.0	36.1	69.7	0.0	30.3	72.7	2.0
Queue Length 95th (m)	#167.5	52.7	8.9	48.7	#90.3	12.4	#68.7	87.7	17.4	46.5	90.4	28.0
Internal Link Dist (m)		327.2			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	553	1554	550	403	754	354	229	1284	686	297	1508	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.69	0.50	0.36	0.64	0.48	0.66

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	474	535	86	250	670	120	154	619	239	183	708	672	
Future Volume (vph)	474	535	86	250	670	120	154	619	239	183	708	672	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1785	3614	1486	1825	3510	1555	
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.34	1.00	1.00	0.28	1.00	1.00	
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	646	3614	1486	530	3510	1555	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	489	552	89	258	691	124	159	638	246	189	730	693	
RTOR Reduction (vph)	0	0	61	0	0	106	0	0	159	0	0	388	
Lane Group Flow (vph)	489	552	28	258	691	18	159	638	87	189	730	305	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3	
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8			2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Effective Green, g (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.47	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.43	0.43	0.43	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	548	1554	478	403	754	231	229	1284	528	285	1508	668	
v/s Ratio Prot	c0.25	0.11		0.08	0.14			0.18		c0.03	0.21		
v/s Ratio Perm	c0.17		0.02			0.01	0.25		0.06	c0.26		0.20	
v/c Ratio	0.89	0.36	0.06	0.64	0.92	0.08	0.69	0.50	0.17	0.66	0.48	0.46	
Uniform Delay, d1	35.9	36.0	32.6	56.8	56.7	49.6	37.2	34.0	29.8	30.5	27.7	27.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.4	0.6	0.2	7.6	17.8	0.7	16.0	1.4	0.7	11.6	1.1	2.2	
Delay (s)	55.4	36.6	32.9	64.3	74.5	50.2	53.2	35.4	30.5	42.1	28.8	29.6	
Level of Service	E	D	C	E	E	D	D	D	C	D	C	C	
Approach Delay (s)		44.4			69.2			37.0			30.7		
Approach LOS		D			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			43.8		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio			0.82										
Actuated Cycle Length (s)			135.0		Sum of lost time (s)						23.0		
Intersection Capacity Utilization			89.4%		ICU Level of Service						E		
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	0	43	0	9	0	434	78	11	350	0
Future Volume (vph)	0	0	0	43	0	9	0	434	78	11	350	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t					0.976			0.977				
Fl _t Protected					0.960						0.998	
Satd. Flow (prot)	0	1883	0	0	1765	0	0	3496	0	0	3571	0
Fl _t Permitted					0.960						0.998	
Satd. Flow (perm)	0	1883	0	0	1765	0	0	3496	0	0	3571	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			201.5			2496.3			588.2	
Travel Time (s)		15.4			15.1			112.3			26.5	
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
Adj. Flow (vph)	0	0	0	47	0	10	0	472	85	12	380	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	57	0	0	557	0	0	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	27.6%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 9: McLaughlin Road & Street A

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	43	0	9	0	434	78	11	350	0
Future Volume (Veh/h)	0	0	0	43	0	9	0	434	78	11	350	0
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)	0	0	0	47	0	10	0	472	85	12	380	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)												
pX, platoon unblocked												
vC, conflicting volume	650	961	190	728	918	278	380			557		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	650	961	190	728	918	278	380			557		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	100	100	100	85	100	99	100			99		
cM capacity (veh/h)	346	252	820	308	267	719	1175			1010		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	0	57	236	321	202	190						
Volume Left	0	47	0	0	12	0						
Volume Right	0	10	0	85	0	0						
cSH	1700	342	1175	1700	1010	1700						
Volume to Capacity	0.00	0.17	0.00	0.19	0.01	0.11						
Queue Length 95th (m)	0.0	4.5	0.0	0.0	0.3	0.0						
Control Delay (s)	0.0	17.6	0.0	0.0	0.6	0.0						
Lane LOS	A	C			A							
Approach Delay (s)	0.0	17.6	0.0		0.3							
Approach LOS	A	C										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			27.6%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	238	3	112	162	35	2	187	233	27	181	8
Future Volume (vph)	2	238	3	112	162	35	2	187	233	27	181	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.973			0.925				0.995
Flt Protected				0.950								0.994
Satd. Flow (prot)	0	1917	0	1772	1807	0	0	1711	0	0	1788	0
Flt Permitted		0.997		0.586				0.999			0.931	
Satd. Flow (perm)	0	1912	0	1093	1807	0	0	1709	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			32			185				6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	253	3	119	172	37	2	199	248	29	193	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	258	0	119	209	0	0	449	0	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

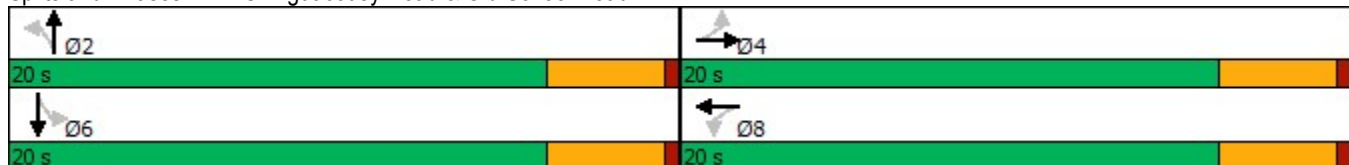


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		9.7		9.5	9.5			19.8			19.8	
Actuated g/C Ratio		0.28		0.27	0.27			0.57			0.57	
v/c Ratio		0.48		0.40	0.40			0.43			0.24	
Control Delay		13.1		13.7	10.4			5.5			6.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		13.1		13.7	10.4			5.5			6.8	
LOS		B		B	B			A			A	
Approach Delay		13.1			11.6			5.5			6.8	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 34.7
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay: 8.9
 Intersection Capacity Utilization 63.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

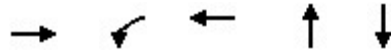
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	258	119	209	449	231
v/c Ratio	0.48	0.40	0.40	0.43	0.24
Control Delay	13.1	13.7	10.4	5.5	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	13.7	10.4	5.5	6.8
Queue Length 50th (m)	11.3	5.1	7.5	7.6	6.4
Queue Length 95th (m)	22.8	13.0	17.1	25.0	18.2
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	886	506	853	1055	959
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.24	0.25	0.43	0.24

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕			↕		
Traffic Volume (vph)	2	238	3	112	162	35	2	187	233	27	181	8	
Future Volume (vph)	2	238	3	112	162	35	2	187	233	27	181	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00		
Frt		1.00		1.00	0.97			0.93			0.99		
Flt Protected		1.00		0.95	1.00			1.00			0.99		
Satd. Flow (prot)		1917		1772	1808			1711			1788		
Flt Permitted		1.00		0.59	1.00			1.00			0.93		
Satd. Flow (perm)		1912		1093	1808			1710			1674		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	253	3	119	172	37	2	199	248	29	193	9	
RTOR Reduction (vph)	0	2	0	0	24	0	0	86	0	0	3	0	
Lane Group Flow (vph)	0	256	0	119	185	0	0	363	0	0	228	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
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)		8.4		8.4	8.4			19.0			19.0		
Effective Green, g (s)		8.4		8.4	8.4			19.0			19.0		
Actuated g/C Ratio		0.24		0.24	0.24			0.54			0.54		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		453		259	429			917			898		
v/s Ratio Prot					0.10								
v/s Ratio Perm		c0.13		0.11				c0.21			0.14		
v/c Ratio		0.57		0.46	0.43			0.40			0.25		
Uniform Delay, d1		11.9		11.6	11.5			4.8			4.4		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		1.6		1.3	0.7			1.3			0.7		
Delay (s)		13.5		12.8	12.2			6.1			5.1		
Level of Service		B		B	B			A			A		
Approach Delay (s)		13.5			12.4			6.1			5.1		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			9.1									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.45										
Actuated Cycle Length (s)			35.4									Sum of lost time (s)	8.0
Intersection Capacity Utilization			63.8%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	6	466	28	197	277	23	32	58	347	36	115	11
Future Volume (vph)	6	466	28	197	277	23	32	58	347	36	115	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.989				0.850		0.991	
Flt Protected		0.999		0.950				0.983			0.989	
Satd. Flow (prot)	0	1872	0	1789	1835	0	0	1864	1617	0	1858	0
Flt Permitted		0.995		0.261				0.866			0.923	
Satd. Flow (perm)	0	1864	0	492	1835	0	0	1642	1617	0	1734	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			8				368			5
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			349.1			588.2			263.1	
Travel Time (s)		71.1			18.0			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	496	30	210	295	24	34	62	369	38	122	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	532	0	210	319	0	0	96	369	0	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

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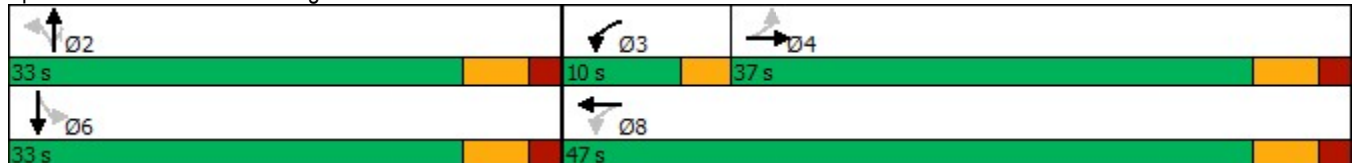


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	37.0	37.0		10.0	47.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	46.3%	46.3%		12.5%	58.8%		41.3%	41.3%	41.3%	41.3%	41.3%	
Maximum Green (s)	31.0	31.0		7.0	41.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0		3.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		25.0		38.1	35.1		27.2	27.2	27.2	27.2	27.2	
Actuated g/C Ratio		0.34		0.51	0.47		0.37	0.37	0.37	0.37	0.37	
v/c Ratio		0.85		0.56	0.37		0.16	0.45	0.45	0.45	0.27	
Control Delay		36.0		15.9	13.3		18.6	4.3	4.3	4.3	19.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		36.0		15.9	13.3		18.6	4.3	4.3	4.3	19.0	
LOS		D		B	B		B	A	A	A	B	
Approach Delay		36.0		14.3	14.3		7.3	7.3	7.3	7.3	19.0	
Approach LOS		D		B	B		A	A	A	A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	74.3
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	19.6
Intersection LOS:	B
Intersection Capacity Utilization:	72.9%
ICU Level of Service:	C
Analysis Period (min):	15

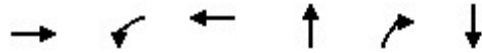
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	532	210	319	96	369	172
v/c Ratio	0.85	0.56	0.37	0.16	0.45	0.27
Control Delay	36.0	15.9	13.3	18.6	4.3	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	15.9	13.3	18.6	4.3	19.0
Queue Length 50th (m)	67.0	15.1	26.1	9.0	0.1	16.4
Queue Length 95th (m)	103.1	26.0	42.4	20.6	17.1	33.2
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	784	375	1022	600	824	637
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.56	0.31	0.16	0.45	0.27

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road
























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕	↗		↕		
Traffic Volume (vph)	6	466	28	197	277	23	32	58	347	36	115	11	
Future Volume (vph)	6	466	28	197	277	23	32	58	347	36	115	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		3.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99		
Satd. Flow (prot)		1873		1789	1835			1864	1617		1857		
Flt Permitted		1.00		0.26	1.00			0.87	1.00		0.92		
Satd. Flow (perm)		1866		491	1835			1642	1617		1733		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	6	496	30	210	295	24	34	62	369	38	122	12	
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	233	0	3	0	
Lane Group Flow (vph)	0	529	0	210	315	0	0	96	136	0	169	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		25.0		35.0	35.0			27.2	27.2		27.2		
Effective Green, g (s)		25.0		35.0	35.0			27.2	27.2		27.2		
Actuated g/C Ratio		0.34		0.47	0.47			0.37	0.37		0.37		
Clearance Time (s)		6.0		3.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		628		354	865			601	592		635		
v/s Ratio Prot				c0.06	0.17								
v/s Ratio Perm		c0.28		0.22				0.06	0.08		c0.10		
v/c Ratio		0.84		0.59	0.36			0.16	0.23		0.27		
Uniform Delay, d1		22.8		14.0	12.5			15.8	16.3		16.5		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		10.0		2.7	0.3			0.6	0.9		1.0		
Delay (s)		32.8		16.7	12.8			16.4	17.2		17.5		
Level of Service		C		B	B			B	B		B		
Approach Delay (s)		32.8			14.3			17.0			17.5		
Approach LOS		C			B			B			B		
Intersection Summary													
HCM 2000 Control Delay			21.2									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.55										
Actuated Cycle Length (s)			74.2									Sum of lost time (s)	15.0
Intersection Capacity Utilization			72.9%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	455	218	167	370	179	39	54	1629	174	33	2297	245	
Future Volume (vph)	455	218	167	370	179	39	54	1629	174	33	2297	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.935			0.973				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1755	1749	0	1722	1786	0	1722	4445	1471	1615	5043	1633	
Flt Permitted	0.300			0.222			0.070			0.070			
Satd. Flow (perm)	554	1749	0	402	1786	0	127	4445	1471	119	5043	1633	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		20			8				148			148	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			855.3			282.2		
Travel Time (s)		51.8			22.6			38.5			12.7		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Adj. Flow (vph)	489	234	180	398	192	42	58	1752	187	35	2470	263	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	489	414	0	398	234	0	58	1752	187	35	2470	263	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

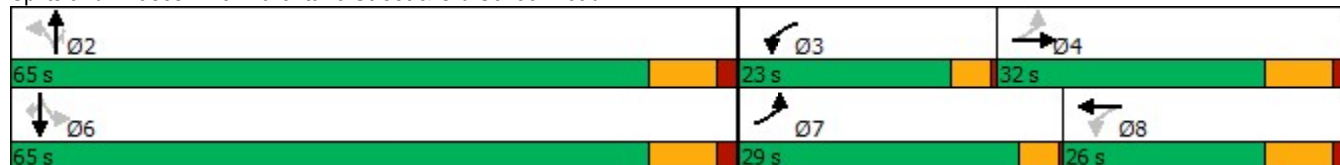


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	29.0	32.0		23.0	26.0		65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	24.2%	26.7%		19.2%	21.7%		54.2%	54.2%	54.2%	54.2%	54.2%	54.2%
Maximum Green (s)	25.0	24.0		19.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Yellow Time (s)	3.5	6.0		3.5	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	51.0	24.0		41.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.42	0.20		0.34	0.15		0.48	0.48	0.48	0.48	0.48	0.48
v/c Ratio	1.01	1.13		1.15	0.85		0.97	0.83	0.24	0.62	1.03	0.31
Control Delay	72.8	130.4		126.6	75.8		143.9	31.6	5.6	74.1	58.5	9.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	130.4		126.6	75.8		143.9	31.6	5.6	74.1	58.5	9.1
LOS	E	F		F	E		F	C	A	E	E	A
Approach Delay		99.2			107.8			32.4				54.0
Approach LOS		F			F			C				D

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	130
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.15
Intersection Signal Delay:	59.0
Intersection LOS:	E
Intersection Capacity Utilization:	103.7%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	414	398	234	58	1752	187	35	2470	263
v/c Ratio	1.01	1.13	1.15	0.85	0.97	0.83	0.24	0.62	1.03	0.31
Control Delay	72.8	130.4	126.6	75.8	143.9	31.6	5.6	74.1	58.5	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	130.4	126.6	75.8	143.9	31.6	5.6	74.1	58.5	9.1
Queue Length 50th (m)	~91.3	~109.6	~91.0	52.6	12.9	127.4	4.8	6.0	~228.3	14.9
Queue Length 95th (m)	#155.0	#170.9	#152.7	#95.6	#41.1	148.5	17.3	#24.9	#256.3	31.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	485	365	346	274	60	2111	776	56	2395	853
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	1.13	1.15	0.85	0.97	0.83	0.24	0.63	1.03	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	218	167	370	179	39	54	1629	174	33	2297	245
Future Volume (vph)	455	218	167	370	179	39	54	1629	174	33	2297	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.93		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	1749		1722	1786		1722	4445	1471	1615	5043	1633
Flt Permitted	0.30	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	554	1749		403	1786		127	4445	1471	119	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	489	234	180	398	192	42	58	1752	187	35	2470	263
RTOR Reduction (vph)	0	16	0	0	7	0	0	0	78	0	0	78
Lane Group Flow (vph)	489	398	0	398	227	0	58	1752	109	35	2470	185
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	47.0	24.0		37.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Effective Green, g (s)	47.0	24.0		37.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.39	0.20		0.31	0.15		0.48	0.48	0.48	0.48	0.48	0.48
Clearance Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
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)	467	349		333	267		60	2111	698	56	2395	775
v/s Ratio Prot	c0.22	c0.23		c0.19	0.13			0.39			c0.49	
v/s Ratio Perm	0.19			0.18			0.46		0.07	0.29		0.11
v/c Ratio	1.05	1.14		1.20	0.85		0.97	0.83	0.16	0.62	1.03	0.24
Uniform Delay, d1	31.8	48.0		37.1	49.7		30.6	27.3	17.9	23.5	31.5	18.7
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	54.5	92.0		113.5	22.0		107.0	4.0	0.5	42.7	27.0	0.7
Delay (s)	86.3	140.0		150.6	71.7		137.6	31.3	18.3	66.3	58.5	19.4
Level of Service	F	F		F	E		F	C	B	E	E	B
Approach Delay (s)		110.9			121.4			33.1			54.9	
Approach LOS		F			F			C			D	

Intersection Summary		
HCM 2000 Control Delay	62.7	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	1.10	E
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	103.7%	20.0
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		G

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↕↔			↔↕↔				↕↔			↕↔	
Traffic Volume (vph)	41	647	48	140	563	24	24	178	136	80	220	36
Future Volume (vph)	41	647	48	140	563	24	24	178	136	80	220	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.995			0.946			0.986	
Fl _t Protected		0.997			0.990			0.996			0.988	
Satd. Flow (prot)	0	4861	0	0	4858	0	0	1741	0	0	1782	0
Fl _t Permitted		0.855			0.682			0.963			0.842	
Satd. Flow (perm)	0	4169	0	0	3346	0	0	1684	0	0	1519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			5			40			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	41	654	48	141	569	24	24	180	137	81	222	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	743	0	0	734	0	0	341	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	52.0	52.0		52.0	52.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
v/c Ratio		0.41			0.51			0.40			0.44	
Control Delay		23.9			44.4			17.9			21.2	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

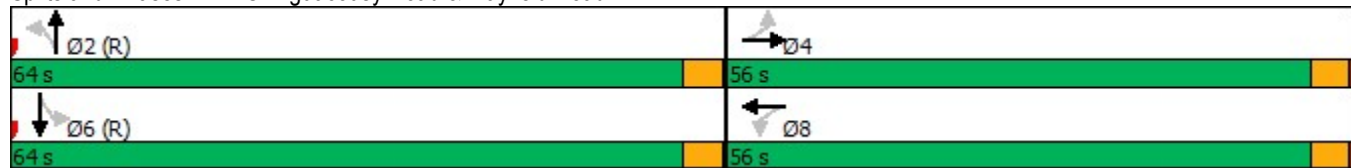


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		23.9			44.4			17.9			21.2	
LOS		C			D			B			C	
Approach Delay		23.9			44.4			17.9			21.2	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	29.5
Intersection LOS:	C
Intersection Capacity Utilization	78.5%
ICU Level of Service	D
Analysis Period (min)	15

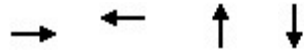
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	743	734	341	339
v/c Ratio	0.41	0.51	0.40	0.44
Control Delay	23.9	44.4	17.9	21.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.9	44.4	17.9	21.2
Queue Length 50th (m)	42.6	64.5	42.4	48.6
Queue Length 95th (m)	53.5	78.1	64.4	72.8
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1812	1452	862	763
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.51	0.40	0.44

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕↕				↕↕
Traffic Volume (vph)	41	647	48	140	563	24	24	178	136	80	220	36
Future Volume (vph)	41	647	48	140	563	24	24	178	136	80	220	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		0.99			1.00			0.95			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		4864			4860			1742			1782	
Flt Permitted		0.86			0.68			0.96			0.84	
Satd. Flow (perm)		4171			3346			1682			1519	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	41	654	48	141	569	24	24	180	137	81	222	36
RTOR Reduction (vph)	0	6	0	0	3	0	0	20	0	0	4	0
Lane Group Flow (vph)	0	737	0	0	731	0	0	321	0	0	336	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		52.0			52.0			60.0			60.0	
Effective Green, g (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		1807			1449			841			759	
v/s Ratio Prot												
v/s Ratio Perm		0.18			0.22			0.19			0.22	
v/c Ratio		0.41			0.50			0.38			0.44	
Uniform Delay, d1		23.4			24.7			18.5			19.3	
Progression Factor		1.00			1.74			1.00			1.00	
Incremental Delay, d2		0.7			1.2			1.3			1.9	
Delay (s)		24.1			44.2			19.9			21.1	
Level of Service		C			D			B			C	
Approach Delay (s)		24.1			44.2			19.9			21.1	
Approach LOS		C			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			29.8									C
HCM 2000 Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			120.0								8.0	
Intersection Capacity Utilization			78.5%									D
Analysis Period (min)			15									

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	877	104	123	696	109	46	214	92	264	360	72
Future Volume (vph)	16	877	104	123	696	109	46	214	92	264	360	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.980			0.955			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4770	0	1644	3397	0	1690	3444	0
Flt Permitted	0.294			0.227			0.454			0.551		
Satd. Flow (perm)	565	4888	0	408	4770	0	786	3397	0	980	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			34			69			24	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	16	895	106	126	710	111	47	218	94	269	367	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	1001	0	126	821	0	47	312	0	269	440	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		23.0	23.0	
Total Split (s)	64.0	64.0		64.0	64.0		56.0	56.0		56.0	56.0	
Total Split (%)	53.3%	53.3%		53.3%	53.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

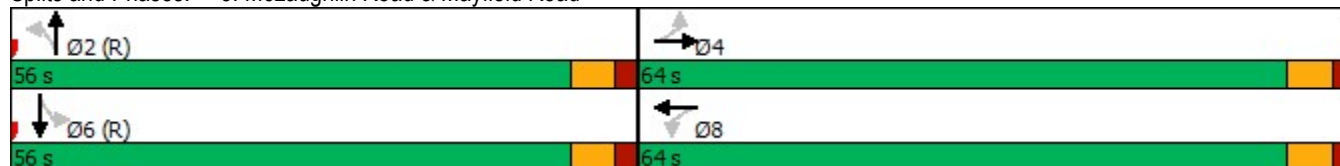


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.42		0.64	0.35		0.14	0.21		0.66	0.30	
Control Delay	21.9	26.6		40.9	19.0		23.3	17.7		37.5	22.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	26.6		40.9	19.0		23.3	17.7		37.5	22.7	
LOS	C	C		D	B		C	B		D	C	
Approach Delay		26.5			21.9			18.4			28.3	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	24.5
Intersection LOS:	C
Intersection Capacity Utilization	69.6%
ICU Level of Service	C
Analysis Period (min)	15

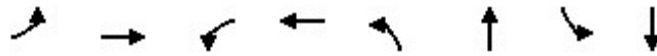
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	1001	126	821	47	312	269	440
v/c Ratio	0.06	0.42	0.64	0.35	0.14	0.21	0.66	0.30
Control Delay	21.9	26.6	40.9	19.0	23.3	17.7	37.5	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	26.6	40.9	19.0	23.3	17.7	37.5	22.7
Queue Length 50th (m)	2.6	70.2	21.6	41.0	6.8	18.6	50.1	33.6
Queue Length 95th (m)	m6.9	81.8	#51.7	50.7	15.1	28.3	82.1	45.8
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	273	2374	197	2323	327	1455	408	1449
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.42	0.64	0.35	0.14	0.21	0.66	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑↑		↘	↑↑	
Traffic Volume (vph)	16	877	104	123	696	109	46	214	92	264	360	72
Future Volume (vph)	16	877	104	123	696	109	46	214	92	264	360	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4889		1706	4768		1644	3397		1690	3445	
Flt Permitted	0.29	1.00		0.23	1.00		0.45	1.00		0.55	1.00	
Satd. Flow (perm)	564	4889		408	4768		785	3397		980	3445	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	16	895	106	126	710	111	47	218	94	269	367	73
RTOR Reduction (vph)	0	12	0	0	18	0	0	40	0	0	14	0
Lane Group Flow (vph)	16	989	0	126	803	0	47	272	0	269	426	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
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)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Effective Green, g (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	272	2363		197	2304		327	1415		408	1435	
v/s Ratio Prot		0.20			0.17			0.08			0.12	
v/s Ratio Perm	0.03			c0.31			0.06			c0.27		
v/c Ratio	0.06	0.42		0.64	0.35		0.14	0.19		0.66	0.30	
Uniform Delay, d1	16.5	20.1		23.2	19.3		21.7	22.2		28.1	23.3	
Progression Factor	1.26	1.32		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.5		14.9	0.4		0.9	0.3		8.1	0.5	
Delay (s)	21.2	27.1		38.0	19.7		22.6	22.5		36.3	23.8	
Level of Service	C	C		D	B		C	C		D	C	
Approach Delay (s)		27.0			22.1			22.5			28.5	
Approach LOS		C			C			C			C	

Intersection Summary		
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.65	
Actuated Cycle Length (s)	120.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization	69.6%	ICU Level of Service C
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	236	865	94	199	556	148	78	349	203	315	815	315
Future Volume (vph)	236	865	94	199	556	148	78	349	203	315	815	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.198			0.950			0.264			0.521		
Satd. Flow (perm)	362	4902	1508	3326	4948	1395	502	3476	1467	926	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100			157			216			335
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	251	920	100	212	591	157	83	371	216	335	867	335
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	920	100	212	591	157	83	371	216	335	867	335
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	31.0	44.0	44.0	20.0	33.0	33.0	96.0	96.0	96.0	96.0	96.0	96.0
Total Split (%)	19.4%	27.5%	27.5%	12.5%	20.6%	20.6%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	26.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

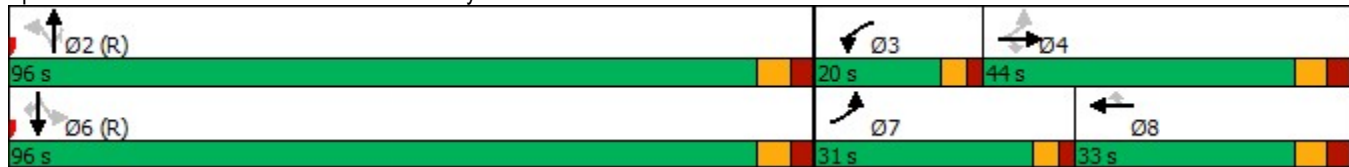


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	59.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.37	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.30	0.19	0.24	0.65	0.44	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
LOS	D	E	A	F	E	B	C	B	A	C	C	A
Approach Delay		57.4			63.0			13.6			19.8	
Approach LOS		E			E			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	39.0
Intersection LOS:	D
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

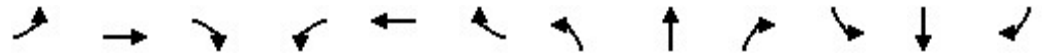
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	920	100	212	591	157	83	371	216	335	867	335
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.30	0.19	0.24	0.65	0.44	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
Queue Length 50th (m)	58.9	102.4	0.0	34.2	66.4	0.0	13.6	30.0	0.0	72.1	82.8	0.0
Queue Length 95th (m)	84.2	119.5	15.4	48.6	81.0	21.2	26.4	39.1	11.9	110.3	98.8	13.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	357	1133	425	313	804	358	279	1933	911	515	1971	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.30	0.19	0.24	0.65	0.44	0.33

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  			 		 	 	
Traffic Volume (vph)	236	865	94	199	556	148	78	349	203	315	815	315
Future Volume (vph)	236	865	94	199	556	148	78	349	203	315	815	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1688	3544	1557
Flt Permitted	0.20	1.00	1.00	0.95	1.00	1.00	0.26	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	362	4902	1508	3340	4948	1395	502	3476	1467	926	3544	1557
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	251	920	100	212	591	157	83	371	216	335	867	335
RTOR Reduction (vph)	0	0	77	0	0	131	0	0	96	0	0	149
Lane Group Flow (vph)	251	920	23	212	591	26	83	371	120	335	867	186
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	57.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Effective Green, g (s)	57.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.36	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Grp Cap (vph)	352	1133	348	313	804	226	279	1933	816	515	1971	866
v/s Ratio Prot	c0.12	c0.19		0.06	0.12			0.11			0.24	
v/s Ratio Perm	0.14		0.02			0.02	0.17		0.08	c0.36		0.12
v/c Ratio	0.71	0.81	0.07	0.68	0.74	0.11	0.30	0.19	0.15	0.65	0.44	0.22
Uniform Delay, d1	40.0	58.2	48.0	70.2	63.7	57.2	18.9	17.6	17.2	24.7	20.9	17.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.7	6.4	0.4	11.2	5.9	1.0	2.7	0.2	0.4	6.3	0.7	0.6
Delay (s)	51.6	64.6	48.4	81.4	69.6	58.2	21.6	17.9	17.5	30.9	21.6	18.5
Level of Service	D	E	D	F	E	E	C	B	B	C	C	B
Approach Delay (s)		60.8			70.4			18.2			22.9	
Approach LOS		E			E			B			C	
Intersection Summary												
HCM 2000 Control Delay			43.3									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			160.0								19.0	
Intersection Capacity Utilization			78.9%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	4	224	2	234	301	44	11	308	268	34	202	4
Future Volume (vph)	4	224	2	234	301	44	11	308	268	34	202	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.981			0.938			0.998	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1838	0	0	1721	0	0	1844	0
Flt Permitted		0.994		0.570				0.993			0.875	
Satd. Flow (perm)	0	1853	0	1095	1838	0	0	1711	0	0	1625	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			10			74			1	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	238	2	249	320	47	12	328	285	36	215	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	249	367	0	0	625	0	0	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	35.0	35.0		35.0	35.0		45.0	45.0		45.0	45.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		56.3%	56.3%		56.3%	56.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		39.0	39.0		39.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		29.0		29.0	29.0			39.0			39.0	
Actuated g/C Ratio		0.36		0.36	0.36			0.49			0.49	

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.36		0.63	0.55			0.72			0.32	
Control Delay		20.6		29.5	23.4			19.8			13.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		20.6		29.5	23.4			19.8			13.8	
LOS		C		C	C			B			B	
Approach Delay		20.6			25.9			19.8			13.8	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	21.2
Intersection LOS:	C
Intersection Capacity Utilization	80.0%
ICU Level of Service	D
Analysis Period (min)	15

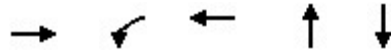
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	244	249	367	625	255
v/c Ratio	0.36	0.63	0.55	0.72	0.32
Control Delay	20.6	29.5	23.4	19.8	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	29.5	23.4	19.8	13.8
Queue Length 50th (m)	26.6	30.7	42.2	62.8	22.3
Queue Length 95th (m)	44.4	55.6	67.5	101.7	37.6
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	672	396	672	872	792
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.63	0.55	0.72	0.32

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	4	224	2	234	301	44	11	308	268	34	202	4
Future Volume (vph)	4	224	2	234	301	44	11	308	268	34	202	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		1.00		1.00	0.98			0.94			1.00	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		1863		1825	1838			1722			1844	
Flt Permitted		0.99		0.57	1.00			0.99			0.87	
Satd. Flow (perm)		1853		1095	1838			1712			1624	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	238	2	249	320	47	12	328	285	36	215	4
RTOR Reduction (vph)	0	1	0	0	6	0	0	38	0	0	1	0
Lane Group Flow (vph)	0	243	0	249	361	0	0	587	0	0	254	0
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
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)		29.0		29.0	29.0			39.0			39.0	
Effective Green, g (s)		29.0		29.0	29.0			39.0			39.0	
Actuated g/C Ratio		0.36		0.36	0.36			0.49			0.49	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Grp Cap (vph)		671		396	666			834			791	
v/s Ratio Prot					0.20							
v/s Ratio Perm		0.13		c0.23				c0.34			0.16	
v/c Ratio		0.36		0.63	0.54			0.70			0.32	
Uniform Delay, d1		18.7		21.1	20.2			16.0			12.5	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.5		7.4	3.1			4.9			1.1	
Delay (s)		20.2		28.4	23.4			20.9			13.5	
Level of Service		C		C	C			C			B	
Approach Delay (s)		20.2			25.4			20.9			13.5	
Approach LOS		C			C			C			B	

Intersection Summary

HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	9	489	31	366	533	25	40	132	374	20	56	6
Future Volume (vph)	9	489	31	366	533	25	40	132	374	20	56	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.993				0.850		0.991	
Flt Protected		0.999		0.950				0.988			0.988	
Satd. Flow (prot)	0	1826	0	1755	1886	0	0	1827	1555	0	1806	0
Flt Permitted		0.988		0.341				0.910			0.886	
Satd. Flow (perm)	0	1806	0	630	1886	0	0	1683	1555	0	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			3				398			4
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1383.3			349.1			588.2				263.1
Travel Time (s)		71.1			18.0			26.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	520	33	389	567	27	43	140	398	21	60	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	563	0	389	594	0	0	183	398	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

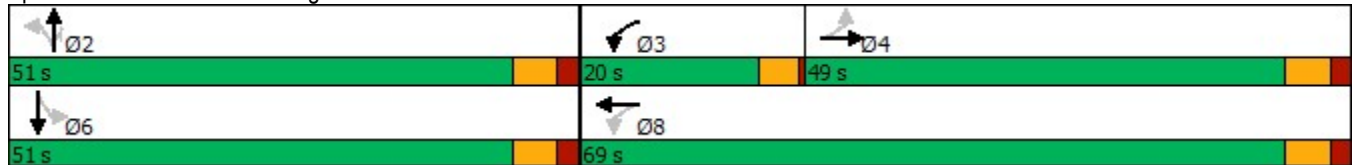
06/07/2024

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	24.0	24.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	49.0	49.0		20.0	69.0		51.0	51.0	51.0	51.0	51.0	
Total Split (%)	40.8%	40.8%		16.7%	57.5%		42.5%	42.5%	42.5%	42.5%	42.5%	
Maximum Green (s)	43.0	43.0		16.0	63.0		45.0	45.0	45.0	45.0	45.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		43.8		65.1	63.1			15.6	15.6		15.6	
Actuated g/C Ratio		0.48		0.72	0.69			0.17	0.17		0.17	
v/c Ratio		0.65		0.61	0.45			0.63	0.67		0.31	
Control Delay		23.1		9.6	8.2			44.9	9.5		33.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		23.1		9.6	8.2			44.9	9.5		33.7	
LOS		C		A	A			D	A		C	
Approach Delay		23.1			8.7			20.6			33.7	
Approach LOS		C			A			C			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 90.8
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 16.5
 Intersection LOS: B
 Intersection Capacity Utilization 91.3%
 ICU Level of Service F
 Analysis Period (min) 15

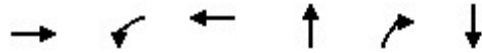
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	563	389	594	183	398	87
v/c Ratio	0.65	0.61	0.45	0.63	0.67	0.31
Control Delay	23.1	9.6	8.2	44.9	9.5	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	9.6	8.2	44.9	9.5	33.7
Queue Length 50th (m)	71.8	20.9	39.8	29.9	0.0	12.8
Queue Length 95th (m)	122.7	42.5	75.7	50.2	23.3	25.5
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	871	650	1312	836	972	806
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.60	0.45	0.22	0.41	0.11

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road
























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕	↗		↕	
Traffic Volume (vph)	9	489	31	366	533	25	40	132	374	20	56	6
Future Volume (vph)	9	489	31	366	533	25	40	132	374	20	56	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		1826		1755	1887			1828	1555		1806	
Flt Permitted		0.99		0.34	1.00			0.91	1.00		0.89	
Satd. Flow (perm)		1806		629	1887			1683	1555		1619	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	520	33	389	567	27	43	140	398	21	60	6
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	330	0	3	0
Lane Group Flow (vph)	0	561	0	389	593	0	0	183	68	0	84	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		43.8		63.2	63.2			15.6	15.6		15.6	
Effective Green, g (s)		43.8		63.2	63.2			15.6	15.6		15.6	
Actuated g/C Ratio		0.48		0.70	0.70			0.17	0.17		0.17	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		871		628	1313			289	267		278	
v/s Ratio Prot				c0.10	0.31							
v/s Ratio Perm		0.31		c0.33				c0.11	0.04		0.05	
v/c Ratio		0.64		0.62	0.45			0.63	0.26		0.30	
Uniform Delay, d1		17.7		7.9	6.1			34.9	32.6		32.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		3.7		1.8	1.1			4.5	0.5		0.6	
Delay (s)		21.3		9.8	7.2			39.4	33.1		33.5	
Level of Service		C		A	A			D	C		C	
Approach Delay (s)		21.3			8.2			35.1			33.5	
Approach LOS		C			A			D			C	
Intersection Summary												
HCM 2000 Control Delay			19.6			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.8			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			91.3%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	554	217	102	295	261	50	182	2859	438	35	1678	476	
Future Volume (vph)	554	217	102	295	261	50	182	2859	438	35	1678	476	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.952			0.976				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1825	1743	0	1789	1859	0	1807	5043	1633	1825	4812	1541	
Flt Permitted	0.164			0.184			0.072			0.078			
Satd. Flow (perm)	315	1743	0	347	1859	0	137	5043	1633	150	4812	1541	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		18			7				194			340	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			855.3			282.2		
Travel Time (s)		51.8			22.6			38.5			12.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%	
Adj. Flow (vph)	571	224	105	304	269	52	188	2947	452	36	1730	491	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	571	329	0	304	321	0	188	2947	452	36	1730	491	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	31.0		22.0	29.0		14.0	57.0	57.0	10.0	53.0	53.0
Total Split (%)	20.0%	25.8%		18.3%	24.2%		11.7%	47.5%	47.5%	8.3%	44.2%	44.2%
Maximum Green (s)	20.0	25.0		18.0	23.0		8.0	51.0	51.0	4.0	47.0	47.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	46.3	26.4		41.4	23.9		63.0	57.1	55.1	55.0	49.0	47.0
Actuated g/C Ratio	0.39	0.22		0.35	0.20		0.53	0.48	0.46	0.46	0.41	0.40
v/c Ratio	1.51	0.82		0.91	0.85		0.88	1.22	0.53	0.24	0.87	0.60
Control Delay	272.9	59.4		62.3	65.7		65.6	131.6	15.7	18.0	38.3	11.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	272.9	59.4		62.3	65.7		65.6	131.6	15.7	18.0	38.3	11.8
LOS	F	E		E	E		E	F	B	B	D	B
Approach Delay		194.9			64.1			113.5				32.2
Approach LOS		F			E			F				C

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	118.9
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.51
Intersection Signal Delay:	94.4
Intersection LOS:	F
Intersection Capacity Utilization:	119.4%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	571	329	304	321	188	2947	452	36	1730	491
v/c Ratio	1.51	0.82	0.91	0.85	0.88	1.22	0.53	0.24	0.87	0.60
Control Delay	272.9	59.4	62.3	65.7	65.6	131.6	15.7	18.0	38.3	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	272.9	59.4	62.3	65.7	65.6	131.6	15.7	18.0	38.3	11.8
Queue Length 50th (m)	~171.6	70.1	52.0	71.2	28.9	~329.0	44.0	4.0	135.8	25.1
Queue Length 95th (m)	#239.4	#114.4	#102.2	#115.4	#71.2	#355.0	75.8	9.1	157.1	59.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	377	410	340	396	213	2420	860	153	1983	814
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.51	0.80	0.89	0.81	0.88	1.22	0.53	0.24	0.87	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	554	217	102	295	261	50	182	2859	438	35	1678	476
Future Volume (vph)	554	217	102	295	261	50	182	2859	438	35	1678	476
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1743		1789	1859		1807	5043	1633	1825	4812	1541
Flt Permitted	0.16	1.00		0.18	1.00		0.07	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	315	1743		346	1859		137	5043	1633	149	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	571	224	105	304	269	52	188	2947	452	36	1730	491
RTOR Reduction (vph)	0	14	0	0	6	0	0	0	106	0	0	201
Lane Group Flow (vph)	571	315	0	304	315	0	188	2947	346	36	1730	290
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.4	24.4		39.4	21.9		63.1	55.1	55.1	51.9	49.5	49.5
Effective Green, g (s)	44.4	26.4		39.4	23.9		65.5	57.1	55.1	55.9	51.5	49.5
Actuated g/C Ratio	0.37	0.22		0.32	0.20		0.54	0.47	0.45	0.46	0.42	0.41
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	363	379		320	365		211	2371	741	129	2041	628
v/s Ratio Prot	c0.26	0.18		0.14	0.17		c0.07	c0.58		0.01	0.36	
v/s Ratio Perm	c0.32			0.17			0.41		0.21	0.12		0.19
v/c Ratio	1.57	0.83		0.95	0.86		0.89	1.24	0.47	0.28	0.85	0.46
Uniform Delay, d1	35.1	45.4		34.6	47.2		32.0	32.2	23.0	27.5	31.4	26.2
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	270.8	14.3		36.7	18.6		34.0	113.1	2.1	1.2	4.6	2.4
Delay (s)	305.9	59.7		71.3	65.8		65.9	145.2	25.1	28.7	36.0	28.7
Level of Service	F	E		E	E		E	F	C	C	D	C
Approach Delay (s)		215.9			68.5			125.9			34.3	
Approach LOS		F			E			F			C	
Intersection Summary												
HCM 2000 Control Delay			104.0									F
HCM 2000 Volume to Capacity ratio			1.38									
Actuated Cycle Length (s)			121.4								16.0	
Intersection Capacity Utilization			119.4%									H
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

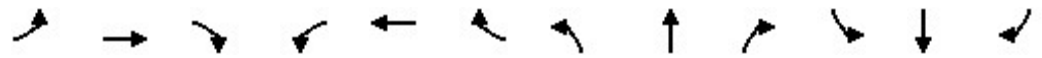
06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕			↕	
Traffic Volume (vph)	40	677	49	178	638	64	33	262	152	32	159	28
Future Volume (vph)	40	677	49	178	638	64	33	262	152	32	159	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.990			0.989			0.954			0.983	
Flt Protected		0.997			0.990			0.996			0.993	
Satd. Flow (prot)	0	5037	0	0	5026	0	0	1785	0	0	1835	0
Flt Permitted		0.834			0.667			0.963			0.893	
Satd. Flow (perm)	0	4213	0	0	3386	0	0	1725	0	0	1651	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			14			29			8	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	43	736	53	193	693	70	36	285	165	35	173	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	832	0	0	956	0	0	486	0	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	59.0	59.0		59.0	59.0		61.0	61.0		61.0	61.0	
Total Split (%)	49.2%	49.2%		49.2%	49.2%		50.8%	50.8%		50.8%	50.8%	
Maximum Green (s)	55.0	55.0		55.0	55.0		57.0	57.0		57.0	57.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		55.0			55.0			57.0			57.0	
Actuated g/C Ratio		0.46			0.46			0.48			0.48	
v/c Ratio		0.43			0.61			0.58			0.30	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

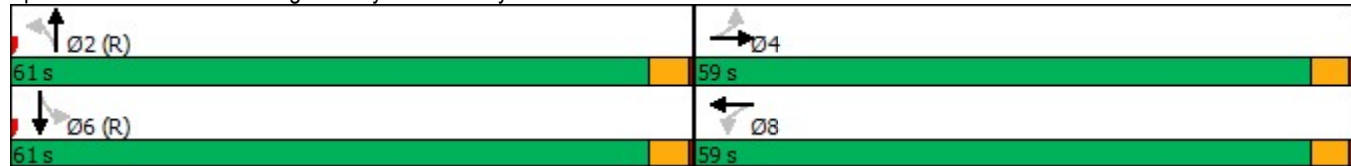


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		22.4			38.2			24.8			19.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.4			38.2			24.8			19.9	
LOS		C			D			C			B	
Approach Delay		22.4			38.2			24.8			19.9	
Approach LOS		C			D			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	28.7
Intersection LOS:	C
Intersection Capacity Utilization	71.0%
ICU Level of Service	C
Analysis Period (min)	15

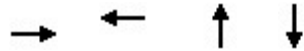
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	832	956	486	238
v/c Ratio	0.43	0.61	0.58	0.30
Control Delay	22.4	38.2	24.8	19.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.4	38.2	24.8	19.9
Queue Length 50th (m)	46.5	83.6	76.1	32.2
Queue Length 95th (m)	57.7	98.6	109.7	50.0
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1937	1559	834	788
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.61	0.58	0.30
Intersection Summary				

HCM Signalized Intersection Capacity Analysis
4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↔↔			↔↔↔			↔			↔		
Traffic Volume (vph)	40	677	49	178	638	64	33	262	152	32	159	28	
Future Volume (vph)	40	677	49	178	638	64	33	262	152	32	159	28	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		0.91			0.91			1.00			1.00		
Frbp, ped/bikes		1.00			1.00			1.00			1.00		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		0.99			0.99			0.95			0.98		
Flt Protected		1.00			0.99			1.00			0.99		
Satd. Flow (prot)		5041			5026			1785			1835		
Flt Permitted		0.83			0.67			0.96			0.89		
Satd. Flow (perm)		4213			3387			1726			1650		
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)	43	736	53	193	693	70	36	285	165	35	173	30	
RTOR Reduction (vph)	0	7	0	0	8	0	0	15	0	0	4	0	
Lane Group Flow (vph)	0	826	0	0	948	0	0	471	0	0	234	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
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)		55.0			55.0			57.0			57.0		
Effective Green, g (s)		55.0			55.0			57.0			57.0		
Actuated g/C Ratio		0.46			0.46			0.48			0.48		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Lane Grp Cap (vph)		1930			1552			819			783		
v/s Ratio Prot													
v/s Ratio Perm		0.20			0.28			0.27			0.14		
v/c Ratio		0.43			0.61			0.57			0.30		
Uniform Delay, d1		21.9			24.5			22.7			19.3		
Progression Factor		1.00			1.50			1.00			1.00		
Incremental Delay, d2		0.7			1.5			2.9			1.0		
Delay (s)		22.6			38.3			25.7			20.2		
Level of Service		C			D			C			C		
Approach Delay (s)		22.6			38.3			25.7			20.2		
Approach LOS		C			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			28.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.59										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			71.0%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	833	65	109	973	248	111	383	112	189	223	75
Future Volume (vph)	41	833	65	109	973	248	111	383	112	189	223	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.970			0.966			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4892	0	1825	3475	0	1738	3393	0
Flt Permitted	0.130			0.232			0.562			0.421		
Satd. Flow (perm)	238	5036	0	429	4892	0	1080	3475	0	770	3393	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			64			44			41	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	43	868	68	114	1014	258	116	399	117	197	232	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	936	0	114	1272	0	116	516	0	197	310	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	50.0	50.0		50.0	50.0		58.0	58.0		58.0	58.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	50.0	50.0		50.0	50.0		58.0	58.0		58.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

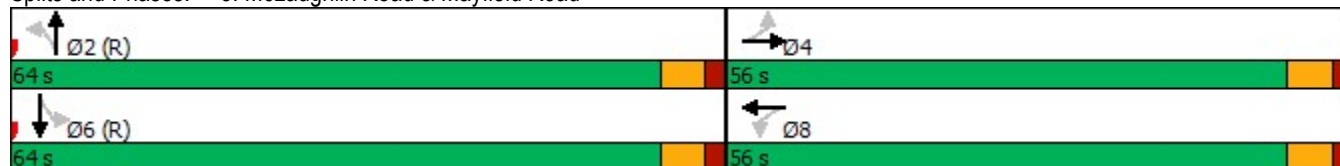


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.43	0.44		0.64	0.61		0.22	0.30		0.53	0.19	
Control Delay	51.8	35.4		47.0	27.4		19.4	17.6		28.0	15.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	51.8	35.4		47.0	27.4		19.4	17.6		28.0	15.5	
LOS	D	D		D	C		B	B		C	B	
Approach Delay		36.2			29.0			17.9			20.4	
Approach LOS		D			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	27.8
Intersection LOS:	C
Intersection Capacity Utilization	72.3%
ICU Level of Service	C
Analysis Period (min)	15

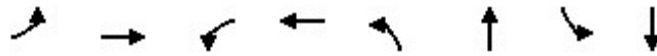
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	936	114	1272	116	516	197	310
v/c Ratio	0.43	0.44	0.64	0.61	0.22	0.30	0.53	0.19
Control Delay	51.8	35.4	47.0	27.4	19.4	17.6	28.0	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	35.4	47.0	27.4	19.4	17.6	28.0	15.5
Queue Length 50th (m)	9.0	71.9	21.0	80.4	15.4	34.1	31.4	18.2
Queue Length 95th (m)	m21.3	85.2	#48.8	95.4	27.6	45.8	55.3	26.7
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	99	2105	178	2075	522	1702	372	1661
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.44	0.64	0.61	0.22	0.30	0.53	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑		↗	↑↑		↖	↑↑	
Traffic Volume (vph)	41	833	65	109	973	248	111	383	112	189	223	75
Future Volume (vph)	41	833	65	109	973	248	111	383	112	189	223	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5036		1755	4890		1825	3475		1738	3393	
Flt Permitted	0.13	1.00		0.23	1.00		0.56	1.00		0.42	1.00	
Satd. Flow (perm)	238	5036		428	4890		1079	3475		771	3393	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	43	868	68	114	1014	258	116	399	117	197	232	78
RTOR Reduction (vph)	0	8	0	0	37	0	0	23	0	0	21	0
Lane Group Flow (vph)	43	928	0	114	1235	0	116	493	0	197	289	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
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)	50.0	50.0		50.0	50.0		58.0	58.0		58.0	58.0	
Effective Green, g (s)	50.0	50.0		50.0	50.0		58.0	58.0		58.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.48	0.48		0.48	0.48	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	99	2098		178	2037		521	1679		372	1639	
v/s Ratio Prot		0.18			0.25			0.14			0.09	
v/s Ratio Perm	0.18			c0.27			0.11			c0.26		
v/c Ratio	0.43	0.44		0.64	0.61		0.22	0.29		0.53	0.18	
Uniform Delay, d1	24.9	25.0		27.8	27.3		17.9	18.7		21.5	17.5	
Progression Factor	1.39	1.40		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.2	0.6		16.4	1.3		1.0	0.4		5.3	0.2	
Delay (s)	46.8	35.7		44.2	28.7		18.9	19.1		26.8	17.7	
Level of Service	D	D		D	C		B	B		C	B	
Approach Delay (s)		36.2			29.9			19.1			21.3	
Approach LOS		D			C			B			C	

































Intersection Summary

HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	579	579	99	266	745	149	187	661	253	214	758	819
Future Volume (vph)	579	579	99	266	745	149	187	661	253	214	758	819
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99	1.00		0.96			0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Fl _t Permitted	0.160			0.950			0.303			0.275		
Satd. Flow (perm)	296	4995	1538	3335	5092	1562	570	3614	1486	528	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			145			254			680
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	597	597	102	274	768	154	193	681	261	221	781	844
Shared Lane Traffic (%)												
Lane Group Flow (vph)	597	597	102	274	768	154	193	681	261	221	781	844
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

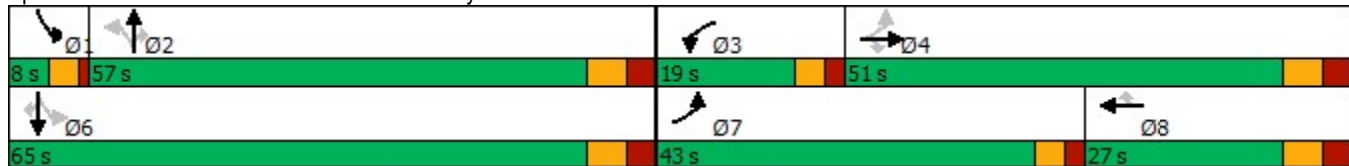


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	43.0	51.0	51.0	19.0	27.0	27.0	57.0	57.0	57.0	8.0	65.0	65.0
Total Split (%)	31.9%	37.8%	37.8%	14.1%	20.0%	20.0%	42.2%	42.2%	42.2%	5.9%	48.1%	48.1%
Maximum Green (s)	38.0	44.0	44.0	14.0	20.0	20.0	50.0	50.0	50.0	4.0	58.0	58.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0
Act Effct Green (s)	67.0	44.4	44.4	15.6	20.0	20.0	52.0	50.0	50.0	63.0	58.0	58.0
Actuated g/C Ratio	0.50	0.33	0.33	0.12	0.15	0.15	0.39	0.37	0.37	0.47	0.43	0.43
v/c Ratio	1.03	0.36	0.18	0.70	1.02	0.44	0.88	0.51	0.37	0.73	0.52	0.80
Control Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
LOS	F	D	A	E	F	B	E	C	A	D	C	B
Approach Delay		54.6			77.4			35.0			23.3	
Approach LOS		D			E			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 135
 Actuated Cycle Length: 135
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 45.0
 Intersection LOS: D
 Intersection Capacity Utilization 97.0%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	597	597	102	274	768	154	193	681	261	221	781	844
v/c Ratio	1.03	0.36	0.18	0.70	1.02	0.44	0.88	0.51	0.37	0.73	0.52	0.80
Control Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
Queue Length 50th (m)	~153.4	44.5	0.0	36.6	~79.2	2.1	47.5	73.6	1.2	35.1	79.2	35.0
Queue Length 95th (m)	#225.3	55.7	12.0	51.6	#106.5	21.7	#94.2	92.1	18.7	#54.9	97.7	99.6
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	579	1644	577	403	754	354	219	1338	710	304	1508	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.36	0.18	0.68	1.02	0.44	0.88	0.51	0.37	0.73	0.52	0.80

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	579	579	99	266	745	149	187	661	253	214	758	819
Future Volume (vph)	579	579	99	266	745	149	187	661	253	214	758	819
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1786	3614	1486	1825	3510	1555
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.30	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	569	3614	1486	529	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	597	597	102	274	768	154	193	681	261	221	781	844
RTOR Reduction (vph)	0	0	68	0	0	124	0	0	160	0	0	388
Lane Group Flow (vph)	597	597	34	274	768	30	193	681	101	221	781	456
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	63.0	44.4	44.4	13.6	20.0	20.0	50.0	50.0	50.0	58.0	58.0	58.0
Effective Green, g (s)	65.0	44.4	44.4	15.6	20.0	20.0	52.0	50.0	50.0	60.0	58.0	58.0
Actuated g/C Ratio	0.48	0.33	0.33	0.12	0.15	0.15	0.39	0.37	0.37	0.44	0.43	0.43
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
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	3.0
Lane Grp Cap (vph)	574	1642	505	393	754	231	219	1338	550	292	1508	668
v/s Ratio Prot	c0.31	0.12		0.08	0.15			0.19		c0.03	0.22	
v/s Ratio Perm	c0.19		0.02			0.02	c0.34		0.07	0.30		0.29
v/c Ratio	1.04	0.36	0.07	0.70	1.02	0.13	0.88	0.51	0.18	0.76	0.52	0.68
Uniform Delay, d1	38.5	34.5	31.1	57.4	57.5	50.0	38.6	33.0	28.7	31.4	28.2	31.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	48.4	0.6	0.3	5.3	37.5	1.2	31.1	0.3	0.2	10.7	1.3	5.6
Delay (s)	86.9	35.2	31.3	62.7	95.0	51.1	69.8	33.3	28.9	42.1	29.5	36.7
Level of Service	F	D	C	E	F	D	E	C	C	D	C	D
Approach Delay (s)		58.7			82.0			38.5			34.3	
Approach LOS		E			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			51.4				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			1.01									
Actuated Cycle Length (s)			135.0			Sum of lost time (s)			19.0			
Intersection Capacity Utilization			97.0%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8
Future Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.973			0.924				0.995
Flt Protected				0.950								0.992
Satd. Flow (prot)	0	1919	0	1772	1807	0	0	1709	0	0	1789	0
Flt Permitted		0.997		0.560				0.999			0.904	
Satd. Flow (perm)	0	1913	0	1044	1807	0	0	1708	0	0	1631	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			33			193				6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	270	3	126	198	44	2	199	259	39	193	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	275	0	126	242	0	0	460	0	0	241	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

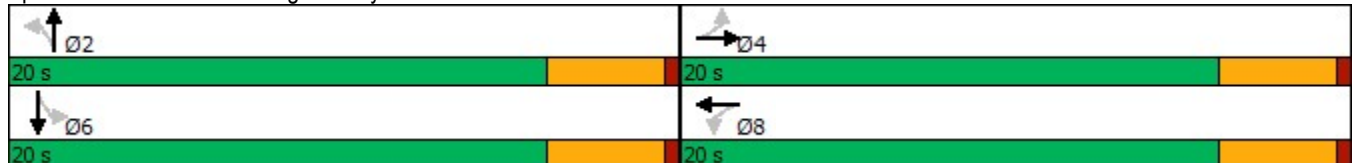
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.0		9.9	9.9			19.6			19.6	
Actuated g/C Ratio		0.29		0.29	0.29			0.57			0.57	
v/c Ratio		0.50		0.42	0.45			0.44			0.26	
Control Delay		13.1		14.2	11.1			5.8			7.2	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		13.1		14.2	11.1			5.8			7.2	
LOS		B		B	B			A			A	
Approach Delay		13.1			12.2			5.8			7.2	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 34.6
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay: 9.3
 Intersection Capacity Utilization 74.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service D

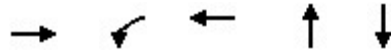
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	275	126	242	460	241
v/c Ratio	0.50	0.42	0.45	0.44	0.26
Control Delay	13.1	14.2	11.1	5.8	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	14.2	11.1	5.8	7.2
Queue Length 50th (m)	12.1	5.4	9.0	8.0	6.9
Queue Length 95th (m)	24.3	13.9	19.7	26.8	20.1
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	887	483	855	1051	927
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.26	0.28	0.44	0.26

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕			↕		
Traffic Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8	
Future Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00		
Frt		1.00		1.00	0.97			0.92			0.99		
Flt Protected		1.00		0.95	1.00			1.00			0.99		
Satd. Flow (prot)		1918		1772	1806			1709			1789		
Flt Permitted		1.00		0.56	1.00			1.00			0.90		
Satd. Flow (perm)		1913		1045	1806			1708			1630		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	270	3	126	198	44	2	199	259	39	193	9	
RTOR Reduction (vph)	0	2	0	0	25	0	0	91	0	0	3	0	
Lane Group Flow (vph)	0	273	0	126	217	0	0	369	0	0	238	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
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)		8.7		8.7	8.7			18.8			18.8		
Effective Green, g (s)		8.7		8.7	8.7			18.8			18.8		
Actuated g/C Ratio		0.25		0.25	0.25			0.53			0.53		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		468		256	442			904			863		
v/s Ratio Prot					0.12								
v/s Ratio Perm		c0.14		0.12				c0.22			0.15		
v/c Ratio		0.58		0.49	0.49			0.41			0.28		
Uniform Delay, d1		11.8		11.5	11.5			5.0			4.6		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		1.9		1.5	0.9			1.4			0.8		
Delay (s)		13.7		13.0	12.4			6.4			5.4		
Level of Service		B		B	B			A			A		
Approach Delay (s)		13.7			12.6			6.4			5.4		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			9.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.46										
Actuated Cycle Length (s)			35.5									Sum of lost time (s)	8.0
Intersection Capacity Utilization			74.3%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Future Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.987				0.850		0.992	
Flt Protected		0.999		0.950				0.981			0.988	
Satd. Flow (prot)	0	1871	0	1789	1830	0	0	1862	1617	0	1857	0
Flt Permitted		0.996		0.245				0.827			0.895	
Satd. Flow (perm)	0	1865	0	461	1830	0	0	1569	1617	0	1683	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			9				338			4
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1383.3			349.1			588.2				263.1
Travel Time (s)		71.1			18.0			26.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	551	36	223	329	31	53	85	391	49	134	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	593	0	223	360	0	0	138	391	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

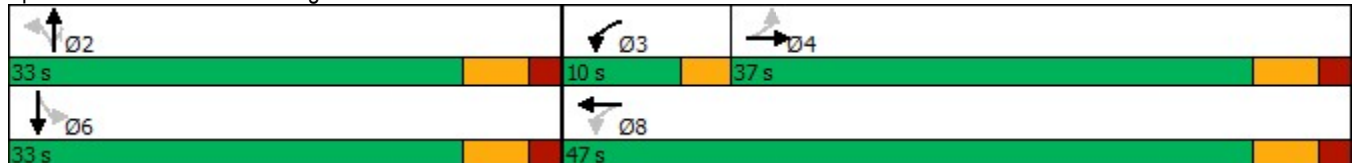
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	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	37.0	37.0		10.0	47.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	46.3%	46.3%		12.5%	58.8%		41.3%	41.3%	41.3%	41.3%	41.3%	
Maximum Green (s)	31.0	31.0		7.0	41.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		27.5		40.5	37.5			27.1	27.1		27.1	
Actuated g/C Ratio		0.36		0.53	0.49			0.35	0.35		0.35	
v/c Ratio		0.88		0.61	0.40			0.25	0.50		0.33	
Control Delay		39.4		17.4	13.4			20.3	6.4		20.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		39.4		17.4	13.4			20.3	6.4		20.7	
LOS		D		B	B			C	A		C	
Approach Delay		39.4			15.0			10.0			20.7	
Approach LOS		D			B			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 76.7
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 21.8
 Intersection Capacity Utilization 79.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

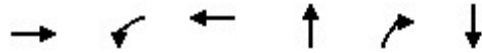
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

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Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	593	223	360	138	391	195
v/c Ratio	0.88	0.61	0.40	0.25	0.50	0.33
Control Delay	39.4	17.4	13.4	20.3	6.4	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	17.4	13.4	20.3	6.4	20.7
Queue Length 50th (m)	78.2	16.2	30.4	15.0	5.4	21.4
Queue Length 95th (m)	#132.6	27.5	48.5	28.3	25.1	37.8
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	759	365	986	554	789	597
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.61	0.37	0.25	0.50	0.33

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road
























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕	↗		↕	
Traffic Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Future Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)		1871		1789	1830			1862	1617		1856	
Flt Permitted		1.00		0.24	1.00			0.83	1.00		0.90	
Satd. Flow (perm)		1864		461	1830			1570	1617		1683	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	6	551	36	223	329	31	53	85	391	49	134	12
RTOR Reduction (vph)	0	3	0	0	5	0	0	0	218	0	3	0
Lane Group Flow (vph)	0	590	0	223	355	0	0	138	173	0	192	0
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		27.5		37.5	37.5			27.1	27.1		27.1	
Effective Green, g (s)		27.5		37.5	37.5			27.1	27.1		27.1	
Actuated g/C Ratio		0.36		0.49	0.49			0.35	0.35		0.35	
Clearance Time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		669		347	895			555	572		595	
v/s Ratio Prot				c0.06	0.19							
v/s Ratio Perm		c0.32		0.26				0.09	0.11		c0.11	
v/c Ratio		0.88		0.64	0.40			0.25	0.30		0.32	
Uniform Delay, d1		23.0		14.1	12.4			17.5	17.9		18.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		13.0		4.0	0.3			1.1	1.4		1.4	
Delay (s)		36.0		18.1	12.7			18.6	19.3		19.5	
Level of Service		D		B	B			B	B		B	
Approach Delay (s)		36.0			14.8			19.1			19.5	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			23.1		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			76.6		Sum of lost time (s)			15.0				
Intersection Capacity Utilization			79.2%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245	
Future Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.936			0.974				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1755	1751	0	1722	1788	0	1722	4445	1471	1615	5043	1633	
Flt Permitted	0.274			0.222			0.070			0.070			
Satd. Flow (perm)	506	1751	0	402	1788	0	127	4445	1471	119	5043	1633	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		20			7				146			146	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			855.3			282.2		
Travel Time (s)		51.8			22.6			38.5			12.7		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Adj. Flow (vph)	489	241	180	399	203	42	58	1782	187	35	2496	263	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	489	421	0	399	245	0	58	1782	187	35	2496	263	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

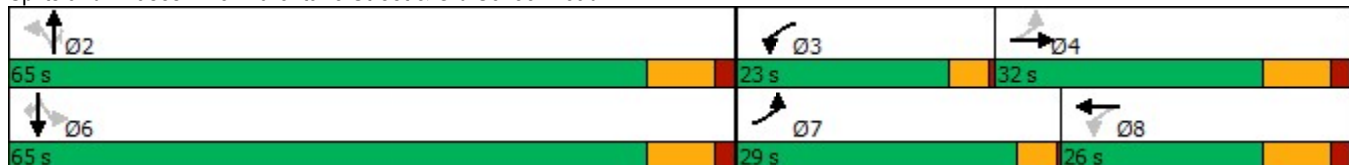


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	29.0	32.0		23.0	26.0		65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	24.2%	26.7%		19.2%	21.7%		54.2%	54.2%	54.2%	54.2%	54.2%	54.2%
Maximum Green (s)	25.0	24.0		19.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Yellow Time (s)	3.5	6.0		3.5	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	51.0	24.0		41.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.42	0.20		0.34	0.15		0.48	0.48	0.48	0.48	0.48	0.48
v/c Ratio	1.03	1.15		1.15	0.89		0.97	0.84	0.24	0.62	1.04	0.31
Control Delay	78.4	135.8		127.6	82.1		143.9	32.3	5.7	74.1	61.9	9.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	135.8		127.6	82.1		143.9	32.3	5.7	74.1	61.9	9.2
LOS	E	F		F	F		F	C	A	E	E	A
Approach Delay		105.0			110.3			33.1				57.1
Approach LOS		F			F			C				E

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	120
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.15
Intersection Signal Delay:	61.7
Intersection LOS:	E
Intersection Capacity Utilization:	104.1%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	421	399	245	58	1782	187	35	2496	263
v/c Ratio	1.03	1.15	1.15	0.89	0.97	0.84	0.24	0.62	1.04	0.31
Control Delay	78.4	135.8	127.6	82.1	143.9	32.3	5.7	74.1	61.9	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	135.8	127.6	82.1	143.9	32.3	5.7	74.1	61.9	9.2
Queue Length 50th (m)	~95.4	~113.0	~91.5	55.8	12.9	131.1	5.1	6.0	~233.0	15.2
Queue Length 95th (m)	#160.3	#174.8	#153.2	#102.0	#41.1	152.6	17.6	#24.9	#260.8	32.1
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	475	366	346	274	60	2111	775	56	2395	852
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	1.15	1.15	0.89	0.97	0.84	0.24	0.63	1.04	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.



























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245
Future Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.94		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	1750		1722	1788		1722	4445	1471	1615	5043	1633
Flt Permitted	0.27	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	506	1750		403	1788		127	4445	1471	119	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	489	241	180	399	203	42	58	1782	187	35	2496	263
RTOR Reduction (vph)	0	16	0	0	6	0	0	0	77	0	0	77
Lane Group Flow (vph)	489	405	0	399	239	0	58	1782	110	35	2496	186
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	47.0	24.0		37.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Effective Green, g (s)	47.0	24.0		37.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.39	0.20		0.31	0.15		0.48	0.48	0.48	0.48	0.48	0.48
Clearance Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
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)	458	350		333	268		60	2111	698	56	2395	775
v/s Ratio Prot	c0.22	c0.23		c0.19	0.13			0.40			c0.49	
v/s Ratio Perm	0.20			0.18			0.46		0.08	0.29		0.11
v/c Ratio	1.07	1.16		1.20	0.89		0.97	0.84	0.16	0.62	1.04	0.24
Uniform Delay, d1	31.5	48.0		37.1	50.0		30.6	27.6	17.9	23.5	31.5	18.7
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	61.3	98.0		114.6	28.7		107.0	4.3	0.5	42.7	30.5	0.7
Delay (s)	92.7	146.0		151.7	78.8		137.6	32.0	18.4	66.3	62.0	19.4
Level of Service	F	F		F	E		F	C	B	E	E	B
Approach Delay (s)		117.4			124.0			33.7			58.1	
Approach LOS		F			F			C			E	
Intersection Summary												
HCM 2000 Control Delay			65.5				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			1.11									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			104.1%				ICU Level of Service			G		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕				↕
Traffic Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Future Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.995			0.942				0.986
Fl _t Protected		0.997			0.988			0.997				0.988
Satd. Flow (prot)	0	4861	0	0	4836	0	0	1737	0	0	1783	0
Fl _t Permitted		0.849			0.667			0.965				0.831
Satd. Flow (perm)	0	4139	0	0	3265	0	0	1681	0	0	1499	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			5			45				7
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				3083.5
Travel Time (s)		14.1			73.0			15.5				138.8
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	41	664	48	200	575	24	24	190	161	81	228	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	753	0	0	799	0	0	375	0	0	345	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	52.0	52.0		52.0	52.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
v/c Ratio		0.42			0.88dl			0.43			0.46	
Control Delay		24.1			43.0			18.5			21.5	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024



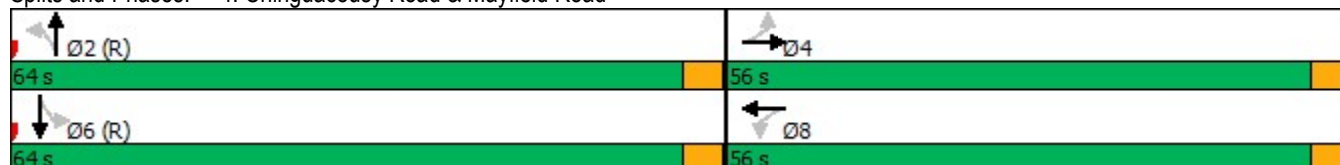
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		24.1			43.0			18.5			21.5	
LOS		C			D			B			C	
Approach Delay		24.1			43.0			18.5			21.5	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	29.4
Intersection LOS:	C
Intersection Capacity Utilization	81.8%
ICU Level of Service	D
Analysis Period (min)	15

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

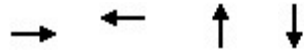
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	753	799	375	345
v/c Ratio	0.42	0.88dl	0.43	0.46
Control Delay	24.1	43.0	18.5	21.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.1	43.0	18.5	21.5
Queue Length 50th (m)	43.4	68.8	47.7	49.9
Queue Length 95th (m)	54.4	83.2	71.6	74.7
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1799	1417	863	753
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.56	0.43	0.46

Intersection Summary

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔			↔↕↔			↕			↕	
Traffic Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Future Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		0.99			1.00			0.94			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		4865			4837			1736			1783	
Flt Permitted		0.85			0.67			0.97			0.83	
Satd. Flow (perm)		4142			3265			1682			1500	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	41	664	48	200	575	24	24	190	161	81	228	36
RTOR Reduction (vph)	0	6	0	0	3	0	0	23	0	0	4	0
Lane Group Flow (vph)	0	747	0	0	796	0	0	353	0	0	342	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		52.0			52.0			60.0			60.0	
Effective Green, g (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		1794			1414			841			750	
v/s Ratio Prot												
v/s Ratio Perm		0.18			0.24			0.21			0.23	
v/c Ratio		0.42			0.88dl			0.42			0.46	
Uniform Delay, d1		23.5			25.5			19.0			19.4	
Progression Factor		1.00			1.62			1.00			1.00	
Incremental Delay, d2		0.7			1.6			1.5			2.0	
Delay (s)		24.2			42.8			20.5			21.4	
Level of Service		C			D			C			C	
Approach Delay (s)		24.2			42.8			20.5			21.4	
Approach LOS		C			D			C			C	

Intersection Summary

HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Future Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.980			0.961			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4770	0	1644	3421	0	1690	3386	0
Flt Permitted	0.294			0.227			0.362			0.515		
Satd. Flow (perm)	565	4888	0	408	4770	0	627	3421	0	916	3386	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			34			51			43	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	50	895	106	126	710	111	47	263	94	269	440	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	1001	0	126	821	0	47	357	0	269	579	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		23.0	23.0	
Total Split (s)	64.0	64.0		64.0	64.0		56.0	56.0		56.0	56.0	
Total Split (%)	53.3%	53.3%		53.3%	53.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

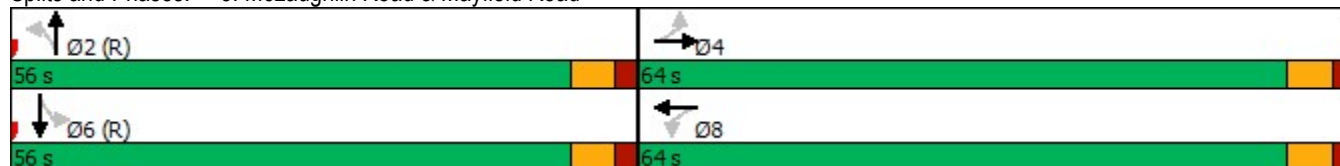


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.18	0.42		0.64	0.35		0.18	0.25		0.71	0.40	
Control Delay	24.7	26.1		40.9	19.0		24.5	19.8		40.9	23.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.7	26.1		40.9	19.0		24.5	19.8		40.9	23.6	
LOS	C	C		D	B		C	B		D	C	
Approach Delay		26.0			21.9			20.4			29.1	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	24.9
Intersection LOS:	C
Intersection Capacity Utilization	70.8%
ICU Level of Service	C
Analysis Period (min)	15

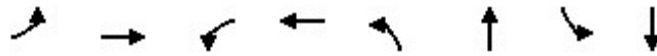
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	50	1001	126	821	47	357	269	579
v/c Ratio	0.18	0.42	0.64	0.35	0.18	0.25	0.71	0.40
Control Delay	24.7	26.1	40.9	19.0	24.5	19.8	40.9	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	26.1	40.9	19.0	24.5	19.8	40.9	23.6
Queue Length 50th (m)	8.7	69.1	21.6	41.0	6.9	23.8	51.5	45.6
Queue Length 95th (m)	19.3	80.7	#51.7	50.7	15.7	34.5	85.9	60.3
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	273	2374	197	2323	261	1455	381	1435
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.42	0.64	0.35	0.18	0.25	0.71	0.40

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Future Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4889		1706	4768		1644	3420		1690	3386	
Flt Permitted	0.29	1.00		0.23	1.00		0.36	1.00		0.52	1.00	
Satd. Flow (perm)	564	4889		408	4768		627	3420		916	3386	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	50	895	106	126	710	111	47	263	94	269	440	139
RTOR Reduction (vph)	0	12	0	0	18	0	0	30	0	0	25	0
Lane Group Flow (vph)	50	989	0	126	803	0	47	327	0	269	554	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
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)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Effective Green, g (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	272	2363		197	2304		261	1425		381	1410	
v/s Ratio Prot		0.20			0.17			0.10			0.16	
v/s Ratio Perm	0.09			c0.31			0.07			c0.29		
v/c Ratio	0.18	0.42		0.64	0.35		0.18	0.23		0.71	0.39	
Uniform Delay, d1	17.6	20.1		23.2	19.3		22.1	22.6		28.9	24.4	
Progression Factor	1.26	1.30		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	0.5		14.9	0.4		1.5	0.4		10.5	0.8	
Delay (s)	23.6	26.6		38.0	19.7		23.6	23.0		39.4	25.2	
Level of Service	C	C		D	B		C	C		D	C	
Approach Delay (s)		26.5			22.1			23.0			29.7	
Approach LOS		C			C			C			C	

































Intersection Summary

HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315
Future Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.198			0.950			0.232			0.492		
Satd. Flow (perm)	362	4902	1508	3326	4948	1395	441	3476	1467	875	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100			157			216			335
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	31.0	44.0	44.0	20.0	33.0	33.0	96.0	96.0	96.0	96.0	96.0	96.0
Total Split (%)	19.4%	27.5%	27.5%	12.5%	20.6%	20.6%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	26.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

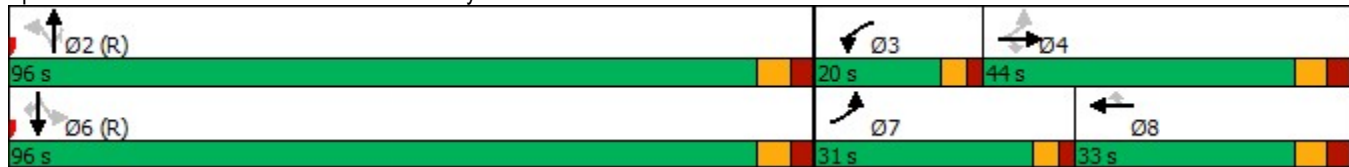


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	59.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.37	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.34	0.22	0.24	0.69	0.48	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
LOS	D	E	A	F	E	B	C	B	A	C	C	A
Approach Delay		57.4			63.0			14.2			20.9	
Approach LOS		E			E			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	38.9
Intersection LOS:	D
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024






































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.34	0.22	0.24	0.69	0.48	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
Queue Length 50th (m)	58.9	102.4	0.0	34.2	66.4	0.0	14.0	34.1	0.0	74.5	93.8	0.0
Queue Length 95th (m)	84.2	119.5	15.4	48.6	81.0	21.2	27.9	44.0	11.9	116.1	111.1	13.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	357	1133	425	313	804	358	245	1933	911	486	1971	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.34	0.22	0.24	0.69	0.48	0.33

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		  	  	
Traffic Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315
Future Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1690	3544	1557
Flt Permitted	0.20	1.00	1.00	0.95	1.00	1.00	0.23	1.00	1.00	0.49	1.00	1.00
Satd. Flow (perm)	362	4902	1508	3340	4948	1395	441	3476	1467	876	3544	1557
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335
RTOR Reduction (vph)	0	0	77	0	0	131	0	0	96	0	0	149
Lane Group Flow (vph)	251	920	23	212	591	26	83	416	120	335	951	186
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	57.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Effective Green, g (s)	57.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.36	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Grp Cap (vph)	352	1133	348	313	804	226	245	1933	816	487	1971	866
v/s Ratio Prot	c0.12	c0.19		0.06	0.12			0.12			0.27	
v/s Ratio Perm	0.14		0.02			0.02	0.19		0.08	c0.38		0.12
v/c Ratio	0.71	0.81	0.07	0.68	0.74	0.11	0.34	0.22	0.15	0.69	0.48	0.22
Uniform Delay, d1	40.0	58.2	48.0	70.2	63.7	57.2	19.4	17.9	17.2	25.5	21.5	17.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.7	6.4	0.4	11.2	5.9	1.0	3.7	0.3	0.4	7.7	0.8	0.6
Delay (s)	51.6	64.6	48.4	81.4	69.6	58.2	23.1	18.2	17.5	33.2	22.4	18.5
Level of Service	D	E	D	F	E	E	C	B	B	C	C	B
Approach Delay (s)		60.8			70.4			18.5			23.8	
Approach LOS		E			E			B			C	
Intersection Summary												
HCM 2000 Control Delay			43.1									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			160.0								19.0	
Intersection Capacity Utilization			78.9%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	115	50	448	66	23	348
Future Volume (vph)	115	50	448	66	23	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0		0.0	0.0	
Storage Lanes	0	0		0	0	
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.959		0.981			
Flt Protected	0.966					0.997
Satd. Flow (prot)	1745	0	3511	0	0	3568
Flt Permitted	0.966					0.997
Satd. Flow (perm)	1745	0	3511	0	0	3568
Link Speed (k/h)	48		80			80
Link Distance (m)	1359.2		2496.3			588.2
Travel Time (s)	101.9		112.3			26.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	54	487	72	25	378
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	559	0	0	403
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	7.4		3.7			3.7
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.0%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 9: McLaughlin Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	115	50	448	66	23	348
Future Volume (Veh/h)	115	50	448	66	23	348
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)	125	54	487	72	25	378
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	762	280			559	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762	280			559	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	62	92			98	
cM capacity (veh/h)	333	718			1008	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	179	325	234	151	252	
Volume Left	125	0	0	25	0	
Volume Right	54	0	72	0	0	
cSH	397	1700	1700	1008	1700	
Volume to Capacity	0.45	0.19	0.14	0.02	0.15	
Queue Length 95th (m)	17.3	0.0	0.0	0.6	0.0	
Control Delay (s)	21.3	0.0	0.0	1.6	0.0	
Lane LOS	C			A		
Approach Delay (s)	21.3	0.0	0.6			
Approach LOS	C					
Intersection Summary						
Average Delay			3.6			
Intersection Capacity Utilization			43.0%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	856	6	0	508	10	10
Future Volume (vph)	856	6	0	508	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.999			0.932		
Fl _t Protected				0.976		
Satd. Flow (prot)	1882	0	0	1883	1713	0
Fl _t Permitted				0.976		
Satd. Flow (perm)	1882	0	0	1883	1713	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	930	7	0	552	11	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	937	0	0	552	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.4%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	856	6	0	508	10	10
Future Volume (Veh/h)	856	6	0	508	10	10
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)	930	7	0	552	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)	349					
pX, platoon unblocked			0.71		0.71	0.71
vC, conflicting volume			937		1486	934
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			708		1480	703
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		89	96
cM capacity (veh/h)			633		98	311
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	937	552	22			
Volume Left	0	0	11			
Volume Right	7	0	11			
cSH	1700	633	149			
Volume to Capacity	0.55	0.00	0.15			
Queue Length 95th (m)	0.0	0.0	3.8			
Control Delay (s)	0.0	0.0	33.2			
Lane LOS			D			
Approach Delay (s)	0.0	0.0	33.2			
Approach LOS			D			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			55.4%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	279	85	1858	2835	26
Future Volume (vph)	28	279	85	1858	2835	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.999	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5137	0
Flt Permitted	0.950		0.050			
Satd. Flow (perm)	1789	1601	94	5142	5137	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		203			2	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	303	92	2020	3082	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	303	92	2020	3110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Over	pm+pt	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4		2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

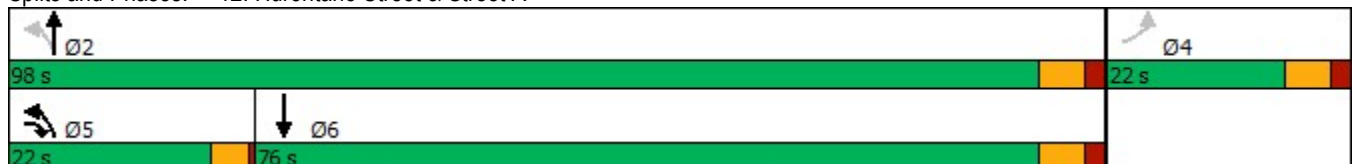


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	22.0	22.0	98.0	76.0	
Total Split (%)	18.3%	18.3%	18.3%	81.7%	63.3%	
Maximum Green (s)	16.0	18.0	18.0	92.0	70.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	4.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	7.3	12.5	94.9	95.5	76.4	
Actuated g/C Ratio	0.07	0.12	0.89	0.89	0.71	
v/c Ratio	0.25	0.83	0.33	0.44	0.85	
Control Delay	53.7	35.1	12.9	2.4	17.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.7	35.1	12.9	2.4	17.3	
LOS	D	D	B	A	B	
Approach Delay	36.8			2.9	17.3	
Approach LOS	D			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	107.2
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	13.0
Intersection LOS:	B
Intersection Capacity Utilization	81.0%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	303	92	2020	3110
v/c Ratio	0.25	0.83	0.33	0.44	0.85
Control Delay	53.7	35.1	12.9	2.4	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	35.1	12.9	2.4	17.3
Queue Length 50th (m)	6.3	20.8	2.3	34.2	187.9
Queue Length 95th (m)	15.8	51.6	17.4	46.5	#285.6
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	268	438	369	4581	3660
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.11	0.69	0.25	0.44	0.85

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	279	85	1858	2835	26
Future Volume (vph)	28	279	85	1858	2835	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5135	
Flt Permitted	0.95	1.00	0.05	1.00	1.00	
Satd. Flow (perm)	1789	1601	94	5142	5135	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	303	92	2020	3082	28
RTOR Reduction (vph)	0	180	0	0	1	0
Lane Group Flow (vph)	30	123	92	2020	3109	0
Turn Type	Perm	Over	pm+pt	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4		2			
Actuated Green, G (s)	4.8	12.5	92.9	92.9	76.4	
Effective Green, g (s)	4.8	12.5	92.9	92.9	76.4	
Actuated g/C Ratio	0.04	0.11	0.85	0.85	0.70	
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	78	182	272	4354	3576	
v/s Ratio Prot		c0.08	0.04	0.39	c0.61	
v/s Ratio Perm	c0.02		0.25			
v/c Ratio	0.38	0.68	0.34	0.46	0.87	
Uniform Delay, d1	51.0	46.7	21.5	2.1	12.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	9.6	0.7	0.4	3.2	
Delay (s)	54.2	56.2	22.2	2.5	16.0	
Level of Service	D	E	C	A	B	
Approach Delay (s)	56.0			3.3	16.0	
Approach LOS	E			A	B	

Intersection Summary

HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8
Future Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.973			0.924				0.995
Flt Protected				0.950								0.992
Satd. Flow (prot)	0	1919	0	1772	1807	0	0	1709	0	0	1789	0
Flt Permitted		0.997		0.560				0.999			0.904	
Satd. Flow (perm)	0	1913	0	1044	1807	0	0	1708	0	0	1631	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			33			193				6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	270	3	126	198	44	2	199	259	39	193	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	275	0	126	242	0	0	460	0	0	241	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

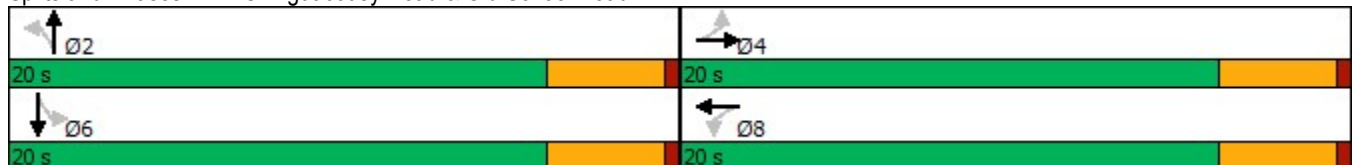


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.0		9.9	9.9			19.6			19.6	
Actuated g/C Ratio		0.29		0.29	0.29			0.57			0.57	
v/c Ratio		0.50		0.42	0.45			0.44			0.26	
Control Delay		13.1		14.2	11.1			5.8			7.2	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		13.1		14.2	11.1			5.8			7.2	
LOS		B		B	B			A			A	
Approach Delay		13.1			12.2			5.8			7.2	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	34.6
Natural Cycle:	40
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.50
Intersection Signal Delay:	9.3
Intersection LOS:	A
Intersection Capacity Utilization:	74.3%
ICU Level of Service:	D
Analysis Period (min):	15

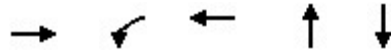
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	275	126	242	460	241
v/c Ratio	0.50	0.42	0.45	0.44	0.26
Control Delay	13.1	14.2	11.1	5.8	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	14.2	11.1	5.8	7.2
Queue Length 50th (m)	12.1	5.4	9.0	8.0	6.9
Queue Length 95th (m)	24.3	13.9	19.7	26.8	20.1
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	887	483	855	1051	927
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.26	0.28	0.44	0.26

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road



















06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕			↕		
Traffic Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8	
Future Volume (vph)	2	254	3	118	186	41	2	187	243	37	181	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00		
Frt		1.00		1.00	0.97			0.92			0.99		
Flt Protected		1.00		0.95	1.00			1.00			0.99		
Satd. Flow (prot)		1918		1772	1806			1709			1789		
Flt Permitted		1.00		0.56	1.00			1.00			0.90		
Satd. Flow (perm)		1913		1045	1806			1708			1630		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	270	3	126	198	44	2	199	259	39	193	9	
RTOR Reduction (vph)	0	2	0	0	25	0	0	91	0	0	3	0	
Lane Group Flow (vph)	0	273	0	126	217	0	0	369	0	0	238	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
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)		8.7		8.7	8.7			18.8			18.8		
Effective Green, g (s)		8.7		8.7	8.7			18.8			18.8		
Actuated g/C Ratio		0.25		0.25	0.25			0.53			0.53		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		468		256	442			904			863		
v/s Ratio Prot					0.12								
v/s Ratio Perm		c0.14		0.12				c0.22			0.15		
v/c Ratio		0.58		0.49	0.49			0.41			0.28		
Uniform Delay, d1		11.8		11.5	11.5			5.0			4.6		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		1.9		1.5	0.9			1.4			0.8		
Delay (s)		13.7		13.0	12.4			6.4			5.4		
Level of Service		B		B	B			A			A		
Approach Delay (s)		13.7			12.6			6.4			5.4		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			9.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.46										
Actuated Cycle Length (s)			35.5									Sum of lost time (s)	8.0
Intersection Capacity Utilization			74.3%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Future Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.987				0.850		0.992	
Flt Protected		0.999		0.950				0.981			0.988	
Satd. Flow (prot)	0	1871	0	1789	1830	0	0	1862	1617	0	1857	0
Flt Permitted		0.996		0.245				0.827			0.895	
Satd. Flow (perm)	0	1865	0	461	1830	0	0	1569	1617	0	1683	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			9				338			4
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			349.1			588.2			263.1	
Travel Time (s)		71.1			18.0			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	551	36	223	329	31	53	85	391	49	134	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	593	0	223	360	0	0	138	391	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

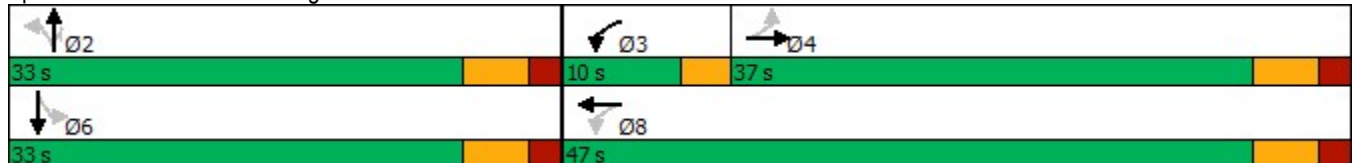
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	37.0	37.0		10.0	47.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	46.3%	46.3%		12.5%	58.8%		41.3%	41.3%	41.3%	41.3%	41.3%	
Maximum Green (s)	31.0	31.0		7.0	41.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		27.5		40.5	37.5			27.1	27.1		27.1	
Actuated g/C Ratio		0.36		0.53	0.49			0.35	0.35		0.35	
v/c Ratio		0.88		0.61	0.40			0.25	0.50		0.33	
Control Delay		39.4		17.4	13.4			20.3	6.4		20.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		39.4		17.4	13.4			20.3	6.4		20.7	
LOS		D		B	B			C	A		C	
Approach Delay		39.4			15.0			10.0			20.7	
Approach LOS		D			B			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 76.7
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 21.8
 Intersection Capacity Utilization 79.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

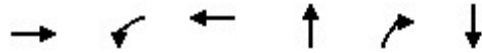
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	593	223	360	138	391	195
v/c Ratio	0.88	0.61	0.40	0.25	0.50	0.33
Control Delay	39.4	17.4	13.4	20.3	6.4	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	17.4	13.4	20.3	6.4	20.7
Queue Length 50th (m)	78.2	16.2	30.4	15.0	5.4	21.4
Queue Length 95th (m)	#132.6	27.5	48.5	28.3	25.1	37.8
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	759	365	986	554	789	597
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.61	0.37	0.25	0.50	0.33

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road
























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕	↖		↕	
Traffic Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Future Volume (vph)	6	518	34	210	309	29	50	80	368	46	126	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)		1871		1789	1830			1862	1617		1856	
Flt Permitted		1.00		0.24	1.00			0.83	1.00		0.90	
Satd. Flow (perm)		1864		461	1830			1570	1617		1683	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	6	551	36	223	329	31	53	85	391	49	134	12
RTOR Reduction (vph)	0	3	0	0	5	0	0	0	218	0	3	0
Lane Group Flow (vph)	0	590	0	223	355	0	0	138	173	0	192	0
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		27.5		37.5	37.5			27.1	27.1		27.1	
Effective Green, g (s)		27.5		37.5	37.5			27.1	27.1		27.1	
Actuated g/C Ratio		0.36		0.49	0.49			0.35	0.35		0.35	
Clearance Time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		669		347	895			555	572		595	
v/s Ratio Prot				c0.06	0.19							
v/s Ratio Perm		c0.32		0.26				0.09	0.11		c0.11	
v/c Ratio		0.88		0.64	0.40			0.25	0.30		0.32	
Uniform Delay, d1		23.0		14.1	12.4			17.5	17.9		18.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		13.0		4.0	0.3			1.1	1.4		1.4	
Delay (s)		36.0		18.1	12.7			18.6	19.3		19.5	
Level of Service		D		B	B			B	B		B	
Approach Delay (s)		36.0			14.8			19.1			19.5	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			23.1		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			76.6		Sum of lost time (s)			15.0				
Intersection Capacity Utilization			79.2%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245	
Future Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.936			0.974				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1755	1751	0	1722	1788	0	1722	4445	1471	1615	5043	1633	
Flt Permitted	0.274			0.222			0.070			0.070			
Satd. Flow (perm)	506	1751	0	402	1788	0	127	4445	1471	119	5043	1633	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		20			7				146			146	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			855.3			282.2		
Travel Time (s)		51.8			22.6			38.5			12.7		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Adj. Flow (vph)	489	241	180	399	203	42	58	1782	187	35	2496	263	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	489	421	0	399	245	0	58	1782	187	35	2496	263	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

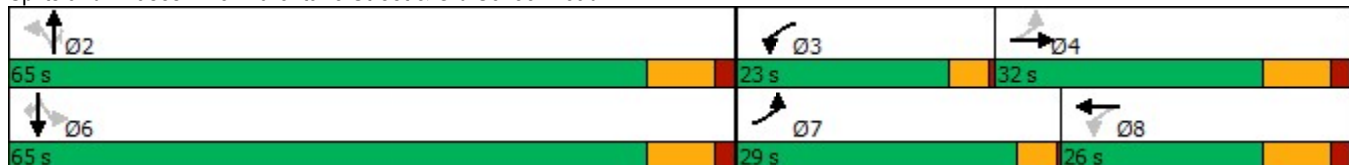


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	29.0	32.0		23.0	26.0		65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	24.2%	26.7%		19.2%	21.7%		54.2%	54.2%	54.2%	54.2%	54.2%	54.2%
Maximum Green (s)	25.0	24.0		19.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Yellow Time (s)	3.5	6.0		3.5	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	51.0	24.0		41.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.42	0.20		0.34	0.15		0.48	0.48	0.48	0.48	0.48	0.48
v/c Ratio	1.03	1.15		1.15	0.89		0.97	0.84	0.24	0.62	1.04	0.31
Control Delay	78.4	135.8		127.6	82.1		143.9	32.3	5.7	74.1	61.9	9.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	135.8		127.6	82.1		143.9	32.3	5.7	74.1	61.9	9.2
LOS	E	F		F	F		F	C	A	E	E	A
Approach Delay		105.0			110.3			33.1				57.1
Approach LOS		F			F			C				E

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	120
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.15
Intersection Signal Delay:	61.7
Intersection LOS:	E
Intersection Capacity Utilization:	104.1%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	421	399	245	58	1782	187	35	2496	263
v/c Ratio	1.03	1.15	1.15	0.89	0.97	0.84	0.24	0.62	1.04	0.31
Control Delay	78.4	135.8	127.6	82.1	143.9	32.3	5.7	74.1	61.9	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	135.8	127.6	82.1	143.9	32.3	5.7	74.1	61.9	9.2
Queue Length 50th (m)	~95.4	~113.0	~91.5	55.8	12.9	131.1	5.1	6.0	~233.0	15.2
Queue Length 95th (m)	#160.3	#174.8	#153.2	#102.0	#41.1	152.6	17.6	#24.9	#260.8	32.1
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	475	366	346	274	60	2111	775	56	2395	852
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	1.15	1.15	0.89	0.97	0.84	0.24	0.63	1.04	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245
Future Volume (vph)	455	224	167	371	189	39	54	1657	174	33	2321	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.94		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	1750		1722	1788		1722	4445	1471	1615	5043	1633
Flt Permitted	0.27	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	506	1750		403	1788		127	4445	1471	119	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	489	241	180	399	203	42	58	1782	187	35	2496	263
RTOR Reduction (vph)	0	16	0	0	6	0	0	0	77	0	0	77
Lane Group Flow (vph)	489	405	0	399	239	0	58	1782	110	35	2496	186
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	47.0	24.0		37.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Effective Green, g (s)	47.0	24.0		37.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.39	0.20		0.31	0.15		0.48	0.48	0.48	0.48	0.48	0.48
Clearance Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
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)	458	350		333	268		60	2111	698	56	2395	775
v/s Ratio Prot	c0.22	c0.23		c0.19	0.13			0.40			c0.49	
v/s Ratio Perm	0.20			0.18			0.46		0.08	0.29		0.11
v/c Ratio	1.07	1.16		1.20	0.89		0.97	0.84	0.16	0.62	1.04	0.24
Uniform Delay, d1	31.5	48.0		37.1	50.0		30.6	27.6	17.9	23.5	31.5	18.7
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	61.3	98.0		114.6	28.7		107.0	4.3	0.5	42.7	30.5	0.7
Delay (s)	92.7	146.0		151.7	78.8		137.6	32.0	18.4	66.3	62.0	19.4
Level of Service	F	F		F	E		F	C	B	E	E	B
Approach Delay (s)		117.4			124.0			33.7			58.1	
Approach LOS		F			F			C			E	
Intersection Summary												
HCM 2000 Control Delay			65.5				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.11									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			104.1%				ICU Level of Service			G		
Analysis Period (min)			15									
c	Critical Lane Group											

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔↔			↔↔↔				↔			↔	
Traffic Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Future Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.995			0.942			0.986	
Fl _t Protected		0.997			0.988			0.997			0.988	
Satd. Flow (prot)	0	4861	0	0	4836	0	0	1737	0	0	1783	0
Fl _t Permitted		0.849			0.667			0.965			0.831	
Satd. Flow (perm)	0	4139	0	0	3265	0	0	1681	0	0	1499	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			5			45			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	41	664	48	200	575	24	24	190	161	81	228	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	753	0	0	799	0	0	375	0	0	345	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	52.0	52.0		52.0	52.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
v/c Ratio		0.42			0.88dl			0.43			0.46	
Control Delay		24.1			43.0			18.5			21.5	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		24.1			43.0			18.5			21.5	
LOS		C			D			B			C	
Approach Delay		24.1			43.0			18.5			21.5	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 29.4

Intersection LOS: C

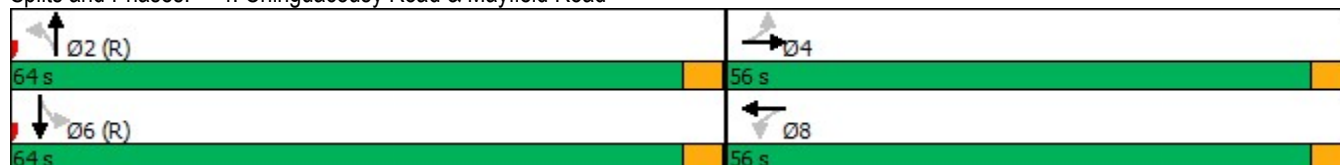
Intersection Capacity Utilization 81.8%

ICU Level of Service D

Analysis Period (min) 15

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

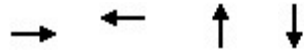
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	753	799	375	345
v/c Ratio	0.42	0.88dl	0.43	0.46
Control Delay	24.1	43.0	18.5	21.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.1	43.0	18.5	21.5
Queue Length 50th (m)	43.4	68.8	47.7	49.9
Queue Length 95th (m)	54.4	83.2	71.6	74.7
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1799	1417	863	753
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.56	0.43	0.46

Intersection Summary

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔			↔↔↔			↔			↔	
Traffic Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Future Volume (vph)	41	657	48	198	569	24	24	188	159	80	226	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		0.99			1.00			0.94			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		4865			4837			1736			1783	
Flt Permitted		0.85			0.67			0.97			0.83	
Satd. Flow (perm)		4142			3265			1682			1500	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	41	664	48	200	575	24	24	190	161	81	228	36
RTOR Reduction (vph)	0	6	0	0	3	0	0	23	0	0	4	0
Lane Group Flow (vph)	0	747	0	0	796	0	0	353	0	0	342	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		52.0			52.0			60.0			60.0	
Effective Green, g (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		1794			1414			841			750	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.24			0.21			c0.23	
v/c Ratio		0.42			0.88dl			0.42			0.46	
Uniform Delay, d1		23.5			25.5			19.0			19.4	
Progression Factor		1.00			1.62			1.00			1.00	
Incremental Delay, d2		0.7			1.6			1.5			2.0	
Delay (s)		24.2			42.8			20.5			21.4	
Level of Service		C			D			C			C	
Approach Delay (s)		24.2			42.8			20.5			21.4	
Approach LOS		C			D			C			C	

Intersection Summary

HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗		↗	↗↗	
Traffic Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Future Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.980			0.961			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4770	0	1644	3421	0	1690	3386	0
Flt Permitted	0.294			0.227			0.362			0.515		
Satd. Flow (perm)	565	4888	0	408	4770	0	627	3421	0	916	3386	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			34			51			43	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	50	895	106	126	710	111	47	263	94	269	440	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	1001	0	126	821	0	47	357	0	269	579	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		23.0	23.0	
Total Split (s)	64.0	64.0		64.0	64.0		56.0	56.0		56.0	56.0	
Total Split (%)	53.3%	53.3%		53.3%	53.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

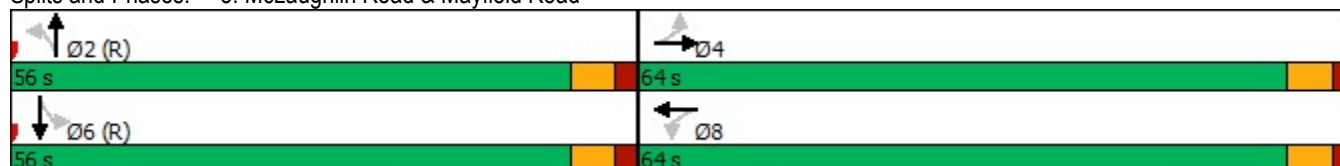


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.18	0.42		0.64	0.35		0.18	0.25		0.71	0.40	
Control Delay	24.7	26.1		40.9	19.0		24.5	19.8		40.9	23.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.7	26.1		40.9	19.0		24.5	19.8		40.9	23.6	
LOS	C	C		D	B		C	B		D	C	
Approach Delay		26.0			21.9			20.4			29.1	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	24.9
Intersection LOS:	C
Intersection Capacity Utilization	70.8%
ICU Level of Service	C
Analysis Period (min)	15

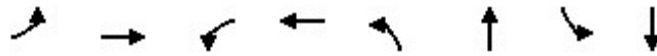
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	50	1001	126	821	47	357	269	579
v/c Ratio	0.18	0.42	0.64	0.35	0.18	0.25	0.71	0.40
Control Delay	24.7	26.1	40.9	19.0	24.5	19.8	40.9	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	26.1	40.9	19.0	24.5	19.8	40.9	23.6
Queue Length 50th (m)	8.7	69.1	21.6	41.0	6.9	23.8	51.5	45.6
Queue Length 95th (m)	19.3	80.7	#51.7	50.7	15.7	34.5	85.9	60.3
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	273	2374	197	2323	261	1455	381	1435
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.42	0.64	0.35	0.18	0.25	0.71	0.40

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖		↖	↗↖	
Traffic Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Future Volume (vph)	49	877	104	123	696	109	46	258	92	264	431	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4889		1706	4768		1644	3420		1690	3386	
Flt Permitted	0.29	1.00		0.23	1.00		0.36	1.00		0.52	1.00	
Satd. Flow (perm)	564	4889		408	4768		627	3420		916	3386	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	50	895	106	126	710	111	47	263	94	269	440	139
RTOR Reduction (vph)	0	12	0	0	18	0	0	30	0	0	25	0
Lane Group Flow (vph)	50	989	0	126	803	0	47	327	0	269	554	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
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)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Effective Green, g (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	272	2363		197	2304		261	1425		381	1410	
v/s Ratio Prot		0.20			0.17			0.10			0.16	
v/s Ratio Perm	0.09			c0.31			0.07			c0.29		
v/c Ratio	0.18	0.42		0.64	0.35		0.18	0.23		0.71	0.39	
Uniform Delay, d1	17.6	20.1		23.2	19.3		22.1	22.6		28.9	24.4	
Progression Factor	1.26	1.30		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	0.5		14.9	0.4		1.5	0.4		10.5	0.8	
Delay (s)	23.6	26.6		38.0	19.7		23.6	23.0		39.4	25.2	
Level of Service	C	C		D	B		C	C		D	C	
Approach Delay (s)		26.5			22.1			23.0			29.7	
Approach LOS		C			C			C			C	

Intersection Summary

HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315
Future Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.198			0.950			0.232			0.492		
Satd. Flow (perm)	362	4902	1508	3326	4948	1395	441	3476	1467	875	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100			157			216			335
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	31.0	44.0	44.0	20.0	33.0	33.0	96.0	96.0	96.0	96.0	96.0	96.0
Total Split (%)	19.4%	27.5%	27.5%	12.5%	20.6%	20.6%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	26.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

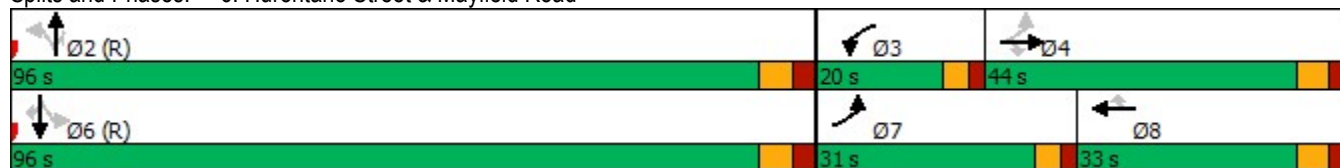


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	59.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.37	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.34	0.22	0.24	0.69	0.48	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
LOS	D	E	A	F	E	B	C	B	A	C	C	A
Approach Delay		57.4			63.0			14.2			20.9	
Approach LOS		E			E			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	38.9
Intersection LOS:	D
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.34	0.22	0.24	0.69	0.48	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	24.3	18.3	2.6	34.7	22.6	2.5
Queue Length 50th (m)	58.9	102.4	0.0	34.2	66.4	0.0	14.0	34.1	0.0	74.5	93.8	0.0
Queue Length 95th (m)	84.2	119.5	15.4	48.6	81.0	21.2	27.9	44.0	11.9	116.1	111.1	13.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	357	1133	425	313	804	358	245	1933	911	486	1971	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.34	0.22	0.24	0.69	0.48	0.33

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 			 		
Traffic Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315	
Future Volume (vph)	236	865	94	199	556	148	78	391	203	315	894	315	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1690	3544	1557	
Flt Permitted	0.20	1.00	1.00	0.95	1.00	1.00	0.23	1.00	1.00	0.49	1.00	1.00	
Satd. Flow (perm)	362	4902	1508	3340	4948	1395	441	3476	1467	876	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	251	920	100	212	591	157	83	416	216	335	951	335	
RTOR Reduction (vph)	0	0	77	0	0	131	0	0	96	0	0	149	
Lane Group Flow (vph)	251	920	23	212	591	26	83	416	120	335	951	186	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	57.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0	
Effective Green, g (s)	57.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0	
Actuated g/C Ratio	0.36	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	352	1133	348	313	804	226	245	1933	816	487	1971	866	
v/s Ratio Prot	c0.12	c0.19		0.06	0.12			0.12			0.27		
v/s Ratio Perm	0.14		0.02			0.02	0.19		0.08	c0.38		0.12	
v/c Ratio	0.71	0.81	0.07	0.68	0.74	0.11	0.34	0.22	0.15	0.69	0.48	0.22	
Uniform Delay, d1	40.0	58.2	48.0	70.2	63.7	57.2	19.4	17.9	17.2	25.5	21.5	17.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.7	6.4	0.4	11.2	5.9	1.0	3.7	0.3	0.4	7.7	0.8	0.6	
Delay (s)	51.6	64.6	48.4	81.4	69.6	58.2	23.1	18.2	17.5	33.2	22.4	18.5	
Level of Service	D	E	D	F	E	E	C	B	B	C	C	B	
Approach Delay (s)		60.8			70.4			18.5			23.8		
Approach LOS		E			E			B			C		
Intersection Summary													
HCM 2000 Control Delay			43.1									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.74										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	19.0
Intersection Capacity Utilization			78.9%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	115	50	448	66	23	348
Future Volume (vph)	115	50	448	66	23	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0		0.0	0.0	
Storage Lanes	0	0		0	0	
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.959		0.981			
Flt Protected	0.966					0.997
Satd. Flow (prot)	1745	0	3511	0	0	3568
Flt Permitted	0.966					0.997
Satd. Flow (perm)	1745	0	3511	0	0	3568
Link Speed (k/h)	48		80			80
Link Distance (m)	1359.2		2496.3			588.2
Travel Time (s)	101.9		112.3			26.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	54	487	72	25	378
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	559	0	0	403
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	7.4		3.7			3.7
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.0%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

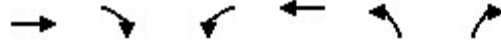
06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	115	50	448	66	23	348
Future Volume (Veh/h)	115	50	448	66	23	348
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)	125	54	487	72	25	378
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	762	280			559	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762	280			559	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	62	92			98	
cM capacity (veh/h)	333	718			1008	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	179	325	234	151	252	
Volume Left	125	0	0	25	0	
Volume Right	54	0	72	0	0	
cSH	397	1700	1700	1008	1700	
Volume to Capacity	0.45	0.19	0.14	0.02	0.15	
Queue Length 95th (m)	17.3	0.0	0.0	0.6	0.0	
Control Delay (s)	21.3	0.0	0.0	1.6	0.0	
Lane LOS	C			A		
Approach Delay (s)	21.3	0.0			0.6	
Approach LOS	C					
Intersection Summary						
Average Delay			3.6			
Intersection Capacity Utilization			43.0%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	856	6	0	508	10	10
Future Volume (vph)	856	6	0	508	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.999			0.932		
Fl _t Protected				0.976		
Satd. Flow (prot)	1882	0	0	1883	1713	0
Fl _t Permitted				0.976		
Satd. Flow (perm)	1882	0	0	1883	1713	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	930	7	0	552	11	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	937	0	0	552	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.4%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	856	6	0	508	10	10
Future Volume (Veh/h)	856	6	0	508	10	10
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)	930	7	0	552	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)	349					
pX, platoon unblocked			0.71		0.71	0.71
vC, conflicting volume			937		1486	934
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			708		1480	703
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		89	96
cM capacity (veh/h)			633		98	311
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	937	552	22			
Volume Left	0	0	11			
Volume Right	7	0	11			
cSH	1700	633	149			
Volume to Capacity	0.55	0.00	0.15			
Queue Length 95th (m)	0.0	0.0	3.8			
Control Delay (s)	0.0	0.0	33.2			
Lane LOS			D			
Approach Delay (s)	0.0	0.0	33.2			
Approach LOS			D			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			55.4%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	279	85	1858	2835	26
Future Volume (vph)	28	279	85	1858	2835	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.999	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5137	0
Flt Permitted	0.950		0.050			
Satd. Flow (perm)	1789	1601	94	5142	5137	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		203			2	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	303	92	2020	3082	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	303	92	2020	3110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Over	pm+pt	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4		2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

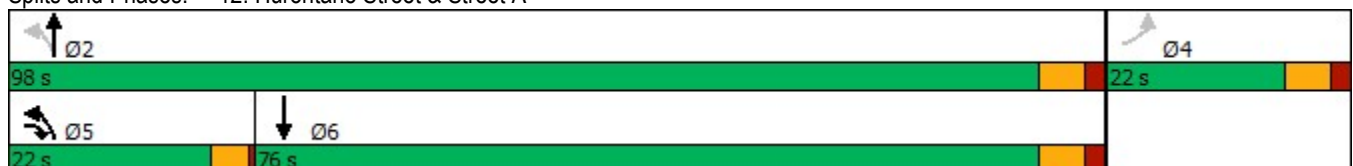


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	22.0	22.0	98.0	76.0	
Total Split (%)	18.3%	18.3%	18.3%	81.7%	63.3%	
Maximum Green (s)	16.0	18.0	18.0	92.0	70.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	4.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	7.3	12.5	94.9	95.5	76.4	
Actuated g/C Ratio	0.07	0.12	0.89	0.89	0.71	
v/c Ratio	0.25	0.83	0.33	0.44	0.85	
Control Delay	53.7	35.1	12.9	2.4	17.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.7	35.1	12.9	2.4	17.3	
LOS	D	D	B	A	B	
Approach Delay	36.8			2.9	17.3	
Approach LOS	D			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	107.2
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	13.0
Intersection LOS:	B
Intersection Capacity Utilization:	81.0%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	303	92	2020	3110
v/c Ratio	0.25	0.83	0.33	0.44	0.85
Control Delay	53.7	35.1	12.9	2.4	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	35.1	12.9	2.4	17.3
Queue Length 50th (m)	6.3	20.8	2.3	34.2	187.9
Queue Length 95th (m)	15.8	51.6	17.4	46.5	#285.6
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	268	438	369	4581	3660
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.11	0.69	0.25	0.44	0.85

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	279	85	1858	2835	26
Future Volume (vph)	28	279	85	1858	2835	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5135	
Flt Permitted	0.95	1.00	0.05	1.00	1.00	
Satd. Flow (perm)	1789	1601	94	5142	5135	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	303	92	2020	3082	28
RTOR Reduction (vph)	0	180	0	0	1	0
Lane Group Flow (vph)	30	123	92	2020	3109	0
Turn Type	Perm	Over	pm+pt	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4		2			
Actuated Green, G (s)	4.8	12.5	92.9	92.9	76.4	
Effective Green, g (s)	4.8	12.5	92.9	92.9	76.4	
Actuated g/C Ratio	0.04	0.11	0.85	0.85	0.70	
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	78	182	272	4354	3576	
v/s Ratio Prot		c0.08	0.04	0.39	c0.61	
v/s Ratio Perm	c0.02		0.25			
v/c Ratio	0.38	0.68	0.34	0.46	0.87	
Uniform Delay, d1	51.0	46.7	21.5	2.1	12.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	9.6	0.7	0.4	3.2	
Delay (s)	54.2	56.2	22.2	2.5	16.0	
Level of Service	D	E	C	A	B	
Approach Delay (s)	56.0			3.3	16.0	
Approach LOS	E			A	B	

Intersection Summary

HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	247	3	133	167	43	2	225	278	32	209	9
Future Volume (vph)	2	247	3	133	167	43	2	225	278	32	209	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.969				0.850		0.995	
Flt Protected				0.950							0.994	
Satd. Flow (prot)	0	1917	0	1772	1796	0	0	1830	1585	0	1789	0
Flt Permitted		0.997		0.568				0.998			0.950	
Satd. Flow (perm)	0	1912	0	1059	1796	0	0	1827	1585	0	1710	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			39				296			6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	263	3	141	178	46	2	239	296	34	222	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	268	0	141	224	0	0	241	296	0	266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

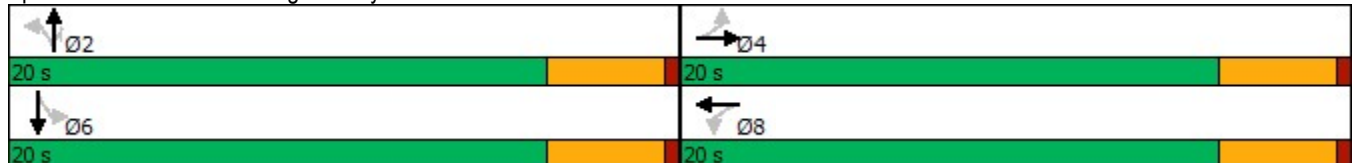


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		10.1		9.9	9.9			19.9	19.9		19.9	
Actuated g/C Ratio		0.29		0.28	0.28			0.57	0.57		0.57	
v/c Ratio		0.49		0.47	0.42			0.23	0.29		0.27	
Control Delay		12.9		15.2	10.2			7.1	2.2		7.3	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		12.9		15.2	10.2			7.1	2.2		7.3	
LOS		B		B	B			A	A		A	
Approach Delay		12.9			12.2			4.4			7.3	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 35.1
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.49
 Intersection Signal Delay: 8.5
 Intersection Capacity Utilization 63.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	268	141	224	241	296	266
v/c Ratio	0.49	0.47	0.42	0.23	0.29	0.27
Control Delay	12.9	15.2	10.2	7.1	2.2	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	15.2	10.2	7.1	2.2	7.3
Queue Length 50th (m)	11.8	6.2	7.9	6.8	0.0	7.5
Queue Length 95th (m)	23.7	15.4	17.9	20.6	8.9	23.0
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	876	484	843	1034	1025	971
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.27	0.23	0.29	0.27

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	247	3	133	167	43	2	225	278	32	209	9	
Future Volume (vph)	2	247	3	133	167	43	2	225	278	32	209	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1917		1772	1796			1830	1585		1788		
Flt Permitted		1.00		0.57	1.00			1.00	1.00		0.95		
Satd. Flow (perm)		1913		1060	1796			1827	1585		1709		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	263	3	141	178	46	2	239	296	34	222	10	
RTOR Reduction (vph)	0	2	0	0	29	0	0	0	139	0	3	0	
Lane Group Flow (vph)	0	266	0	141	195	0	0	241	157	0	263	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6			
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		8.8		8.8	8.8			19.1	19.1		19.1		
Effective Green, g (s)		8.8		8.8	8.8			19.1	19.1		19.1		
Actuated g/C Ratio		0.25		0.25	0.25			0.53	0.53		0.53		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		468		259	440			972	843		909		
v/s Ratio Prot					0.11								
v/s Ratio Perm		c0.14		0.13				0.13	0.10		c0.15		
v/c Ratio		0.57		0.54	0.44			0.25	0.19		0.29		
Uniform Delay, d1		11.9		11.8	11.5			4.5	4.4		4.6		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.6		2.3	0.7			0.6	0.5		0.8		
Delay (s)		13.5		14.1	12.2			5.1	4.9		5.5		
Level of Service		B		B	B			A	A		A		
Approach Delay (s)		13.5			12.9			5.0			5.5		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			8.7									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.38										
Actuated Cycle Length (s)			35.9									Sum of lost time (s)	8.0
Intersection Capacity Utilization			63.3%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔	↔		↔	
Traffic Volume (vph)	6	519	34	233	303	24	40	60	413	37	120	11
Future Volume (vph)	6	519	34	233	303	24	40	60	413	37	120	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.989				0.850		0.991	
Flt Protected		0.999		0.950				0.980			0.989	
Satd. Flow (prot)	0	3551	0	1789	3487	0	0	1860	1617	0	1858	0
Flt Permitted		0.950		0.304				0.829			0.896	
Satd. Flow (perm)	0	3376	0	573	3487	0	0	1574	1617	0	1684	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			15				439			4
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	552	36	248	322	26	43	64	439	39	128	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	594	0	248	348	0	0	107	439	0	179	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

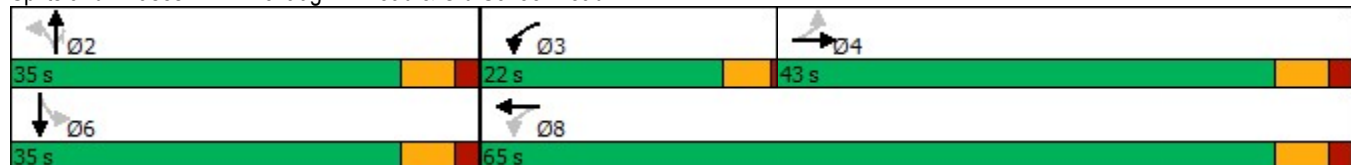


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		15.3		30.6	28.5			11.2	11.2		11.2	
Actuated g/C Ratio		0.29		0.59	0.55			0.21	0.21		0.21	
v/c Ratio		0.60		0.45	0.18			0.32	0.64		0.49	
Control Delay		18.8		8.3	6.1			21.7	7.3		24.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		18.8		8.3	6.1			21.7	7.3		24.1	
LOS		B		A	A			C	A		C	
Approach Delay		18.8			7.0			10.1			24.1	
Approach LOS		B			A			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	52.1
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	13.2
Intersection LOS:	B
Intersection Capacity Utilization:	65.2%
ICU Level of Service:	C
Analysis Period (min):	15

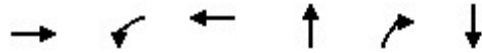
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	594	248	348	107	439	179
v/c Ratio	0.60	0.45	0.18	0.32	0.64	0.49
Control Delay	18.8	8.3	6.1	21.7	7.3	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	8.3	6.1	21.7	7.3	24.1
Queue Length 50th (m)	23.4	9.1	6.9	8.3	0.0	14.0
Queue Length 95th (m)	45.0	22.1	14.7	22.9	19.6	35.0
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2479	770	3395	905	1116	970
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.32	0.10	0.12	0.39	0.18

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕		↕	↕↕			↕	↕		↕↕		
Traffic Volume (vph)	6	519	34	233	303	24	40	60	413	37	120	11	
Future Volume (vph)	6	519	34	233	303	24	40	60	413	37	120	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99		
Satd. Flow (prot)		3552		1789	3486			1861	1617		1859		
Flt Permitted		0.95		0.30	1.00			0.83	1.00		0.90		
Satd. Flow (perm)		3375		573	3486			1574	1617		1684		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	6	552	36	248	322	26	43	64	439	39	128	12	
RTOR Reduction (vph)	0	5	0	0	7	0	0	0	344	0	3	0	
Lane Group Flow (vph)	0	589	0	248	341	0	0	107	95	0	176	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		15.5		28.6	28.6			11.2	11.2		11.2		
Effective Green, g (s)		15.5		28.6	28.6			11.2	11.2		11.2		
Actuated g/C Ratio		0.30		0.55	0.55			0.22	0.22		0.22		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1009		529	1924			340	349		364		
v/s Ratio Prot				c0.08	0.10								
v/s Ratio Perm		c0.17		0.18				0.07	0.06		c0.10		
v/c Ratio		0.58		0.47	0.18			0.31	0.27		0.48		
Uniform Delay, d1		15.4		6.5	5.8			17.1	16.9		17.8		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.9		0.7	0.0			0.5	0.4		1.0		
Delay (s)		16.3		7.1	5.8			17.6	17.3		18.8		
Level of Service		B		A	A			B	B		B		
Approach Delay (s)		16.3			6.4			17.4			18.8		
Approach LOS		B			A			B			B		
Intersection Summary													
HCM 2000 Control Delay			13.7									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			51.8									Sum of lost time (s)	16.0
Intersection Capacity Utilization			65.2%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	557	229	174	391	186	40	55	1812	182	34	2486	297
Future Volume (vph)	557	229	174	391	186	40	55	1812	182	34	2486	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.935			0.973				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3323	0	1722	3394	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.530			0.401			0.068			0.070		
Satd. Flow (perm)	979	3323	0	727	3394	0	123	4445	1471	119	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		78			18				154			161
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1007.8			440.4			855.3				282.2
Travel Time (s)		51.8			22.6			38.5				12.7
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	599	246	187	420	200	43	59	1948	196	37	2673	319
Shared Lane Traffic (%)												
Lane Group Flow (vph)	599	433	0	420	243	0	59	1948	196	37	2673	319
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2				6

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	29.0		20.0	24.0		8.0	71.0	71.0	63.0	63.0	63.0
Total Split (%)	20.8%	24.2%		16.7%	20.0%		6.7%	59.2%	59.2%	52.5%	52.5%	52.5%
Maximum Green (s)	21.0	21.0		16.0	16.0		4.0	63.0	63.0	55.0	55.0	55.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	44.0	19.9		36.9	12.9		67.4	61.4	61.4	57.2	57.2	55.1
Actuated g/C Ratio	0.38	0.17		0.32	0.11		0.58	0.53	0.53	0.50	0.50	0.48
v/c Ratio	1.13	0.68		1.08	0.62		0.38	0.82	0.23	0.64	1.07	0.37
Control Delay	114.3	42.5		101.3	52.6		17.9	26.5	4.6	74.3	69.8	10.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.3	42.5		101.3	52.6		17.9	26.5	4.6	74.3	69.8	10.9
LOS	F	D		F	D		B	C	A	E	E	B
Approach Delay		84.2			83.4			24.3			63.7	
Approach LOS		F			F			C			E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 115.4
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 56.1
 Intersection LOS: E
 Intersection Capacity Utilization 100.3%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	599	433	420	243	59	1948	196	37	2673	319
v/c Ratio	1.13	0.68	1.08	0.62	0.38	0.82	0.23	0.64	1.07	0.37
Control Delay	114.3	42.5	101.3	52.6	17.9	26.5	4.6	74.3	69.8	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.3	42.5	101.3	52.6	17.9	26.5	4.6	74.3	69.8	10.9
Queue Length 50th (m)	~156.0	40.6	~80.0	26.2	5.4	129.1	4.4	6.2	~252.9	20.8
Queue Length 95th (m)	#231.2	57.7	#137.0	39.4	11.7	158.6	16.2	#26.8	#292.0	43.2
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	528	726	388	487	155	2433	874	58	2497	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.60	1.08	0.50	0.38	0.80	0.22	0.64	1.07	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.
































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 			   		  	  		
Traffic Volume (vph)	557	229	174	391	186	40	55	1812	182	34	2486	297	
Future Volume (vph)	557	229	174	391	186	40	55	1812	182	34	2486	297	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	3324		1722	3395		1722	4445	1471	1615	5043	1633	
Flt Permitted	0.53	1.00		0.40	1.00		0.07	1.00	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	979	3324		727	3395		123	4445	1471	119	5043	1633	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	599	246	187	420	200	43	59	1948	196	37	2673	319	
RTOR Reduction (vph)	0	65	0	0	16	0	0	0	71	0	0	85	
Lane Group Flow (vph)	599	368	0	420	227	0	59	1948	125	37	2673	234	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8		5	2			6		
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	37.9	17.9		28.9	12.9		62.2	62.2	62.2	55.1	55.1	55.1	
Effective Green, g (s)	39.9	19.9		32.9	12.9		64.2	62.2	62.2	57.1	57.1	55.1	
Actuated g/C Ratio	0.34	0.17		0.28	0.11		0.55	0.54	0.54	0.49	0.49	0.47	
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0	
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)	490	569		360	377		138	2381	788	58	2480	775	
v/s Ratio Prot	c0.24	0.11		0.18	0.07		0.02	c0.44			c0.53		
v/s Ratio Perm	0.18			c0.15			0.22		0.08	0.31		0.14	
v/c Ratio	1.22	0.65		1.17	0.60		0.43	0.82	0.16	0.64	1.08	0.30	
Uniform Delay, d1	35.7	44.8		38.8	49.2		25.5	22.3	13.7	21.8	29.5	18.7	
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	117.3	2.5		101.0	2.7		2.1	2.3	0.1	20.8	43.2	0.2	
Delay (s)	153.1	47.4		139.8	51.9		27.7	24.6	13.8	42.6	72.7	18.9	
Level of Service	F	D		F	D		C	C	B	D	E	B	
Approach Delay (s)		108.7			107.6			23.7			66.6		
Approach LOS		F			F			C			E		
Intersection Summary													
HCM 2000 Control Delay			63.2									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			1.12										
Actuated Cycle Length (s)			116.1									Sum of lost time (s)	18.0
Intersection Capacity Utilization			100.3%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39
Future Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.993			0.948			0.987	
Flt Protected		0.997		0.950				0.997			0.987	
Satd. Flow (prot)	0	4862	0	1659	4934	0	0	1747	0	0	1780	0
Flt Permitted		0.872		0.264				0.964			0.708	
Satd. Flow (perm)	0	4253	0	461	4934	0	0	1689	0	0	1277	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			42			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	45	681	51	153	591	28	25	202	144	100	254	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	777	0	153	619	0	0	371	0	0	393	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

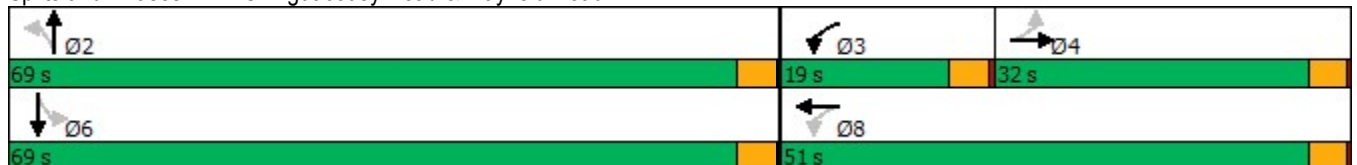
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	32.0	32.0		19.0	51.0		69.0	69.0		69.0	69.0	
Total Split (%)	26.7%	26.7%		15.8%	42.5%		57.5%	57.5%		57.5%	57.5%	
Maximum Green (s)	28.0	28.0		15.0	47.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		34.1		47.4	47.4			26.4			26.4	
Actuated g/C Ratio		0.42		0.58	0.58			0.32			0.32	
v/c Ratio		0.44		0.38	0.22			0.65			0.94	
Control Delay		19.6		12.5	9.4			26.1			59.0	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		19.6		12.5	9.4			26.1			59.0	
LOS		B		B	A			C			E	
Approach Delay		19.6			10.0			26.1			59.0	
Approach LOS		B			B			C			E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 81.8
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 24.1
 Intersection Capacity Utilization 82.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

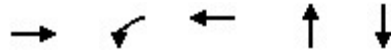
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	777	153	619	371	393
v/c Ratio	0.44	0.38	0.22	0.65	0.94
Control Delay	19.6	12.5	9.4	26.1	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	12.5	9.4	26.1	59.0
Queue Length 50th (m)	29.7	10.0	15.2	43.0	57.6
Queue Length 95th (m)	53.9	25.0	28.5	68.8	#98.2
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1779	488	2860	1361	1024
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.44	0.31	0.22	0.27	0.38

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road





















06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔		↔	↔↔↔			↔			↔	
Traffic Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39
Future Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frt		0.99		1.00	0.99			0.95			0.99	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		4864		1659	4935			1745			1780	
Flt Permitted		0.87		0.26	1.00			0.96			0.71	
Satd. Flow (perm)		4255		462	4935			1689			1277	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	45	681	51	153	591	28	25	202	144	100	254	39
RTOR Reduction (vph)	0	5	0	0	3	0	0	28	0	0	5	0
Lane Group Flow (vph)	0	772	0	153	616	0	0	343	0	0	388	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.1		47.3	47.3			26.4			26.4	
Effective Green, g (s)		34.1		47.3	47.3			26.4			26.4	
Actuated g/C Ratio		0.42		0.58	0.58			0.32			0.32	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1775		402	2857			545			412	
v/s Ratio Prot				c0.04	0.12							
v/s Ratio Perm		c0.18		0.18				0.20			c0.30	
v/c Ratio		0.43		0.38	0.22			0.63			0.94	
Uniform Delay, d1		16.9		8.6	8.3			23.5			26.9	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.8		0.6	0.2			2.3			30.0	
Delay (s)		17.7		9.2	8.4			25.8			56.9	
Level of Service		B		A	A			C			E	
Approach Delay (s)		17.7			8.6			25.8			56.9	
Approach LOS		B			A			C			E	
Intersection Summary												
HCM 2000 Control Delay			22.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			81.7			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			82.0%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Future Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.978			0.957			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4755	0	1644	3406	0	1690	3438	0
Flt Permitted	0.313			0.117			0.469			0.401		
Satd. Flow (perm)	601	4889	0	210	4755	0	812	3406	0	713	3438	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			34			46			28	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	17	957	118	132	747	126	52	248	99	309	411	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	1075	0	132	873	0	52	347	0	309	499	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		16.0	58.0		34.0	34.0		28.0	62.0	
Total Split (%)	35.0%	35.0%		13.3%	48.3%		28.3%	28.3%		23.3%	51.7%	
Maximum Green (s)	36.0	36.0		12.0	52.0		28.0	28.0		24.0	56.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		54.0	52.0		28.0	28.0		58.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.45	0.43		0.23	0.23		0.48	0.47	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

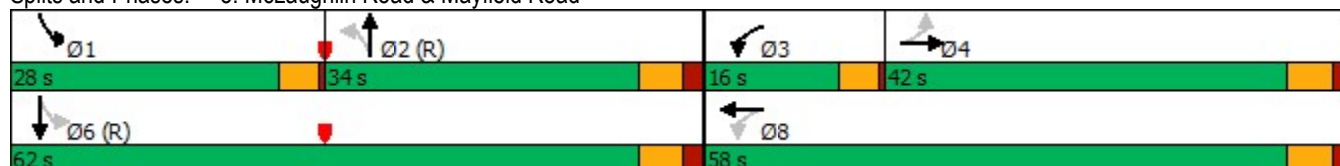


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.09	0.73		0.54	0.42		0.28	0.42		0.57	0.31	
Control Delay	32.2	40.3		28.5	23.3		42.5	35.5		24.3	19.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.2	40.3		28.5	23.3		42.5	35.5		24.3	19.4	
LOS	C	D		C	C		D	D		C	B	
Approach Delay		40.2			24.0			36.4			21.3	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	30.2
Intersection LOS:	C
Intersection Capacity Utilization	71.1%
ICU Level of Service	C
Analysis Period (min)	15

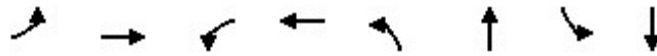
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	1075	132	873	52	347	309	499
v/c Ratio	0.09	0.73	0.54	0.42	0.28	0.42	0.57	0.31
Control Delay	32.2	40.3	28.5	23.3	42.5	35.5	24.3	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	40.3	28.5	23.3	42.5	35.5	24.3	19.4
Queue Length 50th (m)	2.9	81.5	18.1	49.0	10.1	31.6	44.7	35.3
Queue Length 95th (m)	8.8	97.9	30.9	60.4	21.9	45.8	66.1	47.3
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	180	1479	244	2079	189	830	540	1619
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.73	0.54	0.42	0.28	0.42	0.57	0.31

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Future Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4887		1706	4756		1644	3406		1690	3436	
Flt Permitted	0.31	1.00		0.12	1.00		0.47	1.00		0.40	1.00	
Satd. Flow (perm)	601	4887		210	4756		812	3406		713	3436	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	17	957	118	132	747	126	52	248	99	309	411	88
RTOR Reduction (vph)	0	13	0	0	19	0	0	35	0	0	15	0
Lane Group Flow (vph)	17	1062	0	132	854	0	52	312	0	309	484	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		52.0	52.0		28.0	28.0		56.0	56.0	
Effective Green, g (s)	36.0	36.0		52.0	52.0		28.0	28.0		56.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.43	0.43		0.23	0.23		0.47	0.47	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	180	1466		240	2060		189	794		528	1603	
v/s Ratio Prot		c0.22		c0.05	0.18			0.09		c0.12	0.14	
v/s Ratio Perm	0.03			0.18			0.06			c0.16		
v/c Ratio	0.09	0.72		0.55	0.41		0.28	0.39		0.59	0.30	
Uniform Delay, d1	30.3	37.6		23.6	23.5		37.7	38.8		21.3	19.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	3.2		8.8	0.6		3.6	1.5		4.7	0.5	
Delay (s)	31.3	40.7		32.4	24.1		41.3	40.3		26.0	20.4	
Level of Service	C	D		C	C		D	D		C	C	
Approach Delay (s)		40.6			25.2			40.4			22.5	
Approach LOS		D			C			D			C	

































Intersection Summary

HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330
Future Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00		0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.261			0.950			0.316			0.386		
Satd. Flow (perm)	477	4902	1508	3328	4948	1395	600	3476	1467	688	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			184			224			337
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351
Shared Lane Traffic (%)												
Lane Group Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	28.0	49.0	49.0	22.0	43.0	43.0	13.0	49.0	49.0	40.0	76.0	76.0
Total Split (%)	17.5%	30.6%	30.6%	13.8%	26.9%	26.9%	8.1%	30.6%	30.6%	25.0%	47.5%	47.5%
Maximum Green (s)	23.0	42.0	42.0	17.0	36.0	36.0	9.0	42.0	42.0	36.0	69.0	69.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Act Effect Green (s)	68.0	42.0	42.0	17.0	36.0	36.0	54.0	42.0	42.0	85.0	69.0	69.0	
Actuated g/C Ratio	0.42	0.26	0.26	0.11	0.22	0.22	0.34	0.26	0.26	0.53	0.43	0.43	
v/c Ratio	0.66	0.79	0.22	0.62	0.57	0.40	0.32	0.42	0.41	0.67	0.59	0.41	
Control Delay	39.9	60.2	6.5	76.8	57.4	9.1	25.4	50.7	7.5	29.3	36.7	4.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	39.9	60.2	6.5	76.8	57.4	9.1	25.4	50.7	7.5	29.3	36.7	4.7	
LOS	D	E	A	E	E	A	C	D	A	C	D	A	
Approach Delay		52.3				53.0				33.7			28.1
Approach LOS		D				D				C			C

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	70
Control Type:	Pretimed
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	41.3
Intersection LOS:	D
Intersection Capacity Utilization	79.5%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024




































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351
v/c Ratio	0.66	0.79	0.22	0.62	0.57	0.40	0.32	0.42	0.41	0.67	0.59	0.41
Control Delay	39.9	60.2	6.5	76.8	57.4	9.1	25.4	50.7	7.5	29.3	36.7	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	60.2	6.5	76.8	57.4	9.1	25.4	50.7	7.5	29.3	36.7	4.7
Queue Length 50th (m)	56.3	110.9	0.0	35.1	66.2	0.0	13.2	54.2	0.0	75.9	114.3	2.5
Queue Length 95th (m)	79.9	128.3	12.2	49.5	80.1	20.8	22.4	70.4	21.2	103.0	135.6	21.8
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	399	1286	481	354	1113	456	270	912	550	594	1528	863
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.79	0.22	0.62	0.57	0.40	0.32	0.42	0.41	0.67	0.59	0.41

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 		 	 		
Traffic Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330	
Future Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1806	3476	1467	1702	3544	1557	
Flt Permitted	0.26	1.00	1.00	0.95	1.00	1.00	0.32	1.00	1.00	0.39	1.00	1.00	
Satd. Flow (perm)	476	4902	1508	3340	4948	1395	601	3476	1467	691	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351	
RTOR Reduction (vph)	0	0	77	0	0	143	0	0	165	0	0	192	
Lane Group Flow (vph)	263	1015	27	220	633	41	86	387	59	399	902	159	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	64.0	42.0	42.0	17.0	36.0	36.0	51.0	42.0	42.0	82.0	69.0	69.0	
Effective Green, g (s)	66.0	42.0	42.0	17.0	36.0	36.0	51.0	42.0	42.0	82.0	69.0	69.0	
Actuated g/C Ratio	0.41	0.26	0.26	0.11	0.22	0.22	0.32	0.26	0.26	0.51	0.43	0.43	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	393	1286	395	354	1113	313	259	912	385	581	1528	671	
v/s Ratio Prot	c0.10	c0.21		0.07	0.13		0.02	0.11		c0.15	0.25		
v/s Ratio Perm	0.17		0.02			0.03	0.09		0.04	c0.20		0.10	
v/c Ratio	0.67	0.79	0.07	0.62	0.57	0.13	0.33	0.42	0.15	0.69	0.59	0.24	
Uniform Delay, d1	33.5	54.9	44.3	68.4	55.1	49.5	39.0	49.0	45.3	25.6	34.7	28.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.8	5.0	0.3	8.0	2.1	0.9	3.4	1.4	0.8	6.5	1.7	0.8	
Delay (s)	42.3	59.9	44.7	76.4	57.2	50.4	42.4	50.4	46.2	32.1	36.4	29.7	
Level of Service	D	E	D	E	E	D	D	D	D	C	D	C	
Approach Delay (s)		55.4			60.1			48.1			33.9		
Approach LOS		E			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			47.9									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.75										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			79.5%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	231	2	282	312	53	11	371	322	41	240	4
Future Volume (vph)	4	231	2	282	312	53	11	371	322	41	240	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.978				0.850		0.998	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1829	0	0	1797	1601	0	1844	0
Flt Permitted		0.994		0.471				0.987			0.815	
Satd. Flow (perm)	0	1853	0	905	1829	0	0	1776	1601	0	1513	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10				183			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	246	2	300	332	56	12	395	343	44	255	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	252	0	300	388	0	0	407	343	0	303	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

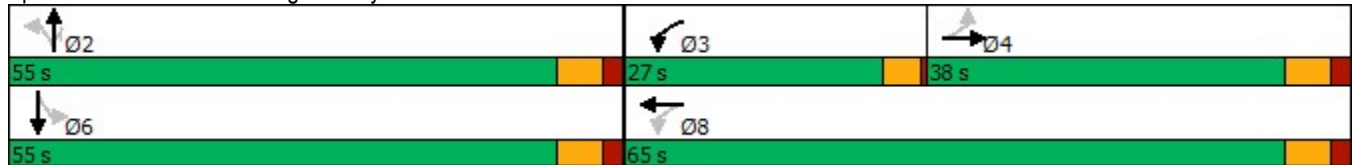
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		38.1		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.32		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.43		0.48	0.43			0.56	0.45		0.49	
Control Delay		36.2		19.2	20.9			31.0	13.4		29.5	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		36.2		19.2	20.9			31.0	13.4		29.5	
LOS		D		B	C			C	B		C	
Approach Delay		36.2			20.2			23.0			29.5	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 24.7
 Intersection Capacity Utilization 87.4%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	252	300	388	407	343	303
v/c Ratio	0.43	0.48	0.43	0.56	0.45	0.49
Control Delay	36.2	19.2	20.9	31.0	13.4	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	19.2	20.9	31.0	13.4	29.5
Queue Length 50th (m)	46.6	38.7	55.6	72.5	25.1	51.8
Queue Length 95th (m)	76.0	57.0	80.1	103.8	49.9	78.0
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	588	666	904	725	762	618
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.45	0.43	0.56	0.45	0.49

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	4	231	2	282	312	53	11	371	322	41	240	4	
Future Volume (vph)	4	231	2	282	312	53	11	371	322	41	240	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.98			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1863		1825	1830			1796	1601		1844		
Flt Permitted		0.99		0.47	1.00			0.99	1.00		0.82		
Satd. Flow (perm)		1853		905	1830			1776	1601		1514		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	4	246	2	300	332	56	12	395	343	44	255	4	
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	108	0	1	0	
Lane Group Flow (vph)	0	252	0	300	383	0	0	407	235	0	302	0	
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		38.1		59.0	59.0			49.0	49.0		49.0		
Effective Green, g (s)		38.1		61.0	59.0			49.0	49.0		49.0		
Actuated g/C Ratio		0.32		0.51	0.49			0.41	0.41		0.41		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		588		604	899			725	653		618		
v/s Ratio Prot				c0.08	c0.21								
v/s Ratio Perm		0.14		0.17				c0.23	0.15		0.20		
v/c Ratio		0.43		0.50	0.43			0.56	0.36		0.49		
Uniform Delay, d1		32.4		18.2	19.6			27.3	24.6		26.2		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		2.3		0.6	1.5			3.1	1.5		2.8		
Delay (s)		34.6		18.9	21.1			30.4	26.2		29.0		
Level of Service		C		B	C			C	C		C		
Approach Delay (s)		34.6			20.1			28.4			29.0		
Approach LOS		C			C			C			C		
Intersection Summary													
HCM 2000 Control Delay			26.4									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.51										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			87.4%									ICU Level of Service	E
Analysis Period (min)			15										
c	Critical Lane Group												

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	10	550	37	439	592	26	49	137	449	21	58	6
Future Volume (vph)	10	550	37	439	592	26	49	137	449	21	58	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.994				0.850		0.991	
Flt Protected		0.999		0.950				0.987			0.988	
Satd. Flow (prot)	0	3465	0	1755	3588	0	0	1821	1555	0	1806	0
Flt Permitted		0.938		0.299				0.886			0.887	
Satd. Flow (perm)	0	3253	0	552	3588	0	0	1635	1555	0	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			7				478			3
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	11	585	39	467	630	28	52	146	478	22	62	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	635	0	467	658	0	0	198	478	0	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings

2: McLaughlin Road & Old School Road

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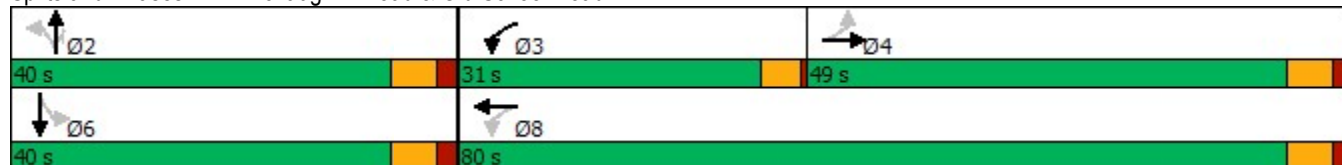


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	49.0	49.0		31.0	80.0		40.0	40.0	40.0	40.0	40.0	
Total Split (%)	40.8%	40.8%		25.8%	66.7%		33.3%	33.3%	33.3%	33.3%	33.3%	
Maximum Green (s)	43.0	43.0		27.0	74.0		34.0	34.0	34.0	34.0	34.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		19.9		43.5	39.2			15.3	15.3		15.3	
Actuated g/C Ratio		0.30		0.65	0.58			0.23	0.23		0.23	
v/c Ratio		0.66		0.70	0.31			0.54	0.66		0.24	
Control Delay		25.5		13.5	7.7			31.2	7.9		25.4	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		25.5		13.5	7.7			31.2	7.9		25.4	
LOS		C		B	A			C	A		C	
Approach Delay		25.5			10.1			14.7			25.4	
Approach LOS		C			B			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	67.3
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	15.7
Intersection LOS:	B
Intersection Capacity Utilization:	75.5%
ICU Level of Service:	D
Analysis Period (min):	15

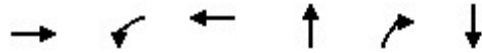
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	635	467	658	198	478	90
v/c Ratio	0.66	0.70	0.31	0.54	0.66	0.24
Control Delay	25.5	13.5	7.7	31.2	7.9	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	13.5	7.7	31.2	7.9	25.4
Queue Length 50th (m)	33.0	22.1	18.1	20.2	0.0	8.3
Queue Length 95th (m)	71.5	61.0	36.1	53.6	25.4	26.0
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2227	912	3409	884	1060	878
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.51	0.19	0.22	0.45	0.10

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	10	550	37	439	592	26	49	137	449	21	58	6
Future Volume (vph)	10	550	37	439	592	26	49	137	449	21	58	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3464		1755	3586			1822	1555		1806	
Flt Permitted		0.94		0.30	1.00			0.89	1.00		0.89	
Satd. Flow (perm)		3253		552	3586			1635	1555		1622	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	585	39	467	630	28	52	146	478	22	62	6
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	368	0	2	0
Lane Group Flow (vph)	0	631	0	467	655	0	0	198	110	0	88	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		20.1		39.2	39.2			15.3	15.3		15.3	
Effective Green, g (s)		20.1		41.2	39.2			15.3	15.3		15.3	
Actuated g/C Ratio		0.30		0.62	0.59			0.23	0.23		0.23	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		983		651	2113			376	357		373	
v/s Ratio Prot				c0.18	0.18							
v/s Ratio Perm		c0.19		0.26				c0.12	0.07		0.05	
v/c Ratio		0.64		0.72	0.31			0.53	0.31		0.24	
Uniform Delay, d1		20.1		7.4	6.9			22.4	21.2		20.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.4		3.8	0.1			1.3	0.5		0.3	
Delay (s)		21.5		11.2	6.9			23.8	21.7		21.2	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		21.5			8.7			22.3			21.2	
Approach LOS		C			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			16.0		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			66.5		Sum of lost time (s)			14.0				
Intersection Capacity Utilization			75.5%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	677	227	106	317	275	52	186	3192	451	36	1867	587
Future Volume (vph)	677	227	106	317	275	52	186	3192	451	36	1867	587
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.952			0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3312	0	1789	3533	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.341			0.312			0.074			0.080		
Satd. Flow (perm)	655	3312	0	588	3533	0	141	5043	1633	154	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			17				190			366
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1007.8			440.4			855.3				282.2
Travel Time (s)		51.8			22.6			38.5				12.7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	698	234	109	327	284	54	192	3291	465	37	1925	605
Shared Lane Traffic (%)												
Lane Group Flow (vph)	698	343	0	327	338	0	192	3291	465	37	1925	605
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1		6

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

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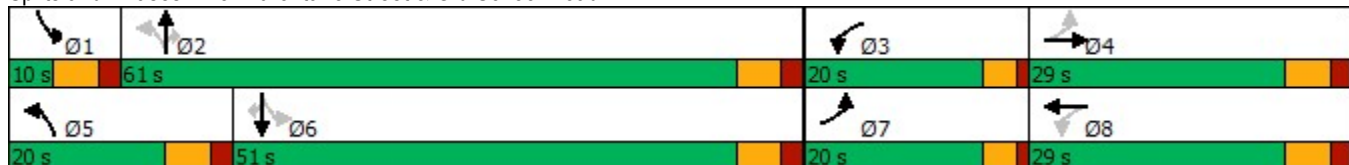


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	20.0	29.0		20.0	29.0		20.0	61.0	61.0	10.0	51.0	51.0
Total Split (%)	16.7%	24.2%		16.7%	24.2%		16.7%	50.8%	50.8%	8.3%	42.5%	42.5%
Maximum Green (s)	16.0	23.0		16.0	23.0		14.0	55.0	55.0	4.0	45.0	45.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	37.5	17.4		33.2	17.3		65.1	59.3	57.3	53.5	47.5	45.4
Actuated g/C Ratio	0.34	0.16		0.30	0.16		0.59	0.54	0.52	0.48	0.43	0.41
v/c Ratio	1.69	0.60		0.94	0.60		0.67	1.22	0.50	0.22	0.93	0.71
Control Delay	345.7	40.7		67.1	45.8		34.3	126.8	12.8	14.8	40.2	16.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	345.7	40.7		67.1	45.8		34.3	126.8	12.8	14.8	40.2	16.1
LOS	F	D		E	D		C	F	B	B	D	B
Approach Delay		245.2			56.3			108.9			34.1	
Approach LOS		F			E			F			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	110.5
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.69
Intersection Signal Delay:	98.5
Intersection LOS:	F
Intersection Capacity Utilization:	125.1%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	698	343	327	338	192	3291	465	37	1925	605
v/c Ratio	1.69	0.60	0.94	0.60	0.67	1.22	0.50	0.22	0.93	0.71
Control Delay	345.7	40.7	67.1	45.8	34.3	126.8	12.8	14.8	40.2	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	345.7	40.7	67.1	45.8	34.3	126.8	12.8	14.8	40.2	16.1
Queue Length 50th (m)	~202.4	31.1	58.3	35.0	24.2	~337.5	38.4	3.1	143.5	42.2
Queue Length 95th (m)	#274.8	45.9	#99.2	49.5	50.2	#385.9	72.0	8.1	#197.2	93.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	413	795	351	814	324	2706	938	165	2066	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.69	0.43	0.93	0.42	0.59	1.22	0.50	0.22	0.93	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		 			 			  			  			
Traffic Volume (vph)	677	227	106	317	275	52	186	3192	451	36	1867	587		
Future Volume (vph)	677	227	106	317	275	52	186	3192	451	36	1867	587		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0		
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00		
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		
Satd. Flow (prot)	1825	3314		1789	3533		1807	5043	1633	1825	4812	1541		
Flt Permitted	0.34	1.00		0.31	1.00		0.07	1.00	1.00	0.08	1.00	1.00		
Satd. Flow (perm)	655	3314		588	3533		141	5043	1633	154	4812	1541		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97		
Adj. Flow (vph)	698	234	109	327	284	54	192	3291	465	37	1925	605		
RTOR Reduction (vph)	0	48	0	0	14	0	0	0	94	0	0	210		
Lane Group Flow (vph)	698	295	0	327	324	0	192	3291	371	37	1925	395		
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm		
Protected Phases	7	4		3	8		5	2		1	6			
Permitted Phases	4			8			2		2	6		6		
Actuated Green, G (s)	31.4	15.4		31.2	15.3		65.6	57.3	57.3	50.3	48.0	48.0		
Effective Green, g (s)	35.4	17.4		31.2	17.3		67.6	59.3	57.3	54.3	50.0	48.0		
Actuated g/C Ratio	0.31	0.15		0.28	0.15		0.60	0.53	0.51	0.48	0.44	0.43		
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		
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)	391	510		331	541		285	2648	828	137	2131	655		
v/s Ratio Prot	c0.28	0.09		0.14	0.09		c0.08	c0.65		0.01	0.40			
v/s Ratio Perm	0.27			c0.13			0.32		0.23	0.12		0.26		
v/c Ratio	1.79	0.58		0.99	0.60		0.67	1.24	0.45	0.27	0.90	0.60		
Uniform Delay, d1	35.4	44.3		37.5	44.6		27.3	26.8	17.7	25.1	29.2	25.1		
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	363.5	1.6		45.7	1.8		6.2	112.6	1.8	1.1	6.8	4.1		
Delay (s)	398.9	45.9		83.2	46.3		33.4	139.4	19.5	26.1	36.0	29.1		
Level of Service	F	D		F	D		C	F	B	C	D	C		
Approach Delay (s)		282.6			64.5			120.2			34.3			
Approach LOS		F			E			F			C			
Intersection Summary														
HCM 2000 Control Delay			109.4									HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio			1.28											
Actuated Cycle Length (s)			112.9								16.0		Sum of lost time (s)	
Intersection Capacity Utilization			125.1%										ICU Level of Service	H
Analysis Period (min)			15											
c Critical Lane Group														

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30
Future Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.984			0.956			0.983	
Flt Protected		0.997		0.950				0.997			0.992	
Satd. Flow (prot)	0	5042	0	1825	5026	0	0	1791	0	0	1834	0
Flt Permitted		0.856		0.238				0.965			0.853	
Satd. Flow (perm)	0	4329	0	457	5026	0	0	1733	0	0	1577	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			19			34			10	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	47	767	55	202	722	85	37	332	180	40	189	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	869	0	202	807	0	0	549	0	0	262	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

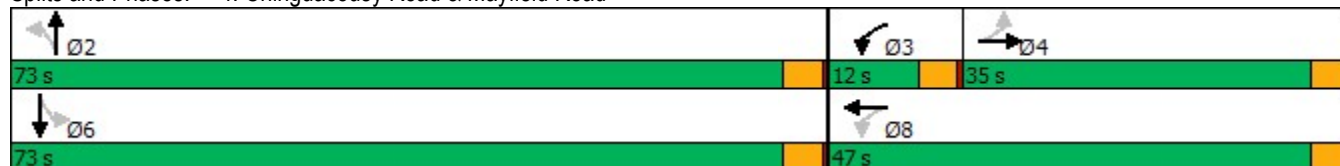


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0		12.0	47.0		73.0	73.0		73.0	73.0	
Total Split (%)	29.2%	29.2%		10.0%	39.2%		60.8%	60.8%		60.8%	60.8%	
Maximum Green (s)	31.0	31.0		8.0	43.0		69.0	69.0		69.0	69.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		31.3		45.4	43.4			29.3			29.3	
Actuated g/C Ratio		0.39		0.56	0.54			0.36			0.36	
v/c Ratio		0.52		0.47	0.30			0.84			0.45	
Control Delay		21.4		14.4	11.6			34.6			20.9	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		21.4		14.4	11.6			34.6			20.9	
LOS		C		B	B			C			C	
Approach Delay		21.4			12.1			34.6			20.9	
Approach LOS		C			B			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	80.8
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	20.6
Intersection LOS:	C
Intersection Capacity Utilization:	71.9%
ICU Level of Service:	C
Analysis Period (min):	15

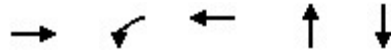
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	869	202	807	549	262
v/c Ratio	0.52	0.47	0.30	0.84	0.45
Control Delay	21.4	14.4	11.6	34.6	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	14.4	11.6	34.6	20.9
Queue Length 50th (m)	35.5	13.8	22.1	70.9	28.5
Queue Length 95th (m)	60.0	33.6	41.1	108.1	46.8
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1681	427	2708	1498	1360
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.47	0.30	0.37	0.19

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↔↔		↔	↔↔↔			↔			↔		
Traffic Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30	
Future Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Frt		0.99		1.00	0.98			0.96			0.98		
Flt Protected		1.00		0.95	1.00			1.00			0.99		
Satd. Flow (prot)		5041		1825	5027			1790			1835		
Flt Permitted		0.86		0.24	1.00			0.97			0.85		
Satd. Flow (perm)		4325		456	5027			1733			1577		
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)	47	767	55	202	722	85	37	332	180	40	189	33	
RTOR Reduction (vph)	0	5	0	0	9	0	0	22	0	0	6	0	
Lane Group Flow (vph)	0	864	0	202	798	0	0	527	0	0	256	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		31.3		43.4	43.4			29.3			29.3		
Effective Green, g (s)		31.3		45.4	43.4			29.3			29.3		
Actuated g/C Ratio		0.39		0.56	0.54			0.36			0.36		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		1677		427	2703			629			572		
v/s Ratio Prot				c0.06	0.16								
v/s Ratio Perm		c0.20		0.21				c0.30			0.16		
v/c Ratio		0.52		0.47	0.30			0.84			0.45		
Uniform Delay, d1		18.9		9.4	10.2			23.5			19.5		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		1.1		0.8	0.3			9.6			0.6		
Delay (s)		20.0		10.2	10.5			33.1			20.1		
Level of Service		C		B	B			C			C		
Approach Delay (s)		20.0			10.5			33.1			20.1		
Approach LOS		C			B			C			C		
Intersection Summary													
HCM 2000 Control Delay			19.1									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			80.7									Sum of lost time (s)	10.0
Intersection Capacity Utilization			71.9%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Future Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.967			0.968			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4881	0	1825	3484	0	1738	3385	0
Flt Permitted	0.113			0.185			0.542			0.190		
Satd. Flow (perm)	207	5036	0	342	4881	0	1041	3484	0	348	3385	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			64			29			49	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	48	923	76	119	1086	307	130	454	123	222	257	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	999	0	119	1393	0	130	577	0	222	350	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

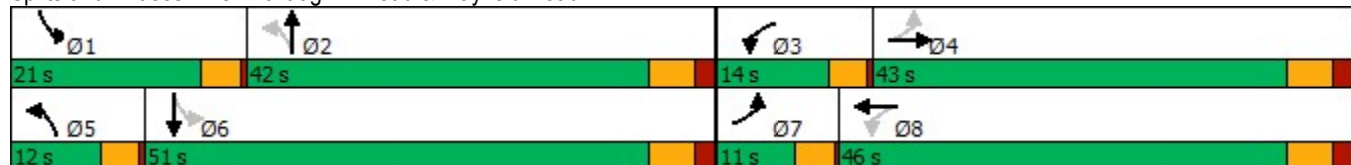


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	11.0	43.0		14.0	46.0		12.0	42.0		21.0	51.0	
Total Split (%)	9.2%	35.8%		11.7%	38.3%		10.0%	35.0%		17.5%	42.5%	
Maximum Green (s)	7.0	37.0		10.0	40.0		8.0	36.0		17.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.3	37.7		51.2	42.0		31.5	21.7		41.2	27.6	
Actuated g/C Ratio	0.45	0.37		0.50	0.41		0.31	0.21		0.40	0.27	
v/c Ratio	0.25	0.53		0.41	0.68		0.34	0.76		0.68	0.37	
Control Delay	18.2	27.5		19.1	27.2		22.1	42.8		31.0	26.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.2	27.5		19.1	27.2		22.1	42.8		31.0	26.3	
LOS	B	C		B	C		C	D		C	C	
Approach Delay		27.1			26.6			39.0			28.1	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 102
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 29.2
 Intersection LOS: C
 Intersection Capacity Utilization 74.4%
 ICU Level of Service D
 Analysis Period (min) 15

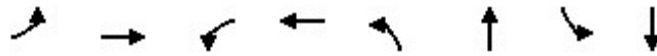
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	48	999	119	1393	130	577	222	350
v/c Ratio	0.25	0.53	0.41	0.68	0.34	0.76	0.68	0.37
Control Delay	18.2	27.5	19.1	27.2	22.1	42.8	31.0	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	27.5	19.1	27.2	22.1	42.8	31.0	26.3
Queue Length 50th (m)	4.7	56.8	12.0	82.2	16.2	54.7	29.5	25.3
Queue Length 95th (m)	12.3	81.1	25.5	114.2	27.9	75.3	46.3	37.2
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	200	1870	313	2049	386	1257	375	1532
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.53	0.38	0.68	0.34	0.46	0.59	0.23

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Future Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5034		1755	4881		1825	3484		1738	3385	
Flt Permitted	0.11	1.00		0.18	1.00		0.54	1.00		0.19	1.00	
Satd. Flow (perm)	206	5034		341	4881		1041	3484		349	3385	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	48	923	76	119	1086	307	130	454	123	222	257	93
RTOR Reduction (vph)	0	7	0	0	38	0	0	23	0	0	36	0
Lane Group Flow (vph)	48	992	0	119	1355	0	130	554	0	222	314	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.8	38.6		50.6	42.0		29.6	21.7		39.5	27.6	
Effective Green, g (s)	43.8	38.6		50.6	42.0		29.6	21.7		39.5	27.6	
Actuated g/C Ratio	0.43	0.38		0.49	0.41		0.29	0.21		0.38	0.27	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	165	1892		286	1996		360	736		320	909	
v/s Ratio Prot	0.01	0.20		c0.03	c0.28		0.03	0.16		c0.09	0.09	
v/s Ratio Perm	0.11			0.17			0.08			c0.17		
v/c Ratio	0.29	0.52		0.42	0.68		0.36	0.75		0.69	0.35	
Uniform Delay, d1	18.6	24.9		15.4	24.8		28.0	38.0		23.7	30.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	1.0		1.0	1.9		0.6	4.4		6.4	0.2	
Delay (s)	19.6	26.0		16.4	26.7		28.6	42.4		30.1	30.5	
Level of Service	B	C		B	C		C	D		C	C	
Approach Delay (s)		25.7			25.9			39.8			30.3	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	102.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Future Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.174			0.950			0.176			0.269		
Satd. Flow (perm)	321	4995	1538	3339	5092	1562	331	3614	1486	513	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			149			243			577
Link Speed (k/h)		70			70			70				70
Link Distance (m)		142.1			749.9			381.1				609.4
Travel Time (s)		7.3			38.6			19.6				31.3
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	22.0	25.0	25.0	20.0	55.0	55.0	17.0	52.0	52.0
Total Split (%)	28.1%	30.4%	30.4%	16.3%	18.5%	18.5%	14.8%	40.7%	40.7%	12.6%	38.5%	38.5%
Maximum Green (s)	33.0	34.0	34.0	17.0	18.0	18.0	16.0	48.0	48.0	13.0	45.0	45.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	60.0	34.0	34.0	17.0	18.0	18.0	70.0	48.0	48.0	65.0	45.0	47.0
Actuated g/C Ratio	0.44	0.25	0.25	0.13	0.13	0.13	0.52	0.36	0.36	0.48	0.33	0.35
v/c Ratio	1.32	0.50	0.24	0.67	1.22	0.53	0.60	0.56	0.40	0.62	0.71	1.05
Control Delay	192.0	44.9	8.1	64.6	158.9	18.5	25.2	37.1	7.2	25.9	43.2	61.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	192.0	44.9	8.1	64.6	158.9	18.5	25.2	37.1	7.2	25.9	43.2	61.4
LOS	F	D	A	E	F	B	C	D	A	C	D	E
Approach Delay	112.3			118.7			28.3			49.8		
Approach LOS	F			F			C			D		

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	120
Control Type:	Pretimed
Maximum v/c Ratio:	1.32
Intersection Signal Delay:	75.2
Intersection LOS:	E
Intersection Capacity Utilization	104.4%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
v/c Ratio	1.32	0.50	0.24	0.67	1.22	0.53	0.60	0.56	0.40	0.62	0.71	1.05
Control Delay	192.0	44.9	8.1	64.6	158.9	18.5	25.2	37.1	7.2	25.9	43.2	61.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	192.0	44.9	8.1	64.6	158.9	18.5	25.2	37.1	7.2	25.9	43.2	61.4
Queue Length 50th (m)	~219.0	53.0	0.0	37.9	~98.4	6.7	31.3	81.4	5.1	35.3	100.8	~172.2
Queue Length 95th (m)	#293.1	65.8	14.7	52.8	#126.1	29.2	46.9	101.3	25.1	52.1	123.9	#251.4
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	514	1258	471	428	678	337	366	1284	684	392	1170	917
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.32	0.50	0.24	0.67	1.22	0.53	0.60	0.56	0.40	0.63	0.71	1.05

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Future Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1822	3510	1555
Flt Permitted	0.17	1.00	1.00	0.95	1.00	1.00	0.18	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	321	4995	1538	3404	5092	1562	332	3614	1486	517	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
RTOR Reduction (vph)	0	0	85	0	0	129	0	0	157	0	0	376
Lane Group Flow (vph)	681	631	28	285	825	48	220	724	115	245	826	587
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	56.0	34.0	34.0	17.0	18.0	18.0	64.0	48.0	48.0	58.0	45.0	45.0
Effective Green, g (s)	58.0	34.0	34.0	17.0	18.0	18.0	67.0	48.0	48.0	62.0	45.0	47.0
Actuated g/C Ratio	0.43	0.25	0.25	0.13	0.13	0.13	0.50	0.36	0.36	0.46	0.33	0.35
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	428	678	208	359	1284	528	382	1170	541
v/s Ratio Prot	c0.35	0.13		0.08	0.16		c0.08	0.20		c0.07	0.24	
v/s Ratio Perm	c0.23		0.02			0.03	0.22		0.08	0.22		c0.38
v/c Ratio	1.34	0.50	0.07	0.67	1.22	0.23	0.61	0.56	0.22	0.64	0.71	1.08
Uniform Delay, d1	39.6	43.2	38.5	56.3	58.5	52.3	22.7	35.1	30.4	23.8	39.2	44.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	165.0	1.4	0.4	8.0	110.7	2.6	7.6	1.8	1.0	8.0	3.6	63.7
Delay (s)	204.6	44.7	38.9	64.3	169.2	54.9	30.3	36.9	31.3	31.8	42.8	107.7
Level of Service	F	D	D	E	F	D	C	D	C	C	D	F
Approach Delay (s)		120.6			130.2			34.4			72.2	
Approach LOS		F			F			C			E	
Intersection Summary												
HCM 2000 Control Delay			88.6	HCM 2000 Level of Service				F				
HCM 2000 Volume to Capacity ratio			1.22									
Actuated Cycle Length (s)			135.0	Sum of lost time (s)				21.0				
Intersection Capacity Utilization			104.4%	ICU Level of Service				G				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	275	8	234	230	51	16	225	351	42	209	9
Future Volume (vph)	2	275	8	234	230	51	16	225	351	42	209	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.973				0.850		0.995	
Flt Protected				0.950				0.997			0.992	
Satd. Flow (prot)	0	1913	0	1772	1807	0	0	1830	1585	0	1789	0
Flt Permitted		0.998		0.573				0.974			0.925	
Satd. Flow (perm)	0	1910	0	1069	1807	0	0	1788	1585	0	1669	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			33				373			6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	293	9	249	245	54	17	239	373	45	222	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	304	0	249	299	0	0	256	373	0	277	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

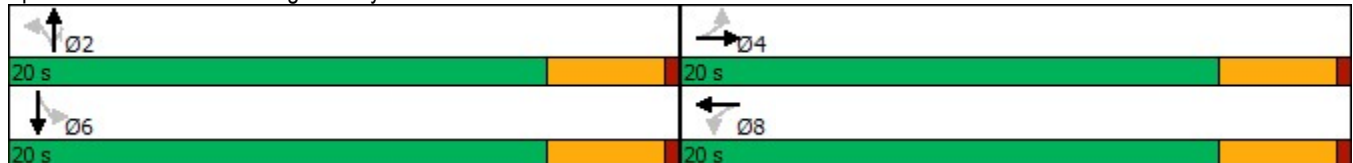


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		12.5		12.5	12.5			16.2	16.2		16.2	
Actuated g/C Ratio		0.34		0.34	0.34			0.44	0.44		0.44	
v/c Ratio		0.47		0.69	0.47			0.33	0.41		0.38	
Control Delay		11.6		21.3	10.8			9.3	2.9		9.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		11.6		21.3	10.8			9.3	2.9		9.7	
LOS		B		C	B			A	A		A	
Approach Delay		11.6			15.6			5.5			9.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 36.8
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 10.3
 Intersection Capacity Utilization 70.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	304	249	299	256	373	277
v/c Ratio	0.47	0.69	0.47	0.33	0.41	0.38
Control Delay	11.6	21.3	10.8	9.3	2.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	21.3	10.8	9.3	2.9	9.7
Queue Length 50th (m)	13.5	12.3	11.9	10.4	0.0	11.2
Queue Length 95th (m)	26.7	#31.3	24.9	23.2	10.5	25.4
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	842	469	812	786	906	737
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.53	0.37	0.33	0.41	0.38

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	275	8	234	230	51	16	225	351	42	209	9	
Future Volume (vph)	2	275	8	234	230	51	16	225	351	42	209	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1913		1772	1807			1829	1585		1789		
Flt Permitted		1.00		0.57	1.00			0.97	1.00		0.92		
Satd. Flow (perm)		1909		1069	1807			1788	1585		1668		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	293	9	249	245	54	17	239	373	45	222	10	
RTOR Reduction (vph)	0	3	0	0	22	0	0	0	208	0	3	0	
Lane Group Flow (vph)	0	301	0	249	277	0	0	256	165	0	274	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		12.5		12.5	12.5			16.2	16.2		16.2		
Effective Green, g (s)		12.5		12.5	12.5			16.2	16.2		16.2		
Actuated g/C Ratio		0.34		0.34	0.34			0.44	0.44		0.44		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		650		364	615			789	699		736		
v/s Ratio Prot					0.15								
v/s Ratio Perm		0.16		c0.23				0.14	0.10		c0.16		
v/c Ratio		0.46		0.68	0.45			0.32	0.24		0.37		
Uniform Delay, d1		9.5		10.4	9.4			6.7	6.4		6.8		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.5		5.2	0.5			1.1	0.8		1.4		
Delay (s)		10.0		15.6	10.0			7.8	7.2		8.3		
Level of Service		A		B	A			A	A		A		
Approach Delay (s)		10.0			12.5			7.4			8.3		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			9.6									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.51										
Actuated Cycle Length (s)			36.7									Sum of lost time (s)	8.0
Intersection Capacity Utilization			70.2%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	40	799	39	292	444	41	42	105	452	53	143	28
Future Volume (vph)	40	799	39	292	444	41	42	105	452	53	143	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.987				0.850		0.983	
Flt Protected		0.998		0.950				0.986			0.988	
Satd. Flow (prot)	0	3563	0	1789	3478	0	0	1868	1617	0	1830	0
Flt Permitted		0.903		0.162				0.817			0.876	
Satd. Flow (perm)	0	3224	0	305	3478	0	0	1547	1617	0	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			17				391			7
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	43	850	41	311	472	44	45	112	481	56	152	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	934	0	311	516	0	0	157	481	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

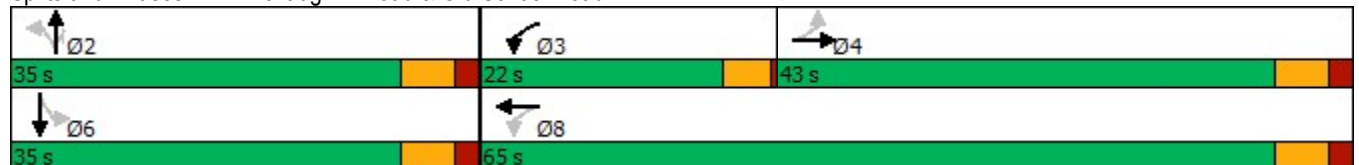
06/07/2024

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		27.7		46.6	44.5			16.7	16.7		16.7	
Actuated g/C Ratio		0.37		0.63	0.60			0.23	0.23		0.23	
v/c Ratio		0.77		0.70	0.25			0.45	0.72		0.64	
Control Delay		26.3		20.0	7.3			31.4	13.3		35.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		26.3		20.0	7.3			31.4	13.3		35.6	
LOS		C		C	A			C	B		D	
Approach Delay		26.3			12.1			17.8			35.6	
Approach LOS		C			B			B			D	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 73.9
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 20.6
 Intersection Capacity Utilization 79.6%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

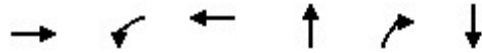
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	934	311	516	157	481	238
v/c Ratio	0.77	0.70	0.25	0.45	0.72	0.64
Control Delay	26.3	20.0	7.3	31.4	13.3	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	20.0	7.3	31.4	13.3	35.6
Queue Length 50th (m)	56.3	16.8	14.5	18.7	10.3	28.9
Queue Length 95th (m)	103.7	54.1	29.5	41.7	45.6	60.5
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1716	575	2821	644	901	679
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.54	0.18	0.24	0.53	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	40	799	39	292	444	41	42	105	452	53	143	28
Future Volume (vph)	40	799	39	292	444	41	42	105	452	53	143	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3563		1789	3478			1867	1617		1830	
Flt Permitted		0.90		0.16	1.00			0.82	1.00		0.88	
Satd. Flow (perm)		3226		305	3478			1547	1617		1623	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	43	850	41	311	472	44	45	112	481	56	152	30
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	302	0	5	0
Lane Group Flow (vph)	0	931	0	311	509	0	0	157	179	0	233	0
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		27.9		44.5	44.5			16.7	16.7		16.7	
Effective Green, g (s)		27.9		44.5	44.5			16.7	16.7		16.7	
Actuated g/C Ratio		0.38		0.61	0.61			0.23	0.23		0.23	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1229		440	2114			352	368		370	
v/s Ratio Prot				c0.12	0.15							
v/s Ratio Perm		0.29		c0.31				0.10	0.11		c0.14	
v/c Ratio		0.76		0.71	0.24			0.45	0.49		0.63	
Uniform Delay, d1		19.7		10.4	6.6			24.3	24.5		25.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		2.7		5.1	0.1			0.9	1.0		3.3	
Delay (s)		22.4		15.6	6.7			25.2	25.5		28.8	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		22.4		10.0				25.5			28.8	
Approach LOS		C		B				C			C	

Intersection Summary		
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.72	B
Actuated Cycle Length (s)	73.2	Sum of lost time (s)
Intersection Capacity Utilization	79.6%	16.0
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		D

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	587	235	530	391	196	40	140	1879	182	34	2534	316
Future Volume (vph)	587	235	530	391	196	40	140	1879	182	34	2534	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.896			0.975				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3209	0	1722	3400	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.525			0.222			0.068			0.070		
Satd. Flow (perm)	970	3209	0	402	3400	0	123	4445	1471	119	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			16				149			168
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	631	253	570	420	211	43	151	2020	196	37	2725	340
Shared Lane Traffic (%)												
Lane Group Flow (vph)	631	823	0	420	254	0	151	2020	196	37	2725	340
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	29.0		20.0	24.0		8.0	71.0	71.0	63.0	63.0	63.0
Total Split (%)	20.8%	24.2%		16.7%	20.0%		6.7%	59.2%	59.2%	52.5%	52.5%	52.5%
Maximum Green (s)	21.0	21.0		16.0	16.0		4.0	63.0	63.0	55.0	55.0	55.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	47.0	23.0		40.0	16.0		69.0	63.0	63.0	57.0	57.0	55.0
Actuated g/C Ratio	0.39	0.19		0.33	0.13		0.58	0.52	0.52	0.48	0.48	0.46
v/c Ratio	1.19	1.55dr		1.27	0.54		1.01	0.87	0.23	0.66	1.14	0.41
Control Delay	134.9	152.0		170.3	50.3		99.7	29.9	5.0	79.7	98.4	11.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	134.9	152.0		170.3	50.3		99.7	29.9	5.0	79.7	98.4	11.9
LOS	F	F		F	D		F	C	A	E	F	B
Approach Delay		144.6			125.1			32.3				88.7
Approach LOS		F			F			C				F

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 130
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.27
 Intersection Signal Delay: 85.0 Intersection LOS: F
 Intersection Capacity Utilization 118.6% ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	631	823	420	254	151	2020	196	37	2725	340
v/c Ratio	1.19	1.55dr	1.27	0.54	1.01	0.87	0.23	0.66	1.14	0.41
Control Delay	134.9	152.0	170.3	50.3	99.7	29.9	5.0	79.7	98.4	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	134.9	152.0	170.3	50.3	99.7	29.9	5.0	79.7	98.4	11.9
Queue Length 50th (m)	~179.3	~118.5	~106.5	27.8	~19.9	146.1	5.2	6.5	~274.1	24.4
Queue Length 95th (m)	#247.9	#157.8	#168.8	41.4	#63.1	169.2	16.8	#26.8	#301.2	46.6
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	530	672	332	467	150	2333	843	56	2395	839
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	1.22	1.27	0.54	1.01	0.87	0.23	0.66	1.14	0.41

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	587	235	530	391	196	40	140	1879	182	34	2534	316	
Future Volume (vph)	587	235	530	391	196	40	140	1879	182	34	2534	316	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.90		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	3209		1722	3399		1722	4445	1471	1615	5043	1633	
Flt Permitted	0.52	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	969	3209		403	3399		123	4445	1471	119	5043	1633	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	631	253	570	420	211	43	151	2020	196	37	2725	340	
RTOR Reduction (vph)	0	57	0	0	14	0	0	0	71	0	0	91	
Lane Group Flow (vph)	631	766	0	420	240	0	151	2020	125	37	2725	249	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8		5	2			6		
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	41.0	21.0		32.0	16.0		63.0	63.0	63.0	55.0	55.0	55.0	
Effective Green, g (s)	43.0	23.0		36.0	16.0		65.0	63.0	63.0	57.0	57.0	55.0	
Actuated g/C Ratio	0.36	0.19		0.30	0.13		0.54	0.52	0.52	0.48	0.48	0.46	
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0	
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)	497	615		318	453		146	2333	772	56	2395	748	
v/s Ratio Prot	c0.24	c0.24		c0.20	0.07		c0.05	0.45			c0.54		
v/s Ratio Perm	0.21			0.20			0.51		0.09	0.31		0.15	
v/c Ratio	1.27	1.55dr		1.32	0.53		1.03	0.87	0.16	0.66	1.14	0.33	
Uniform Delay, d1	35.8	48.5		37.7	48.5		32.2	24.8	14.8	24.1	31.5	20.8	
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	136.5	123.5		164.8	1.2		83.8	3.6	0.1	25.5	67.7	0.3	
Delay (s)	172.3	172.0		202.5	49.7		116.0	28.5	14.9	49.6	99.2	21.0	
Level of Service	F	F		F	D		F	C	B	D	F	C	
Approach Delay (s)		172.1			144.9			32.9			90.0		
Approach LOS		F			F			C			F		
Intersection Summary													
HCM 2000 Control Delay			92.8									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.23										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	18.0
Intersection Capacity Utilization			118.6%									ICU Level of Service	H
Analysis Period (min)			15										
dr Defacto Right Lane. Recode with 1 though lane as a right lane.													
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔		↔	↔↕↔			↕			↕	
Traffic Volume (vph)	45	684	50	193	591	28	25	290	158	99	457	39
Future Volume (vph)	45	684	50	193	591	28	25	290	158	99	457	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.993			0.955			0.991	
Flt Protected		0.997		0.950				0.997			0.992	
Satd. Flow (prot)	0	4862	0	1659	4935	0	0	1760	0	0	1803	0
Flt Permitted		0.865		0.217				0.957			0.796	
Satd. Flow (perm)	0	4218	0	379	4935	0	0	1689	0	0	1447	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			7			33			5	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	45	691	51	195	597	28	25	293	160	100	462	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	787	0	195	625	0	0	478	0	0	601	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

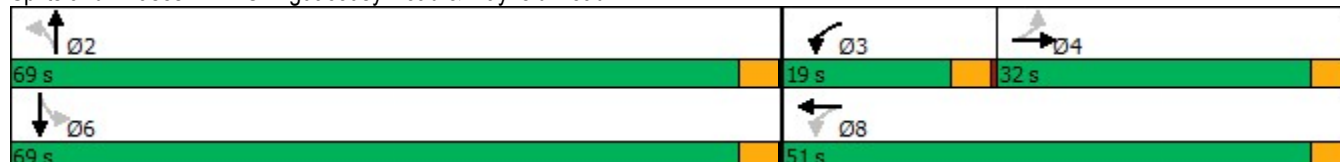


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	32.0	32.0		19.0	51.0		69.0	69.0		69.0	69.0	
Total Split (%)	26.7%	26.7%		15.8%	42.5%		57.5%	57.5%		57.5%	57.5%	
Maximum Green (s)	28.0	28.0		15.0	47.0		65.0	65.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		31.6		47.8	47.8			44.2			44.2	
Actuated g/C Ratio		0.32		0.48	0.48			0.44			0.44	
v/c Ratio		0.59		0.58	0.27			0.63			0.94	
Control Delay		33.7		26.2	17.9			23.0			48.9	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		33.7		26.2	17.9			23.0			48.9	
LOS		C		C	B			C			D	
Approach Delay		33.7			19.8			23.0			48.9	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	100.1
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	31.0
Intersection LOS:	C
Intersection Capacity Utilization:	98.8%
ICU Level of Service:	F
Analysis Period (min):	15

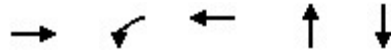
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	787	195	625	478	601
v/c Ratio	0.59	0.58	0.27	0.63	0.94
Control Delay	33.7	26.2	17.9	23.0	48.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.7	26.2	17.9	23.0	48.9
Queue Length 50th (m)	46.5	21.6	25.2	63.7	105.4
Queue Length 95th (m)	79.3	49.5	46.4	92.4	155.6
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1338	375	2357	1125	956
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.52	0.27	0.42	0.63

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔		↔	↔↔↔			↔			↔	
Traffic Volume (vph)	45	684	50	193	591	28	25	290	158	99	457	39
Future Volume (vph)	45	684	50	193	591	28	25	290	158	99	457	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frt		0.99		1.00	0.99			0.95			0.99	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		4864		1659	4936			1760			1803	
Flt Permitted		0.86		0.22	1.00			0.96			0.80	
Satd. Flow (perm)		4218		379	4936			1690			1448	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	45	691	51	195	597	28	25	293	160	100	462	39
RTOR Reduction (vph)	0	5	0	0	4	0	0	18	0	0	3	0
Lane Group Flow (vph)	0	782	0	195	621	0	0	460	0	0	598	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.7		47.8	47.8			44.2			44.2	
Effective Green, g (s)		31.7		47.8	47.8			44.2			44.2	
Actuated g/C Ratio		0.32		0.48	0.48			0.44			0.44	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1337		336	2359			746			640	
v/s Ratio Prot				c0.07	0.13							
v/s Ratio Perm		0.19		c0.21				0.27			c0.41	
v/c Ratio		0.58		0.58	0.26			0.62			0.93	
Uniform Delay, d1		28.6		16.7	15.6			21.4			26.5	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.9		2.5	0.3			1.5			20.9	
Delay (s)		30.5		19.2	15.9			22.9			47.4	
Level of Service		C		B	B			C			D	
Approach Delay (s)		30.5			16.7			22.9			47.4	
Approach LOS		C			B			C			D	

Intersection Summary

HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	938	116	129	732	130	51	361	97	324	659	134
Future Volume (vph)	42	938	116	129	732	130	51	361	97	324	659	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.977			0.968			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4746	0	1644	3450	0	1690	3443	0
Flt Permitted	0.311			0.117			0.346			0.294		
Satd. Flow (perm)	597	4889	0	210	4746	0	599	3450	0	523	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			37			26			27	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	43	957	118	132	747	133	52	368	99	331	672	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	1075	0	132	880	0	52	467	0	331	809	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		16.0	58.0		34.0	34.0		28.0	62.0	
Total Split (%)	35.0%	35.0%		13.3%	48.3%		28.3%	28.3%		23.3%	51.7%	
Maximum Green (s)	36.0	36.0		12.0	52.0		28.0	28.0		24.0	56.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		54.0	52.0		28.0	28.0		58.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.45	0.43		0.23	0.23		0.48	0.47	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

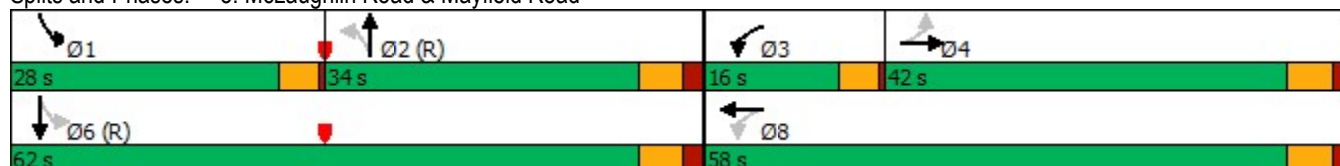


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.24	0.73		0.54	0.42		0.37	0.57		0.68	0.50	
Control Delay	36.2	40.3		28.5	23.3		48.0	41.4		27.8	22.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.2	40.3		28.5	23.3		48.0	41.4		27.8	22.7	
LOS	D	D		C	C		D	D		C	C	
Approach Delay		40.2			24.0			42.0			24.2	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	31.3
Intersection LOS:	C
Intersection Capacity Utilization	75.5%
ICU Level of Service	D
Analysis Period (min)	15

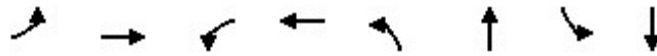
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



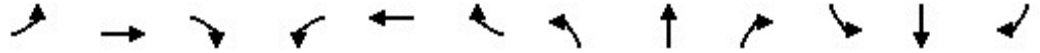
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	1075	132	880	52	467	331	809
v/c Ratio	0.24	0.73	0.54	0.42	0.37	0.57	0.68	0.50
Control Delay	36.2	40.3	28.5	23.3	48.0	41.4	27.8	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	40.3	28.5	23.3	48.0	41.4	27.8	22.7
Queue Length 50th (m)	7.6	81.5	18.1	49.4	10.3	48.5	48.7	65.7
Queue Length 95th (m)	17.9	97.9	30.9	60.8	23.1	65.6	71.7	83.0
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	179	1479	244	2077	139	824	486	1621
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.73	0.54	0.42	0.37	0.57	0.68	0.50

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗		↘	↗↗↗		↘	↗↗		↘	↗↗	
Traffic Volume (vph)	42	938	116	129	732	130	51	361	97	324	659	134
Future Volume (vph)	42	938	116	129	732	130	51	361	97	324	659	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4887		1706	4748		1644	3450		1690	3442	
Flt Permitted	0.31	1.00		0.12	1.00		0.35	1.00		0.29	1.00	
Satd. Flow (perm)	597	4887		210	4748		599	3450		523	3442	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	43	957	118	132	747	133	52	368	99	331	672	137
RTOR Reduction (vph)	0	13	0	0	21	0	0	20	0	0	14	0
Lane Group Flow (vph)	43	1062	0	132	859	0	52	447	0	331	795	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		52.0	52.0		28.0	28.0		56.0	56.0	
Effective Green, g (s)	36.0	36.0		52.0	52.0		28.0	28.0		56.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.43	0.43		0.23	0.23		0.47	0.47	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	179	1466		240	2057		139	805		477	1606	
v/s Ratio Prot		c0.22		c0.05	0.18			0.13		c0.14	0.23	
v/s Ratio Perm	0.07			0.18			0.09			c0.18		
v/c Ratio	0.24	0.72		0.55	0.42		0.37	0.56		0.69	0.49	
Uniform Delay, d1	31.7	37.6		23.6	23.5		38.6	40.5		22.3	22.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.2	3.2		8.8	0.6		7.5	2.8		8.1	1.1	
Delay (s)	34.8	40.7		32.4	24.1		46.2	43.3		30.4	23.3	
Level of Service	C	D		C	C		D	D		C	C	
Approach Delay (s)		40.5			25.2			43.6			25.3	
Approach LOS		D			C			D			C	


































Intersection Summary

HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	
Traffic Volume (vph)	247	954	119	207	595	173	88	466	211	375	1109	330
Future Volume (vph)	247	954	119	207	595	173	88	466	211	375	1109	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00		0.97			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.261			0.950			0.160			0.296		
Satd. Flow (perm)	477	4902	1508	3328	4948	1395	304	3476	1467	531	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127			184			216			258
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	263	1015	127	220	633	184	94	496	224	399	1180	351
Shared Lane Traffic (%)												
Lane Group Flow (vph)	263	1015	127	220	633	184	94	496	224	399	1180	351
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	28.0	49.0	49.0	22.0	43.0	43.0	13.0	49.0	49.0	40.0	76.0	76.0
Total Split (%)	17.5%	30.6%	30.6%	13.8%	26.9%	26.9%	8.1%	30.6%	30.6%	25.0%	47.5%	47.5%
Maximum Green (s)	23.0	42.0	42.0	17.0	36.0	36.0	9.0	42.0	42.0	36.0	69.0	69.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	68.0	42.0	42.0	17.0	36.0	36.0	54.0	42.0	42.0	85.0	69.0	69.0
Actuated g/C Ratio	0.42	0.26	0.26	0.11	0.22	0.22	0.34	0.26	0.26	0.53	0.43	0.43
v/c Ratio	0.66	0.79	0.26	0.62	0.57	0.40	0.50	0.54	0.41	0.73	0.77	0.43
Control Delay	39.9	60.2	8.2	76.8	57.4	9.1	33.0	53.4	8.6	31.7	43.1	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	60.2	8.2	76.8	57.4	9.1	33.0	53.4	8.6	31.7	43.1	9.8
LOS	D	E	A	E	E	A	C	D	A	C	D	A
Approach Delay		51.7			53.0			38.7			34.7	
Approach LOS		D			D			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	75
Control Type:	Pretimed
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	43.6
Intersection LOS:	D
Intersection Capacity Utilization	80.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024




































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	263	1015	127	220	633	184	94	496	224	399	1180	351
v/c Ratio	0.66	0.79	0.26	0.62	0.57	0.40	0.50	0.54	0.41	0.73	0.77	0.43
Control Delay	39.9	60.2	8.2	76.8	57.4	9.1	33.0	53.4	8.6	31.7	43.1	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	60.2	8.2	76.8	57.4	9.1	33.0	53.4	8.6	31.7	43.1	9.8
Queue Length 50th (m)	56.3	110.9	0.0	35.1	66.2	0.0	14.5	72.0	1.9	75.9	167.2	17.8
Queue Length 95th (m)	79.9	128.3	16.6	49.5	80.1	20.8	24.3	90.8	23.8	103.0	194.7	43.0
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	399	1286	489	354	1113	456	187	912	544	546	1528	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.79	0.26	0.62	0.57	0.40	0.50	0.54	0.41	0.73	0.77	0.43

Intersection Summary

HCM Signalized Intersection Capacity Analysis

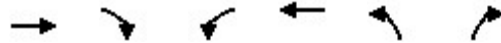
6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 		 	 		
Traffic Volume (vph)	247	954	119	207	595	173	88	466	211	375	1109	330	
Future Volume (vph)	247	954	119	207	595	173	88	466	211	375	1109	330	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1706	3544	1557	
Flt Permitted	0.26	1.00	1.00	0.95	1.00	1.00	0.16	1.00	1.00	0.30	1.00	1.00	
Satd. Flow (perm)	476	4902	1508	3340	4948	1395	304	3476	1467	532	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	263	1015	127	220	633	184	94	496	224	399	1180	351	
RTOR Reduction (vph)	0	0	94	0	0	143	0	0	159	0	0	147	
Lane Group Flow (vph)	263	1015	33	220	633	41	94	496	65	399	1180	204	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	64.0	42.0	42.0	17.0	36.0	36.0	51.0	42.0	42.0	82.0	69.0	69.0	
Effective Green, g (s)	66.0	42.0	42.0	17.0	36.0	36.0	51.0	42.0	42.0	82.0	69.0	69.0	
Actuated g/C Ratio	0.41	0.26	0.26	0.11	0.22	0.22	0.32	0.26	0.26	0.51	0.43	0.43	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	393	1286	395	354	1113	313	181	912	385	536	1528	671	
v/s Ratio Prot	c0.10	c0.21		0.07	0.13		0.03	0.14		c0.17	c0.33		
v/s Ratio Perm	0.17		0.02			0.03	0.14		0.04	0.21		0.13	
v/c Ratio	0.67	0.79	0.08	0.62	0.57	0.13	0.52	0.54	0.17	0.74	0.77	0.30	
Uniform Delay, d1	33.5	54.9	44.5	68.4	55.1	49.5	39.9	50.8	45.5	26.5	38.8	29.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.8	5.0	0.4	8.0	2.1	0.9	10.3	2.3	0.9	9.1	3.8	1.2	
Delay (s)	42.3	59.9	44.9	76.4	57.2	50.4	50.2	53.1	46.5	35.6	42.6	31.0	
Level of Service	D	E	D	E	E	D	D	D	D	D	D	C	
Approach Delay (s)		55.2			60.1			50.9			39.1		
Approach LOS		E			E			D			D		
Intersection Summary													
HCM 2000 Control Delay			49.5		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio			0.79										
Actuated Cycle Length (s)			160.0		Sum of lost time (s)						23.0		
Intersection Capacity Utilization			80.9%		ICU Level of Service						D		
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	634	37	21	454	65	34
Future Volume (vph)	634	37	21	454	65	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.992			0.954		
Flt Protected				0.998	0.968	
Satd. Flow (prot)	3550	0	0	3571	1739	0
Flt Permitted				0.998	0.968	
Satd. Flow (perm)	3550	0	0	3571	1739	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	634	37	21	454	65	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	671	0	0	475	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

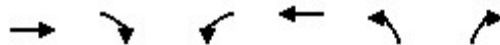
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	634	37	21	454	65	34
Future Volume (Veh/h)	634	37	21	454	65	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	634	37	21	454	65	34
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			671		922	336
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			671		922	336
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		75	95
cM capacity (veh/h)			915		263	660
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	423	248	172	303	99	
Volume Left	0	0	21	0	65	
Volume Right	0	37	0	0	34	
cSH	1700	1700	915	1700	332	
Volume to Capacity	0.25	0.15	0.02	0.18	0.30	
Queue Length 95th (m)	0.0	0.0	0.5	0.0	9.3	
Control Delay (s)	0.0	0.0	1.3	0.0	20.4	
Lane LOS			A			C
Approach Delay (s)	0.0		0.5		20.4	
Approach LOS					C	
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			40.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	400	76	91	156	28	29	579	56	12	532	6
Future Volume (vph)	18	400	76	91	156	28	29	579	56	12	532	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.979			0.986			0.987			0.998	
Fl _t Protected		0.998			0.984			0.998			0.999	
Satd. Flow (prot)	0	1840	0	0	1827	0	0	3525	0	0	3568	0
Fl _t Permitted		0.982			0.612			0.915			0.937	
Satd. Flow (perm)	0	1811	0	0	1137	0	0	3232	0	0	3346	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			10			14			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	400	76	91	156	28	29	579	56	12	532	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	494	0	0	275	0	0	664	0	0	550	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

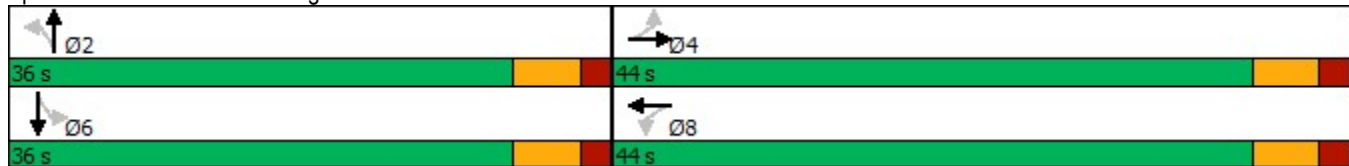


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	44.0	44.0		44.0	44.0		36.0	36.0		36.0	36.0	
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%	45.0%	
Maximum Green (s)	38.0	38.0		38.0	38.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.5			22.5			30.3			30.3	
Actuated g/C Ratio		0.35			0.35			0.47			0.47	
v/c Ratio		0.78			0.69			0.44			0.35	
Control Delay		26.9			26.6			13.8			13.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.9			26.6			13.8			13.2	
LOS		C			C			B			B	
Approach Delay		26.9			26.6			13.8			13.2	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	65
Natural Cycle:	45
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	18.7
Intersection LOS:	B
Intersection Capacity Utilization:	95.5%
ICU Level of Service:	F
Analysis Period (min):	15

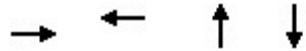
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	494	275	664	550
v/c Ratio	0.78	0.69	0.44	0.35
Control Delay	26.9	26.6	13.8	13.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.9	26.6	13.8	13.2
Queue Length 50th (m)	49.7	26.4	25.8	20.7
Queue Length 95th (m)	78.8	48.7	50.8	41.4
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	1077	676	1516	1562
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.41	0.44	0.35
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	400	76	91	156	28	29	579	56	12	532	6
Future Volume (vph)	18	400	76	91	156	28	29	579	56	12	532	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.99			0.99			1.00	
Flt Protected		1.00			0.98			1.00			1.00	
Satd. Flow (prot)		1841			1827			3526			3569	
Flt Permitted		0.98			0.61			0.91			0.94	
Satd. Flow (perm)		1811			1137			3231			3348	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	400	76	91	156	28	29	579	56	12	532	6
RTOR Reduction (vph)	0	10	0	0	7	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	484	0	0	268	0	0	657	0	0	549	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)		22.5			22.5			30.3			30.3	
Effective Green, g (s)		22.5			22.5			30.3			30.3	
Actuated g/C Ratio		0.35			0.35			0.47			0.47	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		628			394			1510			1565	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.24			c0.20			0.16	
v/c Ratio		0.77			0.68			0.43			0.35	
Uniform Delay, d1		18.8			18.1			11.5			11.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.7			4.8			0.9			0.6	
Delay (s)		24.5			22.9			12.4			11.6	
Level of Service		C			C			B			B	
Approach Delay (s)		24.5			22.9			12.4			11.6	
Approach LOS		C			C			B			B	

Intersection Summary		
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.58	B
Actuated Cycle Length (s)	64.8	Sum of lost time (s)
Intersection Capacity Utilization	95.5%	12.0
Analysis Period (min)	15	ICU Level of Service
		F

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road











06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↘	↗
Traffic Volume (vph)	1205	28	51	708	37	200
Future Volume (vph)	1205	28	51	708	37	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.997			0.850		
Fl _t Protected				0.997	0.950	
Satd. Flow (prot)	3568	0	0	3568	1789	1601
Fl _t Permitted				0.997	0.950	
Satd. Flow (perm)	3568	0	0	3568	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1205	28	51	708	37	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1233	0	0	759	37	200
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	68.2%			ICU Level of Service C		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1205	28	51	708	37	200
Future Volume (Veh/h)	1205	28	51	708	37	200
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1205	28	51	708	37	200
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.83		0.83	0.83
vC, conflicting volume			1233		1675	616
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			871		1404	128
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		63	73
cM capacity (veh/h)			639		100	745
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	803	430	287	472	37	200
Volume Left	0	0	51	0	37	0
Volume Right	0	28	0	0	0	200
cSH	1700	1700	639	1700	100	745
Volume to Capacity	0.47	0.25	0.08	0.28	0.37	0.27
Queue Length 95th (m)	0.0	0.0	2.0	0.0	11.3	8.2
Control Delay (s)	0.0	0.0	2.8	0.0	61.0	11.6
Lane LOS			A		F	B
Approach Delay (s)	0.0		1.1		19.3	
Approach LOS					C	
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			68.2%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	727	193	2134	3408	48
Future Volume (vph)	67	727	193	2134	3408	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		85.0			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.998	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5132	0
Flt Permitted	0.950		0.050			
Satd. Flow (perm)	1789	1601	94	5142	5132	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					2	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	727	193	2134	3408	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	727	193	2134	3456	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	9.5	9.5	22.0	22.0	
Total Split (s)	22.0	37.0	37.0	118.0	81.0	
Total Split (%)	15.7%	26.4%	26.4%	84.3%	57.9%	
Maximum Green (s)	16.0	31.5	31.5	112.0	75.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	
Total Lost Time (s)	6.0	3.5	5.5	6.0	4.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	10.3	47.2	112.8	113.7	77.2	
Actuated g/C Ratio	0.08	0.36	0.86	0.86	0.59	
v/c Ratio	0.48	1.27	0.40	0.48	1.15	
Control Delay	70.7	171.6	26.2	3.4	99.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.7	171.6	26.2	3.4	99.3	
LOS	E	F	C	A	F	
Approach Delay	163.1			5.3	99.3	
Approach LOS	F			A	F	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	131.9
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	73.7
Intersection LOS:	E
Intersection Capacity Utilization	118.6%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	67	727	193	2134	3456
v/c Ratio	0.48	1.27	0.40	0.48	1.15
Control Delay	70.7	171.6	26.2	3.4	99.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	70.7	171.6	26.2	3.4	99.3
Queue Length 50th (m)	17.4	~236.7	26.2	46.3	~402.0
Queue Length 95th (m)	32.6	#310.1	51.5	64.4	#444.6
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	217	572	486	4431	3005
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	1.27	0.40	0.48	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	727	193	2134	3408	48
Future Volume (vph)	67	727	193	2134	3408	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	3.5	5.5	6.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5131	
Flt Permitted	0.95	1.00	0.05	1.00	1.00	
Satd. Flow (perm)	1789	1601	93	5142	5131	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	727	193	2134	3408	48
RTOR Reduction (vph)	0	0	0	0	1	0
Lane Group Flow (vph)	67	727	193	2134	3455	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	8.9	40.5	112.4	112.4	75.3	
Effective Green, g (s)	8.9	44.5	112.4	112.4	77.3	
Actuated g/C Ratio	0.07	0.33	0.84	0.84	0.58	
Clearance Time (s)	6.0	5.5	5.5	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	119	534	480	4335	2975	
v/s Ratio Prot	0.04	c0.34	0.10	0.42	c0.67	
v/s Ratio Perm		0.11	0.24			
v/c Ratio	0.56	1.36	0.40	0.49	1.16	
Uniform Delay, d1	60.3	44.4	33.9	2.8	28.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.0	174.5	0.6	0.4	76.7	
Delay (s)	66.3	218.9	34.4	3.2	104.7	
Level of Service	E	F	C	A	F	
Approach Delay (s)	206.0			5.8	104.7	
Approach LOS	F			A	F	

Intersection Summary			
HCM 2000 Control Delay	82.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	133.3	Sum of lost time (s)	15.5
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	9	517	2	9	354
Future Volume (vph)	4	9	517	2	9	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.850					
Fl _t Protected	0.950					0.999
Satd. Flow (prot)	1789	1601	1883	0	0	1882
Fl _t Permitted	0.950					0.999
Satd. Flow (perm)	1789	1601	1883	0	0	1882
Link Speed (k/h)	48		80			80
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		114.4			24.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	10	562	2	10	385
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	10	564	0	0	395
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	9	517	2	9	354
Future Volume (Veh/h)	4	9	517	2	9	354
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)	4	10	562	2	10	385
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	968	563			564	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	968	563			564	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	98			99	
cM capacity (veh/h)	279	526			1008	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	4	10	564	395		
Volume Left	4	0	0	10		
Volume Right	0	10	2	0		
cSH	279	526	1700	1008		
Volume to Capacity	0.01	0.02	0.33	0.01		
Queue Length 95th (m)	0.3	0.4	0.0	0.2		
Control Delay (s)	18.1	12.0	0.0	0.3		
Lane LOS	C	B		A		
Approach Delay (s)	13.7		0.0	0.3		
Approach LOS	B					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			37.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

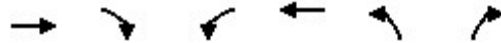
06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↗↗	
Traffic Volume (vph)	656	5	63	466	14	211
Future Volume (vph)	656	5	63	466	14	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.999			0.873		
Fl _t Protected				0.994	0.997	
Satd. Flow (prot)	3575	0	0	3557	1639	0
Fl _t Permitted				0.994	0.997	
Satd. Flow (perm)	3575	0	0	3557	1639	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	34.2			32.8	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	713	5	68	507	15	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	718	0	0	575	244	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.8%			ICU Level of Service B		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

14: Street F & Old School Road

















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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↘	
Traffic Volume (veh/h)	656	5	63	466	14	211
Future Volume (Veh/h)	656	5	63	466	14	211
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)	713	5	68	507	15	229
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			718		1105	359
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			718		1105	359
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		92	64
cM capacity (veh/h)			879		189	638
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	475	243	237	338	244	
Volume Left	0	0	68	0	15	
Volume Right	0	5	0	0	229	
cSH	1700	1700	879	1700	556	
Volume to Capacity	0.28	0.14	0.08	0.20	0.44	
Queue Length 95th (m)	0.0	0.0	1.9	0.0	16.8	
Control Delay (s)	0.0	0.0	3.3	0.0	16.4	
Lane LOS	A			C		
Approach Delay (s)	0.0		1.4		16.4	
Approach LOS						C
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			56.8%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 15: McLaughlin Road & Street E

















06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	46	46	0	25	18	575	18	10	457	6
Future Volume (vph)	11	0	46	46	0	25	18	575	18	10	457	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.891			0.953			0.995			0.998	
Flt Protected		0.990			0.969			0.998			0.999	
Satd. Flow (prot)	0	1661	0	0	1739	0	0	3554	0	0	3568	0
Flt Permitted		0.990			0.969			0.998			0.999	
Satd. Flow (perm)	0	1661	0	0	1739	0	0	3554	0	0	3568	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			29.9			14.2	
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
Adj. Flow (vph)	12	0	50	50	0	27	20	625	20	11	497	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	77	0	0	665	0	0	515	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97	97		97	97		97
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	46.9%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	46	46	0	25	18	575	18	10	457	6
Future Volume (Veh/h)	11	0	46	46	0	25	18	575	18	10	457	6
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)	12	0	50	50	0	27	20	625	20	11	497	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (m)												
								399			189	
pX, platoon unblocked												
vC, conflicting volume	902	1208	252	996	1201	322	504			645		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	902	1208	252	996	1201	322	504			645		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	93	72	100	96	98			99		
cM capacity (veh/h)	218	176	748	181	178	673	1057			936		
Direction, Lane #												
	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	62	77	332	332	260	256						
Volume Left	12	50	20	0	11	0						
Volume Right	50	27	0	20	0	7						
cSH	509	244	1057	1700	936	1700						
Volume to Capacity	0.12	0.32	0.02	0.20	0.01	0.15						
Queue Length 95th (m)	3.1	9.9	0.4	0.0	0.3	0.0						
Control Delay (s)	13.1	26.4	0.7	0.0	0.5	0.0						
Lane LOS	B	D	A		A							
Approach Delay (s)	13.1	26.4	0.3		0.2							
Approach LOS	B	D										
Intersection Summary												
Average Delay			2.4									
Intersection Capacity Utilization			46.9%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	310	16	374	378	76	22	372	435	62	240	4
Future Volume (vph)	4	310	16	374	378	76	22	372	435	62	240	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.975				0.850		0.998	
Flt Protected		0.999		0.950				0.997			0.990	
Satd. Flow (prot)	0	1853	0	1825	1818	0	0	1796	1601	0	1830	0
Flt Permitted		0.995		0.345				0.969			0.677	
Satd. Flow (perm)	0	1846	0	663	1818	0	0	1746	1601	0	1251	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			12				240			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	330	17	398	402	81	23	396	463	66	255	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	351	0	398	483	0	0	419	463	0	325	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

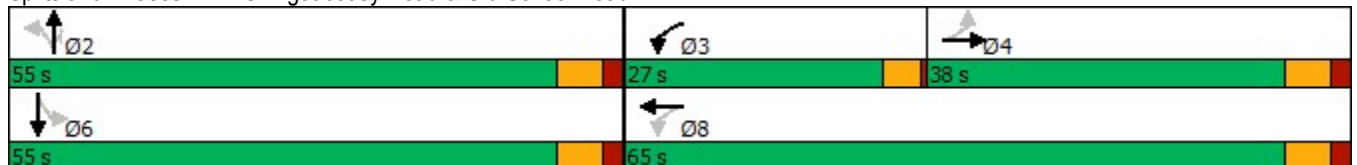
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		34.9		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.29		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.65		0.71	0.54			0.59	0.58		0.64	
Control Delay		44.7		25.0	23.2			31.8	15.8		35.2	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		44.7		25.0	23.2			31.8	15.8		35.2	
LOS		D		C	C			C	B		D	
Approach Delay		44.7			24.0			23.4			35.2	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 28.3
 Intersection LOS: C
 Intersection Capacity Utilization 99.1%
 ICU Level of Service F
 Analysis Period (min) 15

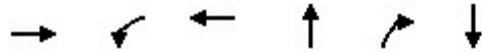
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	351	398	483	419	463	325
v/c Ratio	0.65	0.71	0.54	0.59	0.58	0.64
Control Delay	44.7	25.0	23.2	31.8	15.8	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	25.0	23.2	31.8	15.8	35.2
Queue Length 50th (m)	73.1	54.8	74.4	75.7	38.9	60.1
Queue Length 95th (m)	108.1	78.3	105.2	108.2	71.5	92.3
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	537	590	899	712	795	511
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.67	0.54	0.59	0.58	0.64

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕	↖		↕		
Traffic Volume (vph)	4	310	16	374	378	76	22	372	435	62	240	4	
Future Volume (vph)	4	310	16	374	378	76	22	372	435	62	240	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		0.99		1.00	0.97			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1855		1825	1818			1797	1601		1830		
Flt Permitted		0.99		0.34	1.00			0.97	1.00		0.68		
Satd. Flow (perm)		1846		662	1818			1746	1601		1252		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	4	330	17	398	402	81	23	396	463	66	255	4	
RTOR Reduction (vph)	0	1	0	0	6	0	0	0	142	0	1	0	
Lane Group Flow (vph)	0	350	0	398	477	0	0	419	321	0	324	0	
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		34.9		59.0	59.0			49.0	49.0		49.0		
Effective Green, g (s)		34.9		61.0	59.0			49.0	49.0		49.0		
Actuated g/C Ratio		0.29		0.51	0.49			0.41	0.41		0.41		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		536		550	893			712	653		511		
v/s Ratio Prot				c0.13	0.26								
v/s Ratio Perm		c0.19		0.23				0.24	0.20		c0.26		
v/c Ratio		0.65		0.72	0.53			0.59	0.49		0.63		
Uniform Delay, d1		37.2		20.6	21.0			27.6	26.3		28.4		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		6.1		4.7	2.3			3.5	2.6		5.9		
Delay (s)		43.3		25.3	23.3			31.2	28.9		34.3		
Level of Service		D		C	C			C	C		C		
Approach Delay (s)		43.3			24.2			30.0			34.3		
Approach LOS		D			C			C			C		
Intersection Summary													
HCM 2000 Control Delay			30.4									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.65										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			99.1%									ICU Level of Service	F
Analysis Period (min)			15										
c	Critical Lane Group												

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	30	812	51	520	912	56	50	164	540	51	94	33
Future Volume (vph)	30	812	51	520	912	56	50	164	540	51	94	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.991				0.850		0.975	
Flt Protected		0.998		0.950				0.988			0.986	
Satd. Flow (prot)	0	3464	0	1755	3575	0	0	1827	1555	0	1790	0
Flt Permitted		0.875		0.147				0.838			0.658	
Satd. Flow (perm)	0	3037	0	272	3575	0	0	1550	1555	0	1195	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10				447		10	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	32	864	54	553	970	60	53	174	574	54	100	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	950	0	553	1030	0	0	227	574	0	189	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

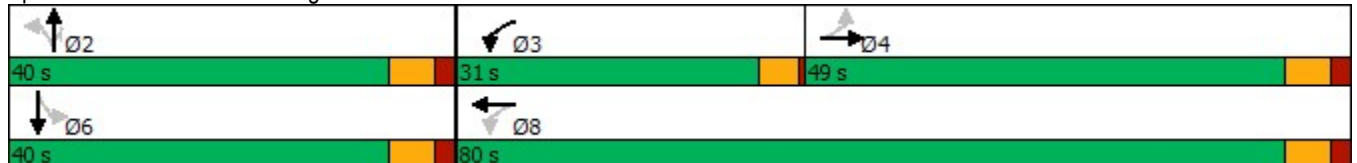
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	49.0	49.0		31.0	80.0		40.0	40.0	40.0	40.0	40.0	
Total Split (%)	40.8%	40.8%		25.8%	66.7%		33.3%	33.3%	33.3%	33.3%	33.3%	
Maximum Green (s)	43.0	43.0		27.0	74.0		34.0	34.0	34.0	34.0	34.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		37.0		72.6	68.6			21.7	21.7		21.7	
Actuated g/C Ratio		0.36		0.71	0.67			0.21	0.21		0.21	
v/c Ratio		0.86		0.89	0.43			0.69	0.84		0.73	
Control Delay		40.3		42.0	9.3			49.4	21.6		52.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		40.3		42.0	9.3			49.4	21.6		52.6	
LOS		D		D	A			D	C		D	
Approach Delay		40.3			20.7			29.4			52.6	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 102.5
 Natural Cycle: 80
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 29.7
 Intersection LOS: C
 Intersection Capacity Utilization 94.9%
 ICU Level of Service F
 Analysis Period (min) 15

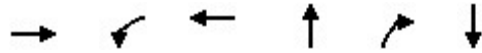
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	950	553	1030	227	574	189
v/c Ratio	0.86	0.89	0.43	0.69	0.84	0.73
Control Delay	40.3	42.0	9.3	49.4	21.6	52.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	42.0	9.3	49.4	21.6	52.6
Queue Length 50th (m)	89.8	80.9	44.3	43.4	23.9	34.6
Queue Length 95th (m)	#139.0	#179.6	78.1	70.0	71.9	60.0
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1302	620	2634	524	821	410
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.89	0.39	0.43	0.70	0.46

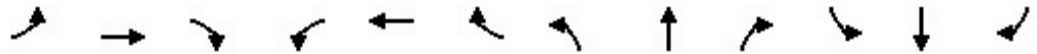
Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	30	812	51	520	912	56	50	164	540	51	94	33
Future Volume (vph)	30	812	51	520	912	56	50	164	540	51	94	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3467		1755	3576			1828	1555		1790	
Flt Permitted		0.88		0.15	1.00			0.84	1.00		0.66	
Satd. Flow (perm)		3040		271	3576			1550	1555		1195	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	32	864	54	553	970	60	53	174	574	54	100	35
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	352	0	8	0
Lane Group Flow (vph)	0	946	0	553	1027	0	0	227	222	0	181	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		37.1		68.6	68.6			21.7	21.7		21.7	
Effective Green, g (s)		37.1		70.6	68.6			21.7	21.7		21.7	
Actuated g/C Ratio		0.36		0.69	0.67			0.21	0.21		0.21	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1102		614	2397			328	329		253	
v/s Ratio Prot				c0.26	0.29							
v/s Ratio Perm		c0.31		0.36				0.15	0.14		c0.15	
v/c Ratio		0.86		0.90	0.43			0.69	0.67		0.72	
Uniform Delay, d1		30.2		23.9	7.8			37.2	37.1		37.4	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		6.8		16.3	0.1			6.2	5.4		9.3	
Delay (s)		37.0		40.3	7.9			43.4	42.4		46.7	
Level of Service		D		D	A			D	D		D	
Approach Delay (s)		37.0			19.2			42.7			46.7	
Approach LOS		D			B			D			D	

Intersection Summary		
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.83	C
Actuated Cycle Length (s)	102.3	Sum of lost time (s)
Intersection Capacity Utilization	94.9%	14.0
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		F

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	699	250	285	317	296	52	487	3258	451	36	1936	611
Future Volume (vph)	699	250	285	317	296	52	487	3258	451	36	1936	611
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.920			0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3162	0	1789	3536	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.355			0.201			0.075			0.081		
Satd. Flow (perm)	682	3162	0	379	3536	0	143	5043	1633	156	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		149			15				186			368
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	721	258	294	327	305	54	502	3359	465	37	1996	630
Shared Lane Traffic (%)												
Lane Group Flow (vph)	721	552	0	327	359	0	502	3359	465	37	1996	630
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

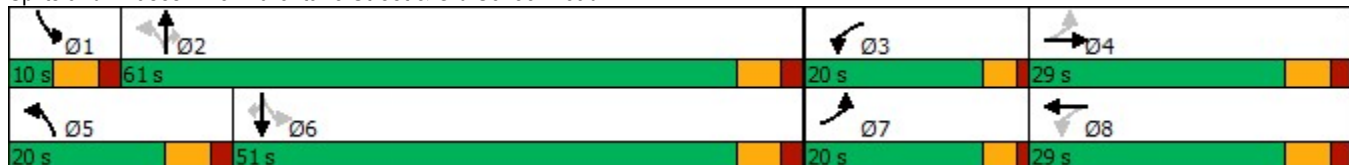


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	20.0	29.0		20.0	29.0		20.0	61.0	61.0	10.0	51.0	51.0
Total Split (%)	16.7%	24.2%		16.7%	24.2%		16.7%	50.8%	50.8%	8.3%	42.5%	42.5%
Maximum Green (s)	16.0	23.0		16.0	23.0		14.0	55.0	55.0	4.0	45.0	45.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	41.9	21.9		37.9	21.9		67.1	61.2	59.2	53.0	47.0	45.0
Actuated g/C Ratio	0.36	0.19		0.32	0.19		0.57	0.52	0.51	0.45	0.40	0.38
v/c Ratio	1.72	0.77		1.04	0.53		1.62	1.27	0.51	0.24	1.03	0.77
Control Delay	357.6	40.7		92.6	44.0		322.4	153.4	14.3	16.8	64.2	20.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	357.6	40.7		92.6	44.0		322.4	153.4	14.3	16.8	64.2	20.1
LOS	F	D		F	D		F	F	B	B	E	C
Approach Delay		220.2			67.1			158.0				53.1
Approach LOS		F			E			F				D

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	117
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.72
Intersection Signal Delay:	128.7
Intersection LOS:	F
Intersection Capacity Utilization:	128.2%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	721	552	327	359	502	3359	465	37	1996	630
v/c Ratio	1.72	0.77	1.04	0.53	1.62	1.27	0.51	0.24	1.03	0.77
Control Delay	357.6	40.7	92.6	44.0	322.4	153.4	14.3	16.8	64.2	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	357.6	40.7	92.6	44.0	322.4	153.4	14.3	16.8	64.2	20.1
Queue Length 50th (m)	~212.0	47.0	~62.7	37.7	~156.0	~382.2	44.4	3.7	~185.7	55.7
Queue Length 95th (m)	#285.0	66.8	#119.3	52.7	#224.1	#411.9	76.0	8.6	#218.3	107.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	420	793	315	768	309	2637	918	156	1934	819
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.72	0.70	1.04	0.47	1.62	1.27	0.51	0.24	1.03	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			  	
Traffic Volume (vph)	699	250	285	317	296	52	487	3258	451	36	1936	611
Future Volume (vph)	699	250	285	317	296	52	487	3258	451	36	1936	611
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.92		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3163		1789	3538		1807	5043	1633	1825	4812	1541
Flt Permitted	0.35	1.00		0.20	1.00		0.07	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	682	3163		379	3538		142	5043	1633	155	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	721	258	294	327	305	54	502	3359	465	37	1996	630
RTOR Reduction (vph)	0	122	0	0	12	0	0	0	94	0	0	222
Lane Group Flow (vph)	721	430	0	327	347	0	502	3359	371	37	1996	408
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	35.9	19.9		35.9	19.9		67.5	59.2	59.2	49.8	47.5	47.5
Effective Green, g (s)	39.9	21.9		35.9	21.9		69.5	61.2	59.2	53.8	49.5	47.5
Actuated g/C Ratio	0.33	0.18		0.30	0.18		0.58	0.51	0.50	0.45	0.41	0.40
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	400	580		302	648		305	2584	809	129	1994	613
v/s Ratio Prot	c0.27	0.14		0.14	0.10		c0.22	0.67		0.01	0.41	
v/s Ratio Perm	0.33			c0.18			c0.73		0.23	0.12		0.27
v/c Ratio	1.80	0.74		1.08	0.54		1.65	1.30	0.46	0.29	1.00	0.67
Uniform Delay, d1	36.2	46.1		37.0	44.1		39.0	29.1	19.6	27.2	35.0	29.5
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	371.0	5.1		75.6	0.9		305.0	137.9	1.9	1.2	20.4	5.6
Delay (s)	407.1	51.2		112.7	45.0		344.0	167.0	21.5	28.5	55.3	35.1
Level of Service	F	D		F	D		F	F	C	C	E	D
Approach Delay (s)		252.8			77.2			171.9			50.2	
Approach LOS		F			E			F			D	
Intersection Summary												
HCM 2000 Control Delay			139.9			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.59									
Actuated Cycle Length (s)			119.4			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			128.2%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	43	727	51	215	687	78	34	536	209	37	342	30
Future Volume (vph)	43	727	51	215	687	78	34	536	209	37	342	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.985			0.964			0.990	
Flt Protected		0.997		0.950				0.998			0.996	
Satd. Flow (prot)	0	5042	0	1825	5030	0	0	1812	0	0	1863	0
Flt Permitted		0.842		0.181				0.967			0.889	
Satd. Flow (perm)	0	4258	0	348	5030	0	0	1755	0	0	1663	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			18			26			6	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	47	790	55	234	747	85	37	583	227	40	372	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	892	0	234	832	0	0	847	0	0	445	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

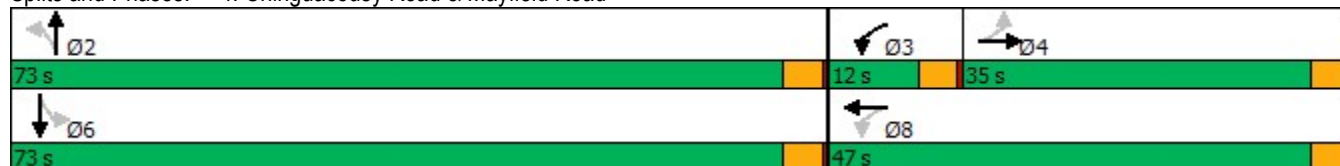


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0		12.0	47.0		73.0	73.0		73.0	73.0	
Total Split (%)	29.2%	29.2%		10.0%	39.2%		60.8%	60.8%		60.8%	60.8%	
Maximum Green (s)	31.0	31.0		8.0	43.0		69.0	69.0		69.0	69.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		31.4		45.6	43.6			54.7			54.7	
Actuated g/C Ratio		0.30		0.43	0.41			0.51			0.51	
v/c Ratio		0.71		0.81	0.40			0.93			0.52	
Control Delay		38.6		47.4	24.2			39.5			18.6	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		38.6		47.4	24.2			39.5			18.6	
LOS		D		D	C			D			B	
Approach Delay		38.6			29.3			39.5			18.6	
Approach LOS		D			C			D			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	106.4
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	33.0
Intersection LOS:	C
Intersection Capacity Utilization:	90.0%
ICU Level of Service:	E
Analysis Period (min):	15

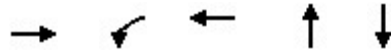
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	892	234	832	847	445
v/c Ratio	0.71	0.81	0.40	0.93	0.52
Control Delay	38.6	47.4	24.2	39.5	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	47.4	24.2	39.5	18.6
Queue Length 50th (m)	61.1	32.2	44.2	150.4	56.8
Queue Length 95th (m)	88.2	#76.1	65.7	213.3	81.9
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1262	289	2070	1162	1094
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.71	0.81	0.40	0.73	0.41

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road





















06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  				  			  		
Traffic Volume (vph)	43	727	51	215	687	78	34	536	209	37	342	30	
Future Volume (vph)	43	727	51	215	687	78	34	536	209	37	342	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Frt		0.99		1.00	0.98			0.96			0.99		
Flt Protected		1.00		0.95	1.00			1.00			1.00		
Satd. Flow (prot)		5042		1825	5029			1811			1862		
Flt Permitted		0.84		0.18	1.00			0.97			0.89		
Satd. Flow (perm)		4257		347	5029			1755			1662		
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)	47	790	55	234	747	85	37	583	227	40	372	33	
RTOR Reduction (vph)	0	6	0	0	11	0	0	13	0	0	3	0	
Lane Group Flow (vph)	0	886	0	234	821	0	0	834	0	0	442	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		31.5		43.6	43.6			54.7			54.7		
Effective Green, g (s)		31.5		45.6	43.6			54.7			54.7		
Actuated g/C Ratio		0.30		0.43	0.41			0.51			0.51		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		1261		289	2062			903			855		
v/s Ratio Prot				c0.08	0.16								
v/s Ratio Perm		c0.21		0.27				c0.48			0.27		
v/c Ratio		0.70		0.81	0.40			0.92			0.52		
Uniform Delay, d1		33.2		21.5	22.1			23.9			17.1		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		3.3		15.3	0.6			14.8			0.5		
Delay (s)		36.5		36.8	22.7			38.6			17.6		
Level of Service		D		D	C			D			B		
Approach Delay (s)		36.5			25.8			38.6			17.6		
Approach LOS		D			C			D			B		
Intersection Summary													
HCM 2000 Control Delay			31.0									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.84										
Actuated Cycle Length (s)			106.3									Sum of lost time (s)	10.0
Intersection Capacity Utilization			90.0%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	886	73	114	1043	475	125	732	118	227	468	141
Future Volume (vph)	110	886	73	114	1043	475	125	732	118	227	468	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.953			0.979			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4832	0	1825	3528	0	1738	3404	0
Flt Permitted	0.105			0.168			0.363			0.108		
Satd. Flow (perm)	192	5036	0	310	4832	0	697	3528	0	198	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			103			15			38	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	115	923	76	119	1086	495	130	763	123	236	488	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	999	0	119	1581	0	130	886	0	236	635	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

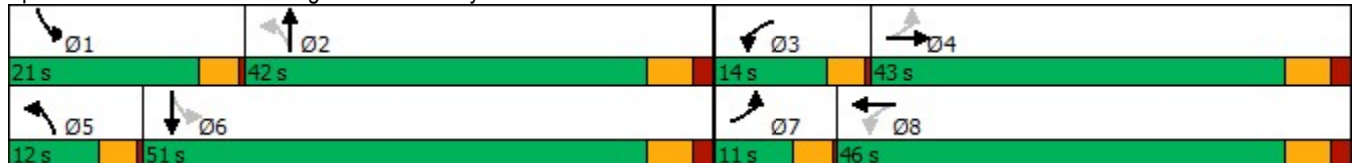
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	11.0	43.0		14.0	46.0		12.0	42.0		21.0	51.0	
Total Split (%)	9.2%	35.8%		11.7%	38.3%		10.0%	35.0%		17.5%	42.5%	
Maximum Green (s)	7.0	37.0		10.0	40.0		8.0	36.0		17.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	47.2	38.2		51.2	40.1		42.7	32.9		53.9	40.1	
Actuated g/C Ratio	0.41	0.33		0.44	0.35		0.37	0.29		0.47	0.35	
v/c Ratio	0.67	0.60		0.48	0.90		0.39	0.87		0.80	0.53	
Control Delay	40.7	34.5		25.9	42.4		21.5	48.9		46.8	29.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.7	34.5		25.9	42.4		21.5	48.9		46.8	29.4	
LOS	D	C		C	D		C	D		D	C	
Approach Delay		35.2			41.2			45.4			34.1	
Approach LOS		D			D			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 115.2
 Natural Cycle: 75
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 39.4 Intersection LOS: D
 Intersection Capacity Utilization 90.1% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	999	119	1581	130	886	236	635
v/c Ratio	0.67	0.60	0.48	0.90	0.39	0.87	0.80	0.53
Control Delay	40.7	34.5	25.9	42.4	21.5	48.9	46.8	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	34.5	25.9	42.4	21.5	48.9	46.8	29.4
Queue Length 50th (m)	15.9	73.3	16.5	124.9	16.3	100.6	35.6	55.9
Queue Length 95th (m)	#37.4	88.3	28.3	#156.3	27.6	125.6	#70.5	72.9
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	172	1675	266	1751	338	1116	320	1357
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.60	0.45	0.90	0.38	0.79	0.74	0.47

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	110	886	73	114	1043	475	125	732	118	227	468	141
Future Volume (vph)	110	886	73	114	1043	475	125	732	118	227	468	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.95		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5034		1755	4832		1825	3529		1738	3405	
Flt Permitted	0.10	1.00		0.17	1.00		0.36	1.00		0.11	1.00	
Satd. Flow (perm)	192	5034		310	4832		698	3529		198	3405	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	923	76	119	1086	495	130	762	123	236	488	147
RTOR Reduction (vph)	0	7	0	0	67	0	0	11	0	0	25	0
Lane Group Flow (vph)	115	992	0	119	1514	0	130	875	0	236	610	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	45.2	38.2		49.2	40.2		40.7	32.9		52.0	40.2	
Effective Green, g (s)	45.2	38.2		49.2	40.2		40.7	32.9		52.0	40.2	
Actuated g/C Ratio	0.39	0.33		0.43	0.35		0.35	0.29		0.45	0.35	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	169	1669		245	1686		322	1007		291	1188	
v/s Ratio Prot	c0.04	0.20		c0.04	c0.31		0.03	0.25		c0.11	0.18	
v/s Ratio Perm	0.23			0.17			0.11			c0.26		
v/c Ratio	0.68	0.59		0.49	0.90		0.40	0.87		0.81	0.51	
Uniform Delay, d1	26.7	32.0		21.7	35.6		26.0	39.1		28.4	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.7	1.6		1.5	8.0		0.8	8.1		15.6	0.4	
Delay (s)	37.5	33.6		23.2	43.6		26.8	47.2		44.0	30.1	
Level of Service	D	C		C	D		C	D		D	C	
Approach Delay (s)		34.0			42.1			44.6			33.9	
Approach LOS		C			D			D			C	

Intersection Summary

HCM 2000 Control Delay	39.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	115.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	661	612	124	276	800	172	393	833	264	238	1006	934
Future Volume (vph)	661	612	124	276	800	172	393	833	264	238	1006	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.174			0.950			0.084			0.195		
Satd. Flow (perm)	321	4995	1538	3339	5092	1562	158	3614	1486	375	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128			149			205			527
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	681	631	128	285	825	177	405	859	272	245	1037	963
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	631	128	285	825	177	405	859	272	245	1037	963
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	22.0	25.0	25.0	20.0	55.0	55.0	17.0	52.0	52.0
Total Split (%)	28.1%	30.4%	30.4%	16.3%	18.5%	18.5%	14.8%	40.7%	40.7%	12.6%	38.5%	38.5%
Maximum Green (s)	33.0	34.0	34.0	17.0	18.0	18.0	16.0	48.0	48.0	13.0	45.0	45.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

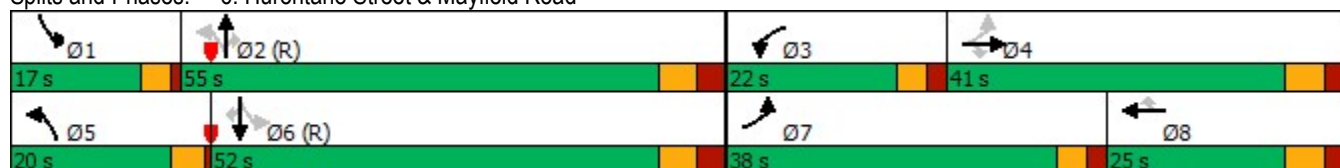


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Act Effect Green (s)	60.0	34.0	34.0	17.0	18.0	18.0	70.0	48.0	48.0	65.0	45.0	47.0	
Actuated g/C Ratio	0.44	0.25	0.25	0.13	0.13	0.13	0.52	0.36	0.36	0.48	0.33	0.35	
v/c Ratio	1.32	0.50	0.27	0.67	1.22	0.53	1.35	0.67	0.41	0.72	0.89	1.09	
Control Delay	192.0	44.9	7.9	64.6	158.9	18.5	212.2	39.9	10.5	31.3	52.9	77.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	192.0	44.9	7.9	64.6	158.9	18.5	212.2	39.9	10.5	31.3	52.9	77.1	
LOS	F	D	A	E	F	B	F	D	B	C	D	E	
Approach Delay		111.2				118.7				80.1			60.9
Approach LOS		F				F				F			E

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.35
Intersection Signal Delay:	88.0
Intersection LOS:	F
Intersection Capacity Utilization	120.0%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	681	631	128	285	825	177	405	859	272	245	1037	963
v/c Ratio	1.32	0.50	0.27	0.67	1.22	0.53	1.35	0.67	0.41	0.72	0.89	1.09
Control Delay	192.0	44.9	7.9	64.6	158.9	18.5	212.2	39.9	10.5	31.3	52.9	77.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	192.0	44.9	7.9	64.6	158.9	18.5	212.2	39.9	10.5	31.3	52.9	77.1
Queue Length 50th (m)	~219.0	53.0	0.0	37.9	~98.4	6.7	~124.8	101.4	12.0	35.3	137.4	~190.8
Queue Length 95th (m)	#293.1	65.8	15.6	52.8	#126.1	29.2	#188.3	123.8	34.4	52.1	#168.1	#270.0
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	514	1258	483	428	678	337	299	1284	660	341	1170	884
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.32	0.50	0.27	0.67	1.22	0.53	1.35	0.67	0.41	0.72	0.89	1.09

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

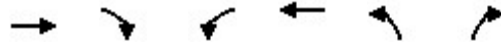


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	661	612	124	276	800	172	393	833	264	238	1006	934
Future Volume (vph)	661	612	124	276	800	172	393	833	264	238	1006	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.17	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	321	4995	1538	3404	5092	1562	158	3614	1486	375	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	681	631	128	285	825	177	405	859	272	245	1037	963
RTOR Reduction (vph)	0	0	96	0	0	129	0	0	132	0	0	344
Lane Group Flow (vph)	681	631	32	285	825	48	405	859	140	245	1037	619
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	56.0	34.0	34.0	17.0	18.0	18.0	64.0	48.0	48.0	58.0	45.0	45.0
Effective Green, g (s)	58.0	34.0	34.0	17.0	18.0	18.0	67.0	48.0	48.0	62.0	45.0	47.0
Actuated g/C Ratio	0.43	0.25	0.25	0.13	0.13	0.13	0.50	0.36	0.36	0.46	0.33	0.35
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	428	678	208	295	1284	528	333	1170	541
v/s Ratio Prot	c0.35	0.13		0.08	0.16		c0.18	0.24		0.08	0.30	
v/s Ratio Perm	c0.23		0.02			0.03	0.50		0.09	0.26		c0.40
v/c Ratio	1.34	0.50	0.08	0.67	1.22	0.23	1.37	0.67	0.26	0.74	0.89	1.15
Uniform Delay, d1	39.6	43.2	38.6	56.3	58.5	52.3	42.1	36.8	30.9	25.0	42.6	44.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	165.0	1.4	0.4	8.0	110.7	2.6	187.9	2.8	1.2	13.5	10.0	85.4
Delay (s)	204.6	44.7	39.0	64.3	169.2	54.9	230.0	39.6	32.2	38.5	52.6	129.4
Level of Service	F	D	D	E	F	D	F	D	C	D	D	F
Approach Delay (s)		119.8			130.2			88.5			84.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	102.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	120.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	749	57	36	789	41	30
Future Volume (vph)	749	57	36	789	41	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.989			0.943		
Fl _t Protected				0.998	0.972	
Satd. Flow (prot)	3539	0	0	3571	1726	0
Fl _t Permitted				0.998	0.972	
Satd. Flow (perm)	3539	0	0	3571	1726	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	749	57	36	789	41	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	806	0	0	825	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.1% ICU Level of Service B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	749	57	36	789	41	30
Future Volume (Veh/h)	749	57	36	789	41	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	749	57	36	789	41	30
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			806		1244	403
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			806		1244	403
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		74	95
cM capacity (veh/h)			814		159	597
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	499	307	299	526	71	
Volume Left	0	0	36	0	41	
Volume Right	0	57	0	0	30	
cSH	1700	1700	814	1700	230	
Volume to Capacity	0.29	0.18	0.04	0.31	0.31	
Queue Length 95th (m)	0.0	0.0	1.1	0.0	9.6	
Control Delay (s)	0.0	0.0	1.6	0.0	27.4	
Lane LOS			A			D
Approach Delay (s)	0.0		0.6		27.4	
Approach LOS					D	
Intersection Summary						
Average Delay			1.4			
Intersection Capacity Utilization			59.1%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	266	50	63	378	21	233	808	134	32	662	9
Future Volume (vph)	0	266	50	63	378	21	233	808	134	32	662	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.979			0.994			0.983			0.998	
Fl _t Protected					0.993			0.990			0.998	
Satd. Flow (prot)	0	1844	0	0	1859	0	0	3483	0	0	3564	0
Fl _t Permitted					0.774			0.646			0.849	
Satd. Flow (perm)	0	1844	0	0	1449	0	0	2272	0	0	3032	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3			22			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	266	50	63	378	21	233	808	134	32	662	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	316	0	0	462	0	0	1175	0	0	703	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	39.0	39.0		39.0	39.0		61.0	61.0		61.0	61.0	
Total Split (%)	39.0%	39.0%		39.0%	39.0%		61.0%	61.0%		61.0%	61.0%	
Maximum Green (s)	33.0	33.0		33.0	33.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		32.5			32.5			55.0			55.0	
Actuated g/C Ratio		0.33			0.33			0.55			0.55	
v/c Ratio		0.52			0.97			0.93			0.42	
Control Delay		29.9			69.5			34.4			14.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.9			69.5			34.4			14.0	
LOS		C			E			C			B	
Approach Delay		29.9			69.5			34.4			14.0	
Approach LOS		C			E			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	99.5
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	34.6
Intersection LOS:	C
Intersection Capacity Utilization:	114.6%
ICU Level of Service:	H
Analysis Period (min):	15

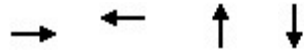
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	316	462	1175	703
v/c Ratio	0.52	0.97	0.93	0.42
Control Delay	29.9	69.5	34.4	14.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.9	69.5	34.4	14.0
Queue Length 50th (m)	47.5	86.7	103.2	39.5
Queue Length 95th (m)	73.0	#149.4	#155.6	52.6
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	618	482	1266	1677
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.96	0.93	0.42

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	266	50	63	378	21	233	808	134	32	662	9
Future Volume (vph)	0	266	50	63	378	21	233	808	134	32	662	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.99			0.98			1.00	
Flt Protected		1.00			0.99			0.99			1.00	
Satd. Flow (prot)		1843			1859			3483			3564	
Flt Permitted		1.00			0.77			0.65			0.85	
Satd. Flow (perm)		1843			1449			2272			3033	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	266	50	63	378	21	233	808	134	32	662	9
RTOR Reduction (vph)	0	7	0	0	2	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	309	0	0	460	0	0	1165	0	0	702	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.5			32.5			55.0			55.0	
Effective Green, g (s)		32.5			32.5			55.0			55.0	
Actuated g/C Ratio		0.33			0.33			0.55			0.55	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		601			473			1255			1676	
v/s Ratio Prot		0.17										
v/s Ratio Perm					c0.32			c0.51			0.23	
v/c Ratio		0.51			0.97			0.93			0.42	
Uniform Delay, d1		27.1			33.1			20.4			12.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			34.1			13.2			0.8	
Delay (s)		27.9			67.2			33.6			13.7	
Level of Service		C			E			C			B	
Approach Delay (s)		27.9			67.2			33.6			13.7	
Approach LOS		C			E			C			B	

Intersection Summary		
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.94	
Actuated Cycle Length (s)	99.5	Sum of lost time (s) 12.0
Intersection Capacity Utilization	114.6%	ICU Level of Service H
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↘	↗
Traffic Volume (vph)	1237	48	162	1242	38	121
Future Volume (vph)	1237	48	162	1242	38	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.994			0.850		
Flt Protected				0.994	0.950	
Satd. Flow (prot)	3557	0	0	3557	1789	1601
Flt Permitted				0.994	0.950	
Satd. Flow (perm)	3557	0	0	3557	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1237	48	162	1242	38	121
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1285	0	0	1404	38	121
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	88.1%
Analysis Period (min)	15
	ICU Level of Service E

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1237	48	162	1242	38	121
Future Volume (Veh/h)	1237	48	162	1242	38	121
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1237	48	162	1242	38	121
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1285		2206	642
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			868		2013	69
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			74		0	85
cM capacity (veh/h)			621		30	788
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	825	460	576	828	38	121
Volume Left	0	0	162	0	38	0
Volume Right	0	48	0	0	0	121
cSH	1700	1700	621	1700	30	788
Volume to Capacity	0.49	0.27	0.26	0.49	1.25	0.15
Queue Length 95th (m)	0.0	0.0	7.9	0.0	32.5	4.1
Control Delay (s)	0.0	0.0	6.8	0.0	444.7	10.4
Lane LOS			A		F	B
Approach Delay (s)	0.0		2.8		114.2	
Approach LOS					F	
Intersection Summary						
Average Delay			7.7			
Intersection Capacity Utilization			88.1%		ICU Level of Service	E
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	405	644	4131	2470	69
Future Volume (vph)	66	405	644	4131	2470	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		85.0			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.996	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5121	0
Flt Permitted	0.950		0.065			
Satd. Flow (perm)	1789	1601	122	5142	5121	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		1			4	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	405	644	4131	2470	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	405	644	4131	2539	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

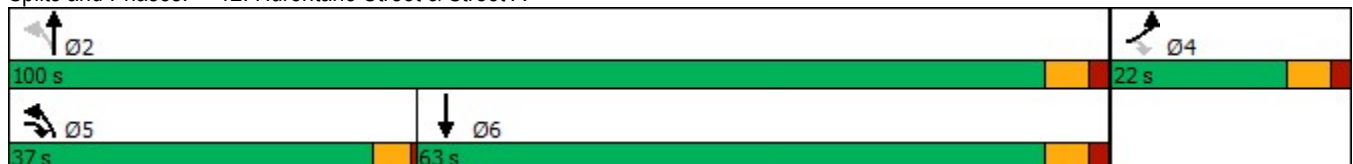


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	37.0	37.0	100.0	63.0	
Total Split (%)	18.0%	30.3%	30.3%	82.0%	51.6%	
Maximum Green (s)	16.0	33.0	33.0	94.0	57.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	-2.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	2.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	9.5	46.0	98.4	95.8	57.2	
Actuated g/C Ratio	0.08	0.41	0.87	0.85	0.50	
v/c Ratio	0.44	0.62	1.03	0.95	0.98	
Control Delay	59.5	31.2	78.2	16.7	42.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.5	31.2	78.2	16.7	42.3	
LOS	E	C	E	B	D	
Approach Delay	35.2			25.0	42.3	
Approach LOS	D			C	D	

Intersection Summary

Area Type:	Other
Cycle Length:	122
Actuated Cycle Length:	113.3
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.03
Intersection Signal Delay:	31.2
Intersection LOS:	C
Intersection Capacity Utilization:	101.9%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	66	405	644	4131	2539
v/c Ratio	0.44	0.62	1.03	0.95	0.98
Control Delay	59.5	31.2	78.2	16.7	42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	31.2	78.2	16.7	42.3
Queue Length 50th (m)	14.5	69.7	~144.3	254.4	~206.7
Queue Length 95th (m)	28.4	101.4	#225.4	#396.3	#263.7
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	253	650	623	4346	2589
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.62	1.03	0.95	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	405	644	4131	2470	69
Future Volume (vph)	66	405	644	4131	2470	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	2.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5121	
Flt Permitted	0.95	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	1789	1601	123	5142	5121	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	405	644	4131	2470	69
RTOR Reduction (vph)	0	1	0	0	2	0
Lane Group Flow (vph)	66	404	644	4131	2537	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	8.2	41.3	94.4	94.4	57.3	
Effective Green, g (s)	8.2	41.3	96.4	94.4	57.3	
Actuated g/C Ratio	0.07	0.36	0.84	0.82	0.50	
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	128	576	613	4235	2560	
v/s Ratio Prot	0.04	c0.20	c0.32	c0.80	0.50	
v/s Ratio Perm		0.05	0.56			
v/c Ratio	0.52	0.70	1.05	0.98	0.99	
Uniform Delay, d1	51.3	31.4	35.7	9.1	28.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.5	3.9	50.3	9.2	15.8	
Delay (s)	54.8	35.2	86.0	18.3	44.2	
Level of Service	D	D	F	B	D	
Approach Delay (s)	38.0			27.4	44.2	
Approach LOS	D			C	D	

Intersection Summary

HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	114.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	1	727	0	1	549
Future Volume (vph)	1	1	727	0	1	549
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.850					
Fl _t Protected	0.950					
Satd. Flow (prot)	1789	1601	1883	0	0	1883
Fl _t Permitted	0.950					
Satd. Flow (perm)	1789	1601	1883	0	0	1883
Link Speed (k/h)	48		48		48	
Link Distance (m)	1161.8		2541.5		542.2	
Travel Time (s)	87.1		190.6		40.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1	790	0	1	597
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	1	790	0	0	598
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0		0.0	
Link Offset(m)	0.0		0.0		0.0	
Crosswalk Width(m)	1.6		1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97		97	
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis
 13: Chinguacousy Road & Street A

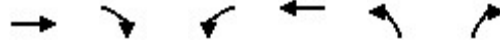
06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	727	0	1	549
Future Volume (Veh/h)	1	1	727	0	1	549
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)	1	1	790	0	1	597
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	1389	790			790	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1389	790			790	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	157	390			830	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	1	1	790	598		
Volume Left	1	0	0	1		
Volume Right	0	1	0	0		
cSH	157	390	1700	830		
Volume to Capacity	0.01	0.00	0.46	0.00		
Queue Length 95th (m)	0.1	0.1	0.0	0.0		
Control Delay (s)	28.1	14.3	0.0	0.0		
Lane LOS	D	B		A		
Approach Delay (s)	21.2		0.0	0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			48.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	767	14	194	814	11	107
Future Volume (vph)	767	14	194	814	11	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.997			0.878		
Fl _t Protected				0.990	0.995	
Satd. Flow (prot)	3568	0	0	3543	1645	0
Fl _t Permitted				0.990	0.995	
Satd. Flow (perm)	3568	0	0	3543	1645	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	23.4			22.5	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	834	15	211	885	12	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	849	0	0	1096	128	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.0%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	767	14	194	814	11	107
Future Volume (Veh/h)	767	14	194	814	11	107
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)	834	15	211	885	12	116
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			849	1706	424	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			849	1706	424	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			73	80	80	
cM capacity (veh/h)			785	60	578	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	556	293	506	590	128	
Volume Left	0	0	211	0	12	
Volume Right	0	15	0	0	116	
cSH	1700	1700	785	1700	320	
Volume to Capacity	0.33	0.17	0.27	0.35	0.40	
Queue Length 95th (m)	0.0	0.0	8.3	0.0	14.1	
Control Delay (s)	0.0	0.0	6.8	0.0	23.6	
Lane LOS	A			C		
Approach Delay (s)	0.0		3.2		23.6	
Approach LOS						C
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			67.0%	ICU Level of Service	C	
Analysis Period (min)			15			

Lanes, Volumes, Timings
15: McLaughlin Road & Street E

















06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	34	34	0	17	50	740	50	23	635	9
Future Volume (vph)	7	0	34	34	0	17	50	740	50	23	635	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.889			0.956			0.991			0.998	
Flt Protected		0.991			0.967			0.997			0.998	
Satd. Flow (prot)	0	1659	0	0	1741	0	0	3536	0	0	3564	0
Flt Permitted		0.991			0.967			0.997			0.998	
Satd. Flow (perm)	0	1659	0	0	1741	0	0	3536	0	0	3564	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			18.0			8.5	
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
Adj. Flow (vph)	8	0	37	37	0	18	54	804	54	25	690	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	55	0	0	912	0	0	725	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	60.7%						ICU Level of Service B					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	34	34	0	17	50	740	50	23	635	9
Future Volume (Veh/h)	7	0	34	34	0	17	50	740	50	23	635	9
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)	8	0	37	37	0	18	54	804	54	25	690	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (m)												
								399			189	
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85				0.85		
vC, conflicting volume	1273	1711	350	1371	1689	429	700			858		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	972	1487	350	1087	1461	0	700			485		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	94	71	100	98	94			97		
cM capacity (veh/h)	161	96	646	128	100	924	893			915		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	45	55	456	456	370	355						
Volume Left	8	37	54	0	25	0						
Volume Right	37	18	0	54	0	10						
cSH	421	178	893	1700	915	1700						
Volume to Capacity	0.11	0.31	0.06	0.27	0.03	0.21						
Queue Length 95th (m)	2.7	9.4	1.5	0.0	0.6	0.0						
Control Delay (s)	14.6	34.0	1.7	0.0	0.9	0.0						
Lane LOS	B	D	A		A							
Approach Delay (s)	14.6	34.0	0.9		0.5							
Approach LOS	B	D										
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			60.7%	ICU Level of Service	B							
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	271	3	137	180	44	2	230	285	33	218	10
Future Volume (vph)	2	271	3	137	180	44	2	230	285	33	218	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.970				0.850		0.995	
Flt Protected				0.950							0.994	
Satd. Flow (prot)	0	1919	0	1772	1799	0	0	1830	1585	0	1788	0
Flt Permitted		0.997		0.534				0.998			0.949	
Satd. Flow (perm)	0	1913	0	996	1799	0	0	1827	1585	0	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			37				303			6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	288	3	146	191	47	2	245	303	35	232	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	293	0	146	238	0	0	247	303	0	278	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

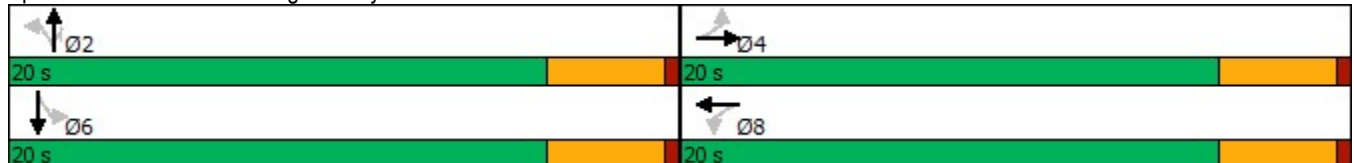


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		10.5		10.3	10.3			19.6	19.6		19.6	
Actuated g/C Ratio		0.30		0.30	0.30			0.56	0.56		0.56	
v/c Ratio		0.51		0.50	0.43			0.24	0.30		0.29	
Control Delay		13.0		16.0	10.3			7.4	2.3		7.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		13.0		16.0	10.3			7.4	2.3		7.7	
LOS		B		B	B			A	A		A	
Approach Delay		13.0			12.5			4.6			7.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	34.9
Natural Cycle:	40
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	8.8
Intersection LOS:	A
Intersection Capacity Utilization:	66.2%
ICU Level of Service:	C
Analysis Period (min):	15

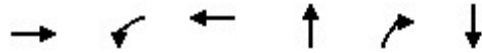
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	293	146	238	247	303	278
v/c Ratio	0.51	0.50	0.43	0.24	0.30	0.29
Control Delay	13.0	16.0	10.3	7.4	2.3	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	16.0	10.3	7.4	2.3	7.7
Queue Length 50th (m)	13.1	6.5	8.6	7.4	0.0	8.4
Queue Length 95th (m)	25.9	16.5	19.3	22.2	9.5	25.3
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	883	459	850	1024	1022	960
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.32	0.28	0.24	0.30	0.29

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	271	3	137	180	44	2	230	285	33	218	10	
Future Volume (vph)	2	271	3	137	180	44	2	230	285	33	218	10	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1918		1772	1800			1830	1585		1787		
Flt Permitted		1.00		0.53	1.00			1.00	1.00		0.95		
Satd. Flow (perm)		1913		995	1800			1827	1585		1707		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	288	3	146	191	47	2	245	303	35	232	11	
RTOR Reduction (vph)	0	1	0	0	28	0	0	0	144	0	3	0	
Lane Group Flow (vph)	0	292	0	146	210	0	0	247	159	0	275	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6			
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		9.0		9.0	9.0			18.7	18.7		18.7		
Effective Green, g (s)		9.0		9.0	9.0			18.7	18.7		18.7		
Actuated g/C Ratio		0.25		0.25	0.25			0.52	0.52		0.52		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		482		250	453			957	830		894		
v/s Ratio Prot					0.12								
v/s Ratio Perm		c0.15		0.15				0.14	0.10		c0.16		
v/c Ratio		0.60		0.58	0.46			0.26	0.19		0.31		
Uniform Delay, d1		11.8		11.7	11.3			4.7	4.5		4.8		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		2.1		3.5	0.8			0.7	0.5		0.9		
Delay (s)		13.9		15.2	12.1			5.3	5.0		5.7		
Level of Service		B		B	B			A	A		A		
Approach Delay (s)		13.9			13.2			5.2			5.7		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			9.0									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.40										
Actuated Cycle Length (s)			35.7									Sum of lost time (s)	8.0
Intersection Capacity Utilization			66.2%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	7	550	34	240	320	26	40	67	423	41	133	12
Future Volume (vph)	7	550	34	240	320	26	40	67	423	41	133	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.989				0.850		0.991	
Flt Protected		0.999		0.950				0.981			0.989	
Satd. Flow (prot)	0	3552	0	1789	3487	0	0	1861	1617	0	1858	0
Flt Permitted		0.949		0.286				0.826			0.893	
Satd. Flow (perm)	0	3374	0	539	3487	0	0	1567	1617	0	1678	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			16				450			3
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	7	585	36	255	340	28	43	71	450	44	141	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	628	0	255	368	0	0	114	450	0	198	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	44.0	44.0		23.0	67.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	44.0%	44.0%		23.0%	67.0%		33.0%	33.0%	33.0%	33.0%	33.0%	
Maximum Green (s)	38.0	38.0		19.0	61.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		16.6		32.3	30.2			12.1	12.1		12.1	
Actuated g/C Ratio		0.30		0.59	0.55			0.22	0.22		0.22	
v/c Ratio		0.61		0.48	0.19			0.33	0.64		0.53	
Control Delay		19.5		9.0	6.4			22.4	7.2		25.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		19.5		9.0	6.4			22.4	7.2		25.7	
LOS		B		A	A			C	A		C	
Approach Delay		19.5			7.4			10.3			25.7	
Approach LOS		B			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 54.8
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 13.8
 Intersection LOS: B
 Intersection Capacity Utilization 67.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	628	255	368	114	450	198
v/c Ratio	0.61	0.48	0.19	0.33	0.64	0.53
Control Delay	19.5	9.0	6.4	22.4	7.2	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	9.0	6.4	22.4	7.2	25.7
Queue Length 50th (m)	26.1	9.9	7.7	9.2	0.0	16.4
Queue Length 95th (m)	50.2	24.2	16.4	25.1	19.9	40.3
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2430	767	3378	801	1046	859
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.33	0.11	0.14	0.43	0.23

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕		
Traffic Volume (vph)	7	550	34	240	320	26	40	67	423	41	133	12	
Future Volume (vph)	7	550	34	240	320	26	40	67	423	41	133	12	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99		
Satd. Flow (prot)		3555		1789	3485			1862	1617		1859		
Flt Permitted		0.95		0.29	1.00			0.83	1.00		0.89		
Satd. Flow (perm)		3376		538	3485			1567	1617		1678		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	7	585	36	255	340	28	43	71	450	44	141	13	
RTOR Reduction (vph)	0	5	0	0	7	0	0	0	350	0	2	0	
Lane Group Flow (vph)	0	623	0	255	361	0	0	114	100	0	196	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		16.8		30.2	30.2			12.1	12.1		12.1		
Effective Green, g (s)		16.8		30.2	30.2			12.1	12.1		12.1		
Actuated g/C Ratio		0.31		0.56	0.56			0.22	0.22		0.22		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1044		515	1938			349	360		373		
v/s Ratio Prot				c0.09	0.10								
v/s Ratio Perm		c0.18		0.19				0.07	0.06		c0.12		
v/c Ratio		0.60		0.50	0.19			0.33	0.28		0.52		
Uniform Delay, d1		15.9		6.8	6.0			17.7	17.5		18.6		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.9		0.8	0.0			0.5	0.4		1.3		
Delay (s)		16.8		7.6	6.0			18.2	17.9		19.9		
Level of Service		B		A	A			B	B		B		
Approach Delay (s)		16.8			6.6			18.0			19.9		
Approach LOS		B			A			B			B		
Intersection Summary													
HCM 2000 Control Delay			14.3									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.55										
Actuated Cycle Length (s)			54.3									Sum of lost time (s)	16.0
Intersection Capacity Utilization			67.7%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	563	249	192	395	201	44	58	1862	185	36	2573	299
Future Volume (vph)	563	249	192	395	201	44	58	1862	185	36	2573	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.935			0.973				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3323	0	1722	3394	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.501			0.377			0.068			0.070		
Satd. Flow (perm)	925	3323	0	683	3394	0	123	4445	1471	119	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		75			18				153			156
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	605	268	206	425	216	47	62	2002	199	39	2767	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	605	474	0	425	263	0	62	2002	199	39	2767	322
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

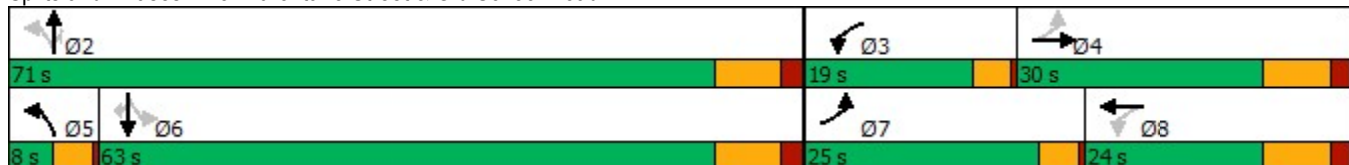


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	30.0		19.0	24.0		8.0	71.0	71.0	63.0	63.0	63.0
Total Split (%)	20.8%	25.0%		15.8%	20.0%		6.7%	59.2%	59.2%	52.5%	52.5%	52.5%
Maximum Green (s)	21.0	22.0		15.0	16.0		4.0	63.0	63.0	55.0	55.0	55.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	44.5	21.4		36.4	13.4		67.4	61.4	61.4	57.2	57.2	55.1
Actuated g/C Ratio	0.38	0.18		0.31	0.12		0.58	0.53	0.53	0.49	0.49	0.48
v/c Ratio	1.17	0.70		1.16	0.65		0.40	0.85	0.23	0.67	1.11	0.38
Control Delay	125.2	43.4		127.7	53.6		18.7	28.0	4.8	79.9	86.5	11.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	125.2	43.4		127.7	53.6		18.7	28.0	4.8	79.9	86.5	11.5
LOS	F	D		F	D		B	C	A	E	F	B
Approach Delay		89.2			99.3			25.7			78.7	
Approach LOS		F			F			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	115.9
Natural Cycle:	130
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.17
Intersection Signal Delay:	65.5
Intersection LOS:	E
Intersection Capacity Utilization:	103.0%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	605	474	425	263	62	2002	199	39	2767	322
v/c Ratio	1.17	0.70	1.16	0.65	0.40	0.85	0.23	0.67	1.11	0.38
Control Delay	125.2	43.4	127.7	53.6	18.7	28.0	4.8	79.9	86.5	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	125.2	43.4	127.7	53.6	18.7	28.0	4.8	79.9	86.5	11.5
Queue Length 50th (m)	~167.3	45.9	~88.4	28.7	5.8	137.5	4.9	6.7	~272.3	22.4
Queue Length 95th (m)	#236.8	63.9	#146.7	42.6	12.3	166.4	16.7	#28.3	#308.5	44.9
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	519	749	367	485	154	2422	871	58	2486	858
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.17	0.63	1.16	0.54	0.40	0.83	0.23	0.67	1.11	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 			  			  		
Traffic Volume (vph)	563	249	192	395	201	44	58	1862	185	36	2573	299	
Future Volume (vph)	563	249	192	395	201	44	58	1862	185	36	2573	299	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.93		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	3323		1722	3395		1722	4445	1471	1615	5043	1633	
Flt Permitted	0.50	1.00		0.38	1.00		0.07	1.00	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	926	3323		683	3395		123	4445	1471	119	5043	1633	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	605	268	206	425	216	47	62	2002	199	39	2767	322	
RTOR Reduction (vph)	0	61	0	0	16	0	0	0	71	0	0	82	
Lane Group Flow (vph)	605	413	0	425	247	0	62	2002	128	39	2767	240	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8		5	2			6		
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	38.4	19.4		28.4	13.4		62.2	62.2	62.2	55.1	55.1	55.1	
Effective Green, g (s)	40.4	21.4		32.4	13.4		64.2	62.2	62.2	57.1	57.1	55.1	
Actuated g/C Ratio	0.35	0.18		0.28	0.11		0.55	0.53	0.53	0.49	0.49	0.47	
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0	
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)	484	609		341	390		137	2371	784	58	2469	771	
v/s Ratio Prot	c0.25	0.12		0.18	0.07		0.02	c0.45			c0.55		
v/s Ratio Perm	0.19			c0.16			0.23		0.09	0.33		0.15	
v/c Ratio	1.25	0.68		1.25	0.63		0.45	0.84	0.16	0.67	1.12	0.31	
Uniform Delay, d1	35.5	44.4		39.1	49.3		25.7	23.1	13.9	22.6	29.7	19.0	
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	128.7	3.0		133.1	3.3		2.4	2.9	0.1	26.6	60.4	0.2	
Delay (s)	164.3	47.4		172.2	52.6		28.1	26.0	14.0	49.2	90.2	19.2	
Level of Service	F	D		F	D		C	C	B	D	F	B	
Approach Delay (s)		112.9			126.5			25.0			82.3		
Approach LOS		F			F			C			F		
Intersection Summary													
HCM 2000 Control Delay			73.1									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			1.17										
Actuated Cycle Length (s)			116.6									Sum of lost time (s)	18.0
Intersection Capacity Utilization			103.0%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Future Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994			0.946			0.986	
Flt Protected		0.997		0.950				0.997			0.988	
Satd. Flow (prot)	0	4862	0	1659	4941	0	0	1743	0	0	1781	0
Flt Permitted		0.864		0.232				0.961			0.696	
Satd. Flow (perm)	0	4213	0	405	4941	0	0	1680	0	0	1255	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			42			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	48	752	56	165	653	29	27	214	159	101	266	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	856	0	165	682	0	0	400	0	0	409	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

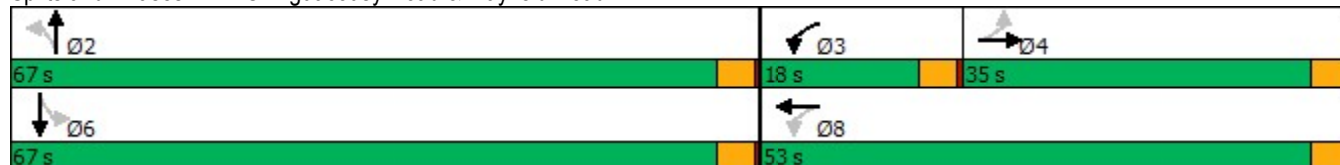


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0		18.0	53.0		67.0	67.0		67.0	67.0	
Total Split (%)	29.2%	29.2%		15.0%	44.2%		55.8%	55.8%		55.8%	55.8%	
Maximum Green (s)	31.0	31.0		14.0	49.0		63.0	63.0		63.0	63.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		35.6		49.4	49.4			28.9			28.9	
Actuated g/C Ratio		0.41		0.57	0.57			0.33			0.33	
v/c Ratio		0.49		0.44	0.24			0.68			0.96	
Control Delay		21.7		14.6	10.5			27.7			63.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		21.7		14.6	10.5			27.7			63.8	
LOS		C		B	B			C			E	
Approach Delay		21.7			11.3			27.7			63.8	
Approach LOS		C			B			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	86.4
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	26.0
Intersection LOS:	C
Intersection Capacity Utilization:	87.2%
ICU Level of Service:	E
Analysis Period (min):	15

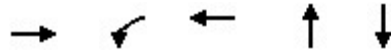
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	856	165	682	400	409
v/c Ratio	0.49	0.44	0.24	0.68	0.96
Control Delay	21.7	14.6	10.5	27.7	63.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	14.6	10.5	27.7	63.8
Queue Length 50th (m)	36.2	11.8	18.4	50.0	64.1
Queue Length 95th (m)	64.7	29.0	34.4	77.8	#112.0
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1742	436	2829	1246	924
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.38	0.24	0.32	0.44

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑↑↑		↑	↑↑↑			↑			↑	
Traffic Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Future Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frt		0.99		1.00	0.99			0.95			0.99	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		4864		1659	4939			1743			1781	
Flt Permitted		0.86		0.23	1.00			0.96			0.70	
Satd. Flow (perm)		4213		406	4939			1682			1254	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	48	752	56	165	653	29	27	214	159	101	266	42
RTOR Reduction (vph)	0	5	0	0	3	0	0	28	0	0	5	0
Lane Group Flow (vph)	0	851	0	165	679	0	0	372	0	0	404	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		35.6		49.4	49.4			28.9			28.9	
Effective Green, g (s)		35.6		49.4	49.4			28.9			28.9	
Actuated g/C Ratio		0.41		0.57	0.57			0.33			0.33	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1737		374	2827			563			419	
v/s Ratio Prot				c0.05	0.14							
v/s Ratio Perm		c0.20		0.20				0.22			c0.32	
v/c Ratio		0.49		0.44	0.24			0.66			0.97	
Uniform Delay, d1		18.7		9.7	9.1			24.5			28.2	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.0		0.8	0.2			2.9			34.7	
Delay (s)		19.7		10.5	9.3			27.4			62.9	
Level of Service		B		B	A			C			E	
Approach Delay (s)		19.7			9.6			27.4			62.9	
Approach LOS		B			A			C			E	

Intersection Summary

HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗		↗	↗↗	
Traffic Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Future Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.979			0.956			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4762	0	1644	3402	0	1690	3439	0
Flt Permitted	0.288			0.105			0.457			0.393		
Satd. Flow (perm)	553	4889	0	189	4762	0	791	3402	0	699	3439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			32			50			28	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	18	1041	126	145	820	133	55	261	108	323	436	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	1167	0	145	953	0	55	369	0	323	526	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	40.0	40.0		16.0	56.0		36.0	36.0		28.0	64.0	
Total Split (%)	33.3%	33.3%		13.3%	46.7%		30.0%	30.0%		23.3%	53.3%	
Maximum Green (s)	34.0	34.0		12.0	50.0		30.0	30.0		24.0	58.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	34.0	34.0		52.0	50.0		30.0	30.0		60.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.43	0.42		0.25	0.25		0.50	0.48	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

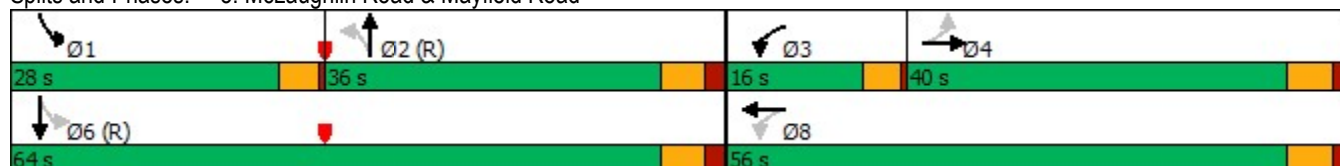


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.12	0.83		0.62	0.48		0.28	0.42		0.59	0.31	
Control Delay	34.4	46.0		35.2	25.5		41.0	34.0		23.6	18.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.4	46.0		35.2	25.5		41.0	34.0		23.6	18.4	
LOS	C	D		D	C		D	C		C	B	
Approach Delay		45.9			26.8			34.9			20.4	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	32.6
Intersection LOS:	C
Intersection Capacity Utilization	75.0%
ICU Level of Service	D
Analysis Period (min)	15

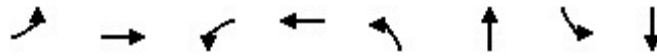
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	1167	145	953	55	369	323	526
v/c Ratio	0.12	0.83	0.62	0.48	0.28	0.42	0.59	0.31
Control Delay	34.4	46.0	35.2	25.5	41.0	34.0	23.6	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	46.0	35.2	25.5	41.0	34.0	23.6	18.4
Queue Length 50th (m)	3.1	93.3	20.8	56.8	10.5	33.0	45.5	36.3
Queue Length 95th (m)	9.3	111.2	38.3	69.2	22.7	47.3	67.2	48.4
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	156	1398	233	2002	197	888	547	1676
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.83	0.62	0.48	0.28	0.42	0.59	0.31

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Traffic Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Future Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4888		1706	4763		1644	3402		1690	3441	
Flt Permitted	0.29	1.00		0.11	1.00		0.46	1.00		0.39	1.00	
Satd. Flow (perm)	553	4888		189	4763		791	3402		699	3441	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	18	1041	126	145	820	133	55	261	108	323	436	90
RTOR Reduction (vph)	0	13	0	0	19	0	0	38	0	0	14	0
Lane Group Flow (vph)	18	1154	0	145	934	0	55	332	0	323	512	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		50.0	50.0		30.0	30.0		58.0	58.0	
Effective Green, g (s)	34.0	34.0		50.0	50.0		30.0	30.0		58.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.42	0.42		0.25	0.25		0.48	0.48	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	156	1384		230	1984		197	850		536	1663	
v/s Ratio Prot		c0.24		c0.06	0.20			0.10		c0.12	0.15	
v/s Ratio Perm	0.03			0.20			0.07			c0.17		
v/c Ratio	0.12	0.83		0.63	0.47		0.28	0.39		0.60	0.31	
Uniform Delay, d1	31.9	40.4		25.8	25.4		36.3	37.4		20.3	18.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	6.0		12.4	0.8		3.5	1.3		5.0	0.5	
Delay (s)	33.4	46.4		38.2	26.2		39.8	38.7		25.3	19.3	
Level of Service	C	D		D	C		D	D		C	B	
Approach Delay (s)		46.2			27.8			38.9			21.6	
Approach LOS		D			C			D			C	

































Intersection Summary

HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363
Future Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98	1.00		0.97	0.99		0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Fl _t Permitted	0.194			0.950			0.287			0.341		
Satd. Flow (perm)	355	4902	1508	3329	4948	1395	545	3476	1467	609	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			172			248			343
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	33.0	49.0	49.0	21.0	37.0	37.0	12.0	47.0	47.0	43.0	78.0	78.0
Total Split (%)	20.6%	30.6%	30.6%	13.1%	23.1%	23.1%	7.5%	29.4%	29.4%	26.9%	48.8%	48.8%
Maximum Green (s)	28.0	42.0	42.0	16.0	30.0	30.0	8.0	40.0	40.0	39.0	71.0	71.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

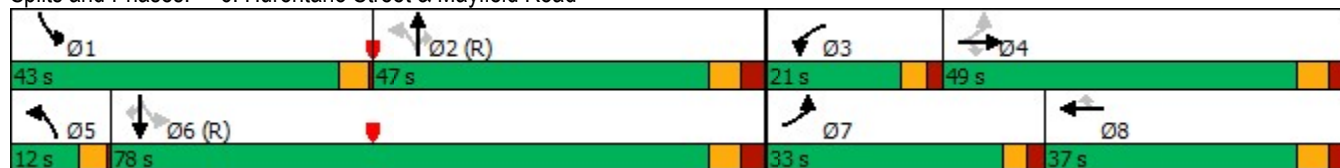


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	67.0	42.0	42.0	16.0	30.0	30.0	51.0	40.0	40.0	86.0	71.0	71.0
Actuated g/C Ratio	0.42	0.26	0.26	0.10	0.19	0.19	0.32	0.25	0.25	0.54	0.44	0.44
v/c Ratio	0.71	0.84	0.24	0.73	0.74	0.47	0.41	0.49	0.45	0.69	0.63	0.44
Control Delay	43.8	63.1	8.4	83.4	66.9	14.2	28.2	53.6	7.9	29.3	36.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	63.1	8.4	83.4	66.9	14.2	28.2	53.6	7.9	29.3	36.7	5.8
LOS	D	E	A	F	E	B	C	D	A	C	D	A
Approach Delay		55.1			61.6			35.8			28.4	
Approach LOS		E			E			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	44.4
Intersection LOS:	D
Intersection Capacity Utilization	81.3%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024





































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386
v/c Ratio	0.71	0.84	0.24	0.73	0.74	0.47	0.41	0.49	0.45	0.69	0.63	0.44
Control Delay	43.8	63.1	8.4	83.4	66.9	14.2	28.2	53.6	7.9	29.3	36.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	63.1	8.4	83.4	66.9	14.2	28.2	53.6	7.9	29.3	36.7	5.8
Queue Length 50th (m)	63.7	120.6	0.0	39.5	76.4	4.8	14.6	61.8	0.0	77.2	128.0	7.8
Queue Length 95th (m)	91.9	138.7	15.8	54.8	91.9	28.4	24.3	79.1	22.8	104.5	150.8	29.8
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	407	1286	481	334	927	401	236	869	552	594	1572	881
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.84	0.24	0.73	0.74	0.47	0.41	0.49	0.45	0.69	0.63	0.44

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 		 		 	
Traffic Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363	
Future Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1806	3476	1467	1703	3544	1557	
Flt Permitted	0.19	1.00	1.00	0.95	1.00	1.00	0.29	1.00	1.00	0.34	1.00	1.00	
Satd. Flow (perm)	354	4902	1508	3340	4948	1395	547	3476	1467	611	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386	
RTOR Reduction (vph)	0	0	86	0	0	140	0	0	186	0	0	191	
Lane Group Flow (vph)	289	1085	30	244	687	50	96	428	62	409	997	195	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	63.0	42.0	42.0	16.0	30.0	30.0	48.0	40.0	40.0	83.0	71.0	71.0	
Effective Green, g (s)	65.0	42.0	42.0	16.0	30.0	30.0	48.0	40.0	40.0	83.0	71.0	71.0	
Actuated g/C Ratio	0.41	0.26	0.26	0.10	0.19	0.19	0.30	0.25	0.25	0.52	0.44	0.44	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	403	1286	395	334	927	261	227	869	366	583	1572	690	
v/s Ratio Prot	c0.13	c0.22		0.07	0.14		0.02	0.12		c0.17	0.28		
v/s Ratio Perm	0.16		0.02			0.04	0.11		0.04	c0.19		0.13	
v/c Ratio	0.72	0.84	0.08	0.73	0.74	0.19	0.42	0.49	0.17	0.70	0.63	0.28	
Uniform Delay, d1	35.4	55.9	44.4	69.9	61.3	54.8	41.4	51.3	47.0	25.5	34.4	28.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.5	6.9	0.4	13.2	5.3	1.6	5.7	2.0	1.0	6.9	2.0	1.0	
Delay (s)	45.9	62.8	44.8	83.1	66.7	56.4	47.1	53.3	48.0	32.4	36.4	29.3	
Level of Service	D	E	D	F	E	E	D	D	D	C	D	C	
Approach Delay (s)		58.1			68.5			50.8			34.0		
Approach LOS		E			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			50.9									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.78										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			81.3%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	250	2	288	342	54	12	379	329	42	246	5
Future Volume (vph)	5	250	2	288	342	54	12	379	329	42	246	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.980				0.850		0.998	
Flt Protected		0.999		0.950				0.998			0.993	
Satd. Flow (prot)	0	1863	0	1825	1835	0	0	1796	1601	0	1843	0
Flt Permitted		0.992		0.456				0.986			0.785	
Satd. Flow (perm)	0	1850	0	876	1835	0	0	1774	1601	0	1457	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					9				180			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	266	2	306	364	57	13	403	350	45	262	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	0	306	421	0	0	416	350	0	312	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

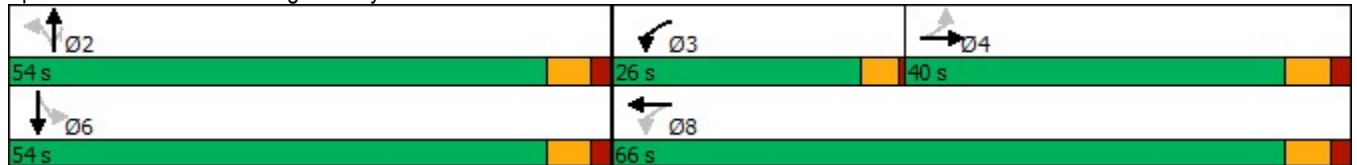
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	40.0	40.0		26.0	66.0		54.0	54.0	54.0	54.0	54.0	
Total Split (%)	33.3%	33.3%		21.7%	55.0%		45.0%	45.0%	45.0%	45.0%	45.0%	
Maximum Green (s)	34.0	34.0		22.0	60.0		48.0	48.0	48.0	48.0	48.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		39.2		64.0	60.0			48.0	48.0		48.0	
Actuated g/C Ratio		0.33		0.53	0.50			0.40	0.40		0.40	
v/c Ratio		0.45		0.50	0.46			0.59	0.47		0.54	
Control Delay		35.9		18.8	21.0			32.4	14.5		31.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		35.9		18.8	21.0			32.4	14.5		31.6	
LOS		D		B	C			C	B		C	
Approach Delay		35.9			20.1			24.2			31.6	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 25.4
 Intersection LOS: C
 Intersection Capacity Utilization 91.0%
 ICU Level of Service F
 Analysis Period (min) 15

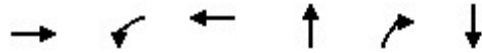
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	273	306	421	416	350	312
v/c Ratio	0.45	0.50	0.46	0.59	0.47	0.54
Control Delay	35.9	18.8	21.0	32.4	14.5	31.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	18.8	21.0	32.4	14.5	31.6
Queue Length 50th (m)	50.5	38.8	60.8	75.8	27.4	55.2
Queue Length 95th (m)	80.8	57.2	86.8	108.3	53.4	83.1
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	604	657	922	709	748	583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.47	0.46	0.59	0.47	0.54

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕	↗		↕		
Traffic Volume (vph)	5	250	2	288	342	54	12	379	329	42	246	5	
Future Volume (vph)	5	250	2	288	342	54	12	379	329	42	246	5	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.98			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1863		1825	1834			1796	1601		1843		
Flt Permitted		0.99		0.46	1.00			0.99	1.00		0.79		
Satd. Flow (perm)		1850		875	1834			1773	1601		1458		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	5	266	2	306	364	57	13	403	350	45	262	5	
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	108	0	1	0	
Lane Group Flow (vph)	0	273	0	306	417	0	0	416	242	0	311	0	
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		39.2		60.0	60.0			48.0	48.0		48.0		
Effective Green, g (s)		39.2		62.0	60.0			48.0	48.0		48.0		
Actuated g/C Ratio		0.33		0.52	0.50			0.40	0.40		0.40		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		604		600	917			709	640		583		
v/s Ratio Prot				c0.08	c0.23								
v/s Ratio Perm		0.15		0.18				c0.23	0.15		0.21		
v/c Ratio		0.45		0.51	0.45			0.59	0.38		0.53		
Uniform Delay, d1		31.9		17.8	19.4			28.2	25.4		27.5		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		2.4		0.7	1.6			3.5	1.7		3.5		
Delay (s)		34.3		18.6	21.0			31.8	27.1		31.0		
Level of Service		C		B	C			C	C		C		
Approach Delay (s)		34.3		20.0				29.7			31.0		
Approach LOS		C		B				C			C		
Intersection Summary													
HCM 2000 Control Delay			27.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			91.0%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	11	575	38	449	627	29	50	152	458	24	64	7
Future Volume (vph)	11	575	38	449	627	29	50	152	458	24	64	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.993				0.850		0.991	
Flt Protected		0.999		0.950				0.988			0.987	
Satd. Flow (prot)	0	3465	0	1755	3584	0	0	1826	1555	0	1806	0
Flt Permitted		0.936		0.281				0.890			0.875	
Satd. Flow (perm)	0	3247	0	519	3584	0	0	1644	1555	0	1601	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			7				487			3
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	12	612	40	478	667	31	53	162	487	26	68	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	664	0	478	698	0	0	215	487	0	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

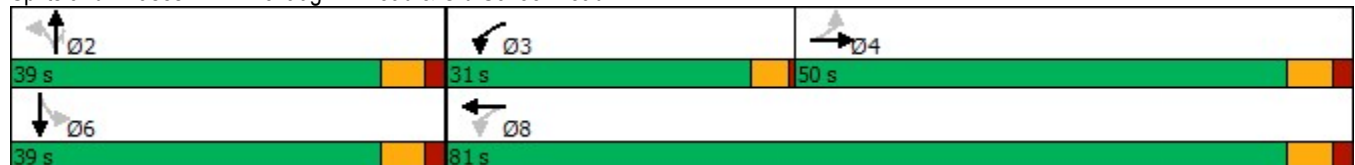
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	50.0	50.0		31.0	81.0		39.0	39.0	39.0	39.0	39.0	
Total Split (%)	41.7%	41.7%		25.8%	67.5%		32.5%	32.5%	32.5%	32.5%	32.5%	
Maximum Green (s)	44.0	44.0		27.0	75.0		33.0	33.0	33.0	33.0	33.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		21.5		45.9	41.6			16.5	16.5		16.5	
Actuated g/C Ratio		0.30		0.65	0.59			0.23	0.23		0.23	
v/c Ratio		0.67		0.74	0.33			0.56	0.66		0.27	
Control Delay		26.6		16.1	8.1			32.8	7.9		26.8	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		26.6		16.1	8.1			32.8	7.9		26.8	
LOS		C		B	A			C	A		C	
Approach Delay		26.6			11.4			15.5			26.8	
Approach LOS		C			B			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	71.1
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	16.9
Intersection LOS:	B
Intersection Capacity Utilization:	78.2%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	664	478	698	215	487	101
v/c Ratio	0.67	0.74	0.33	0.56	0.66	0.27
Control Delay	26.6	16.1	8.1	32.8	7.9	26.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	16.1	8.1	32.8	7.9	26.8
Queue Length 50th (m)	36.4	24.3	20.4	23.2	0.0	9.8
Queue Length 95th (m)	78.3	72.9	41.5	59.6	25.6	29.4
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2169	878	3383	822	1021	803
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.54	0.21	0.26	0.48	0.13

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	11	575	38	449	627	29	50	152	458	24	64	7
Future Volume (vph)	11	575	38	449	627	29	50	152	458	24	64	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3465		1755	3585			1825	1555		1806	
Flt Permitted		0.94		0.28	1.00			0.89	1.00		0.88	
Satd. Flow (perm)		3247		519	3585			1645	1555		1601	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	12	612	40	478	667	31	53	162	487	26	68	7
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	372	0	2	0
Lane Group Flow (vph)	0	660	0	478	695	0	0	215	115	0	99	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		21.8		41.6	41.6			16.5	16.5		16.5	
Effective Green, g (s)		21.8		43.6	41.6			16.5	16.5		16.5	
Actuated g/C Ratio		0.31		0.62	0.59			0.24	0.24		0.24	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1009		636	2127			387	366		376	
v/s Ratio Prot				c0.19	0.19							
v/s Ratio Perm		c0.20		0.28				c0.13	0.07		0.06	
v/c Ratio		0.65		0.75	0.33			0.56	0.31		0.26	
Uniform Delay, d1		20.9		8.1	7.2			23.6	22.1		21.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.5		5.0	0.1			1.7	0.5		0.4	
Delay (s)		22.4		13.1	7.3			25.3	22.6		22.2	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		22.4			9.6			23.4			22.2	
Approach LOS		C			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.0			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			70.1			Sum of lost time (s)			14.0			
Intersection Capacity Utilization			78.2%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	685	244	117	322	299	56	196	3279	456	37	1919	589
Future Volume (vph)	685	244	117	322	299	56	196	3279	456	37	1919	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.951			0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3308	0	1789	3533	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.296			0.327			0.077			0.084		
Satd. Flow (perm)	569	3308	0	616	3533	0	146	5043	1633	161	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			16				181			348
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	706	252	121	332	308	58	202	3380	470	38	1978	607
Shared Lane Traffic (%)												
Lane Group Flow (vph)	706	373	0	332	366	0	202	3380	470	38	1978	607
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

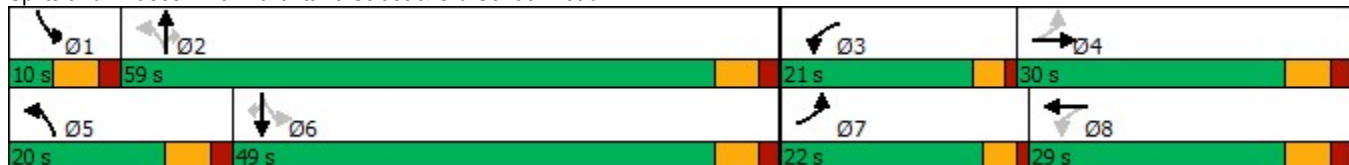


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	22.0	30.0		21.0	29.0		20.0	59.0	59.0	10.0	49.0	49.0
Total Split (%)	18.3%	25.0%		17.5%	24.2%		16.7%	49.2%	49.2%	8.3%	40.8%	40.8%
Maximum Green (s)	18.0	24.0		17.0	23.0		14.0	53.0	53.0	4.0	43.0	43.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	41.5	19.7		34.9	18.3		63.3	57.5	55.5	51.3	45.3	43.3
Actuated g/C Ratio	0.37	0.18		0.31	0.16		0.57	0.52	0.50	0.46	0.41	0.39
v/c Ratio	1.62	0.59		0.90	0.62		0.70	1.30	0.52	0.23	1.01	0.75
Control Delay	312.6	39.3		58.6	46.4		37.2	165.2	14.7	16.2	57.6	19.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	312.6	39.3		58.6	46.4		37.2	165.2	14.7	16.2	57.6	19.3
LOS	F	D		E	D		D	F	B	B	E	B
Approach Delay		218.1			52.2			141.3				48.1
Approach LOS		F			D			F				D

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	111.6
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.62
Intersection Signal Delay:	114.8
Intersection LOS:	F
Intersection Capacity Utilization:	128.0%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	706	373	332	366	202	3380	470	38	1978	607
v/c Ratio	1.62	0.59	0.90	0.62	0.70	1.30	0.52	0.23	1.01	0.75
Control Delay	312.6	39.3	58.6	46.4	37.2	165.2	14.7	16.2	57.6	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	312.6	39.3	58.6	46.4	37.2	165.2	14.7	16.2	57.6	19.3
Queue Length 50th (m)	~203.7	33.7	57.7	38.4	27.0	~365.1	43.5	3.5	~164.0	50.0
Queue Length 95th (m)	#278.2	49.0	#94.2	53.7	54.4	#414.6	79.2	8.9	#217.3	105.2
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	437	819	374	805	321	2597	902	163	1952	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.62	0.46	0.89	0.45	0.63	1.30	0.52	0.23	1.01	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.
































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			   		 	   	
Traffic Volume (vph)	685	244	117	322	299	56	196	3279	456	37	1919	589
Future Volume (vph)	685	244	117	322	299	56	196	3279	456	37	1919	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3309		1789	3534		1807	5043	1633	1825	4812	1541
Flt Permitted	0.30	1.00		0.33	1.00		0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	568	3309		617	3534		147	5043	1633	161	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	706	252	121	332	308	58	202	3380	470	38	1978	607
RTOR Reduction (vph)	0	51	0	0	13	0	0	0	93	0	0	208
Lane Group Flow (vph)	706	322	0	332	353	0	202	3380	377	38	1978	399
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	35.7	17.7		33.1	16.4		63.8	55.5	55.5	48.1	45.8	45.8
Effective Green, g (s)	39.7	19.7		33.1	18.4		65.8	57.5	55.5	52.1	47.8	45.8
Actuated g/C Ratio	0.35	0.17		0.29	0.16		0.58	0.50	0.49	0.46	0.42	0.40
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	417	570		350	569		288	2539	793	136	2014	618
v/s Ratio Prot	c0.30	0.10		0.14	0.10		c0.09	c0.67		0.01	0.41	
v/s Ratio Perm	0.29			c0.14			0.32		0.23	0.12		0.26
v/c Ratio	1.69	0.56		0.95	0.62		0.70	1.33	0.48	0.28	0.98	0.64
Uniform Delay, d1	33.1	43.3		36.3	44.6		29.0	28.4	19.6	25.8	32.8	27.6
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	322.1	1.3		34.5	2.0		7.5	151.9	2.0	1.1	16.3	5.1
Delay (s)	355.1	44.6		70.8	46.7		36.5	180.2	21.7	26.9	49.0	32.8
Level of Service	F	D		E	D		D	F	C	C	D	C
Approach Delay (s)		247.8			58.1			154.6			44.9	
Approach LOS		F			E			F			D	
Intersection Summary												
HCM 2000 Control Delay			124.5				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.31									
Actuated Cycle Length (s)			114.2				Sum of lost time (s)		16.0			
Intersection Capacity Utilization			128.0%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕				↕
Traffic Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32
Future Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				1.00
Frt		0.990			0.985			0.955				0.983
Flt Protected		0.997		0.950				0.996				0.993
Satd. Flow (prot)	0	5037	0	1825	5030	0	0	1787	0	0	1836	0
Flt Permitted		0.843		0.199				0.961				0.845
Satd. Flow (perm)	0	4259	0	382	5030	0	0	1724	0	0	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			17			34				10
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				2541.5
Travel Time (s)		14.1			73.0			15.5				114.4
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	51	847	62	223	797	86	41	345	193	42	202	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	960	0	223	883	0	0	579	0	0	279	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

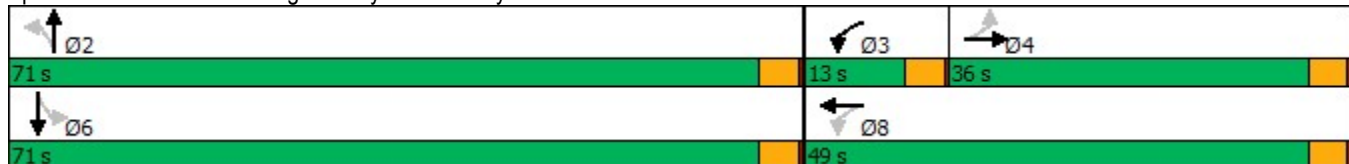


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		13.0	49.0		71.0	71.0		71.0	71.0	
Total Split (%)	30.0%	30.0%		10.8%	40.8%		59.2%	59.2%		59.2%	59.2%	
Maximum Green (s)	32.0	32.0		9.0	45.0		67.0	67.0		67.0	67.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		32.4		47.5	45.5			32.8			32.8	
Actuated g/C Ratio		0.38		0.55	0.53			0.38			0.38	
v/c Ratio		0.60		0.56	0.33			0.86			0.47	
Control Delay		25.0		18.1	13.2			36.1			21.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		25.0		18.1	13.2			36.1			21.4	
LOS		C		B	B			D			C	
Approach Delay		25.0			14.2			36.1			21.4	
Approach LOS		C			B			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	86.4
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	22.7
Intersection LOS:	C
Intersection Capacity Utilization:	77.0%
ICU Level of Service:	D
Analysis Period (min):	15

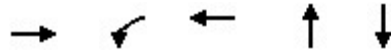
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	960	223	883	579	279
v/c Ratio	0.60	0.56	0.33	0.86	0.47
Control Delay	25.0	18.1	13.2	36.1	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	18.1	13.2	36.1	21.4
Queue Length 50th (m)	45.4	17.7	28.2	80.8	32.4
Queue Length 95th (m)	73.9	40.5	49.9	120.3	51.9
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1600	395	2656	1358	1226
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.56	0.33	0.43	0.23

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↕↔		↔	↕↕↕			↕			↕		
Traffic Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32	
Future Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frb, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Frt		0.99		1.00	0.99			0.95			0.98		
Flt Protected		1.00		0.95	1.00			1.00			0.99		
Satd. Flow (prot)		5040		1825	5032			1788			1835		
Flt Permitted		0.84		0.20	1.00			0.96			0.85		
Satd. Flow (perm)		4258		382	5032			1724			1563		
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)	51	847	62	223	797	86	41	345	193	42	202	35	
RTOR Reduction (vph)	0	6	0	0	8	0	0	21	0	0	6	0	
Lane Group Flow (vph)	0	954	0	223	875	0	0	558	0	0	273	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		32.4		45.5	45.5			32.8			32.8		
Effective Green, g (s)		32.4		47.5	45.5			32.8			32.8		
Actuated g/C Ratio		0.38		0.55	0.53			0.38			0.38		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		1598		395	2653			655			594		
v/s Ratio Prot				c0.07	0.17								
v/s Ratio Perm		c0.22		0.24				c0.32			0.17		
v/c Ratio		0.60		0.56	0.33			0.85			0.46		
Uniform Delay, d1		21.7		11.1	11.7			24.5			20.1		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		1.7		1.8	0.3			10.4			0.6		
Delay (s)		23.4		13.0	12.0			34.9			20.7		
Level of Service		C		B	B			C			C		
Approach Delay (s)		23.4			12.2			34.9			20.7		
Approach LOS		C			B			C			C		
Intersection Summary													
HCM 2000 Control Delay			21.2									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			86.3									Sum of lost time (s)	10.0
Intersection Capacity Utilization			77.0%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Future Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.968			0.967			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4884	0	1825	3480	0	1738	3389	0
Flt Permitted	0.104			0.150			0.532			0.176		
Satd. Flow (perm)	190	5036	0	277	4884	0	1022	3480	0	322	3389	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			62			31			44	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	51	1006	81	130	1179	316	138	477	134	234	275	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	1087	0	130	1495	0	138	611	0	234	370	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

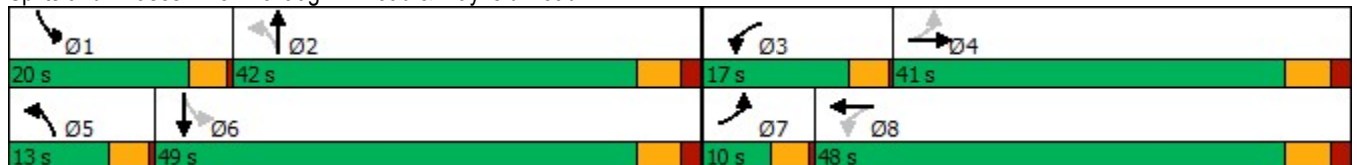
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	10.0	41.0		17.0	48.0		13.0	42.0		20.0	49.0	
Total Split (%)	8.3%	34.2%		14.2%	40.0%		10.8%	35.0%		16.7%	40.8%	
Maximum Green (s)	6.0	35.0		13.0	42.0		9.0	36.0		16.0	43.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	45.3	37.3		52.6	43.3		33.9	23.2		42.8	28.4	
Actuated g/C Ratio	0.43	0.36		0.50	0.42		0.33	0.22		0.41	0.27	
v/c Ratio	0.30	0.60		0.47	0.72		0.35	0.77		0.73	0.39	
Control Delay	20.4	30.2		21.1	28.6		22.2	43.1		34.9	27.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.4	30.2		21.1	28.6		22.2	43.1		34.9	27.9	
LOS	C	C		C	C		C	D		C	C	
Approach Delay		29.8			28.0			39.2			30.6	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 104.2
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 30.9
 Intersection LOS: C
 Intersection Capacity Utilization 77.9%
 ICU Level of Service D
 Analysis Period (min) 15

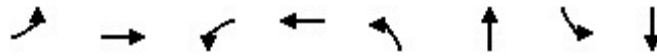
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	1087	130	1495	138	611	234	370
v/c Ratio	0.30	0.60	0.47	0.72	0.35	0.77	0.73	0.39
Control Delay	20.4	30.2	21.1	28.6	22.2	43.1	34.9	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	30.2	21.1	28.6	22.2	43.1	34.9	27.9
Queue Length 50th (m)	5.2	66.3	13.9	93.6	17.6	60.0	32.0	28.5
Queue Length 95th (m)	13.1	95.2	28.4	126.9	29.7	79.7	51.0	41.0
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	172	1810	327	2065	406	1234	352	1438
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.60	0.40	0.72	0.34	0.50	0.66	0.26

Intersection Summary

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Future Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5035		1755	4886		1825	3480		1738	3390	
Flt Permitted	0.10	1.00		0.15	1.00		0.53	1.00		0.18	1.00	
Satd. Flow (perm)	191	5035		277	4886		1021	3480		323	3390	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	1006	81	130	1179	316	138	477	134	234	275	95
RTOR Reduction (vph)	0	7	0	0	36	0	0	24	0	0	32	0
Lane Group Flow (vph)	51	1080	0	130	1459	0	138	587	0	234	338	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.9	38.3		51.9	43.3		31.9	23.2		41.1	28.4	
Effective Green, g (s)	42.9	38.3		51.9	43.3		31.9	23.2		41.1	28.4	
Actuated g/C Ratio	0.41	0.36		0.49	0.41		0.30	0.22		0.39	0.27	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	145	1836		272	2014		376	768		313	916	
v/s Ratio Prot	0.02	0.21		c0.04	c0.30		0.03	0.17		c0.10	0.10	
v/s Ratio Perm	0.13			0.19			0.08			c0.19		
v/c Ratio	0.35	0.59		0.48	0.72		0.37	0.76		0.75	0.37	
Uniform Delay, d1	20.4	27.0		16.4	25.8		27.5	38.3		24.2	31.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	1.4		1.3	2.3		0.6	4.5		9.4	0.3	
Delay (s)	21.8	28.4		17.7	28.2		28.1	42.9		33.6	31.3	
Level of Service	C	C		B	C		C	D		C	C	
Approach Delay (s)		28.1			27.3			40.2			32.2	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Future Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.160			0.950			0.127			0.222		
Satd. Flow (perm)	296	4995	1538	3344	5092	1562	239	3614	1486	426	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121			145			240			545
Link Speed (k/h)		70			70			70				70
Link Distance (m)		142.1			749.9			381.1				609.4
Travel Time (s)		7.3			38.6			19.6				31.3
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
Shared Lane Traffic (%)												
Lane Group Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	24.0	27.0	27.0	20.0	53.0	53.0	17.0	50.0	50.0
Total Split (%)	28.1%	30.4%	30.4%	17.8%	20.0%	20.0%	14.8%	39.3%	39.3%	12.6%	37.0%	37.0%
Maximum Green (s)	33.0	34.0	34.0	19.0	20.0	20.0	16.0	46.0	46.0	13.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

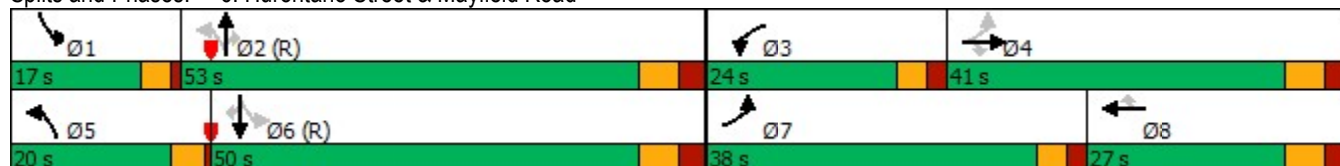


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Act Effect Green (s)	62.0	34.0	34.0	19.0	20.0	20.0	68.0	46.0	46.0	63.0	43.0	45.0	
Actuated g/C Ratio	0.46	0.25	0.25	0.14	0.15	0.15	0.50	0.34	0.34	0.47	0.32	0.33	
v/c Ratio	1.39	0.55	0.25	0.66	1.19	0.52	0.71	0.64	0.45	0.74	0.81	1.15	
Control Delay	218.6	45.8	8.0	62.1	145.9	19.7	35.8	40.5	10.0	33.6	49.0	98.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	218.6	45.8	8.0	62.1	145.9	19.7	35.8	40.5	10.0	33.6	49.0	98.9	
LOS	F	D	A	E	F	B	D	D	A	C	D	F	
Approach Delay		123.7			110.3				32.7			70.3	
Approach LOS		F			F				C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	120
Control Type:	Pretimed
Maximum v/c Ratio:	1.39
Intersection Signal Delay:	84.0
Intersection LOS:	F
Intersection Capacity Utilization	110.2%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
v/c Ratio	1.39	0.55	0.25	0.66	1.19	0.52	0.71	0.64	0.45	0.74	0.81	1.15
Control Delay	218.6	45.8	8.0	62.1	145.9	19.7	35.8	40.5	10.0	33.6	49.0	98.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	218.6	45.8	8.0	62.1	145.9	19.7	35.8	40.5	10.0	33.6	49.0	98.9
Queue Length 50th (m)	~237.6	58.9	0.0	41.3	~104.9	9.5	34.2	93.1	11.0	39.2	116.3	~212.5
Queue Length 95th (m)	#312.3	72.3	15.2	57.2	#133.1	32.9	62.0	114.8	34.8	#58.6	141.7	#292.2
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	514	1258	477	479	754	354	327	1231	664	354	1118	881
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.55	0.25	0.66	1.19	0.52	0.71	0.64	0.45	0.74	0.81	1.15

































Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Future Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.13	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	239	3614	1486	426	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
RTOR Reduction (vph)	0	0	91	0	0	124	0	0	158	0	0	363
Lane Group Flow (vph)	714	691	30	314	895	61	231	790	142	261	904	647
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	34.0	34.0	19.0	20.0	20.0	62.0	46.0	46.0	56.0	43.0	43.0
Effective Green, g (s)	60.0	34.0	34.0	19.0	20.0	20.0	65.0	46.0	46.0	60.0	43.0	45.0
Actuated g/C Ratio	0.44	0.25	0.25	0.14	0.15	0.15	0.48	0.34	0.34	0.44	0.32	0.33
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	479	754	231	321	1231	506	344	1118	518
v/s Ratio Prot	c0.36	0.14		0.09	0.18		c0.10	0.22		c0.08	0.26	
v/s Ratio Perm	c0.26		0.02			0.04	0.25		0.10	0.25		c0.42
v/c Ratio	1.40	0.55	0.08	0.66	1.19	0.27	0.72	0.64	0.28	0.76	0.81	1.25
Uniform Delay, d1	39.8	43.8	38.5	54.9	57.5	51.0	25.6	37.5	32.4	26.0	42.2	45.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	192.8	1.7	0.4	6.8	97.3	2.8	13.0	2.6	1.4	14.5	6.3	127.1
Delay (s)	232.6	45.6	38.9	61.8	154.8	53.8	38.7	40.1	33.8	40.5	48.6	172.1
Level of Service	F	D	D	E	F	D	D	D	C	D	D	F
Approach Delay (s)		132.6			120.4			38.4			105.0	
Approach LOS		F			F			D			F	
Intersection Summary												
HCM 2000 Control Delay			101.2				HCM 2000 Level of Service		F			
HCM 2000 Volume to Capacity ratio			1.34									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)		21.0			
Intersection Capacity Utilization			110.2%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	299	8	238	243	52	16	230	358	43	218	10
Future Volume (vph)	2	299	8	238	243	52	16	230	358	43	218	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.974				0.850		0.995	
Flt Protected				0.950				0.997			0.992	
Satd. Flow (prot)	0	1913	0	1772	1810	0	0	1830	1585	0	1789	0
Flt Permitted		0.998		0.546				0.974			0.924	
Satd. Flow (perm)	0	1910	0	1018	1810	0	0	1788	1585	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			32				381			6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	318	9	253	259	55	17	245	381	46	232	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	329	0	253	314	0	0	262	381	0	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

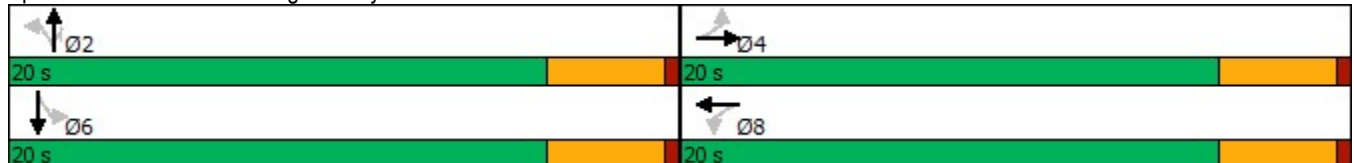


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		13.0		13.0	13.0			16.2	16.2		16.2	
Actuated g/C Ratio		0.35		0.35	0.35			0.44	0.44		0.44	
v/c Ratio		0.49		0.71	0.48			0.34	0.42		0.40	
Control Delay		11.9		23.9	10.9			9.5	3.0		10.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		11.9		23.9	10.9			9.5	3.0		10.1	
LOS		B		C	B			A	A		B	
Approach Delay		11.9			16.7			5.6			10.1	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 37.2
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 10.9
 Intersection Capacity Utilization 73.1%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

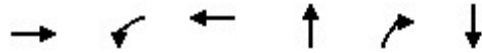
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	329	253	314	262	381	289
v/c Ratio	0.49	0.71	0.48	0.34	0.42	0.40
Control Delay	11.9	23.9	10.9	9.5	3.0	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	23.9	10.9	9.5	3.0	10.1
Queue Length 50th (m)	14.9	12.8	12.7	11.3	0.0	12.6
Queue Length 95th (m)	29.2	#37.7	26.4	23.9	10.5	26.7
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	831	442	804	776	903	727
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.57	0.39	0.34	0.42	0.40

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Volume (vph)	2	299	8	238	243	52	16	230	358	43	218	10
Future Volume (vph)	2	299	8	238	243	52	16	230	358	43	218	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1913		1772	1809			1829	1585		1789	
Flt Permitted		1.00		0.55	1.00			0.97	1.00		0.92	
Satd. Flow (perm)		1910		1019	1809			1787	1585		1666	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	318	9	253	259	55	17	245	381	46	232	11
RTOR Reduction (vph)	0	3	0	0	21	0	0	0	216	0	3	0
Lane Group Flow (vph)	0	326	0	253	293	0	0	262	165	0	286	0
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2		6		
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		13.0		13.0	13.0			16.1	16.1		16.1	
Effective Green, g (s)		13.0		13.0	13.0			16.1	16.1		16.1	
Actuated g/C Ratio		0.35		0.35	0.35			0.43	0.43		0.43	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		669		357	633			775	687		722	
v/s Ratio Prot					0.16							
v/s Ratio Perm		0.17		c0.25				0.15	0.10		c0.17	
v/c Ratio		0.49		0.71	0.46			0.34	0.24		0.40	
Uniform Delay, d1		9.4		10.4	9.3			7.0	6.6		7.2	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.6		6.3	0.5			1.2	0.8		1.6	
Delay (s)		10.0		16.7	9.9			8.1	7.5		8.8	
Level of Service		B		B	A			A	A		A	
Approach Delay (s)		10.0			12.9			7.7			8.8	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.9									A
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			37.1								8.0	
Intersection Capacity Utilization			73.1%									D
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↖	↕↕			↕	↗		↕↔	
Traffic Volume (vph)	41	830	39	299	461	43	42	112	462	57	156	29
Future Volume (vph)	41	830	39	299	461	43	42	112	462	57	156	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.987				0.850		0.984	
Flt Protected		0.998		0.950				0.986			0.988	
Satd. Flow (prot)	0	3567	0	1789	3477	0	0	1867	1617	0	1833	0
Flt Permitted		0.901		0.150				0.807			0.873	
Satd. Flow (perm)	0	3221	0	283	3477	0	0	1528	1617	0	1619	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			18				396		7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	44	883	41	318	490	46	45	119	491	61	166	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	968	0	318	536	0	0	164	491	0	258	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

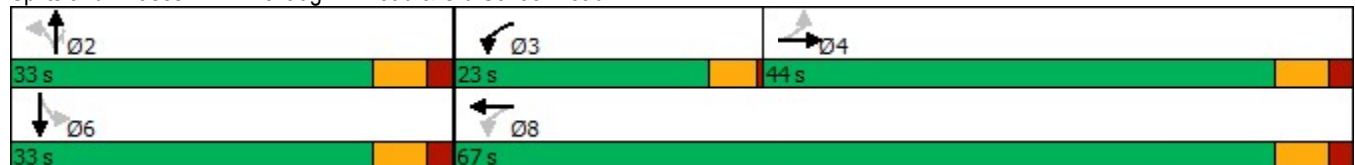


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	44.0	44.0		23.0	67.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	44.0%	44.0%		23.0%	67.0%		33.0%	33.0%	33.0%	33.0%	33.0%	
Maximum Green (s)	38.0	38.0		19.0	61.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		29.4		48.9	46.8			17.8	17.8		17.8	
Actuated g/C Ratio		0.38		0.63	0.61			0.23	0.23		0.23	
v/c Ratio		0.79		0.73	0.25			0.47	0.73		0.68	
Control Delay		27.6		23.4	7.4			32.9	13.8		38.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		27.6		23.4	7.4			32.9	13.8		38.6	
LOS		C		C	A			C	B		D	
Approach Delay		27.6			13.4			18.6			38.6	
Approach LOS		C			B			B			D	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	77.3
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	22.1
Intersection LOS:	C
Intersection Capacity Utilization:	82.1%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	968	318	536	164	491	258
v/c Ratio	0.79	0.73	0.25	0.47	0.73	0.68
Control Delay	27.6	23.4	7.4	32.9	13.8	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	23.4	7.4	32.9	13.8	38.6
Queue Length 50th (m)	63.2	21.3	16.2	21.0	11.5	34.0
Queue Length 95th (m)	110.4	58.8	30.4	44.6	48.6	67.6
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1686	572	2787	567	849	605
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.56	0.19	0.29	0.58	0.43

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	41	830	39	299	461	43	42	112	462	57	156	29
Future Volume (vph)	41	830	39	299	461	43	42	112	462	57	156	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3565		1789	3478			1868	1617		1833	
Flt Permitted		0.90		0.15	1.00			0.81	1.00		0.87	
Satd. Flow (perm)		3220		283	3478			1529	1617		1618	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	44	883	41	318	490	46	45	119	491	61	166	31
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	304	0	5	0
Lane Group Flow (vph)	0	965	0	318	529	0	0	164	187	0	253	0
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		29.6		46.8	46.8			17.8	17.8		17.8	
Effective Green, g (s)		29.6		46.8	46.8			17.8	17.8		17.8	
Actuated g/C Ratio		0.39		0.61	0.61			0.23	0.23		0.23	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1244		432	2124			355	375		375	
v/s Ratio Prot				c0.13	0.15							
v/s Ratio Perm		0.30		c0.32				0.11	0.12		c0.16	
v/c Ratio		0.78		0.74	0.25			0.46	0.50		0.67	
Uniform Delay, d1		20.6		12.9	6.8			25.3	25.5		26.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		3.1		6.4	0.1			1.0	1.0		4.7	
Delay (s)		23.7		19.3	6.9			26.2	26.6		31.5	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		23.7			11.5			26.5			31.5	
Approach LOS		C			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			21.3		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			76.6		Sum of lost time (s)			16.0				
Intersection Capacity Utilization			82.1%		ICU Level of Service				E			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	593	255	548	395	211	44	143	1929	185	36	2621	318
Future Volume (vph)	593	255	548	395	211	44	143	1929	185	36	2621	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.898			0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3215	0	1722	3397	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.494			0.222			0.068			0.070		
Satd. Flow (perm)	913	3215	0	402	3397	0	123	4445	1471	119	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			17				147			163
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	638	274	589	425	227	47	154	2074	199	39	2818	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	638	863	0	425	274	0	154	2074	199	39	2818	342
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	30.0		19.0	24.0		8.0	71.0	71.0	63.0	63.0	63.0
Total Split (%)	20.8%	25.0%		15.8%	20.0%		6.7%	59.2%	59.2%	52.5%	52.5%	52.5%
Maximum Green (s)	21.0	22.0		15.0	16.0		4.0	63.0	63.0	55.0	55.0	55.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	47.0	24.0		39.0	16.0		69.0	63.0	63.0	57.0	57.0	55.0
Actuated g/C Ratio	0.39	0.20		0.32	0.13		0.58	0.52	0.52	0.48	0.48	0.46
v/c Ratio	1.23	1.56dr		1.34	0.59		1.03	0.89	0.24	0.70	1.18	0.41
Control Delay	151.1	156.0		201.3	51.4		105.1	31.4	5.2	85.9	114.6	12.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	151.1	156.0		201.3	51.4		105.1	31.4	5.2	85.9	114.6	12.4
LOS	F	F		F	D		F	C	A	F	F	B
Approach Delay		153.9			142.5			33.9			103.3	
Approach LOS		F			F			C			F	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.34
 Intersection Signal Delay: 95.0 Intersection LOS: F
 Intersection Capacity Utilization 121.8% ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	638	863	425	274	154	2074	199	39	2818	342
v/c Ratio	1.23	1.56dr	1.34	0.59	1.03	0.89	0.24	0.70	1.18	0.41
Control Delay	151.1	156.0	201.3	51.4	105.1	31.4	5.2	85.9	114.6	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	151.1	156.0	201.3	51.4	105.1	31.4	5.2	85.9	114.6	12.4
Queue Length 50th (m)	~185.5	~125.8	~112.7	30.3	~21.5	153.4	5.8	7.0	~290.8	25.6
Queue Length 95th (m)	#254.6	#165.7	#174.9	44.5	#64.6	177.5	17.5	#28.3	#317.3	48.3
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	518	698	317	467	150	2333	842	56	2395	836
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	1.24	1.34	0.59	1.03	0.89	0.24	0.70	1.18	0.41























Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	593	255	548	395	211	44	143	1929	185	36	2621	318	
Future Volume (vph)	593	255	548	395	211	44	143	1929	185	36	2621	318	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.90		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	3214		1722	3398		1722	4445	1471	1615	5043	1633	
Flt Permitted	0.49	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	913	3214		403	3398		123	4445	1471	119	5043	1633	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	638	274	589	425	227	47	154	2074	199	39	2818	342	
RTOR Reduction (vph)	0	55	0	0	15	0	0	0	70	0	0	88	
Lane Group Flow (vph)	638	808	0	425	259	0	154	2074	129	39	2818	254	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8		5	2			6		
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	41.0	22.0		31.0	16.0		63.0	63.0	63.0	55.0	55.0	55.0	
Effective Green, g (s)	43.0	24.0		35.0	16.0		65.0	63.0	63.0	57.0	57.0	55.0	
Actuated g/C Ratio	0.36	0.20		0.29	0.13		0.54	0.52	0.52	0.48	0.48	0.46	
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0	
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)	488	642		304	453		146	2333	772	56	2395	748	
v/s Ratio Prot	c0.25	c0.25		c0.20	0.08		c0.05	0.47			c0.56		
v/s Ratio Perm	0.22			0.21			0.52		0.09	0.33		0.16	
v/c Ratio	1.31	1.56dr		1.40	0.57		1.05	0.89	0.17	0.70	1.18	0.34	
Uniform Delay, d1	35.6	48.0		38.3	48.8		32.2	25.4	14.8	24.7	31.5	20.8	
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	152.5	128.6		197.9	1.7		89.8	4.6	0.1	31.4	84.2	0.3	
Delay (s)	188.2	176.6		236.3	50.5		122.0	30.0	14.9	56.1	115.7	21.1	
Level of Service	F	F		F	D		F	C	B	E	F	C	
Approach Delay (s)		181.5			163.5			34.6			104.9		
Approach LOS		F			F			C			F		
Intersection Summary													
HCM 2000 Control Delay			103.0									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.27										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	18.0
Intersection Capacity Utilization			121.8%									ICU Level of Service	H
Analysis Period (min)			15										
dr Defacto Right Lane. Recode with 1 though lane as a right lane.													
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	48	754	55	205	652	29	27	302	172	100	469	42
Future Volume (vph)	48	754	55	205	652	29	27	302	172	100	469	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994			0.954			0.991	
Flt Protected		0.997		0.950				0.997			0.992	
Satd. Flow (prot)	0	4861	0	1659	4941	0	0	1758	0	0	1804	0
Flt Permitted		0.855		0.184				0.955			0.785	
Satd. Flow (perm)	0	4169	0	321	4941	0	0	1684	0	0	1427	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			33			5	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	48	762	56	207	659	29	27	305	174	101	474	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	866	0	207	688	0	0	506	0	0	617	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

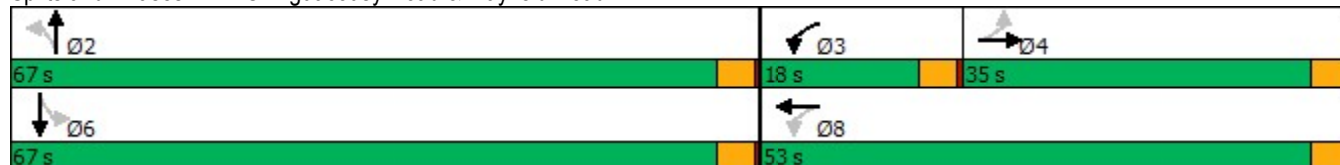


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0		18.0	53.0		67.0	67.0		67.0	67.0	
Total Split (%)	29.2%	29.2%		15.0%	44.2%		55.8%	55.8%		55.8%	55.8%	
Maximum Green (s)	31.0	31.0		14.0	49.0		63.0	63.0		63.0	63.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		33.1		49.6	49.6			47.5			47.5	
Actuated g/C Ratio		0.31		0.47	0.47			0.45			0.45	
v/c Ratio		0.66		0.67	0.29			0.65			0.96	
Control Delay		36.1		31.5	19.0			24.5			53.3	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		36.1		31.5	19.0			24.5			53.3	
LOS		D		C	B			C			D	
Approach Delay		36.1			21.9			24.5			53.3	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	105.2
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	33.3
Intersection LOS:	C
Intersection Capacity Utilization:	103.4%
ICU Level of Service:	G
Analysis Period (min):	15

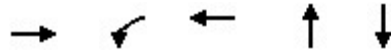
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	866	207	688	506	617
v/c Ratio	0.66	0.67	0.29	0.65	0.96
Control Delay	36.1	31.5	19.0	24.5	53.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	31.5	19.0	24.5	53.3
Queue Length 50th (m)	57.5	25.5	31.0	72.3	116.1
Queue Length 95th (m)	85.6	#54.4	49.8	104.3	#175.4
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1318	331	2334	1034	867
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.66	0.63	0.29	0.49	0.71

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔		↔	↔↕↔			↕			↕	
Traffic Volume (vph)	48	754	55	205	652	29	27	302	172	100	469	42
Future Volume (vph)	48	754	55	205	652	29	27	302	172	100	469	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frt		0.99		1.00	0.99			0.95			0.99	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		4864		1659	4940			1758			1803	
Flt Permitted		0.86		0.18	1.00			0.95			0.79	
Satd. Flow (perm)		4173		322	4940			1683			1428	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	48	762	56	207	659	29	27	305	174	101	474	42
RTOR Reduction (vph)	0	6	0	0	4	0	0	18	0	0	3	0
Lane Group Flow (vph)	0	860	0	207	684	0	0	488	0	0	614	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.1		49.6	49.6			47.5			47.5	
Effective Green, g (s)		33.1		49.6	49.6			47.5			47.5	
Actuated g/C Ratio		0.31		0.47	0.47			0.45			0.45	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1314		310	2331			760			645	
v/s Ratio Prot				c0.08	0.14							
v/s Ratio Perm		0.21		c0.23				0.29			c0.43	
v/c Ratio		0.65		0.67	0.29			0.64			0.95	
Uniform Delay, d1		31.1		18.6	17.0			22.2			27.7	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		2.6		5.4	0.3			1.9			24.1	
Delay (s)		33.6		23.9	17.3			24.1			51.8	
Level of Service		C		C	B			C			D	
Approach Delay (s)		33.6			18.9			24.1			51.8	
Approach LOS		C			B			C			D	
Intersection Summary												
HCM 2000 Control Delay			31.3									C
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			105.1						12.0			
Intersection Capacity Utilization			103.4%									G
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	1020	123	142	804	137	54	374	106	338	683	136
Future Volume (vph)	43	1020	123	142	804	137	54	374	106	338	683	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.978			0.967			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4754	0	1644	3446	0	1690	3444	0
Flt Permitted	0.286			0.105			0.337			0.292		
Satd. Flow (perm)	549	4889	0	189	4754	0	583	3446	0	519	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			34			29			27	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	44	1041	126	145	820	140	55	382	108	345	697	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	1167	0	145	960	0	55	490	0	345	836	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	40.0	40.0		16.0	56.0		36.0	36.0		28.0	64.0	
Total Split (%)	33.3%	33.3%		13.3%	46.7%		30.0%	30.0%		23.3%	53.3%	
Maximum Green (s)	34.0	34.0		12.0	50.0		30.0	30.0		24.0	58.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	34.0	34.0		52.0	50.0		30.0	30.0		60.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.43	0.42		0.25	0.25		0.50	0.48	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

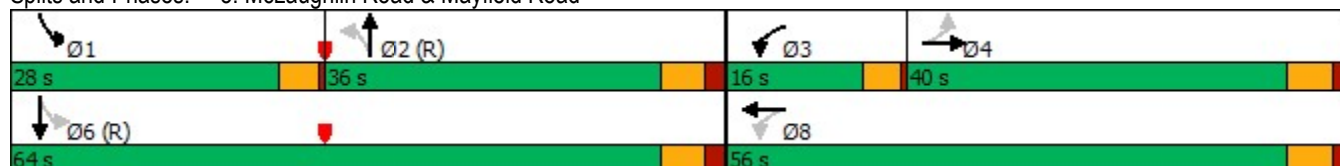


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.28	0.83		0.62	0.48		0.38	0.55		0.70	0.50	
Control Delay	39.7	46.0		35.2	25.5		46.4	39.5		27.3	21.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.7	46.0		35.2	25.5		46.4	39.5		27.3	21.6	
LOS	D	D		D	C		D	D		C	C	
Approach Delay		45.8			26.8			40.2			23.3	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	33.3
Intersection LOS:	C
Intersection Capacity Utilization	79.4%
ICU Level of Service	D
Analysis Period (min)	15

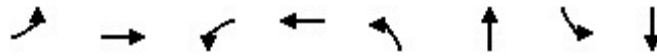
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	1167	145	960	55	490	345	836
v/c Ratio	0.28	0.83	0.62	0.48	0.38	0.55	0.70	0.50
Control Delay	39.7	46.0	35.2	25.5	46.4	39.5	27.3	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	46.0	35.2	25.5	46.4	39.5	27.3	21.6
Queue Length 50th (m)	8.1	93.3	20.8	57.2	10.8	49.9	49.4	66.2
Queue Length 95th (m)	19.2	111.2	38.3	69.6	24.1	67.0	72.4	83.5
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	155	1398	233	2000	145	883	493	1678
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.83	0.62	0.48	0.38	0.55	0.70	0.50

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕		↖	↕↕	
Traffic Volume (vph)	43	1020	123	142	804	137	54	374	106	338	683	136
Future Volume (vph)	43	1020	123	142	804	137	54	374	106	338	683	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4888		1706	4754		1644	3445		1690	3444	
Flt Permitted	0.29	1.00		0.11	1.00		0.34	1.00		0.29	1.00	
Satd. Flow (perm)	549	4888		189	4754		584	3445		519	3444	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	44	1041	126	145	820	140	55	382	108	345	697	139
RTOR Reduction (vph)	0	13	0	0	20	0	0	22	0	0	14	0
Lane Group Flow (vph)	44	1154	0	145	940	0	55	468	0	345	822	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		50.0	50.0		30.0	30.0		58.0	58.0	
Effective Green, g (s)	34.0	34.0		50.0	50.0		30.0	30.0		58.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.42	0.42		0.25	0.25		0.48	0.48	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	155	1384		230	1980		146	861		485	1664	
v/s Ratio Prot		c0.24		c0.06	0.20			0.14		c0.14	0.24	
v/s Ratio Perm	0.08			0.20			0.09			c0.20		
v/c Ratio	0.28	0.83		0.63	0.47		0.38	0.54		0.71	0.49	
Uniform Delay, d1	33.5	40.4		25.8	25.5		37.3	39.1		21.3	21.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.5	6.0		12.4	0.8		7.3	2.5		8.6	1.1	
Delay (s)	38.1	46.4		38.2	26.3		44.5	41.5		29.9	22.1	
Level of Service	D	D		D	C		D	D		C	C	
Approach Delay (s)		46.1			27.8			41.8			24.4	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	1020	130	229	646	179	97	504	233	384	1198	363
Future Volume (vph)	272	1020	130	229	646	179	97	504	233	384	1198	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98	1.00		0.97			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.194			0.950			0.137			0.254		
Satd. Flow (perm)	355	4902	1508	3329	4948	1395	260	3476	1467	456	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			172			217			268
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	289	1085	138	244	687	190	103	536	248	409	1274	386
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	1085	138	244	687	190	103	536	248	409	1274	386
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	33.0	49.0	49.0	21.0	37.0	37.0	12.0	47.0	47.0	43.0	78.0	78.0
Total Split (%)	20.6%	30.6%	30.6%	13.1%	23.1%	23.1%	7.5%	29.4%	29.4%	26.9%	48.8%	48.8%
Maximum Green (s)	28.0	42.0	42.0	16.0	30.0	30.0	8.0	40.0	40.0	39.0	71.0	71.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	67.0	42.0	42.0	16.0	30.0	30.0	51.0	40.0	40.0	86.0	71.0	71.0
Actuated g/C Ratio	0.42	0.26	0.26	0.10	0.19	0.19	0.32	0.25	0.25	0.54	0.44	0.44
v/c Ratio	0.71	0.84	0.29	0.73	0.74	0.47	0.64	0.62	0.47	0.74	0.81	0.46
Control Delay	43.8	63.1	11.9	83.4	66.9	14.2	45.6	56.8	11.9	33.3	43.7	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	63.1	11.9	83.4	66.9	14.2	45.6	56.8	11.9	33.3	43.7	10.6
LOS	D	E	B	F	E	B	D	E	B	C	D	B
Approach Delay		54.7			61.6			43.0			35.5	
Approach LOS		D			E			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	47.1
Intersection LOS:	D
Intersection Capacity Utilization	85.2%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	289	1085	138	244	687	190	103	536	248	409	1274	386
v/c Ratio	0.71	0.84	0.29	0.73	0.74	0.47	0.64	0.62	0.47	0.74	0.81	0.46
Control Delay	43.8	63.1	11.9	83.4	66.9	14.2	45.6	56.8	11.9	33.3	43.7	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	63.1	11.9	83.4	66.9	14.2	45.6	56.8	11.9	33.3	43.7	10.6
Queue Length 50th (m)	63.7	120.6	4.6	39.5	76.4	4.8	15.7	80.2	7.6	77.2	183.5	23.0
Queue Length 95th (m)	91.9	138.7	22.4	54.8	91.9	28.4	#31.5	100.3	32.9	112.1	213.0	50.4
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	407	1286	483	334	927	401	160	869	529	549	1572	839
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.84	0.29	0.73	0.74	0.47	0.64	0.62	0.47	0.74	0.81	0.46

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

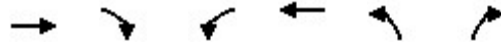
6: Hurontario Street & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	1020	130	229	646	179	97	504	233	384	1198	363
Future Volume (vph)	272	1020	130	229	646	179	97	504	233	384	1198	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1706	3544	1557
Flt Permitted	0.19	1.00	1.00	0.95	1.00	1.00	0.14	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)	354	4902	1508	3340	4948	1395	261	3476	1467	456	3544	1557
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	289	1085	138	244	687	190	103	536	248	409	1274	386
RTOR Reduction (vph)	0	0	88	0	0	140	0	0	163	0	0	149
Lane Group Flow (vph)	289	1085	50	244	687	50	103	536	85	409	1274	237
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	63.0	42.0	42.0	16.0	30.0	30.0	48.0	40.0	40.0	83.0	71.0	71.0
Effective Green, g (s)	65.0	42.0	42.0	16.0	30.0	30.0	48.0	40.0	40.0	83.0	71.0	71.0
Actuated g/C Ratio	0.41	0.26	0.26	0.10	0.19	0.19	0.30	0.25	0.25	0.52	0.44	0.44
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	403	1286	395	334	927	261	155	869	366	541	1572	690
v/s Ratio Prot	c0.13	c0.22		0.07	0.14		0.03	0.15		c0.18	c0.36	
v/s Ratio Perm	0.16		0.03			0.04	0.17		0.06	0.21		0.15
v/c Ratio	0.72	0.84	0.13	0.73	0.74	0.19	0.66	0.62	0.23	0.76	0.81	0.34
Uniform Delay, d1	35.4	55.9	45.0	69.9	61.3	54.8	42.5	53.2	47.8	26.7	38.7	29.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.5	6.9	0.7	13.2	5.3	1.6	20.3	3.3	1.5	9.5	4.6	1.4
Delay (s)	45.9	62.8	45.7	83.1	66.7	56.4	62.8	56.5	49.3	36.2	43.3	30.6
Level of Service	D	E	D	F	E	E	E	E	D	D	D	C
Approach Delay (s)		58.0			68.5			55.2			39.5	
Approach LOS		E			E			E			D	
Intersection Summary												
HCM 2000 Control Delay			52.8	HCM 2000 Level of Service				D				
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			160.0	Sum of lost time (s)				23.0				
Intersection Capacity Utilization			85.2%	ICU Level of Service				E				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	666	37	21	471	65	34
Future Volume (vph)	666	37	21	471	65	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.992				0.954	
Fl _t Protected				0.998	0.968	
Satd. Flow (prot)	3550	0	0	3571	1739	0
Fl _t Permitted				0.998	0.968	
Satd. Flow (perm)	3550	0	0	3571	1739	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	666	37	21	471	65	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	703	0	0	492	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	666	37	21	471	65	34
Future Volume (Veh/h)	666	37	21	471	65	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	666	37	21	471	65	34
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			703		962	352
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			703		962	352
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		74	95
cM capacity (veh/h)			890		248	645
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	444	259	178	314	99	
Volume Left	0	0	21	0	65	
Volume Right	0	37	0	0	34	
cSH	1700	1700	890	1700	314	
Volume to Capacity	0.26	0.15	0.02	0.18	0.32	
Queue Length 95th (m)	0.0	0.0	0.6	0.0	10.0	
Control Delay (s)	0.0	0.0	1.3	0.0	21.6	
Lane LOS			A	C		
Approach Delay (s)	0.0		0.5		21.6	
Approach LOS					C	
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			40.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	400	76	91	156	28	29	596	56	12	553	6
Future Volume (vph)	18	400	76	91	156	28	29	596	56	12	553	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.979			0.986			0.988			0.998	
Fl _t Protected		0.998			0.984			0.998			0.999	
Satd. Flow (prot)	0	1840	0	0	1827	0	0	3529	0	0	3568	0
Fl _t Permitted		0.982			0.612			0.914			0.937	
Satd. Flow (perm)	0	1811	0	0	1137	0	0	3232	0	0	3346	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			10			13			1	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	400	76	91	156	28	29	596	56	12	553	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	494	0	0	275	0	0	681	0	0	571	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

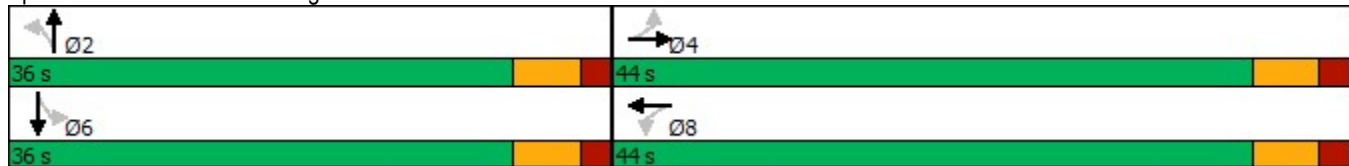


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	44.0	44.0		44.0	44.0		36.0	36.0		36.0	36.0	
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%	45.0%	
Maximum Green (s)	38.0	38.0		38.0	38.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.5			22.5			30.3			30.3	
Actuated g/C Ratio		0.35			0.35			0.47			0.47	
v/c Ratio		0.78			0.69			0.45			0.37	
Control Delay		26.9			26.6			14.0			13.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.9			26.6			14.0			13.3	
LOS		C			C			B			B	
Approach Delay		26.9			26.6			14.0			13.3	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	65
Natural Cycle:	45
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	18.7
Intersection LOS:	B
Intersection Capacity Utilization:	96.5%
ICU Level of Service:	F
Analysis Period (min):	15

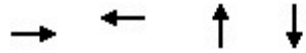
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024

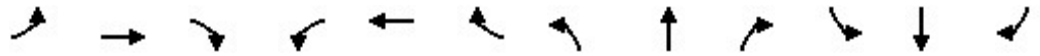


Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	494	275	681	571
v/c Ratio	0.78	0.69	0.45	0.37
Control Delay	26.9	26.6	14.0	13.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.9	26.6	14.0	13.3
Queue Length 50th (m)	49.7	26.4	26.7	21.8
Queue Length 95th (m)	78.8	48.7	52.5	43.3
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	1077	676	1515	1562
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.41	0.45	0.37
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	400	76	91	156	28	29	596	56	12	553	6
Future Volume (vph)	18	400	76	91	156	28	29	596	56	12	553	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.99			0.99			1.00	
Flt Protected		1.00			0.98			1.00			1.00	
Satd. Flow (prot)		1841			1827			3527			3569	
Flt Permitted		0.98			0.61			0.91			0.94	
Satd. Flow (perm)		1811			1137			3230			3349	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	400	76	91	156	28	29	596	56	12	553	6
RTOR Reduction (vph)	0	10	0	0	7	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	484	0	0	268	0	0	674	0	0	570	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)		22.5			22.5			30.3			30.3	
Effective Green, g (s)		22.5			22.5			30.3			30.3	
Actuated g/C Ratio		0.35			0.35			0.47			0.47	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		628			394			1510			1565	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.24			c0.21			0.17	
v/c Ratio		0.77			0.68			0.45			0.36	
Uniform Delay, d1		18.8			18.1			11.6			11.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.7			4.8			1.0			0.7	
Delay (s)		24.5			22.9			12.6			11.7	
Level of Service		C			C			B			B	
Approach Delay (s)		24.5			22.9			12.6			11.7	
Approach LOS		C			C			B			B	

Intersection Summary		
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.58	B
Actuated Cycle Length (s)	64.8	Sum of lost time (s)
Intersection Capacity Utilization	96.5%	12.0
Analysis Period (min)	15	ICU Level of Service
		F

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	1250	28	51	735	37	200
Future Volume (vph)	1250	28	51	735	37	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.997					0.850
Fl _t Protected				0.997	0.950	
Satd. Flow (prot)	3568	0	0	3568	1789	1601
Fl _t Permitted				0.997	0.950	
Satd. Flow (perm)	3568	0	0	3568	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1250	28	51	735	37	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1278	0	0	786	37	200
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.9%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1250	28	51	735	37	200
Future Volume (Veh/h)	1250	28	51	735	37	200
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1250	28	51	735	37	200
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1278		1734	639
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			890		1448	107
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		60	74
cM capacity (veh/h)			618		91	756
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	833	445	296	490	37	200
Volume Left	0	0	51	0	37	0
Volume Right	0	28	0	0	0	200
cSH	1700	1700	618	1700	91	756
Volume to Capacity	0.49	0.26	0.08	0.29	0.40	0.26
Queue Length 95th (m)	0.0	0.0	2.0	0.0	12.5	8.1
Control Delay (s)	0.0	0.0	2.9	0.0	68.9	11.5
Lane LOS			A		F	B
Approach Delay (s)	0.0		1.1		20.4	
Approach LOS					C	
Intersection Summary						
Average Delay			2.5			
Intersection Capacity Utilization			68.9%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	727	193	2191	3517	48
Future Volume (vph)	67	727	193	2191	3517	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		85.0			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.998	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5132	0
Flt Permitted	0.950		0.049			
Satd. Flow (perm)	1789	1601	92	5142	5132	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					2	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	727	193	2191	3517	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	727	193	2191	3565	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

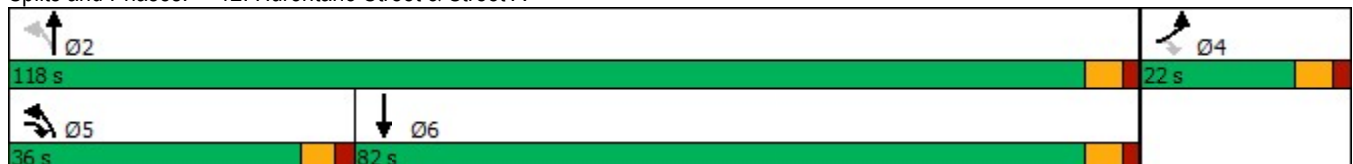


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	9.5	9.5	22.0	22.0	
Total Split (s)	22.0	36.0	36.0	118.0	82.0	
Total Split (%)	15.7%	25.7%	25.7%	84.3%	58.6%	
Maximum Green (s)	16.0	30.5	30.5	112.0	76.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	
Total Lost Time (s)	6.0	3.5	5.5	6.0	4.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	10.3	46.1	112.8	113.7	78.2	
Actuated g/C Ratio	0.08	0.35	0.86	0.86	0.59	
v/c Ratio	0.48	1.30	0.41	0.49	1.17	
Control Delay	70.7	183.3	27.3	3.5	107.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.7	183.3	27.3	3.5	107.8	
LOS	E	F	C	A	F	
Approach Delay	173.8			5.4	107.8	
Approach LOS	F			A	F	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	131.9
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.30
Intersection Signal Delay:	79.4
Intersection LOS:	E
Intersection Capacity Utilization	120.7%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	67	727	193	2191	3565
v/c Ratio	0.48	1.30	0.41	0.49	1.17
Control Delay	70.7	183.3	27.3	3.5	107.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	70.7	183.3	27.3	3.5	107.8
Queue Length 50th (m)	17.4	~240.0	26.9	48.5	~420.4
Queue Length 95th (m)	32.6	#313.4	52.3	67.3	#462.8
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	217	560	472	4431	3044
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	1.30	0.41	0.49	1.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	727	193	2191	3517	48
Future Volume (vph)	67	727	193	2191	3517	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	3.5	5.5	6.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5131	
Flt Permitted	0.95	1.00	0.05	1.00	1.00	
Satd. Flow (perm)	1789	1601	92	5142	5131	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	727	193	2191	3517	48
RTOR Reduction (vph)	0	0	0	0	1	0
Lane Group Flow (vph)	67	727	193	2191	3564	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	8.9	39.5	112.4	112.4	76.3	
Effective Green, g (s)	8.9	43.5	112.4	112.4	78.3	
Actuated g/C Ratio	0.07	0.33	0.84	0.84	0.59	
Clearance Time (s)	6.0	5.5	5.5	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	119	522	467	4335	3013	
v/s Ratio Prot	0.04	c0.34	0.09	0.43	c0.69	
v/s Ratio Perm		0.11	0.25			
v/c Ratio	0.56	1.39	0.41	0.51	1.18	
Uniform Delay, d1	60.3	44.9	34.7	2.9	27.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.0	188.2	0.6	0.4	86.0	
Delay (s)	66.3	233.1	35.3	3.3	113.5	
Level of Service	E	F	D	A	F	
Approach Delay (s)	219.0			5.9	113.5	
Approach LOS	F			A	F	

Intersection Summary

HCM 2000 Control Delay	87.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	133.3	Sum of lost time (s)	15.5
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	9	530	2	9	367
Future Volume (vph)	4	9	530	2	9	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.850					
Fl _t Protected	0.950					0.999
Satd. Flow (prot)	1789	1601	1883	0	0	1882
Fl _t Permitted	0.950					0.999
Satd. Flow (perm)	1789	1601	1883	0	0	1882
Link Speed (k/h)	48		80			80
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		114.4			24.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	10	576	2	10	399
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	10	578	0	0	409
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

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

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	9	530	2	9	367
Future Volume (Veh/h)	4	9	530	2	9	367
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)	4	10	576	2	10	399
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	996	577			578	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	996	577			578	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	98			99	
cM capacity (veh/h)	268	516			996	
Direction, Lane #						
	WB 1	WB 2	NB 1	SB 1		
Volume Total	4	10	578	409		
Volume Left	4	0	0	10		
Volume Right	0	10	2	0		
cSH	268	516	1700	996		
Volume to Capacity	0.01	0.02	0.34	0.01		
Queue Length 95th (m)	0.3	0.4	0.0	0.2		
Control Delay (s)	18.6	12.1	0.0	0.3		
Lane LOS	C	B		A		
Approach Delay (s)	14.0		0.0	0.3		
Approach LOS	B					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			38.0%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↘	
Traffic Volume (vph)	688	5	63	485	14	211
Future Volume (vph)	688	5	63	485	14	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.999				0.873	
Fl _t Protected				0.994	0.997	
Satd. Flow (prot)	3575	0	0	3557	1639	0
Fl _t Permitted				0.994	0.997	
Satd. Flow (perm)	3575	0	0	3557	1639	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	34.2			32.8	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	748	5	68	527	15	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	753	0	0	595	244	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	58.2%			ICU Level of Service B		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	688	5	63	485	14	211
Future Volume (Veh/h)	688	5	63	485	14	211
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)	748	5	68	527	15	229
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			753		1150	376
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			753		1150	376
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		91	63
cM capacity (veh/h)			853		176	621
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	499	254	244	351	244	
Volume Left	0	0	68	0	15	
Volume Right	0	5	0	0	229	
cSH	1700	1700	853	1700	538	
Volume to Capacity	0.29	0.15	0.08	0.21	0.45	
Queue Length 95th (m)	0.0	0.0	2.0	0.0	17.8	
Control Delay (s)	0.0	0.0	3.3	0.0	17.1	
Lane LOS	A			C		
Approach Delay (s)	0.0		1.3	17.1		
Approach LOS				C		
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			58.2%	ICU Level of Service	B	
Analysis Period (min)			15			

















Lanes, Volumes, Timings
 15: McLaughlin Road & Street E

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	46	46	0	25	18	592	18	10	478	6
Future Volume (vph)	11	0	46	46	0	25	18	592	18	10	478	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.891			0.953			0.996			0.998	
Flt Protected		0.990			0.969			0.999			0.999	
Satd. Flow (prot)	0	1661	0	0	1739	0	0	3561	0	0	3568	0
Flt Permitted		0.990			0.969			0.999			0.999	
Satd. Flow (perm)	0	1661	0	0	1739	0	0	3561	0	0	3568	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			29.9			14.2	
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
Adj. Flow (vph)	12	0	50	50	0	27	20	643	20	11	520	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	77	0	0	683	0	0	538	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97	97		97	97		97
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	47.4%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
 15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	46	46	0	25	18	592	18	10	478	6
Future Volume (Veh/h)	11	0	46	46	0	25	18	592	18	10	478	6
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)	12	0	50	50	0	27	20	643	20	11	520	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	934	1248	264	1025	1242	332	527			663		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	934	1248	264	1025	1242	332	527			663		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	94	100	93	71	100	96	98			99		
cM capacity (veh/h)	207	167	735	172	168	664	1036			922		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	62	77	342	342	271	267						
Volume Left	12	50	20	0	11	0						
Volume Right	50	27	0	20	0	7						
cSH	492	233	1036	1700	922	1700						
Volume to Capacity	0.13	0.33	0.02	0.20	0.01	0.16						
Queue Length 95th (m)	3.3	10.5	0.4	0.0	0.3	0.0						
Control Delay (s)	13.4	27.9	0.7	0.0	0.5	0.0						
Lane LOS	B	D	A		A							
Approach Delay (s)	13.4	27.9	0.3		0.2							
Approach LOS	B	D										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			47.4%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	329	16	380	408	77	23	380	442	63	246	5
Future Volume (vph)	5	329	16	380	408	77	23	380	442	63	246	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.976				0.850		0.998	
Flt Protected		0.999		0.950				0.997			0.990	
Satd. Flow (prot)	0	1855	0	1825	1822	0	0	1797	1601	0	1830	0
Flt Permitted		0.993		0.338				0.967			0.650	
Satd. Flow (perm)	0	1844	0	649	1822	0	0	1743	1601	0	1201	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			11				236			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	350	17	404	434	82	24	404	470	67	262	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	372	0	404	516	0	0	428	470	0	334	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

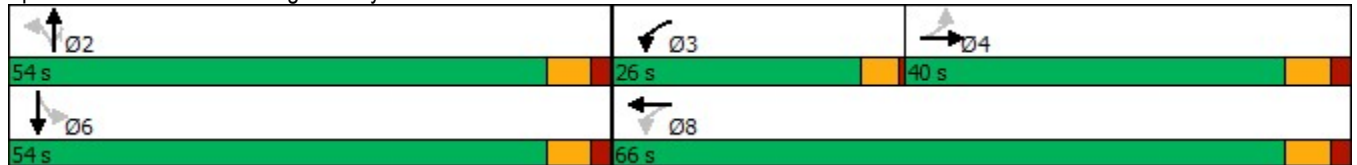
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	40.0	40.0		26.0	66.0		54.0	54.0	54.0	54.0	54.0	
Total Split (%)	33.3%	33.3%		21.7%	55.0%		45.0%	45.0%	45.0%	45.0%	45.0%	
Maximum Green (s)	34.0	34.0		22.0	60.0		48.0	48.0	48.0	48.0	48.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		36.2		64.0	60.0			48.0	48.0		48.0	
Actuated g/C Ratio		0.30		0.53	0.50			0.40	0.40		0.40	
v/c Ratio		0.67		0.72	0.56			0.61	0.60		0.69	
Control Delay		44.0		25.0	23.4			33.3	17.0		38.9	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		44.0		25.0	23.4			33.3	17.0		38.9	
LOS		D		C	C			C	B		D	
Approach Delay		44.0			24.1			24.8			38.9	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 29.2
 Intersection LOS: C
 Intersection Capacity Utilization 102.7%
 ICU Level of Service G
 Analysis Period (min) 15

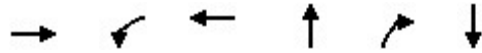
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	372	404	516	428	470	334
v/c Ratio	0.67	0.72	0.56	0.61	0.60	0.69
Control Delay	44.0	25.0	23.4	33.3	17.0	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	25.0	23.4	33.3	17.0	38.9
Queue Length 50th (m)	77.7	54.8	80.2	79.1	41.9	64.3
Queue Length 95th (m)	112.5	78.3	112.8	112.9	76.0	99.7
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	557	581	916	697	782	481
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.70	0.56	0.61	0.60	0.69

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road



















06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Volume (vph)	5	329	16	380	408	77	23	380	442	63	246	5
Future Volume (vph)	5	329	16	380	408	77	23	380	442	63	246	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	0.98			1.00	0.85		1.00	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1856		1825	1822			1797	1601		1830	
Flt Permitted		0.99		0.34	1.00			0.97	1.00		0.65	
Satd. Flow (perm)		1843		648	1822			1743	1601		1202	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	350	17	404	434	82	24	404	470	67	262	5
RTOR Reduction (vph)	0	1	0	0	6	0	0	0	142	0	1	0
Lane Group Flow (vph)	0	371	0	404	511	0	0	428	328	0	333	0
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		36.2		60.0	60.0			48.0	48.0		48.0	
Effective Green, g (s)		36.2		62.0	60.0			48.0	48.0		48.0	
Actuated g/C Ratio		0.30		0.52	0.50			0.40	0.40		0.40	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		555		548	911			697	640		480	
v/s Ratio Prot				c0.13	0.28							
v/s Ratio Perm		c0.20		0.25				0.25	0.21		c0.28	
v/c Ratio		0.67		0.74	0.56			0.61	0.51		0.69	
Uniform Delay, d1		36.6		20.2	20.8			28.6	27.2		29.9	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		6.3		5.1	2.5			4.0	2.9		8.1	
Delay (s)		42.9		25.4	23.3			32.6	30.1		38.0	
Level of Service		D		C	C			C	C		D	
Approach Delay (s)		42.9			24.2			31.3			38.0	
Approach LOS		D			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			31.3			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			14.0			
Intersection Capacity Utilization			102.7%			ICU Level of Service			G			
Analysis Period (min)			15									
c	Critical Lane Group											

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	837	52	530	947	59	51	179	549	54	100	34
Future Volume (vph)	31	837	52	530	947	59	51	179	549	54	100	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.991				0.850		0.976	
Flt Protected		0.998		0.950				0.989			0.986	
Satd. Flow (prot)	0	3468	0	1755	3575	0	0	1831	1555	0	1791	0
Flt Permitted		0.870		0.139				0.837			0.611	
Satd. Flow (perm)	0	3023	0	257	3575	0	0	1550	1555	0	1110	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10				441		9	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	33	890	55	564	1007	63	54	190	584	57	106	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	978	0	564	1070	0	0	244	584	0	199	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	50.0	50.0		31.0	81.0		39.0	39.0	39.0	39.0	39.0	
Total Split (%)	41.7%	41.7%		25.8%	67.5%		32.5%	32.5%	32.5%	32.5%	32.5%	
Maximum Green (s)	44.0	44.0		27.0	75.0		33.0	33.0	33.0	33.0	33.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		38.8		74.4	70.3			22.8	22.8		22.8	
Actuated g/C Ratio		0.37		0.71	0.67			0.22	0.22		0.22	
v/c Ratio		0.88		0.94	0.45			0.73	0.86		0.81	
Control Delay		41.4		51.0	9.6			52.1	23.6		62.4	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		41.4		51.0	9.6			52.1	23.6		62.4	
LOS		D		D	A			D	C		E	
Approach Delay		41.4			23.9			32.0			62.4	
Approach LOS		D			C			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	105.3
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	32.6
Intersection LOS:	C
Intersection Capacity Utilization:	97.6%
ICU Level of Service:	F
Analysis Period (min):	15

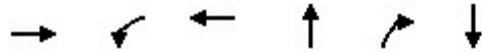
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	978	564	1070	244	584	199
v/c Ratio	0.88	0.94	0.45	0.73	0.86	0.81
Control Delay	41.4	51.0	9.6	52.1	23.6	62.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.4	51.0	9.6	52.1	23.6	62.4
Queue Length 50th (m)	96.4	91.2	49.3	48.8	29.7	38.9
Queue Length 95th (m)	#148.6	#187.1	80.4	76.5	79.4	65.9
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1288	601	2592	494	796	360
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.94	0.41	0.49	0.73	0.55



















Intersection Summary

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

HCM Signalized Intersection Capacity Analysis























2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	837	52	530	947	59	51	179	549	54	100	34
Future Volume (vph)	31	837	52	530	947	59	51	179	549	54	100	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3468		1755	3576			1831	1555		1791	
Flt Permitted		0.87		0.14	1.00			0.84	1.00		0.61	
Satd. Flow (perm)		3021		256	3576			1549	1555		1109	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	33	890	55	564	1007	63	54	190	584	57	106	36
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	346	0	7	0
Lane Group Flow (vph)	0	974	0	564	1067	0	0	244	238	0	192	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		38.8		70.3	70.3			22.7	22.7		22.7	
Effective Green, g (s)		38.8		72.3	70.3			22.7	22.7		22.7	
Actuated g/C Ratio		0.37		0.69	0.67			0.22	0.22		0.22	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1116		597	2394			334	336		239	
v/s Ratio Prot				c0.27	0.30							
v/s Ratio Perm		c0.32		0.38				0.16	0.15		c0.17	
v/c Ratio		0.87		0.94	0.45			0.73	0.71		0.80	
Uniform Delay, d1		30.8		26.3	8.2			38.3	38.1		39.0	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		7.7		23.8	0.1			8.0	6.7		17.5	
Delay (s)		38.5		50.1	8.3			46.3	44.8		56.5	
Level of Service		D		D	A			D	D		E	
Approach Delay (s)		38.5			22.7			45.2			56.5	
Approach LOS		D			C			D			E	
Intersection Summary												
HCM 2000 Control Delay			33.9			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			105.0			Sum of lost time (s)		14.0				
Intersection Capacity Utilization			97.6%			ICU Level of Service		F				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	707	267	296	322	320	56	497	3345	456	37	1988	613
Future Volume (vph)	707	267	296	322	320	56	497	3345	456	37	1988	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.921			0.978				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3167	0	1789	3540	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.304			0.203			0.078			0.084		
Satd. Flow (perm)	584	3167	0	382	3540	0	148	5043	1633	161	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		154			15				178			350
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	729	275	305	332	330	58	512	3448	470	38	2049	632
Shared Lane Traffic (%)												
Lane Group Flow (vph)	729	580	0	332	388	0	512	3448	470	38	2049	632
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

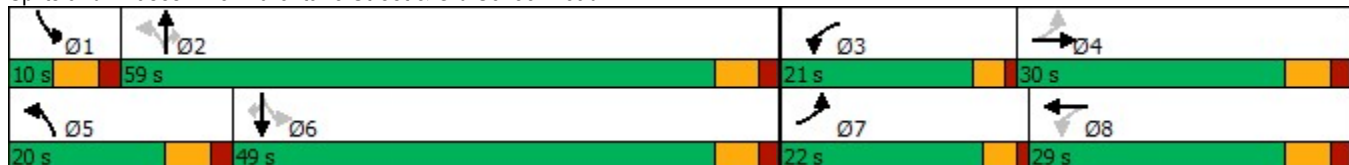


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	22.0	30.0		21.0	29.0		20.0	59.0	59.0	10.0	49.0	49.0
Total Split (%)	18.3%	25.0%		17.5%	24.2%		16.7%	49.2%	49.2%	8.3%	40.8%	40.8%
Maximum Green (s)	18.0	24.0		17.0	23.0		14.0	53.0	53.0	4.0	43.0	43.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	44.8	22.7		38.8	21.7		65.0	59.2	57.2	51.0	45.0	43.0
Actuated g/C Ratio	0.38	0.19		0.33	0.19		0.56	0.51	0.49	0.44	0.39	0.37
v/c Ratio	1.67	0.78		1.00	0.58		1.66	1.35	0.53	0.25	1.10	0.80
Control Delay	337.5	40.6		82.0	45.2		335.2	187.1	15.9	17.8	90.4	23.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	337.5	40.6		82.0	45.2		335.2	187.1	15.9	17.8	90.4	23.5
LOS	F	D		F	D		F	F	B	B	F	C
Approach Delay		206.0			62.1			186.1			73.9	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	116.8
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.67
Intersection Signal Delay:	145.9
Intersection LOS:	F
Intersection Capacity Utilization:	131.1%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	729	580	332	388	512	3448	470	38	2049	632
v/c Ratio	1.67	0.78	1.00	0.58	1.66	1.35	0.53	0.25	1.10	0.80
Control Delay	337.5	40.6	82.0	45.2	335.2	187.1	15.9	17.8	90.4	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	337.5	40.6	82.0	45.2	335.2	187.1	15.9	17.8	90.4	23.5
Queue Length 50th (m)	~216.4	49.7	58.8	41.3	~160.7	~404.5	48.5	3.9	~201.7	62.9
Queue Length 95th (m)	#290.0	69.9	#117.7	56.9	#229.3	#434.9	82.0	9.2	#234.9	118.5
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	436	824	331	770	309	2555	890	155	1855	788
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.67	0.70	1.00	0.50	1.66	1.35	0.53	0.25	1.10	0.80

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.





























Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			  	
Traffic Volume (vph)	707	267	296	322	320	56	497	3345	456	37	1988	613
Future Volume (vph)	707	267	296	322	320	56	497	3345	456	37	1988	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.92		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3167		1789	3538		1807	5043	1633	1825	4812	1541
Flt Permitted	0.30	1.00		0.20	1.00		0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	585	3167		382	3538		148	5043	1633	162	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	729	275	305	332	330	58	512	3448	470	38	2049	632
RTOR Reduction (vph)	0	125	0	0	12	0	0	0	93	0	0	216
Lane Group Flow (vph)	729	455	0	332	376	0	512	3448	377	38	2049	416
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	38.7	20.7		36.7	19.7		65.5	57.2	57.2	47.8	45.5	45.5
Effective Green, g (s)	42.7	22.7		36.7	21.7		67.5	59.2	57.2	51.8	47.5	45.5
Actuated g/C Ratio	0.36	0.19		0.31	0.18		0.57	0.50	0.48	0.43	0.40	0.38
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	417	603		318	644		306	2504	783	130	1917	588
v/s Ratio Prot	c0.29	0.14		0.15	0.11		c0.22	0.68		0.01	0.43	
v/s Ratio Perm	0.33			c0.17			c0.72		0.23	0.12		0.27
v/c Ratio	1.75	0.76		1.04	0.58		1.67	1.38	0.48	0.29	1.07	0.71
Uniform Delay, d1	33.8	45.6		36.5	44.6		38.7	30.0	21.0	27.6	35.9	31.2
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	346.5	5.4		62.4	1.4		316.9	172.2	2.1	1.3	41.8	7.0
Delay (s)	380.3	51.0		98.9	46.0		355.6	202.2	23.1	28.8	77.6	38.2
Level of Service	F	D		F	D		F	F	C	C	E	D
Approach Delay (s)		234.4			70.4			201.0			67.8	
Approach LOS		F			E			F			E	
Intersection Summary												
HCM 2000 Control Delay			156.0				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.60									
Actuated Cycle Length (s)			119.2				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			131.1%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↕	↕↕↕			↕			↕	
Traffic Volume (vph)	47	800	57	234	756	79	38	548	221	39	354	32
Future Volume (vph)	47	800	57	234	756	79	38	548	221	39	354	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.986			0.963			0.990	
Flt Protected		0.997		0.950				0.998			0.995	
Satd. Flow (prot)	0	5042	0	1825	5034	0	0	1809	0	0	1861	0
Flt Permitted		0.828		0.141				0.962			0.878	
Satd. Flow (perm)	0	4187	0	271	5034	0	0	1744	0	0	1642	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			17			26			6	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	51	870	62	254	822	86	41	596	240	42	385	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	983	0	254	908	0	0	877	0	0	462	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		13.0	49.0		71.0	71.0		71.0	71.0	
Total Split (%)	30.0%	30.0%		10.8%	40.8%		59.2%	59.2%		59.2%	59.2%	
Maximum Green (s)	32.0	32.0		9.0	45.0		67.0	67.0		67.0	67.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		32.3		47.4	45.4			59.1			59.1	
Actuated g/C Ratio		0.29		0.42	0.40			0.53			0.53	
v/c Ratio		0.81		0.95	0.45			0.95			0.53	
Control Delay		44.7		72.3	26.0			43.6			19.6	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		44.7		72.3	26.0			43.6			19.6	
LOS		D		E	C			D			B	
Approach Delay		44.7			36.1			43.6			19.6	
Approach LOS		D			D			D			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	112.5
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	38.2
Intersection LOS:	D
Intersection Capacity Utilization:	95.2%
ICU Level of Service:	F
Analysis Period (min):	15

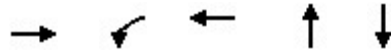
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	983	254	908	877	462
v/c Ratio	0.81	0.95	0.45	0.95	0.53
Control Delay	44.7	72.3	26.0	43.6	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	72.3	26.0	43.6	19.6
Queue Length 50th (m)	79.1	~41.5	56.6	169.4	62.9
Queue Length 95th (m)	#100.4	#94.8	70.5	#260.8	90.5
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1207	267	2040	1057	988
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.95	0.45	0.83	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↕↔		↔	↔↕↔			↕			↕		
Traffic Volume (vph)	47	800	57	234	756	79	38	548	221	39	354	32	
Future Volume (vph)	47	800	57	234	756	79	38	548	221	39	354	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Frt		0.99		1.00	0.99			0.96			0.99		
Flt Protected		1.00		0.95	1.00			1.00			1.00		
Satd. Flow (prot)		5041		1825	5033			1809			1861		
Flt Permitted		0.83		0.14	1.00			0.96			0.88		
Satd. Flow (perm)		4183		270	5033			1745			1642		
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)	51	870	62	254	822	86	41	596	240	42	385	35	
RTOR Reduction (vph)	0	6	0	0	10	0	0	12	0	0	3	0	
Lane Group Flow (vph)	0	977	0	254	898	0	0	865	0	0	459	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		32.3		45.4	45.4			59.0			59.0		
Effective Green, g (s)		32.3		47.4	45.4			59.0			59.0		
Actuated g/C Ratio		0.29		0.42	0.40			0.52			0.52		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		1202		267	2032			915			861		
v/s Ratio Prot				c0.09	0.18								
v/s Ratio Perm		c0.23		0.31				c0.50			0.28		
v/c Ratio		0.81		0.95	0.44			0.94			0.53		
Uniform Delay, d1		37.2		24.6	24.3			25.2			17.6		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		6.1		41.7	0.7			17.8			0.6		
Delay (s)		43.3		66.3	25.0			42.9			18.3		
Level of Service		D		E	C			D			B		
Approach Delay (s)		43.3			34.0			42.9			18.3		
Approach LOS		D			C			D			B		
Intersection Summary													
HCM 2000 Control Delay			36.8									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.90										
Actuated Cycle Length (s)			112.4									Sum of lost time (s)	10.0
Intersection Capacity Utilization			95.2%									ICU Level of Service	F
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	966	78	125	1132	483	132	754	129	239	485	143
Future Volume (vph)	113	966	78	125	1132	483	132	754	129	239	485	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.955			0.978			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4839	0	1825	3524	0	1738	3408	0
Flt Permitted	0.106			0.127			0.336			0.105		
Satd. Flow (perm)	194	5036	0	235	4839	0	645	3524	0	192	3408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			99			16			36	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	118	1006	81	130	1179	503	138	785	134	249	505	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	1087	0	130	1682	0	138	919	0	249	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

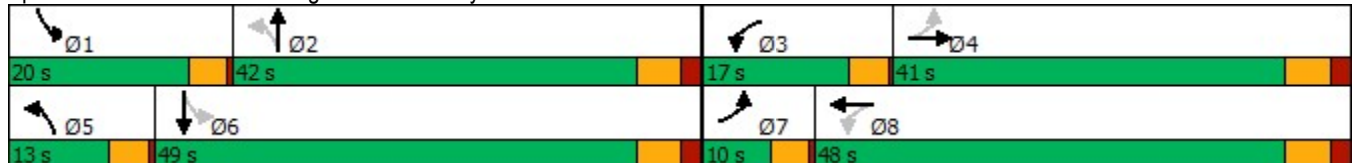


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	10.0	41.0		17.0	48.0		13.0	42.0		20.0	49.0	
Total Split (%)	8.3%	34.2%		14.2%	40.0%		10.8%	35.0%		16.7%	40.8%	
Maximum Green (s)	6.0	35.0		13.0	42.0		9.0	36.0		16.0	43.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	45.7	37.7		53.3	42.1		44.5	33.9		55.1	40.4	
Actuated g/C Ratio	0.39	0.32		0.45	0.36		0.38	0.29		0.47	0.34	
v/c Ratio	0.77	0.67		0.54	0.93		0.42	0.89		0.86	0.55	
Control Delay	53.5	37.3		27.9	45.3		22.2	51.2		54.9	31.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	53.5	37.3		27.9	45.3		22.2	51.2		54.9	31.0	
LOS	D	D		C	D		C	D		D	C	
Approach Delay		38.9			44.1			47.5			37.6	
Approach LOS		D			D			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	117.2
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	42.4
Intersection LOS:	D
Intersection Capacity Utilization:	93.8%
ICU Level of Service:	F
Analysis Period (min):	15

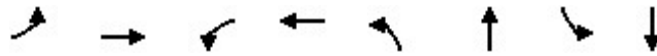
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	1087	130	1682	138	919	249	654
v/c Ratio	0.77	0.67	0.54	0.93	0.42	0.89	0.86	0.55
Control Delay	53.5	37.3	27.9	45.3	22.2	51.2	54.9	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	37.3	27.9	45.3	22.2	51.2	54.9	31.0
Queue Length 50th (m)	16.1	81.3	17.8	134.4	17.6	105.7	40.2	60.0
Queue Length 95th (m)	#44.4	100.2	30.2	#168.0	29.6	#132.5	#82.7	78.0
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	154	1627	277	1800	338	1095	301	1275
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.67	0.47	0.93	0.41	0.84	0.83	0.51

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	113	966	78	125	1132	483	132	754	129	239	485	143
Future Volume (vph)	113	966	78	125	1132	483	132	754	129	239	485	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5035		1755	4840		1825	3525		1738	3408	
Flt Permitted	0.11	1.00		0.13	1.00		0.34	1.00		0.11	1.00	
Satd. Flow (perm)	194	5035		234	4840		646	3525		193	3408	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	118	1006	81	130	1179	503	138	785	134	249	505	149
RTOR Reduction (vph)	0	7	0	0	63	0	0	11	0	0	24	0
Lane Group Flow (vph)	118	1080	0	130	1619	0	138	908	0	249	630	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.7	37.7		52.1	42.1		42.7	34.0		53.2	40.5	
Effective Green, g (s)	43.7	37.7		52.1	42.1		42.7	34.0		53.2	40.5	
Actuated g/C Ratio	0.37	0.32		0.44	0.36		0.36	0.29		0.45	0.35	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	1618		238	1737		322	1021		287	1176	
v/s Ratio Prot	c0.04	0.21		0.05	c0.33		0.03	0.26		c0.11	0.19	
v/s Ratio Perm	0.25			0.19			0.12			c0.28		
v/c Ratio	0.78	0.67		0.55	0.93		0.43	0.89		0.87	0.54	
Uniform Delay, d1	28.9	34.4		22.1	36.2		25.8	39.8		31.0	30.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.6	2.2		2.6	10.5		0.9	9.6		23.0	0.5	
Delay (s)	51.5	36.6		24.6	46.8		26.7	49.4		54.0	31.3	
Level of Service	D	D		C	D		C	D		D	C	
Approach Delay (s)		38.0			45.2			46.5			37.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	117.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	693	670	131	305	868	179	404	897	291	253	1082	980
Future Volume (vph)	693	670	131	305	868	179	404	897	291	253	1082	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.160			0.950			0.085			0.151		
Satd. Flow (perm)	296	4995	1538	3344	5092	1562	160	3614	1486	290	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			145			205			509
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	714	691	135	314	895	185	416	925	300	261	1115	1010
Shared Lane Traffic (%)												
Lane Group Flow (vph)	714	691	135	314	895	185	416	925	300	261	1115	1010
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	24.0	27.0	27.0	20.0	53.0	53.0	17.0	50.0	50.0
Total Split (%)	28.1%	30.4%	30.4%	17.8%	20.0%	20.0%	14.8%	39.3%	39.3%	12.6%	37.0%	37.0%
Maximum Green (s)	33.0	34.0	34.0	19.0	20.0	20.0	16.0	46.0	46.0	13.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

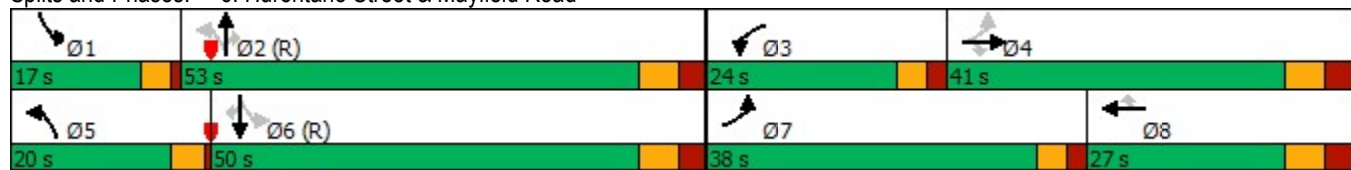


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	62.0	34.0	34.0	19.0	20.0	20.0	68.0	46.0	46.0	63.0	43.0	45.0
Actuated g/C Ratio	0.46	0.25	0.25	0.14	0.15	0.15	0.50	0.34	0.34	0.47	0.32	0.33
v/c Ratio	1.39	0.55	0.28	0.66	1.19	0.52	1.40	0.75	0.47	0.86	1.00	1.18
Control Delay	218.6	45.8	7.7	62.1	145.9	19.7	231.2	44.1	13.5	50.0	72.1	113.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	218.6	45.8	7.7	62.1	145.9	19.7	231.2	44.1	13.5	50.0	72.1	113.2
LOS	F	D	A	E	F	B	F	D	B	D	E	F
Approach Delay		122.6			110.3			85.9			87.1	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	120
Control Type:	Pretimed
Maximum v/c Ratio:	1.40
Intersection Signal Delay:	99.3
Intersection LOS:	F
Intersection Capacity Utilization	125.8%
ICU Level of Service	H
Analysis Period (min)	15

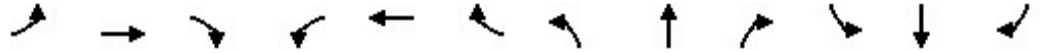
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	714	691	135	314	895	185	416	925	300	261	1115	1010
v/c Ratio	1.39	0.55	0.28	0.66	1.19	0.52	1.40	0.75	0.47	0.86	1.00	1.18
Control Delay	218.6	45.8	7.7	62.1	145.9	19.7	231.2	44.1	13.5	50.0	72.1	113.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	218.6	45.8	7.7	62.1	145.9	19.7	231.2	44.1	13.5	50.0	72.1	113.2
Queue Length 50th (m)	~237.6	58.9	0.0	41.3	~104.9	9.5	~131.9	114.7	17.8	39.2	156.3	~226.2
Queue Length 95th (m)	#312.3	72.3	16.0	57.2	#133.1	32.9	#195.9	139.2	43.8	#84.5	#203.8	#305.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	514	1258	488	479	754	354	297	1231	641	305	1118	857
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.55	0.28	0.66	1.19	0.52	1.40	0.75	0.47	0.86	1.00	1.18

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	693	670	131	305	868	179	404	897	291	253	1082	980
Future Volume (vph)	693	670	131	305	868	179	404	897	291	253	1082	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	160	3614	1486	290	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	714	691	135	314	895	185	416	925	300	261	1115	1010
RTOR Reduction (vph)	0	0	101	0	0	124	0	0	135	0	0	339
Lane Group Flow (vph)	714	691	34	314	895	61	416	925	165	261	1115	671
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	34.0	34.0	19.0	20.0	20.0	62.0	46.0	46.0	56.0	43.0	43.0
Effective Green, g (s)	60.0	34.0	34.0	19.0	20.0	20.0	65.0	46.0	46.0	60.0	43.0	45.0
Actuated g/C Ratio	0.44	0.25	0.25	0.14	0.15	0.15	0.48	0.34	0.34	0.44	0.32	0.33
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	479	754	231	294	1231	506	299	1118	518
v/s Ratio Prot	c0.36	0.14		0.09	0.18		c0.19	0.26		0.10	0.32	
v/s Ratio Perm	c0.26		0.02			0.04	0.49		0.11	0.29		c0.43
v/c Ratio	1.40	0.55	0.09	0.66	1.19	0.27	1.41	0.75	0.33	0.87	1.00	1.29
Uniform Delay, d1	39.8	43.8	38.6	54.9	57.5	51.0	42.8	39.4	33.0	27.8	45.9	45.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	192.8	1.7	0.4	6.8	97.3	2.8	205.7	4.3	1.7	27.8	26.3	146.4
Delay (s)	232.6	45.6	39.1	61.8	154.8	53.8	248.5	43.7	34.7	55.6	72.2	191.4
Level of Service	F	D	D	E	F	D	F	D	C	E	E	F
Approach Delay (s)		131.7			120.4			94.0			120.9	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM 2000 Control Delay			116.8			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.46									
Actuated Cycle Length (s)			135.0			Sum of lost time (s)			21.0			
Intersection Capacity Utilization			125.8%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	775	57	36	825	41	30
Future Volume (vph)	775	57	36	825	41	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.990			0.943		
Flt Protected				0.998	0.972	
Satd. Flow (prot)	3543	0	0	3571	1726	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	3543	0	0	3571	1726	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	775	57	36	825	41	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	832	0	0	861	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.0%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	775	57	36	825	41	30
Future Volume (Veh/h)	775	57	36	825	41	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	775	57	36	825	41	30
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			832		1288	416
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			832		1288	416
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		72	95
cM capacity (veh/h)			796		149	585
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	517	315	311	550	71	
Volume Left	0	0	36	0	41	
Volume Right	0	57	0	0	30	
cSH	1700	1700	796	1700	217	
Volume to Capacity	0.30	0.19	0.05	0.32	0.33	
Queue Length 95th (m)	0.0	0.0	1.1	0.0	10.3	
Control Delay (s)	0.0	0.0	1.6	0.0	29.4	
Lane LOS			A			D
Approach Delay (s)	0.0		0.6		29.4	
Approach LOS					D	
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			60.0%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	266	50	63	378	21	233	833	134	32	678	9
Future Volume (vph)	0	266	50	63	378	21	233	833	134	32	678	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.979			0.994			0.983			0.998	
Fl _t Protected					0.993			0.990			0.998	
Satd. Flow (prot)	0	1844	0	0	1859	0	0	3483	0	0	3564	0
Fl _t Permitted					0.774			0.643			0.848	
Satd. Flow (perm)	0	1844	0	0	1449	0	0	2262	0	0	3029	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3			22			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	266	50	63	378	21	233	833	134	32	678	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	316	0	0	462	0	0	1200	0	0	719	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

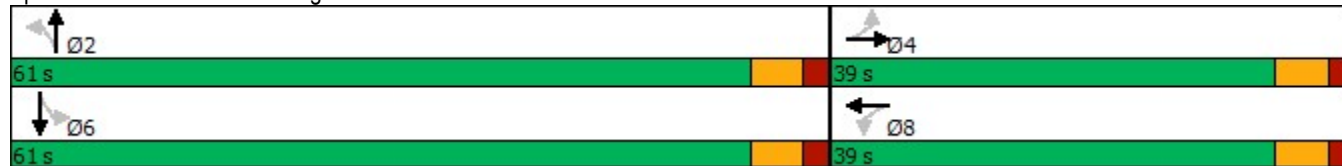


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	39.0	39.0		39.0	39.0		61.0	61.0		61.0	61.0	
Total Split (%)	39.0%	39.0%		39.0%	39.0%		61.0%	61.0%		61.0%	61.0%	
Maximum Green (s)	33.0	33.0		33.0	33.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		32.5			32.5			55.0			55.0	
Actuated g/C Ratio		0.33			0.33			0.55			0.55	
v/c Ratio		0.52			0.97			0.95			0.43	
Control Delay		29.9			69.5			38.1			14.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.9			69.5			38.1			14.1	
LOS		C			E			D			B	
Approach Delay		29.9			69.5			38.1			14.1	
Approach LOS		C			E			D			B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	99.5
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	36.1
Intersection LOS:	D
Intersection Capacity Utilization:	115.7%
ICU Level of Service:	H
Analysis Period (min):	15

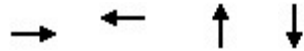
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	316	462	1200	719
v/c Ratio	0.52	0.97	0.95	0.43
Control Delay	29.9	69.5	38.1	14.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.9	69.5	38.1	14.1
Queue Length 50th (m)	47.5	86.7	108.5	40.7
Queue Length 95th (m)	73.0	#149.4	#161.9	54.2
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	618	482	1260	1675
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.96	0.95	0.43

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	266	50	63	378	21	233	833	134	32	678	9
Future Volume (vph)	0	266	50	63	378	21	233	833	134	32	678	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.99			0.98			1.00	
Flt Protected		1.00			0.99			0.99			1.00	
Satd. Flow (prot)		1843			1859			3485			3564	
Flt Permitted		1.00			0.77			0.64			0.85	
Satd. Flow (perm)		1843			1449			2262			3030	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	266	50	63	378	21	233	833	134	32	678	9
RTOR Reduction (vph)	0	7	0	0	2	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	309	0	0	460	0	0	1190	0	0	718	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.5			32.5			55.0			55.0	
Effective Green, g (s)		32.5			32.5			55.0			55.0	
Actuated g/C Ratio		0.33			0.33			0.55			0.55	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		601			473			1250			1674	
v/s Ratio Prot		0.17										
v/s Ratio Perm					c0.32			c0.53			0.24	
v/c Ratio		0.51			0.97			0.95			0.43	
Uniform Delay, d1		27.1			33.1			21.0			13.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			34.1			16.3			0.8	
Delay (s)		27.9			67.2			37.3			13.8	
Level of Service		C			E			D			B	
Approach Delay (s)		27.9			67.2			37.3			13.8	
Approach LOS		C			E			D			B	

Intersection Summary

HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	99.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
10: Street D & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	1274	48	162	1290	38	121
Future Volume (vph)	1274	48	162	1290	38	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.995				0.850	
Fl _t Protected			0.994		0.950	
Satd. Flow (prot)	3561	0	0	3557	1789	1601
Fl _t Permitted			0.994		0.950	
Satd. Flow (perm)	3561	0	0	3557	1789	1601
Link Speed (k/h)	70		70		48	
Link Distance (m)	349.1		1007.8		330.5	
Travel Time (s)	18.0		51.8		24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1274	48	162	1290	38	121
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1322	0	0	1452	38	121
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7		3.7		3.7	
Link Offset(m)	0.0		0.0		0.0	
Crosswalk Width(m)	1.6		1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24		14	
Sign Control	Free		Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	90.4%
Analysis Period (min)	15
	ICU Level of Service E

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1274	48	162	1290	38	121
Future Volume (Veh/h)	1274	48	162	1290	38	121
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1274	48	162	1290	38	121
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1322		2267	661
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			889		2078	58
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			73		0	85
cM capacity (veh/h)			602		27	792
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	849	473	592	860	38	121
Volume Left	0	0	162	0	38	0
Volume Right	0	48	0	0	0	121
cSH	1700	1700	602	1700	27	792
Volume to Capacity	0.50	0.28	0.27	0.51	1.42	0.15
Queue Length 95th (m)	0.0	0.0	8.2	0.0	34.5	4.1
Control Delay (s)	0.0	0.0	7.0	0.0	540.6	10.4
Lane LOS			A			B
Approach Delay (s)	0.0		2.9		137.1	
Approach LOS			F			
Intersection Summary						
Average Delay			8.9			
Intersection Capacity Utilization			90.4%		ICU Level of Service E	
Analysis Period (min)	15					

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	405	644	4232	2539	69
Future Volume (vph)	66	405	644	4232	2539	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		85.0			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.996	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5121	0
Flt Permitted	0.950		0.065			
Satd. Flow (perm)	1789	1601	122	5142	5121	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					4	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	405	644	4232	2539	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	405	644	4232	2608	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

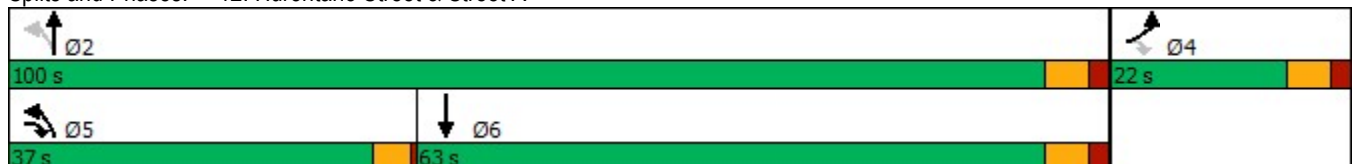


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	37.0	37.0	100.0	63.0	
Total Split (%)	18.0%	30.3%	30.3%	82.0%	51.6%	
Maximum Green (s)	16.0	33.0	33.0	94.0	57.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	-2.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	2.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	9.5	46.0	98.4	95.8	57.2	
Actuated g/C Ratio	0.08	0.41	0.87	0.85	0.50	
v/c Ratio	0.44	0.62	1.03	0.97	1.01	
Control Delay	59.5	31.3	78.2	20.0	48.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.5	31.3	78.2	20.0	48.5	
LOS	E	C	E	C	D	
Approach Delay	35.2			27.7	48.5	
Approach LOS	D			C	D	

Intersection Summary

Area Type:	Other
Cycle Length:	122
Actuated Cycle Length:	113.3
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.03
Intersection Signal Delay:	35.0
Intersection LOS:	C
Intersection Capacity Utilization:	103.3%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	66	405	644	4232	2608
v/c Ratio	0.44	0.62	1.03	0.97	1.01
Control Delay	59.5	31.3	78.2	20.0	48.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	31.3	78.2	20.0	48.5
Queue Length 50th (m)	14.5	69.8	~144.3	~310.8	~232.2
Queue Length 95th (m)	28.4	101.5	#225.4	#413.6	#275.9
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	253	650	623	4346	2589
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.62	1.03	0.97	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	405	644	4232	2539	69
Future Volume (vph)	66	405	644	4232	2539	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	2.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5121	
Flt Permitted	0.95	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	1789	1601	123	5142	5121	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	405	644	4232	2539	69
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	66	405	644	4232	2606	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	8.2	41.3	94.4	94.4	57.3	
Effective Green, g (s)	8.2	41.3	96.4	94.4	57.3	
Actuated g/C Ratio	0.07	0.36	0.84	0.82	0.50	
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	128	576	613	4235	2560	
v/s Ratio Prot	0.04	c0.20	c0.32	c0.82	0.51	
v/s Ratio Perm		0.05	0.56			
v/c Ratio	0.52	0.70	1.05	1.00	1.02	
Uniform Delay, d1	51.3	31.4	35.7	10.1	28.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.5	3.9	50.3	13.7	22.4	
Delay (s)	54.8	35.3	86.0	23.7	51.1	
Level of Service	D	D	F	C	D	
Approach Delay (s)	38.0			32.0	51.1	
Approach LOS	D			C	D	

Intersection Summary

HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	114.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	1	741	0	1	561
Future Volume (vph)	1	1	741	0	1	561
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.850					
Fl _t Protected	0.950					
Satd. Flow (prot)	1789	1601	1883	0	0	1883
Fl _t Permitted	0.950					
Satd. Flow (perm)	1789	1601	1883	0	0	1883
Link Speed (k/h)	48		48		48	
Link Distance (m)	1161.8		2541.5		542.2	
Travel Time (s)	87.1		190.6		40.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1	805	0	1	610
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	1	805	0	0	611
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0		0.0	
Link Offset(m)	0.0		0.0		0.0	
Crosswalk Width(m)	1.6		1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97		97	
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.0%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	741	0	1	561
Future Volume (Veh/h)	1	1	741	0	1	561
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)	1	1	805	0	1	610
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	1417	805			805	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1417	805			805	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	151	382			819	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	1	1	805	611		
Volume Left	1	0	0	1		
Volume Right	0	1	0	0		
cSH	151	382	1700	819		
Volume to Capacity	0.01	0.00	0.47	0.00		
Queue Length 95th (m)	0.2	0.1	0.0	0.0		
Control Delay (s)	29.0	14.4	0.0	0.0		
Lane LOS	D	B		A		
Approach Delay (s)	21.7		0.0	0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			49.0%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	793	14	194	850	11	107
Future Volume (vph)	793	14	194	850	11	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.997			0.878		
Fl _t Protected				0.991	0.995	
Satd. Flow (prot)	3568	0	0	3546	1645	0
Fl _t Permitted				0.991	0.995	
Satd. Flow (perm)	3568	0	0	3546	1645	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	23.4			22.5	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	862	15	211	924	12	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	877	0	0	1135	128	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.7%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	793	14	194	850	11	107
Future Volume (Veh/h)	793	14	194	850	11	107
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)	862	15	211	924	12	116
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			877		1754	438
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			877		1754	438
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			72		78	80
cM capacity (veh/h)			766		55	566
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	575	302	519	616	128	
Volume Left	0	0	211	0	12	
Volume Right	0	15	0	0	116	
cSH	1700	1700	766	1700	304	
Volume to Capacity	0.34	0.18	0.28	0.36	0.42	
Queue Length 95th (m)	0.0	0.0	8.5	0.0	15.2	
Control Delay (s)	0.0	0.0	7.0	0.0	25.2	
Lane LOS	A			D		
Approach Delay (s)	0.0		3.2		25.2	
Approach LOS				D		
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			68.7%	ICU Level of Service	C	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 15: McLaughlin Road & Street E

















06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	34	34	0	17	50	765	50	23	651	9
Future Volume (vph)	7	0	34	34	0	17	50	765	50	23	651	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.889			0.956			0.991			0.998	
Flt Protected		0.991			0.967			0.997			0.998	
Satd. Flow (prot)	0	1659	0	0	1741	0	0	3536	0	0	3564	0
Flt Permitted		0.991			0.967			0.997			0.998	
Satd. Flow (perm)	0	1659	0	0	1741	0	0	3536	0	0	3564	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			18.0			8.5	
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
Adj. Flow (vph)	8	0	37	37	0	18	54	832	54	25	708	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	55	0	0	940	0	0	743	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	61.9%						ICU Level of Service B					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	34	34	0	17	50	765	50	23	651	9
Future Volume (Veh/h)	7	0	34	34	0	17	50	765	50	23	651	9
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)	8	0	37	37	0	18	54	832	54	25	708	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (m)												
								399			189	
pX, platoon unblocked	0.84	0.84		0.84	0.84	0.84				0.84		
vC, conflicting volume	1305	1757	359	1408	1735	443	718			886		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	984	1522	359	1107	1495	0	718			486		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	94	70	100	98	94			97		
cM capacity (veh/h)	156	90	638	122	93	912	879			903		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	45	55	470	470	379	364						
Volume Left	8	37	54	0	25	0						
Volume Right	37	18	0	54	0	10						
cSH	412	170	879	1700	903	1700						
Volume to Capacity	0.11	0.32	0.06	0.28	0.03	0.21						
Queue Length 95th (m)	2.8	10.0	1.5	0.0	0.6	0.0						
Control Delay (s)	14.8	36.0	1.8	0.0	0.9	0.0						
Lane LOS	B	E	A		A							
Approach Delay (s)	14.8	36.0	0.9		0.5							
Approach LOS	B	E										
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			61.9%	ICU Level of Service		B						
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	2	297	4	141	195	45	2	235	293	34	228	11
Future Volume (vph)	2	297	4	141	195	45	2	235	293	34	228	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.972				0.850		0.994	
Flt Protected				0.950							0.994	
Satd. Flow (prot)	0	1917	0	1772	1804	0	0	1830	1585	0	1786	0
Flt Permitted		0.998		0.535				0.998			0.946	
Satd. Flow (perm)	0	1913	0	998	1804	0	0	1827	1585	0	1700	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			35				312			6
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	316	4	150	207	48	2	250	312	36	243	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	322	0	150	255	0	0	252	312	0	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings

1: Chinguacousy Road & Old School Road

06/07/2024

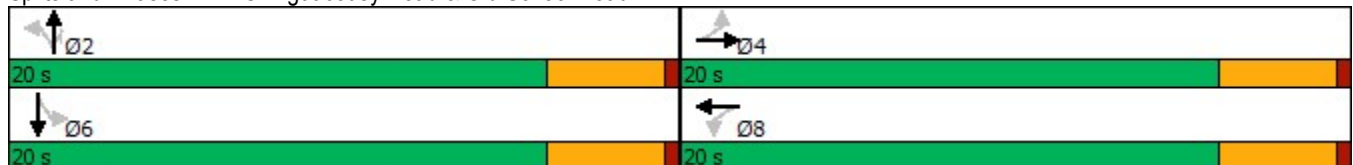


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		11.1		11.1	11.1			16.9	16.9		16.9	
Actuated g/C Ratio		0.31		0.31	0.31			0.47	0.47		0.47	
v/c Ratio		0.54		0.49	0.44			0.29	0.34		0.36	
Control Delay		13.6		15.4	10.6			8.2	2.6		8.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		13.6		15.4	10.6			8.2	2.6		8.7	
LOS		B		B	B			A	A		A	
Approach Delay		13.6			12.4			5.1			8.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 36.1
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 9.3
 Intersection Capacity Utilization 69.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	322	150	255	252	312	291
v/c Ratio	0.54	0.49	0.44	0.29	0.34	0.36
Control Delay	13.6	15.4	10.6	8.2	2.6	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	15.4	10.6	8.2	2.6	8.7
Queue Length 50th (m)	14.6	6.7	9.6	7.9	0.0	9.3
Queue Length 95th (m)	28.7	16.9	20.8	22.8	9.6	26.6
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	852	444	822	857	909	800
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.34	0.31	0.29	0.34	0.36

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	297	4	141	195	45	2	235	293	34	228	11	
Future Volume (vph)	2	297	4	141	195	45	2	235	293	34	228	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1917		1772	1804			1830	1585		1787		
Flt Permitted		1.00		0.53	1.00			1.00	1.00		0.95		
Satd. Flow (perm)		1914		998	1804			1826	1585		1702		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	316	4	150	207	48	2	250	312	36	243	12	
RTOR Reduction (vph)	0	1	0	0	24	0	0	0	166	0	3	0	
Lane Group Flow (vph)	0	321	0	150	231	0	0	252	146	0	288	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6			
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		11.1		11.1	11.1			16.9	16.9		16.9		
Effective Green, g (s)		11.1		11.1	11.1			16.9	16.9		16.9		
Actuated g/C Ratio		0.31		0.31	0.31			0.47	0.47		0.47		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		590		307	556			857	744		798		
v/s Ratio Prot					0.13								
v/s Ratio Perm		c0.17		0.15				0.14	0.09		c0.17		
v/c Ratio		0.54		0.49	0.42			0.29	0.20		0.36		
Uniform Delay, d1		10.3		10.1	9.9			5.9	5.6		6.1		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.0		1.2	0.5			0.9	0.6		1.3		
Delay (s)		11.4		11.4	10.4			6.8	6.2		7.4		
Level of Service		B		B	B			A	A		A		
Approach Delay (s)		11.4			10.7			6.4			7.4		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			8.7									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.43										
Actuated Cycle Length (s)			36.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			69.3%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	8	583	35	248	340	29	40	74	435	46	147	14
Future Volume (vph)	8	583	35	248	340	29	40	74	435	46	147	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.983			0.989	
Satd. Flow (prot)	0	3557	0	1789	3483	0	0	1864	1617	0	1858	0
Flt Permitted		0.947		0.265				0.825			0.891	
Satd. Flow (perm)	0	3371	0	499	3483	0	0	1565	1617	0	1674	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			16				436			4
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	9	620	37	264	362	31	43	79	463	49	156	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	666	0	264	393	0	0	122	463	0	220	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	44.0	44.0		22.0	66.0		34.0	34.0	34.0	34.0	34.0	
Total Split (%)	44.0%	44.0%		22.0%	66.0%		34.0%	34.0%	34.0%	34.0%	34.0%	
Maximum Green (s)	38.0	38.0		18.0	60.0		28.0	28.0	28.0	28.0	28.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		18.0		34.1	32.0			13.3	13.3		13.3	
Actuated g/C Ratio		0.31		0.59	0.55			0.23	0.23		0.23	
v/c Ratio		0.63		0.51	0.20			0.34	0.65		0.57	
Control Delay		20.5		9.9	6.7			23.3	8.4		27.2	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		20.5		9.9	6.7			23.3	8.4		27.2	
LOS		C		A	A			C	A		C	
Approach Delay		20.5			8.0			11.5			27.2	
Approach LOS		C			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 57.8
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 14.9
 Intersection LOS: B
 Intersection Capacity Utilization 70.5%
 ICU Level of Service C
 Analysis Period (min) 15

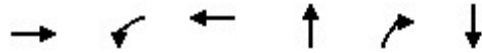
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	666	264	393	122	463	220
v/c Ratio	0.63	0.51	0.20	0.34	0.65	0.57
Control Delay	20.5	9.9	6.7	23.3	8.4	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	9.9	6.7	23.3	8.4	27.2
Queue Length 50th (m)	29.3	11.0	8.8	10.3	2.1	19.2
Queue Length 95th (m)	56.6	26.9	18.7	27.7	26.0	46.5
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2316	713	3284	791	1033	848
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.37	0.12	0.15	0.45	0.26

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕		
Traffic Volume (vph)	8	583	35	248	340	29	40	74	435	46	147	14	
Future Volume (vph)	8	583	35	248	340	29	40	74	435	46	147	14	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99		
Satd. Flow (prot)		3556		1789	3483			1864	1617		1857		
Flt Permitted		0.95		0.26	1.00			0.82	1.00		0.89		
Satd. Flow (perm)		3371		499	3483			1564	1617		1674		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	9	620	37	264	362	31	43	79	463	49	156	15	
RTOR Reduction (vph)	0	5	0	0	7	0	0	0	335	0	3	0	
Lane Group Flow (vph)	0	661	0	264	386	0	0	122	128	0	217	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		18.2		32.0	32.0			13.3	13.3		13.3		
Effective Green, g (s)		18.2		32.0	32.0			13.3	13.3		13.3		
Actuated g/C Ratio		0.32		0.56	0.56			0.23	0.23		0.23		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1070		499	1945			363	375		388		
v/s Ratio Prot				c0.09	0.11								
v/s Ratio Perm		c0.20		0.21				0.08	0.08		c0.13		
v/c Ratio		0.62		0.53	0.20			0.34	0.34		0.56		
Uniform Delay, d1		16.6		7.3	6.3			18.3	18.3		19.4		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.1		1.0	0.1			0.6	0.5		1.7		
Delay (s)		17.7		8.3	6.3			18.9	18.9		21.2		
Level of Service		B		A	A			B	B		C		
Approach Delay (s)		17.7			7.1			18.9			21.2		
Approach LOS		B			A			B			C		
Intersection Summary													
HCM 2000 Control Delay			15.1		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			57.3		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			70.5%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	570	271	212	400	217	48	61	1916	188	37	2665	301
Future Volume (vph)	570	271	212	400	217	48	61	1916	188	37	2665	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.934			0.973				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3320	0	1722	3394	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.472			0.358			0.069			0.071		
Satd. Flow (perm)	872	3320	0	649	3394	0	125	4445	1471	121	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		74			19				148			155
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1007.8			440.4			855.3				282.2
Travel Time (s)		51.8			22.6			38.5				12.7
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	613	291	228	430	233	52	66	2060	202	40	2866	324
Shared Lane Traffic (%)												
Lane Group Flow (vph)	613	519	0	430	285	0	66	2060	202	40	2866	324
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2				6

Lanes, Volumes, Timings
 3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	32.0		18.0	25.0		8.0	70.0	70.0	62.0	62.0	62.0
Total Split (%)	20.8%	26.7%		15.0%	20.8%		6.7%	58.3%	58.3%	51.7%	51.7%	51.7%
Maximum Green (s)	21.0	24.0		14.0	17.0		4.0	62.0	62.0	54.0	54.0	54.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	45.2	23.2		36.2	14.1		66.4	60.4	60.4	56.1	56.1	54.1
Actuated g/C Ratio	0.39	0.20		0.31	0.12		0.57	0.52	0.52	0.49	0.49	0.47
v/c Ratio	1.19	0.72		1.23	0.66		0.43	0.89	0.24	0.69	1.17	0.38
Control Delay	132.9	43.1		152.8	53.2		20.0	30.8	5.4	83.2	110.9	12.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.9	43.1		152.8	53.2		20.0	30.8	5.4	83.2	110.9	12.0
LOS	F	D		F	D		B	C	A	F	F	B
Approach Delay		91.7			113.1			28.3			100.6	
Approach LOS		F			F			C			F	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 115.6
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 77.7
 Intersection LOS: E
 Intersection Capacity Utilization 106.5%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	613	519	430	285	66	2060	202	40	2866	324
v/c Ratio	1.19	0.72	1.23	0.66	0.43	0.89	0.24	0.69	1.17	0.38
Control Delay	132.9	43.1	152.8	53.2	20.0	30.8	5.4	83.2	110.9	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.9	43.1	152.8	53.2	20.0	30.8	5.4	83.2	110.9	12.0
Queue Length 50th (m)	~130.4	51.0	~94.6	31.2	6.3	147.1	5.9	7.0	~292.2	23.1
Queue Length 95th (m)	#241.6	69.7	#152.8	45.4	13.1	178.7	18.2	#28.8	#329.5	46.1
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	517	805	351	516	154	2388	859	58	2448	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.64	1.23	0.55	0.43	0.86	0.24	0.69	1.17	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis



















3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			  	
Traffic Volume (vph)	570	271	212	400	217	48	61	1916	188	37	2665	301
Future Volume (vph)	570	271	212	400	217	48	61	1916	188	37	2665	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.93		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	3321		1722	3393		1722	4445	1471	1615	5043	1633
Flt Permitted	0.47	1.00		0.36	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	872	3321		649	3393		125	4445	1471	121	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	613	291	228	430	233	52	66	2060	202	40	2866	324
RTOR Reduction (vph)	0	59	0	0	17	0	0	0	70	0	0	83
Lane Group Flow (vph)	613	460	0	430	268	0	66	2060	132	40	2866	241
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	39.2	21.2		28.1	14.1		61.2	61.2	61.2	54.1	54.1	54.1
Effective Green, g (s)	41.2	23.2		32.1	14.1		63.2	61.2	61.2	56.1	56.1	54.1
Actuated g/C Ratio	0.35	0.20		0.28	0.12		0.54	0.53	0.53	0.48	0.48	0.46
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0
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)	483	661		326	411		137	2337	773	58	2430	758
v/s Ratio Prot	c0.25	0.14		c0.18	0.08		0.02	c0.46			c0.57	
v/s Ratio Perm	0.20			c0.18			0.24		0.09	0.33		0.15
v/c Ratio	1.27	0.70		1.32	0.65		0.48	0.88	0.17	0.69	1.18	0.32
Uniform Delay, d1	34.7	43.3		39.0	48.8		25.7	24.4	14.4	23.4	30.2	19.6
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	136.7	3.2		163.6	3.7		2.7	4.3	0.1	29.0	85.3	0.2
Delay (s)	171.4	46.5		202.6	52.5		28.3	28.7	14.5	52.4	115.5	19.8
Level of Service	F	D		F	D		C	C	B	D	F	B
Approach Delay (s)		114.2			142.8			27.4			105.1	
Approach LOS		F			F			C			F	
Intersection Summary												
HCM 2000 Control Delay			85.7	HCM 2000 Level of Service				F				
HCM 2000 Volume to Capacity ratio			1.23									
Actuated Cycle Length (s)			116.4	Sum of lost time (s)				18.0				
Intersection Capacity Utilization			106.5%	ICU Level of Service				G				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46
Future Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	85.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994				0.850		0.986	
Flt Protected		0.997		0.950				0.994			0.988	
Satd. Flow (prot)	0	4861	0	1659	4942	0	0	1826	1585	0	1782	0
Flt Permitted		0.855		0.200				0.927			0.761	
Satd. Flow (perm)	0	4169	0	349	4942	0	0	1703	1585	0	1373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6				174		8	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	52	829	62	179	721	30	30	227	174	102	281	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	943	0	179	751	0	0	257	174	0	429	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

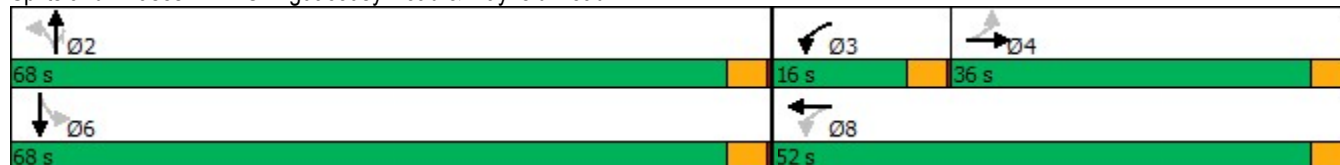


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	36.0	36.0		16.0	52.0		68.0	68.0	68.0	68.0	68.0	
Total Split (%)	30.0%	30.0%		13.3%	43.3%		56.7%	56.7%	56.7%	56.7%	56.7%	
Maximum Green (s)	32.0	32.0		12.0	48.0		64.0	64.0	64.0	64.0	64.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		34.1		48.4	48.4			28.0	28.0		28.0	
Actuated g/C Ratio		0.40		0.57	0.57			0.33	0.33		0.33	
v/c Ratio		0.56		0.50	0.26			0.46	0.27		0.93	
Control Delay		22.5		15.5	10.4			24.4	4.1		54.9	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		22.5		15.5	10.4			24.4	4.1		54.9	
LOS		C		B	B			C	A		D	
Approach Delay		22.5			11.3			16.2			54.9	
Approach LOS		C			B			B			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 84.5
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 22.8
 Intersection LOS: C
 Intersection Capacity Utilization 82.6%
 ICU Level of Service E
 Analysis Period (min) 15

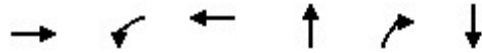
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	943	179	751	257	174	429
v/c Ratio	0.56	0.50	0.26	0.46	0.27	0.93
Control Delay	22.5	15.5	10.4	24.4	4.1	54.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	15.5	10.4	24.4	4.1	54.9
Queue Length 50th (m)	41.2	12.6	20.0	31.9	0.0	64.5
Queue Length 95th (m)	69.4	30.6	37.2	50.9	11.4	102.2
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		85.0			50.0	
Base Capacity (vph)	1689	387	2834	1300	1251	1050
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.46	0.26	0.20	0.14	0.41

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↕↔		↔	↔↕↔			↕	↔		↕↔		
Traffic Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46	
Future Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99		
Satd. Flow (prot)		4863		1659	4942			1826	1585		1782		
Flt Permitted		0.85		0.20	1.00			0.93	1.00		0.76		
Satd. Flow (perm)		4169		350	4942			1703	1585		1372		
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	52	829	62	179	721	30	30	227	174	102	281	46	
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	116	0	5	0	
Lane Group Flow (vph)	0	938	0	179	748	0	0	257	58	0	424	0	
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		34.2		48.4	48.4			28.0	28.0		28.0		
Effective Green, g (s)		34.2		48.4	48.4			28.0	28.0		28.0		
Actuated g/C Ratio		0.41		0.57	0.57			0.33	0.33		0.33		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1689		358	2834			564	525		455		
v/s Ratio Prot				c0.06	0.15								
v/s Ratio Perm		c0.22		0.23				0.15	0.04		c0.31		
v/c Ratio		0.56		0.50	0.26			0.46	0.11		0.93		
Uniform Delay, d1		19.3		9.9	9.0			22.2	19.6		27.3		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.3		1.1	0.2			0.6	0.1		25.9		
Delay (s)		20.6		11.0	9.3			22.8	19.7		53.1		
Level of Service		C		B	A			C	B		D		
Approach Delay (s)		20.6			9.6			21.5			53.1		
Approach LOS		C			A			C			D		
Intersection Summary													
HCM 2000 Control Delay			22.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			84.4									Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.6%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Future Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.980			0.955				0.975
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4770	0	1644	3397	0	1690	3444	0
Flt Permitted	0.263			0.100			0.443			0.357		
Satd. Flow (perm)	505	4888	0	180	4770	0	767	3397	0	635	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			32			52			26	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	20	1133	134	159	900	141	59	276	119	339	464	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	1267	0	159	1041	0	59	395	0	339	557	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		17.0	59.0		34.0	34.0		27.0	61.0	
Total Split (%)	35.0%	35.0%		14.2%	49.2%		28.3%	28.3%		22.5%	50.8%	
Maximum Green (s)	36.0	36.0		13.0	53.0		28.0	28.0		23.0	55.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		55.0	53.0		28.0	28.0		57.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.46	0.44		0.23	0.23		0.48	0.46	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

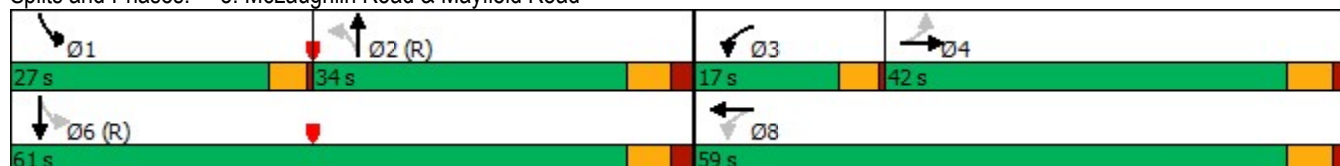


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.13	0.86		0.64	0.49		0.33	0.47		0.67	0.35	
Control Delay	33.5	46.0		35.5	24.0		44.5	36.4		28.2	20.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	33.5	46.0		35.5	24.0		44.5	36.4		28.2	20.7	
LOS	C	D		D	C		D	D		C	C	
Approach Delay		45.8			25.5			37.4			23.5	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	33.3
Intersection LOS:	C
Intersection Capacity Utilization	79.3%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	1267	159	1041	59	395	339	557
v/c Ratio	0.13	0.86	0.64	0.49	0.33	0.47	0.67	0.35
Control Delay	33.5	46.0	35.5	24.0	44.5	36.4	28.2	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	46.0	35.5	24.0	44.5	36.4	28.2	20.7
Queue Length 50th (m)	3.4	101.6	21.8	60.6	11.6	36.7	51.1	41.3
Queue Length 95th (m)	10.0	120.1	42.7	73.2	24.6	52.0	75.0	54.5
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	151	1478	247	2124	178	832	503	1592
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.86	0.64	0.49	0.33	0.47	0.67	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Future Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4889		1706	4768		1644	3397		1690	3444	
Flt Permitted	0.26	1.00		0.10	1.00		0.44	1.00		0.36	1.00	
Satd. Flow (perm)	505	4889		180	4768		767	3397		634	3444	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	1133	134	159	900	141	59	276	119	339	464	93
RTOR Reduction (vph)	0	12	0	0	18	0	0	40	0	0	14	0
Lane Group Flow (vph)	20	1255	0	159	1023	0	59	355	0	339	543	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		53.0	53.0		28.0	28.0		55.0	55.0	
Effective Green, g (s)	36.0	36.0		53.0	53.0		28.0	28.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.44	0.44		0.23	0.23		0.46	0.46	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	151	1466		244	2105		178	792		492	1578	
v/s Ratio Prot		c0.26		c0.07	0.21			0.10		c0.13	0.16	
v/s Ratio Perm	0.04			0.22			0.08			c0.18		
v/c Ratio	0.13	0.86		0.65	0.49		0.33	0.45		0.69	0.34	
Uniform Delay, d1	30.6	39.6		24.9	23.8		38.2	39.4		22.7	20.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	6.6		12.8	0.8		4.9	1.8		7.7	0.6	
Delay (s)	32.4	46.2		37.7	24.6		43.2	41.2		30.4	21.5	
Level of Service	C	D		D	C		D	D		C	C	
Approach Delay (s)		46.0			26.4			41.5			24.9	
Approach LOS		D			C			D			C	

Intersection Summary

HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399
Future Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98	1.00		0.97	1.00		0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Fl _t Permitted	0.143			0.950			0.259			0.321		
Satd. Flow (perm)	262	4902	1508	3330	4948	1395	492	3476	1467	574	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			162			273			362
Link Speed (k/h)		70			70			70				70
Link Distance (m)		142.1			749.9			381.1				609.4
Travel Time (s)		7.3			38.6			19.6				31.3
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424
Shared Lane Traffic (%)												
Lane Group Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.88	0.95	0.27	0.92	0.86	0.53	0.48	0.50	0.46	0.69	0.65	0.46
Control Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
LOS	E	E	A	F	E	B	C	D	A	C	C	A
Approach Delay	68.1			73.2			34.7			26.6		
Approach LOS	E			E			C			C		

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	49.8
Intersection LOS:	D
Intersection Capacity Utilization	83.7%
ICU Level of Service	E
Analysis Period (min)	15

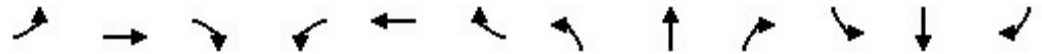
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424
v/c Ratio	0.88	0.95	0.27	0.92	0.86	0.53	0.48	0.50	0.46	0.69	0.65	0.46
Control Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
Queue Length 50th (m)	79.9	134.5	1.5	44.5	85.8	9.8	15.1	67.2	0.0	75.3	138.3	10.7
Queue Length 95th (m)	#132.8	#162.4	18.2	#71.6	102.1	35.6	24.9	85.1	23.2	101.7	161.8	34.2
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	361	1225	468	292	865	377	220	934	593	605	1683	929
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.95	0.27	0.92	0.86	0.53	0.48	0.50	0.46	0.69	0.65	0.46


































Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	
Traffic Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399
Future Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1806	3476	1467	1703	3544	1557
Flt Permitted	0.14	1.00	1.00	0.95	1.00	1.00	0.26	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	263	4902	1508	3340	4948	1395	493	3476	1467	576	3544	1557
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424
RTOR Reduction (vph)	0	0	92	0	0	134	0	0	200	0	0	190
Lane Group Flow (vph)	318	1163	37	269	748	64	105	471	73	420	1100	234
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	358	1225	377	292	865	244	211	934	394	594	1683	739
v/s Ratio Prot	c0.16	c0.24		0.08	0.15		0.02	0.14		c0.18	0.31	
v/s Ratio Perm	0.18		0.02			0.05	0.13		0.05	c0.21		0.15
v/c Ratio	0.89	0.95	0.10	0.92	0.86	0.26	0.50	0.50	0.19	0.71	0.65	0.32
Uniform Delay, d1	44.1	59.0	46.1	72.5	64.2	57.1	40.1	49.5	45.0	23.6	32.0	26.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.3	16.1	0.5	35.8	11.2	2.6	8.2	1.9	1.0	6.9	2.0	1.1
Delay (s)	70.4	75.1	46.6	108.3	75.4	59.7	48.3	51.4	46.1	30.5	34.0	27.1
Level of Service	E	E	D	F	E	E	D	D	D	C	C	C
Approach Delay (s)		71.9			80.1			49.3			31.7	
Approach LOS		E			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			56.4	HCM 2000 Level of Service				E				
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			160.0	Sum of lost time (s)				23.0				
Intersection Capacity Utilization			83.7%	ICU Level of Service				E				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

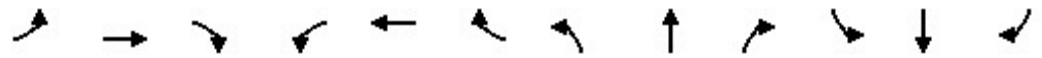
06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	5	271	2	294	375	55	14	387	336	43	254	5
Future Volume (vph)	5	271	2	294	375	55	14	387	336	43	254	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.981				0.850		0.998	
Flt Protected		0.999		0.950				0.998			0.993	
Satd. Flow (prot)	0	1863	0	1825	1838	0	0	1796	1601	0	1844	0
Flt Permitted		0.992		0.422				0.983			0.780	
Satd. Flow (perm)	0	1850	0	811	1838	0	0	1769	1601	0	1448	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					9				182			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	288	2	313	399	59	15	412	357	46	270	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	295	0	313	458	0	0	427	357	0	321	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

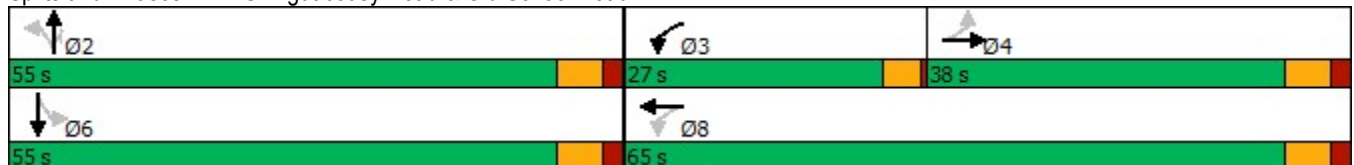


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		37.6		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.31		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.51		0.53	0.50			0.59	0.47		0.54	
Control Delay		38.5		20.0	22.6			31.8	14.3		31.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		38.5		20.0	22.6			31.8	14.3		31.1	
LOS		D		C	C			C	B		C	
Approach Delay		38.5			21.6			23.9			31.1	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	26.1
Intersection LOS:	C
Intersection Capacity Utilization:	94.9%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	295	313	458	427	357	321
v/c Ratio	0.51	0.53	0.50	0.59	0.47	0.54
Control Delay	38.5	20.0	22.6	31.8	14.3	31.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	20.0	22.6	31.8	14.3	31.1
Queue Length 50th (m)	56.5	40.7	69.3	77.2	27.9	56.4
Queue Length 95th (m)	89.7	59.7	98.3	110.2	53.6	84.8
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	579	637	908	722	761	591
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.49	0.50	0.59	0.47	0.54

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Volume (vph)	5	271	2	294	375	55	14	387	336	43	254	5
Future Volume (vph)	5	271	2	294	375	55	14	387	336	43	254	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	0.98			1.00	0.85		1.00	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1863		1825	1837			1796	1601		1843	
Flt Permitted		0.99		0.42	1.00			0.98	1.00		0.78	
Satd. Flow (perm)		1850		811	1837			1769	1601		1447	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	288	2	313	399	59	15	412	357	46	270	5
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	108	0	1	0
Lane Group Flow (vph)	0	295	0	313	453	0	0	427	249	0	320	0
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		37.6		59.0	59.0			49.0	49.0		49.0	
Effective Green, g (s)		37.6		61.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.31		0.51	0.49			0.41	0.41		0.41	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		579		576	903			722	653		590	
v/s Ratio Prot				c0.09	c0.25							
v/s Ratio Perm		0.16		0.19				c0.24	0.16		0.22	
v/c Ratio		0.51		0.54	0.50			0.59	0.38		0.54	
Uniform Delay, d1		33.7		18.7	20.6			27.7	24.9		27.0	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		3.2		1.1	2.0			3.5	1.7		3.6	
Delay (s)		36.8		19.8	22.6			31.2	26.6		30.6	
Level of Service		D		B	C			C	C		C	
Approach Delay (s)		36.8			21.4			29.1			30.6	
Approach LOS		D			C			C			C	
Intersection Summary												
HCM 2000 Control Delay			27.7			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			14.0			
Intersection Capacity Utilization			94.9%			ICU Level of Service			F			
Analysis Period (min)			15									
c	Critical Lane Group											

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	12	603	39	459	666	32	51	168	469	26	71	8
Future Volume (vph)	12	603	39	459	666	32	51	168	469	26	71	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.993				0.850		0.989	
Flt Protected		0.999		0.950				0.989			0.988	
Satd. Flow (prot)	0	3465	0	1755	3584	0	0	1829	1555	0	1804	0
Flt Permitted		0.934		0.260				0.894			0.875	
Satd. Flow (perm)	0	3240	0	480	3584	0	0	1654	1555	0	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8				499			4
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	13	641	41	488	709	34	54	179	499	28	76	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	695	0	488	743	0	0	233	499	0	113	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings

2: McLaughlin Road & Old School Road

06/07/2024

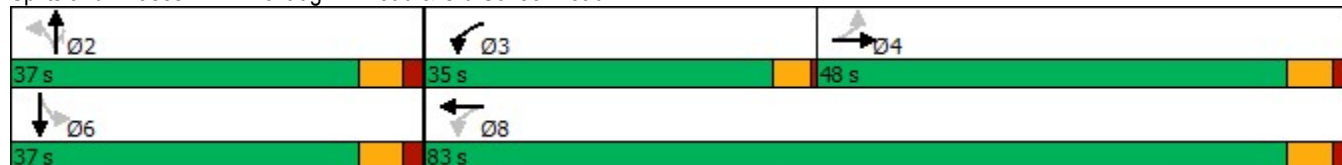


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8		2		2		6		6	
Detector Phase	4	4	3		8	2		2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0	8.0		22.0	22.0		22.0	22.0	22.0	22.0	
Total Split (s)	48.0	48.0	35.0		83.0	37.0		37.0	37.0	37.0	37.0	
Total Split (%)	40.0%	40.0%	29.2%		69.2%	30.8%		30.8%	30.8%	30.8%	30.8%	
Maximum Green (s)	42.0	42.0	31.0		77.0	31.0		31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0	3.5		4.0	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	0.5		2.0	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		-2.0		0.0	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.0		2.0		6.0	6.0		6.0	6.0	6.0		
Lead/Lag	Lag		Lag		Lead		Lead		Lead		Lead	
Lead-Lag Optimize?	Yes		Yes		Yes		Yes		Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	None	None		None	None		None	None	None	None	
Walk Time (s)	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0	0		0	0	0	0	
Act Effct Green (s)	23.5		49.8		45.5	18.1		18.1	18.1		18.1	
Actuated g/C Ratio	0.31		0.65		0.59	0.24		0.24	0.24		0.24	
v/c Ratio	0.70		0.76		0.35	0.60		0.67	0.67		0.30	
Control Delay	29.0		18.8		8.5	35.9		8.0	35.9		29.1	
Queue Delay	0.0		0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay	29.0		18.8		8.5	35.9		8.0	35.9		29.1	
LOS	C		B		A	D		A	D		C	
Approach Delay	29.0		12.6		16.8		16.8		16.8		29.1	
Approach LOS	C		B		B		B		B		C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 76.7
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 18.5
 Intersection LOS: B
 Intersection Capacity Utilization 81.0%
 ICU Level of Service D
 Analysis Period (min) 15

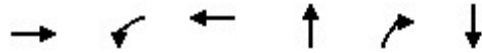
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	695	488	743	233	499	113
v/c Ratio	0.70	0.76	0.35	0.60	0.67	0.30
Control Delay	29.0	18.8	8.5	35.9	8.0	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	18.8	8.5	35.9	8.0	29.1
Queue Length 50th (m)	41.3	27.5	23.4	27.2	0.0	11.8
Queue Length 95th (m)	90.1	86.6	48.0	70.0	27.4	34.9
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2027	917	3245	732	966	709
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.53	0.23	0.32	0.52	0.16

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	12	603	39	459	666	32	51	168	469	26	71	8
Future Volume (vph)	12	603	39	459	666	32	51	168	469	26	71	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3466		1755	3584			1829	1555		1804	
Flt Permitted		0.93		0.26	1.00			0.89	1.00		0.88	
Satd. Flow (perm)		3240		480	3584			1654	1555		1598	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	641	41	488	709	34	54	179	499	28	76	9
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	380	0	3	0
Lane Group Flow (vph)	0	691	0	488	740	0	0	233	119	0	110	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		23.9		45.5	45.5			18.1	18.1		18.1	
Effective Green, g (s)		23.9		47.5	45.5			18.1	18.1		18.1	
Actuated g/C Ratio		0.32		0.63	0.60			0.24	0.24		0.24	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1024		632	2157			395	372		382	
v/s Ratio Prot				c0.20	0.21							
v/s Ratio Perm		c0.21		0.28				c0.14	0.08		0.07	
v/c Ratio		0.67		0.77	0.34			0.59	0.32		0.29	
Uniform Delay, d1		22.5		9.2	7.6			25.5	23.7		23.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.8		5.8	0.1			2.3	0.5		0.4	
Delay (s)		24.2		15.0	7.6			27.7	24.2		23.9	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		24.2		10.6				25.3			23.9	
Approach LOS		C		B				C			C	
Intersection Summary												
HCM 2000 Control Delay			18.4		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			75.6		Sum of lost time (s)			14.0				
Intersection Capacity Utilization			81.0%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	694	262	130	329	325	62	206	3369	461	39	1974	591
Future Volume (vph)	694	262	130	329	325	62	206	3369	461	39	1974	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.950			0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3303	0	1789	3533	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.286			0.254			0.076			0.082		
Satd. Flow (perm)	549	3303	0	478	3533	0	145	5043	1633	158	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			17				181			344
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	715	270	134	339	335	64	212	3473	475	40	2035	609
Shared Lane Traffic (%)												
Lane Group Flow (vph)	715	404	0	339	399	0	212	3473	475	40	2035	609
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

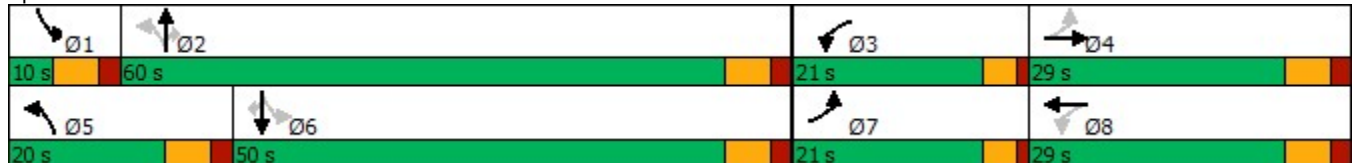
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	21.0	29.0		21.0	29.0		20.0	60.0	60.0	10.0	50.0	50.0
Total Split (%)	17.5%	24.2%		17.5%	24.2%		16.7%	50.0%	50.0%	8.3%	41.7%	41.7%
Maximum Green (s)	17.0	23.0		17.0	23.0		14.0	54.0	54.0	4.0	44.0	44.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	40.6	19.5		36.6	19.5		64.6	58.8	56.8	52.1	46.1	44.1
Actuated g/C Ratio	0.36	0.17		0.32	0.17		0.57	0.52	0.50	0.46	0.41	0.39
v/c Ratio	1.74	0.65		0.97	0.64		0.72	1.33	0.52	0.25	1.04	0.75
Control Delay	367.1	41.8		71.8	46.8		39.6	175.7	14.8	16.7	64.9	19.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	367.1	41.8		71.8	46.8		39.6	175.7	14.8	16.7	64.9	19.8
LOS	F	D		E	D		D	F	B	B	E	B
Approach Delay		249.7			58.2			150.4			53.9	
Approach LOS		F			E			F			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 113.2
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.74
 Intersection Signal Delay: 125.6 Intersection LOS: F
 Intersection Capacity Utilization 131.2% ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	715	404	339	399	212	3473	475	40	2035	609
v/c Ratio	1.74	0.65	0.97	0.64	0.72	1.33	0.52	0.25	1.04	0.75
Control Delay	367.1	41.8	71.8	46.8	39.6	175.7	14.8	16.7	64.9	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	367.1	41.8	71.8	46.8	39.6	175.7	14.8	16.7	64.9	19.8
Queue Length 50th (m)	~216.7	37.8	60.1	42.4	29.6	~383.4	44.6	3.7	~183.0	52.6
Queue Length 95th (m)	#292.8	54.0	#110.8	58.3	#62.3	#435.6	81.5	9.3	#228.7	107.7
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	411	781	351	795	318	2620	909	161	1960	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.74	0.52	0.97	0.50	0.67	1.33	0.52	0.25	1.04	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	694	262	130	329	325	62	206	3369	461	39	1974	591
Future Volume (vph)	694	262	130	329	325	62	206	3369	461	39	1974	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3304		1789	3533		1807	5043	1633	1825	4812	1541
Flt Permitted	0.29	1.00		0.25	1.00		0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	550	3304		478	3533		145	5043	1633	158	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	715	270	134	339	335	64	212	3473	475	40	2035	609
RTOR Reduction (vph)	0	53	0	0	14	0	0	0	92	0	0	205
Lane Group Flow (vph)	715	351	0	339	385	0	212	3473	383	40	2035	404
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	34.5	17.5		34.5	17.5		65.1	56.8	56.8	48.9	46.6	46.6
Effective Green, g (s)	38.5	19.5		34.5	19.5		67.1	58.8	56.8	52.9	48.6	46.6
Actuated g/C Ratio	0.33	0.17		0.30	0.17		0.58	0.51	0.49	0.46	0.42	0.40
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	392	557		335	595		292	2565	802	134	2023	621
v/s Ratio Prot	c0.30	0.11		0.15	0.11		c0.09	c0.69		0.01	0.42	
v/s Ratio Perm	0.31			c0.15			0.33		0.23	0.13		0.26
v/c Ratio	1.82	0.63		1.01	0.65		0.73	1.35	0.48	0.30	1.01	0.65
Uniform Delay, d1	34.3	44.7		36.4	44.8		30.8	28.4	19.5	26.2	33.5	27.9
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	380.7	2.2		52.2	2.4		8.7	161.9	2.0	1.3	21.4	5.2
Delay (s)	415.0	46.9		88.7	47.3		39.5	190.3	21.6	27.4	54.9	33.1
Level of Service	F	D		F	D		D	F	C	C	D	C
Approach Delay (s)		282.1			66.3			163.4			49.6	
Approach LOS		F			E			F			D	
Intersection Summary												
HCM 2000 Control Delay			135.3				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.36									
Actuated Cycle Length (s)			115.6				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			131.2%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕	↗		↕↕	
Traffic Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35
Future Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	85.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.990			0.986				0.850		0.983	
Flt Protected		0.997		0.950				0.994			0.993	
Satd. Flow (prot)	0	5037	0	1825	5034	0	0	1893	1555	0	1835	0
Flt Permitted		0.832		0.190				0.918			0.624	
Satd. Flow (perm)	0	4203	0	365	5034	0	0	1748	1555	0	1153	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			16				200			8
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				2541.5
Travel Time (s)		14.1			73.0			15.5				114.4
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	55	934	68	245	879	87	46	358	210	45	218	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1057	0	245	966	0	0	404	210	0	301	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

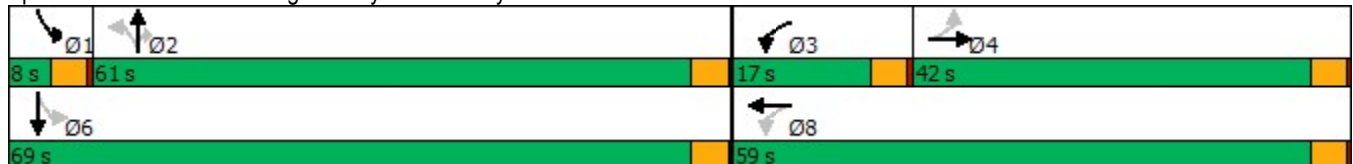


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	42.0	42.0		17.0	59.0		61.0	61.0	61.0	8.0	69.0	
Total Split (%)	32.8%	32.8%		13.3%	46.1%		47.7%	47.7%	47.7%	6.3%	53.9%	
Maximum Green (s)	38.0	38.0		13.0	55.0		57.0	57.0	57.0	4.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0		0	
Act Effct Green (s)		39.7		57.3	55.3			25.7	25.7		25.7	
Actuated g/C Ratio		0.45		0.64	0.62			0.29	0.29		0.29	
v/c Ratio		0.56		0.54	0.31			0.80	0.36		0.89	
Control Delay		20.9		12.3	8.9			41.8	5.7		57.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		20.9		12.3	8.9			41.8	5.7		57.6	
LOS		C		B	A			D	A		E	
Approach Delay		20.9			9.6			29.5			57.6	
Approach LOS		C			A			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	128
Actuated Cycle Length:	89
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	21.7
Intersection LOS:	C
Intersection Capacity Utilization:	84.4%
ICU Level of Service:	E
Analysis Period (min):	15

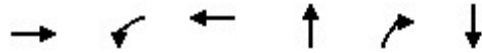
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1057	245	966	404	210	301
v/c Ratio	0.56	0.54	0.31	0.80	0.36	0.89
Control Delay	20.9	12.3	8.9	41.8	5.7	57.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	12.3	8.9	41.8	5.7	57.6
Queue Length 50th (m)	47.9	15.5	25.1	63.2	1.2	47.6
Queue Length 95th (m)	74.6	34.4	43.3	94.8	15.5	79.7
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		85.0			50.0	
Base Capacity (vph)	1880	482	3133	1125	1072	848
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.51	0.31	0.36	0.20	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road


























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↕↔		↔	↔↕↔			↔	↔		↔↕		
Traffic Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35	
Future Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		2.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00		
Frbp, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00		
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.98		
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99		
Satd. Flow (prot)		5040		1825	5036			1893	1555		1835		
Flt Permitted		0.83		0.19	1.00			0.92	1.00		0.62		
Satd. Flow (perm)		4204		366	5036			1748	1555		1153		
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)	55	934	68	245	879	87	46	358	210	45	218	38	
RTOR Reduction (vph)	0	5	0	0	6	0	0	0	142	0	6	0	
Lane Group Flow (vph)	0	1052	0	245	960	0	0	404	68	0	295	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA		
Protected Phases		4		3	8			2		1	6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		39.7		55.3	55.3			25.7	25.7		25.7		
Effective Green, g (s)		39.7		57.3	55.3			25.7	25.7		25.7		
Actuated g/C Ratio		0.45		0.64	0.62			0.29	0.29		0.29		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1875		458	3129			504	449		332		
v/s Ratio Prot				c0.08	0.19								
v/s Ratio Perm		c0.25		0.26				0.23	0.04		c0.26		
v/c Ratio		0.56		0.53	0.31			0.80	0.15		0.89		
Uniform Delay, d1		18.2		8.0	7.9			29.3	23.5		30.3		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.2		1.2	0.3			8.9	0.2		23.8		
Delay (s)		19.4		9.2	8.1			38.2	23.7		54.1		
Level of Service		B		A	A			D	C		D		
Approach Delay (s)		19.4			8.4			33.2			54.1		
Approach LOS		B			A			C			D		
Intersection Summary													
HCM 2000 Control Delay			21.2									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			89.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			84.4%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Future Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.970			0.966			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4892	0	1825	3475	0	1738	3393	0
Flt Permitted	0.101			0.124			0.520			0.160		
Satd. Flow (perm)	185	5036	0	229	4892	0	999	3475	0	293	3393	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			58			33			42	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	54	1099	86	144	1282	325	146	503	148	248	294	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	1185	0	144	1607	0	146	651	0	248	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	9.0	44.0		15.0	50.0		13.0	42.0		19.0	48.0	
Total Split (%)	7.5%	36.7%		12.5%	41.7%		10.8%	35.0%		15.8%	40.0%	
Maximum Green (s)	5.0	38.0		11.0	44.0		9.0	36.0		15.0	42.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	45.9	38.9		54.4	45.5		35.8	25.0		44.7	30.1	
Actuated g/C Ratio	0.43	0.36		0.51	0.42		0.33	0.23		0.42	0.28	
v/c Ratio	0.36	0.65		0.57	0.76		0.37	0.78		0.81	0.40	
Control Delay	22.8	31.5		25.0	30.0		22.7	43.7		43.0	28.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.8	31.5		25.0	30.0		22.7	43.7		43.0	28.7	
LOS	C	C		C	C		C	D		D	C	
Approach Delay		31.1			29.6			39.9			34.2	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 107.4
 Natural Cycle: 75
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 32.5 Intersection LOS: C
 Intersection Capacity Utilization 81.8% ICU Level of Service D
 Analysis Period (min) 15

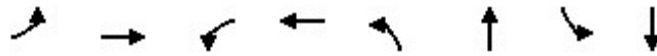
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	54	1185	144	1607	146	651	248	392
v/c Ratio	0.36	0.65	0.57	0.76	0.37	0.78	0.81	0.40
Control Delay	22.8	31.5	25.0	30.0	22.7	43.7	43.0	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	31.5	25.0	30.0	22.7	43.7	43.0	28.7
Queue Length 50th (m)	5.7	76.7	16.1	105.6	19.1	65.6	34.8	31.3
Queue Length 95th (m)	13.9	103.7	31.3	140.2	31.7	85.3	#67.8	44.2
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	151	1828	273	2104	405	1194	325	1361
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.65	0.53	0.76	0.36	0.55	0.76	0.29

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Future Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5036		1755	4890		1825	3475		1738	3394	
Flt Permitted	0.10	1.00		0.12	1.00		0.52	1.00		0.16	1.00	
Satd. Flow (perm)	184	5036		229	4890		1000	3475		292	3394	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	54	1099	86	144	1282	325	146	503	148	248	294	98
RTOR Reduction (vph)	0	7	0	0	34	0	0	25	0	0	30	0
Lane Group Flow (vph)	54	1178	0	144	1573	0	146	626	0	248	362	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.7	39.8		53.4	45.5		33.7	25.0		42.8	30.1	
Effective Green, g (s)	43.7	39.8		53.4	45.5		33.7	25.0		42.8	30.1	
Actuated g/C Ratio	0.40	0.37		0.49	0.42		0.31	0.23		0.40	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	130	1852		248	2056		377	802		299	944	
v/s Ratio Prot	0.01	0.23		c0.05	c0.32		0.03	0.18		c0.11	0.11	
v/s Ratio Perm	0.15			0.23			0.09			c0.22		
v/c Ratio	0.42	0.64		0.58	0.77		0.39	0.78		0.83	0.38	
Uniform Delay, d1	21.8	28.2		17.9	26.8		27.9	39.0		25.2	31.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	1.7		3.4	2.8		0.7	4.9		17.1	0.3	
Delay (s)	23.9	29.9		21.3	29.6		28.5	44.0		42.3	31.8	
Level of Service	C	C		C	C		C	D		D	C	
Approach Delay (s)		29.6			28.9			41.1			35.9	
Approach LOS		C			C			D			D	

Intersection Summary		
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.82	
Actuated Cycle Length (s)	108.2	Sum of lost time (s) 20.0
Intersection Capacity Utilization	81.8%	ICU Level of Service D
Analysis Period (min)	15	
c Critical Lane Group		

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Future Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Fl _t Permitted	0.154			0.950			0.089			0.191		
Satd. Flow (perm)	284	4995	1538	3349	5092	1562	168	3614	1486	367	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			145			246			536
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
Shared Lane Traffic (%)												
Lane Group Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	25.0	28.0	28.0	19.0	54.0	54.0	15.0	50.0	50.0
Total Split (%)	28.1%	30.4%	30.4%	18.5%	20.7%	20.7%	14.1%	40.0%	40.0%	11.1%	37.0%	37.0%
Maximum Green (s)	33.0	34.0	34.0	20.0	21.0	21.0	15.0	47.0	47.0	11.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	34.0	34.0	20.0	21.0	21.0	67.0	47.0	47.0	61.0	43.0	45.0
Actuated g/C Ratio	0.47	0.25	0.25	0.15	0.16	0.16	0.50	0.35	0.35	0.45	0.32	0.33
v/c Ratio	1.47	0.60	0.27	0.69	1.23	0.53	0.85	0.69	0.49	0.91	0.89	1.21
Control Delay	250.9	46.9	7.8	62.4	159.7	20.9	58.3	41.1	11.7	56.6	54.4	127.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	250.9	46.9	7.8	62.4	159.7	20.9	58.3	41.1	11.7	56.6	54.4	127.7
LOS	F	D	A	E	F	C	E	D	B	E	D	F
Approach Delay	137.4			119.6			37.2			88.1		
Approach LOS	F			F			D			F		

Intersection Summary

Area Type: Other

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Pretimed

Maximum v/c Ratio: 1.47

Intersection Signal Delay: 96.1

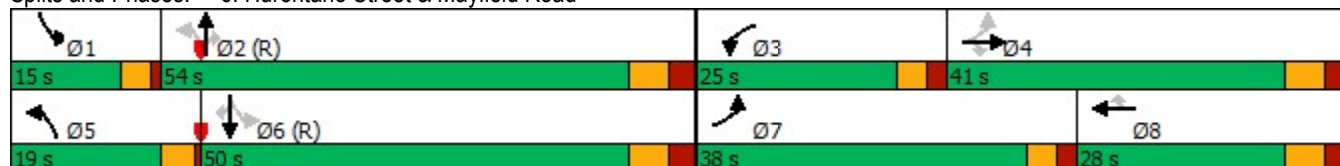
Intersection LOS: F

Intersection Capacity Utilization 116.6%

ICU Level of Service H

Analysis Period (min) 15

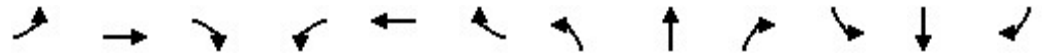
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
v/c Ratio	1.47	0.60	0.27	0.69	1.23	0.53	0.85	0.69	0.49	0.91	0.89	1.21
Control Delay	250.9	46.9	7.8	62.4	159.7	20.9	58.3	41.1	11.7	56.6	54.4	127.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	250.9	46.9	7.8	62.4	159.7	20.9	58.3	41.1	11.7	56.6	54.4	127.7
Queue Length 50th (m)	~259.1	65.5	0.0	45.8	~116.5	11.5	46.0	103.4	15.8	43.0	132.0	~245.7
Queue Length 95th (m)	#335.0	79.7	15.6	62.3	#145.1	35.6	#90.2	126.5	42.7	#87.8	#162.6	#326.0
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	513	1258	484	504	792	365	287	1258	677	306	1118	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.47	0.60	0.27	0.69	1.23	0.53	0.85	0.69	0.49	0.91	0.89	1.21

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Future Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.15	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	284	4995	1538	3404	5092	1562	168	3614	1486	368	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
RTOR Reduction (vph)	0	0	97	0	0	122	0	0	160	0	0	357
Lane Group Flow (vph)	752	757	33	347	971	72	243	864	172	278	991	706
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	59.0	34.0	34.0	20.0	21.0	21.0	62.0	47.0	47.0	54.0	43.0	43.0
Effective Green, g (s)	61.0	34.0	34.0	20.0	21.0	21.0	64.0	47.0	47.0	58.0	43.0	45.0
Actuated g/C Ratio	0.45	0.25	0.25	0.15	0.16	0.16	0.47	0.35	0.35	0.43	0.32	0.33
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	504	792	242	283	1258	517	298	1118	518
v/s Ratio Prot	c0.38	0.15		0.10	0.19		c0.11	0.24		c0.09	0.28	
v/s Ratio Perm	c0.28		0.02			0.05	0.30		0.12	0.31		c0.45
v/c Ratio	1.48	0.60	0.08	0.69	1.23	0.30	0.86	0.69	0.33	0.93	0.89	1.36
Uniform Delay, d1	39.9	44.5	38.6	54.5	57.0	50.5	37.0	37.7	32.4	29.4	43.7	45.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	225.3	2.1	0.4	7.5	112.8	3.1	27.1	3.1	1.7	37.5	10.4	175.2
Delay (s)	265.2	46.7	39.0	62.0	169.8	53.5	64.1	40.8	34.2	66.9	54.1	220.2
Level of Service	F	D	D	E	F	D	E	D	C	E	D	F
Approach Delay (s)		146.3			130.2			43.2			131.3	
Approach LOS		F			F			D			F	
Intersection Summary												
HCM 2000 Control Delay			116.3	HCM 2000 Level of Service						F		
HCM 2000 Volume to Capacity ratio			1.45									
Actuated Cycle Length (s)			135.0	Sum of lost time (s)						21.0		
Intersection Capacity Utilization			116.6%	ICU Level of Service						H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	325	9	242	258	53	16	235	366	44	228	11
Future Volume (vph)	2	325	9	242	258	53	16	235	366	44	228	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.975				0.850		0.995	
Flt Protected				0.950				0.997			0.992	
Satd. Flow (prot)	0	1913	0	1772	1812	0	0	1830	1585	0	1788	0
Flt Permitted		0.998		0.516				0.973			0.924	
Satd. Flow (perm)	0	1910	0	962	1812	0	0	1786	1585	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			31				356			6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	346	10	257	274	56	17	250	389	47	243	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	358	0	257	330	0	0	267	389	0	302	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

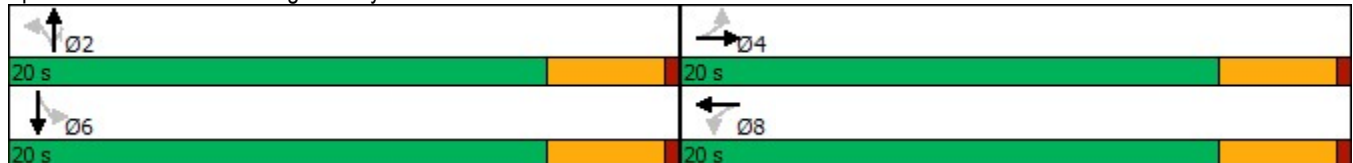


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		13.4		13.4	13.4			16.1	16.1		16.1	
Actuated g/C Ratio		0.36		0.36	0.36			0.43	0.43		0.43	
v/c Ratio		0.52		0.75	0.50			0.35	0.44		0.42	
Control Delay		12.4		27.6	11.2			9.7	3.6		10.5	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		12.4		27.6	11.2			9.7	3.6		10.5	
LOS		B		C	B			A	A		B	
Approach Delay		12.4			18.3			6.1			10.5	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	37.6
Natural Cycle:	40
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	11.7
Intersection LOS:	B
Intersection Capacity Utilization:	76.2%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	358	257	330	267	389	302
v/c Ratio	0.52	0.75	0.50	0.35	0.44	0.42
Control Delay	12.4	27.6	11.2	9.7	3.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	27.6	11.2	9.7	3.6	10.5
Queue Length 50th (m)	16.6	13.4	13.6	12.0	1.3	13.7
Queue Length 95th (m)	32.1	#40.1	28.0	24.3	12.5	28.0
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	822	412	795	766	883	718
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.62	0.42	0.35	0.44	0.42

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	325	9	242	258	53	16	235	366	44	228	11	
Future Volume (vph)	2	325	9	242	258	53	16	235	366	44	228	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1913		1772	1811			1829	1585		1788		
Flt Permitted		1.00		0.52	1.00			0.97	1.00		0.92		
Satd. Flow (perm)		1910		962	1811			1786	1585		1665		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	346	10	257	274	56	17	250	389	47	243	12	
RTOR Reduction (vph)	0	3	0	0	20	0	0	0	203	0	3	0	
Lane Group Flow (vph)	0	355	0	257	310	0	0	267	186	0	299	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6		6	
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		13.4		13.4	13.4			16.1	16.1		16.1		
Effective Green, g (s)		13.4		13.4	13.4			16.1	16.1		16.1		
Actuated g/C Ratio		0.36		0.36	0.36			0.43	0.43		0.43		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		682		343	647			766	680		714		
v/s Ratio Prot					0.17								
v/s Ratio Perm		0.19		c0.27				0.15	0.12		c0.18		
v/c Ratio		0.52		0.75	0.48			0.35	0.27		0.42		
Uniform Delay, d1		9.5		10.6	9.3			7.2	6.9		7.4		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.7		8.7	0.6			1.3	1.0		1.8		
Delay (s)		10.2		19.3	9.9			8.4	7.9		9.2		
Level of Service		B		B	A			A	A		A		
Approach Delay (s)		10.2			14.0			8.1			9.2		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			10.5									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.57										
Actuated Cycle Length (s)			37.5									Sum of lost time (s)	8.0
Intersection Capacity Utilization			76.2%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	42	863	40	307	481	46	42	119	474	62	170	31
Future Volume (vph)	42	863	40	307	481	46	42	119	474	62	170	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.987				0.850		0.984	
Flt Protected		0.998		0.950				0.987			0.988	
Satd. Flow (prot)	0	3567	0	1789	3477	0	0	1869	1617	0	1833	0
Flt Permitted		0.898		0.136				0.798			0.863	
Satd. Flow (perm)	0	3210	0	256	3477	0	0	1511	1617	0	1601	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			18				379			7
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	45	918	43	327	512	49	45	127	504	66	181	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1006	0	327	561	0	0	172	504	0	280	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

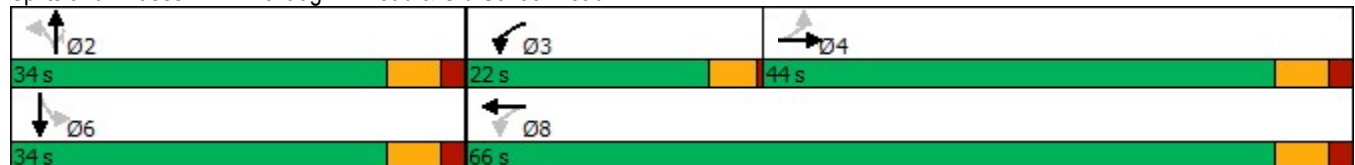
06/07/2024

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	44.0	44.0		22.0	66.0		34.0	34.0	34.0	34.0	34.0	
Total Split (%)	44.0%	44.0%		22.0%	66.0%		34.0%	34.0%	34.0%	34.0%	34.0%	
Maximum Green (s)	38.0	38.0		18.0	60.0		28.0	28.0	28.0	28.0	28.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		31.5		52.1	50.0			19.4	19.4		19.4	
Actuated g/C Ratio		0.38		0.64	0.61			0.24	0.24		0.24	
v/c Ratio		0.81		0.76	0.26			0.48	0.75		0.73	
Control Delay		29.8		27.9	7.9			33.7	16.1		41.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		29.8		27.9	7.9			33.7	16.1		41.7	
LOS		C		C	A			C	B		D	
Approach Delay		29.8			15.3			20.6			41.7	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 81.9
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 24.3
 Intersection Capacity Utilization 85.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service E

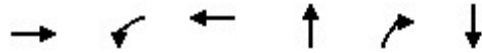
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1006	327	561	172	504	280
v/c Ratio	0.81	0.76	0.26	0.48	0.75	0.73
Control Delay	29.8	27.9	7.9	33.7	16.1	41.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	27.9	7.9	33.7	16.1	41.7
Queue Length 50th (m)	75.0	27.9	18.8	24.7	17.2	42.0
Queue Length 95th (m)	116.7	#72.8	33.0	46.0	56.1	73.2
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1564	516	2619	541	822	578
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.63	0.21	0.32	0.61	0.48

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	42	863	40	307	481	46	42	119	474	62	170	31
Future Volume (vph)	42	863	40	307	481	46	42	119	474	62	170	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3565		1789	3477			1869	1617		1834	
Flt Permitted		0.90		0.14	1.00			0.80	1.00		0.86	
Satd. Flow (perm)		3210		256	3477			1510	1617		1601	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	45	918	43	327	512	49	45	127	504	66	181	33
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	289	0	5	0
Lane Group Flow (vph)	0	1003	0	327	554	0	0	172	215	0	275	0
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		31.7		50.0	50.0			19.3	19.3		19.3	
Effective Green, g (s)		31.7		50.0	50.0			19.3	19.3		19.3	
Actuated g/C Ratio		0.39		0.62	0.62			0.24	0.24		0.24	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1251		427	2138			358	383		380	
v/s Ratio Prot				c0.13	0.16							
v/s Ratio Perm		0.31		c0.34				0.11	0.13		c0.17	
v/c Ratio		0.80		0.77	0.26			0.48	0.56		0.72	
Uniform Delay, d1		22.0		16.0	7.2			26.7	27.3		28.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		3.8		8.0	0.1			1.0	1.9		6.7	
Delay (s)		25.8		24.0	7.2			27.7	29.2		35.2	
Level of Service		C		C	A			C	C		D	
Approach Delay (s)		25.8			13.4			28.8			35.2	
Approach LOS		C			B			C			D	

Intersection Summary		
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.78	C
Actuated Cycle Length (s)	81.3	Sum of lost time (s)
Intersection Capacity Utilization	85.0%	16.0
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		E

Lanes, Volumes, Timings

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	600	277	568	400	227	48	146	1983	188	37	2713	320
Future Volume (vph)	600	277	568	400	227	48	146	1983	188	37	2713	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.899			0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3218	0	1722	3397	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.469			0.211			0.069			0.071		
Satd. Flow (perm)	866	3218	0	382	3397	0	125	4445	1471	121	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			16				143			156
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	645	298	611	430	244	52	157	2132	202	40	2917	344
Shared Lane Traffic (%)												
Lane Group Flow (vph)	645	909	0	430	296	0	157	2132	202	40	2917	344
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
 3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	32.0		18.0	25.0		8.0	70.0	70.0	62.0	62.0	62.0
Total Split (%)	20.8%	26.7%		15.0%	20.8%		6.7%	58.3%	58.3%	51.7%	51.7%	51.7%
Maximum Green (s)	21.0	24.0		14.0	17.0		4.0	62.0	62.0	54.0	54.0	54.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	48.0	26.0		39.0	17.0		68.0	62.0	62.0	56.0	56.0	54.0
Actuated g/C Ratio	0.40	0.22		0.32	0.14		0.57	0.52	0.52	0.47	0.47	0.45
v/c Ratio	1.25	1.51dr		1.42	0.60		1.05	0.93	0.24	0.71	1.24	0.42
Control Delay	157.9	144.6		236.2	51.3		110.7	35.5	5.8	89.5	141.8	13.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	157.9	144.6		236.2	51.3		110.7	35.5	5.8	89.5	141.8	13.4
LOS	F	F		F	D		F	D	A	F	F	B
Approach Delay		150.1			160.8			37.8				127.8
Approach LOS		F			F			D				F

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.42
 Intersection Signal Delay: 107.3 Intersection LOS: F
 Intersection Capacity Utilization 125.3% ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	645	909	430	296	157	2132	202	40	2917	344
v/c Ratio	1.25	1.51dr	1.42	0.60	1.05	0.93	0.24	0.71	1.24	0.42
Control Delay	157.9	144.6	236.2	51.3	110.7	35.5	5.8	89.5	141.8	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	157.9	144.6	236.2	51.3	110.7	35.5	5.8	89.5	141.8	13.4
Queue Length 50th (m)	~189.4	~131.0	~119.0	32.9	~23.7	164.9	6.7	7.3	~312.3	27.7
Queue Length 95th (m)	#259.0	#171.4	#181.3	47.6	#66.6	190.6	19.0	#28.8	#338.7	51.0
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	516	751	302	494	150	2296	829	56	2353	820
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.25	1.21	1.42	0.60	1.05	0.93	0.24	0.71	1.24	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	600	277	568	400	227	48	146	1983	188	37	2713	320
Future Volume (vph)	600	277	568	400	227	48	146	1983	188	37	2713	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.90		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	3218		1722	3396		1722	4445	1471	1615	5043	1633
Flt Permitted	0.47	1.00		0.21	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	866	3218		382	3396		125	4445	1471	121	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	645	298	611	430	244	52	157	2132	202	40	2917	344
RTOR Reduction (vph)	0	54	0	0	14	0	0	0	69	0	0	86
Lane Group Flow (vph)	645	855	0	430	282	0	157	2132	133	40	2917	258
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	42.0	24.0		31.0	17.0		62.0	62.0	62.0	54.0	54.0	54.0
Effective Green, g (s)	44.0	26.0		35.0	17.0		64.0	62.0	62.0	56.0	56.0	54.0
Actuated g/C Ratio	0.37	0.22		0.29	0.14		0.53	0.52	0.52	0.47	0.47	0.45
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0
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)	487	697		290	481		146	2296	760	56	2353	734
v/s Ratio Prot	c0.25	0.27		c0.20	0.08		c0.05	0.48			c0.58	
v/s Ratio Perm	0.23			c0.23			0.52		0.09	0.33		0.16
v/c Ratio	1.32	1.51dr		1.48	0.59		1.08	0.93	0.17	0.71	1.24	0.35
Uniform Delay, d1	34.9	47.0		38.2	48.2		31.7	26.9	15.4	25.6	32.0	21.6
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	159.8	114.4		234.9	1.8		96.0	7.3	0.1	35.0	111.7	0.3
Delay (s)	194.7	161.4		273.1	50.0		127.8	34.2	15.5	60.6	143.7	21.9
Level of Service	F	F		F	D		F	C	B	E	F	C
Approach Delay (s)		175.2			182.1			38.6			130.0	
Approach LOS		F			F			D			F	

Intersection Summary



















HCM 2000 Control Delay	115.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	125.3%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	831	61	219	720	30	30	315	187	101	484	46
Future Volume (vph)	51	831	61	219	720	30	30	315	187	101	484	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	85.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994				0.850		0.990	
Flt Protected		0.997		0.950				0.996			0.992	
Satd. Flow (prot)	0	4861	0	1659	4943	0	0	1832	1585	0	1802	0
Flt Permitted		0.845		0.152				0.928			0.790	
Satd. Flow (perm)	0	4120	0	265	4943	0	0	1707	1585	0	1435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6				189		5	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	52	839	62	221	727	30	30	318	189	102	489	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	953	0	221	757	0	0	348	189	0	637	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

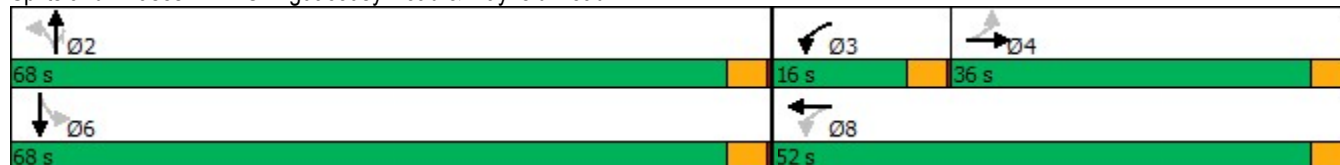


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	36.0	36.0		16.0	52.0		68.0	68.0	68.0	68.0	68.0	
Total Split (%)	30.0%	30.0%		13.3%	43.3%		56.7%	56.7%	56.7%	56.7%	56.7%	
Maximum Green (s)	32.0	32.0		12.0	48.0		64.0	64.0	64.0	64.0	64.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		32.4		48.7	48.7			47.7	47.7		47.7	
Actuated g/C Ratio		0.31		0.47	0.47			0.46	0.46		0.46	
v/c Ratio		0.74		0.78	0.33			0.45	0.23		0.97	
Control Delay		38.1		41.2	19.7			20.6	2.7		55.4	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		38.1		41.2	19.7			20.6	2.7		55.4	
LOS		D		D	B			C	A		E	
Approach Delay		38.1			24.6			14.3			55.4	
Approach LOS		D			C			B			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	104.5
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	33.3
Intersection LOS:	C
Intersection Capacity Utilization:	98.4%
ICU Level of Service:	F
Analysis Period (min):	15

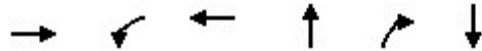
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024






























Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	953	221	757	348	189	637
v/c Ratio	0.74	0.78	0.33	0.45	0.23	0.97
Control Delay	38.1	41.2	19.7	20.6	2.7	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.1	41.2	19.7	20.6	2.7	55.4
Queue Length 50th (m)	63.5	27.5	34.9	46.2	0.0	120.0
Queue Length 95th (m)	#95.6	#77.2	56.1	67.3	10.4	#183.9
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		85.0			50.0	
Base Capacity (vph)	1284	285	2304	1059	1055	892
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.78	0.33	0.33	0.18	0.71

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
4: Chinguacousy Road & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  				  	  		  		
Traffic Volume (vph)	51	831	61	219	720	30	30	315	187	101	484	46	
Future Volume (vph)	51	831	61	219	720	30	30	315	187	101	484	46	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		4864		1659	4943			1832	1585		1803		
Flt Permitted		0.85		0.15	1.00			0.93	1.00		0.79		
Satd. Flow (perm)		4121		265	4943			1707	1585		1435		
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	52	839	62	221	727	30	30	318	189	102	489	46	
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	103	0	3	0	
Lane Group Flow (vph)	0	947	0	221	754	0	0	348	86	0	634	0	
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		32.5		48.7	48.7			47.7	47.7		47.7		
Effective Green, g (s)		32.5		48.7	48.7			47.7	47.7		47.7		
Actuated g/C Ratio		0.31		0.47	0.47			0.46	0.46		0.46		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1282		286	2305			779	724		655		
v/s Ratio Prot				c0.09	0.15								
v/s Ratio Perm		0.23		c0.27				0.20	0.05		c0.44		
v/c Ratio		0.74		0.77	0.33			0.45	0.12		0.97		
Uniform Delay, d1		32.2		19.7	17.5			19.3	16.3		27.6		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		3.8		12.2	0.4			0.4	0.1		27.1		
Delay (s)		36.0		31.9	17.9			19.8	16.4		54.7		
Level of Service		D		C	B			B	B		D		
Approach Delay (s)		36.0			21.1			18.6			54.7		
Approach LOS		D			C			B			D		
Intersection Summary													
HCM 2000 Control Delay			32.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.90										
Actuated Cycle Length (s)			104.4									Sum of lost time (s)	12.0
Intersection Capacity Utilization			98.4%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗		↗	↗↗	
Traffic Volume (vph)	45	1110	131	156	882	145	58	388	117	353	711	139
Future Volume (vph)	45	1110	131	156	882	145	58	388	117	353	711	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.979			0.965			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4761	0	1644	3438	0	1690	3445	0
Flt Permitted	0.261			0.100			0.327			0.255		
Satd. Flow (perm)	501	4888	0	180	4761	0	566	3438	0	454	3445	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			34			31			25	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	46	1133	134	159	900	148	59	396	119	360	726	142
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	1267	0	159	1048	0	59	515	0	360	868	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		17.0	59.0		34.0	34.0		27.0	61.0	
Total Split (%)	35.0%	35.0%		14.2%	49.2%		28.3%	28.3%		22.5%	50.8%	
Maximum Green (s)	36.0	36.0		13.0	53.0		28.0	28.0		23.0	55.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		55.0	53.0		28.0	28.0		57.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.46	0.44		0.23	0.23		0.48	0.46	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

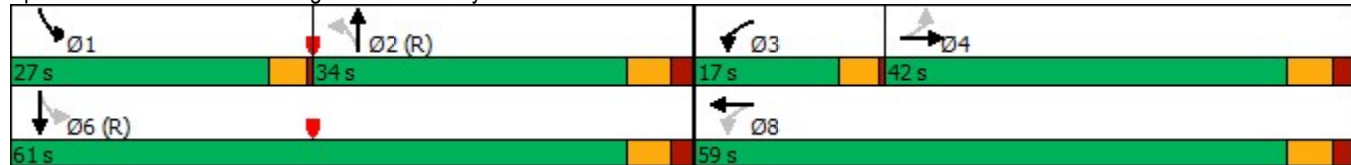


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.31	0.86		0.64	0.49		0.45	0.62		0.80	0.55	
Control Delay	39.4	46.0		35.5	24.0		51.9	42.6		35.7	24.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.4	46.0		35.5	24.0		51.9	42.6		35.7	24.3	
LOS	D	D		D	C		D	D		D	C	
Approach Delay		45.7			25.5			43.5			27.6	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	70
Control Type:	Pretimed
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	34.7
Intersection LOS:	C
Intersection Capacity Utilization	83.7%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	1267	159	1048	59	515	360	868
v/c Ratio	0.31	0.86	0.64	0.49	0.45	0.62	0.80	0.55
Control Delay	39.4	46.0	35.5	24.0	51.9	42.6	35.7	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	46.0	35.5	24.0	51.9	42.6	35.7	24.3
Queue Length 50th (m)	8.3	101.6	21.8	61.0	12.0	54.2	55.1	73.6
Queue Length 95th (m)	19.6	120.1	42.7	73.8	26.2	72.2	#91.0	92.4
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	150	1478	247	2121	132	825	452	1592
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.86	0.64	0.49	0.45	0.62	0.80	0.55

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶		↶	↶↶	
Traffic Volume (vph)	45	1110	131	156	882	145	58	388	117	353	711	139
Future Volume (vph)	45	1110	131	156	882	145	58	388	117	353	711	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4889		1706	4761		1644	3439		1690	3447	
Flt Permitted	0.26	1.00		0.10	1.00		0.33	1.00		0.26	1.00	
Satd. Flow (perm)	501	4889		180	4761		565	3439		454	3447	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	46	1133	134	159	900	148	59	396	119	360	726	142
RTOR Reduction (vph)	0	12	0	0	19	0	0	24	0	0	14	0
Lane Group Flow (vph)	46	1255	0	159	1029	0	59	491	0	360	854	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		53.0	53.0		28.0	28.0		55.0	55.0	
Effective Green, g (s)	36.0	36.0		53.0	53.0		28.0	28.0		55.0	55.0	
Actuated g/C Ratio	0.30	0.30		0.44	0.44		0.23	0.23		0.46	0.46	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	150	1466		244	2102		131	802		444	1579	
v/s Ratio Prot		c0.26		c0.07	0.22			0.14		c0.16	0.25	
v/s Ratio Perm	0.09			0.22			0.10			c0.22		
v/c Ratio	0.31	0.86		0.65	0.49		0.45	0.61		0.81	0.54	
Uniform Delay, d1	32.4	39.6		24.9	23.9		39.4	41.1		23.9	23.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.2	6.6		12.8	0.8		10.8	3.5		14.8	1.3	
Delay (s)	37.6	46.2		37.7	24.7		50.2	44.6		38.7	24.7	
Level of Service	D	D		D	C		D	D		D	C	
Approach Delay (s)		45.9			26.4			45.2			28.8	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	299	1093	141	253	703	186	106	545	257	395	1295	399
Future Volume (vph)	299	1093	141	253	703	186	106	545	257	395	1295	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.143			0.950			0.120			0.241		
Satd. Flow (perm)	262	4902	1508	3330	4948	1395	228	3476	1467	433	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			162			227			289
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	318	1163	150	269	748	198	113	580	273	420	1378	424
Shared Lane Traffic (%)												
Lane Group Flow (vph)	318	1163	150	269	748	198	113	580	273	420	1378	424
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.88	0.95	0.32	0.92	0.86	0.53	0.78	0.62	0.49	0.75	0.82	0.48
Control Delay	67.2	74.8	15.2	107.2	75.4	18.8	63.6	54.8	12.8	32.4	41.1	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	15.2	107.2	75.4	18.8	63.6	54.8	12.8	32.4	41.1	10.1
LOS	E	E	B	F	E	B	E	D	B	C	D	B
Approach Delay		67.8			73.2			43.9			33.5	
Approach LOS		E			E			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	52.5
Intersection LOS:	D
Intersection Capacity Utilization:	90.2%
ICU Level of Service:	E
Analysis Period (min):	15

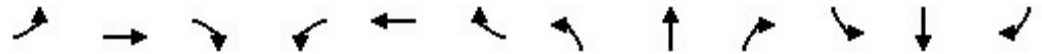
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	1163	150	269	748	198	113	580	273	420	1378	424
v/c Ratio	0.88	0.95	0.32	0.92	0.86	0.53	0.78	0.62	0.49	0.75	0.82	0.48
Control Delay	67.2	74.8	15.2	107.2	75.4	18.8	63.6	54.8	12.8	32.4	41.1	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	15.2	107.2	75.4	18.8	63.6	54.8	12.8	32.4	41.1	10.1
Queue Length 50th (m)	79.9	134.5	8.4	44.5	85.8	9.8	16.3	85.8	11.1	75.3	195.4	25.6
Queue Length 95th (m)	#132.8	#162.4	27.9	#71.6	102.1	35.6	#45.5	106.3	38.2	115.2	225.8	53.8
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	361	1225	464	292	865	377	144	934	560	561	1683	891
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.95	0.32	0.92	0.86	0.53	0.78	0.62	0.49	0.75	0.82	0.48

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

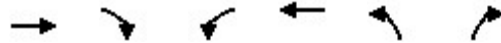
6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	299	1093	141	253	703	186	106	545	257	395	1295	399
Future Volume (vph)	299	1093	141	253	703	186	106	545	257	395	1295	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1706	3544	1557
Flt Permitted	0.14	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	263	4902	1508	3340	4948	1395	228	3476	1467	432	3544	1557
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	318	1163	150	269	748	198	113	580	273	420	1378	424
RTOR Reduction (vph)	0	0	87	0	0	134	0	0	166	0	0	152
Lane Group Flow (vph)	318	1163	63	269	748	64	113	580	107	420	1378	272
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	358	1225	377	292	865	244	140	934	394	553	1683	739
v/s Ratio Prot	c0.16	c0.24		0.08	0.15		0.04	0.17		c0.19	c0.39	
v/s Ratio Perm	0.18		0.04			0.05	0.22		0.07	0.22		0.17
v/c Ratio	0.89	0.95	0.17	0.92	0.86	0.26	0.81	0.62	0.27	0.76	0.82	0.37
Uniform Delay, d1	44.1	59.0	47.0	72.5	64.2	57.1	42.4	51.3	46.1	25.1	36.1	26.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.3	16.1	1.0	35.8	11.2	2.6	37.6	3.1	1.7	9.5	4.6	1.4
Delay (s)	70.4	75.1	47.9	108.3	75.4	59.7	79.9	54.4	47.8	34.5	40.7	28.1
Level of Service	E	E	D	F	E	E	E	D	D	C	D	C
Approach Delay (s)		71.7			80.1			55.6			37.1	
Approach LOS		E			F			E			D	
Intersection Summary												
HCM 2000 Control Delay			58.1	HCM 2000 Level of Service				E				
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			160.0	Sum of lost time (s)				23.0				
Intersection Capacity Utilization			90.2%	ICU Level of Service				E				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	701	37	21	491	65	34
Future Volume (vph)	701	37	21	491	65	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.992			0.954		
Fl _t Protected				0.998	0.968	
Satd. Flow (prot)	3550	0	0	3571	1739	0
Fl _t Permitted				0.998	0.968	
Satd. Flow (perm)	3550	0	0	3571	1739	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	701	37	21	491	65	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	738	0	0	512	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

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

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	701	37	21	491	65	34
Future Volume (Veh/h)	701	37	21	491	65	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	701	37	21	491	65	34
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			738		1007	369
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			738		1007	369
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		72	95
cM capacity (veh/h)			864		231	628
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	467	271	185	327	99	
Volume Left	0	0	21	0	65	
Volume Right	0	37	0	0	34	
cSH	1700	1700	864	1700	296	
Volume to Capacity	0.27	0.16	0.02	0.19	0.33	
Queue Length 95th (m)	0.0	0.0	0.6	0.0	10.9	
Control Delay (s)	0.0	0.0	1.3	0.0	23.2	
Lane LOS	A			C		
Approach Delay (s)	0.0		0.5		23.2	
Approach LOS	C					
Intersection Summary						
Average Delay			1.9			
Intersection Capacity Utilization			41.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕			↕	
Traffic Volume (vph)	18	400	76	91	156	28	29	615	56	12	576	6
Future Volume (vph)	18	400	76	91	156	28	29	615	56	12	576	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	25.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (m)	2.5			2.5			85.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.986			0.987			0.998	
Flt Protected		0.998			0.984		0.950				0.999	
Satd. Flow (prot)	0	1840	0	0	1827	0	1789	3532	0	0	3568	0
Flt Permitted		0.982			0.602		0.409				0.938	
Satd. Flow (perm)	0	1811	0	0	1118	0	770	3532	0	0	3350	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			9			14			1	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	400	76	91	156	28	29	615	56	12	576	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	494	0	0	275	0	29	671	0	0	594	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

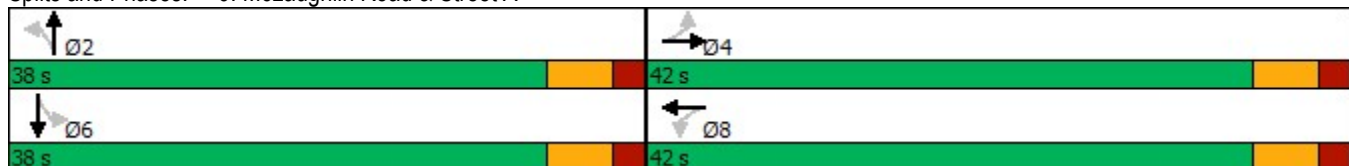


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	42.0	42.0		42.0	42.0		38.0	38.0		38.0	38.0	
Total Split (%)	52.5%	52.5%		52.5%	52.5%		47.5%	47.5%		47.5%	47.5%	
Maximum Green (s)	36.0	36.0		36.0	36.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		23.2			23.2		32.3	32.3			32.3	
Actuated g/C Ratio		0.34			0.34		0.48	0.48			0.48	
v/c Ratio		0.78			0.71		0.08	0.40			0.37	
Control Delay		28.4			28.8		13.3	13.3			13.4	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		28.4			28.8		13.3	13.3			13.4	
LOS		C			C		B	B			B	
Approach Delay		28.4			28.8			13.3			13.4	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	67.7
Natural Cycle:	45
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	19.0
Intersection LOS:	B
Intersection Capacity Utilization:	81.3%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	494	275	29	671	594
v/c Ratio	0.78	0.71	0.08	0.40	0.37
Control Delay	28.4	28.8	13.3	13.3	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	28.8	13.3	13.3	13.4
Queue Length 50th (m)	52.7	28.2	1.9	26.3	23.4
Queue Length 95th (m)	82.6	51.3	7.7	51.1	46.2
Internal Link Dist (m)	180.8	1335.2		2472.3	375.3
Turn Bay Length (m)			25.0		
Base Capacity (vph)	979	604	367	1693	1600
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.46	0.08	0.40	0.37

Intersection Summary

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕			↕	
Traffic Volume (vph)	18	400	76	91	156	28	29	615	56	12	576	6
Future Volume (vph)	18	400	76	91	156	28	29	615	56	12	576	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frt		0.98			0.99		1.00	0.99			1.00	
Flt Protected		1.00			0.98		0.95	1.00			1.00	
Satd. Flow (prot)		1841			1827		1789	3534			3570	
Flt Permitted		0.98			0.60		0.41	1.00			0.94	
Satd. Flow (perm)		1811			1118		770	3534			3353	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	400	76	91	156	28	29	615	56	12	576	6
RTOR Reduction (vph)	0	10	0	0	6	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	484	0	0	269	0	29	664	0	0	593	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)		23.3			23.3		32.3	32.3			32.3	
Effective Green, g (s)		23.3			23.3		32.3	32.3			32.3	
Actuated g/C Ratio		0.34			0.34		0.48	0.48			0.48	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		624			385		367	1688			1602	
v/s Ratio Prot								c0.19				
v/s Ratio Perm		c0.27			0.24		0.04				0.18	
v/c Ratio		0.78			0.70		0.08	0.39			0.37	
Uniform Delay, d1		19.8			19.1		9.6	11.3			11.2	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		6.0			5.5		0.4	0.7			0.7	
Delay (s)		25.8			24.6		10.0	12.0			11.9	
Level of Service		C			C		A	B			B	
Approach Delay (s)		25.8			24.6			12.0			11.9	
Approach LOS		C			C			B			B	

Intersection Summary

HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	67.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↘	↗
Traffic Volume (vph)	1300	28	51	765	37	200
Future Volume (vph)	1300	28	51	765	37	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.997					0.850
Fl _t Protected				0.997	0.950	
Satd. Flow (prot)	3568	0	0	3568	1789	1601
Fl _t Permitted				0.997	0.950	
Satd. Flow (perm)	3568	0	0	3568	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1300	28	51	765	37	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1328	0	0	816	37	200
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	69.6%			ICU Level of Service C		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1300	28	51	765	37	200
Future Volume (Veh/h)	1300	28	51	765	37	200
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1300	28	51	765	37	200
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1328		1798	664
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			911		1499	81
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		55	74
cM capacity (veh/h)			595		83	770
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	867	461	306	510	37	200
Volume Left	0	0	51	0	37	0
Volume Right	0	28	0	0	0	200
cSH	1700	1700	595	1700	83	770
Volume to Capacity	0.51	0.27	0.09	0.30	0.45	0.26
Queue Length 95th (m)	0.0	0.0	2.1	0.0	14.0	7.9
Control Delay (s)	0.0	0.0	2.9	0.0	79.8	11.3
Lane LOS			A		F	B
Approach Delay (s)	0.0		1.1		22.0	
Approach LOS					C	
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			69.6%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	727	193	2251	3634	48
Future Volume (vph)	67	727	193	2251	3634	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.998	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5132	0
Flt Permitted	0.950		0.048			
Satd. Flow (perm)	1789	1601	90	5142	5132	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					2	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	727	193	2251	3634	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	727	193	2251	3682	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

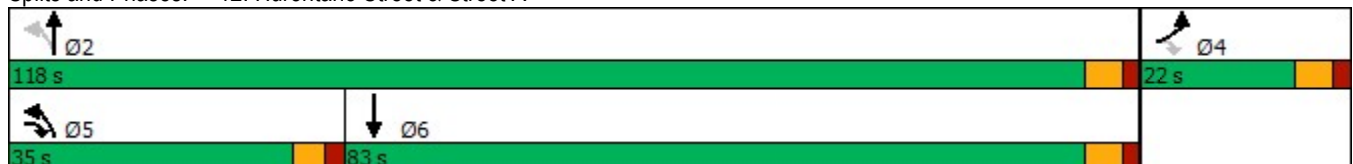


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	9.5	9.5	22.0	22.0	
Total Split (s)	22.0	35.0	35.0	118.0	83.0	
Total Split (%)	15.7%	25.0%	25.0%	84.3%	59.3%	
Maximum Green (s)	16.0	29.5	29.5	112.0	77.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	
Total Lost Time (s)	6.0	3.5	5.5	6.0	4.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	10.3	45.1	112.8	113.7	79.2	
Actuated g/C Ratio	0.08	0.34	0.86	0.86	0.60	
v/c Ratio	0.48	1.33	0.42	0.51	1.19	
Control Delay	70.7	195.4	28.4	3.6	117.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.7	195.4	28.4	3.6	117.4	
LOS	E	F	C	A	F	
Approach Delay	184.8			5.6	117.4	
Approach LOS	F			A	F	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	131.9
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.33
Intersection Signal Delay:	85.6
Intersection LOS:	F
Intersection Capacity Utilization	123.0%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	67	727	193	2251	3682
v/c Ratio	0.48	1.33	0.42	0.51	1.19
Control Delay	70.7	195.4	28.4	3.6	117.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	70.7	195.4	28.4	3.6	117.4
Queue Length 50th (m)	17.4	~243.3	27.5	50.9	~440.4
Queue Length 95th (m)	32.6	#316.7	53.2	70.6	#482.7
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	217	548	457	4431	3083
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	1.33	0.42	0.51	1.19

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	727	193	2251	3634	48
Future Volume (vph)	67	727	193	2251	3634	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	3.5	5.5	6.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5132	
Flt Permitted	0.95	1.00	0.05	1.00	1.00	
Satd. Flow (perm)	1789	1601	91	5142	5132	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	727	193	2251	3634	48
RTOR Reduction (vph)	0	0	0	0	1	0
Lane Group Flow (vph)	67	727	193	2251	3681	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	8.9	38.5	112.4	112.4	77.3	
Effective Green, g (s)	8.9	42.5	112.4	112.4	79.3	
Actuated g/C Ratio	0.07	0.32	0.84	0.84	0.59	
Clearance Time (s)	6.0	5.5	5.5	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	119	510	453	4335	3053	
v/s Ratio Prot	0.04	c0.34	0.09	0.44	c0.72	
v/s Ratio Perm		0.12	0.26			
v/c Ratio	0.56	1.43	0.43	0.52	1.21	
Uniform Delay, d1	60.3	45.4	35.5	2.9	27.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.0	202.6	0.6	0.4	95.9	
Delay (s)	66.3	248.0	36.2	3.4	122.9	
Level of Service	E	F	D	A	F	
Approach Delay (s)	232.7			6.0	122.9	
Approach LOS	F			A	F	

Intersection Summary			
HCM 2000 Control Delay	94.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	133.3	Sum of lost time (s)	15.5
Intersection Capacity Utilization	123.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	9	544	2	9	382
Future Volume (vph)	4	9	544	2	9	382
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.850					
Fl _t Protected	0.950					0.999
Satd. Flow (prot)	1789	1601	1883	0	0	1882
Fl _t Permitted	0.950					0.999
Satd. Flow (perm)	1789	1601	1883	0	0	1882
Link Speed (k/h)	48		80			80
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		114.4			24.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	10	591	2	10	415
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	10	593	0	0	425
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

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

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	9	544	2	9	382
Future Volume (Veh/h)	4	9	544	2	9	382
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)	4	10	591	2	10	415
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	1027	592			593	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1027	592			593	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			99	
cM capacity (veh/h)	257	506			983	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	4	10	593	425		
Volume Left	4	0	0	10		
Volume Right	0	10	2	0		
cSH	257	506	1700	983		
Volume to Capacity	0.02	0.02	0.35	0.01		
Queue Length 95th (m)	0.4	0.5	0.0	0.2		
Control Delay (s)	19.2	12.3	0.0	0.3		
Lane LOS	C	B		A		
Approach Delay (s)	14.2		0.0	0.3		
Approach LOS	B					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			38.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	
Traffic Volume (vph)	723	5	63	505	14	211
Future Volume (vph)	723	5	63	505	14	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.999				0.873	
Fl _t Protected				0.995	0.997	
Satd. Flow (prot)	3575	0	0	3561	1639	0
Fl _t Permitted				0.995	0.997	
Satd. Flow (perm)	3575	0	0	3561	1639	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	34.2			32.8	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	786	5	68	549	15	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	791	0	0	617	244	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	59.8%			ICU Level of Service B		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	723	5	63	505	14	211
Future Volume (Veh/h)	723	5	63	505	14	211
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)	786	5	68	549	15	229
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			791	1199	396	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			791	1199	396	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			92	91	62	
cM capacity (veh/h)			825	163	604	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	524	267	251	366	244	
Volume Left	0	0	68	0	15	
Volume Right	0	5	0	0	229	
cSH	1700	1700	825	1700	518	
Volume to Capacity	0.31	0.16	0.08	0.22	0.47	
Queue Length 95th (m)	0.0	0.0	2.0	0.0	18.9	
Control Delay (s)	0.0	0.0	3.3	0.0	18.0	
Lane LOS	A			C		
Approach Delay (s)	0.0		1.3		18.0	
Approach LOS						C
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			59.8%	ICU Level of Service	B	
Analysis Period (min)			15			

















Lanes, Volumes, Timings
15: McLaughlin Road & Street E

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	46	46	0	25	18	611	18	10	501	6
Future Volume (vph)	11	0	46	46	0	25	18	611	18	10	501	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.891			0.953			0.996			0.998	
Flt Protected		0.990			0.969			0.999			0.999	
Satd. Flow (prot)	0	1661	0	0	1739	0	0	3561	0	0	3568	0
Flt Permitted		0.990			0.969			0.999			0.999	
Satd. Flow (perm)	0	1661	0	0	1739	0	0	3561	0	0	3568	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			29.9			14.2	
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
Adj. Flow (vph)	12	0	50	50	0	27	20	664	20	11	545	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	77	0	0	704	0	0	563	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97	97		97	97		97
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	47.9%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
 15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	46	46	0	25	18	611	18	10	501	6
Future Volume (Veh/h)	11	0	46	46	0	25	18	611	18	10	501	6
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)	12	0	50	50	0	27	20	664	20	11	545	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (m)												
								399			189	
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	970	1294	276	1058	1288	342	552			684		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	950	1278	276	1040	1271	316	552			661		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	94	100	93	70	100	96	98			99		
cM capacity (veh/h)	199	158	721	166	160	673	1014			914		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	62	77	352	352	284	280						
Volume Left	12	50	20	0	11	0						
Volume Right	50	27	0	20	0	7						
cSH	479	226	1014	1700	914	1700						
Volume to Capacity	0.13	0.34	0.02	0.21	0.01	0.16						
Queue Length 95th (m)	3.4	11.0	0.5	0.0	0.3	0.0						
Control Delay (s)	13.6	29.0	0.7	0.0	0.5	0.0						
Lane LOS	B	D	A		A							
Approach Delay (s)	13.6	29.0	0.3		0.2							
Approach LOS	B	D										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			47.9%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	5	350	16	386	441	78	25	388	449	64	254	5
Future Volume (vph)	5	350	16	386	441	78	25	388	449	64	254	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.977				0.850		0.998	
Flt Protected		0.999		0.950				0.997			0.990	
Satd. Flow (prot)	0	1855	0	1825	1826	0	0	1797	1601	0	1830	0
Flt Permitted		0.993		0.302				0.962			0.646	
Satd. Flow (perm)	0	1844	0	580	1826	0	0	1734	1601	0	1194	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			10				236			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	372	17	411	469	83	27	413	478	68	270	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	394	0	411	552	0	0	440	478	0	343	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

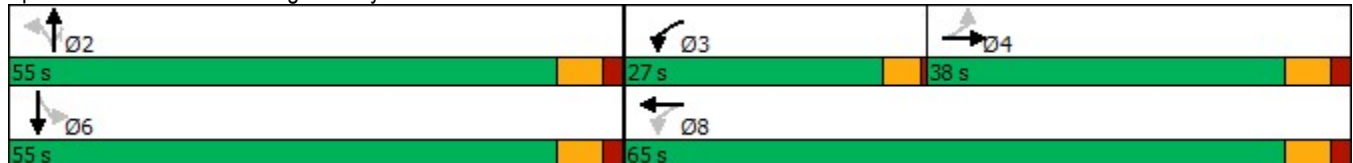


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		34.5		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.29		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.74		0.76	0.61			0.62	0.60		0.70	
Control Delay		49.1		27.7	25.4			32.9	17.0		38.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		49.1		27.7	25.4			32.9	17.0		38.7	
LOS		D		C	C			C	B		D	
Approach Delay		49.1			26.4			24.6			38.7	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	30.8
Intersection LOS:	C
Intersection Capacity Utilization:	106.6%
ICU Level of Service:	G
Analysis Period (min):	15

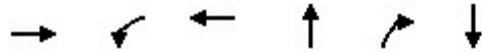
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	394	411	552	440	478	343
v/c Ratio	0.74	0.76	0.61	0.62	0.60	0.70
Control Delay	49.1	27.7	25.4	32.9	17.0	38.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	27.7	25.4	32.9	17.0	38.7
Queue Length 50th (m)	85.4	57.1	90.0	81.0	43.2	65.9
Queue Length 95th (m)	#131.8	81.5	126.2	115.4	77.5	102.1
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	531	563	902	708	793	488
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.73	0.61	0.62	0.60	0.70

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕	↖		↕		
Traffic Volume (vph)	5	350	16	386	441	78	25	388	449	64	254	5	
Future Volume (vph)	5	350	16	386	441	78	25	388	449	64	254	5	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		0.99		1.00	0.98			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1856		1825	1827			1797	1601		1831		
Flt Permitted		0.99		0.30	1.00			0.96	1.00		0.65		
Satd. Flow (perm)		1844		580	1827			1735	1601		1194		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	5	372	17	411	469	83	27	413	478	68	270	5	
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	140	0	1	0	
Lane Group Flow (vph)	0	393	0	411	547	0	0	440	338	0	342	0	
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		34.5		59.0	59.0			49.0	49.0		49.0		
Effective Green, g (s)		34.5		61.0	59.0			49.0	49.0		49.0		
Actuated g/C Ratio		0.29		0.51	0.49			0.41	0.41		0.41		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		530		528	898			708	653		487		
v/s Ratio Prot				c0.15	0.30								
v/s Ratio Perm		c0.21		0.25				0.25	0.21		c0.29		
v/c Ratio		0.74		0.78	0.61			0.62	0.52		0.70		
Uniform Delay, d1		38.7		21.3	22.1			28.1	26.6		29.5		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		9.0		7.1	3.1			4.1	2.9		8.2		
Delay (s)		47.7		28.5	25.2			32.2	29.6		37.7		
Level of Service		D		C	C			C	C		D		
Approach Delay (s)		47.7			26.6			30.8			37.7		
Approach LOS		D			C			C			D		
Intersection Summary													
HCM 2000 Control Delay			32.7									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.73										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			106.6%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	32	865	53	540	986	62	52	195	560	56	107	35
Future Volume (vph)	32	865	53	540	986	62	52	195	560	56	107	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.991				0.850		0.976	
Flt Protected		0.998		0.950				0.990			0.986	
Satd. Flow (prot)	0	3468	0	1755	3575	0	0	1834	1555	0	1791	0
Flt Permitted		0.862		0.119				0.829			0.548	
Satd. Flow (perm)	0	2995	0	220	3575	0	0	1536	1555	0	995	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			11				481		9	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	34	920	56	574	1049	66	55	207	596	60	114	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1010	0	574	1115	0	0	262	596	0	211	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

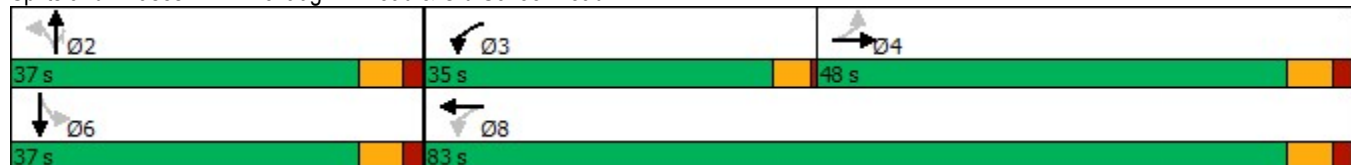


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	48.0	48.0		35.0	83.0		37.0	37.0	37.0	37.0	37.0	
Total Split (%)	40.0%	40.0%		29.2%	69.2%		30.8%	30.8%	30.8%	30.8%	30.8%	
Maximum Green (s)	42.0	42.0		31.0	77.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		40.9		80.1	76.1			24.5	24.5		24.5	
Actuated g/C Ratio		0.36		0.71	0.68			0.22	0.22		0.22	
v/c Ratio		0.93		0.94	0.46			0.79	0.83		0.95	
Control Delay		49.8		54.1	9.9			58.8	20.0		90.4	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		49.8		54.1	9.9			58.8	20.0		90.4	
LOS		D		D	A			E	B		F	
Approach Delay		49.8			24.9			31.8			90.4	
Approach LOS		D			C			C			F	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	112.6
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	36.8
Intersection LOS:	D
Intersection Capacity Utilization:	100.4%
ICU Level of Service:	G
Analysis Period (min):	15

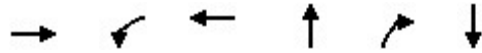
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1010	574	1115	262	596	211
v/c Ratio	0.93	0.94	0.46	0.79	0.83	0.95
Control Delay	49.8	54.1	9.9	58.8	20.0	90.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	54.1	9.9	58.8	20.0	90.4
Queue Length 50th (m)	112.1	102.8	56.1	55.4	22.8	44.8
Queue Length 95th (m)	#165.2	#187.5	80.6	84.5	72.6	#85.0
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1126	608	2460	424	778	281
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.94	0.45	0.62	0.77	0.75

Intersection Summary

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























HCM Signalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	32	865	53	540	986	62	52	195	560	56	107	35	
Future Volume (vph)	32	865	53	540	986	62	52	195	560	56	107	35	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.98		
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99		
Satd. Flow (prot)		3468		1755	3576			1834	1555		1791		
Flt Permitted		0.86		0.12	1.00			0.83	1.00		0.55		
Satd. Flow (perm)		2993		220	3576			1536	1555		995		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	34	920	56	574	1049	66	55	207	596	60	114	37	
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	376	0	7	0	
Lane Group Flow (vph)	0	1007	0	574	1111	0	0	262	220	0	204	0	
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		40.9		76.1	76.1			24.5	24.5		24.5		
Effective Green, g (s)		40.9		78.1	76.1			24.5	24.5		24.5		
Actuated g/C Ratio		0.36		0.69	0.68			0.22	0.22		0.22		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1087		605	2416			334	338		216		
v/s Ratio Prot				c0.28	0.31								
v/s Ratio Perm		c0.34		0.38				0.17	0.14		c0.20		
v/c Ratio		0.93		0.95	0.46			0.78	0.65		0.94		
Uniform Delay, d1		34.4		29.6	8.6			41.6	40.1		43.4		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		13.0		24.3	0.1			11.4	4.3		45.4		
Delay (s)		47.4		53.9	8.7			53.0	44.4		88.8		
Level of Service		D		D	A			D	D		F		
Approach Delay (s)		47.4			24.1			47.0			88.8		
Approach LOS		D			C			D			F		
Intersection Summary													
HCM 2000 Control Delay			39.2									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.93										
Actuated Cycle Length (s)			112.6									Sum of lost time (s)	14.0
Intersection Capacity Utilization			100.4%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	716	285	309	329	346	62	507	3435	461	39	2043	615
Future Volume (vph)	716	285	309	329	346	62	507	3435	461	39	2043	615
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.922			0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3171	0	1789	3536	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.298			0.189			0.078			0.085		
Satd. Flow (perm)	572	3171	0	356	3536	0	148	5043	1633	163	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		150			15				178			346
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	738	294	319	339	357	64	523	3541	475	40	2106	634
Shared Lane Traffic (%)												
Lane Group Flow (vph)	738	613	0	339	421	0	523	3541	475	40	2106	634
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

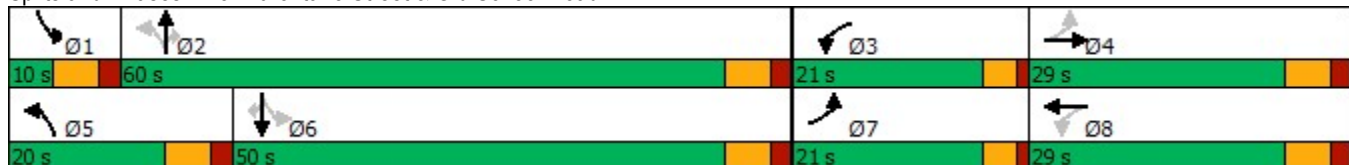


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	21.0	29.0		21.0	29.0		20.0	60.0	60.0	10.0	50.0	50.0
Total Split (%)	17.5%	24.2%		17.5%	24.2%		16.7%	50.0%	50.0%	8.3%	41.7%	41.7%
Maximum Green (s)	17.0	23.0		17.0	23.0		14.0	54.0	54.0	4.0	44.0	44.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	44.3	23.2		40.3	23.2		66.0	58.1	56.1	52.0	46.0	44.0
Actuated g/C Ratio	0.37	0.20		0.34	0.20		0.56	0.49	0.47	0.44	0.39	0.37
v/c Ratio	1.78	0.83		1.04	0.60		1.70	1.43	0.55	0.26	1.12	0.80
Control Delay	384.3	44.4		91.9	45.4		357.3	222.8	16.7	17.8	98.5	23.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	384.3	44.4		91.9	45.4		357.3	222.8	16.7	17.8	98.5	23.7
LOS	F	D		F	D		F	F	B	B	F	C
Approach Delay		230.1			66.2			216.8			80.3	
Approach LOS		F			E			F			F	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	118.3
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.78
Intersection Signal Delay:	166.3
Intersection LOS:	F
Intersection Capacity Utilization:	134.2%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	738	613	339	421	523	3541	475	40	2106	634
v/c Ratio	1.78	0.83	1.04	0.60	1.70	1.43	0.55	0.26	1.12	0.80
Control Delay	384.3	44.4	91.9	45.4	357.3	222.8	16.7	17.8	98.5	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	384.3	44.4	91.9	45.4	357.3	222.8	16.7	17.8	98.5	23.7
Queue Length 50th (m)	~229.4	55.5	~67.0	45.4	~168.4	~424.3	50.0	4.2	~212.4	65.0
Queue Length 95th (m)	#302.6	76.7	#125.0	61.8	#234.6	#447.3	82.1	9.3	#241.3	118.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	415	788	327	759	307	2477	868	155	1872	790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.78	0.78	1.04	0.55	1.70	1.43	0.55	0.26	1.13	0.80

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	716	285	309	329	346	62	507	3435	461	39	2043	615
Future Volume (vph)	716	285	309	329	346	62	507	3435	461	39	2043	615
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.92		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3171		1789	3537		1807	5043	1633	1825	4812	1541
Flt Permitted	0.30	1.00		0.19	1.00		0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	573	3171		355	3537		148	5043	1633	162	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	738	294	319	339	357	64	523	3541	475	40	2106	634
RTOR Reduction (vph)	0	121	0	0	12	0	0	0	94	0	0	215
Lane Group Flow (vph)	738	492	0	339	409	0	523	3541	381	40	2106	419
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	38.2	21.2		38.2	21.2		65.3	56.1	56.1	48.5	45.3	45.3
Effective Green, g (s)	42.2	23.2		38.2	23.2		67.3	58.1	56.1	52.5	47.3	45.3
Actuated g/C Ratio	0.35	0.19		0.32	0.19		0.56	0.49	0.47	0.44	0.40	0.38
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	401	615		317	686		305	2451	766	143	1904	584
v/s Ratio Prot	c0.29	0.16		0.15	0.12		c0.23	0.70		0.01	0.44	
v/s Ratio Perm	0.36			c0.19			c0.73		0.23	0.11		0.27
v/c Ratio	1.84	0.80		1.07	0.60		1.71	1.44	0.50	0.28	1.11	0.72
Uniform Delay, d1	34.2	45.9		35.5	43.9		38.7	30.7	21.9	27.2	36.1	31.6
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	387.8	7.4		70.2	1.4		335.2	202.5	2.3	1.1	56.1	7.4
Delay (s)	422.0	53.3		105.7	45.3		374.0	233.2	24.2	28.3	92.2	39.1
Level of Service	F	D		F	D		F	F	C	C	F	D
Approach Delay (s)		254.7			72.2			227.5			79.2	
Approach LOS		F			E			F			E	
Intersection Summary												
HCM 2000 Control Delay			175.2				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.64									
Actuated Cycle Length (s)			119.5				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			134.2%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕	↗		↕↕	
Traffic Volume (vph)	51	880	63	254	832	80	42	560	236	41	369	35
Future Volume (vph)	51	880	63	254	832	80	42	560	236	41	369	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	85.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				1.00
Frt		0.991			0.987				0.850			0.989
Flt Protected		0.997		0.950				0.997				0.995
Satd. Flow (prot)	0	5041	0	1825	5039	0	0	1898	1555	0	1858	0
Flt Permitted		0.812		0.126				0.942				0.636
Satd. Flow (perm)	0	4106	0	242	5039	0	0	1793	1555	0	1188	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			16				151			5
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				2541.5
Travel Time (s)		14.1			73.0			15.5				114.4
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	55	957	68	276	904	87	46	609	257	45	401	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1080	0	276	991	0	0	655	257	0	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

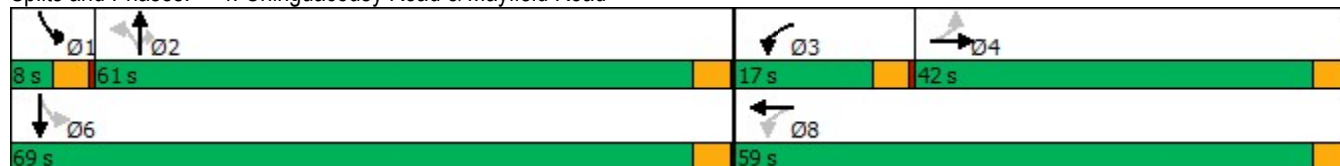


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	42.0	42.0		17.0	59.0		61.0	61.0	61.0	8.0	69.0	
Total Split (%)	32.8%	32.8%		13.3%	46.1%		47.7%	47.7%	47.7%	6.3%	53.9%	
Maximum Green (s)	38.0	38.0		13.0	55.0		57.0	57.0	57.0	4.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0		0	
Act Effct Green (s)		38.3		57.4	55.4			57.2	57.2		57.2	
Actuated g/C Ratio		0.32		0.48	0.46			0.47	0.47		0.47	
v/c Ratio		0.83		0.88	0.43			0.77	0.31		0.86	
Control Delay		45.5		55.9	23.5			32.9	8.4		43.5	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		45.5		55.9	23.5			32.9	8.4		43.5	
LOS		D		E	C			C	A		D	
Approach Delay		45.5			30.5			26.0			43.5	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 128
 Actuated Cycle Length: 120.7
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 35.4
 Intersection LOS: D
 Intersection Capacity Utilization 103.3%
 ICU Level of Service G
 Analysis Period (min) 15

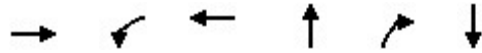
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1080	276	991	655	257	484
v/c Ratio	0.83	0.88	0.43	0.77	0.31	0.86
Control Delay	45.5	55.9	23.5	32.9	8.4	43.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.5	55.9	23.5	32.9	8.4	43.5
Queue Length 50th (m)	94.4	48.2	62.8	124.3	13.7	97.2
Queue Length 95th (m)	#114.1	#101.0	75.1	170.0	29.7	#149.9
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		85.0			50.0	
Base Capacity (vph)	1307	313	2322	920	871	646
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.88	0.43	0.71	0.30	0.75

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↕↔		↔	↔↕↔			↕	↔		↕↔		
Traffic Volume (vph)	51	880	63	254	832	80	42	560	236	41	369	35	
Future Volume (vph)	51	880	63	254	832	80	42	560	236	41	369	35	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		2.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00		
Frbp, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00		
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		1.00		
Satd. Flow (prot)		5042		1825	5038			1897	1555		1860		
Flt Permitted		0.81		0.13	1.00			0.94	1.00		0.64		
Satd. Flow (perm)		4107		242	5038			1793	1555		1188		
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)	55	957	68	276	904	87	46	609	257	45	401	38	
RTOR Reduction (vph)	0	5	0	0	9	0	0	0	79	0	3	0	
Lane Group Flow (vph)	0	1075	0	276	982	0	0	655	178	0	481	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA		
Protected Phases		4		3	8			2		1	6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		38.3		55.4	55.4			57.2	57.2		57.2		
Effective Green, g (s)		38.3		57.4	55.4			57.2	57.2		57.2		
Actuated g/C Ratio		0.32		0.48	0.46			0.47	0.47		0.47		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1304		313	2314			850	737		563		
v/s Ratio Prot				c0.11	0.19								
v/s Ratio Perm		c0.26		0.31				0.37	0.11		c0.41		
v/c Ratio		0.82		0.88	0.42			0.77	0.24		0.86		
Uniform Delay, d1		38.0		26.9	21.9			26.3	18.8		28.0		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		6.0		23.9	0.6			4.4	0.2		12.1		
Delay (s)		44.0		50.8	22.5			30.6	19.0		40.1		
Level of Service		D		D	C			C	B		D		
Approach Delay (s)		44.0			28.6			27.3			40.1		
Approach LOS		D			C			C			D		
Intersection Summary													
HCM 2000 Control Delay			34.3									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.88										
Actuated Cycle Length (s)			120.6									Sum of lost time (s)	14.0
Intersection Capacity Utilization			103.3%									ICU Level of Service	G
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1055	83	138	1231	492	140	779	142	252	503	146
Future Volume (vph)	116	1055	83	138	1231	492	140	779	142	252	503	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.957			0.977			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4846	0	1825	3520	0	1738	3408	0
Flt Permitted	0.103			0.103			0.317			0.103		
Satd. Flow (perm)	188	5036	0	190	4846	0	609	3520	0	188	3408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			95			18			34	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	121	1099	86	144	1282	513	146	811	148	263	524	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	1185	0	144	1795	0	146	959	0	263	676	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

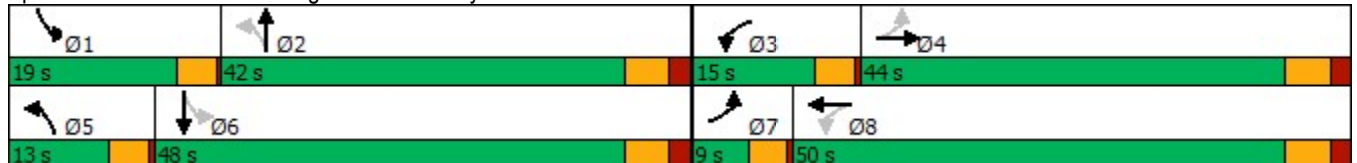
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	9.0	44.0		15.0	50.0		13.0	42.0		19.0	48.0	
Total Split (%)	7.5%	36.7%		12.5%	41.7%		10.8%	35.0%		15.8%	40.0%	
Maximum Green (s)	5.0	38.0		11.0	44.0		9.0	36.0		15.0	42.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.0	39.0		54.7	44.0		45.6	34.8		55.9	41.1	
Actuated g/C Ratio	0.39	0.33		0.46	0.37		0.38	0.29		0.47	0.35	
v/c Ratio	0.88	0.71		0.66	0.97		0.45	0.92		0.93	0.56	
Control Delay	75.9	38.0		35.5	49.8		23.5	54.2		68.2	32.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	75.9	38.0		35.5	49.8		23.5	54.2		68.2	32.0	
LOS	E	D		D	D		C	D		E	C	
Approach Delay		41.5			48.7			50.2			42.2	
Approach LOS		D			D			D			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 118.9
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 46.1 Intersection LOS: D
 Intersection Capacity Utilization 97.9% ICU Level of Service F
 Analysis Period (min) 15

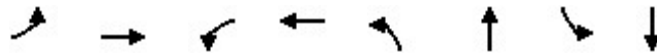
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	121	1185	144	1795	146	959	263	676
v/c Ratio	0.88	0.71	0.66	0.97	0.45	0.92	0.93	0.56
Control Delay	75.9	38.0	35.5	49.8	23.5	54.2	68.2	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	38.0	35.5	49.8	23.5	54.2	68.2	32.0
Queue Length 50th (m)	16.2	90.1	19.6	145.4	19.1	111.9	45.1	63.7
Queue Length 95th (m)	#48.6	106.9	36.4	#181.5	31.7	#148.0	#95.0	82.3
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	138	1658	232	1854	326	1078	284	1226
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.71	0.62	0.97	0.45	0.89	0.93	0.55

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	116	1055	83	138	1231	492	140	779	142	252	503	146
Future Volume (vph)	116	1055	83	138	1231	492	140	779	142	252	503	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5036		1755	4847		1825	3520		1738	3409	
Flt Permitted	0.10	1.00		0.10	1.00		0.32	1.00		0.10	1.00	
Satd. Flow (perm)	188	5036		190	4847		609	3520		189	3409	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	121	1099	86	144	1282	512	146	811	148	262	524	152
RTOR Reduction (vph)	0	7	0	0	60	0	0	13	0	0	22	0
Lane Group Flow (vph)	121	1178	0	144	1735	0	146	946	0	263	654	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.0		53.1	44.1		43.5	34.8		53.8	41.1	
Effective Green, g (s)	44.0	39.0		53.1	44.1		43.5	34.8		53.8	41.1	
Actuated g/C Ratio	0.37	0.33		0.45	0.37		0.37	0.29		0.45	0.35	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	1651		217	1797		311	1030		280	1178	
v/s Ratio Prot	c0.04	0.23		0.06	c0.36		0.03	0.27		c0.12	0.19	
v/s Ratio Perm	0.30			0.24			0.14			c0.31		
v/c Ratio	0.90	0.71		0.66	0.97		0.47	0.92		0.94	0.55	
Uniform Delay, d1	32.7	35.0		23.3	36.7		26.2	40.7		33.6	31.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	49.3	2.7		7.4	14.5		1.1	12.6		37.3	0.6	
Delay (s)	82.0	37.7		30.8	51.2		27.4	53.3		70.9	32.1	
Level of Service	F	D		C	D		C	D		E	C	
Approach Delay (s)		41.8			49.7			49.8			42.9	
Approach LOS		D			D			D			D	

Intersection Summary

HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	118.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	729	734	140	337	942	188	416	969	322	270	1166	1031
Future Volume (vph)	729	734	140	337	942	188	416	969	322	270	1166	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.154			0.950			0.085			0.126		
Satd. Flow (perm)	284	4995	1538	3349	5092	1562	160	3614	1486	242	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			144			145			213			514
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	752	757	144	347	971	194	429	999	332	278	1202	1063
Shared Lane Traffic (%)												
Lane Group Flow (vph)	752	757	144	347	971	194	429	999	332	278	1202	1063
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	25.0	28.0	28.0	19.0	54.0	54.0	15.0	50.0	50.0
Total Split (%)	28.1%	30.4%	30.4%	18.5%	20.7%	20.7%	14.1%	40.0%	40.0%	11.1%	37.0%	37.0%
Maximum Green (s)	33.0	34.0	34.0	20.0	21.0	21.0	15.0	47.0	47.0	11.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

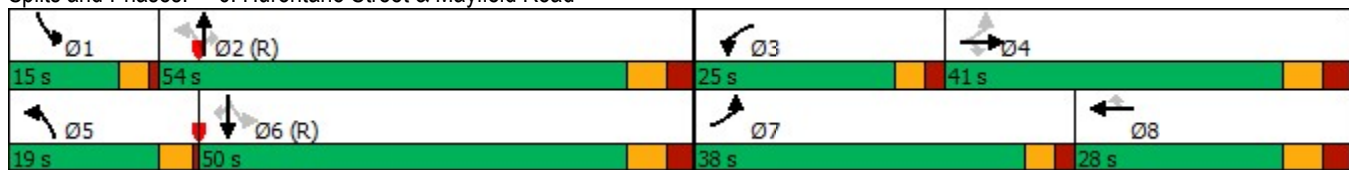


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	34.0	34.0	20.0	21.0	21.0	67.0	47.0	47.0	61.0	43.0	45.0
Actuated g/C Ratio	0.47	0.25	0.25	0.15	0.16	0.16	0.50	0.35	0.35	0.45	0.32	0.33
v/c Ratio	1.47	0.60	0.29	0.69	1.23	0.53	1.51	0.79	0.51	1.07	1.08	1.23
Control Delay	250.9	46.9	7.7	62.4	159.7	20.9	277.2	45.3	14.8	103.4	93.1	136.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	250.9	46.9	7.7	62.4	159.7	20.9	277.2	45.3	14.8	103.4	93.1	136.7
LOS	F	D	A	E	F	C	F	D	B	F	F	F
Approach Delay		136.3			119.6			96.0			112.5	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	130
Control Type:	Pretimed
Maximum v/c Ratio:	1.51
Intersection Signal Delay:	115.3
Intersection LOS:	F
Intersection Capacity Utilization	132.2%
ICU Level of Service	H
Analysis Period (min)	15

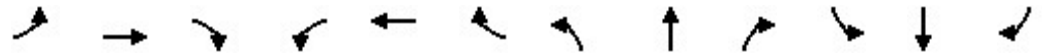
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	752	757	144	347	971	194	429	999	332	278	1202	1063
v/c Ratio	1.47	0.60	0.29	0.69	1.23	0.53	1.51	0.79	0.51	1.07	1.08	1.23
Control Delay	250.9	46.9	7.7	62.4	159.7	20.9	277.2	45.3	14.8	103.4	93.1	136.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	250.9	46.9	7.7	62.4	159.7	20.9	277.2	45.3	14.8	103.4	93.1	136.7
Queue Length 50th (m)	~259.1	65.5	0.0	45.8	~116.5	11.5	~143.0	125.8	23.1	~57.0	~187.2	~254.0
Queue Length 95th (m)	#335.0	79.7	16.3	62.3	#145.1	35.6	#208.1	151.7	51.4	#113.2	#229.4	#334.3
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	513	1258	495	504	792	365	284	1258	656	261	1118	861
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.47	0.60	0.29	0.69	1.23	0.53	1.51	0.79	0.51	1.07	1.08	1.23

































Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

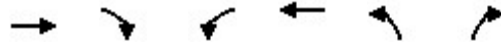
6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	729	734	140	337	942	188	416	969	322	270	1166	1031
Future Volume (vph)	729	734	140	337	942	188	416	969	322	270	1166	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.15	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	284	4995	1538	3404	5092	1562	160	3614	1486	241	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	752	757	144	347	971	194	429	999	332	278	1202	1063
RTOR Reduction (vph)	0	0	108	0	0	122	0	0	139	0	0	343
Lane Group Flow (vph)	752	757	36	347	971	72	429	999	193	278	1202	720
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	59.0	34.0	34.0	20.0	21.0	21.0	62.0	47.0	47.0	54.0	43.0	43.0
Effective Green, g (s)	61.0	34.0	34.0	20.0	21.0	21.0	64.0	47.0	47.0	58.0	43.0	45.0
Actuated g/C Ratio	0.45	0.25	0.25	0.15	0.16	0.16	0.47	0.35	0.35	0.43	0.32	0.33
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	504	792	242	280	1258	517	256	1118	518
v/s Ratio Prot	c0.38	0.15		0.10	0.19		c0.19	0.28		0.10	0.34	
v/s Ratio Perm	c0.28		0.02			0.05	0.53		0.13	0.36		c0.46
v/c Ratio	1.48	0.60	0.09	0.69	1.23	0.30	1.53	0.79	0.37	1.09	1.08	1.39
Uniform Delay, d1	39.9	44.5	38.7	54.5	57.0	50.5	42.7	39.6	33.0	31.7	46.0	45.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	225.3	2.1	0.5	7.5	112.8	3.1	256.7	5.2	2.1	81.1	49.5	187.4
Delay (s)	265.2	46.7	39.2	62.0	169.8	53.5	299.5	44.9	35.0	112.8	95.5	232.4
Level of Service	F	D	D	E	F	D	F	D	D	F	F	F
Approach Delay (s)		145.4			130.2			105.1			154.6	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM 2000 Control Delay			136.0				HCM 2000 Level of Service		F			
HCM 2000 Volume to Capacity ratio			1.55									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)		21.0			
Intersection Capacity Utilization			132.2%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	804	57	36	865	41	30
Future Volume (vph)	804	57	36	865	41	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.990			0.943		
Flt Protected				0.998	0.972	
Satd. Flow (prot)	3543	0	0	3571	1726	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	3543	0	0	3571	1726	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	804	57	36	865	41	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	861	0	0	901	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

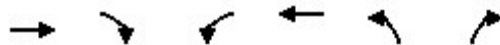
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.1%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	804	57	36	865	41	30
Future Volume (Veh/h)	804	57	36	865	41	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	804	57	36	865	41	30
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			861		1337	430
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			861		1337	430
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		70	95
cM capacity (veh/h)			776		138	573
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	536	325	324	577	71	
Volume Left	0	0	36	0	41	
Volume Right	0	57	0	0	30	
cSH	1700	1700	776	1700	203	
Volume to Capacity	0.32	0.19	0.05	0.34	0.35	
Queue Length 95th (m)	0.0	0.0	1.1	0.0	11.3	
Control Delay (s)	0.0	0.0	1.6	0.0	32.0	
Lane LOS			A			D
Approach Delay (s)	0.0		0.6		32.0	
Approach LOS					D	
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			61.1%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Volume (vph)	0	266	50	63	378	21	233	860	134	32	696	9
Future Volume (vph)	0	266	50	63	378	21	233	860	134	32	696	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	25.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (m)	2.5			2.5			85.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.994			0.980			0.998	
Flt Protected					0.993		0.950				0.998	
Satd. Flow (prot)	0	1844	0	0	1859	0	1789	3507	0	0	3564	0
Flt Permitted					0.791		0.329				0.872	
Satd. Flow (perm)	0	1844	0	0	1481	0	620	3507	0	0	3114	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			3			25			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	266	50	63	378	21	233	860	134	32	696	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	316	0	0	462	0	233	994	0	0	737	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases		4			8			2			6	

Lanes, Volumes, Timings

9: McLaughlin Road & Street A

06/07/2024

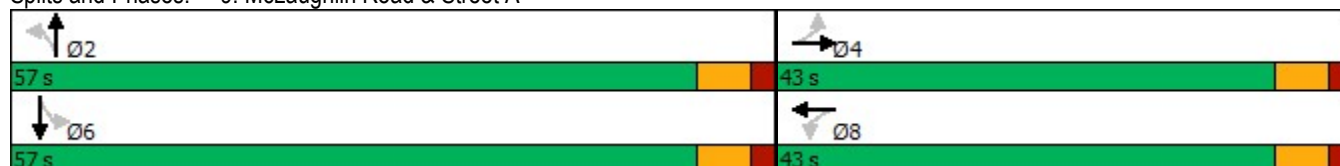


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	43.0	43.0		43.0	43.0		57.0	57.0		57.0	57.0	
Total Split (%)	43.0%	43.0%		43.0%	43.0%		57.0%	57.0%		57.0%	57.0%	
Maximum Green (s)	37.0	37.0		37.0	37.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0		51.2	51.2			51.2	
Actuated g/C Ratio		0.33			0.33		0.54	0.54			0.54	
v/c Ratio		0.51			0.94		0.69	0.52			0.44	
Control Delay		27.5			60.2		31.1	15.4			14.7	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		27.5			60.2		31.1	15.4			14.7	
LOS		C			E		C	B			B	
Approach Delay		27.5			60.2			18.4			14.7	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	94.3
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	25.5
Intersection LOS:	C
Intersection Capacity Utilization:	110.2%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	316	462	233	994	737
v/c Ratio	0.51	0.94	0.69	0.52	0.44
Control Delay	27.5	60.2	31.1	15.4	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	60.2	31.1	15.4	14.7
Queue Length 50th (m)	44.2	80.2	31.0	58.8	42.1
Queue Length 95th (m)	68.0	#134.8	#76.2	82.4	60.8
Internal Link Dist (m)	180.8	1335.2		2472.3	375.3
Turn Bay Length (m)			25.0		
Base Capacity (vph)	733	584	336	1915	1692
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.79	0.69	0.52	0.44

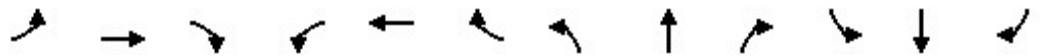
Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕			↕	
Traffic Volume (vph)	0	266	50	63	378	21	233	860	134	32	696	9
Future Volume (vph)	0	266	50	63	378	21	233	860	134	32	696	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frt		0.98			0.99		1.00	0.98			1.00	
Flt Protected		1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1843			1859		1789	3506			3564	
Flt Permitted		1.00			0.79		0.33	1.00			0.87	
Satd. Flow (perm)		1843			1480		620	3506			3115	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	266	50	63	378	21	233	860	134	32	696	9
RTOR Reduction (vph)	0	7	0	0	2	0	0	11	0	0	1	0
Lane Group Flow (vph)	0	309	0	0	460	0	233	983	0	0	736	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.1			31.1		51.2	51.2			51.2	
Effective Green, g (s)		31.1			31.1		51.2	51.2			51.2	
Actuated g/C Ratio		0.33			0.33		0.54	0.54			0.54	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		607			488		336	1903			1691	
v/s Ratio Prot		0.17						0.28				
v/s Ratio Perm					c0.31		c0.38				0.24	
v/c Ratio		0.51			0.94		0.69	0.52			0.44	
Uniform Delay, d1		25.4			30.7		15.8	13.7			12.9	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		0.7			26.8		11.2	1.0			0.8	
Delay (s)		26.1			57.6		27.0	14.7			13.7	
Level of Service		C			E		C	B			B	
Approach Delay (s)		26.1			57.6			17.0			13.7	
Approach LOS		C			E			B			B	

Intersection Summary		
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.79	C
Actuated Cycle Length (s)	94.3	Sum of lost time (s)
Intersection Capacity Utilization	110.2%	12.0
Analysis Period (min)	15	ICU Level of Service
		H

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↑	↘	↗
Traffic Volume (vph)	1315	48	162	1342	38	121
Future Volume (vph)	1315	48	162	1342	38	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.995					0.850
Fl _t Protected				0.995	0.950	
Satd. Flow (prot)	3561	0	0	3561	1789	1601
Fl _t Permitted				0.995	0.950	
Satd. Flow (perm)	3561	0	0	3561	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1315	48	162	1342	38	121
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1363	0	0	1504	38	121
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	93.0%			ICU Level of Service F		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1315	48	162	1342	38	121
Future Volume (Veh/h)	1315	48	162	1342	38	121
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1315	48	162	1342	38	121
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.78		0.78	0.78
vC, conflicting volume			1363		2334	682
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			893		2143	16
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			72		0	85
cM capacity (veh/h)			587		23	823
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	877	486	609	895	38	121
Volume Left	0	0	162	0	38	0
Volume Right	0	48	0	0	0	121
cSH	1700	1700	587	1700	23	823
Volume to Capacity	0.52	0.29	0.28	0.53	1.62	0.15
Queue Length 95th (m)	0.0	0.0	8.5	0.0	36.4	3.9
Control Delay (s)	0.0	0.0	7.3	0.0	661.3	10.1
Lane LOS			A			B
Approach Delay (s)	0.0		3.0		165.7	
Approach LOS					F	
Intersection Summary						
Average Delay			10.2			
Intersection Capacity Utilization			93.0%	ICU Level of Service		F
Analysis Period (min)	15					

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	405	644	4338	2613	69
Future Volume (vph)	66	405	644	4338	2613	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	85.0		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.996	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5121	0
Flt Permitted	0.950		0.064			
Satd. Flow (perm)	1789	1601	121	5142	5121	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					4	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	405	644	4338	2613	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	405	644	4338	2682	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

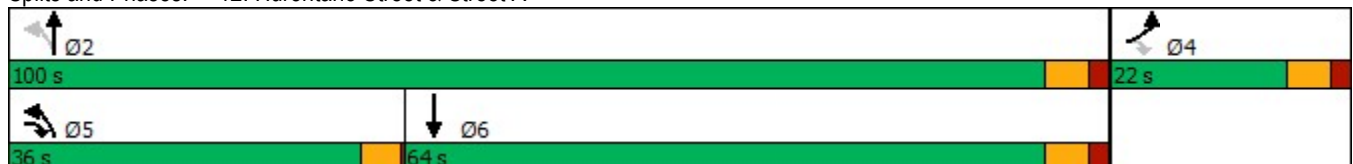


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	36.0	36.0	100.0	64.0	
Total Split (%)	18.0%	29.5%	29.5%	82.0%	52.5%	
Maximum Green (s)	16.0	32.0	32.0	94.0	58.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	-2.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	2.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	9.5	45.0	98.4	95.8	58.3	
Actuated g/C Ratio	0.08	0.40	0.87	0.85	0.51	
v/c Ratio	0.44	0.64	1.06	1.00	1.02	
Control Delay	59.5	32.5	86.7	25.3	50.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.5	32.5	86.7	25.3	50.7	
LOS	E	C	F	C	D	
Approach Delay	36.2			33.2	50.7	
Approach LOS	D			C	D	

Intersection Summary

Area Type:	Other
Cycle Length:	122
Actuated Cycle Length:	113.3
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.06
Intersection Signal Delay:	39.2
Intersection LOS:	D
Intersection Capacity Utilization:	104.7%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	66	405	644	4338	2682
v/c Ratio	0.44	0.64	1.06	1.00	1.02
Control Delay	59.5	32.5	86.7	25.3	50.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	32.5	86.7	25.3	50.7
Queue Length 50th (m)	14.5	71.0	~147.9	~388.0	~241.2
Queue Length 95th (m)	28.4	103.2	#228.9	#432.0	#285.2
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	253	635	607	4346	2634
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.64	1.06	1.00	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	405	644	4338	2613	69
Future Volume (vph)	66	405	644	4338	2613	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	2.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5122	
Flt Permitted	0.95	1.00	0.06	1.00	1.00	
Satd. Flow (perm)	1789	1601	121	5142	5122	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	405	644	4338	2613	69
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	66	405	644	4338	2680	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	8.2	40.3	94.4	94.4	58.3	
Effective Green, g (s)	8.2	40.3	96.4	94.4	58.3	
Actuated g/C Ratio	0.07	0.35	0.84	0.82	0.51	
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	128	563	598	4235	2605	
v/s Ratio Prot	0.04	c0.20	c0.32	c0.84	0.52	
v/s Ratio Perm		0.05	0.59			
v/c Ratio	0.52	0.72	1.08	1.02	1.03	
Uniform Delay, d1	51.3	32.2	36.2	10.1	28.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.5	4.4	59.2	20.5	25.5	
Delay (s)	54.8	36.6	95.4	30.6	53.7	
Level of Service	D	D	F	C	D	
Approach Delay (s)	39.2			39.0	53.7	
Approach LOS	D			D	D	

Intersection Summary

HCM 2000 Control Delay	43.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	114.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	1	758	0	1	575
Future Volume (vph)	1	1	758	0	1	575
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.850					
Fl _t Protected	0.950					
Satd. Flow (prot)	1789	1601	1883	0	0	1883
Fl _t Permitted	0.950					
Satd. Flow (perm)	1789	1601	1883	0	0	1883
Link Speed (k/h)	48		48		48	
Link Distance (m)	1161.8		2541.5		542.2	
Travel Time (s)	87.1		190.6		40.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1	824	0	1	625
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	1	824	0	0	626
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0		0.0	
Link Offset(m)	0.0		0.0		0.0	
Crosswalk Width(m)	1.6		1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97		97	
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.9%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

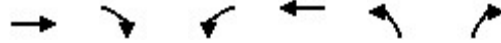
06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	758	0	1	575
Future Volume (Veh/h)	1	1	758	0	1	575
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)	1	1	824	0	1	625
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	1451	824			824	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1451	824			824	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	144	373			806	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	1	1	824	626		
Volume Left	1	0	0	1		
Volume Right	0	1	0	0		
cSH	144	373	1700	806		
Volume to Capacity	0.01	0.00	0.48	0.00		
Queue Length 95th (m)	0.2	0.1	0.0	0.0		
Control Delay (s)	30.2	14.7	0.0	0.0		
Lane LOS	D	B		A		
Approach Delay (s)	22.4		0.0	0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			49.9%	ICU Level of Service		A
Analysis Period (min)	15					

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	822	14	194	891	11	107
Future Volume (vph)	822	14	194	891	11	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.998			0.878		
Fl _t Protected				0.991	0.995	
Satd. Flow (prot)	3571	0	0	3546	1645	0
Fl _t Permitted				0.991	0.995	
Satd. Flow (perm)	3571	0	0	3546	1645	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	23.4			22.5	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	893	15	211	968	12	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	908	0	0	1179	128	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.7%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	822	14	194	891	11	107
Future Volume (Veh/h)	822	14	194	891	11	107
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)	893	15	211	968	12	116
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			908	1806	454	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			908	1806	454	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			72	76	79	
cM capacity (veh/h)			745	50	553	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	595	313	534	645	128	
Volume Left	0	0	211	0	12	
Volume Right	0	15	0	0	116	
cSH	1700	1700	745	1700	286	
Volume to Capacity	0.35	0.18	0.28	0.38	0.45	
Queue Length 95th (m)	0.0	0.0	8.8	0.0	16.6	
Control Delay (s)	0.0	0.0	7.1	0.0	27.4	
Lane LOS	A			D		
Approach Delay (s)	0.0		3.2		27.4	
Approach LOS				D		
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			70.7%	ICU Level of Service	C	
Analysis Period (min)			15			

















Lanes, Volumes, Timings
15: McLaughlin Road & Street E

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	34	34	0	17	50	792	50	23	669	9
Future Volume (vph)	7	0	34	34	0	17	50	792	50	23	669	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.889			0.956			0.992			0.998	
Flt Protected		0.991			0.967			0.997			0.998	
Satd. Flow (prot)	0	1659	0	0	1741	0	0	3539	0	0	3564	0
Flt Permitted		0.991			0.967			0.997			0.998	
Satd. Flow (perm)	0	1659	0	0	1741	0	0	3539	0	0	3564	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			18.0			8.5	
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
Adj. Flow (vph)	8	0	37	37	0	18	54	861	54	25	727	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	55	0	0	969	0	0	762	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	63.1%						ICU Level of Service B					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
 15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	34	34	0	17	50	792	50	23	669	9
Future Volume (Veh/h)	7	0	34	34	0	17	50	792	50	23	669	9
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)	8	0	37	37	0	18	54	861	54	25	727	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (m)												
								399			189	
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85				0.85		
vC, conflicting volume	1338	1805	368	1446	1783	458	737			915		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1035	1587	368	1163	1561	0	737			534		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	94	100	94	67	100	98	94			97		
cM capacity (veh/h)	144	82	629	111	86	917	865			871		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	45	55	484	484	388	374						
Volume Left	8	37	54	0	25	0						
Volume Right	37	18	0	54	0	10						
cSH	393	156	865	1700	871	1700						
Volume to Capacity	0.11	0.35	0.06	0.28	0.03	0.22						
Queue Length 95th (m)	2.9	11.1	1.5	0.0	0.7	0.0						
Control Delay (s)	15.3	40.1	1.8	0.0	0.9	0.0						
Lane LOS	C	E	A		A							
Approach Delay (s)	15.3	40.1	0.9		0.5							
Approach LOS	C	E										
Intersection Summary												
Average Delay			2.2									
Intersection Capacity Utilization			63.1%	ICU Level of Service		B						
Analysis Period (min)			15									

Synchro Outputs - With GTA West

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	211	3	86	130	26	2	141	177	20	146	8
Future Volume (vph)	2	211	3	86	130	26	2	141	177	20	146	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.975			0.925				0.993
Flt Protected				0.950								0.994
Satd. Flow (prot)	0	1917	0	1772	1812	0	0	1711	0	0	1783	0
Flt Permitted				0.950								0.994
Satd. Flow (perm)	0	1917	0	1772	1812	0	0	1711	0	0	1783	0
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	224	3	91	138	28	2	150	188	21	155	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	229	0	91	166	0	0	340	0	0	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop				Stop


















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	211	3	86	130	26	2	141	177	20	146	8
Future Volume (vph)	2	211	3	86	130	26	2	141	177	20	146	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	2	224	3	91	138	28	2	150	188	21	155	9
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	229	91	166	340	185							
Volume Left (vph)	2	91	0	2	21							
Volume Right (vph)	3	0	28	188	9							
Hadj (s)	-0.01	0.55	-0.06	-0.26	0.10							
Departure Headway (s)	6.0	7.0	6.4	5.4	6.1							
Degree Utilization, x	0.38	0.18	0.29	0.51	0.31							
Capacity (veh/h)	542	474	518	615	532							
Control Delay (s)	12.8	10.3	10.8	14.1	11.8							
Approach Delay (s)	12.8	10.6		14.1	11.8							
Approach LOS	B	B		B	B							
Intersection Summary												
Delay			12.5									
Level of Service			B									
Intersection Capacity Utilization			52.5%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	6	384	21	153	219	21	22	55	263	34	109	10
Future Volume (vph)	6	384	21	153	219	21	22	55	263	34	109	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.987				0.850			0.991
Flt Protected		0.999		0.950				0.986				0.989
Satd. Flow (prot)	0	1875	0	1789	1830	0	0	1867	1617	0	1858	0
Flt Permitted		0.999		0.950				0.986				0.989
Satd. Flow (perm)	0	1875	0	1789	1830	0	0	1867	1617	0	1858	0
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1383.3			349.1			588.2				263.1
Travel Time (s)		71.1			18.0			26.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	409	22	163	233	22	23	59	280	36	116	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	437	0	163	255	0	0	82	280	0	163	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop				Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.5%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	384	21	153	219	21	22	55	263	34	109	10
Future Volume (vph)	6	384	21	153	219	21	22	55	263	34	109	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	409	22	163	233	22	23	59	280	36	116	11
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	437	163	255	82	280	163						
Volume Left (vph)	6	163	0	23	0	36						
Volume Right (vph)	22	0	22	0	280	11						
Hadj (s)	0.00	0.53	0.00	0.16	-0.68	0.03						
Departure Headway (s)	7.3	8.0	7.5	8.0	7.2	8.5						
Degree Utilization, x	0.89	0.36	0.53	0.18	0.56	0.38						
Capacity (veh/h)	475	417	451	430	482	402						
Control Delay (s)	44.7	14.4	17.5	11.6	17.6	16.6						
Approach Delay (s)	44.7	16.3		16.3		16.6						
Approach LOS	E	C		C		C						
Intersection Summary												
Delay			25.3									
Level of Service			D									
Intersection Capacity Utilization			59.5%		ICU Level of Service		B					
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	327	189	158	206	145	101	53	1396	117	56	2054	181
Future Volume (vph)	327	189	158	206	145	101	53	1396	117	56	2054	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.932			0.938				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1745	0	1722	1730	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.526			0.394			0.067			0.112		
Satd. Flow (perm)	972	1745	0	714	1730	0	121	4445	1471	190	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			18				122			129
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			742.4			556.7	
Travel Time (s)		51.8			22.6			33.4			25.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	352	203	170	222	156	109	57	1501	126	60	2209	195
Shared Lane Traffic (%)												
Lane Group Flow (vph)	352	373	0	222	265	0	57	1501	126	60	2209	195
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	24.0	24.0		24.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	52.0	52.0		52.0	52.0		68.0	68.0	68.0	68.0	68.0	68.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%	56.7%	56.7%	56.7%	56.7%
Maximum Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Yellow Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50
v/c Ratio	0.99	0.58		0.85	0.41		0.95	0.68	0.16	0.63	0.88	0.22
Control Delay	83.7	34.9		64.6	28.7		138.1	24.6	3.5	55.4	31.7	6.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.7	34.9		64.6	28.7		138.1	24.6	3.5	55.4	31.7	6.6
LOS	F	C		E	C		F	C	A	E	C	A
Approach Delay		58.6			45.0			26.8			30.3	
Approach LOS		E			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.99
Intersection Signal Delay:	34.4
Intersection LOS:	C
Intersection Capacity Utilization:	98.5%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	352	373	222	265	57	1501	126	60	2209	195
v/c Ratio	0.99	0.58	0.85	0.41	0.95	0.68	0.16	0.63	0.88	0.22
Control Delay	83.7	34.9	64.6	28.7	138.1	24.6	3.5	55.4	31.7	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.7	34.9	64.6	28.7	138.1	24.6	3.5	55.4	31.7	6.6
Queue Length 50th (m)	81.6	69.7	47.6	42.9	12.3	94.6	0.5	10.0	164.2	7.8
Queue Length 95th (m)	#142.5	100.9	#92.7	66.2	#40.6	111.1	9.9	#34.1	186.5	20.2
Internal Link Dist (m)		983.8		416.4		718.4			532.7	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	356	641	261	645	60	2222	796	95	2521	881
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.58	0.85	0.41	0.95	0.68	0.16	0.63	0.88	0.22























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	327	189	158	206	145	101	53	1396	117	56	2054	181
Future Volume (vph)	327	189	158	206	145	101	53	1396	117	56	2054	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.93		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	1744		1722	1730		1722	4445	1471	1615	5043	1633
Flt Permitted	0.53	1.00		0.39	1.00		0.07	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	972	1744		714	1730		121	4445	1471	191	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	352	203	170	222	156	109	57	1501	126	60	2209	195
RTOR Reduction (vph)	0	1	0	0	11	0	0	0	61	0	0	65
Lane Group Flow (vph)	352	372	0	222	254	0	57	1501	65	60	2209	131
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2		2	6	6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Effective Green, g (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
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)	356	639		261	634		60	2222	735	95	2521	816
v/s Ratio Prot		0.21			0.15			0.34			0.44	
v/s Ratio Perm	c0.36			0.31			c0.47		0.04	0.31		0.08
v/c Ratio	0.99	0.58		0.85	0.40		0.95	0.68	0.09	0.63	0.88	0.16
Uniform Delay, d1	37.8	30.6		35.0	28.2		28.6	22.7	15.7	21.9	26.7	16.3
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	44.2	1.4		22.4	0.4		102.6	1.7	0.2	27.8	4.7	0.4
Delay (s)	82.0	31.9		57.4	28.6		131.1	24.3	15.9	49.7	31.4	16.7
Level of Service	F	C		E	C		F	C	B	D	C	B
Approach Delay (s)		56.2			41.7			27.3			30.6	
Approach LOS		E			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			34.1									C
HCM 2000 Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			120.0								16.0	
Intersection Capacity Utilization			98.5%									F
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕↕				↕↕
Traffic Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Future Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.996			0.943				0.984
Fl _t Protected		0.997			0.991			0.996				0.990
Satd. Flow (prot)	0	4860	0	0	4872	0	0	1736	0	0	1786	0
Fl _t Permitted		0.874			0.719			0.967				0.789
Satd. Flow (perm)	0	4260	0	0	3535	0	0	1685	0	0	1423	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			7			31				6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				3083.5
Travel Time (s)		14.1			73.0			15.5				138.8
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	35	615	45	126	535	18	22	153	127	58	184	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	695	0	0	679	0	0	302	0	0	275	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Maximum Green (s)	77.0	77.0		77.0	77.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
v/c Ratio		0.25			0.30			0.59			0.66	
Control Delay		9.2			23.9			37.9			45.1	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

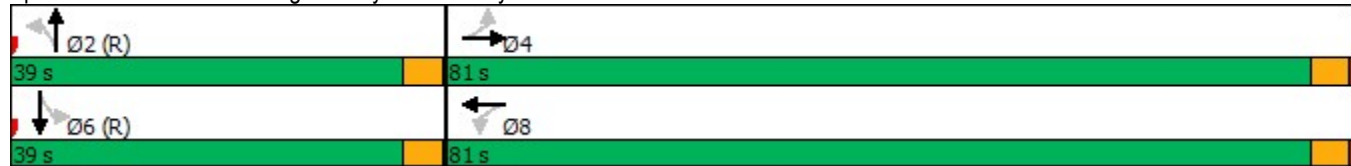


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		9.2			23.9			37.9			45.1	
LOS		A			C			D			D	
Approach Delay		9.2			23.9			37.9			45.1	
Approach LOS		A			C			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	23.8
Intersection LOS:	C
Intersection Capacity Utilization	66.0%
ICU Level of Service	C
Analysis Period (min)	15

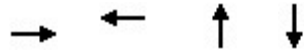
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	695	679	302	275
v/c Ratio	0.25	0.30	0.59	0.66
Control Delay	9.2	23.9	37.9	45.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.2	23.9	37.9	45.1
Queue Length 50th (m)	23.0	42.5	54.6	55.6
Queue Length 95th (m)	29.1	54.9	83.9	85.7
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2739	2270	513	419
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.30	0.59	0.66
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔			↔↔↔			↔			↔	
Traffic Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Future Volume (vph)	35	609	45	125	530	18	22	151	126	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		0.99			1.00			0.94			0.98	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		4864			4871			1737			1785	
Flt Permitted		0.87			0.72			0.97			0.79	
Satd. Flow (perm)		4260			3536			1686			1423	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	615	45	126	535	18	22	153	127	58	184	33
RTOR Reduction (vph)	0	6	0	0	3	0	0	22	0	0	4	0
Lane Group Flow (vph)	0	689	0	0	676	0	0	280	0	0	271	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		77.0			77.0			35.0			35.0	
Effective Green, g (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		2733			2268			491			415	
v/s Ratio Prot												
v/s Ratio Perm		0.16			0.19			0.17			0.19	
v/c Ratio		0.25			0.30			0.57			0.65	
Uniform Delay, d1		9.2			9.5			36.1			37.2	
Progression Factor		1.00			2.48			1.00			1.00	
Incremental Delay, d2		0.2			0.3			4.7			7.8	
Delay (s)		9.4			23.9			40.9			44.9	
Level of Service		A			C			D			D	
Approach Delay (s)		9.4			23.9			40.9			44.9	
Approach LOS		A			C			D			D	

Intersection Summary

HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Future Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.981				0.850		0.977	
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1825	4892	0	1706	4781	0	0	1837	1570	1690	1818	0
Flt Permitted	0.341			0.284				0.671		0.521		
Satd. Flow (perm)	655	4892	0	510	4781	0	0	1244	1570	927	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			38				84			8
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1263.7			341.6				2496.3
Travel Time (s)		73.0			65.0			15.4				112.3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	14	811	90	117	659	93	40	181	88	217	311	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	901	0	117	752	0	0	221	88	217	367	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	23.0	23.0	
Total Split (s)	78.0	78.0		78.0	78.0		42.0	42.0	42.0	42.0	42.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	72.0	72.0		72.0	72.0		36.0	36.0	36.0	36.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.31		0.38	0.26			0.59	0.17	0.78	0.67	
Control Delay	17.5	18.9		17.0	11.0			43.5	8.0	59.1	42.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.5	18.9		17.0	11.0			43.5	8.0	59.1	42.9	
LOS	B	B		B	B			D	A	E	D	
Approach Delay		18.9			11.8			33.4			48.9	
Approach LOS		B			B			C			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	24.8
Intersection LOS:	C
Intersection Capacity Utilization	74.6%
ICU Level of Service	D
Analysis Period (min)	15

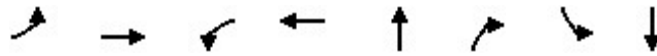
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	14	901	117	752	221	88	217	367
v/c Ratio	0.04	0.31	0.38	0.26	0.59	0.17	0.78	0.67
Control Delay	17.5	18.9	17.0	11.0	43.5	8.0	59.1	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	18.9	17.0	11.0	43.5	8.0	59.1	42.9
Queue Length 50th (m)	1.6	44.1	13.5	27.3	44.3	0.7	46.7	73.9
Queue Length 95th (m)	m4.8	55.0	27.6	34.2	71.0	12.4	#86.2	107.3
Internal Link Dist (m)		1395.4		1239.7	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	393	2946	306	2883	373	529	278	551
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.31	0.38	0.26	0.59	0.17	0.78	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024




































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗	↖	↗	
Traffic Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Future Volume (vph)	14	795	88	115	646	91	39	177	86	213	305	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1825	4892		1706	4783			1837	1570	1690	1819	
Flt Permitted	0.34	1.00		0.28	1.00			0.67	1.00	0.52	1.00	
Satd. Flow (perm)	656	4892		510	4783			1244	1570	927	1819	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	14	811	90	117	659	93	40	181	88	217	311	56
RTOR Reduction (vph)	0	11	0	0	15	0	0	0	59	0	6	0
Lane Group Flow (vph)	14	890	0	117	737	0	0	221	29	217	361	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Effective Green, g (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	393	2935		306	2869			373	471	278	545	
v/s Ratio Prot		0.18			0.15						0.20	
v/s Ratio Perm	0.02			c0.23				0.18	0.02	c0.23		
v/c Ratio	0.04	0.30		0.38	0.26			0.59	0.06	0.78	0.66	
Uniform Delay, d1	9.8	11.7		12.5	11.3			35.8	30.0	38.4	36.7	
Progression Factor	1.72	1.63		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.3		3.6	0.2			6.8	0.3	19.3	6.2	
Delay (s)	17.1	19.4		16.1	11.6			42.5	30.2	57.7	42.9	
Level of Service	B	B		B	B			D	C	E	D	
Approach Delay (s)		19.4			12.2			39.0			48.4	
Approach LOS		B			B			D			D	

Intersection Summary		
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.52	
Actuated Cycle Length (s)	120.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization	74.6%	ICU Level of Service D
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	
Traffic Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293
Future Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.329			0.950			0.253			0.523		
Satd. Flow (perm)	601	4902	1508	3324	4948	1395	481	3476	1467	929	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			124			203			312
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	28.0	58.0	58.0	20.0	50.0	50.0	82.0	82.0	82.0	82.0	82.0	82.0
Total Split (%)	17.5%	36.3%	36.3%	12.5%	31.3%	31.3%	51.3%	51.3%	51.3%	51.3%	51.3%	51.3%
Maximum Green (s)	23.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

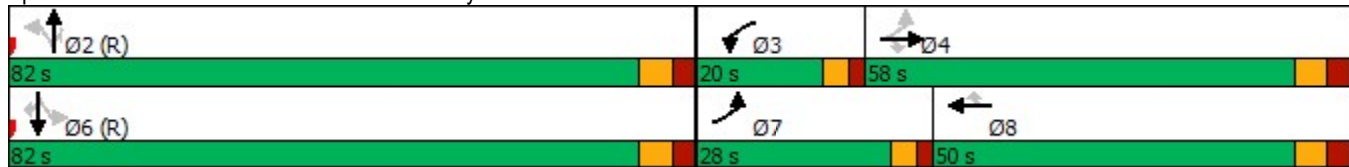


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	73.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Actuated g/C Ratio	0.46	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.21	0.26	0.58	0.49	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
LOS	C	D	A	E	D	A	C	C	A	D	C	A
Approach Delay		39.7			50.4			19.4			25.8	
Approach LOS		D			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	34.0
Intersection LOS:	C
Intersection Capacity Utilization	73.8%
ICU Level of Service	D
Analysis Period (min)	15

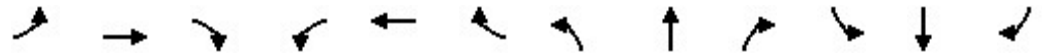
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024





































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.21	0.26	0.58	0.49	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	32.5	25.5	3.7	37.8	30.6	3.4
Queue Length 50th (m)	46.3	75.9	0.0	32.1	51.5	0.0	15.6	34.1	0.0	58.3	93.2	0.0
Queue Length 95th (m)	66.6	89.7	13.4	46.0	63.5	16.3	30.4	44.9	14.1	89.5	111.7	16.5
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	437	1562	545	313	1329	465	225	1629	795	435	1661	895
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.35	0.21	0.26	0.58	0.49	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 		 		 	
Traffic Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293	
Future Volume (vph)	220	750	89	188	503	117	73	329	191	239	768	293	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1737	4902	1508	3340	4948	1395	1807	3476	1467	1688	3544	1557	
Flt Permitted	0.33	1.00	1.00	0.95	1.00	1.00	0.25	1.00	1.00	0.52	1.00	1.00	
Satd. Flow (perm)	602	4902	1508	3340	4948	1395	482	3476	1467	929	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	234	798	95	200	535	124	78	350	203	254	817	312	
RTOR Reduction (vph)	0	0	65	0	0	91	0	0	108	0	0	166	
Lane Group Flow (vph)	234	798	30	200	535	33	78	350	95	254	817	146	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0	
Effective Green, g (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0	
Actuated g/C Ratio	0.44	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	430	1562	480	313	1329	374	225	1629	687	435	1661	729	
v/s Ratio Prot	c0.08	0.16		c0.06	0.11			0.10			0.23		
v/s Ratio Perm	c0.16		0.02			0.02	0.16		0.06	c0.27		0.09	
v/c Ratio	0.54	0.51	0.06	0.64	0.40	0.09	0.35	0.21	0.14	0.58	0.49	0.20	
Uniform Delay, d1	29.3	44.4	37.9	69.9	48.0	43.8	27.0	25.1	24.1	31.1	29.3	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.9	1.2	0.3	9.6	0.9	0.5	4.2	0.3	0.4	5.6	1.0	0.6	
Delay (s)	34.2	45.5	38.1	79.5	48.9	44.3	31.1	25.4	24.6	36.7	30.4	25.5	
Level of Service	C	D	D	E	D	D	C	C	C	D	C	C	
Approach Delay (s)		42.6			55.3			25.8			30.5		
Approach LOS		D			E			C			C		
Intersection Summary													
HCM 2000 Control Delay			38.5									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	19.0
Intersection Capacity Utilization			73.8%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024




















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↙	↘			↕			↕	
Traffic Volume (vph)	4	185	2	174	275	32	10	229	199	25	154	4
Future Volume (vph)	4	185	2	174	275	32	10	229	199	25	154	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.984			0.939			0.997	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1849	0	0	1723	0	0	1842	0
Flt Permitted		0.999		0.950				0.999			0.993	
Satd. Flow (perm)	0	1863	0	1825	1849	0	0	1723	0	0	1842	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	197	2	185	293	34	11	244	212	27	164	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	185	327	0	0	467	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.4%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	185	2	174	275	32	10	229	199	25	154	4
Future Volume (vph)	4	185	2	174	275	32	10	229	199	25	154	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	197	2	185	293	34	11	244	212	27	164	4
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	203	185	327	467	195							
Volume Left (vph)	4	185	0	11	27							
Volume Right (vph)	2	0	34	212	4							
Hadj (s)	0.05	0.50	-0.03	-0.19	0.07							
Departure Headway (s)	7.6	7.9	7.3	6.5	7.5							
Degree Utilization, x	0.43	0.40	0.66	0.84	0.41							
Capacity (veh/h)	435	438	469	531	433							
Control Delay (s)	16.3	14.9	22.5	35.3	15.6							
Approach Delay (s)	16.3	19.7		35.3	15.6							
Approach LOS	C	C		E	C							
Intersection Summary												
Delay			23.9									
Level of Service			C									
Intersection Capacity Utilization			62.4%		ICU Level of Service				B			
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	9	381	22	274	447	23	29	124	280	19	53	6
Future Volume (vph)	9	381	22	274	447	23	29	124	280	19	53	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.993				0.850		0.990	
Flt Protected		0.999		0.950				0.991			0.988	
Satd. Flow (prot)	0	1829	0	1755	1886	0	0	1839	1555	0	1805	0
Flt Permitted		0.999		0.950				0.991			0.988	
Satd. Flow (perm)	0	1829	0	1755	1886	0	0	1839	1555	0	1805	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			349.1			588.2			263.1	
Travel Time (s)		71.1			18.0			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	405	23	291	476	24	31	132	298	20	56	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	438	0	291	500	0	0	163	298	0	82	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.5%
ICU Level of Service	C
Analysis Period (min)	15
























HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	381	22	274	447	23	29	124	280	19	53	6
Future Volume (vph)	9	381	22	274	447	23	29	124	280	19	53	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	405	23	291	476	24	31	132	298	20	56	6
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	438	291	500	163	298	82						
Volume Left (vph)	10	291	0	31	0	20						
Volume Right (vph)	23	0	24	0	298	6						
Hadj (s)	0.04	0.57	-0.01	0.15	-0.61	0.07						
Departure Headway (s)	7.6	8.1	7.5	8.2	7.4	9.3						
Degree Utilization, x	0.92	0.65	1.04	0.37	0.61	0.21						
Capacity (veh/h)	471	435	486	430	468	367						
Control Delay (s)	51.1	23.7	77.0	14.7	20.3	14.8						
Approach Delay (s)	51.1	57.4		18.3		14.8						
Approach LOS	F	F		C		B						
Intersection Summary												
Delay			43.7									
Level of Service			E									
Intersection Capacity Utilization			72.5%	ICU Level of Service	C							
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	399	176	96	220	232	111	177	2435	259	113	1437	337	
Future Volume (vph)	399	176	96	220	232	111	177	2435	259	113	1437	337	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.947			0.952				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1825	1731	0	1789	1817	0	1807	5043	1633	1825	4812	1541	
Flt Permitted	0.148			0.481			0.079			0.089			
Satd. Flow (perm)	284	1731	0	906	1817	0	150	5043	1633	171	4812	1541	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		22			15				160			204	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			742.4			556.7		
Travel Time (s)		51.8			22.6			33.4			25.1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%	
Adj. Flow (vph)	411	181	99	227	239	114	182	2510	267	116	1481	347	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	411	280	0	227	353	0	182	2510	267	116	1481	347	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	
Protected Phases	7	4		3	8		5	2			6	7	

Lanes, Volumes, Timings

3: Hurontario Street & Old School Road

06/07/2024

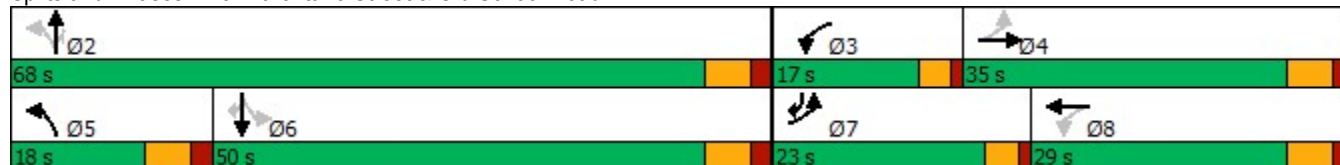


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	29.0	29.0	10.0
Total Split (s)	23.0	35.0		17.0	29.0		18.0	68.0	68.0	50.0	50.0	23.0
Total Split (%)	19.2%	29.2%		14.2%	24.2%		15.0%	56.7%	56.7%	41.7%	41.7%	19.2%
Maximum Green (s)	19.0	29.0		13.0	23.0		12.0	62.0	62.0	44.0	44.0	19.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	Max	Max	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0			0	0	0	0	
Act Effct Green (s)	48.0	29.5		37.5	23.0		62.0	62.0	62.0	44.8	44.8	69.8
Actuated g/C Ratio	0.40	0.25		0.31	0.19		0.52	0.52	0.52	0.37	0.37	0.58
v/c Ratio	1.15	0.63		0.61	0.98		0.78	0.96	0.29	1.84	0.82	0.35
Control Delay	126.7	44.8		33.5	89.5		48.6	39.2	7.2	456.9	39.0	6.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.7	44.8		33.5	89.5		48.6	39.2	7.2	456.9	39.0	6.2
LOS	F	D		C	F		D	D	A	F	D	A
Approach Delay		93.5			67.6			36.9				58.1
Approach LOS		F			E			D				E

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.84
 Intersection Signal Delay: 52.8
 Intersection LOS: D
 Intersection Capacity Utilization 112.7%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	411	280	227	353	182	2510	267	116	1481	347
v/c Ratio	1.15	0.63	0.61	0.98	0.78	0.96	0.29	1.84	0.82	0.35
Control Delay	126.7	44.8	33.5	89.5	48.6	39.2	7.2	456.9	39.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.7	44.8	33.5	89.5	48.6	39.2	7.2	456.9	39.0	6.2
Queue Length 50th (m)	~96.8	54.9	36.2	80.4	25.9	200.9	12.6	~41.5	115.7	15.0
Queue Length 95th (m)	#158.6	84.3	55.8	#139.9	#59.1	#244.5	27.7	#65.3	135.2	31.7
Internal Link Dist (m)		983.8		416.4		718.4			532.7	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	357	441	382	360	243	2605	921	63	1796	981
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.63	0.59	0.98	0.75	0.96	0.29	1.84	0.82	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.



























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	399	176	96	220	232	111	177	2435	259	113	1437	337
Future Volume (vph)	399	176	96	220	232	111	177	2435	259	113	1437	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1731		1789	1816		1807	5043	1633	1825	4812	1541
Flt Permitted	0.15	1.00		0.48	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	285	1731		906	1816		150	5043	1633	172	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	411	181	99	227	239	114	182	2510	267	116	1481	347
RTOR Reduction (vph)	0	17	0	0	12	0	0	0	77	0	0	96
Lane Group Flow (vph)	411	263	0	227	341	0	182	2510	190	116	1481	251
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	46.0	29.5		35.5	23.0		62.0	62.0	62.0	44.8	44.8	63.8
Effective Green, g (s)	46.0	29.5		35.5	23.0		62.0	62.0	62.0	44.8	44.8	63.8
Actuated g/C Ratio	0.38	0.25		0.30	0.19		0.52	0.52	0.52	0.37	0.37	0.53
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
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)	353	425		360	348		232	2605	843	64	1796	819
v/s Ratio Prot	c0.18	0.15		0.07	0.19		0.07	c0.50			0.31	0.05
v/s Ratio Perm	c0.26			0.12			0.33		0.12	c0.68		0.11
v/c Ratio	1.16	0.62		0.63	0.98		0.78	0.96	0.22	1.81	0.82	0.31
Uniform Delay, d1	34.9	40.3		34.2	48.3		28.0	27.9	15.9	37.6	34.0	15.7
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	100.5	2.7		3.6	42.2		15.8	11.0	0.6	420.2	4.5	0.2
Delay (s)	135.4	43.0		37.7	90.5		43.8	38.9	16.5	457.8	38.5	15.9
Level of Service	F	D		D	F		D	D	B	F	D	B
Approach Delay (s)		97.9			69.8			37.1			59.5	
Approach LOS		F			E			D			E	
Intersection Summary												
HCM 2000 Control Delay			54.1				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			1.50									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			22.0		
Intersection Capacity Utilization			112.7%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕				↕
Traffic Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25
Future Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.990			0.991			0.951			0.982	
Flt Protected		0.998			0.990			0.996			0.993	
Satd. Flow (prot)	0	5041	0	0	5034	0	0	1778	0	0	1832	0
Flt Permitted		0.849			0.676			0.962			0.918	
Satd. Flow (perm)	0	4289	0	0	3437	0	0	1717	0	0	1694	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			10			31			8	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	39	691	50	179	653	50	34	225	147	28	151	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	780	0	0	882	0	0	406	0	0	206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		57.0			57.0			55.0			55.0	
Actuated g/C Ratio		0.48			0.48			0.46			0.46	
v/c Ratio		0.38			0.54			0.51			0.26	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

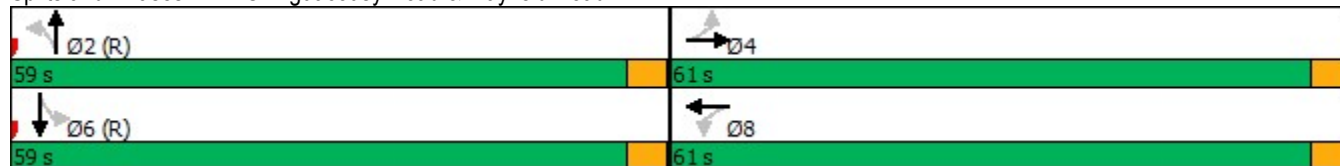


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		20.5			44.8			23.7			20.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.5			44.8			23.7			20.3	
LOS		C			D			C			C	
Approach Delay		20.5			44.8			23.7			20.3	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	30.5
Intersection LOS:	C
Intersection Capacity Utilization	64.8%
ICU Level of Service	C
Analysis Period (min)	15

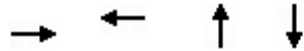
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	780	882	406	206
v/c Ratio	0.38	0.54	0.51	0.26
Control Delay	20.5	44.8	23.7	20.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.5	44.8	23.7	20.3
Queue Length 50th (m)	41.3	73.8	60.7	28.0
Queue Length 95th (m)	51.5	87.8	89.2	44.5
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2043	1637	803	780
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.54	0.51	0.26
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↔↔			↔↔↔			↔			↔		
Traffic Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25	
Future Volume (vph)	36	636	46	165	601	46	31	207	135	26	139	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		0.91			0.91			1.00			1.00		
Frbp, ped/bikes		1.00			1.00			1.00			1.00		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		0.99			0.99			0.95			0.98		
Flt Protected		1.00			0.99			1.00			0.99		
Satd. Flow (prot)		5041			5036			1777			1833		
Flt Permitted		0.85			0.68			0.96			0.92		
Satd. Flow (perm)		4288			3438			1717			1694		
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)	39	691	50	179	653	50	34	225	147	28	151	27	
RTOR Reduction (vph)	0	6	0	0	5	0	0	17	0	0	4	0	
Lane Group Flow (vph)	0	774	0	0	877	0	0	389	0	0	202	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
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)		57.0			57.0			55.0			55.0		
Effective Green, g (s)		57.0			57.0			55.0			55.0		
Actuated g/C Ratio		0.48			0.48			0.46			0.46		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Lane Grp Cap (vph)		2036			1633			786			776		
v/s Ratio Prot													
v/s Ratio Perm		0.18			0.26			0.23			0.12		
v/c Ratio		0.38			0.54			0.50			0.26		
Uniform Delay, d1		20.2			22.2			22.8			20.0		
Progression Factor		1.00			1.97			1.00			1.00		
Incremental Delay, d2		0.5			1.1			2.2			0.8		
Delay (s)		20.7			44.8			25.0			20.8		
Level of Service		C			D			C			C		
Approach Delay (s)		20.7			44.8			25.0			20.8		
Approach LOS		C			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			30.8									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.52										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			64.8%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Future Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.973				0.850		0.966	
Flt Protected	0.950			0.950				0.989		0.950		
Satd. Flow (prot)	1738	5041	0	1755	4902	0	0	1885	1585	1738	1794	0
Flt Permitted	0.173			0.264				0.852		0.301		
Satd. Flow (perm)	317	5041	0	488	4902	0	0	1624	1585	551	1794	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			48				64			17
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	35	794	58	106	916	198	96	328	108	165	200	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	852	0	106	1114	0	0	424	108	165	259	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	8.0	22.0	
Total Split (s)	56.0	56.0		56.0	56.0		52.0	52.0	52.0	12.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		43.3%	43.3%	43.3%	10.0%	53.3%	
Maximum Green (s)	50.0	50.0		50.0	50.0		46.0	46.0	46.0	8.0	58.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	3.5	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	
Act Effct Green (s)	50.0	50.0		50.0	50.0			46.0	46.0	60.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.50	0.48	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

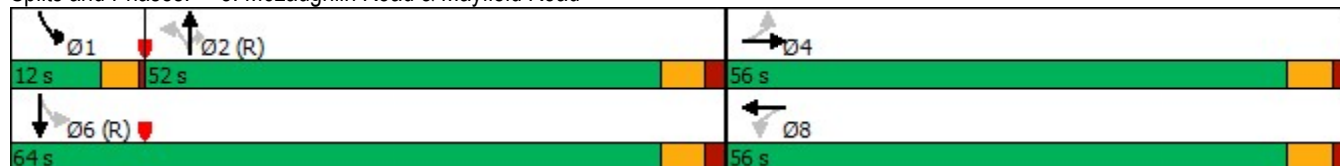


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.27	0.40		0.52	0.54			0.68	0.17	0.47	0.30	
Control Delay	32.8	28.1		37.4	26.2			37.6	11.7	21.3	18.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	32.8	28.1		37.4	26.2			37.6	11.7	21.3	18.5	
LOS	C	C		D	C			D	B	C	B	
Approach Delay		28.3			27.2			32.4			19.6	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Pretimed
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	27.4
Intersection LOS:	C
Intersection Capacity Utilization	79.8%
ICU Level of Service	D
Analysis Period (min)	15

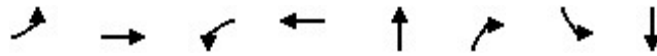
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	35	852	106	1114	424	108	165	259
v/c Ratio	0.27	0.40	0.52	0.54	0.68	0.17	0.47	0.30
Control Delay	32.8	28.1	37.4	26.2	37.6	11.7	21.3	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	28.1	37.4	26.2	37.6	11.7	21.3	18.5
Queue Length 50th (m)	6.6	62.1	18.3	67.9	82.4	6.5	20.8	33.2
Queue Length 95th (m)	m16.5	75.4	38.2	81.6	119.1	18.3	33.8	51.2
Internal Link Dist (m)		1395.4		1239.7	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	132	2107	203	2070	622	647	354	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.40	0.52	0.54	0.68	0.17	0.47	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑			↑	↗	↖	↑	↘
Traffic Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Future Volume (vph)	34	762	56	102	879	190	92	315	104	158	192	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1738	5040		1755	4903			1885	1585	1738	1793	
Flt Permitted	0.17	1.00		0.26	1.00			0.85	1.00	0.30	1.00	
Satd. Flow (perm)	316	5040		488	4903			1623	1585	550	1793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	35	794	58	106	916	198	96	328	108	165	200	59
RTOR Reduction (vph)	0	7	0	0	28	0	0	0	39	0	9	0
Lane Group Flow (vph)	35	845	0	106	1086	0	0	424	69	165	250	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Effective Green, g (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.48	0.48	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	131	2100		203	2042			622	607	345	866	
v/s Ratio Prot		0.17			c0.22					c0.03	0.14	
v/s Ratio Perm	0.11			0.22				c0.26	0.04	0.20		
v/c Ratio	0.27	0.40		0.52	0.53			0.68	0.11	0.48	0.29	
Uniform Delay, d1	23.0	24.5		26.1	26.2			30.9	23.8	19.9	18.6	
Progression Factor	1.13	1.14		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.6	0.5		9.3	1.0			5.9	0.4	4.7	0.8	
Delay (s)	30.7	28.4		35.4	27.2			36.8	24.2	24.6	19.5	
Level of Service	C	C		D	C			D	C	C	B	
Approach Delay (s)		28.5			27.9			34.3			21.4	
Approach LOS		C			C			C			C	

Intersection Summary		
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.60	C
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	79.8%	16.0
Analysis Period (min)	15	ICU Level of Service
		D

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672
Future Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99	1.00		0.96			0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Fl _t Permitted	0.160			0.950			0.349			0.284		
Satd. Flow (perm)	296	4995	1538	3331	5092	1562	656	3614	1486	546	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			145			246			680
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693
Shared Lane Traffic (%)												
Lane Group Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	43.0	49.0	49.0	21.0	27.0	27.0	55.0	55.0	55.0	10.0	65.0	65.0
Total Split (%)	31.9%	36.3%	36.3%	15.6%	20.0%	20.0%	40.7%	40.7%	40.7%	7.4%	48.1%	48.1%
Maximum Green (s)	38.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	6.0	58.0	58.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

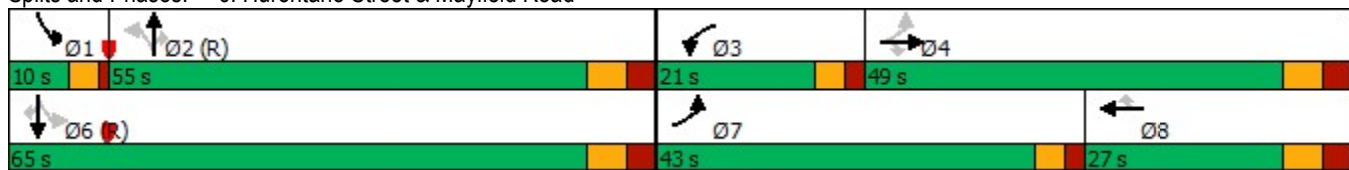


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	65.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	61.0	58.0	58.0
Actuated g/C Ratio	0.48	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.45	0.43	0.43
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.68	0.49	0.36	0.62	0.48	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
LOS	D	D	A	E	E	A	D	D	A	C	C	A
Approach Delay		41.3			64.4			31.1			19.4	
Approach LOS		D			E			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	37.0
Intersection LOS:	D
Intersection Capacity Utilization	89.1%
ICU Level of Service	E
Analysis Period (min)	15

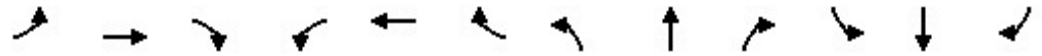
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.68	0.49	0.36	0.62	0.48	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	53.9	35.5	5.1	34.5	29.0	5.4
Queue Length 50th (m)	106.9	41.7	0.0	34.3	67.3	0.0	35.9	68.0	0.0	30.3	71.7	2.0
Queue Length 95th (m)	#167.5	52.7	8.9	48.7	#90.3	12.4	#67.7	85.5	17.4	46.5	89.1	28.0
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	553	1554	550	403	754	354	233	1284	686	303	1508	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.68	0.49	0.36	0.62	0.48	0.66

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672	
Future Volume (vph)	474	535	86	250	670	120	154	606	239	183	700	672	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1785	3614	1486	1825	3510	1555	
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.35	1.00	1.00	0.28	1.00	1.00	
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	655	3614	1486	545	3510	1555	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	489	552	89	258	691	124	159	625	246	189	722	693	
RTOR Reduction (vph)	0	0	61	0	0	106	0	0	159	0	0	388	
Lane Group Flow (vph)	489	552	28	258	691	18	159	625	87	189	722	305	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3	
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8			2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Effective Green, g (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.47	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.43	0.43	0.43	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	548	1554	478	403	754	231	232	1284	528	291	1508	668	
v/s Ratio Prot	c0.25	0.11		0.08	0.14			0.17		c0.03	0.21		
v/s Ratio Perm	c0.17		0.02			0.01	0.24		0.06	c0.25		0.20	
v/c Ratio	0.89	0.36	0.06	0.64	0.92	0.08	0.69	0.49	0.17	0.65	0.48	0.46	
Uniform Delay, d1	35.9	36.0	32.6	56.8	56.7	49.6	37.1	33.9	29.8	30.3	27.6	27.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.4	0.6	0.2	7.6	17.8	0.7	15.3	1.3	0.7	10.7	1.1	2.2	
Delay (s)	55.4	36.6	32.9	64.3	74.5	50.2	52.3	35.2	30.5	41.0	28.7	29.6	
Level of Service	E	D	C	E	E	D	D	D	C	D	C	C	
Approach Delay (s)		44.4			69.2			36.7			30.5		
Approach LOS		D			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			43.7									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.81										
Actuated Cycle Length (s)			135.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			89.1%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	212	3	86	134	30	2	141	177	21	146	8
Future Volume (vph)	2	212	3	86	134	30	2	141	177	21	146	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.973			0.925				0.993
Flt Protected				0.950								0.994
Satd. Flow (prot)	0	1917	0	1772	1807	0	0	1711	0	0	1784	0
Flt Permitted				0.950								0.994
Satd. Flow (perm)	0	1917	0	1772	1807	0	0	1711	0	0	1784	0
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	226	3	91	143	32	2	150	188	22	155	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	91	175	0	0	340	0	0	186	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop				Stop


















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.7%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	212	3	86	134	30	2	141	177	21	146	8
Future Volume (vph)	2	212	3	86	134	30	2	141	177	21	146	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	2	226	3	91	143	32	2	150	188	22	155	9
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	231	91	175	340	186							
Volume Left (vph)	2	91	0	2	22							
Volume Right (vph)	3	0	32	188	9							
Hadj (s)	-0.01	0.55	-0.07	-0.26	0.10							
Departure Headway (s)	6.1	7.0	6.4	5.5	6.1							
Degree Utilization, x	0.39	0.18	0.31	0.52	0.32							
Capacity (veh/h)	539	473	507	611	518							
Control Delay (s)	12.9	10.3	11.0	14.2	12.0							
Approach Delay (s)	12.9	10.8		14.2	12.0							
Approach LOS	B	B		B	B							
Intersection Summary												
Delay			12.6									
Level of Service			B									
Intersection Capacity Utilization			53.7%		ICU Level of Service		A					
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↙	↘			↕	↗		↕	
Traffic Volume (vph)	6	384	24	155	219	21	30	59	267	34	111	10
Future Volume (vph)	6	384	24	155	219	21	30	59	267	34	111	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.987				0.850			0.991
Flt Protected		0.999		0.950				0.983				0.989
Satd. Flow (prot)	0	1871	0	1789	1830	0	0	1864	1617	0	1858	0
Flt Permitted		0.999		0.950				0.983				0.989
Satd. Flow (perm)	0	1871	0	1789	1830	0	0	1864	1617	0	1858	0
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1383.3			349.1			588.2				263.1
Travel Time (s)		71.1			18.0			26.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	409	26	165	233	22	32	63	284	36	118	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	441	0	165	255	0	0	95	284	0	165	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop				Stop



















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.8%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	384	24	155	219	21	30	59	267	34	111	10
Future Volume (vph)	6	384	24	155	219	21	30	59	267	34	111	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	409	26	165	233	22	32	63	284	36	118	11
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	441	165	255	95	284	165						
Volume Left (vph)	6	165	0	32	0	36						
Volume Right (vph)	26	0	22	0	284	11						
Hadj (s)	0.00	0.53	0.00	0.19	-0.68	0.03						
Departure Headway (s)	7.4	8.2	7.6	8.1	7.2	8.6						
Degree Utilization, x	0.91	0.37	0.54	0.21	0.57	0.39						
Capacity (veh/h)	471	412	445	430	480	401						
Control Delay (s)	48.1	14.7	17.9	12.1	18.2	17.0						
Approach Delay (s)	48.1	16.7		16.7		17.0						
Approach LOS	E	C		C		C						
Intersection Summary												
Delay			26.6									
Level of Service			D									
Intersection Capacity Utilization			59.8%		ICU Level of Service		B					
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	331	189	158	206	145	101	53	1396	117	56	2054	183
Future Volume (vph)	331	189	158	206	145	101	53	1396	117	56	2054	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.932			0.938				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	1745	0	1722	1730	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.526			0.394			0.067			0.112		
Satd. Flow (perm)	972	1745	0	714	1730	0	121	4445	1471	190	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			18				122			130
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			742.4			556.7	
Travel Time (s)		51.8			22.6			33.4			25.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	356	203	170	222	156	109	57	1501	126	60	2209	197
Shared Lane Traffic (%)												
Lane Group Flow (vph)	356	373	0	222	265	0	57	1501	126	60	2209	197
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	

Lanes, Volumes, Timings
 3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	24.0	24.0		24.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	52.0	52.0		52.0	52.0		68.0	68.0	68.0	68.0	68.0	68.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%	56.7%	56.7%	56.7%	56.7%
Maximum Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Yellow Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50
v/c Ratio	1.00	0.58		0.85	0.41		0.95	0.68	0.16	0.63	0.88	0.22
Control Delay	86.6	34.9		64.6	28.7		138.1	24.6	3.5	55.4	31.7	6.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.6	34.9		64.6	28.7		138.1	24.6	3.5	55.4	31.7	6.7
LOS	F	C		E	C		F	C	A	E	C	A
Approach Delay		60.1			45.0			26.8			30.3	
Approach LOS		E			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	34.6
Intersection LOS:	C
Intersection Capacity Utilization:	98.7%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	356	373	222	265	57	1501	126	60	2209	197
v/c Ratio	1.00	0.58	0.85	0.41	0.95	0.68	0.16	0.63	0.88	0.22
Control Delay	86.6	34.9	64.6	28.7	138.1	24.6	3.5	55.4	31.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.6	34.9	64.6	28.7	138.1	24.6	3.5	55.4	31.7	6.7
Queue Length 50th (m)	83.1	69.7	47.6	42.9	12.3	94.6	0.5	10.0	164.2	8.0
Queue Length 95th (m)	#144.5	100.9	#92.7	66.2	#40.6	111.1	9.9	#34.1	186.5	20.3
Internal Link Dist (m)		983.8		416.4		718.4			532.7	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	356	641	261	645	60	2222	796	95	2521	881
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.58	0.85	0.41	0.95	0.68	0.16	0.63	0.88	0.22























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	331	189	158	206	145	101	53	1396	117	56	2054	183	
Future Volume (vph)	331	189	158	206	145	101	53	1396	117	56	2054	183	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	1744		1722	1730		1722	4445	1471	1615	5043	1633	
Flt Permitted	0.53	1.00		0.39	1.00		0.07	1.00	1.00	0.11	1.00	1.00	
Satd. Flow (perm)	972	1744		714	1730		121	4445	1471	191	5043	1633	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	356	203	170	222	156	109	57	1501	126	60	2209	197	
RTOR Reduction (vph)	0	1	0	0	11	0	0	0	61	0	0	65	
Lane Group Flow (vph)	356	372	0	222	254	0	57	1501	65	60	2209	132	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm	
Protected Phases		4			8			2		2	6	6	
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0	
Effective Green, g (s)	44.0	44.0		44.0	44.0		60.0	60.0	60.0	60.0	60.0	60.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	0.50	
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0	
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)	356	639		261	634		60	2222	735	95	2521	816	
v/s Ratio Prot		0.21			0.15			0.34			0.44		
v/s Ratio Perm	c0.37			0.31			c0.47		0.04	0.31		0.08	
v/c Ratio	1.00	0.58		0.85	0.40		0.95	0.68	0.09	0.63	0.88	0.16	
Uniform Delay, d1	38.0	30.6		35.0	28.2		28.6	22.7	15.7	21.9	26.7	16.3	
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	47.7	1.4		22.4	0.4		102.6	1.7	0.2	27.8	4.7	0.4	
Delay (s)	85.7	31.9		57.4	28.6		131.1	24.3	15.9	49.7	31.4	16.7	
Level of Service	F	C		E	C		F	C	B	D	C	B	
Approach Delay (s)		58.2			41.7			27.3			30.6		
Approach LOS		E			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			34.3									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.97										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			98.7%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔			↔↔↔			↔			↔	
Traffic Volume (vph)	35	609	45	133	530	18	22	151	130	57	182	33
Future Volume (vph)	35	609	45	133	530	18	22	151	130	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.996			0.942			0.984	
Fl _t Protected		0.997			0.990			0.996			0.990	
Satd. Flow (prot)	0	4860	0	0	4865	0	0	1734	0	0	1786	0
Fl _t Permitted		0.873			0.711			0.968			0.785	
Satd. Flow (perm)	0	4255	0	0	3494	0	0	1686	0	0	1416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			6			32			6	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	35	615	45	134	535	18	22	153	131	58	184	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	695	0	0	687	0	0	306	0	0	275	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Maximum Green (s)	77.0	77.0		77.0	77.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
v/c Ratio		0.25			0.31			0.60			0.66	
Control Delay		9.2			23.8			38.0			45.3	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

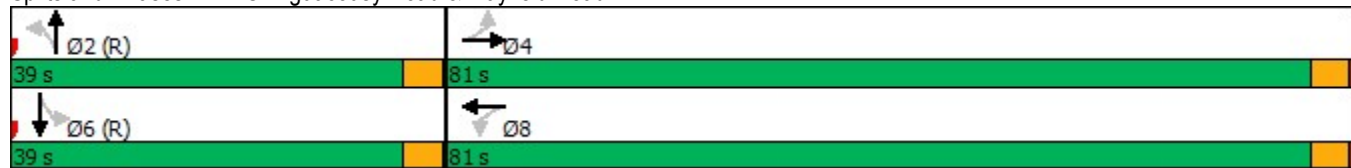


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		9.2			23.8			38.0			45.3	
LOS		A			C			D			D	
Approach Delay		9.2			23.8			38.0			45.3	
Approach LOS		A			C			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	23.9
Intersection LOS:	C
Intersection Capacity Utilization	66.4%
ICU Level of Service	C
Analysis Period (min)	15

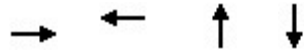
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	695	687	306	275
v/c Ratio	0.25	0.31	0.60	0.66
Control Delay	9.2	23.8	38.0	45.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.2	23.8	38.0	45.3
Queue Length 50th (m)	23.0	42.7	55.4	55.6
Queue Length 95th (m)	29.1	55.2	85.0	85.8
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2736	2244	514	417
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.31	0.60	0.66
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔			↔↔↔			↔			↔	
Traffic Volume (vph)	35	609	45	133	530	18	22	151	130	57	182	33
Future Volume (vph)	35	609	45	133	530	18	22	151	130	57	182	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		0.99			1.00			0.94			0.98	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		4864			4867			1735			1785	
Flt Permitted		0.87			0.71			0.97			0.78	
Satd. Flow (perm)		4256			3497			1686			1416	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	615	45	134	535	18	22	153	131	58	184	33
RTOR Reduction (vph)	0	6	0	0	2	0	0	23	0	0	4	0
Lane Group Flow (vph)	0	689	0	0	685	0	0	283	0	0	271	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	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)		77.0			77.0			35.0			35.0	
Effective Green, g (s)		77.0			77.0			35.0			35.0	
Actuated g/C Ratio		0.64			0.64			0.29			0.29	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		2730			2243			491			413	
v/s Ratio Prot												
v/s Ratio Perm		0.16			0.20			0.17			0.19	
v/c Ratio		0.25			0.31			0.58			0.66	
Uniform Delay, d1		9.2			9.6			36.2			37.2	
Progression Factor		1.00			2.45			1.00			1.00	
Incremental Delay, d2		0.2			0.3			4.9			7.9	
Delay (s)		9.4			23.8			41.1			45.1	
Level of Service		A			C			D			D	
Approach Delay (s)		9.4			23.8			41.1			45.1	
Approach LOS		A			C			D			D	

Intersection Summary

HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	795	88	115	646	91	39	181	86	213	313	63
Future Volume (vph)	18	795	88	115	646	91	39	181	86	213	313	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.981				0.850		0.975	
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1825	4892	0	1706	4781	0	0	1838	1570	1690	1813	0
Flt Permitted	0.341			0.284				0.642		0.515		
Satd. Flow (perm)	655	4892	0	510	4781	0	0	1190	1570	916	1813	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			38				83			9
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1263.7			341.6				2496.3
Travel Time (s)		73.0			65.0			15.4				112.3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	18	811	90	117	659	93	40	185	88	217	319	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	901	0	117	752	0	0	225	88	217	383	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	23.0	23.0	
Total Split (s)	78.0	78.0		78.0	78.0		42.0	42.0	42.0	42.0	42.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	72.0	72.0		72.0	72.0		36.0	36.0	36.0	36.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

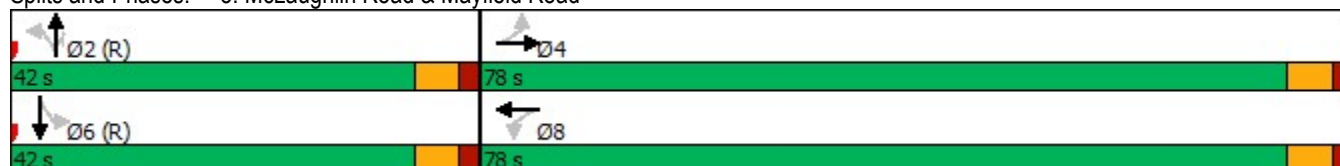


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.31		0.38	0.26			0.63	0.17	0.79	0.70	
Control Delay	17.3	18.8		17.0	11.0			45.5	8.2	60.5	44.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.3	18.8		17.0	11.0			45.5	8.2	60.5	44.1	
LOS	B	B		B	B			D	A	E	D	
Approach Delay		18.8			11.8			35.0			50.0	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	25.4
Intersection LOS:	C
Intersection Capacity Utilization	75.7%
ICU Level of Service	D
Analysis Period (min)	15

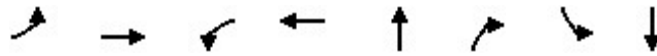
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	901	117	752	225	88	217	383
v/c Ratio	0.05	0.31	0.38	0.26	0.63	0.17	0.79	0.70
Control Delay	17.3	18.8	17.0	11.0	45.5	8.2	60.5	44.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	18.8	17.0	11.0	45.5	8.2	60.5	44.1
Queue Length 50th (m)	2.1	43.9	13.5	27.3	45.7	0.8	46.8	77.9
Queue Length 95th (m)	m5.7	54.9	27.6	34.2	73.4	12.6	#87.0	112.4
Internal Link Dist (m)		1395.4		1239.7	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	393	2946	306	2883	357	529	274	550
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.31	0.38	0.26	0.63	0.17	0.79	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024





































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑			↑	↗	↖	↑	↘
Traffic Volume (vph)	18	795	88	115	646	91	39	181	86	213	313	63
Future Volume (vph)	18	795	88	115	646	91	39	181	86	213	313	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1825	4892		1706	4783			1838	1570	1690	1812	
Flt Permitted	0.34	1.00		0.28	1.00			0.64	1.00	0.51	1.00	
Satd. Flow (perm)	656	4892		510	4783			1191	1570	916	1812	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	18	811	90	117	659	93	40	185	88	217	319	64
RTOR Reduction (vph)	0	11	0	0	15	0	0	0	58	0	6	0
Lane Group Flow (vph)	18	890	0	117	737	0	0	225	30	217	377	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Effective Green, g (s)	72.0	72.0		72.0	72.0			36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.30	0.30	0.30	0.30	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	393	2935		306	2869			357	471	274	543	
v/s Ratio Prot		0.18			0.15							0.21
v/s Ratio Perm	0.03			c0.23				0.19	0.02	c0.24		
v/c Ratio	0.05	0.30		0.38	0.26			0.63	0.06	0.79	0.69	
Uniform Delay, d1	9.9	11.7		12.5	11.3			36.3	30.0	38.6	37.1	
Progression Factor	1.68	1.63		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.3		3.6	0.2			8.2	0.3	20.5	7.1	
Delay (s)	16.8	19.3		16.1	11.6			44.4	30.2	59.1	44.3	
Level of Service	B	B		B	B			D	C	E	D	
Approach Delay (s)		19.3			12.2			40.4			49.6	
Approach LOS		B			B			D			D	

Intersection Summary		
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.52	C
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	75.7%	12.0
Analysis Period (min)	15	ICU Level of Service
		D

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	 
Traffic Volume (vph)	220	750	89	188	503	117	73	334	191	239	788	293
Future Volume (vph)	220	750	89	188	503	117	73	334	191	239	788	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.329			0.950			0.244			0.519		
Satd. Flow (perm)	601	4902	1508	3324	4948	1395	464	3476	1467	922	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			124			203			312
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	234	798	95	200	535	124	78	355	203	254	838	312
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	798	95	200	535	124	78	355	203	254	838	312
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	28.0	58.0	58.0	20.0	50.0	50.0	82.0	82.0	82.0	82.0	82.0	82.0
Total Split (%)	17.5%	36.3%	36.3%	12.5%	31.3%	31.3%	51.3%	51.3%	51.3%	51.3%	51.3%	51.3%
Maximum Green (s)	23.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

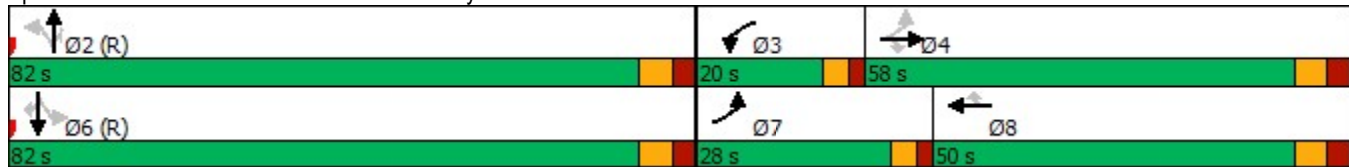


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	73.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0
Actuated g/C Ratio	0.46	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.36	0.22	0.26	0.59	0.50	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	33.2	25.6	3.7	38.1	30.9	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	33.2	25.6	3.7	38.1	30.9	3.4
LOS	C	D	A	E	D	A	C	C	A	D	C	A
Approach Delay		39.7			50.4			19.5			26.1	
Approach LOS		D			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	34.1
Intersection LOS:	C
Intersection Capacity Utilization	73.8%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	798	95	200	535	124	78	355	203	254	838	312
v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.36	0.22	0.26	0.59	0.50	0.35
Control Delay	32.3	45.7	7.4	79.9	49.1	8.3	33.2	25.6	3.7	38.1	30.9	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	45.7	7.4	79.9	49.1	8.3	33.2	25.6	3.7	38.1	30.9	3.4
Queue Length 50th (m)	46.3	75.9	0.0	32.1	51.5	0.0	15.6	34.6	0.0	58.5	96.4	0.0
Queue Length 95th (m)	66.6	89.7	13.4	46.0	63.5	16.3	30.8	45.6	14.1	89.8	115.2	16.5
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	437	1562	545	313	1329	465	217	1629	795	432	1661	895
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.51	0.17	0.64	0.40	0.27	0.36	0.22	0.26	0.59	0.50	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

















6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		 	  			 		 	 		
Traffic Volume (vph)	220	750	89	188	503	117	73	334	191	239	788	293	
Future Volume (vph)	220	750	89	188	503	117	73	334	191	239	788	293	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	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	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1737	4902	1508	3340	4948	1395	1807	3476	1467	1689	3544	1557	
Flt Permitted	0.33	1.00	1.00	0.95	1.00	1.00	0.24	1.00	1.00	0.52	1.00	1.00	
Satd. Flow (perm)	602	4902	1508	3340	4948	1395	464	3476	1467	922	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	234	798	95	200	535	124	78	355	203	254	838	312	
RTOR Reduction (vph)	0	0	65	0	0	91	0	0	108	0	0	166	
Lane Group Flow (vph)	234	798	30	200	535	33	78	355	95	254	838	146	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0	
Effective Green, g (s)	71.0	51.0	51.0	15.0	43.0	43.0	75.0	75.0	75.0	75.0	75.0	75.0	
Actuated g/C Ratio	0.44	0.32	0.32	0.09	0.27	0.27	0.47	0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	430	1562	480	313	1329	374	217	1629	687	432	1661	729	
v/s Ratio Prot	c0.08	0.16		c0.06	0.11			0.10			0.24		
v/s Ratio Perm	c0.16		0.02			0.02	0.17		0.06	c0.28		0.09	
v/c Ratio	0.54	0.51	0.06	0.64	0.40	0.09	0.36	0.22	0.14	0.59	0.50	0.20	
Uniform Delay, d1	29.3	44.4	37.9	69.9	48.0	43.8	27.2	25.1	24.1	31.2	29.6	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.9	1.2	0.3	9.6	0.9	0.5	4.6	0.3	0.4	5.8	1.1	0.6	
Delay (s)	34.2	45.5	38.1	79.5	48.9	44.3	31.7	25.5	24.6	36.9	30.7	25.5	
Level of Service	C	D	D	E	D	D	C	C	C	D	C	C	
Approach Delay (s)		42.6			55.3			25.9			30.7		
Approach LOS		D			E			C			C		
Intersection Summary													
HCM 2000 Control Delay			38.5									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	19.0
Intersection Capacity Utilization			73.8%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

















06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	64	0	16	0	341	19	7	283	0
Future Volume (vph)	0	0	0	64	0	16	0	341	19	7	283	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t					0.974			0.992				
Fl _t Protected					0.961						0.999	
Satd. Flow (prot)	0	1883	0	0	1763	0	0	3550	0	0	3575	0
Fl _t Permitted					0.961						0.999	
Satd. Flow (perm)	0	1883	0	0	1763	0	0	3550	0	0	3575	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			679.6			2496.3			588.2	
Travel Time (s)		15.4			51.0			112.3			26.5	
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
Adj. Flow (vph)	0	0	0	70	0	17	0	371	21	8	308	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	87	0	0	392	0	0	316	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	24.0%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

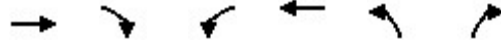
9: McLaughlin Road & Street A

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	64	0	16	0	341	19	7	283	0
Future Volume (Veh/h)	0	0	0	64	0	16	0	341	19	7	283	0
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)	0	0	0	70	0	17	0	371	21	8	308	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)												
pX, platoon unblocked												
vC, conflicting volume	526	716	154	552	706	196	308			392		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	526	716	154	552	706	196	308			392		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	100	100	100	83	100	98	100			99		
cM capacity (veh/h)	423	352	864	415	357	812	1249			1163		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	0	87	186	206	162	154						
Volume Left	0	70	0	0	8	0						
Volume Right	0	17	0	21	0	0						
cSH	1700	459	1249	1700	1163	1700						
Volume to Capacity	0.00	0.19	0.00	0.12	0.01	0.09						
Queue Length 95th (m)	0.0	5.3	0.0	0.0	0.2	0.0						
Control Delay (s)	0.0	14.7	0.0	0.0	0.5	0.0						
Lane LOS	A	B			A							
Approach Delay (s)	0.0	14.7	0.0		0.2							
Approach LOS	A	B										
Intersection Summary												
Average Delay				1.7								
Intersection Capacity Utilization			24.0%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	682	0	0	394	0	0
Future Volume (vph)	682	0	0	394	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	741	0	0	428	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	741	0	0	428	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

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

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Volume (veh/h)	682	0	0	394	0	0
Future Volume (Veh/h)	682	0	0	394	0	0
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)	741	0	0	428	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)						
pX, platoon unblocked						
vC, conflicting volume			741		1169	741
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			741		1169	741
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		100	100
cM capacity (veh/h)			866		213	416
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	741	428	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	866	1700			
Volume to Capacity	0.44	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			39.2%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↙	↘			↕			↕	
Traffic Volume (vph)	4	188	2	174	278	35	10	229	199	29	154	4
Future Volume (vph)	4	188	2	174	278	35	10	229	199	29	154	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.983			0.939			0.997	
Flt Protected		0.999		0.950				0.999			0.992	
Satd. Flow (prot)	0	1863	0	1825	1845	0	0	1723	0	0	1837	0
Flt Permitted		0.999		0.950				0.999			0.992	
Satd. Flow (perm)	0	1863	0	1825	1845	0	0	1723	0	0	1837	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	200	2	185	296	37	11	244	212	31	164	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	206	0	185	333	0	0	467	0	0	199	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	


















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.7%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	188	2	174	278	35	10	229	199	29	154	4
Future Volume (vph)	4	188	2	174	278	35	10	229	199	29	154	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	200	2	185	296	37	11	244	212	31	164	4
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total (vph)	206	185	333	467	199							
Volume Left (vph)	4	185	0	11	31							
Volume Right (vph)	2	0	37	212	4							
Hadj (s)	0.05	0.50	-0.04	-0.19	0.08							
Departure Headway (s)	7.7	7.9	7.4	6.6	7.6							
Degree Utilization, x	0.44	0.41	0.68	0.85	0.42							
Capacity (veh/h)	432	436	467	528	430							
Control Delay (s)	16.6	15.1	23.5	36.6	16.0							
Approach Delay (s)	16.6	20.5		36.6	16.0							
Approach LOS	C	C		E	C							
Intersection Summary												
Delay			24.7									
Level of Service			C									
Intersection Capacity Utilization			62.7%		ICU Level of Service				B			
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	9	381	29	278	447	23	34	127	283	19	56	6
Future Volume (vph)	9	381	29	278	447	23	34	127	283	19	56	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.993				0.850		0.991	
Flt Protected		0.999		0.950				0.990			0.989	
Satd. Flow (prot)	0	1823	0	1755	1886	0	0	1834	1555	0	1807	0
Flt Permitted		0.999		0.950				0.990			0.989	
Satd. Flow (perm)	0	1823	0	1755	1886	0	0	1834	1555	0	1807	0
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			349.1			588.2			263.1	
Travel Time (s)		71.1			18.0			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	405	31	296	476	24	36	135	301	20	60	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	446	0	296	500	0	0	171	301	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.5%
ICU Level of Service	D
Analysis Period (min)	15
























HCM Unsignalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	381	29	278	447	23	34	127	283	19	56	6
Future Volume (vph)	9	381	29	278	447	23	34	127	283	19	56	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	405	31	296	476	24	36	135	301	20	60	6
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total (vph)	446	296	500	171	301	86						
Volume Left (vph)	10	296	0	36	0	20						
Volume Right (vph)	31	0	24	0	301	6						
Hadj (s)	0.04	0.57	-0.01	0.17	-0.61	0.08						
Departure Headway (s)	7.6	8.2	7.6	8.2	7.5	9.4						
Degree Utilization, x	0.94	0.67	1.05	0.39	0.62	0.22						
Capacity (veh/h)	468	431	481	428	466	366						
Control Delay (s)	56.0	25.0	81.4	15.2	20.8	15.1						
Approach Delay (s)	56.0	60.5		18.8		15.1						
Approach LOS	F	F		C		C						
Intersection Summary												
Delay			46.3									
Level of Service			E									
Intersection Capacity Utilization			73.5%		ICU Level of Service		D					
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	402	176	96	220	232	111	177	2435	259	113	1437	341	
Future Volume (vph)	402	176	96	220	232	111	177	2435	259	113	1437	341	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.947			0.952				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1825	1731	0	1789	1817	0	1807	5043	1633	1825	4812	1541	
Flt Permitted	0.148			0.511			0.080			0.090			
Satd. Flow (perm)	284	1731	0	962	1817	0	152	5043	1633	173	4812	1541	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		22			17				158			197	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			742.4			556.7		
Travel Time (s)		51.8			22.6			33.4			25.1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%	
Adj. Flow (vph)	414	181	99	227	239	114	182	2510	267	116	1481	352	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	414	280	0	227	353	0	182	2510	267	116	1481	352	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	
Protected Phases	7	4		3	8		5	2			6	7	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

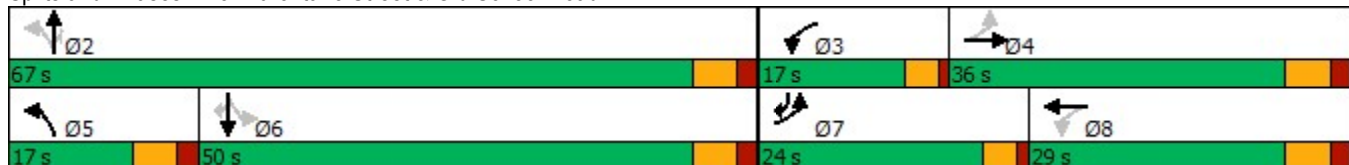


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	29.0	29.0	10.0
Total Split (s)	24.0	36.0		17.0	29.0		17.0	67.0	67.0	50.0	50.0	24.0
Total Split (%)	20.0%	30.0%		14.2%	24.2%		14.2%	55.8%	55.8%	41.7%	41.7%	20.0%
Maximum Green (s)	20.0	30.0		13.0	23.0		11.0	61.0	61.0	44.0	44.0	20.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	Max	Max	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0			0	0	0	0	
Act Effct Green (s)	49.0	30.5		37.5	23.0		61.0	61.0	61.0	44.3	44.3	70.3
Actuated g/C Ratio	0.41	0.25		0.31	0.19		0.51	0.51	0.51	0.37	0.37	0.59
v/c Ratio	1.11	0.61		0.59	0.98		0.81	0.98	0.29	1.84	0.83	0.36
Control Delay	112.7	43.2		32.2	87.8		52.7	42.7	7.6	454.4	39.6	6.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.7	43.2		32.2	87.8		52.7	42.7	7.6	454.4	39.6	6.4
LOS	F	D		C	F		D	D	A	F	D	A
Approach Delay		84.7			66.1			40.2			58.3	
Approach LOS		F			E			D			E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 100
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.84
 Intersection Signal Delay: 53.3
 Intersection Capacity Utilization 112.9%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service H

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	414	280	227	353	182	2510	267	116	1481	352
v/c Ratio	1.11	0.61	0.59	0.98	0.81	0.98	0.29	1.84	0.83	0.36
Control Delay	112.7	43.2	32.2	87.8	52.7	42.7	7.6	454.4	39.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.7	43.2	32.2	87.8	52.7	42.7	7.6	454.4	39.6	6.4
Queue Length 50th (m)	~94.5	54.3	35.7	79.9	26.2	204.8	13.1	~41.3	115.7	16.0
Queue Length 95th (m)	#155.8	83.4	54.9	#139.0	#62.5	#248.2	28.6	#65.0	135.2	32.7
Internal Link Dist (m)		983.8		416.4		718.4			532.7	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	372	456	394	362	228	2563	907	63	1777	984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.61	0.58	0.98	0.80	0.98	0.29	1.84	0.83	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	176	96	220	232	111	177	2435	259	113	1437	341
Future Volume (vph)	402	176	96	220	232	111	177	2435	259	113	1437	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1731		1789	1816		1807	5043	1633	1825	4812	1541
Flt Permitted	0.15	1.00		0.51	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	285	1731		963	1816		151	5043	1633	173	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	414	181	99	227	239	114	182	2510	267	116	1481	352
RTOR Reduction (vph)	0	16	0	0	14	0	0	0	78	0	0	91
Lane Group Flow (vph)	414	264	0	227	339	0	182	2510	189	116	1481	261
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	47.0	30.5		35.5	23.0		61.0	61.0	61.0	44.3	44.3	64.3
Effective Green, g (s)	47.0	30.5		35.5	23.0		61.0	61.0	61.0	44.3	44.3	64.3
Actuated g/C Ratio	0.39	0.25		0.30	0.19		0.51	0.51	0.51	0.37	0.37	0.54
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	4.0
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)	368	439		370	348		224	2563	830	63	1776	825
v/s Ratio Prot	c0.19	0.15		0.06	0.19		0.07	c0.50			0.31	0.05
v/s Ratio Perm	c0.25			0.12			0.34		0.12	c0.67		0.12
v/c Ratio	1.12	0.60		0.61	0.97		0.81	0.98	0.23	1.84	0.83	0.32
Uniform Delay, d1	35.1	39.4		34.1	48.2		28.3	28.9	16.4	37.9	34.5	15.6
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	85.3	2.3		3.0	41.2		19.7	13.5	0.6	433.2	4.8	0.2
Delay (s)	120.4	41.7		37.1	89.4		47.9	42.4	17.0	471.1	39.3	15.8
Level of Service	F	D		D	F		D	D	B	F	D	B
Approach Delay (s)		88.6			68.9			40.5			60.7	
Approach LOS		F			E			D			E	

Intersection Summary

HCM 2000 Control Delay	54.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	112.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕				↕
Traffic Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25
Future Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				1.00
Frt		0.990			0.992			0.948				0.982
Flt Protected		0.998			0.990			0.996				0.993
Satd. Flow (prot)	0	5041	0	0	5040	0	0	1771	0	0	1832	0
Flt Permitted		0.848			0.674			0.963				0.916
Satd. Flow (perm)	0	4284	0	0	3431	0	0	1712	0	0	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			10			34				8
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				3083.5
Travel Time (s)		14.1			73.0			15.5				138.8
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	39	691	50	188	653	50	34	225	160	28	151	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	780	0	0	891	0	0	419	0	0	206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	
Maximum Green (s)	57.0	57.0		57.0	57.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		57.0			57.0			55.0			55.0	
Actuated g/C Ratio		0.48			0.48			0.46			0.46	
v/c Ratio		0.38			0.55			0.52			0.26	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

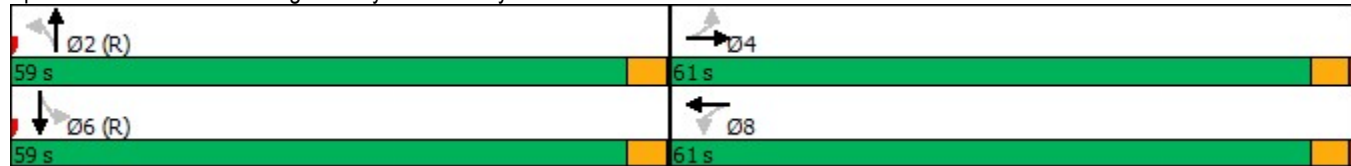


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		20.5			44.6			23.9			20.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.5			44.6			23.9			20.3	
LOS		C			D			C			C	
Approach Delay		20.5			44.6			23.9			20.3	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	30.5
Intersection LOS:	C
Intersection Capacity Utilization	65.7%
ICU Level of Service	C
Analysis Period (min)	15

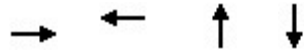
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	780	891	419	206
v/c Ratio	0.38	0.55	0.52	0.26
Control Delay	20.5	44.6	23.9	20.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.5	44.6	23.9	20.3
Queue Length 50th (m)	41.3	74.5	63.0	28.0
Queue Length 95th (m)	51.6	88.4	92.4	44.5
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	2041	1634	803	778
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.55	0.52	0.26
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↔↔			↔↔↔			↔			↔		
Traffic Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25	
Future Volume (vph)	36	636	46	173	601	46	31	207	147	26	139	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		0.91			0.91			1.00			1.00		
Frbp, ped/bikes		1.00			1.00			1.00			1.00		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		0.99			0.99			0.95			0.98		
Flt Protected		1.00			0.99			1.00			0.99		
Satd. Flow (prot)		5041			5035			1771			1833		
Flt Permitted		0.85			0.67			0.96			0.92		
Satd. Flow (perm)		4283			3428			1713			1691		
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)	39	691	50	188	653	50	34	225	160	28	151	27	
RTOR Reduction (vph)	0	6	0	0	5	0	0	18	0	0	4	0	
Lane Group Flow (vph)	0	774	0	0	886	0	0	401	0	0	202	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
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)		57.0			57.0			55.0			55.0		
Effective Green, g (s)		57.0			57.0			55.0			55.0		
Actuated g/C Ratio		0.48			0.48			0.46			0.46		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Lane Grp Cap (vph)		2034			1628			785			775		
v/s Ratio Prot													
v/s Ratio Perm		0.18			c0.26			c0.23			0.12		
v/c Ratio		0.38			0.54			0.51			0.26		
Uniform Delay, d1		20.2			22.3			23.0			20.0		
Progression Factor		1.00			1.95			1.00			1.00		
Incremental Delay, d2		0.5			1.1			2.4			0.8		
Delay (s)		20.7			44.7			25.3			20.8		
Level of Service		C			D			C			C		
Approach Delay (s)		20.7			44.7			25.3			20.8		
Approach LOS		C			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			30.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			65.7%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Future Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	0.0		30.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (m)	85.0			55.0			2.5			2.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.973				0.850		0.963	
Flt Protected	0.950			0.950				0.989		0.950		
Satd. Flow (prot)	1738	5041	0	1755	4902	0	0	1885	1585	1738	1788	0
Flt Permitted	0.173			0.264				0.851		0.288		
Satd. Flow (perm)	317	5041	0	488	4902	0	0	1622	1585	527	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			48				64			19
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1419.4			1263.7			341.6				2496.3
Travel Time (s)		73.0			65.0			15.4				112.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	48	794	58	106	916	198	96	341	108	165	208	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	852	0	106	1114	0	0	437	108	165	276	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1		6
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	8.0		22.0
Total Split (s)	56.0	56.0		56.0	56.0		52.0	52.0	52.0	12.0		64.0
Total Split (%)	46.7%	46.7%		46.7%	46.7%		43.3%	43.3%	43.3%	10.0%		53.3%
Maximum Green (s)	50.0	50.0		50.0	50.0		46.0	46.0	46.0	8.0		58.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	3.5		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	0.5		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0		6.0
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0			5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0			0
Act Effct Green (s)	50.0	50.0		50.0	50.0			46.0	46.0	60.0		58.0
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.50		0.48

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

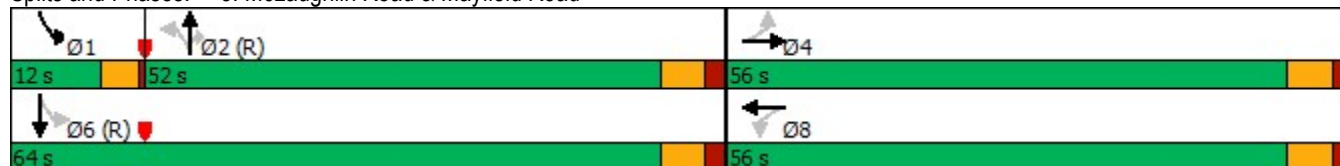


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.36	0.40		0.52	0.54			0.70	0.17	0.48	0.32	
Control Delay	37.1	28.0		37.4	26.2			38.6	11.7	21.7	18.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	37.1	28.0		37.4	26.2			38.6	11.7	21.7	18.7	
LOS	D	C		D	C			D	B	C	B	
Approach Delay		28.5			27.2			33.3			19.9	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Pretimed
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	27.6
Intersection LOS:	C
Intersection Capacity Utilization	81.3%
ICU Level of Service	D
Analysis Period (min)	15

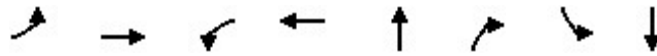
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	852	106	1114	437	108	165	276
v/c Ratio	0.36	0.40	0.52	0.54	0.70	0.17	0.48	0.32
Control Delay	37.1	28.0	37.4	26.2	38.6	11.7	21.7	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	28.0	37.4	26.2	38.6	11.7	21.7	18.7
Queue Length 50th (m)	9.6	61.6	18.3	67.9	85.8	6.5	20.8	35.7
Queue Length 95th (m)	m21.3	74.9	38.2	81.6	123.9	18.3	33.8	54.5
Internal Link Dist (m)		1395.4		1239.7	317.6			2472.3
Turn Bay Length (m)	30.0		30.0			30.0		
Base Capacity (vph)	132	2107	203	2070	621	647	344	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.40	0.52	0.54	0.70	0.17	0.48	0.32

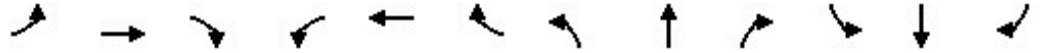
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗	↖	↑	↗
Traffic Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Future Volume (vph)	46	762	56	102	879	190	92	327	104	158	200	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1738	5040		1755	4903			1886	1585	1738	1788	
Flt Permitted	0.17	1.00		0.26	1.00			0.85	1.00	0.29	1.00	
Satd. Flow (perm)	316	5040		488	4903			1621	1585	526	1788	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	48	794	58	106	916	198	96	341	108	165	208	68
RTOR Reduction (vph)	0	7	0	0	28	0	0	0	39	0	10	0
Lane Group Flow (vph)	48	845	0	106	1086	0	0	437	69	165	266	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		2	1	6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Effective Green, g (s)	50.0	50.0		50.0	50.0			46.0	46.0	58.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.38	0.38	0.48	0.48	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	131	2100		203	2042			621	607	335	864	
v/s Ratio Prot		0.17			c0.22					c0.03	0.15	
v/s Ratio Perm	0.15			0.22				c0.27	0.04	0.21		
v/c Ratio	0.37	0.40		0.52	0.53			0.70	0.11	0.49	0.31	
Uniform Delay, d1	24.1	24.5		26.1	26.2			31.2	23.8	20.1	18.8	
Progression Factor	1.13	1.13		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.3	0.5		9.3	1.0			6.6	0.4	5.1	0.9	
Delay (s)	34.5	28.2		35.4	27.2			37.8	24.2	25.2	19.7	
Level of Service	C	C		D	C			D	C	C	B	
Approach Delay (s)		28.5			27.9			35.1			21.8	
Approach LOS		C			C			D			C	

Intersection Summary

HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	474	535	86	250	670	120	154	627	239	183	710	672
Future Volume (vph)	474	535	86	250	670	120	154	627	239	183	710	672
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99	1.00		0.96			0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Fl _t Permitted	0.160			0.950			0.343			0.272		
Satd. Flow (perm)	296	4995	1538	3331	5092	1562	644	3614	1486	523	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			145			246			680
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	489	552	89	258	691	124	159	646	246	189	732	693
Shared Lane Traffic (%)												
Lane Group Flow (vph)	489	552	89	258	691	124	159	646	246	189	732	693
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	43.0	49.0	49.0	21.0	27.0	27.0	55.0	55.0	55.0	10.0	65.0	65.0
Total Split (%)	31.9%	36.3%	36.3%	15.6%	20.0%	20.0%	40.7%	40.7%	40.7%	7.4%	48.1%	48.1%
Maximum Green (s)	38.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	6.0	58.0	58.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

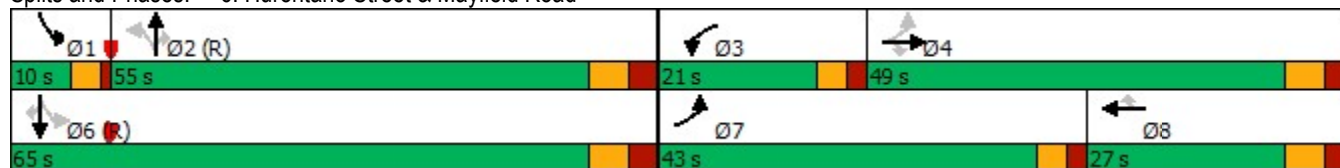


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	65.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	61.0	58.0	58.0
Actuated g/C Ratio	0.48	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.45	0.43	0.43
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.70	0.50	0.36	0.64	0.49	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.4	35.8	5.1	35.8	29.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.4	35.8	5.1	35.8	29.1	5.4
LOS	D	D	A	E	E	A	E	D	A	D	C	A
Approach Delay		41.3			64.4			31.6			19.7	
Approach LOS		D			E			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	37.1
Intersection LOS:	D
Intersection Capacity Utilization	89.4%
ICU Level of Service	E
Analysis Period (min)	15

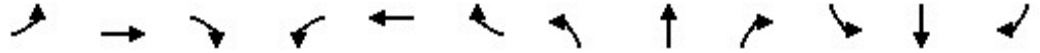
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	552	89	258	691	124	159	646	246	189	732	693
v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.70	0.50	0.36	0.64	0.49	0.66
Control Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.4	35.8	5.1	35.8	29.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	36.8	4.8	64.7	74.4	7.8	55.4	35.8	5.1	35.8	29.1	5.4
Queue Length 50th (m)	106.9	41.7	0.0	34.3	67.3	0.0	36.2	70.7	0.0	30.3	72.9	2.0
Queue Length 95th (m)	#167.5	52.7	8.9	48.7	#90.3	12.4	#68.9	88.9	17.4	46.5	90.7	28.0
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	553	1554	550	403	754	354	228	1284	686	294	1508	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.36	0.16	0.64	0.92	0.35	0.70	0.50	0.36	0.64	0.49	0.66

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

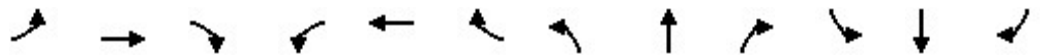
6: Hurontario Street & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	474	535	86	250	670	120	154	627	239	183	710	672	
Future Volume (vph)	474	535	86	250	670	120	154	627	239	183	710	672	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1785	3614	1486	1825	3510	1555	
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.34	1.00	1.00	0.27	1.00	1.00	
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	644	3614	1486	522	3510	1555	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	489	552	89	258	691	124	159	646	246	189	732	693	
RTOR Reduction (vph)	0	0	61	0	0	106	0	0	159	0	0	388	
Lane Group Flow (vph)	489	552	28	258	691	18	159	646	87	189	732	305	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3	
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8			2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Effective Green, g (s)	63.0	42.0	42.0	16.0	20.0	20.0	48.0	48.0	48.0	58.0	58.0	58.0	
Actuated g/C Ratio	0.47	0.31	0.31	0.12	0.15	0.15	0.36	0.36	0.36	0.43	0.43	0.43	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	548	1554	478	403	754	231	228	1284	528	282	1508	668	
v/s Ratio Prot	c0.25	0.11		0.08	0.14			0.18		c0.03	0.21		
v/s Ratio Perm	c0.17		0.02			0.01	0.25		0.06	c0.26		0.20	
v/c Ratio	0.89	0.36	0.06	0.64	0.92	0.08	0.70	0.50	0.17	0.67	0.49	0.46	
Uniform Delay, d1	35.9	36.0	32.6	56.8	56.7	49.6	37.3	34.1	29.8	30.7	27.7	27.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.4	0.6	0.2	7.6	17.8	0.7	16.3	1.4	0.7	12.0	1.1	2.2	
Delay (s)	55.4	36.6	32.9	64.3	74.5	50.2	53.5	35.6	30.5	42.7	28.9	29.6	
Level of Service	E	D	C	E	E	D	D	D	C	D	C	C	
Approach Delay (s)		44.4			69.2			37.1			30.8		
Approach LOS		D			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			43.8									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.83										
Actuated Cycle Length (s)			135.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			89.4%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	0	42	0	10	0	434	76	13	350	0
Future Volume (vph)	0	0	0	42	0	10	0	434	76	13	350	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t					0.974			0.978				
Fl _t Protected					0.961						0.998	
Satd. Flow (prot)	0	1883	0	0	1763	0	0	3500	0	0	3571	0
Fl _t Permitted					0.961						0.998	
Satd. Flow (perm)	0	1883	0	0	1763	0	0	3500	0	0	3571	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			679.6			2496.3			588.2	
Travel Time (s)		15.4			51.0			112.3			26.5	
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
Adj. Flow (vph)	0	0	0	46	0	11	0	472	83	14	380	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	57	0	0	555	0	0	394	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.2%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

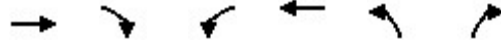
9: McLaughlin Road & Street A

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	42	0	10	0	434	76	13	350	0
Future Volume (Veh/h)	0	0	0	42	0	10	0	434	76	13	350	0
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)	0	0	0	46	0	11	0	472	83	14	380	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)												
pX, platoon unblocked												
vC, conflicting volume	655	963	190	732	922	278	380			555		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	655	963	190	732	922	278	380			555		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	100	100	100	85	100	98	100			99		
cM capacity (veh/h)	342	251	820	306	265	720	1175			1011		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	0	57	236	319	204	190						
Volume Left	0	46	0	0	14	0						
Volume Right	0	11	0	83	0	0						
cSH	1700	344	1175	1700	1011	1700						
Volume to Capacity	0.00	0.17	0.00	0.19	0.01	0.11						
Queue Length 95th (m)	0.0	4.5	0.0	0.0	0.3	0.0						
Control Delay (s)	0.0	17.5	0.0	0.0	0.7	0.0						
Lane LOS	A	C			A							
Approach Delay (s)	0.0	17.5	0.0		0.4							
Approach LOS	A	C										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			29.2%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	681	0	0	745	0	0
Future Volume (vph)	681	0	0	745	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	740	0	0	810	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	740	0	0	810	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	
Traffic Volume (veh/h)	681	0	0	745	0	0
Future Volume (Veh/h)	681	0	0	745	0	0
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)	740	0	0	810	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)						
pX, platoon unblocked						
vC, conflicting volume			740		1550	740
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			740		1550	740
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		100	100
cM capacity (veh/h)			867		125	417
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	740	810	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	867	1700			
Volume to Capacity	0.44	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			42.5%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	228	3	112	147	35	2	187	233	27	181	8
Future Volume (vph)	2	228	3	112	147	35	2	187	233	27	181	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.971			0.925				0.995
Flt Protected				0.950								0.994
Satd. Flow (prot)	0	1917	0	1772	1802	0	0	1711	0	0	1788	0
Flt Permitted		0.997		0.605				0.999			0.931	
Satd. Flow (perm)	0	1912	0	1128	1802	0	0	1709	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			36			185				6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	243	3	119	156	37	2	199	248	29	193	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	248	0	119	193	0	0	449	0	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

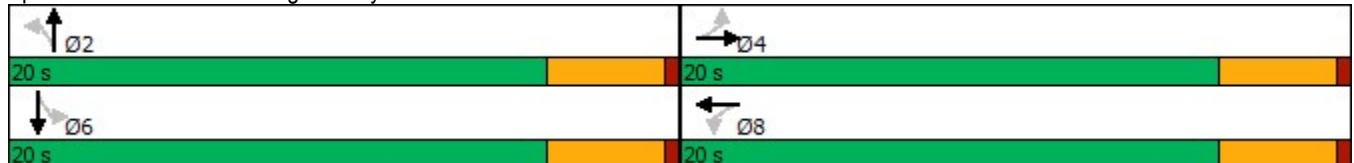


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		9.6		9.4	9.4			19.8			19.8	
Actuated g/C Ratio		0.28		0.27	0.27			0.57			0.57	
v/c Ratio		0.47		0.39	0.37			0.42			0.24	
Control Delay		12.9		13.4	9.9			5.5			6.7	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		12.9		13.4	9.9			5.5			6.7	
LOS		B		B	A			A			A	
Approach Delay		12.9			11.2			5.5			6.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 34.6
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.47
 Intersection Signal Delay: 8.6
 Intersection Capacity Utilization 62.5%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

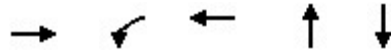
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	248	119	193	449	231
v/c Ratio	0.47	0.39	0.37	0.42	0.24
Control Delay	12.9	13.4	9.9	5.5	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	13.4	9.9	5.5	6.7
Queue Length 50th (m)	10.7	5.1	6.5	7.6	6.3
Queue Length 95th (m)	21.9	12.8	15.5	24.9	18.1
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	888	523	855	1058	962
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.23	0.23	0.42	0.24

Intersection Summary

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↙	↘			↕	↘		↕	
Traffic Volume (vph)	6	456	28	197	262	23	32	58	347	36	115	11
Future Volume (vph)	6	456	28	197	262	23	32	58	347	36	115	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.983			0.989	
Satd. Flow (prot)	0	1871	0	1789	1833	0	0	1864	1617	0	1858	0
Flt Permitted		0.995		0.264				0.866			0.923	
Satd. Flow (perm)	0	1864	0	497	1833	0	0	1642	1617	0	1734	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			8				369			5
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			349.1			588.2			263.1	
Travel Time (s)		71.1			18.0			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	485	30	210	279	24	34	62	369	38	122	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	521	0	210	303	0	0	96	369	0	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

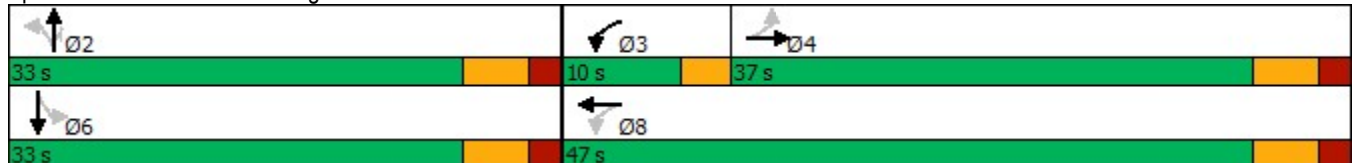
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	37.0	37.0		10.0	47.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	46.3%	46.3%		12.5%	58.8%		41.3%	41.3%	41.3%	41.3%	41.3%	
Maximum Green (s)	31.0	31.0		7.0	41.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		24.6		37.7	34.7			27.2	27.2		27.2	
Actuated g/C Ratio		0.33		0.51	0.47			0.37	0.37		0.37	
v/c Ratio		0.84		0.56	0.35			0.16	0.45		0.27	
Control Delay		35.3		15.9	13.1			18.5	4.3		18.8	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		35.3		15.9	13.1			18.5	4.3		18.8	
LOS		D		B	B			B	A		B	
Approach Delay		35.3			14.2			7.2			18.8	
Approach LOS		D			B			A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 73.9
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 19.3
 Intersection Capacity Utilization 71.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024


























Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	521	210	303	96	369	172
v/c Ratio	0.84	0.56	0.35	0.16	0.45	0.27
Control Delay	35.3	15.9	13.1	18.5	4.3	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	15.9	13.1	18.5	4.3	18.8
Queue Length 50th (m)	65.1	15.1	24.5	8.9	0.0	16.1
Queue Length 95th (m)	100.3	26.0	40.3	20.6	16.9	33.2
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	789	376	1026	603	828	640
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.56	0.30	0.16	0.45	0.27

Intersection Summary

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	455	208	167	310	164	149	54	1629	154	73	2297	245	
Future Volume (vph)	455	208	167	310	164	149	54	1629	154	73	2297	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.933			0.929				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1755	1746	0	1722	1715	0	1722	4445	1471	1615	5043	1633	
Flt Permitted	0.182			0.222			0.070			0.070			
Satd. Flow (perm)	336	1746	0	402	1715	0	127	4445	1471	119	5043	1633	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		30			27				131			148	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			855.3			282.2		
Travel Time (s)		51.8			22.6			38.5			12.7		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Adj. Flow (vph)	489	224	180	333	176	160	58	1752	166	78	2470	263	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	489	404	0	333	336	0	58	1752	166	78	2470	263	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	29.0	32.0		23.0	26.0		65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	24.2%	26.7%		19.2%	21.7%		54.2%	54.2%	54.2%	54.2%	54.2%	54.2%
Maximum Green (s)	25.0	24.0		19.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Yellow Time (s)	3.5	6.0		3.5	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	51.0	24.0		41.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.42	0.20		0.34	0.15		0.48	0.48	0.48	0.48	0.48	0.48
v/c Ratio	1.12	1.08		0.96	1.20		0.97	0.83	0.22	1.39	1.03	0.31
Control Delay	109.9	112.8		71.6	159.6		143.9	31.6	5.6	285.6	58.5	9.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	112.8		71.6	159.6		143.9	31.6	5.6	285.6	58.5	9.1
LOS	F	F		E	F		F	C	A	F	E	A
Approach Delay		111.2			115.8			32.7			60.2	
Approach LOS		F			F			C			E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 130
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.39
 Intersection Signal Delay: 64.7
 Intersection LOS: E
 Intersection Capacity Utilization 114.0%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	404	333	336	58	1752	166	78	2470	263
v/c Ratio	1.12	1.08	0.96	1.20	0.97	0.83	0.22	1.39	1.03	0.31
Control Delay	109.9	112.8	71.6	159.6	143.9	31.6	5.6	285.6	58.5	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	112.8	71.6	159.6	143.9	31.6	5.6	285.6	58.5	9.1
Queue Length 50th (m)	~114.2	~100.7	59.3	~90.7	12.9	127.4	4.3	~24.4	~228.3	14.9
Queue Length 95th (m)	#179.0	#162.0	#116.4	#148.0	#41.1	148.5	16.2	#43.1	#256.3	31.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	438	373	346	280	60	2111	767	56	2395	853
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	1.08	0.96	1.20	0.97	0.83	0.22	1.39	1.03	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↕↔			↔↕↔				↕↔			↕↔	
Traffic Volume (vph)	41	647	48	140	563	24	24	178	136	80	220	36
Future Volume (vph)	41	647	48	140	563	24	24	178	136	80	220	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.995			0.946			0.986	
Fl _t Protected		0.997			0.990			0.996			0.988	
Satd. Flow (prot)	0	4861	0	0	4858	0	0	1741	0	0	1782	0
Fl _t Permitted		0.855			0.682			0.963			0.842	
Satd. Flow (perm)	0	4169	0	0	3346	0	0	1684	0	0	1519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			5			40			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	41	654	48	141	569	24	24	180	137	81	222	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	743	0	0	734	0	0	341	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	52.0	52.0		52.0	52.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
v/c Ratio		0.41			0.51			0.40			0.44	
Control Delay		23.9			44.4			17.9			21.2	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

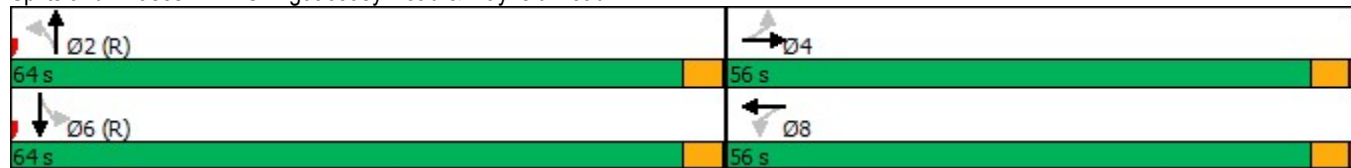


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		23.9			44.4			17.9			21.2	
LOS		C			D			B			C	
Approach Delay		23.9			44.4			17.9			21.2	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	29.5
Intersection LOS:	C
Intersection Capacity Utilization	78.5%
ICU Level of Service	D
Analysis Period (min)	15

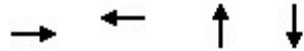
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road





















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Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	743	734	341	339
v/c Ratio	0.41	0.51	0.40	0.44
Control Delay	23.9	44.4	17.9	21.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.9	44.4	17.9	21.2
Queue Length 50th (m)	42.6	64.5	42.4	48.6
Queue Length 95th (m)	53.5	78.1	64.4	72.8
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1812	1452	862	763
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.51	0.40	0.44
Intersection Summary				

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	877	104	123	696	109	46	214	92	264	360	72
Future Volume (vph)	16	877	104	123	696	109	46	214	92	264	360	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.980			0.955			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4770	0	1644	3397	0	1690	3444	0
Flt Permitted	0.294			0.227			0.454			0.551		
Satd. Flow (perm)	565	4888	0	408	4770	0	786	3397	0	980	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			34			69			24	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	16	895	106	126	710	111	47	218	94	269	367	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	1001	0	126	821	0	47	312	0	269	440	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		23.0	23.0	
Total Split (s)	64.0	64.0		64.0	64.0		56.0	56.0		56.0	56.0	
Total Split (%)	53.3%	53.3%		53.3%	53.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

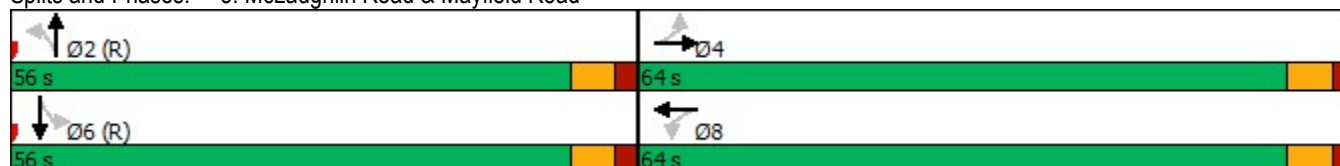


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.42		0.64	0.35		0.14	0.21		0.66	0.30	
Control Delay	21.9	26.6		40.9	19.0		23.3	17.7		37.5	22.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	26.6		40.9	19.0		23.3	17.7		37.5	22.7	
LOS	C	C		D	B		C	B		D	C	
Approach Delay		26.5			21.9			18.4			28.3	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	24.5
Intersection LOS:	C
Intersection Capacity Utilization	69.6%
ICU Level of Service	C
Analysis Period (min)	15

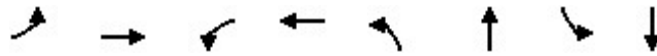
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	1001	126	821	47	312	269	440
v/c Ratio	0.06	0.42	0.64	0.35	0.14	0.21	0.66	0.30
Control Delay	21.9	26.6	40.9	19.0	23.3	17.7	37.5	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	26.6	40.9	19.0	23.3	17.7	37.5	22.7
Queue Length 50th (m)	2.6	70.2	21.6	41.0	6.8	18.6	50.1	33.6
Queue Length 95th (m)	m6.9	81.8	#51.7	50.7	15.1	28.3	82.1	45.8
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	273	2374	197	2323	327	1455	408	1449
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.42	0.64	0.35	0.14	0.21	0.66	0.30

Intersection Summary

































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	236	865	94	199	556	148	78	349	203	315	815	315
Future Volume (vph)	236	865	94	199	556	148	78	349	203	315	815	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.198			0.950			0.264			0.521		
Satd. Flow (perm)	362	4902	1508	3326	4948	1395	502	3476	1467	926	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100			157			216			335
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	251	920	100	212	591	157	83	371	216	335	867	335
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	920	100	212	591	157	83	371	216	335	867	335
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	31.0	44.0	44.0	20.0	33.0	33.0	96.0	96.0	96.0	96.0	96.0	96.0
Total Split (%)	19.4%	27.5%	27.5%	12.5%	20.6%	20.6%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	26.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

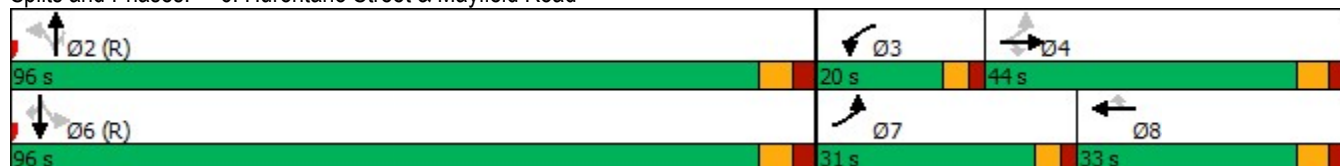


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	59.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.37	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.30	0.19	0.24	0.65	0.44	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
LOS	D	E	A	F	E	B	C	B	A	C	C	A
Approach Delay		57.4			63.0			13.6			19.8	
Approach LOS		E			E			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	39.0
Intersection LOS:	D
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	920	100	212	591	157	83	371	216	335	867	335
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.30	0.19	0.24	0.65	0.44	0.33
Control Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	9.7	81.8	69.9	11.9	22.5	17.9	2.6	32.1	21.7	2.5
Queue Length 50th (m)	58.9	102.4	0.0	34.2	66.4	0.0	13.6	30.0	0.0	72.1	82.8	0.0
Queue Length 95th (m)	84.2	119.5	15.4	48.6	81.0	21.2	26.4	39.1	11.9	110.3	98.8	13.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	357	1133	425	313	804	358	279	1933	911	515	1971	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.30	0.19	0.24	0.65	0.44	0.33

Intersection Summary

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	209	2	234	301	44	11	308	268	34	202	4
Future Volume (vph)	4	209	2	234	301	44	11	308	268	34	202	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.981			0.938			0.998	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1838	0	0	1721	0	0	1844	0
Flt Permitted		0.993		0.589				0.993			0.875	
Satd. Flow (perm)	0	1852	0	1132	1838	0	0	1711	0	0	1625	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			10			74			1	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	222	2	249	320	47	12	328	285	36	215	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	249	367	0	0	625	0	0	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	35.0	35.0		35.0	35.0		45.0	45.0		45.0	45.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		56.3%	56.3%		56.3%	56.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		39.0	39.0		39.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		29.0		29.0	29.0			39.0			39.0	
Actuated g/C Ratio		0.36		0.36	0.36			0.49			0.49	

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.34		0.61	0.55			0.72			0.32	
Control Delay		20.3		28.4	23.4			19.8			13.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		20.3		28.4	23.4			19.8			13.8	
LOS		C		C	C			B			B	
Approach Delay		20.3			25.4			19.8			13.8	
Approach LOS		C			C			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	21.0
Intersection LOS:	C
Intersection Capacity Utilization	79.3%
ICU Level of Service	D
Analysis Period (min)	15

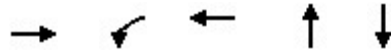
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	228	249	367	625	255
v/c Ratio	0.34	0.61	0.55	0.72	0.32
Control Delay	20.3	28.4	23.4	19.8	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	28.4	23.4	19.8	13.8
Queue Length 50th (m)	24.6	30.3	42.2	62.8	22.3
Queue Length 95th (m)	41.8	54.6	67.5	101.7	37.6
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	671	410	672	872	792
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.61	0.55	0.72	0.32

Intersection Summary

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	9	474	31	366	533	25	40	132	374	20	56	6
Future Volume (vph)	9	474	31	366	533	25	40	132	374	20	56	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.993				0.850		0.991	
Flt Protected		0.999		0.950				0.988			0.988	
Satd. Flow (prot)	0	1826	0	1755	1886	0	0	1827	1555	0	1806	0
Flt Permitted		0.988		0.351				0.910			0.886	
Satd. Flow (perm)	0	1805	0	648	1886	0	0	1683	1555	0	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			3				398			4
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			349.1			588.2			263.1	
Travel Time (s)		71.1			18.0			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	504	33	389	567	27	43	140	398	21	60	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	0	389	594	0	0	183	398	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

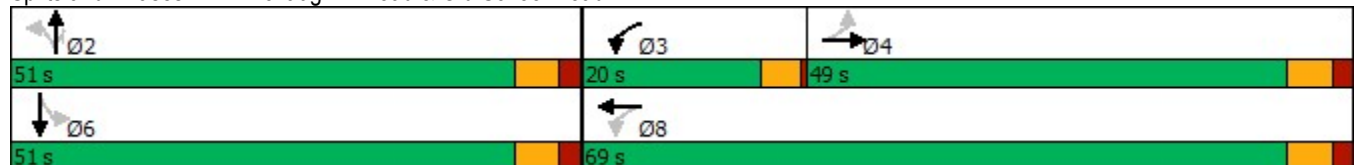
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	24.0	24.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	49.0	49.0		20.0	69.0		51.0	51.0	51.0	51.0	51.0	
Total Split (%)	40.8%	40.8%		16.7%	57.5%		42.5%	42.5%	42.5%	42.5%	42.5%	
Maximum Green (s)	43.0	43.0		16.0	63.0		45.0	45.0	45.0	45.0	45.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		44.1		65.1	63.1			15.6	15.6		15.6	
Actuated g/C Ratio		0.49		0.72	0.69			0.17	0.17		0.17	
v/c Ratio		0.62		0.60	0.45			0.63	0.67		0.31	
Control Delay		22.3		9.5	8.2			44.9	9.5		33.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		22.3		9.5	8.2			44.9	9.5		33.7	
LOS		C		A	A			D	A		C	
Approach Delay		22.3			8.7			20.6			33.7	
Approach LOS		C			A			C			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 90.8
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 16.2
 Intersection LOS: B
 Intersection Capacity Utilization 90.5%
 ICU Level of Service E
 Analysis Period (min) 15

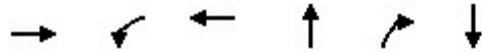
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	547	389	594	183	398	87
v/c Ratio	0.62	0.60	0.45	0.63	0.67	0.31
Control Delay	22.3	9.5	8.2	44.9	9.5	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	9.5	8.2	44.9	9.5	33.7
Queue Length 50th (m)	68.8	20.9	39.8	29.9	0.0	12.8
Queue Length 95th (m)	117.9	42.5	75.7	50.2	23.3	25.5
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	879	660	1312	836	972	806
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.59	0.45	0.22	0.41	0.11

Intersection Summary

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	554	202	102	325	261	160	182	2859	368	170	1678	476
Future Volume (vph)	554	202	102	325	261	160	182	2859	368	170	1678	476
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.950			0.943				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1738	0	1789	1800	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.160			0.234			0.075			0.082		
Satd. Flow (perm)	307	1738	0	441	1800	0	143	5043	1633	158	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			23				163			340
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1007.8			440.4			855.3				282.2
Travel Time (s)		51.8			22.6			38.5				12.7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	571	208	105	335	269	165	188	2947	379	175	1730	491
Shared Lane Traffic (%)												
Lane Group Flow (vph)	571	313	0	335	434	0	188	2947	379	175	1730	491
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1		6

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	31.0		22.0	29.0		14.0	57.0	57.0	10.0	53.0	53.0
Total Split (%)	20.0%	25.8%		18.3%	24.2%		11.7%	47.5%	47.5%	8.3%	44.2%	44.2%
Maximum Green (s)	20.0	25.0		18.0	23.0		8.0	51.0	51.0	4.0	47.0	47.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	47.0	27.0		43.0	25.0		63.0	53.0	51.0	55.0	49.0	47.0
Actuated g/C Ratio	0.39	0.22		0.36	0.21		0.52	0.44	0.42	0.46	0.41	0.39
v/c Ratio	1.53	0.77		0.93	1.10		0.88	1.32	0.48	1.13	0.88	0.61
Control Delay	279.5	54.7		61.7	118.6		64.6	178.9	15.9	136.6	39.2	11.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.5	54.7		61.7	118.6		64.6	178.9	15.9	136.6	39.2	11.9
LOS	F	D		E	F		E	F	B	F	D	B
Approach Delay		199.9			93.8			155.2			40.7	
Approach LOS		F			F			F			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	140
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.53
Intersection Signal Delay:	117.9
Intersection LOS:	F
Intersection Capacity Utilization	132.2%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	571	313	335	434	188	2947	379	175	1730	491
v/c Ratio	1.53	0.77	0.93	1.10	0.88	1.32	0.48	1.13	0.88	0.61
Control Delay	279.5	54.7	61.7	118.6	64.6	178.9	15.9	136.6	39.2	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.5	54.7	61.7	118.6	64.6	178.9	15.9	136.6	39.2	11.9
Queue Length 50th (m)	~172.5	65.4	56.5	~112.1	28.2	~329.0	34.7	~31.4	135.8	25.1
Queue Length 95th (m)	#240.3	#104.9	#109.7	#174.8	#69.9	#355.0	61.4	#76.3	157.1	59.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	373	406	360	393	213	2227	787	155	1964	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.53	0.77	0.93	1.10	0.88	1.32	0.48	1.13	0.88	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕				↕
Traffic Volume (vph)	40	677	49	178	638	64	33	262	152	32	159	28
Future Volume (vph)	40	677	49	178	638	64	33	262	152	32	159	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				1.00
Frt		0.990			0.989			0.954				0.983
Flt Protected		0.997			0.990			0.996				0.993
Satd. Flow (prot)	0	5037	0	0	5026	0	0	1785	0	0	1835	0
Flt Permitted		0.834			0.667			0.963				0.893
Satd. Flow (perm)	0	4213	0	0	3386	0	0	1725	0	0	1651	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			14			29				8
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				3083.5
Travel Time (s)		14.1			73.0			15.5				138.8
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	43	736	53	193	693	70	36	285	165	35	173	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	832	0	0	956	0	0	486	0	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	59.0	59.0		59.0	59.0		61.0	61.0		61.0	61.0	
Total Split (%)	49.2%	49.2%		49.2%	49.2%		50.8%	50.8%		50.8%	50.8%	
Maximum Green (s)	55.0	55.0		55.0	55.0		57.0	57.0		57.0	57.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0				0.0
Total Lost Time (s)		4.0			4.0			4.0				4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		55.0			55.0			57.0				57.0
Actuated g/C Ratio		0.46			0.46			0.48				0.48
v/c Ratio		0.43			0.61			0.58				0.30

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

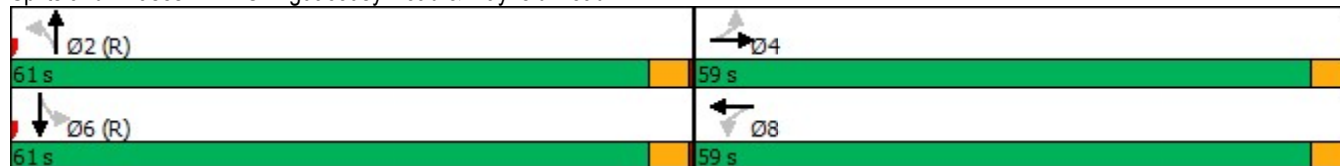


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		22.4			38.2			24.8			19.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.4			38.2			24.8			19.9	
LOS		C			D			C			B	
Approach Delay		22.4			38.2			24.8			19.9	
Approach LOS		C			D			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	28.7
Intersection LOS:	C
Intersection Capacity Utilization	71.0%
ICU Level of Service	C
Analysis Period (min)	15

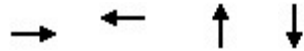
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road





















06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	832	956	486	238
v/c Ratio	0.43	0.61	0.58	0.30
Control Delay	22.4	38.2	24.8	19.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.4	38.2	24.8	19.9
Queue Length 50th (m)	46.5	83.6	76.1	32.2
Queue Length 95th (m)	57.7	98.6	109.7	50.0
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1937	1559	834	788
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.61	0.58	0.30
Intersection Summary				

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	833	65	109	973	248	111	383	112	189	223	75
Future Volume (vph)	41	833	65	109	973	248	111	383	112	189	223	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.970			0.966			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4892	0	1825	3475	0	1738	3393	0
Flt Permitted	0.130			0.232			0.562			0.421		
Satd. Flow (perm)	238	5036	0	429	4892	0	1080	3475	0	770	3393	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			64			44			41	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	43	868	68	114	1014	258	116	399	117	197	232	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	936	0	114	1272	0	116	516	0	197	310	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	50.0	50.0		50.0	50.0		58.0	58.0		58.0	58.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	50.0	50.0		50.0	50.0		58.0	58.0		58.0	58.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

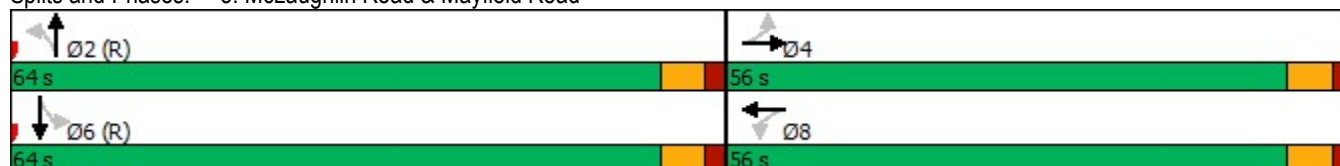


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.43	0.44		0.64	0.61		0.22	0.30		0.53	0.19	
Control Delay	51.8	35.4		47.0	27.4		19.4	17.6		28.0	15.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	51.8	35.4		47.0	27.4		19.4	17.6		28.0	15.5	
LOS	D	D		D	C		B	B		C	B	
Approach Delay		36.2			29.0			17.9			20.4	
Approach LOS		D			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	27.8
Intersection LOS:	C
Intersection Capacity Utilization	72.3%
ICU Level of Service	C
Analysis Period (min)	15

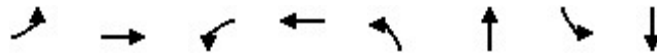
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	936	114	1272	116	516	197	310
v/c Ratio	0.43	0.44	0.64	0.61	0.22	0.30	0.53	0.19
Control Delay	51.8	35.4	47.0	27.4	19.4	17.6	28.0	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	35.4	47.0	27.4	19.4	17.6	28.0	15.5
Queue Length 50th (m)	9.0	71.9	21.0	80.4	15.4	34.1	31.4	18.2
Queue Length 95th (m)	m21.3	85.2	#48.8	95.4	27.6	45.8	55.3	26.7
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	99	2105	178	2075	522	1702	372	1661
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.44	0.64	0.61	0.22	0.30	0.53	0.19

Intersection Summary

























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	579	579	99	266	745	149	187	661	253	214	758	819
Future Volume (vph)	579	579	99	266	745	149	187	661	253	214	758	819
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99	1.00		0.96			0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Fl _t Permitted	0.160			0.950			0.303			0.275		
Satd. Flow (perm)	296	4995	1538	3335	5092	1562	570	3614	1486	528	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			145			254			680
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	597	597	102	274	768	154	193	681	261	221	781	844
Shared Lane Traffic (%)												
Lane Group Flow (vph)	597	597	102	274	768	154	193	681	261	221	781	844
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

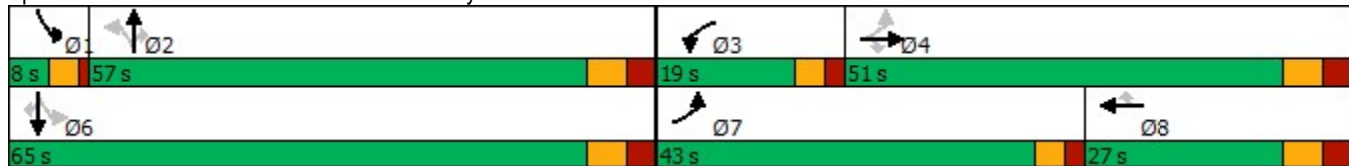


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	43.0	51.0	51.0	19.0	27.0	27.0	57.0	57.0	57.0	8.0	65.0	65.0
Total Split (%)	31.9%	37.8%	37.8%	14.1%	20.0%	20.0%	42.2%	42.2%	42.2%	5.9%	48.1%	48.1%
Maximum Green (s)	38.0	44.0	44.0	14.0	20.0	20.0	50.0	50.0	50.0	4.0	58.0	58.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0
Act Effct Green (s)	67.0	44.4	44.4	15.6	20.0	20.0	52.0	50.0	50.0	63.0	58.0	58.0
Actuated g/C Ratio	0.50	0.33	0.33	0.12	0.15	0.15	0.39	0.37	0.37	0.47	0.43	0.43
v/c Ratio	1.03	0.36	0.18	0.70	1.02	0.44	0.88	0.51	0.37	0.73	0.52	0.80
Control Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
LOS	F	D	A	E	F	B	E	C	A	D	C	B
Approach Delay		54.6			77.4			35.0			23.3	
Approach LOS		D			E			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 135
 Actuated Cycle Length: 135
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 45.0
 Intersection LOS: D
 Intersection Capacity Utilization 97.0%
 ICU Level of Service F
 Analysis Period (min) 15

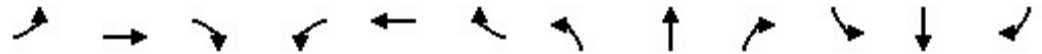
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	597	597	102	274	768	154	193	681	261	221	781	844
v/c Ratio	1.03	0.36	0.18	0.70	1.02	0.44	0.88	0.51	0.37	0.73	0.52	0.80
Control Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	35.4	6.2	67.6	93.7	13.4	76.5	34.6	5.3	40.2	29.8	12.8
Queue Length 50th (m)	~153.4	44.5	0.0	36.6	~79.2	2.1	47.5	73.6	1.2	35.1	79.2	35.0
Queue Length 95th (m)	#225.3	55.7	12.0	51.6	#106.5	21.7	#94.2	92.1	18.7	#54.9	97.7	99.6
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	579	1644	577	403	754	354	219	1338	710	304	1508	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.36	0.18	0.68	1.02	0.44	0.88	0.51	0.37	0.73	0.52	0.80

Intersection Summary

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

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	2	235	3	112	169	35	2	187	233	27	181	8
Future Volume (vph)	2	235	3	112	169	35	2	187	233	27	181	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.974			0.925				0.995
Flt Protected				0.950								0.994
Satd. Flow (prot)	0	1917	0	1772	1810	0	0	1711	0	0	1788	0
Flt Permitted		0.997		0.592				0.999			0.931	
Satd. Flow (perm)	0	1912	0	1104	1810	0	0	1709	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			31			185				6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			1383.3			3083.5				342.6
Travel Time (s)		30.4			71.1			138.8				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	250	3	119	180	37	2	199	248	29	193	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	255	0	119	217	0	0	449	0	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

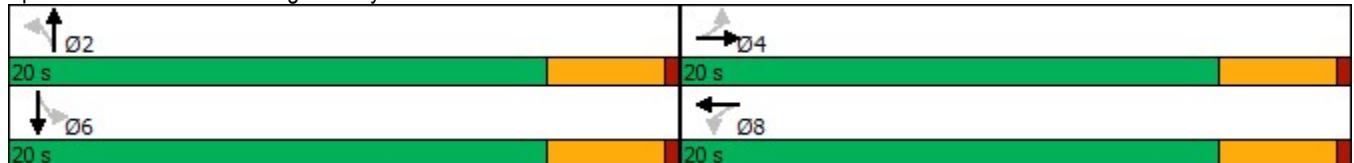


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		9.7		9.5	9.5			19.8			19.8	
Actuated g/C Ratio		0.28		0.27	0.27			0.57			0.57	
v/c Ratio		0.48		0.39	0.42			0.43			0.24	
Control Delay		13.0		13.6	10.7			5.5			6.7	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		13.0		13.6	10.7			5.5			6.7	
LOS		B		B	B			A			A	
Approach Delay		13.0			11.7			5.5			6.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 34.6
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay: 8.9
 Intersection Capacity Utilization 64.0%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

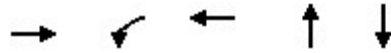
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024





















Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	255	119	217	449	231
v/c Ratio	0.48	0.39	0.42	0.43	0.24
Control Delay	13.0	13.6	10.7	5.5	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	13.6	10.7	5.5	6.7
Queue Length 50th (m)	11.1	5.1	7.9	7.6	6.4
Queue Length 95th (m)	22.6	12.9	17.7	25.0	18.2
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	886	511	855	1056	960
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.23	0.25	0.43	0.24

Intersection Summary

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	456	35	197	262	23	54	80	347	36	126	11
Future Volume (vph)	6	456	35	197	262	23	54	80	347	36	126	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.980			0.990	
Satd. Flow (prot)	0	1866	0	1789	1833	0	0	1860	1617	0	1861	0
Flt Permitted		0.996		0.262				0.823			0.918	
Satd. Flow (perm)	0	1861	0	493	1833	0	0	1562	1617	0	1726	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8				369			5
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1383.3			349.1			588.2				263.1
Travel Time (s)		71.1			18.0			26.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	485	37	210	279	24	57	85	369	38	134	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	528	0	210	303	0	0	142	369	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

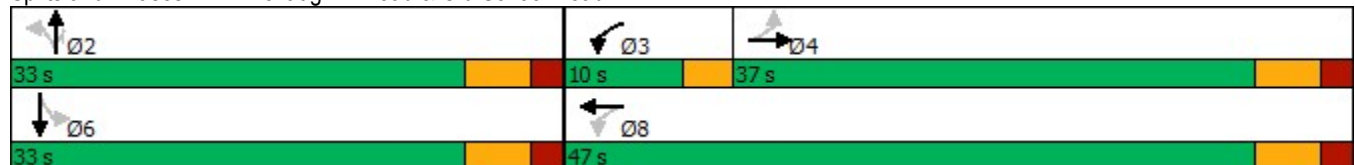


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	37.0	37.0		10.0	47.0		33.0	33.0	33.0	33.0	33.0	
Total Split (%)	46.3%	46.3%		12.5%	58.8%		41.3%	41.3%	41.3%	41.3%	41.3%	
Maximum Green (s)	31.0	31.0		7.0	41.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		3.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		24.8		37.9	34.9			27.2	27.2		27.2	
Actuated g/C Ratio		0.33		0.51	0.47			0.37	0.37		0.37	
v/c Ratio		0.84		0.56	0.35			0.25	0.45		0.29	
Control Delay		35.6		15.9	13.0			19.5	4.3		19.2	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		35.6		15.9	13.0			19.5	4.3		19.2	
LOS		D		B	B			B	A		B	
Approach Delay		35.6			14.2			8.5			19.2	
Approach LOS		D			B			A			B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	74.1
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	19.6
Intersection LOS:	B
Intersection Capacity Utilization:	72.6%
ICU Level of Service:	C
Analysis Period (min):	15

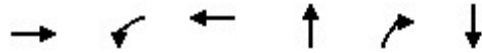
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024


























Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	528	210	303	142	369	184
v/c Ratio	0.84	0.56	0.35	0.25	0.45	0.29
Control Delay	35.6	15.9	13.0	19.5	4.3	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	15.9	13.0	19.5	4.3	19.2
Queue Length 50th (m)	66.0	15.1	24.5	13.7	0.0	17.6
Queue Length 95th (m)	101.9	26.0	40.3	29.0	16.9	35.5
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	786	375	1024	572	826	635
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.56	0.30	0.25	0.45	0.29

Intersection Summary

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	455	208	167	310	164	149	54	1673	154	73	2315	245	
Future Volume (vph)	455	208	167	310	164	149	54	1673	154	73	2315	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.933			0.929				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1755	1746	0	1722	1715	0	1722	4445	1471	1615	5043	1633	
Flt Permitted	0.182			0.222			0.070			0.070			
Satd. Flow (perm)	336	1746	0	402	1715	0	127	4445	1471	119	5043	1633	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		30			26				128			147	
Link Speed (k/h)		70			70			80			80		
Link Distance (m)		1007.8			440.4			855.3			282.2		
Travel Time (s)		51.8			22.6			38.5			12.7		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Adj. Flow (vph)	489	224	180	333	176	160	58	1799	166	78	2489	263	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	489	404	0	333	336	0	58	1799	166	78	2489	263	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7			3.7		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		1.6			1.6			1.6			1.6		
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7		
Detector 2 Size(m)		1.8			1.8			1.8			1.8		
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8			2			6		

Lanes, Volumes, Timings
 3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	29.0	32.0		23.0	26.0		65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	24.2%	26.7%		19.2%	21.7%		54.2%	54.2%	54.2%	54.2%	54.2%	54.2%
Maximum Green (s)	25.0	24.0		19.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Yellow Time (s)	3.5	6.0		3.5	6.0		6.0	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	8.0		4.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	51.0	24.0		41.0	18.0		57.0	57.0	57.0	57.0	57.0	57.0
Actuated g/C Ratio	0.42	0.20		0.34	0.15		0.48	0.48	0.48	0.48	0.48	0.48
v/c Ratio	1.12	1.08		0.96	1.20		0.97	0.85	0.22	1.39	1.04	0.31
Control Delay	109.9	112.8		71.6	161.3		143.9	32.8	5.9	285.6	61.0	9.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	112.8		71.6	161.3		143.9	32.8	5.9	285.6	61.0	9.2
LOS	F	F		E	F		F	C	A	F	E	A
Approach Delay		111.2			116.6			33.8				62.4
Approach LOS		F			F			C				E

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 130
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.39
 Intersection Signal Delay: 65.8
 Intersection LOS: E
 Intersection Capacity Utilization 114.3%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	489	404	333	336	58	1799	166	78	2489	263
v/c Ratio	1.12	1.08	0.96	1.20	0.97	0.85	0.22	1.39	1.04	0.31
Control Delay	109.9	112.8	71.6	161.3	143.9	32.8	5.9	285.6	61.0	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	112.8	71.6	161.3	143.9	32.8	5.9	285.6	61.0	9.2
Queue Length 50th (m)	~114.2	~100.7	59.3	~91.1	12.9	133.3	4.7	~24.4	~231.7	15.0
Queue Length 95th (m)	#179.0	#162.0	#116.4	#148.4	#41.1	155.0	16.6	#43.1	#259.7	32.0
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	438	373	346	279	60	2111	765	56	2395	852
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	1.08	0.96	1.20	0.97	0.85	0.22	1.39	1.04	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↕↔			↔↕↔				↕↔			↕↔	
Traffic Volume (vph)	41	647	48	184	563	24	24	178	157	80	220	36
Future Volume (vph)	41	647	48	184	563	24	24	178	157	80	220	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.990			0.995			0.941			0.986	
Fl _t Protected		0.997			0.988			0.997			0.988	
Satd. Flow (prot)	0	4861	0	0	4838	0	0	1735	0	0	1782	0
Fl _t Permitted		0.850			0.671			0.965			0.834	
Satd. Flow (perm)	0	4145	0	0	3286	0	0	1679	0	0	1504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			5			47			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	41	654	48	186	569	24	24	180	159	81	222	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	743	0	0	779	0	0	363	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	52.0	52.0		52.0	52.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		52.0			52.0			60.0			60.0	
Actuated g/C Ratio		0.43			0.43			0.50			0.50	
v/c Ratio		0.41			0.55			0.42			0.45	
Control Delay		23.9			43.4			18.1			21.3	
Queue Delay		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

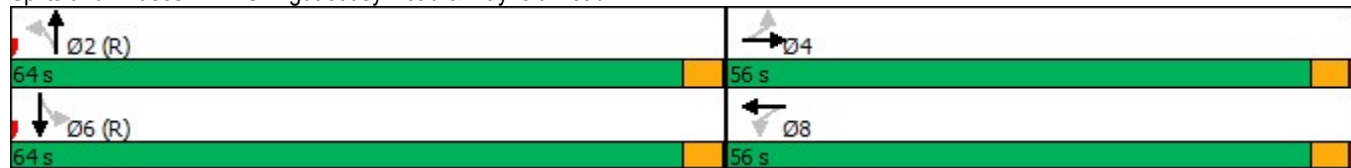


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		23.9			43.4			18.1			21.3	
LOS		C			D			B			C	
Approach Delay		23.9			43.4			18.1			21.3	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	29.4
Intersection LOS:	C
Intersection Capacity Utilization	80.4%
ICU Level of Service	D
Analysis Period (min)	15

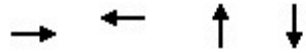
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	743	779	363	339
v/c Ratio	0.41	0.55	0.42	0.45
Control Delay	23.9	43.4	18.1	21.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.9	43.4	18.1	21.3
Queue Length 50th (m)	42.7	67.7	45.3	48.8
Queue Length 95th (m)	53.6	81.8	68.8	73.1
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1802	1426	863	755
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.55	0.42	0.45
Intersection Summary				

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	877	104	123	696	109	46	235	92	264	404	116
Future Volume (vph)	37	877	104	123	696	109	46	235	92	264	404	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.980			0.958			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4770	0	1644	3409	0	1690	3401	0
Flt Permitted	0.294			0.227			0.393			0.533		
Satd. Flow (perm)	565	4888	0	408	4770	0	680	3409	0	948	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			34			59			38	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	38	895	106	126	710	111	47	240	94	269	412	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	1001	0	126	821	0	47	334	0	269	530	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		23.0	23.0	
Total Split (s)	64.0	64.0		64.0	64.0		56.0	56.0		56.0	56.0	
Total Split (%)	53.3%	53.3%		53.3%	53.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	58.0	58.0		58.0	58.0		50.0	50.0		50.0	50.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.42	0.42		0.42	0.42	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

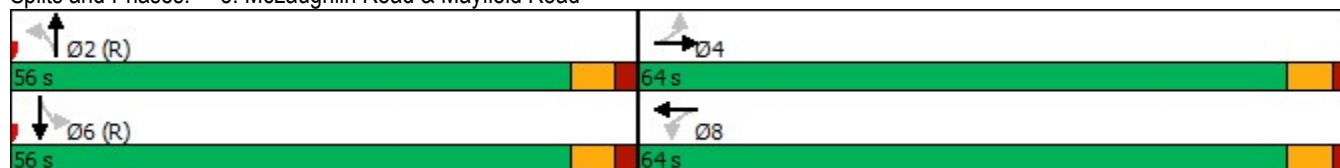


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.14	0.42		0.64	0.35		0.17	0.23		0.68	0.37	
Control Delay	23.5	26.1		40.9	19.0		24.0	18.8		39.0	23.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.5	26.1		40.9	19.0		24.0	18.8		39.0	23.1	
LOS	C	C		D	B		C	B		D	C	
Approach Delay		26.0			21.9			19.5			28.5	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	24.6
Intersection LOS:	C
Intersection Capacity Utilization	70.1%
ICU Level of Service	C
Analysis Period (min)	15

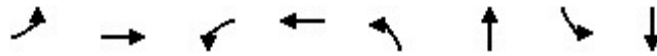
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	1001	126	821	47	334	269	530
v/c Ratio	0.14	0.42	0.64	0.35	0.17	0.23	0.68	0.37
Control Delay	23.5	26.1	40.9	19.0	24.0	18.8	39.0	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	26.1	40.9	19.0	24.0	18.8	39.0	23.1
Queue Length 50th (m)	6.5	69.0	21.6	41.0	6.8	21.2	50.8	41.1
Queue Length 95th (m)	m15.5	80.6	#51.7	50.7	15.5	31.5	83.9	54.8
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	273	2374	197	2323	283	1454	395	1439
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.42	0.64	0.35	0.17	0.23	0.68	0.37

Intersection Summary

































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	236	865	94	199	556	148	78	376	203	315	926	315
Future Volume (vph)	236	865	94	199	556	148	78	376	203	315	926	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97	0.99		0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Fl _t Permitted	0.198			0.950			0.220			0.502		
Satd. Flow (perm)	362	4902	1508	3326	4948	1395	418	3476	1467	893	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			157			216			335
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	251	920	100	212	591	157	83	400	216	335	985	335
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	920	100	212	591	157	83	400	216	335	985	335
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	31.0	44.0	44.0	20.0	33.0	33.0	96.0	96.0	96.0	96.0	96.0	96.0
Total Split (%)	19.4%	27.5%	27.5%	12.5%	20.6%	20.6%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	26.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

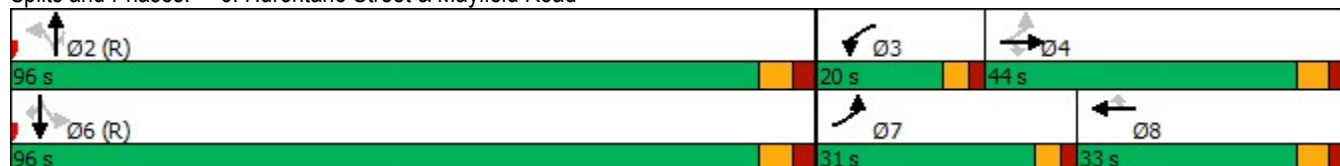


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	59.0	37.0	37.0	15.0	26.0	26.0	89.0	89.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.37	0.23	0.23	0.09	0.16	0.16	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.36	0.21	0.24	0.68	0.50	0.33
Control Delay	48.8	64.9	10.9	81.8	69.9	11.9	25.2	18.1	2.6	33.7	22.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	10.9	81.8	69.9	11.9	25.2	18.1	2.6	33.7	22.9	2.5
LOS	D	E	B	F	E	B	C	B	A	C	C	A
Approach Delay		57.4			63.0			14.2			21.0	
Approach LOS		E			E			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	122 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	38.9
Intersection LOS:	D
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024




















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	920	100	212	591	157	83	400	216	335	985	335
v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.36	0.21	0.24	0.68	0.50	0.33
Control Delay	48.8	64.9	10.9	81.8	69.9	11.9	25.2	18.1	2.6	33.7	22.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	64.9	10.9	81.8	69.9	11.9	25.2	18.1	2.6	33.7	22.9	2.5
Queue Length 50th (m)	58.9	102.4	1.0	34.2	66.4	0.0	14.2	32.6	0.0	73.7	98.5	0.0
Queue Length 95th (m)	84.2	119.5	16.5	48.6	81.0	21.2	28.6	42.2	11.9	113.9	116.3	13.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	357	1133	422	313	804	358	232	1933	911	496	1971	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.81	0.24	0.68	0.74	0.44	0.36	0.21	0.24	0.68	0.50	0.33

Intersection Summary

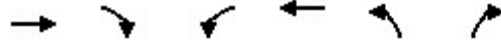
Lanes, Volumes, Timings
9: McLaughlin Road & Street A

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	89	0	44	0	438	43	18	342	0
Future Volume (vph)	0	0	0	89	0	44	0	438	43	18	342	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.850			0.987				
Flt Protected				0.950							0.997	
Satd. Flow (prot)	0	1883	0	1789	1601	0	0	3532	0	0	3568	0
Flt Permitted				0.950							0.997	
Satd. Flow (perm)	0	1883	0	1789	1601	0	0	3532	0	0	3568	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			588.2	
Travel Time (s)		15.4			101.9			112.3			26.5	
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
Adj. Flow (vph)	0	0	0	97	0	48	0	476	47	20	372	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	97	48	0	0	523	0	0	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	34.4%						ICU Level of Service A					
Analysis Period (min)	15											

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	840	0	0	483	0	0
Future Volume (vph)	840	0	0	483	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frnt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	913	0	0	525	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	913	0	0	525	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	44	266	62	1838	2775	18
Future Volume (vph)	44	266	62	1838	2775	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.999	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5137	0
Flt Permitted	0.950		0.049			
Satd. Flow (perm)	1789	1601	92	5142	5137	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		204			1	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	289	67	1998	3016	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	289	67	1998	3036	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Over	pm+pt	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4		2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

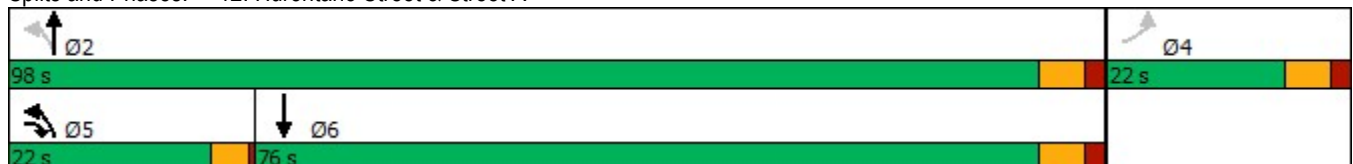


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	22.0	22.0	98.0	76.0	
Total Split (%)	18.3%	18.3%	18.3%	81.7%	63.3%	
Maximum Green (s)	16.0	18.0	18.0	92.0	70.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	4.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	8.4	11.8	95.1	94.4	77.3	
Actuated g/C Ratio	0.08	0.11	0.86	0.85	0.70	
v/c Ratio	0.36	0.82	0.26	0.46	0.85	
Control Delay	56.7	34.2	8.4	3.2	18.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.7	34.2	8.4	3.2	18.1	
LOS	E	C	A	A	B	
Approach Delay	37.4			3.4	18.1	
Approach LOS	D			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	111
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	13.7
Intersection LOS:	B
Intersection Capacity Utilization	78.8%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	48	289	67	1998	3036
v/c Ratio	0.36	0.82	0.26	0.46	0.85
Control Delay	56.7	34.2	8.4	3.2	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	34.2	8.4	3.2	18.1
Queue Length 50th (m)	10.2	17.9	1.8	36.3	175.2
Queue Length 95th (m)	22.1	47.4	10.8	51.0	#282.0
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	258	430	354	4372	3576
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.67	0.19	0.46	0.85

Intersection Summary

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

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	4	223	2	234	315	44	11	308	268	34	202	4
Future Volume (vph)	4	223	2	234	315	44	11	308	268	34	202	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.982			0.938			0.998	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1841	0	0	1721	0	0	1844	0
Flt Permitted		0.994		0.571				0.993			0.875	
Satd. Flow (perm)	0	1853	0	1097	1841	0	0	1711	0	0	1625	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			10			74			1	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			1383.3			3083.5			342.6	
Travel Time (s)		30.4			71.1			138.8			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	237	2	249	335	47	12	328	285	36	215	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	243	0	249	382	0	0	625	0	0	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	35.0	35.0		35.0	35.0		45.0	45.0		45.0	45.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		56.3%	56.3%		56.3%	56.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		39.0	39.0		39.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		29.0		29.0	29.0			39.0			39.0	
Actuated g/C Ratio		0.36		0.36	0.36			0.49			0.49	

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.36		0.63	0.57			0.72			0.32	
Control Delay		20.6		29.5	23.9			19.8			13.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		20.6		29.5	23.9			19.8			13.8	
LOS		C		C	C			B			B	
Approach Delay		20.6			26.1			19.8			13.8	
Approach LOS		C			C			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Pretimed
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	21.3
Intersection LOS:	C
Intersection Capacity Utilization	80.7%
ICU Level of Service	D
Analysis Period (min)	15

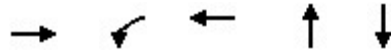
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	243	249	382	625	255
v/c Ratio	0.36	0.63	0.57	0.72	0.32
Control Delay	20.6	29.5	23.9	19.8	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	29.5	23.9	19.8	13.8
Queue Length 50th (m)	26.4	30.6	44.5	62.8	22.3
Queue Length 95th (m)	44.4	55.6	70.8	101.7	37.6
Internal Link Dist (m)	566.7		1359.3	3059.5	318.6
Turn Bay Length (m)		30.0			
Base Capacity (vph)	672	397	673	872	792
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.63	0.57	0.72	0.32

Intersection Summary

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	9	474	45	366	533	25	54	146	374	20	70	6
Future Volume (vph)	9	474	45	366	533	25	54	146	374	20	70	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			50.0			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.993				0.850		0.992	
Flt Protected		0.999		0.950				0.987			0.990	
Satd. Flow (prot)	0	1816	0	1755	1886	0	0	1821	1555	0	1807	0
Flt Permitted		0.988		0.334				0.888			0.889	
Satd. Flow (perm)	0	1796	0	617	1886	0	0	1638	1555	0	1623	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3				398			3
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1383.3			349.1			588.2			263.1	
Travel Time (s)		71.1			18.0			26.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	10	504	48	389	567	27	57	155	398	21	74	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	562	0	389	594	0	0	212	398	0	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

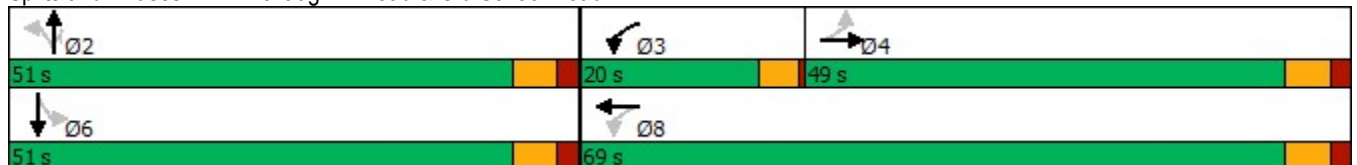
06/07/2024

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	24.0	24.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	49.0	49.0		20.0	69.0		51.0	51.0	51.0	51.0	51.0	
Total Split (%)	40.8%	40.8%		16.7%	57.5%		42.5%	42.5%	42.5%	42.5%	42.5%	
Maximum Green (s)	43.0	43.0		16.0	63.0		45.0	45.0	45.0	45.0	45.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		43.7		65.2	63.2			17.7	17.7		17.7	
Actuated g/C Ratio		0.47		0.70	0.68			0.19	0.19		0.19	
v/c Ratio		0.66		0.63	0.46			0.68	0.64		0.32	
Control Delay		24.9		10.9	9.2			46.2	8.6		33.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		24.9		10.9	9.2			46.2	8.6		33.7	
LOS		C		B	A			D	A		C	
Approach Delay		24.9			9.9			21.7			33.7	
Approach LOS		C			A			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	92.9
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	17.9
Intersection LOS:	B
Intersection Capacity Utilization:	93.6%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024


























Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	562	389	594	212	398	101
v/c Ratio	0.66	0.63	0.46	0.68	0.64	0.32
Control Delay	24.9	10.9	9.2	46.2	8.6	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	10.9	9.2	46.2	8.6	33.7
Queue Length 50th (m)	75.2	23.1	43.5	35.5	0.0	15.2
Queue Length 95th (m)	129.1	47.1	83.2	58.0	22.8	29.0
Internal Link Dist (m)	1359.3		325.1	564.2		239.1
Turn Bay Length (m)		30.0				
Base Capacity (vph)	846	629	1283	795	960	789
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.62	0.46	0.27	0.41	0.13

Intersection Summary

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	554	202	102	325	261	160	182	2886	368	170	1719	476	
Future Volume (vph)	554	202	102	325	261	160	182	2886	368	170	1719	476	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0	
Storage Lanes	1		0	1		0	1		1	1		1	
Taper Length (m)	100.0			100.0			85.0			95.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00	
Frt		0.950			0.943				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1825	1738	0	1789	1800	0	1807	5043	1633	1825	4812	1541	
Flt Permitted	0.160			0.234			0.075			0.082			
Satd. Flow (perm)	307	1738	0	441	1800	0	143	5043	1633	158	4812	1541	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		20			23				161			332	
Link Speed (k/h)		70			70			80				80	
Link Distance (m)		1007.8			440.4			855.3				282.2	
Travel Time (s)		51.8			22.6			38.5				12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%	
Adj. Flow (vph)	571	208	105	335	269	165	188	2975	379	175	1772	491	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	571	313	0	335	434	0	188	2975	379	175	1772	491	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.7			3.7			3.7				3.7	
Link Offset(m)		0.0			0.0			0.0				0.0	
Crosswalk Width(m)		1.6			1.6			1.6				1.6	
Two way Left Turn Lane								Yes					
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Turning Speed (k/h)	24		14	24		14	24		14	24		14	
Number of Detectors	1	2		1	2		1	2	1	1	2	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7				28.7	
Detector 2 Size(m)		1.8			1.8			1.8				1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex	
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0			0.0				0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1		6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	31.0		22.0	29.0		14.0	57.0	57.0	10.0	53.0	53.0
Total Split (%)	20.0%	25.8%		18.3%	24.2%		11.7%	47.5%	47.5%	8.3%	44.2%	44.2%
Maximum Green (s)	20.0	25.0		18.0	23.0		8.0	51.0	51.0	4.0	47.0	47.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	47.0	27.0		43.0	25.0		63.0	53.0	51.0	55.0	49.0	47.0
Actuated g/C Ratio	0.39	0.22		0.36	0.21		0.52	0.44	0.42	0.46	0.41	0.39
v/c Ratio	1.53	0.77		0.93	1.10		0.88	1.34	0.48	1.13	0.90	0.61
Control Delay	279.5	54.7		61.7	118.6		64.6	184.3	16.0	136.6	40.9	12.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.5	54.7		61.7	118.6		64.6	184.3	16.0	136.6	40.9	12.4
LOS	F	D		E	F		E	F	B	F	D	B
Approach Delay		199.9			93.8			160.0			42.0	
Approach LOS		F			F			F			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 140
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.53
 Intersection Signal Delay: 120.3 Intersection LOS: F
 Intersection Capacity Utilization 132.7% ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	571	313	335	434	188	2975	379	175	1772	491
v/c Ratio	1.53	0.77	0.93	1.10	0.88	1.34	0.48	1.13	0.90	0.61
Control Delay	279.5	54.7	61.7	118.6	64.6	184.3	16.0	136.6	40.9	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.5	54.7	61.7	118.6	64.6	184.3	16.0	136.6	40.9	12.4
Queue Length 50th (m)	~172.5	65.4	56.5	~112.1	28.2	~334.0	35.1	~31.4	141.0	27.0
Queue Length 95th (m)	#240.3	#104.9	#109.7	#174.8	#69.9	#359.9	61.8	#76.3	162.8	61.8
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	373	406	360	393	213	2227	786	155	1964	805
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.53	0.77	0.93	1.10	0.88	1.34	0.48	1.13	0.90	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕			↕↕↕			↕			↕	
Traffic Volume (vph)	40	677	49	219	638	64	33	262	216	32	159	28
Future Volume (vph)	40	677	49	219	638	64	33	262	216	32	159	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.990			0.990			0.943			0.983	
Flt Protected		0.997			0.988			0.997			0.993	
Satd. Flow (prot)	0	5037	0	0	5026	0	0	1760	0	0	1835	0
Flt Permitted		0.829			0.660			0.967			0.886	
Satd. Flow (perm)	0	4188	0	0	3357	0	0	1707	0	0	1638	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			13			42			8	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			3083.5	
Travel Time (s)		14.1			73.0			15.5			138.8	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	43	736	53	238	693	70	36	285	235	35	173	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	832	0	0	1001	0	0	556	0	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	59.0	59.0		59.0	59.0		61.0	61.0		61.0	61.0	
Total Split (%)	49.2%	49.2%		49.2%	49.2%		50.8%	50.8%		50.8%	50.8%	
Maximum Green (s)	55.0	55.0		55.0	55.0		57.0	57.0		57.0	57.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		55.0			55.0			57.0			57.0	
Actuated g/C Ratio		0.46			0.46			0.48			0.48	
v/c Ratio		0.43			0.97dl			0.67			0.30	

Lanes, Volumes, Timings
 4: Chinguacousy Road & Mayfield Road

06/07/2024

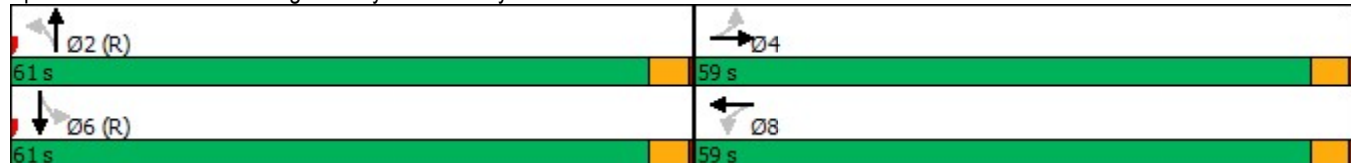


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		22.5			27.1			27.0			20.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.5			27.1			27.0			20.0	
LOS		C			C			C			B	
Approach Delay		22.5			27.1			27.0			20.0	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 25.0
 Intersection LOS: C
 Intersection Capacity Utilization 75.8%
 ICU Level of Service D
 Analysis Period (min) 15
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

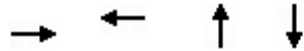
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024























Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	832	1001	556	238
v/c Ratio	0.43	0.97dl	0.67	0.30
Control Delay	22.5	27.1	27.0	20.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.5	27.1	27.0	20.0
Queue Length 50th (m)	46.5	64.1	91.0	32.3
Queue Length 95th (m)	57.8	79.6	130.5	50.1
Internal Link Dist (m)	250.5	1395.4	321.5	3059.5
Turn Bay Length (m)				
Base Capacity (vph)	1926	1545	832	782
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.65	0.67	0.30

Intersection Summary

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	833	65	109	973	248	111	447	112	189	264	116
Future Volume (vph)	105	833	65	109	973	248	111	447	112	189	264	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.970			0.970			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4892	0	1825	3492	0	1738	3361	0
Flt Permitted	0.110			0.293			0.518			0.238		
Satd. Flow (perm)	201	5036	0	541	4892	0	995	3492	0	435	3361	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			60			25			71	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	109	868	68	114	1014	258	116	466	117	197	275	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	936	0	114	1272	0	116	583	0	197	396	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	7	4			8			2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

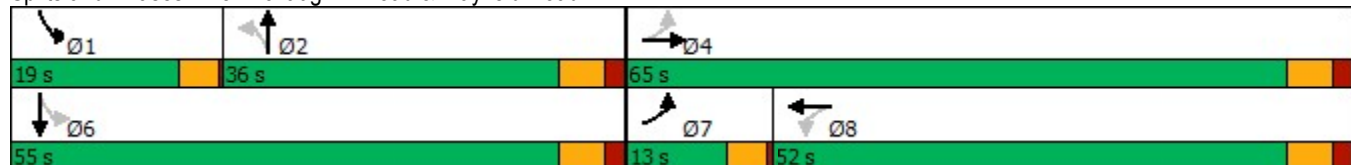


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		22.0	22.0		22.0	22.0		8.0	22.0	
Total Split (s)	13.0	65.0		52.0	52.0		36.0	36.0		19.0	55.0	
Total Split (%)	10.8%	54.2%		43.3%	43.3%		30.0%	30.0%		15.8%	45.8%	
Maximum Green (s)	9.0	59.0		46.0	46.0		30.0	30.0		15.0	49.0	
Yellow Time (s)	3.5	4.0		4.0	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		2.0	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		6.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		Max	Max		Max	Max		None	Max	
Walk Time (s)		5.0		5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0		0	0			0	
Act Effct Green (s)	61.0	59.0		46.6	46.6		31.8	31.8		51.0	49.0	
Actuated g/C Ratio	0.51	0.49		0.39	0.39		0.26	0.26		0.42	0.41	
v/c Ratio	0.52	0.38		0.54	0.66		0.44	0.62		0.60	0.28	
Control Delay	24.7	19.2		40.5	30.7		43.9	40.8		30.6	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.7	19.2		40.5	30.7		43.9	40.8		30.6	19.8	
LOS	C	B		D	C		D	D		C	B	
Approach Delay		19.8			31.5			41.3			23.4	
Approach LOS		B			C			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 28.8
 Intersection LOS: C
 Intersection Capacity Utilization 73.2%
 ICU Level of Service D
 Analysis Period (min) 15

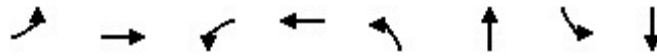
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



































Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	109	936	114	1272	116	583	197	396
v/c Ratio	0.52	0.38	0.54	0.66	0.44	0.62	0.60	0.28
Control Delay	24.7	19.2	40.5	30.7	43.9	40.8	30.6	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	19.2	40.5	30.7	43.9	40.8	30.6	19.8
Queue Length 50th (m)	13.0	48.0	20.7	85.7	23.1	61.8	29.6	26.0
Queue Length 95th (m)	22.9	58.3	41.7	101.8	42.2	81.7	46.5	37.5
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	217	2483	210	1936	263	942	347	1414
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.38	0.54	0.66	0.44	0.62	0.57	0.28

Intersection Summary

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	579	579	99	266	745	149	187	770	253	214	812	819
Future Volume (vph)	579	579	99	266	745	149	187	770	253	214	812	819
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99	1.00		0.96			0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Fl _t Permitted	0.160			0.950			0.272			0.217		
Satd. Flow (perm)	296	4995	1538	3335	5092	1562	511	3614	1486	417	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			145			218			680
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	597	597	102	274	768	154	193	794	261	221	837	844
Shared Lane Traffic (%)												
Lane Group Flow (vph)	597	597	102	274	768	154	193	794	261	221	837	844
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

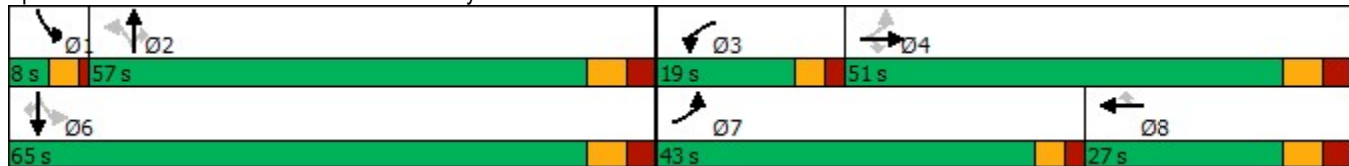


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	43.0	51.0	51.0	19.0	27.0	27.0	57.0	57.0	57.0	8.0	65.0	65.0
Total Split (%)	31.9%	37.8%	37.8%	14.1%	20.0%	20.0%	42.2%	42.2%	42.2%	5.9%	48.1%	48.1%
Maximum Green (s)	38.0	44.0	44.0	14.0	20.0	20.0	50.0	50.0	50.0	4.0	58.0	58.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0
Act Effct Green (s)	67.0	44.4	44.4	15.6	20.0	20.0	52.0	50.0	50.0	63.0	58.0	58.0
Actuated g/C Ratio	0.50	0.33	0.33	0.12	0.15	0.15	0.39	0.37	0.37	0.47	0.43	0.43
v/c Ratio	1.03	0.36	0.18	0.70	1.02	0.44	0.98	0.59	0.38	0.86	0.56	0.80
Control Delay	82.2	35.4	6.2	67.6	93.7	13.4	102.4	36.5	7.9	57.3	30.6	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	35.4	6.2	67.6	93.7	13.4	102.4	36.5	7.9	57.3	30.6	12.8
LOS	F	D	A	E	F	B	F	D	A	E	C	B
Approach Delay		54.6			77.4			40.7			25.8	
Approach LOS		D			E			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 135
 Actuated Cycle Length: 135
 Natural Cycle: 100
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 46.7
 Intersection LOS: D
 Intersection Capacity Utilization 98.4%
 ICU Level of Service F
 Analysis Period (min) 15

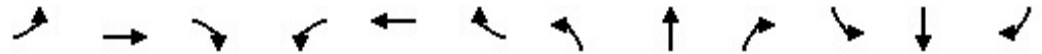
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	597	597	102	274	768	154	193	794	261	221	837	844
v/c Ratio	1.03	0.36	0.18	0.70	1.02	0.44	0.98	0.59	0.38	0.86	0.56	0.80
Control Delay	82.2	35.4	6.2	67.6	93.7	13.4	102.4	36.5	7.9	57.3	30.6	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	35.4	6.2	67.6	93.7	13.4	102.4	36.5	7.9	57.3	30.6	12.8
Queue Length 50th (m)	~153.4	44.5	0.0	36.6	~79.2	2.1	50.4	89.3	7.4	35.1	86.7	35.0
Queue Length 95th (m)	#225.3	55.7	12.0	51.6	#106.5	21.7	#100.5	110.0	27.1	#69.8	106.5	99.6
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	579	1644	577	403	754	354	196	1338	687	257	1508	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.36	0.18	0.68	1.02	0.44	0.98	0.59	0.38	0.86	0.56	0.80

Intersection Summary

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

Lanes, Volumes, Timings
9: McLaughlin Road & Street A

06/07/2024



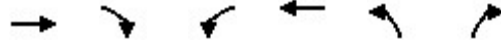
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Traffic Volume (vph)	0	0	0	81	0	27	0	547	127	27	453	0
Future Volume (vph)	0	0	0	81	0	27	0	547	127	27	453	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.850			0.972				
Flt Protected				0.950							0.997	
Satd. Flow (prot)	0	1883	0	1789	1601	0	0	3478	0	0	3568	0
Flt Permitted				0.950							0.997	
Satd. Flow (perm)	0	1883	0	1789	1601	0	0	3478	0	0	3568	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			588.2	
Travel Time (s)		15.4			101.9			112.3			26.5	
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
Adj. Flow (vph)	0	0	0	88	0	29	0	595	138	29	492	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	88	29	0	0	733	0	0	521	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	869	0	0	925	0	0
Future Volume (vph)	869	0	0	925	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	945	0	0	1005	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	945	0	0	1005	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	135	259	3410	2106	41
Future Volume (vph)	27	135	259	3410	2106	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.997	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5126	0
Flt Permitted	0.950		0.052			
Satd. Flow (perm)	1789	1601	98	5142	5126	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2			3	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	147	282	3707	2289	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	147	282	3707	2334	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

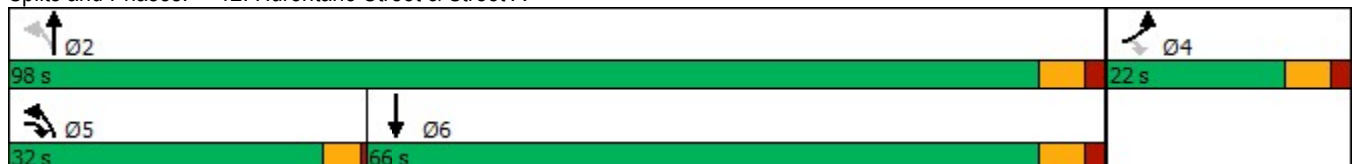


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	32.0	32.0	98.0	66.0	
Total Split (%)	18.3%	26.7%	26.7%	81.7%	55.0%	
Maximum Green (s)	16.0	28.0	28.0	92.0	60.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	4.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	7.3	24.7	94.7	95.3	72.2	
Actuated g/C Ratio	0.07	0.23	0.89	0.89	0.68	
v/c Ratio	0.24	0.40	0.81	0.81	0.67	
Control Delay	53.6	34.8	47.0	6.7	14.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.6	34.8	47.0	6.7	14.2	
LOS	D	C	D	A	B	
Approach Delay	37.9			9.6	14.2	
Approach LOS	D			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	106.9
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	12.0
Intersection LOS:	B
Intersection Capacity Utilization	79.2%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	29	147	282	3707	2334
v/c Ratio	0.24	0.40	0.81	0.81	0.67
Control Delay	53.6	34.8	47.0	6.7	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	34.8	47.0	6.7	14.2
Queue Length 50th (m)	6.1	25.2	43.3	136.0	114.2
Queue Length 95th (m)	15.3	38.1	69.6	184.4	169.7
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	268	544	531	4584	3461
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.11	0.27	0.53	0.81	0.67

Intersection Summary

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	237	3	133	152	43	2	225	278	32	209	9
Future Volume (vph)	2	237	3	133	152	43	2	225	278	32	209	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.967				0.850		0.995	
Flt Protected				0.950							0.994	
Satd. Flow (prot)	0	1917	0	1772	1790	0	0	1830	1585	0	1789	0
Flt Permitted		0.997		0.587				0.998			0.950	
Satd. Flow (perm)	0	1912	0	1095	1790	0	0	1827	1585	0	1710	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			43				296			6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	252	3	141	162	46	2	239	296	34	222	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	257	0	141	208	0	0	241	296	0	266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

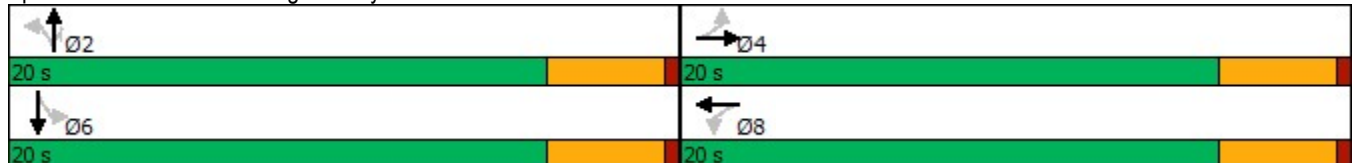


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		9.9		9.7	9.7			19.8	19.8		19.8	
Actuated g/C Ratio		0.28		0.28	0.28			0.57	0.57		0.57	
v/c Ratio		0.47		0.46	0.39			0.23	0.29		0.27	
Control Delay		12.8		14.9	9.7			7.0	2.2		7.2	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		12.8		14.9	9.7			7.0	2.2		7.2	
LOS		B		B	A			A	A		A	
Approach Delay		12.8			11.8			4.3			7.2	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 34.9
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.47
 Intersection Signal Delay: 8.3
 Intersection Capacity Utilization 62.0%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	257	141	208	241	296	266
v/c Ratio	0.47	0.46	0.39	0.23	0.29	0.27
Control Delay	12.8	14.9	9.7	7.0	2.2	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.8	14.9	9.7	7.0	2.2	7.2
Queue Length 50th (m)	11.2	6.2	6.9	6.7	0.0	7.4
Queue Length 95th (m)	22.7	15.3	16.4	20.4	8.8	22.7
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					50.0	
Base Capacity (vph)	880	503	846	1038	1029	974
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.28	0.25	0.23	0.29	0.27

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↖	↗		↕		
Traffic Volume (vph)	2	237	3	133	152	43	2	225	278	32	209	9	
Future Volume (vph)	2	237	3	133	152	43	2	225	278	32	209	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1917		1772	1790			1830	1585		1788		
Flt Permitted		1.00		0.59	1.00			1.00	1.00		0.95		
Satd. Flow (perm)		1912		1095	1790			1827	1585		1709		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	252	3	141	162	46	2	239	296	34	222	10	
RTOR Reduction (vph)	0	2	0	0	33	0	0	0	138	0	3	0	
Lane Group Flow (vph)	0	255	0	141	175	0	0	241	158	0	263	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6			
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		8.6		8.6	8.6			19.1	19.1		19.1		
Effective Green, g (s)		8.6		8.6	8.6			19.1	19.1		19.1		
Actuated g/C Ratio		0.24		0.24	0.24			0.54	0.54		0.54		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		460		263	431			977	847		914		
v/s Ratio Prot					0.10								
v/s Ratio Perm		c0.13		0.13				0.13	0.10		c0.15		
v/c Ratio		0.56		0.54	0.41			0.25	0.19		0.29		
Uniform Delay, d1		11.9		11.8	11.4			4.4	4.3		4.6		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.5		2.1	0.6			0.6	0.5		0.8		
Delay (s)		13.3		13.9	12.0			5.0	4.8		5.4		
Level of Service		B		B	B			A	A		A		
Approach Delay (s)		13.3			12.8			4.9			5.4		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			8.5									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.37										
Actuated Cycle Length (s)			35.7									Sum of lost time (s)	8.0
Intersection Capacity Utilization			62.0%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	6	509	34	233	288	24	40	60	413	37	120	11
Future Volume (vph)	6	509	34	233	288	24	40	60	413	37	120	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.980			0.989	
Satd. Flow (prot)	0	3550	0	1789	3483	0	0	1860	1617	0	1858	0
Flt Permitted		0.950		0.310				0.830			0.896	
Satd. Flow (perm)	0	3376	0	584	3483	0	0	1576	1617	0	1684	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			15				439			4
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	6	541	36	248	306	26	43	64	439	39	128	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	583	0	248	332	0	0	107	439	0	179	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		15.1		30.4	28.3			11.2	11.2		11.2	
Actuated g/C Ratio		0.29		0.59	0.55			0.22	0.22		0.22	
v/c Ratio		0.59		0.45	0.17			0.32	0.63		0.49	
Control Delay		18.8		8.2	6.1			21.5	7.3		23.9	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		18.8		8.2	6.1			21.5	7.3		23.9	
LOS		B		A	A			C	A		C	
Approach Delay		18.8			7.0			10.0			23.9	
Approach LOS		B			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 51.9
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 13.1
 Intersection Capacity Utilization 64.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



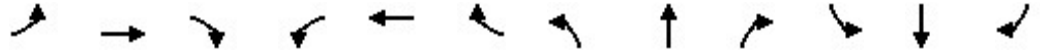
Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	583	248	332	107	439	179
v/c Ratio	0.59	0.45	0.17	0.32	0.63	0.49
Control Delay	18.8	8.2	6.1	21.5	7.3	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	8.2	6.1	21.5	7.3	23.9
Queue Length 50th (m)	22.8	9.1	6.5	8.2	0.0	14.0
Queue Length 95th (m)	44.0	22.0	14.1	22.7	19.5	34.9
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2490	774	3396	910	1119	974
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.32	0.10	0.12	0.39	0.18

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↔		↖	↕↕			↕	↗		↕↔		
Traffic Volume (vph)	6	509	34	233	288	24	40	60	413	37	120	11	
Future Volume (vph)	6	509	34	233	288	24	40	60	413	37	120	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99		
Satd. Flow (prot)		3551		1789	3484			1861	1617		1859		
Flt Permitted		0.95		0.31	1.00			0.83	1.00		0.90		
Satd. Flow (perm)		3374		583	3484			1576	1617		1683		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	6	541	36	248	306	26	43	64	439	39	128	12	
RTOR Reduction (vph)	0	6	0	0	7	0	0	0	344	0	3	0	
Lane Group Flow (vph)	0	577	0	248	325	0	0	107	95	0	176	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		15.2		28.3	28.3			11.1	11.1		11.1		
Effective Green, g (s)		15.2		28.3	28.3			11.1	11.1		11.1		
Actuated g/C Ratio		0.30		0.55	0.55			0.22	0.22		0.22		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		997		534	1918			340	349		363		
v/s Ratio Prot				c0.08	0.09								
v/s Ratio Perm		c0.17		0.17				0.07	0.06		c0.10		
v/c Ratio		0.58		0.46	0.17			0.31	0.27		0.48		
Uniform Delay, d1		15.4		6.4	5.7			17.0	16.8		17.6		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.8		0.6	0.0			0.5	0.4		1.0		
Delay (s)		16.2		7.1	5.8			17.5	17.2		18.7		
Level of Service		B		A	A			B	B		B		
Approach Delay (s)		16.2			6.3			17.3			18.7		
Approach LOS		B			A			B			B		
Intersection Summary													
HCM 2000 Control Delay			13.7									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			51.4									Sum of lost time (s)	16.0
Intersection Capacity Utilization			64.9%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	557	219	174	331	171	150	55	1812	162	74	2486	297
Future Volume (vph)	557	219	174	331	171	150	55	1812	162	74	2486	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.934			0.930				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3321	0	1722	3262	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.386			0.506			0.067			0.069		
Satd. Flow (perm)	713	3321	0	917	3262	0	121	4445	1471	117	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79			17				139			163
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	599	235	187	356	184	161	59	1948	174	80	2673	319
Shared Lane Traffic (%)												
Lane Group Flow (vph)	599	422	0	356	345	0	59	1948	174	80	2673	319
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings

3: Hurontario Street & Old School Road

06/07/2024

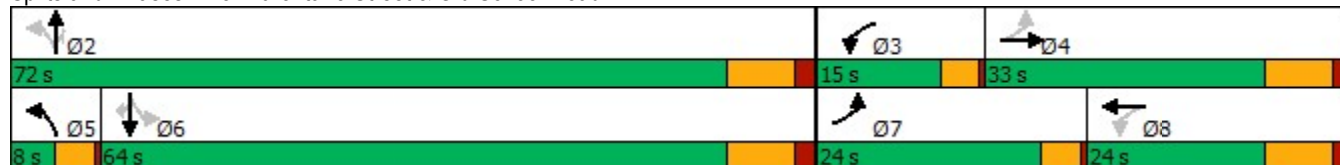


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	33.0		15.0	24.0		8.0	72.0	72.0	64.0	64.0	64.0
Total Split (%)	20.0%	27.5%		12.5%	20.0%		6.7%	60.0%	60.0%	53.3%	53.3%	53.3%
Maximum Green (s)	20.0	25.0		11.0	16.0		4.0	64.0	64.0	56.0	56.0	56.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	45.1	26.1		34.1	15.1		68.4	62.3	62.3	58.1	58.1	56.1
Actuated g/C Ratio	0.38	0.22		0.29	0.13		0.58	0.53	0.53	0.49	0.49	0.48
v/c Ratio	1.28	0.53		1.00	0.80		0.39	0.83	0.21	1.40	1.07	0.37
Control Delay	170.4	35.3		83.4	61.8		18.3	26.9	4.4	286.5	71.0	10.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	170.4	35.3		83.4	61.8		18.3	26.9	4.4	286.5	71.0	10.8
LOS	F	D		F	E		B	C	A	F	E	B
Approach Delay		114.6			72.8			24.9			70.4	
Approach LOS		F			E			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	117.5
Natural Cycle:	140
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.40
Intersection Signal Delay:	62.9
Intersection LOS:	E
Intersection Capacity Utilization:	110.1%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	599	422	356	345	59	1948	174	80	2673	319
v/c Ratio	1.28	0.53	1.00	0.80	0.39	0.83	0.21	1.40	1.07	0.37
Control Delay	170.4	35.3	83.4	61.8	18.3	26.9	4.4	286.5	71.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	170.4	35.3	83.4	61.8	18.3	26.9	4.4	286.5	71.0	10.8
Queue Length 50th (m)	~143.6	37.3	~64.8	39.7	5.7	134.1	3.8	~25.4	~261.0	21.2
Queue Length 95th (m)	#214.0	53.3	#102.4	#59.0	11.4	155.4	14.4	#44.6	#288.3	42.1
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	469	824	355	459	152	2424	865	57	2492	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.28	0.51	1.00	0.75	0.39	0.80	0.20	1.40	1.07	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	557	219	174	331	171	150	55	1812	162	74	2486	297
Future Volume (vph)	557	219	174	331	171	150	55	1812	162	74	2486	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	3319		1722	3262		1722	4445	1471	1615	5043	1633
Flt Permitted	0.39	1.00		0.51	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	712	3319		916	3262		121	4445	1471	117	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	599	235	187	356	184	161	59	1948	174	80	2673	319
RTOR Reduction (vph)	0	62	0	0	15	0	0	0	65	0	0	86
Lane Group Flow (vph)	599	360	0	356	330	0	59	1948	109	80	2673	233
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	39.1	24.1		26.1	15.1		63.2	63.2	63.2	56.1	56.1	56.1
Effective Green, g (s)	41.1	26.1		30.1	15.1		65.2	63.2	63.2	58.1	58.1	56.1
Actuated g/C Ratio	0.35	0.22		0.25	0.13		0.55	0.53	0.53	0.49	0.49	0.47
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0
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)	441	732		321	416		135	2374	785	57	2476	774
v/s Ratio Prot	c0.25	0.11		0.12	0.10		0.02	c0.44			0.53	
v/s Ratio Perm	0.22			c0.16			0.22		0.07	c0.68		0.14
v/c Ratio	1.36	0.49		1.11	0.79		0.44	0.82	0.14	1.40	1.08	0.30
Uniform Delay, d1	35.1	40.3		41.7	50.1		26.1	22.8	13.9	30.1	30.1	19.1
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	175.4	0.5		82.8	10.0		2.3	2.4	0.1	258.7	43.9	0.2
Delay (s)	210.6	40.8		124.6	60.1		28.3	25.2	13.9	288.8	74.0	19.3
Level of Service	F	D		F	E		C	C	B	F	E	B
Approach Delay (s)		140.4			92.8			24.4			73.9	
Approach LOS		F			F			C			E	
Intersection Summary												
HCM 2000 Control Delay			70.1			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			1.32									
Actuated Cycle Length (s)			118.3			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			110.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔		↔	↕↕↕			↕			↕	
Traffic Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39
Future Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.993			0.948			0.987	
Flt Protected		0.997		0.950				0.997			0.987	
Satd. Flow (prot)	0	4862	0	1659	4934	0	0	1747	0	0	1780	0
Flt Permitted		0.871		0.269				0.963			0.699	
Satd. Flow (perm)	0	4248	0	470	4934	0	0	1687	0	0	1261	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			39			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	45	681	51	153	591	28	25	202	144	100	254	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	777	0	153	619	0	0	371	0	0	393	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	38.0	38.0		16.0	54.0		66.0	66.0		66.0	66.0	
Total Split (%)	31.7%	31.7%		13.3%	45.0%		55.0%	55.0%		55.0%	55.0%	
Maximum Green (s)	34.0	34.0		12.0	50.0		62.0	62.0		62.0	62.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		37.3		50.4	50.4			27.7			27.7	
Actuated g/C Ratio		0.43		0.58	0.58			0.32			0.32	
v/c Ratio		0.42		0.38	0.21			0.65			0.96	
Control Delay		19.4		12.8	9.7			27.6			63.6	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		19.4		12.8	9.7			27.6			63.6	
LOS		B		B	A			C			E	
Approach Delay		19.4			10.3			27.6			63.6	
Approach LOS		B			B			C			E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 86.2

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 25.2

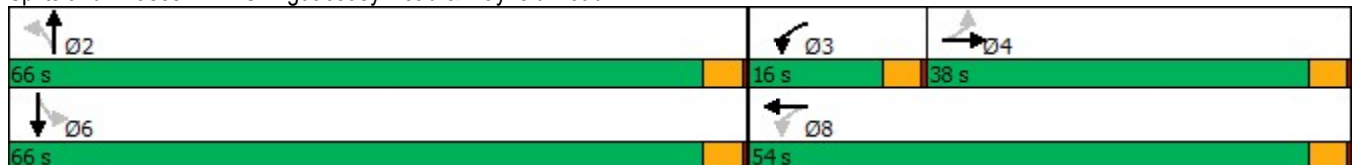
Intersection LOS: C

Intersection Capacity Utilization 82.0%

ICU Level of Service D

Analysis Period (min) 15

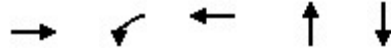
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	777	153	619	371	393
v/c Ratio	0.42	0.38	0.21	0.65	0.96
Control Delay	19.4	12.8	9.7	27.6	63.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	12.8	9.7	27.6	63.6
Queue Length 50th (m)	30.9	10.5	15.9	46.1	61.4
Queue Length 95th (m)	54.3	25.9	29.8	72.9	#107.5
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1841	441	2887	1233	916
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.35	0.21	0.30	0.43

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↔↔↔		↔	↔↔↔			↔			↔			
Traffic Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39		
Future Volume (vph)	45	674	50	151	585	28	25	200	143	99	251	39		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0			
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00			
Frt		0.99		1.00	0.99			0.95			0.99			
Flt Protected		1.00		0.95	1.00			1.00			0.99			
Satd. Flow (prot)		4864		1659	4935			1745			1780			
Flt Permitted		0.87		0.27	1.00			0.96			0.70			
Satd. Flow (perm)		4250		470	4935			1687			1259			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99		
Adj. Flow (vph)	45	681	51	153	591	28	25	202	144	100	254	39		
RTOR Reduction (vph)	0	5	0	0	3	0	0	26	0	0	5	0		
Lane Group Flow (vph)	0	772	0	153	616	0	0	345	0	0	388	0		
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%		
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA			
Protected Phases		4		3	8			2			6			
Permitted Phases	4			8			2			6				
Actuated Green, G (s)		37.3		50.4	50.4			27.7			27.7			
Effective Green, g (s)		37.3		50.4	50.4			27.7			27.7			
Actuated g/C Ratio		0.43		0.59	0.59			0.32			0.32			
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0			
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0			
Lane Grp Cap (vph)		1841		400	2888			542			405			
v/s Ratio Prot				c0.04	0.12									
v/s Ratio Perm		c0.18		0.18				0.20			c0.31			
v/c Ratio		0.42		0.38	0.21			0.64			0.96			
Uniform Delay, d1		16.9		8.8	8.5			24.9			28.6			
Progression Factor		1.00		1.00	1.00			1.00			1.00			
Incremental Delay, d2		0.7		0.6	0.2			2.4			33.7			
Delay (s)		17.6		9.4	8.6			27.3			62.4			
Level of Service		B		A	A			C			E			
Approach Delay (s)		17.6			8.8			27.3			62.4			
Approach LOS		B			A			C			E			
Intersection Summary														
HCM 2000 Control Delay			23.8									HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio			0.62											
Actuated Cycle Length (s)			86.1								12.0			
Intersection Capacity Utilization			82.0%										ICU Level of Service	D
Analysis Period (min)			15											
c Critical Lane Group														

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗		↗	↗↗	
Traffic Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Future Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.978			0.957			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4755	0	1644	3406	0	1690	3438	0
Flt Permitted	0.313			0.117			0.469			0.387		
Satd. Flow (perm)	601	4889	0	210	4755	0	812	3406	0	688	3438	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			34			45			28	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	17	957	118	132	747	126	52	248	99	309	411	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	1075	0	132	873	0	52	347	0	309	499	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		16.0	58.0		32.0	32.0		30.0	62.0	
Total Split (%)	35.0%	35.0%		13.3%	48.3%		26.7%	26.7%		25.0%	51.7%	
Maximum Green (s)	36.0	36.0		12.0	52.0		26.0	26.0		26.0	56.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		54.0	52.0		26.0	26.0		58.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.45	0.43		0.22	0.22		0.48	0.47	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

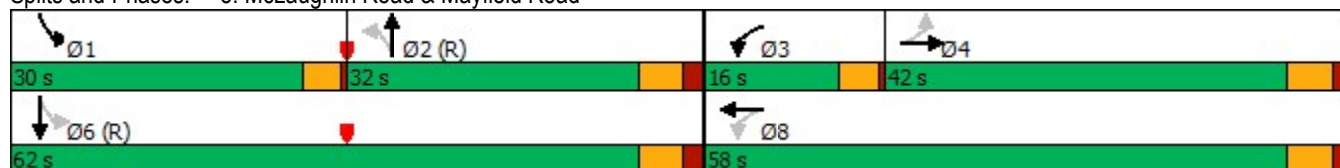


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.09	0.73		0.54	0.42		0.30	0.45		0.56	0.31	
Control Delay	32.2	40.3		28.5	23.3		44.9	37.4		24.1	19.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.2	40.3		28.5	23.3		44.9	37.4		24.1	19.4	
LOS	C	D		C	C		D	D		C	B	
Approach Delay		40.2			24.0			38.4			21.2	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	30.4
Intersection LOS:	C
Intersection Capacity Utilization	71.1%
ICU Level of Service	C
Analysis Period (min)	15

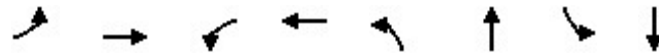
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	1075	132	873	52	347	309	499
v/c Ratio	0.09	0.73	0.54	0.42	0.30	0.45	0.56	0.31
Control Delay	32.2	40.3	28.5	23.3	44.9	37.4	24.1	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	40.3	28.5	23.3	44.9	37.4	24.1	19.4
Queue Length 50th (m)	2.9	81.5	18.1	49.0	10.3	32.5	44.7	35.3
Queue Length 95th (m)	8.8	97.9	30.9	60.4	22.4	47.1	66.1	47.3
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	180	1479	244	2079	175	773	549	1619
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.73	0.54	0.42	0.30	0.45	0.56	0.31

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Future Volume (vph)	17	938	116	129	732	123	51	243	97	303	403	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4887		1706	4756		1644	3406		1690	3436	
Flt Permitted	0.31	1.00		0.12	1.00		0.47	1.00		0.39	1.00	
Satd. Flow (perm)	601	4887		210	4756		812	3406		689	3436	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	17	957	118	132	747	126	52	248	99	309	411	88
RTOR Reduction (vph)	0	13	0	0	19	0	0	35	0	0	15	0
Lane Group Flow (vph)	17	1062	0	132	854	0	52	312	0	309	484	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Effective Green, g (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.43	0.43		0.22	0.22		0.47	0.47	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	180	1466		240	2060		175	737		538	1603	
v/s Ratio Prot		c0.22		c0.05	0.18			0.09		c0.12	0.14	
v/s Ratio Perm	0.03			0.18			0.06			c0.14		
v/c Ratio	0.09	0.72		0.55	0.41		0.30	0.42		0.57	0.30	
Uniform Delay, d1	30.3	37.6		23.6	23.5		39.4	40.5		21.3	19.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	3.2		8.8	0.6		4.3	1.8		4.4	0.5	
Delay (s)	31.3	40.7		32.4	24.1		43.6	42.3		25.8	20.4	
Level of Service	C	D		C	C		D	D		C	C	
Approach Delay (s)		40.6			25.2			42.5			22.4	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330
Future Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00		0.97	0.99		0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Fl _t Permitted	0.212			0.950			0.316			0.390		
Satd. Flow (perm)	387	4902	1508	3328	4948	1395	600	3476	1467	696	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			178			224			351
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351
Shared Lane Traffic (%)												
Lane Group Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings

6: Hurontario Street & Mayfield Road

06/07/2024

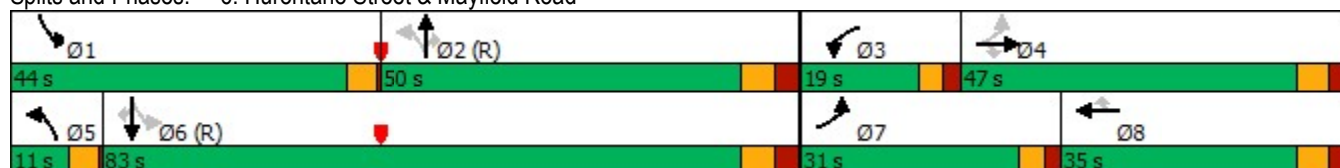


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.68	0.83	0.22	0.75	0.73	0.47	0.34	0.41	0.40	0.62	0.54	0.38
Control Delay	44.3	63.6	6.7	87.8	68.1	12.5	25.1	49.8	7.4	24.8	31.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	63.6	6.7	87.8	68.1	12.5	25.1	49.8	7.4	24.8	31.0	3.4
LOS	D	E	A	F	E	B	C	D	A	C	C	A
Approach Delay		55.6			62.4			33.1			23.7	
Approach LOS		E			E			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	70
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	42.7
Intersection LOS:	D
Intersection Capacity Utilization	79.5%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351
v/c Ratio	0.68	0.83	0.22	0.75	0.73	0.47	0.34	0.41	0.40	0.62	0.54	0.38
Control Delay	44.3	63.6	6.7	87.8	68.1	12.5	25.1	49.8	7.4	24.8	31.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	63.6	6.7	87.8	68.1	12.5	25.1	49.8	7.4	24.8	31.0	3.4
Queue Length 50th (m)	59.5	112.8	0.0	35.8	70.6	1.6	12.2	53.7	0.0	70.4	104.8	0.0
Queue Length 95th (m)	84.5	130.6	12.5	#52.9	85.6	24.4	20.8	69.8	21.0	95.6	124.5	16.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	388	1225	464	292	865	390	251	934	558	644	1683	923
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.83	0.22	0.75	0.73	0.47	0.34	0.41	0.40	0.62	0.54	0.38

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330	
Future Volume (vph)	247	954	98	207	595	173	81	364	211	375	848	330	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1806	3476	1467	1702	3544	1557	
Flt Permitted	0.21	1.00	1.00	0.95	1.00	1.00	0.32	1.00	1.00	0.39	1.00	1.00	
Satd. Flow (perm)	388	4902	1508	3340	4948	1395	601	3476	1467	699	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	263	1015	104	220	633	184	86	387	224	399	902	351	
RTOR Reduction (vph)	0	0	78	0	0	147	0	0	164	0	0	184	
Lane Group Flow (vph)	263	1015	26	220	633	37	86	387	60	399	902	167	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	384	1225	377	292	865	244	240	934	394	630	1683	739	
v/s Ratio Prot	c0.12	c0.21		0.07	0.13		0.02	0.11		c0.16	0.25		
v/s Ratio Perm	0.14		0.02			0.03	0.10		0.04	c0.19		0.11	
v/c Ratio	0.68	0.83	0.07	0.75	0.73	0.15	0.36	0.41	0.15	0.63	0.54	0.23	
Uniform Delay, d1	37.3	56.8	45.8	71.3	62.4	55.9	39.7	48.1	44.6	22.5	29.6	24.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.5	6.5	0.4	16.4	5.4	1.3	4.1	1.4	0.8	4.8	1.2	0.7	
Delay (s)	46.8	63.3	46.1	87.7	67.9	57.3	43.8	49.5	45.4	27.3	30.8	25.4	
Level of Service	D	E	D	F	E	E	D	D	D	C	C	C	
Approach Delay (s)		58.9			70.2			47.5			28.8		
Approach LOS		E			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			49.3									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.72										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			79.5%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	216	2	282	312	53	11	371	322	41	240	4
Future Volume (vph)	4	216	2	282	312	53	11	371	322	41	240	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.978				0.850		0.998	
Flt Protected		0.999		0.950				0.999			0.993	
Satd. Flow (prot)	0	1863	0	1825	1829	0	0	1797	1601	0	1844	0
Flt Permitted		0.993		0.489				0.987			0.815	
Satd. Flow (perm)	0	1852	0	939	1829	0	0	1776	1601	0	1513	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10				324			1
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	230	2	300	332	56	12	395	343	44	255	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	236	0	300	388	0	0	407	343	0	303	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

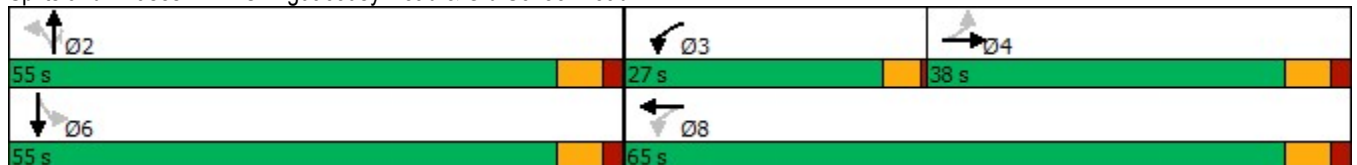
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		38.1		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.32		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.40		0.47	0.43			0.56	0.41		0.49	
Control Delay		35.7		19.0	20.9			31.0	4.7		29.5	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		35.7		19.0	20.9			31.0	4.7		29.5	
LOS		D		B	C			C	A		C	
Approach Delay		35.7			20.1			18.9			29.5	
Approach LOS		D			C			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 23.0
 Intersection LOS: C
 Intersection Capacity Utilization 86.6%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	236	300	388	407	343	303
v/c Ratio	0.40	0.47	0.43	0.56	0.41	0.49
Control Delay	35.7	19.0	20.9	31.0	4.7	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	19.0	20.9	31.0	4.7	29.5
Queue Length 50th (m)	43.2	38.7	55.6	72.5	2.6	51.8
Queue Length 95th (m)	71.0	57.0	80.1	103.8	20.2	78.0
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					50.0	
Base Capacity (vph)	588	677	904	725	845	618
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.44	0.43	0.56	0.41	0.49

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕	↖		↕		
Traffic Volume (vph)	4	216	2	282	312	53	11	371	322	41	240	4	
Future Volume (vph)	4	216	2	282	312	53	11	371	322	41	240	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.98			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1863		1825	1830			1796	1601		1844		
Flt Permitted		0.99		0.49	1.00			0.99	1.00		0.82		
Satd. Flow (perm)		1852		939	1830			1776	1601		1514		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	4	230	2	300	332	56	12	395	343	44	255	4	
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	192	0	1	0	
Lane Group Flow (vph)	0	236	0	300	383	0	0	407	151	0	302	0	
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		38.1		59.0	59.0			49.0	49.0		49.0		
Effective Green, g (s)		38.1		61.0	59.0			49.0	49.0		49.0		
Actuated g/C Ratio		0.32		0.51	0.49			0.41	0.41		0.41		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		588		616	899			725	653		618		
v/s Ratio Prot				c0.08	c0.21								
v/s Ratio Perm		0.13		0.17				c0.23	0.09		0.20		
v/c Ratio		0.40		0.49	0.43			0.56	0.23		0.49		
Uniform Delay, d1		32.0		18.1	19.6			27.3	23.2		26.2		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		2.0		0.6	1.5			3.1	0.8		2.8		
Delay (s)		34.1		18.7	21.1			30.4	24.0		29.0		
Level of Service		C		B	C			C	C		C		
Approach Delay (s)		34.1			20.1			27.5			29.0		
Approach LOS		C			C			C			C		
Intersection Summary													
HCM 2000 Control Delay			25.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.51										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			86.6%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	10	535	37	439	592	26	49	137	449	21	58	6
Future Volume (vph)	10	535	37	439	592	26	49	137	449	21	58	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.994				0.850		0.991	
Flt Protected		0.999		0.950				0.987			0.988	
Satd. Flow (prot)	0	3464	0	1755	3588	0	0	1821	1555	0	1806	0
Flt Permitted		0.938		0.309				0.886			0.887	
Satd. Flow (perm)	0	3253	0	571	3588	0	0	1635	1555	0	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			7				478			3
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	11	569	39	467	630	28	52	146	478	22	62	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	619	0	467	658	0	0	198	478	0	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

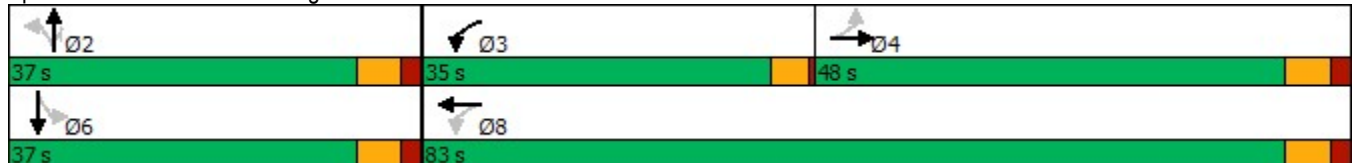
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	48.0	48.0		35.0	83.0		37.0	37.0	37.0	37.0	37.0	
Total Split (%)	40.0%	40.0%		29.2%	69.2%		30.8%	30.8%	30.8%	30.8%	30.8%	
Maximum Green (s)	42.0	42.0		31.0	77.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		19.7		43.3	39.0			15.3	15.3		15.3	
Actuated g/C Ratio		0.29		0.64	0.58			0.23	0.23		0.23	
v/c Ratio		0.65		0.70	0.32			0.53	0.66		0.24	
Control Delay		25.3		13.0	7.7			31.0	7.9		25.2	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		25.3		13.0	7.7			31.0	7.9		25.2	
LOS		C		B	A			C	A		C	
Approach Delay		25.3			9.9			14.6			25.2	
Approach LOS		C			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 67.2
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 15.5
 Intersection LOS: B
 Intersection Capacity Utilization 75.1%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	619	467	658	198	478	90
v/c Ratio	0.65	0.70	0.32	0.53	0.66	0.24
Control Delay	25.3	13.0	7.7	31.0	7.9	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	13.0	7.7	31.0	7.9	25.2
Queue Length 50th (m)	32.0	22.1	18.1	20.1	0.0	8.2
Queue Length 95th (m)	69.2	59.1	36.3	53.3	25.3	25.9
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2183	1003	3431	809	1010	804
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.47	0.19	0.24	0.47	0.11

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	10	535	37	439	592	26	49	137	449	21	58	6
Future Volume (vph)	10	535	37	439	592	26	49	137	449	21	58	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3463		1755	3586			1822	1555		1806	
Flt Permitted		0.94		0.31	1.00			0.89	1.00		0.89	
Satd. Flow (perm)		3250		571	3586			1635	1555		1622	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	569	39	467	630	28	52	146	478	22	62	6
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	368	0	2	0
Lane Group Flow (vph)	0	615	0	467	655	0	0	198	110	0	88	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		20.0		39.0	39.0			15.3	15.3		15.3	
Effective Green, g (s)		20.0		41.0	39.0			15.3	15.3		15.3	
Actuated g/C Ratio		0.30		0.62	0.59			0.23	0.23		0.23	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		980		656	2109			377	358		374	
v/s Ratio Prot				c0.18	0.18							
v/s Ratio Perm		c0.19		0.26				c0.12	0.07		0.05	
v/c Ratio		0.63		0.71	0.31			0.53	0.31		0.23	
Uniform Delay, d1		19.9		7.3	6.9			22.3	21.1		20.7	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.3		3.7	0.1			1.3	0.5		0.3	
Delay (s)		21.2		11.0	7.0			23.6	21.6		21.1	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		21.2			8.6			22.2			21.1	
Approach LOS		C			A			C			C	

Intersection Summary

HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	14.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	677	212	106	347	275	162	186	3192	381	171	1867	587
Future Volume (vph)	677	212	106	347	275	162	186	3192	381	171	1867	587
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.950			0.944				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3303	0	1789	3424	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.226			0.394			0.080			0.088		
Satd. Flow (perm)	434	3303	0	742	3424	0	152	5043	1633	169	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		65			69				151			352
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1007.8			440.4			855.3				282.2
Travel Time (s)		51.8			22.6			38.5				12.7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	698	219	109	358	284	167	192	3291	393	176	1925	605
Shared Lane Traffic (%)												
Lane Group Flow (vph)	698	328	0	358	451	0	192	3291	393	176	1925	605
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1		6

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	29.0		24.0	29.0		19.0	57.0	57.0	10.0	48.0	48.0
Total Split (%)	20.0%	24.2%		20.0%	24.2%		15.8%	47.5%	47.5%	8.3%	40.0%	40.0%
Maximum Green (s)	20.0	23.0		20.0	23.0		13.0	51.0	51.0	4.0	42.0	42.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	44.4	20.8		39.2	20.0		63.1	53.1	51.1	51.8	45.7	43.7
Actuated g/C Ratio	0.39	0.18		0.34	0.17		0.55	0.46	0.44	0.45	0.40	0.38
v/c Ratio	1.61	0.51		0.84	0.69		0.70	1.42	0.49	1.09	1.01	0.75
Control Delay	310.4	36.7		46.4	43.5		37.8	217.6	16.2	122.3	57.6	20.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	310.4	36.7		46.4	43.5		37.8	217.6	16.2	122.3	57.6	20.0
LOS	F	D		D	D		D	F	B	F	E	B
Approach Delay		222.9			44.8			188.3			53.4	
Approach LOS		F			D			F			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 115.1
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.61
 Intersection Signal Delay: 135.3
 Intersection Capacity Utilization 134.8%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service H

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	698	328	358	451	192	3291	393	176	1925	605
v/c Ratio	1.61	0.51	0.84	0.69	0.70	1.42	0.49	1.09	1.01	0.75
Control Delay	310.4	36.7	46.4	43.5	37.8	217.6	16.2	122.3	57.6	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	310.4	36.7	46.4	43.5	37.8	217.6	16.2	122.3	57.6	20.0
Queue Length 50th (m)	~208.3	28.4	61.4	43.0	25.5	~366.6	36.7	~29.5	~172.3	51.7
Queue Length 95th (m)	#285.4	42.5	#95.9	60.0	52.5	#415.2	67.9	#78.0	#216.4	106.7
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	433	769	439	798	299	2324	808	162	1912	803
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.61	0.43	0.82	0.57	0.64	1.42	0.49	1.09	1.01	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	677	212	106	347	275	162	186	3192	381	171	1867	587
Future Volume (vph)	677	212	106	347	275	162	186	3192	381	171	1867	587
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3303		1789	3426		1807	5043	1633	1825	4812	1541
Flt Permitted	0.23	1.00		0.39	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	434	3303		742	3426		153	5043	1633	168	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	698	219	109	358	284	167	192	3291	393	176	1925	605
RTOR Reduction (vph)	0	53	0	0	57	0	0	0	84	0	0	218
Lane Group Flow (vph)	698	275	0	358	394	0	192	3291	309	176	1925	387
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	38.8	18.8		37.2	18.0		61.0	51.0	51.0	47.7	43.7	43.7
Effective Green, g (s)	42.8	20.8		37.2	20.0		63.0	53.0	51.0	51.7	45.7	43.7
Actuated g/C Ratio	0.37	0.18		0.32	0.17		0.55	0.46	0.44	0.45	0.40	0.38
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	427	597		414	595		275	2324	724	161	1912	585
v/s Ratio Prot	c0.31	0.08		0.14	0.12		0.08	c0.65		c0.06	0.40	
v/s Ratio Perm	0.29			c0.14			0.30		0.19	0.43		0.25
v/c Ratio	1.63	0.46		0.86	0.66		0.70	1.42	0.43	1.09	1.01	0.66
Uniform Delay, d1	30.6	42.1		33.2	44.3		28.2	31.0	22.0	27.9	34.6	29.5
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	296.1	0.6		16.9	2.8		7.5	189.8	1.8	98.0	22.2	5.8
Delay (s)	326.7	42.6		50.0	47.1		35.7	220.8	23.8	125.9	56.9	35.3
Level of Service	F	D		D	D		D	F	C	F	E	D
Approach Delay (s)		235.9			48.4			191.7			56.6	
Approach LOS		F			D			F			E	
Intersection Summary												
HCM 2000 Control Delay	139.9			HCM 2000 Level of Service				F				
HCM 2000 Volume to Capacity ratio	1.34											
Actuated Cycle Length (s)	115.0			Sum of lost time (s)				16.0				
Intersection Capacity Utilization	134.8%			ICU Level of Service				H				
Analysis Period (min)	15											
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30
Future Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.984			0.956			0.983	
Flt Protected		0.997		0.950				0.997			0.992	
Satd. Flow (prot)	0	5042	0	1825	5026	0	0	1791	0	0	1834	0
Flt Permitted		0.852		0.238				0.965			0.835	
Satd. Flow (perm)	0	4309	0	457	5026	0	0	1733	0	0	1543	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			21			30			9	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	47	767	55	202	722	85	37	332	180	40	189	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	869	0	202	807	0	0	549	0	0	262	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

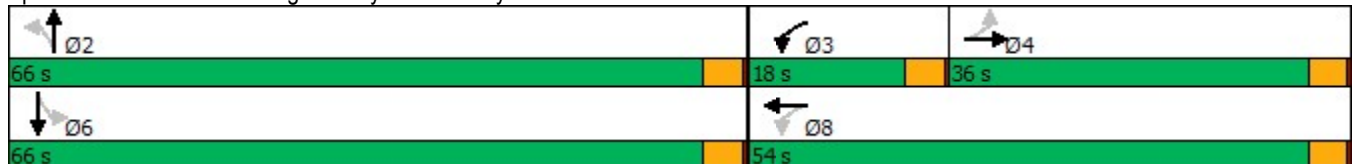


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		18.0	54.0		66.0	66.0		66.0	66.0	
Total Split (%)	30.0%	30.0%		15.0%	45.0%		55.0%	55.0%		55.0%	55.0%	
Maximum Green (s)	32.0	32.0		14.0	50.0		62.0	62.0		62.0	62.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		36.1		52.5	50.5			32.6			32.6	
Actuated g/C Ratio		0.40		0.58	0.55			0.36			0.36	
v/c Ratio		0.51		0.45	0.29			0.86			0.47	
Control Delay		24.0		14.6	12.1			39.3			24.0	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		24.0		14.6	12.1			39.3			24.0	
LOS		C		B	B			D			C	
Approach Delay		24.0			12.6			39.3			24.0	
Approach LOS		C			B			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	91.2
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	22.8
Intersection LOS:	C
Intersection Capacity Utilization:	71.9%
ICU Level of Service:	C
Analysis Period (min):	15

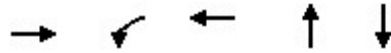
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	869	202	807	549	262
v/c Ratio	0.51	0.45	0.29	0.86	0.47
Control Delay	24.0	14.6	12.1	39.3	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	14.6	12.1	39.3	24.0
Queue Length 50th (m)	40.1	15.4	24.5	82.9	33.3
Queue Length 95th (m)	70.2	36.4	44.6	122.3	53.2
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1713	505	2791	1198	1061
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.51	0.40	0.29	0.46	0.25

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔		↔	↔↔↔			↔			↔	
Traffic Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30
Future Volume (vph)	43	706	51	186	664	78	34	305	166	37	174	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frbp, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.98			0.96			0.98	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		5041		1825	5027			1790			1835	
Flt Permitted		0.85		0.24	1.00			0.96			0.83	
Satd. Flow (perm)		4306		457	5027			1732			1543	
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)	47	767	55	202	722	85	37	332	180	40	189	33
RTOR Reduction (vph)	0	5	0	0	9	0	0	19	0	0	6	0
Lane Group Flow (vph)	0	864	0	202	798	0	0	530	0	0	256	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.2		50.5	50.5			32.6			32.6	
Effective Green, g (s)		36.2		52.5	50.5			32.6			32.6	
Actuated g/C Ratio		0.40		0.58	0.55			0.36			0.36	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1711		448	2786			619			552	
v/s Ratio Prot				c0.06	0.16							
v/s Ratio Perm		c0.20		0.20				c0.31			0.17	
v/c Ratio		0.50		0.45	0.29			0.86			0.46	
Uniform Delay, d1		20.7		10.0	10.8			27.1			22.5	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.1		0.7	0.3			11.2			0.6	
Delay (s)		21.8		10.7	11.0			38.3			23.1	
Level of Service		C		B	B			D			C	
Approach Delay (s)		21.8			11.0			38.3			23.1	
Approach LOS		C			B			D			C	
Intersection Summary												
HCM 2000 Control Delay			21.2			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			91.1			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			71.9%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Future Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.967			0.968			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4881	0	1825	3484	0	1738	3385	0
Flt Permitted	0.117			0.179			0.542			0.192		
Satd. Flow (perm)	214	5036	0	331	4881	0	1041	3484	0	351	3385	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			64			29			49	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	48	923	76	119	1086	307	130	454	123	222	257	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	999	0	119	1393	0	130	577	0	222	350	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

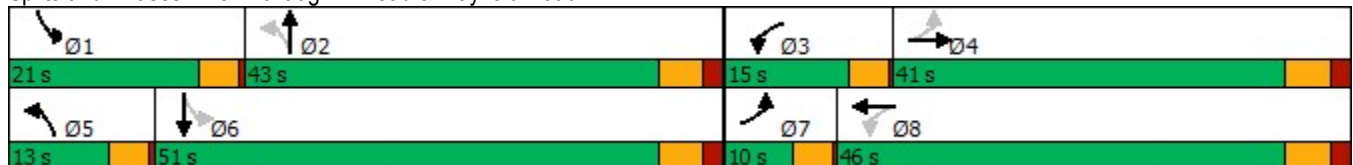


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	10.0	41.0		15.0	46.0		13.0	43.0		21.0	51.0	
Total Split (%)	8.3%	34.2%		12.5%	38.3%		10.8%	35.8%		17.5%	42.5%	
Maximum Green (s)	6.0	35.0		11.0	40.0		9.0	37.0		17.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.4	36.4		50.7	41.6		32.1	21.5		40.7	26.5	
Actuated g/C Ratio	0.44	0.36		0.50	0.41		0.32	0.21		0.40	0.26	
v/c Ratio	0.26	0.55		0.41	0.68		0.33	0.75		0.67	0.38	
Control Delay	18.7	28.0		19.1	26.7		21.4	42.2		30.5	26.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.7	28.0		19.1	26.7		21.4	42.2		30.5	26.6	
LOS	B	C		B	C		C	D		C	C	
Approach Delay		27.5			26.1			38.4			28.1	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	100.6
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	29.1
Intersection LOS:	C
Intersection Capacity Utilization:	74.4%
ICU Level of Service:	D
Analysis Period (min):	15

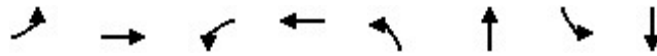
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	48	999	119	1393	130	577	222	350
v/c Ratio	0.26	0.55	0.41	0.68	0.33	0.75	0.67	0.38
Control Delay	18.7	28.0	19.1	26.7	21.4	42.2	30.5	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	28.0	19.1	26.7	21.4	42.2	30.5	26.6
Queue Length 50th (m)	4.6	56.4	11.9	80.3	16.0	53.9	29.0	25.3
Queue Length 95th (m)	12.3	82.0	25.5	112.2	27.3	74.4	45.6	37.4
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	186	1829	325	2056	407	1310	380	1553
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.55	0.37	0.68	0.32	0.44	0.58	0.23

Intersection Summary

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑↑		↘	↑↑	
Traffic Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Future Volume (vph)	46	886	73	114	1043	295	125	436	118	213	247	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5034		1755	4881		1825	3484		1738	3385	
Flt Permitted	0.12	1.00		0.18	1.00		0.54	1.00		0.19	1.00	
Satd. Flow (perm)	213	5034		331	4881		1041	3484		352	3385	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	48	923	76	119	1086	307	130	454	123	222	257	93
RTOR Reduction (vph)	0	7	0	0	38	0	0	23	0	0	36	0
Lane Group Flow (vph)	48	992	0	119	1355	0	130	554	0	222	314	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.9	37.3		50.2	41.6		30.1	21.5		39.2	26.6	
Effective Green, g (s)	41.9	37.3		50.2	41.6		30.1	21.5		39.2	26.6	
Actuated g/C Ratio	0.41	0.37		0.50	0.41		0.30	0.21		0.39	0.26	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	1851		288	2002		375	738		323	887	
v/s Ratio Prot	0.01	0.20		c0.04	c0.28		0.03	0.16		c0.09	0.09	
v/s Ratio Perm	0.11			0.17			0.07			c0.17		
v/c Ratio	0.31	0.54		0.41	0.68		0.35	0.75		0.69	0.35	
Uniform Delay, d1	19.0	25.2		15.2	24.4		27.0	37.4		23.3	30.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.1		1.0	1.9		0.6	4.3		6.0	0.2	
Delay (s)	20.1	26.4		16.2	26.3		27.5	41.8		29.2	30.7	
Level of Service	C	C		B	C		C	D		C	C	
Approach Delay (s)		26.1			25.5			39.1			30.1	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	101.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Future Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.154			0.950			0.176			0.259		
Satd. Flow (perm)	284	4995	1538	3339	5092	1562	331	3614	1486	494	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			152			241			539
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	37.0	40.0	40.0	25.0	28.0	28.0	18.0	54.0	54.0	16.0	52.0	52.0
Total Split (%)	27.4%	29.6%	29.6%	18.5%	20.7%	20.7%	13.3%	40.0%	40.0%	11.9%	38.5%	38.5%
Maximum Green (s)	32.0	33.0	33.0	20.0	21.0	21.0	14.0	47.0	47.0	12.0	45.0	45.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

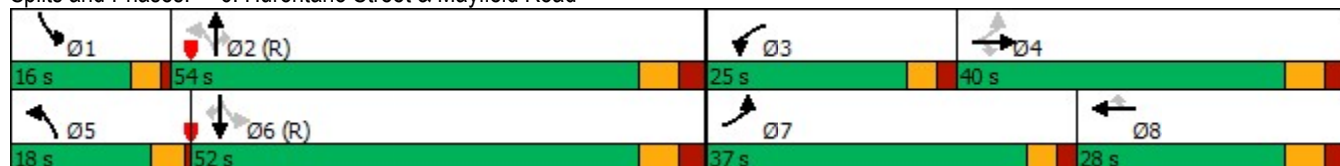


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	62.0	33.0	33.0	20.0	21.0	21.0	68.0	47.0	47.0	64.0	45.0	47.0
Actuated g/C Ratio	0.46	0.24	0.24	0.15	0.16	0.16	0.50	0.35	0.35	0.47	0.33	0.35
v/c Ratio	1.36	0.52	0.25	0.57	1.04	0.48	0.65	0.58	0.40	0.66	0.71	1.08
Control Delay	207.8	45.9	8.3	58.4	97.9	15.9	28.5	38.1	7.5	28.8	43.2	73.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.8	45.9	8.3	58.4	97.9	15.9	28.5	38.1	7.5	28.8	43.2	73.1
LOS	F	D	A	E	F	B	C	D	A	C	D	E
Approach Delay		120.3			77.8			29.5			55.6	
Approach LOS		F			E			C			E	

Intersection Summary

Area Type: Other
 Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 120
 Control Type: Pretimed
 Maximum v/c Ratio: 1.36
 Intersection Signal Delay: 70.5
 Intersection LOS: E
 Intersection Capacity Utilization 104.4%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
v/c Ratio	1.36	0.52	0.25	0.57	1.04	0.48	0.65	0.58	0.40	0.66	0.71	1.08
Control Delay	207.8	45.9	8.3	58.4	97.9	15.9	28.5	38.1	7.5	28.8	43.2	73.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.8	45.9	8.3	58.4	97.9	15.9	28.5	38.1	7.5	28.8	43.2	73.1
Queue Length 50th (m)	~223.0	53.5	0.0	36.9	~86.9	5.8	32.3	82.5	5.5	36.5	100.8	~186.3
Queue Length 95th (m)	#297.1	66.5	14.9	51.4	#114.7	27.5	48.4	102.5	25.9	53.9	123.9	#265.5
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	500	1221	461	504	792	371	339	1258	674	372	1170	892
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.36	0.52	0.25	0.57	1.04	0.48	0.65	0.58	0.40	0.66	0.71	1.08

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Future Volume (vph)	661	612	110	276	800	172	213	702	264	238	801	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1822	3510	1555
Flt Permitted	0.15	1.00	1.00	0.95	1.00	1.00	0.18	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	284	4995	1538	3404	5092	1562	332	3614	1486	497	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	681	631	113	285	825	177	220	724	272	245	826	963
RTOR Reduction (vph)	0	0	85	0	0	128	0	0	157	0	0	351
Lane Group Flow (vph)	681	631	28	285	825	49	220	724	115	245	826	612
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	33.0	33.0	20.0	21.0	21.0	61.0	47.0	47.0	57.0	45.0	45.0
Effective Green, g (s)	60.0	33.0	33.0	20.0	21.0	21.0	65.0	47.0	47.0	61.0	45.0	47.0
Actuated g/C Ratio	0.44	0.24	0.24	0.15	0.16	0.16	0.48	0.35	0.35	0.45	0.33	0.35
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	496	1221	375	504	792	242	332	1258	517	361	1170	541
v/s Ratio Prot	c0.35	0.13		0.08	0.16		c0.08	0.20		c0.07	0.24	
v/s Ratio Perm	c0.26		0.02			0.03	0.24		0.08	0.24		c0.39
v/c Ratio	1.37	0.52	0.07	0.57	1.04	0.20	0.66	0.58	0.22	0.68	0.71	1.13
Uniform Delay, d1	39.9	44.1	39.2	53.5	57.0	49.7	23.8	35.9	31.1	24.6	39.2	44.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	180.3	1.6	0.4	4.5	43.3	1.9	10.0	1.9	1.0	9.9	3.6	79.9
Delay (s)	220.2	45.7	39.6	58.0	100.3	51.5	33.8	37.8	32.1	34.5	42.8	123.9
Level of Service	F	D	D	E	F	D	C	D	C	C	D	F
Approach Delay (s)		128.6			84.3			35.8			80.2	
Approach LOS		F			F			D			F	
Intersection Summary												
HCM 2000 Control Delay			83.6				HCM 2000 Level of Service		F			
HCM 2000 Volume to Capacity ratio			1.27									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)		21.0			
Intersection Capacity Utilization			104.4%				ICU Level of Service		G			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	270	9	206	230	49	20	229	330	42	209	9
Future Volume (vph)	2	270	9	206	230	49	20	229	330	42	209	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.974				0.850		0.995	
Flt Protected				0.950				0.996			0.992	
Satd. Flow (prot)	0	1912	0	1772	1810	0	0	1829	1585	0	1789	0
Flt Permitted		0.998		0.575				0.968			0.924	
Satd. Flow (perm)	0	1908	0	1072	1810	0	0	1778	1585	0	1667	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			32				351			6
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	287	10	219	245	52	21	244	351	45	222	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	299	0	219	297	0	0	265	351	0	277	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

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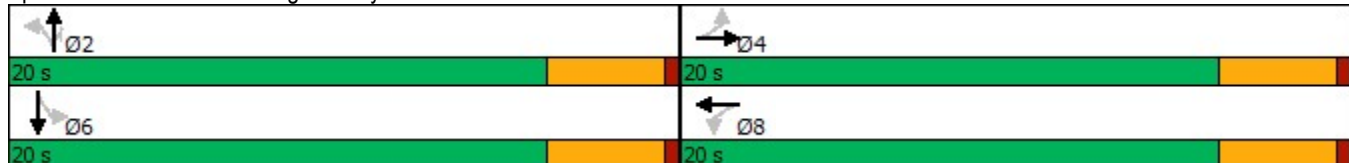


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		11.8		11.8	11.8			16.4	16.4		16.4	
Actuated g/C Ratio		0.33		0.33	0.33			0.45	0.45		0.45	
v/c Ratio		0.48		0.63	0.49			0.33	0.39		0.37	
Control Delay		12.0		18.8	11.2			9.0	2.8		9.3	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		12.0		18.8	11.2			9.0	2.8		9.3	
LOS		B		B	B			A	A		A	
Approach Delay		12.0			14.4			5.5			9.3	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 36.3
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 9.9
 Intersection Capacity Utilization 70.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

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Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	299	219	297	265	351	277
v/c Ratio	0.48	0.63	0.49	0.33	0.39	0.37
Control Delay	12.0	18.8	11.2	9.0	2.8	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	18.8	11.2	9.0	2.8	9.3
Queue Length 50th (m)	13.2	10.5	11.8	9.3	0.0	9.6
Queue Length 95th (m)	26.3	24.8	24.7	24.1	10.2	25.4
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					50.0	
Base Capacity (vph)	851	476	823	803	908	756
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.46	0.36	0.33	0.39	0.37
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	270	9	206	230	49	20	229	330	42	209	9	
Future Volume (vph)	2	270	9	206	230	49	20	229	330	42	209	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1912		1772	1809			1829	1585		1789		
Flt Permitted		1.00		0.57	1.00			0.97	1.00		0.92		
Satd. Flow (perm)		1908		1072	1809			1777	1585		1667		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	287	10	219	245	52	21	244	351	45	222	10	
RTOR Reduction (vph)	0	3	0	0	22	0	0	0	192	0	3	0	
Lane Group Flow (vph)	0	296	0	219	275	0	0	265	159	0	274	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6			
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		11.8		11.8	11.8			16.4	16.4		16.4		
Effective Green, g (s)		11.8		11.8	11.8			16.4	16.4		16.4		
Actuated g/C Ratio		0.33		0.33	0.33			0.45	0.45		0.45		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		621		349	589			805	718		755		
v/s Ratio Prot					0.15								
v/s Ratio Perm		0.15		c0.20				0.15	0.10		c0.16		
v/c Ratio		0.48		0.63	0.47			0.33	0.22		0.36		
Uniform Delay, d1		9.7		10.3	9.7			6.4	6.0		6.5		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.6		3.5	0.6			1.1	0.7		1.3		
Delay (s)		10.3		13.8	10.3			7.5	6.7		7.8		
Level of Service		B		B	B			A	A		A		
Approach Delay (s)		10.3			11.8			7.0			7.8		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			9.2									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.47										
Actuated Cycle Length (s)			36.2									Sum of lost time (s)	8.0
Intersection Capacity Utilization			70.3%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↖	↕↕			↕	↗		↕↔	
Traffic Volume (vph)	40	786	40	282	421	41	40	105	451	53	143	28
Future Volume (vph)	40	786	40	282	421	41	40	105	451	53	143	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.987				0.850		0.983	
Flt Protected		0.998		0.950				0.986			0.988	
Satd. Flow (prot)	0	3562	0	1789	3477	0	0	1867	1617	0	1830	0
Flt Permitted		0.905		0.167				0.830			0.877	
Satd. Flow (perm)	0	3230	0	315	3477	0	0	1572	1617	0	1624	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			18				393			7
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	43	836	43	300	448	44	43	112	480	56	152	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	922	0	300	492	0	0	155	480	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

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	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		27.1		45.5	43.3			16.5	16.5		16.5	
Actuated g/C Ratio		0.37		0.63	0.60			0.23	0.23		0.23	
v/c Ratio		0.76		0.68	0.24			0.43	0.72		0.64	
Control Delay		25.6		18.5	7.2			30.4	12.9		34.8	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		25.6		18.5	7.2			30.4	12.9		34.8	
LOS		C		B	A			C	B		C	
Approach Delay		25.6			11.5			17.2			34.8	
Approach LOS		C			B			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 72.6
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 20.1
 Intersection Capacity Utilization 79.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	922	300	492	155	480	238
v/c Ratio	0.76	0.68	0.24	0.43	0.72	0.64
Control Delay	25.6	18.5	7.2	30.4	12.9	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	18.5	7.2	30.4	12.9	34.8
Queue Length 50th (m)	53.2	15.3	13.4	17.7	9.5	27.8
Queue Length 95th (m)	101.7	49.9	27.9	41.0	44.6	60.5
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1752	585	2862	667	912	693
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.51	0.17	0.23	0.53	0.34

Intersection Summary























HCM Signalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	40	786	40	282	421	41	40	105	451	53	143	28	
Future Volume (vph)	40	786	40	282	421	41	40	105	451	53	143	28	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.98		
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99		
Satd. Flow (prot)		3561		1789	3475			1868	1617		1830		
Flt Permitted		0.91		0.17	1.00			0.83	1.00		0.88		
Satd. Flow (perm)		3230		314	3475			1571	1617		1624		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	43	836	43	300	448	44	43	112	480	56	152	30	
RTOR Reduction (vph)	0	4	0	0	7	0	0	0	303	0	5	0	
Lane Group Flow (vph)	0	918	0	300	485	0	0	155	177	0	233	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		27.3		43.3	43.3			16.5	16.5		16.5		
Effective Green, g (s)		27.3		43.3	43.3			16.5	16.5		16.5		
Actuated g/C Ratio		0.38		0.60	0.60			0.23	0.23		0.23		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1228		435	2095			361	371		373		
v/s Ratio Prot				c0.12	0.14								
v/s Ratio Perm		0.28		c0.30				0.10	0.11		c0.14		
v/c Ratio		0.75		0.69	0.23			0.43	0.48		0.62		
Uniform Delay, d1		19.3		9.8	6.6			23.6	23.9		24.9		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		2.5		4.5	0.1			0.8	1.0		3.2		
Delay (s)		21.8		14.3	6.6			24.4	24.9		28.1		
Level of Service		C		B	A			C	C		C		
Approach Delay (s)		21.8			9.5			24.8			28.1		
Approach LOS		C			A			C			C		
Intersection Summary													
HCM 2000 Control Delay			19.4									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			71.8									Sum of lost time (s)	16.0
Intersection Capacity Utilization			79.2%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	617	225	520	331	181	150	136	1940	162	74	2545	322
Future Volume (vph)	617	225	520	331	181	150	136	1940	162	74	2545	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.895			0.932				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3206	0	1722	3268	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.375			0.222			0.067			0.069		
Satd. Flow (perm)	693	3206	0	402	3268	0	121	4445	1471	117	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			11				130			173
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	663	242	559	356	195	161	146	2086	174	80	2737	346
Shared Lane Traffic (%)												
Lane Group Flow (vph)	663	801	0	356	356	0	146	2086	174	80	2737	346
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	33.0		15.0	24.0		8.0	72.0	72.0	64.0	64.0	64.0
Total Split (%)	20.0%	27.5%		12.5%	20.0%		6.7%	60.0%	60.0%	53.3%	53.3%	53.3%
Maximum Green (s)	20.0	25.0		11.0	16.0		4.0	64.0	64.0	56.0	56.0	56.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	46.0	27.0		35.0	16.0		70.0	64.0	64.0	58.0	58.0	56.0
Actuated g/C Ratio	0.38	0.22		0.29	0.13		0.58	0.53	0.53	0.48	0.48	0.47
v/c Ratio	1.44	1.34dr		1.37	0.80		0.97	0.88	0.21	1.43	1.12	0.41
Control Delay	238.7	83.3		216.1	63.3		90.8	30.2	4.9	298.8	91.9	11.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	238.7	83.3		216.1	63.3		90.8	30.2	4.9	298.8	91.9	11.5
LOS	F	F		F	E		F	C	A	F	F	B
Approach Delay		153.7			139.7			32.0				88.3
Approach LOS		F			F			C				F

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 120
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.44
 Intersection Signal Delay: 87.9 Intersection LOS: F
 Intersection Capacity Utilization 119.0% ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	663	801	356	356	146	2086	174	80	2737	346
v/c Ratio	1.44	1.34dr	1.37	0.80	0.97	0.88	0.21	1.43	1.12	0.41
Control Delay	238.7	83.3	216.1	63.3	90.8	30.2	4.9	298.8	91.9	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	238.7	83.3	216.1	63.3	90.8	30.2	4.9	298.8	91.9	11.5
Queue Length 50th (m)	~176.6	~99.6	~91.4	42.1	18.5	152.0	4.8	~25.4	~272.4	24.1
Queue Length 95th (m)	#249.9	#138.7	#151.1	#63.4	#60.1	175.8	15.6	#44.6	#299.4	46.5
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	460	774	260	445	150	2370	845	56	2437	854
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.44	1.03	1.37	0.80	0.97	0.88	0.21	1.43	1.12	0.41

































Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis


















3: Hurontario Street & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 			   		 	   	 	
Traffic Volume (vph)	617	225	520	331	181	150	136	1940	162	74	2545	322	
Future Volume (vph)	617	225	520	331	181	150	136	1940	162	74	2545	322	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.90		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	3207		1722	3269		1722	4445	1471	1615	5043	1633	
Flt Permitted	0.37	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	693	3207		403	3269		121	4445	1471	117	5043	1633	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	663	242	559	356	195	161	146	2086	174	80	2737	346	
RTOR Reduction (vph)	0	53	0	0	10	0	0	0	61	0	0	92	
Lane Group Flow (vph)	663	748	0	356	346	0	146	2086	113	80	2737	254	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8		5	2			6		
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	40.0	25.0		27.0	16.0		64.0	64.0	64.0	56.0	56.0	56.0	
Effective Green, g (s)	42.0	27.0		31.0	16.0		66.0	64.0	64.0	58.0	58.0	56.0	
Actuated g/C Ratio	0.35	0.22		0.26	0.13		0.55	0.53	0.53	0.48	0.48	0.47	
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0	
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)	437	721		247	435		146	2370	784	56	2437	762	
v/s Ratio Prot	c0.28	0.23		0.16	0.11		c0.05	0.47			0.54		
v/s Ratio Perm	0.25			c0.22			0.50		0.08	c0.68		0.16	
v/c Ratio	1.52	1.34dr		1.44	0.80		1.00	0.88	0.14	1.43	1.12	0.33	
Uniform Delay, d1	35.3	46.5		40.9	50.4		32.6	24.6	14.2	31.0	31.0	20.2	
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	244.2	43.4		220.1	9.7		74.5	4.2	0.1	269.5	61.5	0.3	
Delay (s)	279.6	89.9		261.0	60.2		107.1	28.8	14.2	300.5	92.5	20.5	
Level of Service	F	F		F	E		F	C	B	F	F	C	
Approach Delay (s)		175.8			160.6			32.5			89.9		
Approach LOS		F			F			C			F		
Intersection Summary													
HCM 2000 Control Delay			94.8									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.43										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	18.0
Intersection Capacity Utilization			119.0%									ICU Level of Service	H
Analysis Period (min)			15										
dr Defacto Right Lane. Recode with 1 though lane as a right lane.													
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	684	50	184	591	28	25	283	157	99	410	39
Future Volume (vph)	45	684	50	184	591	28	25	283	157	99	410	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.993			0.954			0.990	
Flt Protected		0.997		0.950				0.997			0.991	
Satd. Flow (prot)	0	4862	0	1659	4935	0	0	1758	0	0	1798	0
Flt Permitted		0.865		0.237				0.961			0.768	
Satd. Flow (perm)	0	4218	0	414	4935	0	0	1695	0	0	1394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			32			5	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	45	691	51	186	597	28	25	286	159	100	414	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	787	0	186	625	0	0	470	0	0	553	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

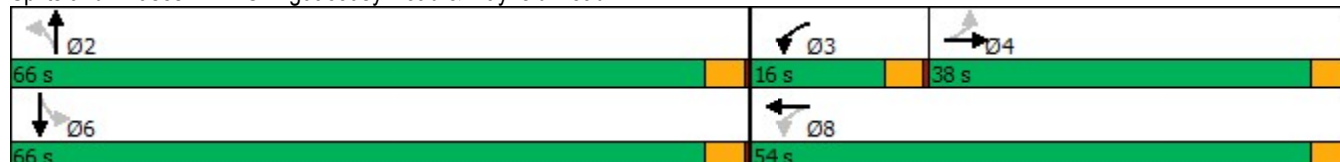


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	38.0	38.0		16.0	54.0		66.0	66.0		66.0	66.0	
Total Split (%)	31.7%	31.7%		13.3%	45.0%		55.0%	55.0%		55.0%	55.0%	
Maximum Green (s)	34.0	34.0		12.0	50.0		62.0	62.0		62.0	62.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		36.0		50.7	50.7			42.2			42.2	
Actuated g/C Ratio		0.36		0.50	0.50			0.42			0.42	
v/c Ratio		0.52		0.55	0.25			0.65			0.95	
Control Delay		29.4		23.9	16.3			25.4			53.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		29.4		23.9	16.3			25.4			53.8	
LOS		C		C	B			C			D	
Approach Delay		29.4			18.1			25.4			53.8	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 101
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 30.3
 Intersection LOS: C
 Intersection Capacity Utilization 95.9%
 ICU Level of Service F
 Analysis Period (min) 15

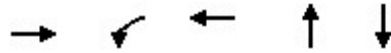
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	787	186	625	470	553
v/c Ratio	0.52	0.55	0.25	0.65	0.95
Control Delay	29.4	23.9	16.3	25.4	53.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	23.9	16.3	25.4	53.8
Queue Length 50th (m)	43.8	19.2	23.6	66.0	99.6
Queue Length 95th (m)	73.6	45.2	44.3	95.8	148.4
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1510	358	2481	1067	869
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.52	0.25	0.44	0.64

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔		↔	↔↔↔			↔			↔	
Traffic Volume (vph)	45	684	50	184	591	28	25	283	157	99	410	39
Future Volume (vph)	45	684	50	184	591	28	25	283	157	99	410	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frt		0.99		1.00	0.99			0.95			0.99	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		4864		1659	4936			1759			1799	
Flt Permitted		0.87		0.24	1.00			0.96			0.77	
Satd. Flow (perm)		4222		413	4936			1695			1394	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	45	691	51	186	597	28	25	286	159	100	414	39
RTOR Reduction (vph)	0	6	0	0	3	0	0	19	0	0	3	0
Lane Group Flow (vph)	0	781	0	186	622	0	0	451	0	0	550	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.1		50.7	50.7			42.2			42.2	
Effective Green, g (s)		36.1		50.7	50.7			42.2			42.2	
Actuated g/C Ratio		0.36		0.50	0.50			0.42			0.42	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1510		338	2480			708			583	
v/s Ratio Prot				c0.06	0.13							
v/s Ratio Perm		0.19		c0.22				0.27			c0.39	
v/c Ratio		0.52		0.55	0.25			0.64			0.94	
Uniform Delay, d1		25.5		15.2	14.3			23.3			28.2	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.3		1.9	0.2			1.9			24.0	
Delay (s)		26.8		17.1	14.5			25.2			52.2	
Level of Service		C		B	B			C			D	
Approach Delay (s)		26.8			15.1			25.2			52.2	
Approach LOS		C			B			C			D	

Intersection Summary

HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	938	116	129	732	132	51	354	97	339	602	125
Future Volume (vph)	41	938	116	129	732	132	51	354	97	339	602	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.977			0.968			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4745	0	1644	3449	0	1690	3439	0
Flt Permitted	0.310			0.117			0.370			0.282		
Satd. Flow (perm)	596	4889	0	210	4745	0	640	3449	0	502	3439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			38			27			27	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	42	957	118	132	747	135	52	361	99	346	614	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	1075	0	132	882	0	52	460	0	346	742	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		16.0	58.0		32.0	32.0		30.0	62.0	
Total Split (%)	35.0%	35.0%		13.3%	48.3%		26.7%	26.7%		25.0%	51.7%	
Maximum Green (s)	36.0	36.0		12.0	52.0		26.0	26.0		26.0	56.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		54.0	52.0		26.0	26.0		58.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.45	0.43		0.22	0.22		0.48	0.47	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

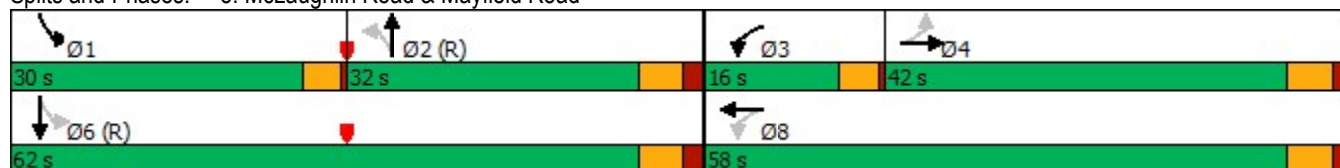


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.24	0.73		0.54	0.42		0.38	0.60		0.69	0.46	
Control Delay	36.1	40.3		28.5	23.3		49.5	43.5		28.2	22.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.1	40.3		28.5	23.3		49.5	43.5		28.2	22.0	
LOS	D	D		C	C		D	D		C	C	
Approach Delay		40.2			23.9			44.1			24.0	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	31.6
Intersection LOS:	C
Intersection Capacity Utilization	76.2%
ICU Level of Service	D
Analysis Period (min)	15

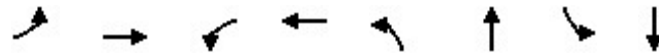
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	42	1075	132	882	52	460	346	742
v/c Ratio	0.24	0.73	0.54	0.42	0.38	0.60	0.69	0.46
Control Delay	36.1	40.3	28.5	23.3	49.5	43.5	28.2	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	40.3	28.5	23.3	49.5	43.5	28.2	22.0
Queue Length 50th (m)	7.5	81.5	18.1	49.5	10.5	48.6	51.5	58.5
Queue Length 95th (m)	17.5	97.9	30.9	60.9	23.3	65.9	75.4	74.5
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	178	1479	244	2077	138	768	500	1619
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.73	0.54	0.42	0.38	0.60	0.69	0.46

Intersection Summary

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024




































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	41	938	116	129	732	132	51	354	97	339	602	125
Future Volume (vph)	41	938	116	129	732	132	51	354	97	339	602	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4887		1706	4745		1644	3448		1690	3439	
Flt Permitted	0.31	1.00		0.12	1.00		0.37	1.00		0.28	1.00	
Satd. Flow (perm)	596	4887		210	4745		640	3448		502	3439	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	42	957	118	132	747	135	52	361	99	346	614	128
RTOR Reduction (vph)	0	13	0	0	22	0	0	21	0	0	14	0
Lane Group Flow (vph)	42	1062	0	132	860	0	52	439	0	346	728	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Effective Green, g (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.43	0.43		0.22	0.22		0.47	0.47	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	178	1466		240	2056		138	747		491	1604	
v/s Ratio Prot		c0.22		c0.05	0.18			0.13		c0.15	0.21	
v/s Ratio Perm	0.07			0.18			0.08			c0.18		
v/c Ratio	0.24	0.72		0.55	0.42		0.38	0.59		0.70	0.45	
Uniform Delay, d1	31.6	37.6		23.6	23.5		40.1	42.2		22.6	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	3.2		8.8	0.6		7.7	3.4		8.2	0.9	
Delay (s)	34.7	40.7		32.4	24.2		47.8	45.6		30.8	22.6	
Level of Service	C	D		C	C		D	D		C	C	
Approach Delay (s)		40.5			25.2			45.8			25.2	
Approach LOS		D			C			D			C	

Intersection Summary		
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.71	
Actuated Cycle Length (s)	120.0	Sum of lost time (s) 20.0
Intersection Capacity Utilization	76.2%	ICU Level of Service D
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	
Traffic Volume (vph)	247	954	134	207	595	173	90	487	211	375	1273	330
Future Volume (vph)	247	954	134	207	595	173	90	487	211	375	1273	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00		0.97			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.212			0.950			0.131			0.285		
Satd. Flow (perm)	387	4902	1508	3328	4948	1395	249	3476	1467	512	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			178			208			243
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	263	1015	143	220	633	184	96	518	224	399	1354	351
Shared Lane Traffic (%)												
Lane Group Flow (vph)	263	1015	143	220	633	184	96	518	224	399	1354	351
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.68	0.83	0.31	0.75	0.73	0.47	0.64	0.55	0.41	0.68	0.80	0.40
Control Delay	44.3	63.6	14.0	87.8	68.1	12.5	45.0	53.0	9.5	26.8	40.3	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	63.6	14.0	87.8	68.1	12.5	45.0	53.0	9.5	26.8	40.3	9.2
LOS	D	E	B	F	E	B	D	D	A	C	D	A
Approach Delay		55.0			62.4			40.4			32.6	
Approach LOS		E			E			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	45.4
Intersection LOS:	D
Intersection Capacity Utilization	85.5%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	263	1015	143	220	633	184	96	518	224	399	1354	351
v/c Ratio	0.68	0.83	0.31	0.75	0.73	0.47	0.64	0.55	0.41	0.68	0.80	0.40
Control Delay	44.3	63.6	14.0	87.8	68.1	12.5	45.0	53.0	9.5	26.8	40.3	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	63.6	14.0	87.8	68.1	12.5	45.0	53.0	9.5	26.8	40.3	9.2
Queue Length 50th (m)	59.5	112.8	6.6	35.8	70.6	1.6	13.7	75.1	3.8	70.4	189.9	19.1
Queue Length 95th (m)	84.5	130.6	25.2	#52.9	85.6	24.4	#28.1	94.1	26.0	95.6	219.6	42.8
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	388	1225	464	292	865	390	150	934	546	586	1683	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.83	0.31	0.75	0.73	0.47	0.64	0.55	0.41	0.68	0.80	0.40

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

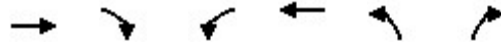
6: Hurontario Street & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	247	954	134	207	595	173	90	487	211	375	1273	330	
Future Volume (vph)	247	954	134	207	595	173	90	487	211	375	1273	330	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1706	3544	1557	
Flt Permitted	0.21	1.00	1.00	0.95	1.00	1.00	0.13	1.00	1.00	0.29	1.00	1.00	
Satd. Flow (perm)	388	4902	1508	3340	4948	1395	248	3476	1467	512	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	263	1015	143	220	633	184	96	518	224	399	1354	351	
RTOR Reduction (vph)	0	0	87	0	0	147	0	0	152	0	0	128	
Lane Group Flow (vph)	263	1015	56	220	633	37	96	518	72	399	1354	223	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	384	1225	377	292	865	244	145	934	394	576	1683	739	
v/s Ratio Prot	c0.12	c0.21		0.07	0.13		0.03	0.15		c0.17	c0.38		
v/s Ratio Perm	0.14		0.04			0.03	0.18		0.05	0.20		0.14	
v/c Ratio	0.68	0.83	0.15	0.75	0.73	0.15	0.66	0.55	0.18	0.69	0.80	0.30	
Uniform Delay, d1	37.3	56.8	46.7	71.3	62.4	55.9	40.9	50.3	45.0	23.7	35.7	25.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.5	6.5	0.8	16.4	5.4	1.3	21.3	2.4	1.0	6.7	4.2	1.1	
Delay (s)	46.8	63.3	47.6	87.7	67.9	57.3	62.2	52.6	46.0	30.4	39.9	26.8	
Level of Service	D	E	D	F	E	E	E	D	D	C	D	C	
Approach Delay (s)		58.7			70.2			52.0			35.9		
Approach LOS		E			E			D			D		
Intersection Summary													
HCM 2000 Control Delay			51.0									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.81										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			85.5%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	623	20	12	438	48	21
Future Volume (vph)	623	20	12	438	48	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.995			0.959		
Fl _t Protected				0.999	0.966	
Satd. Flow (prot)	3561	0	0	3575	1745	0
Fl _t Permitted				0.999	0.966	
Satd. Flow (perm)	3561	0	0	3575	1745	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	623	20	12	438	48	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	643	0	0	450	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	623	20	12	438	48	21
Future Volume (Veh/h)	623	20	12	438	48	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	623	20	12	438	48	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			643		876	322
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			643		876	322
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		83	97
cM capacity (veh/h)			938		285	674
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	415	228	158	292	69	
Volume Left	0	0	12	0	48	
Volume Right	0	20	0	0	21	
cSH	1700	1700	938	1700	345	
Volume to Capacity	0.24	0.13	0.01	0.17	0.20	
Queue Length 95th (m)	0.0	0.0	0.3	0.0	5.6	
Control Delay (s)	0.0	0.0	0.8	0.0	18.0	
Lane LOS	A			C		
Approach Delay (s)	0.0		0.3		18.0	
Approach LOS				C		
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			31.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	387	76	72	138	28	28	575	54	12	500	6
Future Volume (vph)	18	387	76	72	138	28	28	575	54	12	500	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.979			0.984			0.988			0.998	
Fl _t Protected		0.998			0.985			0.998			0.999	
Satd. Flow (prot)	0	1840	0	0	1826	0	0	3529	0	0	3568	0
Fl _t Permitted		0.983			0.665			0.918			0.937	
Satd. Flow (perm)	0	1813	0	0	1232	0	0	3246	0	0	3346	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			11			14			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	387	76	72	138	28	28	575	54	12	500	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	481	0	0	238	0	0	657	0	0	518	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

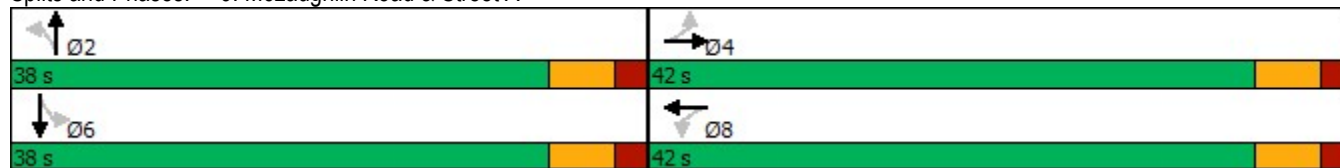


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	42.0	42.0		42.0	42.0		38.0	38.0		38.0	38.0	
Total Split (%)	52.5%	52.5%		52.5%	52.5%		47.5%	47.5%		47.5%	47.5%	
Maximum Green (s)	36.0	36.0		36.0	36.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.6			22.6			32.3			32.3	
Actuated g/C Ratio		0.34			0.34			0.48			0.48	
v/c Ratio		0.77			0.56			0.42			0.32	
Control Delay		28.1			22.3			13.4			12.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		28.1			22.3			13.4			12.6	
LOS		C			C			B			B	
Approach Delay		28.1			22.3			13.4			12.6	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	67.1
Natural Cycle:	45
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	18.0
Intersection LOS:	B
Intersection Capacity Utilization:	91.4%
ICU Level of Service:	F
Analysis Period (min):	15

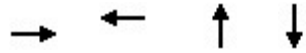
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	481	238	657	518
v/c Ratio	0.77	0.56	0.42	0.32
Control Delay	28.1	22.3	13.4	12.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.1	22.3	13.4	12.6
Queue Length 50th (m)	50.7	22.4	25.6	19.4
Queue Length 95th (m)	79.9	40.8	50.1	38.8
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	989	673	1572	1613
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.49	0.35	0.42	0.32
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	387	76	72	138	28	28	575	54	12	500	6
Future Volume (vph)	18	387	76	72	138	28	28	575	54	12	500	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.98			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1840			1826			3527			3568	
Flt Permitted		0.98			0.67			0.92			0.94	
Satd. Flow (perm)		1812			1233			3245			3346	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	387	76	72	138	28	28	575	54	12	500	6
RTOR Reduction (vph)	0	10	0	0	7	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	471	0	0	231	0	0	650	0	0	517	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)		22.6			22.6			32.3			32.3	
Effective Green, g (s)		22.6			22.6			32.3			32.3	
Actuated g/C Ratio		0.34			0.34			0.48			0.48	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		612			416			1566			1615	
v/s Ratio Prot												
v/s Ratio Perm		c0.26			0.19			c0.20			0.15	
v/c Ratio		0.77			0.55			0.41			0.32	
Uniform Delay, d1		19.8			18.0			11.2			10.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.8			1.6			0.8			0.5	
Delay (s)		25.6			19.7			12.0			11.1	
Level of Service		C			B			B			B	
Approach Delay (s)		25.6			19.7			12.0			11.1	
Approach LOS		C			B			B			B	

Intersection Summary		
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.56	B
Actuated Cycle Length (s)	66.9	Sum of lost time (s)
Intersection Capacity Utilization	91.4%	12.0
Analysis Period (min)	15	ICU Level of Service
		F

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↙↑	↖	↗
Traffic Volume (vph)	1200	19	53	674	39	213
Future Volume (vph)	1200	19	53	674	39	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.998					0.850
Fl _t Protected				0.996	0.950	
Satd. Flow (prot)	3571	0	0	3564	1789	1601
Fl _t Permitted				0.996	0.950	
Satd. Flow (perm)	3571	0	0	3564	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1200	19	53	674	39	213
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1219	0	0	727	39	213
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	67.3%			ICU Level of Service C		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1200	19	53	674	39	213
Future Volume (Veh/h)	1200	19	53	674	39	213
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1200	19	53	674	39	213
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			1219		1652	610
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			871		1389	142
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		62	71
cM capacity (veh/h)			644		103	736
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	800	419	278	449	39	213
Volume Left	0	0	53	0	39	0
Volume Right	0	19	0	0	0	213
cSH	1700	1700	644	1700	103	736
Volume to Capacity	0.47	0.25	0.08	0.26	0.38	0.29
Queue Length 95th (m)	0.0	0.0	2.0	0.0	11.7	9.1
Control Delay (s)	0.0	0.0	3.0	0.0	60.2	11.9
Lane LOS			A		F	B
Approach Delay (s)	0.0		1.1		19.4	
Approach LOS					C	
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			67.3%	ICU Level of Service	C	
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	712	188	2110	3338	59
Future Volume (vph)	128	712	188	2110	3338	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.997	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5126	0
Flt Permitted	0.950		0.048			
Satd. Flow (perm)	1789	1601	90	5142	5126	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					3	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	712	188	2110	3338	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	712	188	2110	3397	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

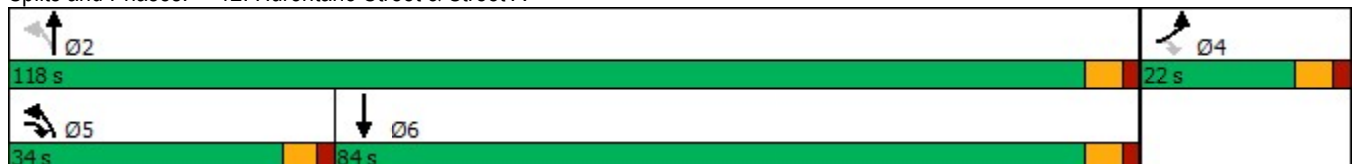


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	9.5	9.5	22.0	22.0	
Total Split (s)	22.0	34.0	34.0	118.0	84.0	
Total Split (%)	15.7%	24.3%	24.3%	84.3%	60.0%	
Maximum Green (s)	16.0	28.5	28.5	112.0	78.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	
Total Lost Time (s)	6.0	3.5	5.5	6.0	4.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	13.8	50.4	112.6	112.1	80.0	
Actuated g/C Ratio	0.10	0.37	0.82	0.81	0.58	
v/c Ratio	0.72	1.22	0.44	0.51	1.14	
Control Delay	81.9	151.7	30.1	4.7	96.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	81.9	151.7	30.1	4.7	96.9	
LOS	F	F	C	A	F	
Approach Delay	141.1			6.8	96.9	
Approach LOS	F			A	F	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	137.9
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.22
Intersection Signal Delay:	70.9
Intersection LOS:	E
Intersection Capacity Utilization	116.6%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	128	712	188	2110	3397
v/c Ratio	0.72	1.22	0.44	0.51	1.14
Control Delay	81.9	151.7	30.1	4.7	96.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	81.9	151.7	30.1	4.7	96.9
Queue Length 50th (m)	34.3	~236.8	28.6	58.6	~403.5
Queue Length 95th (m)	56.1	#311.2	52.6	67.7	#428.6
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	207	584	424	4178	2976
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	1.22	0.44	0.51	1.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	712	188	2110	3338	59
Future Volume (vph)	128	712	188	2110	3338	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	3.5	5.5	6.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5128	
Flt Permitted	0.95	1.00	0.05	1.00	1.00	
Satd. Flow (perm)	1789	1601	90	5142	5128	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	712	188	2110	3338	59
RTOR Reduction (vph)	0	0	0	0	1	0
Lane Group Flow (vph)	128	712	188	2110	3396	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	13.8	42.3	112.0	112.0	78.0	
Effective Green, g (s)	13.8	46.3	112.0	112.0	80.0	
Actuated g/C Ratio	0.10	0.34	0.81	0.81	0.58	
Clearance Time (s)	6.0	5.5	5.5	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	179	537	424	4179	2977	
v/s Ratio Prot	0.07	c0.29	0.09	0.41	c0.66	
v/s Ratio Perm		0.15	0.27			
v/c Ratio	0.72	1.33	0.44	0.50	1.14	
Uniform Delay, d1	60.1	45.8	37.3	4.1	28.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.7	159.2	0.7	0.4	67.9	
Delay (s)	72.8	205.0	38.0	4.5	96.8	
Level of Service	E	F	D	A	F	
Approach Delay (s)	184.8			7.3	96.8	
Approach LOS	F			A	F	

Intersection Summary

HCM 2000 Control Delay	76.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	137.8	Sum of lost time (s)	15.5
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	93	35	544	45	16	412
Future Volume (vph)	93	35	544	45	16	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.990			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1789	1601	1865	0	0	1880
Flt Permitted	0.950					0.998
Satd. Flow (perm)	1789	1601	1865	0	0	1880
Link Speed (k/h)	48		80			80
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		114.4			24.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	101	38	591	49	17	448
Shared Lane Traffic (%)						
Lane Group Flow (vph)	101	38	640	0	0	465
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	35	544	45	16	412
Future Volume (Veh/h)	93	35	544	45	16	412
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)	101	38	591	49	17	448
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	1098	616			640	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1098	616			640	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	56	92			98	
cM capacity (veh/h)	231	491			944	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	101	38	640	465		
Volume Left	101	0	0	17		
Volume Right	0	38	49	0		
cSH	231	491	1700	944		
Volume to Capacity	0.44	0.08	0.38	0.02		
Queue Length 95th (m)	15.7	1.9	0.0	0.4		
Control Delay (s)	32.1	12.9	0.0	0.5		
Lane LOS	D	B	A			
Approach Delay (s)	26.9	0.0		0.5		
Approach LOS	D					
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			46.5%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↑	↗	
Traffic Volume (vph)	642	6	65	443	18	224
Future Volume (vph)	642	6	65	443	18	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.999			0.875		
Flt Protected				0.994	0.996	
Satd. Flow (prot)	3575	0	0	3557	1641	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	3575	0	0	3557	1641	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	34.2			32.8	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	698	7	71	482	20	243
Shared Lane Traffic (%)						
Lane Group Flow (vph)	705	0	0	553	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.9%			ICU Level of Service B		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	642	6	65	443	18	224
Future Volume (Veh/h)	642	6	65	443	18	224
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)	698	7	71	482	20	243
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			705		1084	352
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			705		1084	352
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		90	62
cM capacity (veh/h)			889		194	644
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	465	240	232	321	263	
Volume Left	0	0	71	0	20	
Volume Right	0	7	0	0	243	
cSH	1700	1700	889	1700	548	
Volume to Capacity	0.27	0.14	0.08	0.19	0.48	
Queue Length 95th (m)	0.0	0.0	2.0	0.0	19.6	
Control Delay (s)	0.0	0.0	3.5	0.0	17.5	
Lane LOS	A			C		
Approach Delay (s)	0.0		1.4		17.5	
Approach LOS						C
Intersection Summary						
Average Delay			3.6			
Intersection Capacity Utilization			56.9%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 15: McLaughlin Road & Street E

















06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	36	36	0	29	17	574	17	11	447	6
Future Volume (vph)	11	0	36	36	0	29	17	574	17	11	447	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.897			0.939			0.996			0.998	
Flt Protected		0.988			0.973			0.999			0.999	
Satd. Flow (prot)	0	1669	0	0	1721	0	0	3561	0	0	3568	0
Flt Permitted		0.988			0.973			0.999			0.999	
Satd. Flow (perm)	0	1669	0	0	1721	0	0	3561	0	0	3568	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			29.9			14.2	
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
Adj. Flow (vph)	12	0	39	39	0	32	18	624	18	12	486	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	71	0	0	660	0	0	505	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97	97		97	97		97
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	43.3%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	36	36	0	29	17	574	17	11	447	6
Future Volume (Veh/h)	11	0	36	36	0	29	17	574	17	11	447	6
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)	12	0	39	39	0	32	18	624	18	12	486	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	894	1192	246	975	1186	321	493			642		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	894	1192	246	975	1186	321	493			642		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	95	80	100	95	98			99		
cM capacity (veh/h)	220	180	754	191	182	675	1067			939		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	51	71	330	330	255	250						
Volume Left	12	39	18	0	12	0						
Volume Right	39	32	0	18	0	7						
cSH	480	282	1067	1700	939	1700						
Volume to Capacity	0.11	0.25	0.02	0.19	0.01	0.15						
Queue Length 95th (m)	2.7	7.4	0.4	0.0	0.3	0.0						
Control Delay (s)	13.4	22.0	0.6	0.0	0.5	0.0						
Lane LOS	B	C	A		A							
Approach Delay (s)	13.4	22.0	0.3		0.3							
Approach LOS	B	C										
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization			43.3%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	280	13	367	378	76	22	372	435	62	241	4
Future Volume (vph)	4	280	13	367	378	76	22	372	435	62	241	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		50.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.975				0.850		0.998	
Flt Protected		0.999		0.950				0.997			0.990	
Satd. Flow (prot)	0	1855	0	1825	1818	0	0	1796	1601	0	1830	0
Flt Permitted		0.994		0.381				0.969			0.678	
Satd. Flow (perm)	0	1846	0	732	1818	0	0	1746	1601	0	1253	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			12				425			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	4	298	14	390	402	81	23	396	463	66	256	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	316	0	390	483	0	0	419	463	0	326	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

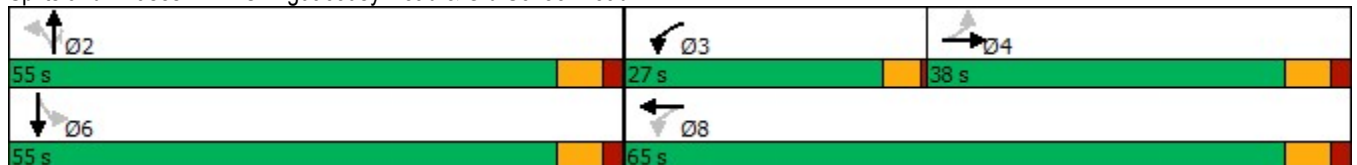
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		35.1		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.29		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.58		0.67	0.54			0.59	0.51		0.64	
Control Delay		42.1		23.5	23.2			31.8	5.5		35.2	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		42.1		23.5	23.2			31.8	5.5		35.2	
LOS		D		C	C			C	A		D	
Approach Delay		42.1			23.4			18.0			35.2	
Approach LOS		D			C			B			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 25.5
 Intersection LOS: C
 Intersection Capacity Utilization 97.4%
 ICU Level of Service F
 Analysis Period (min) 15

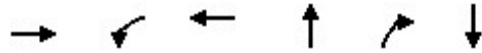
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	316	390	483	419	463	326
v/c Ratio	0.58	0.67	0.54	0.59	0.51	0.64
Control Delay	42.1	23.5	23.2	31.8	5.5	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	23.5	23.2	31.8	5.5	35.2
Queue Length 50th (m)	63.9	53.4	74.4	75.7	5.3	60.2
Queue Length 95th (m)	96.0	76.4	105.2	108.2	27.6	92.9
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					50.0	
Base Capacity (vph)	541	612	899	712	905	512
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.64	0.54	0.59	0.51	0.64

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕	↗		↕	
Traffic Volume (vph)	4	280	13	367	378	76	22	372	435	62	241	4
Future Volume (vph)	4	280	13	367	378	76	22	372	435	62	241	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	0.97			1.00	0.85		1.00	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1856		1825	1818			1797	1601		1831	
Flt Permitted		0.99		0.38	1.00			0.97	1.00		0.68	
Satd. Flow (perm)		1846		732	1818			1746	1601		1253	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	298	14	390	402	81	23	396	463	66	256	4
RTOR Reduction (vph)	0	1	0	0	6	0	0	0	251	0	1	0
Lane Group Flow (vph)	0	315	0	390	477	0	0	419	212	0	325	0
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		35.1		59.0	59.0			49.0	49.0		49.0	
Effective Green, g (s)		35.1		61.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.29		0.51	0.49			0.41	0.41		0.41	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		539		571	893			712	653		511	
v/s Ratio Prot				c0.12	0.26							
v/s Ratio Perm		c0.17		0.22				0.24	0.13		c0.26	
v/c Ratio		0.58		0.68	0.53			0.59	0.32		0.64	
Uniform Delay, d1		36.2		20.1	21.0			27.6	24.2		28.4	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		4.6		3.4	2.3			3.5	1.3		6.0	
Delay (s)		40.8		23.5	23.3			31.2	25.5		34.3	
Level of Service		D		C	C			C	C		C	
Approach Delay (s)		40.8			23.4			28.2			34.3	
Approach LOS		D			C			C			C	

Intersection Summary

HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	97.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↖	↕↕			↕	↗		↕↔	
Traffic Volume (vph)	30	788	48	518	915	56	49	164	540	49	85	26
Future Volume (vph)	30	788	48	518	915	56	49	164	540	49	85	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.991				0.850		0.978	
Flt Protected		0.998		0.950				0.989			0.985	
Satd. Flow (prot)	0	3468	0	1755	3575	0	0	1830	1555	0	1794	0
Flt Permitted		0.873		0.155				0.855			0.643	
Satd. Flow (perm)	0	3034	0	286	3575	0	0	1582	1555	0	1171	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			10				488		8	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	32	838	51	551	973	60	52	174	574	52	90	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	921	0	551	1033	0	0	226	574	0	170	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

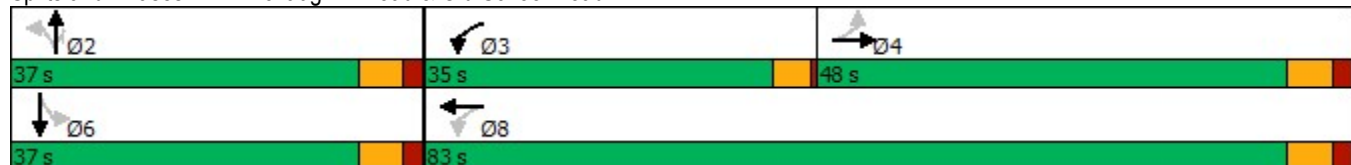


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	48.0	48.0		35.0	83.0		37.0	37.0	37.0	37.0	37.0	
Total Split (%)	40.0%	40.0%		29.2%	69.2%		30.8%	30.8%	30.8%	30.8%	30.8%	
Maximum Green (s)	42.0	42.0		31.0	77.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		36.4		73.4	69.3			21.0	21.0		21.0	
Actuated g/C Ratio		0.35		0.71	0.67			0.20	0.20		0.20	
v/c Ratio		0.85		0.86	0.43			0.70	0.81		0.69	
Control Delay		40.4		36.1	8.7			51.5	17.4		52.9	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		40.4		36.1	8.7			51.5	17.4		52.9	
LOS		D		D	A			D	B		D	
Approach Delay		40.4			18.2			27.0			52.9	
Approach LOS		D			B			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 102.7
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 27.8
 Intersection LOS: C
 Intersection Capacity Utilization 93.0%
 ICU Level of Service F
 Analysis Period (min) 15

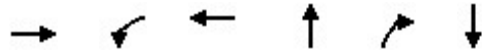
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	921	551	1033	226	574	170
v/c Ratio	0.85	0.86	0.43	0.70	0.81	0.69
Control Delay	40.4	36.1	8.7	51.5	17.4	52.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	36.1	8.7	51.5	17.4	52.9
Queue Length 50th (m)	92.2	79.4	45.0	45.6	15.8	32.7
Queue Length 95th (m)	#134.5	#161.6	72.7	71.7	60.7	56.0
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1288	693	2722	494	821	371
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.80	0.38	0.46	0.70	0.46

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	30	788	48	518	915	56	49	164	540	49	85	26
Future Volume (vph)	30	788	48	518	915	56	49	164	540	49	85	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.98	
Satd. Flow (prot)		3468		1755	3576			1829	1555		1793	
Flt Permitted		0.87		0.16	1.00			0.85	1.00		0.64	
Satd. Flow (perm)		3033		287	3576			1581	1555		1170	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	32	838	51	551	973	60	52	174	574	52	90	28
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	388	0	6	0
Lane Group Flow (vph)	0	918	0	551	1030	0	0	226	186	0	164	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		36.5		69.2	69.2			21.0	21.0		21.0	
Effective Green, g (s)		36.5		71.2	69.2			21.0	21.0		21.0	
Actuated g/C Ratio		0.36		0.70	0.68			0.21	0.21		0.21	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1083		640	2421			324	319		240	
v/s Ratio Prot				c0.26	0.29							
v/s Ratio Perm		c0.30		0.34				c0.14	0.12		0.14	
v/c Ratio		0.85		0.86	0.43			0.70	0.58		0.68	
Uniform Delay, d1		30.3		22.2	7.5			37.7	36.7		37.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		6.3		11.4	0.1			6.4	2.7		7.7	
Delay (s)		36.6		33.6	7.6			44.1	39.4		45.3	
Level of Service		D		C	A			D	D		D	
Approach Delay (s)		36.6			16.7			40.7			45.3	
Approach LOS		D			B			D			D	

Intersection Summary

HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	102.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	695	235	279	347	296	162	468	3251	381	171	1997	641
Future Volume (vph)	695	235	279	347	296	162	468	3251	381	171	1997	641
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.918			0.947				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3153	0	1789	3434	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.228			0.207			0.083			0.091		
Satd. Flow (perm)	438	3153	0	390	3434	0	158	5043	1633	175	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		145			68				149			360
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	716	242	288	358	305	167	482	3352	393	176	2059	661
Shared Lane Traffic (%)												
Lane Group Flow (vph)	716	530	0	358	472	0	482	3352	393	176	2059	661
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	29.0		24.0	29.0		19.0	57.0	57.0	10.0	48.0	48.0
Total Split (%)	20.0%	24.2%		20.0%	24.2%		15.8%	47.5%	47.5%	8.3%	40.0%	40.0%
Maximum Green (s)	20.0	23.0		20.0	23.0		13.0	51.0	51.0	4.0	42.0	42.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	45.3	21.3		41.3	21.3		63.1	53.1	51.1	50.1	44.1	42.0
Actuated g/C Ratio	0.39	0.18		0.35	0.18		0.54	0.46	0.44	0.43	0.38	0.36
v/c Ratio	1.65	0.76		0.94	0.69		1.62	1.46	0.49	1.10	1.13	0.84
Control Delay	329.7	40.2		65.6	43.4		319.2	236.5	16.8	126.8	100.9	26.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	329.7	40.2		65.6	43.4		319.2	236.5	16.8	126.8	100.9	26.6
LOS	F	D		E	D		F	F	B	F	F	C
Approach Delay		206.6			53.0			225.5			85.5	
Approach LOS		F			D			F			F	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 116.4
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.65
 Intersection Signal Delay: 163.3
 Intersection Capacity Utilization 137.5%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service H

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	716	530	358	472	482	3352	393	176	2059	661
v/c Ratio	1.65	0.76	0.94	0.69	1.62	1.46	0.49	1.10	1.13	0.84
Control Delay	329.7	40.2	65.6	43.4	319.2	236.5	16.8	126.8	100.9	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	329.7	40.2	65.6	43.4	319.2	236.5	16.8	126.8	100.9	26.6
Queue Length 50th (m)	~218.7	44.6	63.2	45.8	~145.1	~386.8	38.3	~29.9	~202.1	69.0
Queue Length 95th (m)	#294.4	63.6	#120.0	63.3	#215.7	#425.9	68.4	#76.9	#240.2	#145.5
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	433	791	379	791	298	2298	799	160	1821	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.65	0.67	0.94	0.60	1.62	1.46	0.49	1.10	1.13	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			   			   	
Traffic Volume (vph)	695	235	279	347	296	162	468	3251	381	171	1997	641
Future Volume (vph)	695	235	279	347	296	162	468	3251	381	171	1997	641
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.92		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3155		1789	3434		1807	5043	1633	1825	4812	1541
Flt Permitted	0.23	1.00		0.21	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	438	3155		390	3434		158	5043	1633	174	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	716	242	288	358	305	167	482	3352	393	176	2059	661
RTOR Reduction (vph)	0	118	0	0	56	0	0	0	84	0	0	230
Lane Group Flow (vph)	716	412	0	358	416	0	482	3352	309	176	2059	431
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	39.3	19.3		39.3	19.3		61.1	51.1	51.1	46.1	42.1	42.1
Effective Green, g (s)	43.3	21.3		39.3	21.3		63.1	53.1	51.1	50.1	44.1	42.1
Actuated g/C Ratio	0.37	0.18		0.34	0.18		0.54	0.46	0.44	0.43	0.38	0.36
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	425	577		372	628		298	2300	716	159	1823	557
v/s Ratio Prot	c0.32	0.13		0.17	0.12		c0.21	0.66		0.06	0.43	
v/s Ratio Perm	0.31			c0.16			c0.67		0.19	0.42		0.28
v/c Ratio	1.68	0.71		0.96	0.66		1.62	1.46	0.43	1.11	1.13	0.77
Uniform Delay, d1	31.0	44.7		33.0	44.2		36.9	31.7	22.6	29.5	36.1	32.9
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	318.2	4.2		36.6	2.6		292.9	208.3	1.9	102.9	65.9	10.1
Delay (s)	349.2	48.8		69.6	46.9		329.8	239.9	24.5	132.4	102.0	43.0
Level of Service	F	D		E	D		F	F	C	F	F	D
Approach Delay (s)		221.5			56.7			230.2			90.4	
Approach LOS		F			E			F			F	
Intersection Summary												
HCM 2000 Control Delay			169.3				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.54									
Actuated Cycle Length (s)			116.4				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			137.5%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	43	727	51	213	687	78	34	536	209	37	332	30
Future Volume (vph)	43	727	51	213	687	78	34	536	209	37	332	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.985			0.964			0.990	
Flt Protected		0.997		0.950				0.998			0.995	
Satd. Flow (prot)	0	5042	0	1825	5030	0	0	1812	0	0	1861	0
Flt Permitted		0.839		0.173				0.967			0.874	
Satd. Flow (perm)	0	4243	0	332	5030	0	0	1755	0	0	1634	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			20			23			5	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	47	790	55	232	747	85	37	583	227	40	361	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	892	0	232	832	0	0	847	0	0	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

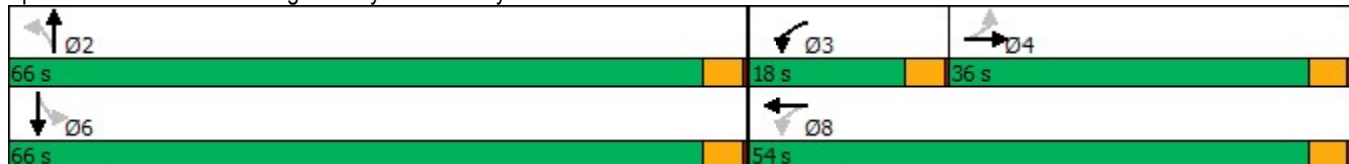


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		18.0	54.0		66.0	66.0		66.0	66.0	
Total Split (%)	30.0%	30.0%		15.0%	45.0%		55.0%	55.0%		55.0%	55.0%	
Maximum Green (s)	32.0	32.0		14.0	50.0		62.0	62.0		62.0	62.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		33.4		52.2	50.2			57.6			57.6	
Actuated g/C Ratio		0.29		0.45	0.43			0.50			0.50	
v/c Ratio		0.73		0.68	0.38			0.96			0.53	
Control Delay		42.0		32.3	23.0			49.3			22.2	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		42.0		32.3	23.0			49.3			22.2	
LOS		D		C	C			D			C	
Approach Delay		42.0			25.0			49.3			22.2	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	115.8
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	35.7
Intersection LOS:	D
Intersection Capacity Utilization:	89.8%
ICU Level of Service:	E
Analysis Period (min):	15

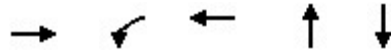
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	892	232	832	847	434
v/c Ratio	0.73	0.68	0.38	0.96	0.53
Control Delay	42.0	32.3	23.0	49.3	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	32.3	23.0	49.3	22.2
Queue Length 50th (m)	70.9	34.8	48.0	174.5	64.1
Queue Length 95th (m)	87.2	53.2	59.1	#262.0	92.6
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1229	356	2190	953	879
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.73	0.65	0.38	0.89	0.49

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑↑↑		↑	↑↑↑			↑			↑	
Traffic Volume (vph)	43	727	51	213	687	78	34	536	209	37	332	30
Future Volume (vph)	43	727	51	213	687	78	34	536	209	37	332	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frbp, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.98			0.96			0.99	
Flt Protected		1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		5042		1825	5029			1811			1861	
Flt Permitted		0.84		0.17	1.00			0.97			0.87	
Satd. Flow (perm)		4240		333	5029			1755			1633	
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)	47	790	55	232	747	85	37	583	227	40	361	33
RTOR Reduction (vph)	0	6	0	0	11	0	0	12	0	0	3	0
Lane Group Flow (vph)	0	886	0	232	821	0	0	835	0	0	431	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.4		50.2	50.2			57.6			57.6	
Effective Green, g (s)		33.4		52.2	50.2			57.6			57.6	
Actuated g/C Ratio		0.29		0.45	0.43			0.50			0.50	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1222		340	2180			872			812	
v/s Ratio Prot				c0.09	0.16							
v/s Ratio Perm		c0.21		0.22				c0.48			0.26	
v/c Ratio		0.73		0.68	0.38			0.96			0.53	
Uniform Delay, d1		37.1		21.9	22.2			27.9			19.9	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		3.8		5.6	0.5			20.7			0.7	
Delay (s)		40.8		27.5	22.7			48.6			20.6	
Level of Service		D		C	C			D			C	
Approach Delay (s)		40.8			23.7			48.6			20.6	
Approach LOS		D			C			D			C	





















Intersection Summary

HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	115.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	886	73	114	1043	295	125	731	118	230	456	139
Future Volume (vph)	110	886	73	114	1043	295	125	731	118	230	456	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.967			0.979			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4881	0	1825	3528	0	1738	3404	0
Flt Permitted	0.109			0.158			0.364			0.108		
Satd. Flow (perm)	199	5036	0	292	4881	0	699	3528	0	198	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			64			16			38	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	115	923	76	119	1086	307	130	761	123	240	475	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	999	0	119	1393	0	130	884	0	240	620	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

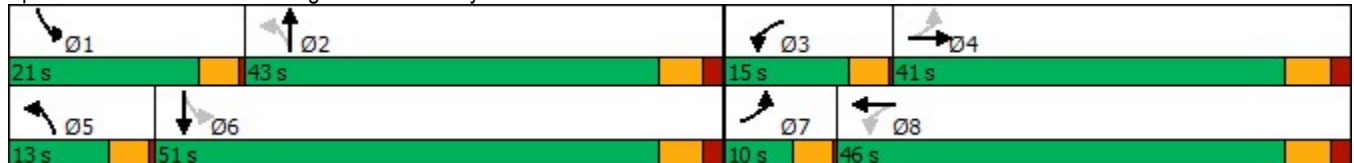


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	10.0	41.0		15.0	46.0		13.0	43.0		21.0	51.0	
Total Split (%)	8.3%	34.2%		12.5%	38.3%		10.8%	35.8%		17.5%	42.5%	
Maximum Green (s)	6.0	35.0		11.0	40.0		9.0	37.0		17.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.8	36.7		51.1	40.2		43.5	32.9		53.8	39.2	
Actuated g/C Ratio	0.39	0.32		0.45	0.35		0.38	0.29		0.47	0.34	
v/c Ratio	0.72	0.61		0.47	0.79		0.37	0.86		0.81	0.52	
Control Delay	48.6	35.5		26.1	36.5		20.5	47.4		47.5	29.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	48.6	35.5		26.1	36.5		20.5	47.4		47.5	29.3	
LOS	D	D		C	D		C	D		D	C	
Approach Delay		36.8			35.7			43.9			34.4	
Approach LOS		D			D			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	114.1
Natural Cycle:	70
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	37.6
Intersection LOS:	D
Intersection Capacity Utilization:	86.2%
ICU Level of Service:	E
Analysis Period (min):	15

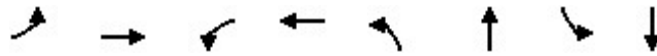
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	999	119	1393	130	884	240	620
v/c Ratio	0.72	0.61	0.47	0.79	0.37	0.86	0.81	0.52
Control Delay	48.6	35.5	26.1	36.5	20.5	47.4	47.5	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	35.5	26.1	36.5	20.5	47.4	47.5	29.3
Queue Length 50th (m)	15.7	72.9	16.3	103.5	16.0	98.6	36.0	54.2
Queue Length 95th (m)	#41.3	90.6	28.8	124.8	27.1	123.5	#72.1	70.9
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	159	1629	275	1758	358	1158	323	1370
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.61	0.43	0.79	0.36	0.76	0.74	0.45

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024



































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	110	886	73	114	1043	295	125	731	118	230	456	139
Future Volume (vph)	110	886	73	114	1043	295	125	731	118	230	456	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5034		1755	4881		1825	3529		1738	3404	
Flt Permitted	0.11	1.00		0.16	1.00		0.36	1.00		0.11	1.00	
Satd. Flow (perm)	199	5034		291	4881		700	3529		198	3404	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	923	76	119	1086	307	130	761	123	240	475	145
RTOR Reduction (vph)	0	7	0	0	41	0	0	11	0	0	25	0
Lane Group Flow (vph)	115	992	0	119	1352	0	130	873	0	240	595	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.8	36.8		49.6	40.2		41.5	32.9		51.9	39.3	
Effective Green, g (s)	42.8	36.8		49.6	40.2		41.5	32.9		51.9	39.3	
Actuated g/C Ratio	0.38	0.32		0.43	0.35		0.36	0.29		0.45	0.34	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	1623		247	1719		339	1017		292	1172	
v/s Ratio Prot	c0.04	0.20		c0.04	c0.28		0.03	0.25		c0.11	0.17	
v/s Ratio Perm	0.24			0.17			0.11			c0.26		
v/c Ratio	0.74	0.61		0.48	0.79		0.38	0.86		0.82	0.51	
Uniform Delay, d1	26.2	32.6		21.2	33.1		25.0	38.4		28.3	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.3	1.7		1.5	3.7		0.7	7.3		16.8	0.3	
Delay (s)	43.5	34.3		22.7	36.8		25.7	45.7		45.1	30.1	
Level of Service	D	C		C	D		C	D		D	C	
Approach Delay (s)		35.3			35.7			43.1			34.2	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  			 		 	 	
Traffic Volume (vph)	661	612	127	276	800	172	393	995	264	238	1046	934
Future Volume (vph)	661	612	127	276	800	172	393	995	264	238	1046	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.154			0.950			0.082			0.109		
Satd. Flow (perm)	284	4995	1538	3339	5092	1562	154	3614	1486	209	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			152			170			497
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	681	631	131	285	825	177	405	1026	272	245	1078	963
Shared Lane Traffic (%)												
Lane Group Flow (vph)	681	631	131	285	825	177	405	1026	272	245	1078	963
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	37.0	40.0	40.0	25.0	28.0	28.0	18.0	54.0	54.0	16.0	52.0	52.0
Total Split (%)	27.4%	29.6%	29.6%	18.5%	20.7%	20.7%	13.3%	40.0%	40.0%	11.9%	38.5%	38.5%
Maximum Green (s)	32.0	33.0	33.0	20.0	21.0	21.0	14.0	47.0	47.0	12.0	45.0	45.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

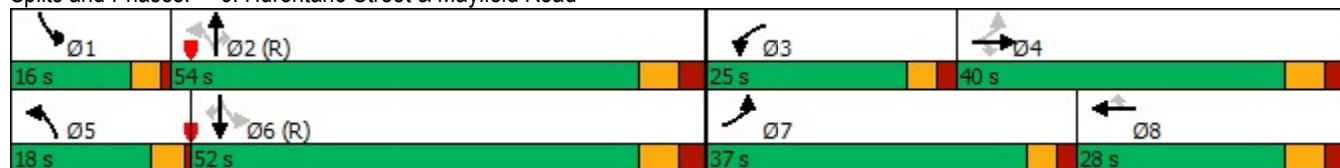


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Act Effect Green (s)	62.0	33.0	33.0	20.0	21.0	21.0	68.0	47.0	47.0	64.0	45.0	47.0	
Actuated g/C Ratio	0.46	0.24	0.24	0.15	0.16	0.16	0.50	0.35	0.35	0.47	0.33	0.35	
v/c Ratio	1.36	0.52	0.28	0.57	1.04	0.48	1.49	0.82	0.43	0.92	0.92	1.11	
Control Delay	207.8	45.9	8.0	58.4	97.9	15.9	271.1	46.4	14.5	68.3	56.7	87.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	207.8	45.9	8.0	58.4	97.9	15.9	271.1	46.4	14.5	68.3	56.7	87.2	
LOS	F	D	A	E	F	B	F	D	B	E	E	F	
Approach Delay		118.9				77.8				94.7			70.8
Approach LOS		F				E				F			E

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	110
Control Type:	Pretimed
Maximum v/c Ratio:	1.49
Intersection Signal Delay:	88.5
Intersection LOS:	F
Intersection Capacity Utilization	121.1%
ICU Level of Service	H
Analysis Period (min)	15

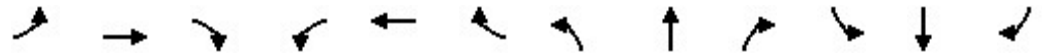
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	681	631	131	285	825	177	405	1026	272	245	1078	963
v/c Ratio	1.36	0.52	0.28	0.57	1.04	0.48	1.49	0.82	0.43	0.92	0.92	1.11
Control Delay	207.8	45.9	8.0	58.4	97.9	15.9	271.1	46.4	14.5	68.3	56.7	87.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.8	45.9	8.0	58.4	97.9	15.9	271.1	46.4	14.5	68.3	56.7	87.2
Queue Length 50th (m)	~223.0	53.5	0.0	36.9	~86.9	5.8	~133.3	130.5	19.0	43.3	145.2	~201.9
Queue Length 95th (m)	#297.1	66.5	15.8	51.4	#114.7	27.5	#196.7	157.3	43.5	#92.9	#185.2	#281.1
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	500	1221	474	504	792	371	271	1258	628	266	1170	865
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.36	0.52	0.28	0.57	1.04	0.48	1.49	0.82	0.43	0.92	0.92	1.11

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	661	612	127	276	800	172	393	995	264	238	1046	934
Future Volume (vph)	661	612	127	276	800	172	393	995	264	238	1046	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.15	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	284	4995	1538	3404	5092	1562	154	3614	1486	209	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	681	631	131	285	825	177	405	1026	272	245	1078	963
RTOR Reduction (vph)	0	0	99	0	0	128	0	0	111	0	0	324
Lane Group Flow (vph)	681	631	32	285	825	49	405	1026	161	245	1078	639
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	33.0	33.0	20.0	21.0	21.0	61.0	47.0	47.0	57.0	45.0	45.0
Effective Green, g (s)	60.0	33.0	33.0	20.0	21.0	21.0	65.0	47.0	47.0	61.0	45.0	47.0
Actuated g/C Ratio	0.44	0.24	0.24	0.15	0.16	0.16	0.48	0.35	0.35	0.45	0.33	0.35
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	496	1221	375	504	792	242	267	1258	517	262	1170	541
v/s Ratio Prot	c0.35	0.13		0.08	0.16		c0.18	0.28		0.10	0.31	
v/s Ratio Perm	c0.26		0.02			0.03	0.55		0.11	0.33		c0.41
v/c Ratio	1.37	0.52	0.09	0.57	1.04	0.20	1.52	0.82	0.31	0.94	0.92	1.18
Uniform Delay, d1	39.9	44.1	39.4	53.5	57.0	49.7	41.9	40.1	32.2	33.3	43.3	44.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	180.3	1.6	0.4	4.5	43.3	1.9	250.9	5.9	1.6	41.1	13.1	99.3
Delay (s)	220.2	45.7	39.8	58.0	100.3	51.5	292.8	46.0	33.7	74.4	56.4	143.3
Level of Service	F	D	D	E	F	D	F	D	C	E	E	F
Approach Delay (s)		127.5			84.3			102.7			95.0	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM 2000 Control Delay			101.9				HCM 2000 Level of Service		F			
HCM 2000 Volume to Capacity ratio			1.41									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)		21.0			
Intersection Capacity Utilization			121.1%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	723	53	30	784	38	28
Future Volume (vph)	723	53	30	784	38	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.990			0.943		
Flt Protected				0.998	0.972	
Satd. Flow (prot)	3543	0	0	3571	1726	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	3543	0	0	3571	1726	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	723	53	30	784	38	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	776	0	0	814	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.1% ICU Level of Service A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	723	53	30	784	38	28
Future Volume (Veh/h)	723	53	30	784	38	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	723	53	30	784	38	28
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			776		1202	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			776		1202	388
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		78	95
cM capacity (veh/h)			836		171	611
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	482	294	291	523	66	
Volume Left	0	0	30	0	38	
Volume Right	0	53	0	0	28	
cSH	1700	1700	836	1700	246	
Volume to Capacity	0.28	0.17	0.04	0.31	0.27	
Queue Length 95th (m)	0.0	0.0	0.8	0.0	8.0	
Control Delay (s)	0.0	0.0	1.3	0.0	24.9	
Lane LOS			A			C
Approach Delay (s)	0.0	0.5		24.9		
Approach LOS					C	
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			54.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	259	50	59	357	21	232	808	134	30	656	7
Future Volume (vph)	0	259	50	59	357	21	232	808	134	30	656	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.978			0.994			0.983			0.998	
Fl _t Protected					0.993			0.990			0.998	
Satd. Flow (prot)	0	1842	0	0	1859	0	0	3483	0	0	3564	0
Fl _t Permitted					0.775			0.652			0.857	
Satd. Flow (perm)	0	1842	0	0	1451	0	0	2294	0	0	3061	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3			23			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	259	50	59	357	21	232	808	134	30	656	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	309	0	0	437	0	0	1174	0	0	693	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

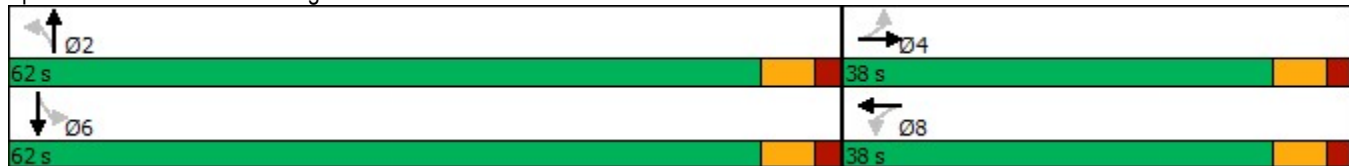


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	38.0	38.0		38.0	38.0		62.0	62.0		62.0	62.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		62.0%	62.0%		62.0%	62.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		56.0	56.0		56.0	56.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		30.8			30.8			56.1			56.1	
Actuated g/C Ratio		0.31			0.31			0.57			0.57	
v/c Ratio		0.53			0.96			0.90			0.40	
Control Delay		30.9			68.4			29.7			13.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.9			68.4			29.7			13.0	
LOS		C			E			C			B	
Approach Delay		30.9			68.4			29.7			13.0	
Approach LOS		C			E			C			B	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 98.9
 Natural Cycle: 75
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 31.9
 Intersection LOS: C
 Intersection Capacity Utilization 112.6%
 ICU Level of Service H
 Analysis Period (min) 15

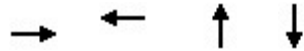
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	309	437	1174	693
v/c Ratio	0.53	0.96	0.90	0.40
Control Delay	30.9	68.4	29.7	13.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.9	68.4	29.7	13.0
Queue Length 50th (m)	46.9	81.4	99.3	37.7
Queue Length 95th (m)	72.5	#140.8	#151.4	50.2
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	603	472	1309	1736
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.93	0.90	0.40

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	259	50	59	357	21	232	808	134	30	656	7
Future Volume (vph)	0	259	50	59	357	21	232	808	134	30	656	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.99			0.98			1.00	
Flt Protected		1.00			0.99			0.99			1.00	
Satd. Flow (prot)		1842			1859			3483			3565	
Flt Permitted		1.00			0.77			0.65			0.86	
Satd. Flow (perm)		1842			1450			2294			3063	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	259	50	59	357	21	232	808	134	30	656	7
RTOR Reduction (vph)	0	7	0	0	2	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	302	0	0	435	0	0	1164	0	0	692	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.8			30.8			56.0			56.0	
Effective Green, g (s)		30.8			30.8			56.0			56.0	
Actuated g/C Ratio		0.31			0.31			0.57			0.57	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		574			452			1300			1736	
v/s Ratio Prot		0.16										
v/s Ratio Perm					c0.30			c0.51			0.23	
v/c Ratio		0.53			0.96			0.90			0.40	
Uniform Delay, d1		28.0			33.4			18.8			12.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.9			32.6			9.8			0.7	
Delay (s)		28.9			66.0			28.6			12.7	
Level of Service		C			E			C			B	
Approach Delay (s)		28.9			66.0			28.6			12.7	
Approach LOS		C			E			C			B	

Intersection Summary		
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.92	
Actuated Cycle Length (s)	98.8	Sum of lost time (s) 12.0
Intersection Capacity Utilization	112.6%	ICU Level of Service H
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↘	↗
Traffic Volume (vph)	1125	41	168	1306	38	117
Future Volume (vph)	1125	41	168	1306	38	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.995					0.850
Fl _t Protected				0.994	0.950	
Satd. Flow (prot)	3561	0	0	3557	1789	1601
Fl _t Permitted				0.994	0.950	
Satd. Flow (perm)	3561	0	0	3557	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1125	41	168	1306	38	117
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1166	0	0	1474	38	117
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	86.7%			ICU Level of Service E		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1125	41	168	1306	38	117
Future Volume (Veh/h)	1125	41	168	1306	38	117
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1125	41	168	1306	38	117
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.83		0.83	0.83
vC, conflicting volume			1166		2134	583
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			795		1960	95
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			75		0	85
cM capacity (veh/h)			684		35	785
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	750	416	603	871	38	117
Volume Left	0	0	168	0	38	0
Volume Right	0	41	0	0	0	117
cSH	1700	1700	684	1700	35	785
Volume to Capacity	0.44	0.24	0.25	0.51	1.09	0.15
Queue Length 95th (m)	0.0	0.0	7.3	0.0	30.2	4.0
Control Delay (s)	0.0	0.0	6.2	0.0	355.0	10.4
Lane LOS			A		F	B
Approach Delay (s)	0.0		2.5		94.9	
Approach LOS					F	
Intersection Summary						
Average Delay			6.6			
Intersection Capacity Utilization			86.7%		ICU Level of Service	E
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	396	606	4042	2494	130
Future Volume (vph)	59	396	606	4042	2494	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.993	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5106	0
Flt Permitted	0.950		0.062			
Satd. Flow (perm)	1789	1601	117	5142	5106	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		1			9	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	396	606	4042	2494	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	396	606	4042	2624	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

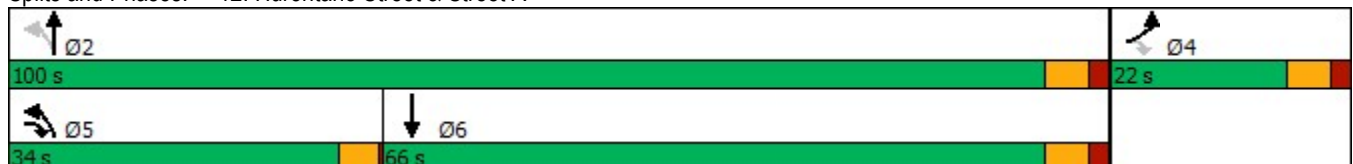


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	34.0	34.0	100.0	66.0	
Total Split (%)	18.0%	27.9%	27.9%	82.0%	54.1%	
Maximum Green (s)	16.0	30.0	30.0	94.0	60.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	-2.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	2.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	9.1	42.6	98.3	95.7	60.2	
Actuated g/C Ratio	0.08	0.38	0.87	0.85	0.53	
v/c Ratio	0.41	0.66	1.05	0.93	0.96	
Control Delay	58.9	34.5	84.7	14.0	36.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.9	34.5	84.7	14.0	36.7	
LOS	E	C	F	B	D	
Approach Delay	37.7			23.2	36.7	
Approach LOS	D			C	D	

Intersection Summary

Area Type:	Other
Cycle Length:	122
Actuated Cycle Length:	112.8
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.05
Intersection Signal Delay:	28.7
Intersection LOS:	C
Intersection Capacity Utilization	101.3%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	59	396	606	4042	2624
v/c Ratio	0.41	0.66	1.05	0.93	0.96
Control Delay	58.9	34.5	84.7	14.0	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	34.5	84.7	14.0	36.7
Queue Length 50th (m)	12.9	71.0	~136.3	223.3	204.6
Queue Length 95th (m)	26.2	103.4	#214.2	#376.2	#263.9
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	254	604	577	4361	2729
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.66	1.05	0.93	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	396	606	4042	2494	130
Future Volume (vph)	59	396	606	4042	2494	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	2.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5104	
Flt Permitted	0.95	1.00	0.06	1.00	1.00	
Satd. Flow (perm)	1789	1601	117	5142	5104	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	396	606	4042	2494	130
RTOR Reduction (vph)	0	1	0	0	4	0
Lane Group Flow (vph)	59	395	606	4042	2620	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	7.8	37.9	94.4	94.4	60.3	
Effective Green, g (s)	7.8	37.9	96.4	94.4	60.3	
Actuated g/C Ratio	0.07	0.33	0.84	0.83	0.53	
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	122	531	568	4250	2695	
v/s Ratio Prot	0.03	c0.20	c0.30	c0.79	0.51	
v/s Ratio Perm		0.05	0.60			
v/c Ratio	0.48	0.74	1.07	0.95	0.97	
Uniform Delay, d1	51.3	33.9	36.7	8.0	26.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.0	5.6	56.9	6.4	11.9	
Delay (s)	54.3	39.5	93.6	14.4	38.1	
Level of Service	D	D	F	B	D	
Approach Delay (s)	41.4			24.7	38.1	
Approach LOS	D			C	D	

Intersection Summary

HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	114.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	18	811	126	20	602
Future Volume (vph)	82	18	811	126	20	602
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850	0.982			
Fl _t Protected	0.950					0.998
Satd. Flow (prot)	1789	1601	1850	0	0	1880
Fl _t Permitted	0.950					0.998
Satd. Flow (perm)	1789	1601	1850	0	0	1880
Link Speed (k/h)	48		48			48
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		190.6			40.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	20	882	137	22	654
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	20	1019	0	0	676
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.5%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

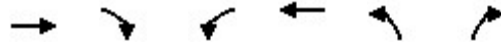
06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	82	18	811	126	20	602
Future Volume (Veh/h)	82	18	811	126	20	602
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)	89	20	882	137	22	654
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	1648	950			1019	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1648	950			1019	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	16	94			97	
cM capacity (veh/h)	105	315			681	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	89	20	1019	676		
Volume Left	89	0	0	22		
Volume Right	0	20	137	0		
cSH	105	315	1700	681		
Volume to Capacity	0.84	0.06	0.60	0.03		
Queue Length 95th (m)	36.8	1.5	0.0	0.8		
Control Delay (s)	123.3	17.2	0.0	0.9		
Lane LOS	F	C		A		
Approach Delay (s)	103.9		0.0	0.9		
Approach LOS	F					
Intersection Summary						
Average Delay			6.6			
Intersection Capacity Utilization			61.5%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	743	11	198	805	11	102
Future Volume (vph)	743	11	198	805	11	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.998				0.878	
Fl _t Protected				0.990	0.995	
Satd. Flow (prot)	3571	0	0	3543	1645	0
Fl _t Permitted				0.990	0.995	
Satd. Flow (perm)	3571	0	0	3543	1645	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	23.4			22.5	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	808	12	215	875	12	111
Shared Lane Traffic (%)						
Lane Group Flow (vph)	820	0	0	1090	123	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	65.8%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis

14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	743	11	198	805	11	102
Future Volume (Veh/h)	743	11	198	805	11	102
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)	808	12	215	875	12	111
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			820		1682	410
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			820		1682	410
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			73		81	81
cM capacity (veh/h)			805		63	591
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	539	281	507	583	123	
Volume Left	0	0	215	0	12	
Volume Right	0	12	0	0	111	
cSH	1700	1700	805	1700	324	
Volume to Capacity	0.32	0.17	0.27	0.34	0.38	
Queue Length 95th (m)	0.0	0.0	8.2	0.0	13.1	
Control Delay (s)	0.0	0.0	6.8	0.0	22.8	
Lane LOS			A	C		
Approach Delay (s)	0.0		3.1		22.8	
Approach LOS					C	
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			65.8%	ICU Level of Service	C	
Analysis Period (min)			15			

















Lanes, Volumes, Timings
15: McLaughlin Road & Street E

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	3579	0	0	3579	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	3579	0	0	3579	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			18.0			8.5	
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
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 0.0%	ICU Level of Service A											
Analysis Period (min)	15											

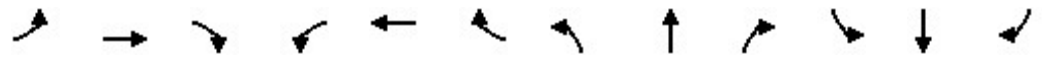
HCM Unsignalized Intersection Capacity Analysis
 15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
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)	0	0	0	0	0	0	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)								399			189	
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1084	1023	896	1084	1622			1622		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	0	0	0	0	0	0						
Volume Left	0	0	0	0	0	0						
Volume Right	0	0	0	0	0	0						
cSH	1700	1700	1700	1700	1700	1700						
Volume to Capacity	0.11	0.25	0.00	0.19	0.00	0.15						
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0						
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0						
Lane LOS	A	A										
Approach Delay (s)	0.0	0.0	0.0		0.0							
Approach LOS	A	A										
Intersection Summary												
Average Delay			0.0									
Intersection Capacity Utilization			0.0%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	2	261	3	137	165	44	2	230	285	33	218	10
Future Volume (vph)	2	261	3	137	165	44	2	230	285	33	218	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.968				0.850		0.995	
Flt Protected				0.950							0.994	
Satd. Flow (prot)	0	1919	0	1772	1794	0	0	1830	1585	0	1788	0
Flt Permitted		0.997		0.545				0.998			0.949	
Satd. Flow (perm)	0	1913	0	1017	1794	0	0	1827	1585	0	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			40				303			6
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	278	3	146	176	47	2	245	303	35	232	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	146	223	0	0	247	303	0	278	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

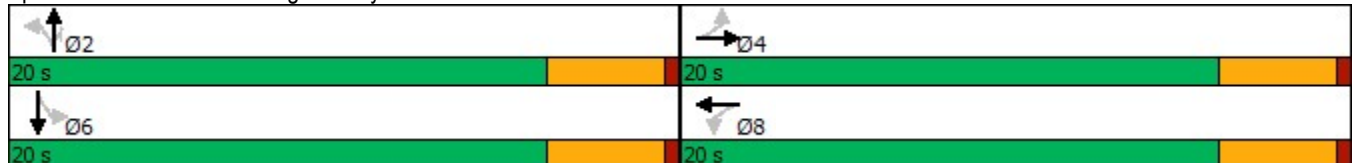


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		10.4		10.1	10.1			19.8	19.8		19.8	
Actuated g/C Ratio		0.30		0.29	0.29			0.56	0.56		0.56	
v/c Ratio		0.50		0.50	0.41			0.24	0.30		0.29	
Control Delay		13.0		16.0	9.9			7.3	2.3		7.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		13.0		16.0	9.9			7.3	2.3		7.6	
LOS		B		B	A			A	A		A	
Approach Delay		13.0			12.3			4.5			7.6	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 35.2
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay: 8.7
 Intersection Capacity Utilization 64.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	283	146	223	247	303	278
v/c Ratio	0.50	0.50	0.41	0.24	0.30	0.29
Control Delay	13.0	16.0	9.9	7.3	2.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	16.0	9.9	7.3	2.3	7.6
Queue Length 50th (m)	12.5	6.5	7.8	7.3	0.0	8.3
Queue Length 95th (m)	24.9	16.4	17.8	21.9	9.3	24.9
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	874	463	840	1028	1024	963
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.32	0.27	0.24	0.30	0.29

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	261	3	137	165	44	2	230	285	33	218	10	
Future Volume (vph)	2	261	3	137	165	44	2	230	285	33	218	10	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.97			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1918		1772	1794			1830	1585		1787		
Flt Permitted		1.00		0.55	1.00			1.00	1.00		0.95		
Satd. Flow (perm)		1913		1017	1794			1827	1585		1707		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	278	3	146	176	47	2	245	303	35	232	11	
RTOR Reduction (vph)	0	2	0	0	30	0	0	0	143	0	3	0	
Lane Group Flow (vph)	0	282	0	146	193	0	0	247	160	0	275	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6			
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		9.0		9.0	9.0			19.0	19.0		19.0		
Effective Green, g (s)		9.0		9.0	9.0			19.0	19.0		19.0		
Actuated g/C Ratio		0.25		0.25	0.25			0.53	0.53		0.53		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		478		254	448			964	836		900		
v/s Ratio Prot					0.11								
v/s Ratio Perm		c0.15		0.14				0.14	0.10		c0.16		
v/c Ratio		0.59		0.57	0.43			0.26	0.19		0.31		
Uniform Delay, d1		11.9		11.8	11.3			4.6	4.5		4.8		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.9		3.1	0.7			0.6	0.5		0.9		
Delay (s)		13.7		15.0	12.0			5.3	5.0		5.7		
Level of Service		B		B	B			A	A		A		
Approach Delay (s)		13.7			13.2			5.1			5.7		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			8.9									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.40										
Actuated Cycle Length (s)			36.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			64.8%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	7	540	34	240	305	26	40	67	423	41	133	12
Future Volume (vph)	7	540	34	240	305	26	40	67	423	41	133	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.981			0.989	
Satd. Flow (prot)	0	3552	0	1789	3482	0	0	1861	1617	0	1858	0
Flt Permitted		0.949		0.290				0.827			0.892	
Satd. Flow (perm)	0	3374	0	546	3482	0	0	1569	1617	0	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			16				450			4
Link Speed (k/h)		70			70			80				80
Link Distance (m)		437.6			349.1			188.9				263.1
Travel Time (s)		22.5			18.0			8.5				11.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	7	574	36	255	324	28	43	71	450	44	141	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	617	0	255	352	0	0	114	450	0	198	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		16.1		31.8	29.7			12.1	12.1		12.1	
Actuated g/C Ratio		0.30		0.59	0.55			0.22	0.22		0.22	
v/c Ratio		0.61		0.48	0.18			0.33	0.63		0.53	
Control Delay		19.6		8.9	6.3			22.2	7.1		25.2	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		19.6		8.9	6.3			22.2	7.1		25.2	
LOS		B		A	A			C	A		C	
Approach Delay		19.6			7.4			10.2			25.2	
Approach LOS		B			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 54.2
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 13.8
 Intersection Capacity Utilization 67.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024





















Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	617	255	352	114	450	198
v/c Ratio	0.61	0.48	0.18	0.33	0.63	0.53
Control Delay	19.6	8.9	6.3	22.2	7.1	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	8.9	6.3	22.2	7.1	25.2
Queue Length 50th (m)	25.5	9.9	7.3	9.1	0.0	16.2
Queue Length 95th (m)	49.2	24.1	15.7	24.8	19.9	39.9
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2393	748	3359	871	1098	932
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.34	0.10	0.13	0.41	0.21

Intersection Summary























HCM Signalized Intersection Capacity Analysis
 2: McLaughlin Road & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	7	540	34	240	305	26	40	67	423	41	133	12	
Future Volume (vph)	7	540	34	240	305	26	40	67	423	41	133	12	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99		
Satd. Flow (prot)		3554		1789	3483			1862	1617		1859		
Flt Permitted		0.95		0.29	1.00			0.83	1.00		0.89		
Satd. Flow (perm)		3375		546	3483			1569	1617		1677		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	7	574	36	255	324	28	43	71	450	44	141	13	
RTOR Reduction (vph)	0	5	0	0	7	0	0	0	349	0	3	0	
Lane Group Flow (vph)	0	612	0	255	345	0	0	114	101	0	195	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		16.3		29.7	29.7			12.0	12.0		12.0		
Effective Green, g (s)		16.3		29.7	29.7			12.0	12.0		12.0		
Actuated g/C Ratio		0.30		0.55	0.55			0.22	0.22		0.22		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1024		519	1926			350	361		374		
v/s Ratio Prot				c0.09	0.10								
v/s Ratio Perm		c0.18		0.19				0.07	0.06		c0.12		
v/c Ratio		0.60		0.49	0.18			0.33	0.28		0.52		
Uniform Delay, d1		15.9		6.8	6.0			17.5	17.3		18.3		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.9		0.7	0.0			0.5	0.4		1.3		
Delay (s)		16.9		7.5	6.0			18.0	17.7		19.6		
Level of Service		B		A	A			B	B		B		
Approach Delay (s)		16.9			6.6			17.8			19.6		
Approach LOS		B			A			B			B		
Intersection Summary													
HCM 2000 Control Delay			14.3		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.55										
Actuated Cycle Length (s)			53.7		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			67.4%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	563	239	192	335	186	154	58	1862	165	76	2573	299
Future Volume (vph)	563	239	192	335	186	154	58	1862	165	76	2573	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.933			0.932				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3317	0	1722	3268	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.358			0.486			0.067			0.069		
Satd. Flow (perm)	661	3317	0	881	3268	0	121	4445	1471	117	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		78			15				138			159
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	605	257	206	360	200	166	62	2002	177	82	2767	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	605	463	0	360	366	0	62	2002	177	82	2767	322
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
 3: Hurontario Street & Old School Road

06/07/2024

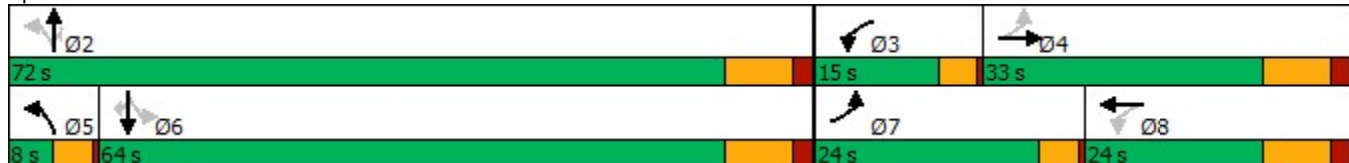


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	33.0		15.0	24.0		8.0	72.0	72.0	64.0	64.0	64.0
Total Split (%)	20.0%	27.5%		12.5%	20.0%		6.7%	60.0%	60.0%	53.3%	53.3%	53.3%
Maximum Green (s)	20.0	25.0		11.0	16.0		4.0	64.0	64.0	56.0	56.0	56.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	45.4	26.4		34.4	15.4		68.4	62.4	62.4	58.1	58.1	56.1
Actuated g/C Ratio	0.39	0.22		0.29	0.13		0.58	0.53	0.53	0.49	0.49	0.48
v/c Ratio	1.32	0.58		1.03	0.83		0.41	0.85	0.21	1.44	1.11	0.37
Control Delay	187.3	37.0		89.9	65.3		19.0	28.2	4.6	299.6	86.9	11.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	187.3	37.0		89.9	65.3		19.0	28.2	4.6	299.6	86.9	11.2
LOS	F	D		F	E		B	C	A	F	F	B
Approach Delay		122.2			77.5			26.1			84.7	
Approach LOS		F			E			C			F	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	117.8
Natural Cycle:	140
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.44
Intersection Signal Delay:	71.3
Intersection LOS:	E
Intersection Capacity Utilization:	112.7%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	605	463	360	366	62	2002	177	82	2767	322
v/c Ratio	1.32	0.58	1.03	0.83	0.41	0.85	0.21	1.44	1.11	0.37
Control Delay	187.3	37.0	89.9	65.3	19.0	28.2	4.6	299.6	86.9	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	187.3	37.0	89.9	65.3	19.0	28.2	4.6	299.6	86.9	11.2
Queue Length 50th (m)	~151.5	42.6	~68.9	42.9	6.0	140.8	4.2	~26.3	~277.8	22.4
Queue Length 95th (m)	#222.3	59.7	#108.0	#65.3	12.0	163.1	14.9	#46.1	#304.7	43.6
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	459	821	350	457	151	2418	862	57	2486	860
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.32	0.56	1.03	0.80	0.41	0.83	0.21	1.44	1.11	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 			   			   		
Traffic Volume (vph)	563	239	192	335	186	154	58	1862	165	76	2573	299	
Future Volume (vph)	563	239	192	335	186	154	58	1862	165	76	2573	299	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1755	3318		1722	3268		1722	4445	1471	1615	5043	1633	
Flt Permitted	0.36	1.00		0.49	1.00		0.07	1.00	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	662	3318		880	3268		121	4445	1471	117	5043	1633	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	605	257	206	360	200	166	62	2002	177	82	2767	322	
RTOR Reduction (vph)	0	61	0	0	13	0	0	0	64	0	0	84	
Lane Group Flow (vph)	605	402	0	360	353	0	62	2002	113	82	2767	238	
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8		5	2			6		
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	39.4	24.4		26.4	15.4		63.2	63.2	63.2	56.1	56.1	56.1	
Effective Green, g (s)	41.4	26.4		30.4	15.4		65.2	63.2	63.2	58.1	58.1	56.1	
Actuated g/C Ratio	0.35	0.22		0.26	0.13		0.55	0.53	0.53	0.49	0.49	0.47	
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0	
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)	433	738		317	424		135	2368	783	57	2470	772	
v/s Ratio Prot	c0.26	0.12		0.12	0.11		0.02	c0.45			0.55		
v/s Ratio Perm	0.23			c0.17			0.23		0.08	c0.70		0.15	
v/c Ratio	1.40	0.55		1.14	0.83		0.46	0.85	0.14	1.44	1.12	0.31	
Uniform Delay, d1	34.8	40.8		41.5	50.3		26.2	23.5	14.0	30.2	30.2	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	192.3	0.8		92.4	13.1		2.5	3.0	0.1	272.4	60.2	0.2	
Delay (s)	227.2	41.6		134.0	63.4		28.7	26.5	14.1	302.7	90.5	19.5	
Level of Service	F	D		F	E		C	C	B	F	F	B	
Approach Delay (s)		146.7			98.4			25.6			88.7		
Approach LOS		F			F			C			F		
Intersection Summary													
HCM 2000 Control Delay			78.7									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			1.36										
Actuated Cycle Length (s)			118.6									Sum of lost time (s)	18.0
Intersection Capacity Utilization			112.7%									ICU Level of Service	H
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Future Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994			0.946			0.986	
Flt Protected		0.997		0.950				0.997			0.988	
Satd. Flow (prot)	0	4862	0	1659	4941	0	0	1743	0	0	1781	0
Flt Permitted		0.864		0.233				0.961			0.696	
Satd. Flow (perm)	0	4213	0	407	4941	0	0	1680	0	0	1255	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			42			7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	48	752	56	165	653	29	27	214	159	101	266	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	856	0	165	682	0	0	400	0	0	409	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

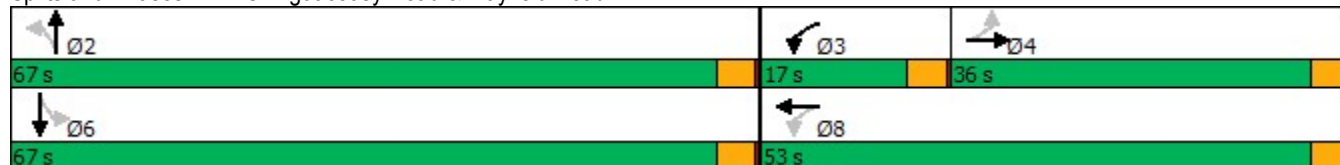


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		17.0	53.0		67.0	67.0		67.0	67.0	
Total Split (%)	30.0%	30.0%		14.2%	44.2%		55.8%	55.8%		55.8%	55.8%	
Maximum Green (s)	32.0	32.0		13.0	49.0		63.0	63.0		63.0	63.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		35.8		49.4	49.4			28.9			28.9	
Actuated g/C Ratio		0.41		0.57	0.57			0.33			0.33	
v/c Ratio		0.49		0.44	0.24			0.68			0.96	
Control Delay		21.5		14.6	10.5			27.7			63.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		21.5		14.6	10.5			27.7			63.8	
LOS		C		B	B			C			E	
Approach Delay		21.5			11.3			27.7			63.8	
Approach LOS		C			B			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	86.4
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	25.9
Intersection LOS:	C
Intersection Capacity Utilization:	87.2%
ICU Level of Service:	E
Analysis Period (min):	15

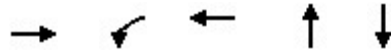
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	856	165	682	400	409
v/c Ratio	0.49	0.44	0.24	0.68	0.96
Control Delay	21.5	14.6	10.5	27.7	63.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	14.6	10.5	27.7	63.8
Queue Length 50th (m)	36.2	11.8	18.4	50.0	64.1
Queue Length 95th (m)	63.6	29.0	34.4	77.8	#112.0
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1751	423	2829	1246	924
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.39	0.24	0.32	0.44

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔		↔	↔↕↔			↕			↕	
Traffic Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Future Volume (vph)	48	744	55	163	646	29	27	212	157	100	263	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frt		0.99		1.00	0.99			0.95			0.99	
Flt Protected		1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)		4864		1659	4939			1743			1781	
Flt Permitted		0.86		0.23	1.00			0.96			0.70	
Satd. Flow (perm)		4214		407	4939			1682			1254	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	48	752	56	165	653	29	27	214	159	101	266	42
RTOR Reduction (vph)	0	5	0	0	3	0	0	28	0	0	5	0
Lane Group Flow (vph)	0	851	0	165	679	0	0	372	0	0	404	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		35.8		49.4	49.4			28.9			28.9	
Effective Green, g (s)		35.8		49.4	49.4			28.9			28.9	
Actuated g/C Ratio		0.41		0.57	0.57			0.33			0.33	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1748		372	2827			563			419	
v/s Ratio Prot				c0.05	0.14							
v/s Ratio Perm		c0.20		0.20				0.22			c0.32	
v/c Ratio		0.49		0.44	0.24			0.66			0.97	
Uniform Delay, d1		18.5		9.7	9.1			24.5			28.2	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.0		0.8	0.2			2.9			34.7	
Delay (s)		19.5		10.5	9.3			27.4			62.9	
Level of Service		B		B	A			C			E	
Approach Delay (s)		19.5			9.6			27.4			62.9	
Approach LOS		B			A			C			E	

Intersection Summary

HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Future Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.979			0.956			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4762	0	1644	3402	0	1690	3439	0
Flt Permitted	0.288			0.105			0.457			0.373		
Satd. Flow (perm)	553	4889	0	189	4762	0	791	3402	0	663	3439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			32			49			28	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	18	1041	126	145	820	133	55	261	108	323	436	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	1167	0	145	953	0	55	369	0	323	526	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	40.0	40.0		16.0	56.0		33.0	33.0		31.0	64.0	
Total Split (%)	33.3%	33.3%		13.3%	46.7%		27.5%	27.5%		25.8%	53.3%	
Maximum Green (s)	34.0	34.0		12.0	50.0		27.0	27.0		27.0	58.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	34.0	34.0		52.0	50.0		27.0	27.0		60.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.43	0.42		0.22	0.22		0.50	0.48	

Lanes, Volumes, Timings

5: McLaughlin Road & Mayfield Road

06/07/2024

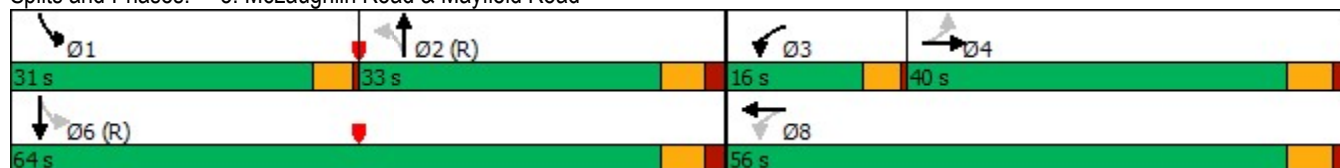


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.12	0.83		0.62	0.48		0.31	0.46		0.57	0.31	
Control Delay	34.4	46.0		35.2	25.5		44.5	36.8		23.2	18.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.4	46.0		35.2	25.5		44.5	36.8		23.2	18.4	
LOS	C	D		D	C		D	D		C	B	
Approach Delay		45.9			26.8			37.8			20.2	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	32.9
Intersection LOS:	C
Intersection Capacity Utilization	75.0%
ICU Level of Service	D
Analysis Period (min)	15

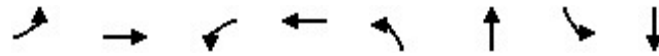
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	1167	145	953	55	369	323	526
v/c Ratio	0.12	0.83	0.62	0.48	0.31	0.46	0.57	0.31
Control Delay	34.4	46.0	35.2	25.5	44.5	36.8	23.2	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	46.0	35.2	25.5	44.5	36.8	23.2	18.4
Queue Length 50th (m)	3.1	93.3	20.8	56.8	10.9	34.3	45.5	36.3
Queue Length 95th (m)	9.3	111.2	38.3	69.2	23.5	49.2	67.2	48.4
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	156	1398	233	2002	177	803	562	1676
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.83	0.62	0.48	0.31	0.46	0.57	0.31

Intersection Summary

HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖↗		↖	↗↖↗	
Traffic Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Future Volume (vph)	18	1020	123	142	804	130	54	256	106	317	427	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4888		1706	4763		1644	3402		1690	3441	
Flt Permitted	0.29	1.00		0.11	1.00		0.46	1.00		0.37	1.00	
Satd. Flow (perm)	553	4888		189	4763		791	3402		664	3441	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	18	1041	126	145	820	133	55	261	108	323	436	90
RTOR Reduction (vph)	0	13	0	0	19	0	0	38	0	0	14	0
Lane Group Flow (vph)	18	1154	0	145	934	0	55	331	0	323	512	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		50.0	50.0		27.0	27.0		58.0	58.0	
Effective Green, g (s)	34.0	34.0		50.0	50.0		27.0	27.0		58.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.42	0.42		0.22	0.22		0.48	0.48	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	156	1384		230	1984		177	765		551	1663	
v/s Ratio Prot		c0.24		c0.06	0.20			0.10		c0.13	0.15	
v/s Ratio Perm	0.03			0.20			0.07			c0.15		
v/c Ratio	0.12	0.83		0.63	0.47		0.31	0.43		0.59	0.31	
Uniform Delay, d1	31.9	40.4		25.8	25.4		38.7	39.9		20.3	18.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	6.0		12.4	0.8		4.5	1.8		4.5	0.5	
Delay (s)	33.4	46.4		38.2	26.2		43.3	41.7		24.9	19.3	
Level of Service	C	D		D	C		D	D		C	B	
Approach Delay (s)		46.2			27.8			41.9			21.4	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363
Future Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98	1.00		0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.179			0.950			0.287			0.356		
Satd. Flow (perm)	328	4902	1508	3329	4948	1395	545	3476	1467	636	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			169			248			363
Link Speed (k/h)		70			70			70				70
Link Distance (m)		142.1			749.9			381.1				609.4
Travel Time (s)		7.3			38.6			19.6				31.3
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.77	0.89	0.25	0.84	0.79	0.50	0.41	0.46	0.43	0.65	0.59	0.42
Control Delay	51.1	67.5	8.7	95.2	70.9	15.6	27.0	50.7	7.3	25.8	32.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	67.5	8.7	95.2	70.9	15.6	27.0	50.7	7.3	25.8	32.5	4.3
LOS	D	E	A	F	E	B	C	D	A	C	C	A
Approach Delay		59.7			66.8			33.8			24.9	
Approach LOS		E			E			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	45.3
Intersection LOS:	D
Intersection Capacity Utilization	81.3%
ICU Level of Service	D
Analysis Period (min)	15

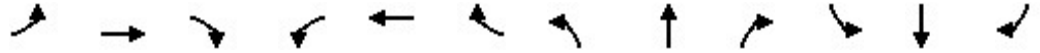
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386
v/c Ratio	0.77	0.89	0.25	0.84	0.79	0.50	0.41	0.46	0.43	0.65	0.59	0.42
Control Delay	51.1	67.5	8.7	95.2	70.9	15.6	27.0	50.7	7.3	25.8	32.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	67.5	8.7	95.2	70.9	15.6	27.0	50.7	7.3	25.8	32.5	4.3
Queue Length 50th (m)	66.6	122.8	0.0	40.1	77.6	5.7	13.7	60.2	0.0	72.7	120.2	3.9
Queue Length 95th (m)	#100.2	141.2	16.1	#62.1	93.4	30.0	22.9	77.1	22.1	98.4	141.7	22.5
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	375	1225	464	292	865	383	235	934	575	625	1683	930
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.89	0.25	0.84	0.79	0.50	0.41	0.46	0.43	0.65	0.59	0.42


































Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 		 	 		
Traffic Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363	
Future Volume (vph)	272	1020	109	229	646	179	90	402	233	384	937	363	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1806	3476	1467	1703	3544	1557	
Flt Permitted	0.18	1.00	1.00	0.95	1.00	1.00	0.29	1.00	1.00	0.36	1.00	1.00	
Satd. Flow (perm)	327	4902	1508	3340	4948	1395	547	3476	1467	637	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	289	1085	116	244	687	190	96	428	248	409	997	386	
RTOR Reduction (vph)	0	0	87	0	0	139	0	0	181	0	0	191	
Lane Group Flow (vph)	289	1085	29	244	687	51	96	428	67	409	997	195	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	371	1225	377	292	865	244	226	934	394	612	1683	739	
v/s Ratio Prot	c0.14	c0.22		0.07	0.14		0.02	0.12		c0.17	0.28		
v/s Ratio Perm	0.16		0.02			0.04	0.11		0.05	c0.20		0.13	
v/c Ratio	0.78	0.89	0.08	0.84	0.79	0.21	0.42	0.46	0.17	0.67	0.59	0.26	
Uniform Delay, d1	38.4	57.8	45.9	71.9	63.2	56.5	39.9	48.8	44.8	23.0	30.7	25.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.9	9.6	0.4	23.7	7.4	1.9	5.8	1.6	0.9	5.7	1.5	0.9	
Delay (s)	53.2	67.4	46.3	95.6	70.7	58.4	45.7	50.4	45.7	28.7	32.2	26.1	
Level of Service	D	E	D	F	E	E	D	D	D	C	C	C	
Approach Delay (s)		63.0			74.0			48.3			30.1		
Approach LOS		E			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			51.8									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.78										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			81.3%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	235	2	288	342	54	12	379	329	42	246	5
Future Volume (vph)	5	235	2	288	342	54	12	379	329	42	246	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.980				0.850		0.998	
Flt Protected		0.999		0.950				0.998			0.993	
Satd. Flow (prot)	0	1863	0	1825	1835	0	0	1796	1601	0	1843	0
Flt Permitted		0.991		0.458				0.986			0.812	
Satd. Flow (perm)	0	1848	0	880	1835	0	0	1774	1601	0	1507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					9				186			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	250	2	306	364	57	13	403	350	45	262	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	257	0	306	421	0	0	416	350	0	312	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

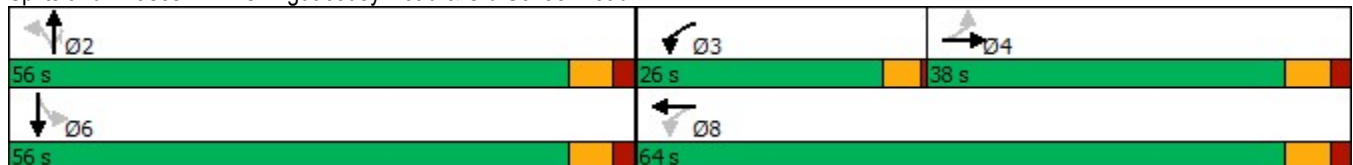
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		26.0	64.0		56.0	56.0	56.0	56.0	56.0	
Total Split (%)	31.7%	31.7%		21.7%	53.3%		46.7%	46.7%	46.7%	46.7%	46.7%	
Maximum Green (s)	32.0	32.0		22.0	58.0		50.0	50.0	50.0	50.0	50.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		36.9		62.0	58.0			50.0	50.0		50.0	
Actuated g/C Ratio		0.31		0.52	0.48			0.42	0.42		0.42	
v/c Ratio		0.45		0.51	0.47			0.56	0.45		0.50	
Control Delay		37.6		20.1	22.5			30.3	13.2		29.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		37.6		20.1	22.5			30.3	13.2		29.1	
LOS		D		C	C			C	B		C	
Approach Delay		37.6			21.5			22.5			29.1	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	25.0
Intersection LOS:	C
Intersection Capacity Utilization:	90.2%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	257	306	421	416	350	312
v/c Ratio	0.45	0.51	0.47	0.56	0.45	0.50
Control Delay	37.6	20.1	22.5	30.3	13.2	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	20.1	22.5	30.3	13.2	29.1
Queue Length 50th (m)	48.6	40.4	63.0	73.5	25.4	53.0
Queue Length 95th (m)	77.7	59.5	90.0	105.0	50.4	79.6
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	568	643	891	739	775	628
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.48	0.47	0.56	0.45	0.50

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road



















06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕	↗		↕		
Traffic Volume (vph)	5	235	2	288	342	54	12	379	329	42	246	5	
Future Volume (vph)	5	235	2	288	342	54	12	379	329	42	246	5	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.98			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1863		1825	1834			1796	1601		1843		
Flt Permitted		0.99		0.46	1.00			0.99	1.00		0.81		
Satd. Flow (perm)		1848		880	1834			1773	1601		1507		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	5	250	2	306	364	57	13	403	350	45	262	5	
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	109	0	1	0	
Lane Group Flow (vph)	0	257	0	306	416	0	0	416	242	0	311	0	
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		36.9		58.0	58.0			50.0	50.0		50.0		
Effective Green, g (s)		36.9		60.0	58.0			50.0	50.0		50.0		
Actuated g/C Ratio		0.31		0.50	0.48			0.42	0.42		0.42		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		568		590	886			738	667		627		
v/s Ratio Prot				c0.08	c0.23								
v/s Ratio Perm		0.14		0.18				c0.23	0.15		0.21		
v/c Ratio		0.45		0.52	0.47			0.56	0.36		0.50		
Uniform Delay, d1		33.4		19.0	20.7			26.7	24.0		25.7		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		2.6		0.8	1.8			3.1	1.5		2.8		
Delay (s)		36.0		19.7	22.5			29.8	25.6		28.5		
Level of Service		D		B	C			C	C		C		
Approach Delay (s)		36.0			21.3			27.9			28.5		
Approach LOS		D			C			C			C		
Intersection Summary													
HCM 2000 Control Delay			26.7									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			90.2%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	560	38	449	627	29	50	152	458	24	64	7
Future Volume (vph)	11	560	38	449	627	29	50	152	458	24	64	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.993				0.850		0.991	
Flt Protected		0.999		0.950				0.988			0.987	
Satd. Flow (prot)	0	3465	0	1755	3584	0	0	1826	1555	0	1806	0
Flt Permitted		0.935		0.289				0.890			0.875	
Satd. Flow (perm)	0	3243	0	534	3584	0	0	1644	1555	0	1601	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			7				487		3	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	12	596	40	478	667	31	53	162	487	26	68	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	478	698	0	0	215	487	0	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

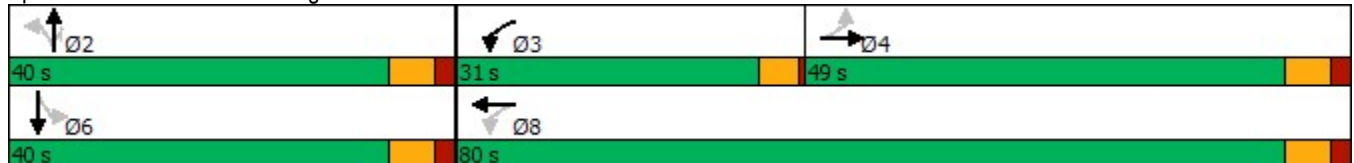


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	49.0	49.0		31.0	80.0		40.0	40.0	40.0	40.0	40.0	
Total Split (%)	40.8%	40.8%		25.8%	66.7%		33.3%	33.3%	33.3%	33.3%	33.3%	
Maximum Green (s)	43.0	43.0		27.0	74.0		34.0	34.0	34.0	34.0	34.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		20.8		45.2	40.9			16.4	16.4		16.4	
Actuated g/C Ratio		0.30		0.64	0.58			0.23	0.23		0.23	
v/c Ratio		0.67		0.73	0.33			0.56	0.66		0.27	
Control Delay		26.6		15.5	8.2			32.2	7.8		26.3	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		26.6		15.5	8.2			32.2	7.8		26.3	
LOS		C		B	A			C	A		C	
Approach Delay		26.6			11.1			15.3			26.3	
Approach LOS		C			B			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	70.2
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	16.6
Intersection LOS:	B
Intersection Capacity Utilization:	77.8%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	648	478	698	215	487	101
v/c Ratio	0.67	0.73	0.33	0.56	0.66	0.27
Control Delay	26.6	15.5	8.2	32.2	7.8	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	15.5	8.2	32.2	7.8	26.3
Queue Length 50th (m)	35.2	24.2	20.3	23.0	0.0	9.7
Queue Length 95th (m)	76.1	70.8	41.5	58.9	25.6	29.2
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2139	886	3340	856	1043	835
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.54	0.21	0.25	0.47	0.12

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	11	560	38	449	627	29	50	152	458	24	64	7
Future Volume (vph)	11	560	38	449	627	29	50	152	458	24	64	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3464		1755	3585			1825	1555		1806	
Flt Permitted		0.94		0.29	1.00			0.89	1.00		0.88	
Satd. Flow (perm)		3244		534	3585			1645	1555		1601	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	12	596	40	478	667	31	53	162	487	26	68	7
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	372	0	2	0
Lane Group Flow (vph)	0	644	0	478	695	0	0	215	115	0	99	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		21.2		40.9	40.9			16.4	16.4		16.4	
Effective Green, g (s)		21.2		42.9	40.9			16.4	16.4		16.4	
Actuated g/C Ratio		0.31		0.62	0.59			0.24	0.24		0.24	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		992		642	2115			389	367		378	
v/s Ratio Prot				c0.19	0.19							
v/s Ratio Perm		c0.20		0.27				c0.13	0.07		0.06	
v/c Ratio		0.65		0.74	0.33			0.55	0.31		0.26	
Uniform Delay, d1		20.8		8.0	7.2			23.2	21.8		21.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.5		4.7	0.1			1.7	0.5		0.4	
Delay (s)		22.3		12.6	7.3			24.9	22.3		21.9	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		22.3			9.5			23.1			21.9	
Approach LOS		C			A			C			C	

Intersection Summary

HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	14.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	685	229	117	352	299	166	196	3279	386	172	1919	589
Future Volume (vph)	685	229	117	352	299	166	196	3279	386	172	1919	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.949			0.946				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3298	0	1789	3431	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.212			0.358			0.081			0.088		
Satd. Flow (perm)	407	3298	0	674	3431	0	154	5043	1633	169	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			68				149			344
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	706	236	121	363	308	171	202	3380	398	177	1978	607
Shared Lane Traffic (%)												
Lane Group Flow (vph)	706	357	0	363	479	0	202	3380	398	177	1978	607
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	29.0		24.0	29.0		19.0	57.0	57.0	10.0	48.0	48.0
Total Split (%)	20.0%	24.2%		20.0%	24.2%		15.8%	47.5%	47.5%	8.3%	40.0%	40.0%
Maximum Green (s)	20.0	23.0		20.0	23.0		13.0	51.0	51.0	4.0	42.0	42.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	45.5	21.7		40.4	21.0		63.0	53.0	51.0	51.4	45.4	43.4
Actuated g/C Ratio	0.39	0.19		0.35	0.18		0.54	0.46	0.44	0.44	0.39	0.37
v/c Ratio	1.65	0.53		0.86	0.71		0.73	1.47	0.50	1.11	1.05	0.77
Control Delay	327.7	37.3		49.4	44.2		40.6	240.4	16.9	129.0	71.0	21.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	327.7	37.3		49.4	44.2		40.6	240.4	16.9	129.0	71.0	21.4
LOS	F	D		D	D		D	F	B	F	E	C
Approach Delay		230.2			46.5			207.9			63.8	
Approach LOS		F			D			F			E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 116.1
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.65
 Intersection Signal Delay: 148.9 Intersection LOS: F
 Intersection Capacity Utilization 137.7% ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	706	357	363	479	202	3380	398	177	1978	607
v/c Ratio	1.65	0.53	0.86	0.71	0.73	1.47	0.50	1.11	1.05	0.77
Control Delay	327.7	37.3	49.4	44.2	40.6	240.4	16.9	129.0	71.0	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	327.7	37.3	49.4	44.2	40.6	240.4	16.9	129.0	71.0	21.4
Queue Length 50th (m)	~216.0	31.5	62.5	46.7	28.2	~387.6	38.7	~30.9	~185.5	55.4
Queue Length 95th (m)	#292.9	46.3	#93.3	64.3	#59.6	#430.8	69.7	#78.6	#225.9	110.1
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	428	763	430	792	297	2303	801	160	1881	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.65	0.47	0.84	0.60	0.68	1.47	0.50	1.11	1.05	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	685	229	117	352	299	166	196	3279	386	172	1919	589	
Future Volume (vph)	685	229	117	352	299	166	196	3279	386	172	1919	589	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1825	3299		1789	3433		1807	5043	1633	1825	4812	1541	
Flt Permitted	0.21	1.00		0.36	1.00		0.08	1.00	1.00	0.09	1.00	1.00	
Satd. Flow (perm)	408	3299		674	3433		154	5043	1633	169	4812	1541	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	706	236	121	363	308	171	202	3380	398	177	1978	607	
RTOR Reduction (vph)	0	55	0	0	56	0	0	0	84	0	0	215	
Lane Group Flow (vph)	706	302	0	363	423	0	202	3380	314	177	1978	392	
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4			8			2		2	6		6	
Actuated Green, G (s)	39.7	19.7		38.5	19.1		61.0	51.0	51.0	47.4	43.4	43.4	
Effective Green, g (s)	43.7	21.7		38.5	21.1		63.0	53.0	51.0	51.4	45.4	43.4	
Actuated g/C Ratio	0.38	0.19		0.33	0.18		0.54	0.46	0.44	0.44	0.39	0.37	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	
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)	422	616		409	623		277	2302	717	160	1881	576	
v/s Ratio Prot	c0.32	0.09		0.15	0.12		0.09	c0.67		c0.06	0.41		
v/s Ratio Perm	0.31			c0.15			0.31		0.19	0.43		0.25	
v/c Ratio	1.67	0.49		0.89	0.68		0.73	1.47	0.44	1.11	1.05	0.68	
Uniform Delay, d1	31.1	42.2		32.9	44.3		29.6	31.5	22.6	28.7	35.4	30.5	
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	313.1	0.6		20.1	3.0		9.2	213.2	1.9	102.5	35.8	6.4	
Delay (s)	344.2	42.9		53.0	47.3		38.9	244.7	24.6	131.2	71.2	36.9	
Level of Service	F	D		D	D		D	F	C	F	E	D	
Approach Delay (s)		243.0			49.8			212.2			67.5		
Approach LOS		F			D			F			E		
Intersection Summary													
HCM 2000 Control Delay			154.0									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.37										
Actuated Cycle Length (s)			116.1									Sum of lost time (s)	16.0
Intersection Capacity Utilization			137.7%									ICU Level of Service	H
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32
Future Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.990			0.985			0.955			0.983	
Flt Protected		0.997		0.950				0.996			0.993	
Satd. Flow (prot)	0	5037	0	1825	5030	0	0	1787	0	0	1836	0
Flt Permitted		0.843		0.199				0.961			0.845	
Satd. Flow (perm)	0	4259	0	382	5030	0	0	1724	0	0	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			17			34			10	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	51	847	62	223	797	86	41	345	193	42	202	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	960	0	223	883	0	0	579	0	0	279	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

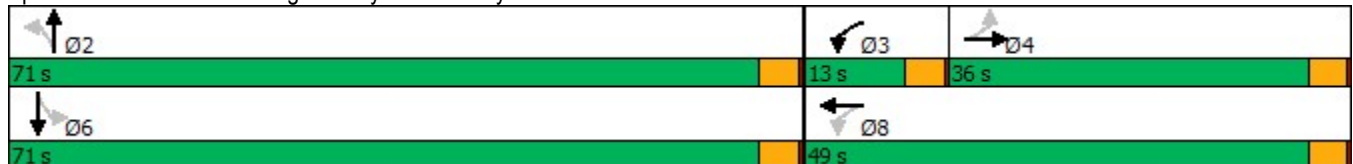


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		13.0	49.0		71.0	71.0		71.0	71.0	
Total Split (%)	30.0%	30.0%		10.8%	40.8%		59.2%	59.2%		59.2%	59.2%	
Maximum Green (s)	32.0	32.0		9.0	45.0		67.0	67.0		67.0	67.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		32.4		47.5	45.5			32.8			32.8	
Actuated g/C Ratio		0.38		0.55	0.53			0.38			0.38	
v/c Ratio		0.60		0.56	0.33			0.86			0.47	
Control Delay		25.0		18.1	13.2			36.1			21.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		25.0		18.1	13.2			36.1			21.4	
LOS		C		B	B			D			C	
Approach Delay		25.0			14.2			36.1			21.4	
Approach LOS		C			B			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	86.4
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	22.7
Intersection LOS:	C
Intersection Capacity Utilization:	77.0%
ICU Level of Service:	D
Analysis Period (min):	15

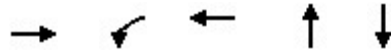
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	960	223	883	579	279
v/c Ratio	0.60	0.56	0.33	0.86	0.47
Control Delay	25.0	18.1	13.2	36.1	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	18.1	13.2	36.1	21.4
Queue Length 50th (m)	45.4	17.7	28.2	80.8	32.4
Queue Length 95th (m)	73.9	40.5	49.9	120.3	51.9
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1600	395	2656	1358	1226
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.56	0.33	0.43	0.23

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↕↔		↔	↔↕↔			↕			↕		
Traffic Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32	
Future Volume (vph)	47	779	57	205	733	79	38	317	178	39	186	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00		
Frbp, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00		
Frt		0.99		1.00	0.99			0.95			0.98		
Flt Protected		1.00		0.95	1.00			1.00			0.99		
Satd. Flow (prot)		5040		1825	5032			1788			1835		
Flt Permitted		0.84		0.20	1.00			0.96			0.85		
Satd. Flow (perm)		4258		382	5032			1724			1563		
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)	51	847	62	223	797	86	41	345	193	42	202	35	
RTOR Reduction (vph)	0	6	0	0	8	0	0	21	0	0	6	0	
Lane Group Flow (vph)	0	954	0	223	875	0	0	558	0	0	273	0	
Confl. Peds. (#/hr)							1					1	
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		32.4		45.5	45.5			32.8			32.8		
Effective Green, g (s)		32.4		47.5	45.5			32.8			32.8		
Actuated g/C Ratio		0.38		0.55	0.53			0.38			0.38		
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0		
Lane Grp Cap (vph)		1598		395	2653			655			594		
v/s Ratio Prot				c0.07	0.17								
v/s Ratio Perm		c0.22		0.24				c0.32			0.17		
v/c Ratio		0.60		0.56	0.33			0.85			0.46		
Uniform Delay, d1		21.7		11.1	11.7			24.5			20.1		
Progression Factor		1.00		1.00	1.00			1.00			1.00		
Incremental Delay, d2		1.7		1.8	0.3			10.4			0.6		
Delay (s)		23.4		13.0	12.0			34.9			20.7		
Level of Service		C		B	B			C			C		
Approach Delay (s)		23.4			12.2			34.9			20.7		
Approach LOS		C			B			C			C		
Intersection Summary													
HCM 2000 Control Delay			21.2									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			86.3									Sum of lost time (s)	10.0
Intersection Capacity Utilization			77.0%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Future Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.968			0.967			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4884	0	1825	3480	0	1738	3389	0
Flt Permitted	0.109			0.146			0.532			0.178		
Satd. Flow (perm)	199	5036	0	270	4884	0	1022	3480	0	326	3389	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			60			30			46	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	51	1006	81	130	1179	316	138	477	134	234	275	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	1087	0	130	1495	0	138	611	0	234	370	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

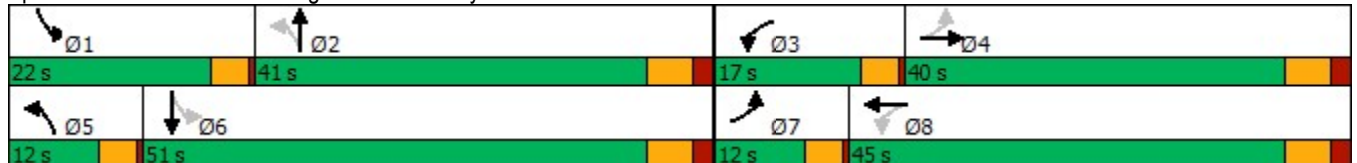
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	12.0	40.0		17.0	45.0		12.0	41.0		22.0	51.0	
Total Split (%)	10.0%	33.3%		14.2%	37.5%		10.0%	34.2%		18.3%	42.5%	
Maximum Green (s)	8.0	34.0		13.0	39.0		8.0	35.0		18.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.8	35.9		50.7	40.8		32.9	23.0		43.0	29.4	
Actuated g/C Ratio	0.43	0.35		0.49	0.40		0.32	0.22		0.42	0.29	
v/c Ratio	0.27	0.62		0.48	0.76		0.36	0.76		0.70	0.37	
Control Delay	19.8	31.1		22.0	31.0		22.0	42.7		32.2	26.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.8	31.1		22.0	31.0		22.0	42.7		32.2	26.1	
LOS	B	C		C	C		C	D		C	C	
Approach Delay		30.6			30.3			38.9			28.5	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 103
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 31.7
 Intersection LOS: C
 Intersection Capacity Utilization 77.9%
 ICU Level of Service D
 Analysis Period (min) 15

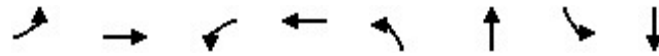
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	1087	130	1495	138	611	234	370
v/c Ratio	0.27	0.62	0.48	0.76	0.36	0.76	0.70	0.37
Control Delay	19.8	31.1	22.0	31.0	22.0	42.7	32.2	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	31.1	22.0	31.0	22.0	42.7	32.2	26.1
Queue Length 50th (m)	5.1	65.5	13.7	94.5	17.1	58.3	30.9	27.2
Queue Length 95th (m)	13.5	97.9	29.4	134.9	29.2	80.7	49.7	39.5
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	209	1760	324	1970	391	1215	386	1523
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.62	0.40	0.76	0.35	0.50	0.61	0.24

Intersection Summary

































HCM Signalized Intersection Capacity Analysis
 5: McLaughlin Road & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Future Volume (vph)	49	966	78	125	1132	303	132	458	129	225	264	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5035		1755	4886		1825	3480		1738	3390	
Flt Permitted	0.11	1.00		0.15	1.00		0.53	1.00		0.18	1.00	
Satd. Flow (perm)	199	5035		270	4886		1021	3480		326	3390	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	1006	81	130	1179	316	138	477	134	234	275	95
RTOR Reduction (vph)	0	7	0	0	36	0	0	23	0	0	33	0
Lane Group Flow (vph)	51	1080	0	130	1459	0	138	588	0	234	337	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.4	36.8		50.4	40.8		30.9	23.0		41.3	29.4	
Effective Green, g (s)	42.4	36.8		50.4	40.8		30.9	23.0		41.3	29.4	
Actuated g/C Ratio	0.41	0.35		0.49	0.39		0.30	0.22		0.40	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1786		268	1922		365	771		324	961	
v/s Ratio Prot	0.02	0.21		c0.04	c0.30		0.03	0.17		c0.10	0.10	
v/s Ratio Perm	0.11			0.19			0.08			c0.19		
v/c Ratio	0.31	0.60		0.49	0.76		0.38	0.76		0.72	0.35	
Uniform Delay, d1	20.4	27.5		16.7	27.2		27.6	37.8		23.4	29.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.5		1.4	2.9		0.7	4.5		7.7	0.2	
Delay (s)	21.5	29.0		18.1	30.1		28.3	42.3		31.1	29.8	
Level of Service	C	C		B	C		C	D		C	C	
Approach Delay (s)		28.7			29.1			39.7			30.3	
Approach LOS		C			C			D			C	
Intersection Summary												
HCM 2000 Control Delay			31.1				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			103.7				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			77.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c	Critical Lane Group											

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Future Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.160			0.950			0.127			0.242		
Satd. Flow (perm)	296	4995	1538	3344	5092	1562	239	3614	1486	462	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			137			178			246			551
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
Shared Lane Traffic (%)												
Lane Group Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	24.0	27.0	27.0	20.0	55.0	55.0	15.0	50.0	50.0
Total Split (%)	28.1%	30.4%	30.4%	17.8%	20.0%	20.0%	14.8%	40.7%	40.7%	11.1%	37.0%	37.0%
Maximum Green (s)	33.0	34.0	34.0	19.0	20.0	20.0	16.0	48.0	48.0	11.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

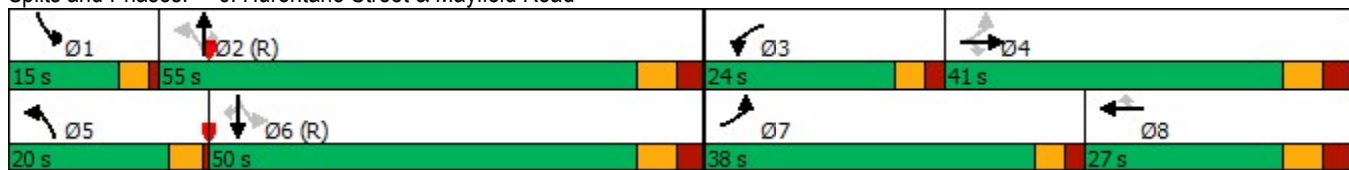


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Act Effect Green (s)	62.0	34.0	34.0	19.0	20.0	20.0	68.0	48.0	48.0	61.0	43.0	45.0	
Actuated g/C Ratio	0.46	0.25	0.25	0.14	0.15	0.15	0.50	0.36	0.36	0.45	0.32	0.33	
v/c Ratio	1.39	0.55	0.25	0.66	1.19	0.48	0.71	0.62	0.44	0.77	0.81	1.14	
Control Delay	218.6	45.8	5.8	62.1	145.9	12.6	35.8	38.4	8.9	37.0	49.0	96.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	218.6	45.8	5.8	62.1	145.9	12.6	35.8	38.4	8.9	37.0	49.0	96.6	
LOS	F	D	A	E	F	B	D	D	A	D	D	F	
Approach Delay		123.5			109.4				31.3			69.7	
Approach LOS		F			F				C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	120
Control Type:	Pretimed
Maximum v/c Ratio:	1.39
Intersection Signal Delay:	83.2
Intersection LOS:	F
Intersection Capacity Utilization	110.2%
ICU Level of Service	H
Analysis Period (min)	15

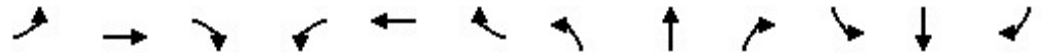
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
v/c Ratio	1.39	0.55	0.25	0.66	1.19	0.48	0.71	0.62	0.44	0.77	0.81	1.14
Control Delay	218.6	45.8	5.8	62.1	145.9	12.6	35.8	38.4	8.9	37.0	49.0	96.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	218.6	45.8	5.8	62.1	145.9	12.6	35.8	38.4	8.9	37.0	49.0	96.6
Queue Length 50th (m)	~237.6	58.9	0.0	41.3	~104.9	1.6	34.2	91.0	9.6	39.2	116.3	~210.2
Queue Length 95th (m)	#312.3	72.3	11.7	57.2	#133.1	23.2	62.0	112.1	32.4	#63.2	141.7	#289.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	514	1258	489	479	754	383	327	1284	686	340	1118	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.55	0.25	0.66	1.19	0.48	0.71	0.62	0.44	0.77	0.81	1.14

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Future Volume (vph)	693	670	117	305	868	179	224	766	291	253	877	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1823	3510	1555
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.13	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	239	3614	1486	464	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	714	691	121	314	895	185	231	790	300	261	904	1010
RTOR Reduction (vph)	0	0	91	0	0	152	0	0	159	0	0	367
Lane Group Flow (vph)	714	691	30	314	895	33	231	790	141	261	904	643
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	34.0	34.0	19.0	20.0	20.0	63.0	48.0	48.0	54.0	43.0	43.0
Effective Green, g (s)	60.0	34.0	34.0	19.0	20.0	20.0	65.0	48.0	48.0	58.0	43.0	45.0
Actuated g/C Ratio	0.44	0.25	0.25	0.14	0.15	0.15	0.48	0.36	0.36	0.43	0.32	0.33
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	479	754	231	321	1284	528	330	1118	518
v/s Ratio Prot	c0.36	0.14		0.09	0.18		c0.10	0.22		c0.08	0.26	
v/s Ratio Perm	c0.26		0.02			0.02	0.25		0.10	0.26		c0.41
v/c Ratio	1.40	0.55	0.08	0.66	1.19	0.14	0.72	0.62	0.27	0.79	0.81	1.24
Uniform Delay, d1	39.8	43.8	38.5	54.9	57.5	50.1	25.6	35.9	31.0	26.8	42.2	45.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	192.8	1.7	0.4	6.8	97.3	1.3	13.0	2.2	1.2	17.4	6.3	124.0
Delay (s)	232.6	45.6	38.9	61.8	154.8	51.4	38.7	38.1	32.2	44.2	48.6	169.0
Level of Service	F	D	D	E	F	D	D	D	C	D	D	F
Approach Delay (s)		132.6			120.1			36.9			103.9	
Approach LOS		F			F			D			F	
Intersection Summary												
HCM 2000 Control Delay			100.4				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.34									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)		21.0			
Intersection Capacity Utilization			110.2%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	2	294	9	209	243	50	20	234	337	43	218	10
Future Volume (vph)	2	294	9	209	243	50	20	234	337	43	218	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.975				0.850		0.995	
Flt Protected				0.950				0.996			0.992	
Satd. Flow (prot)	0	1913	0	1772	1812	0	0	1829	1585	0	1789	0
Flt Permitted		0.998		0.546				0.967			0.924	
Satd. Flow (perm)	0	1910	0	1018	1812	0	0	1776	1585	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			31				359			6
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	313	10	222	259	53	21	249	359	46	232	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	325	0	222	312	0	0	270	359	0	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

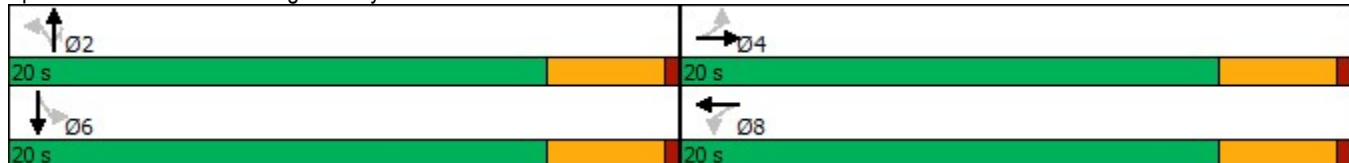


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		12.0		12.0	12.0			16.2	16.2		16.2	
Actuated g/C Ratio		0.33		0.33	0.33			0.45	0.45		0.45	
v/c Ratio		0.51		0.66	0.50			0.34	0.40		0.39	
Control Delay		12.4		20.4	11.5			9.2	2.8		9.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		12.4		20.4	11.5			9.2	2.8		9.6	
LOS		B		C	B			A	A		A	
Approach Delay		12.4			15.2			5.6			9.6	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 36.3
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 10.4
 Intersection Capacity Utilization 73.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	325	222	312	270	359	289
v/c Ratio	0.51	0.66	0.50	0.34	0.40	0.39
Control Delay	12.4	20.4	11.5	9.2	2.8	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	20.4	11.5	9.2	2.8	9.6
Queue Length 50th (m)	14.6	10.8	12.7	9.8	0.0	10.6
Queue Length 95th (m)	28.7	#26.5	26.2	24.5	10.3	26.7
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	854	453	824	791	905	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.49	0.38	0.34	0.40	0.39

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕	↗		↕	
Traffic Volume (vph)	2	294	9	209	243	50	20	234	337	43	218	10
Future Volume (vph)	2	294	9	209	243	50	20	234	337	43	218	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1913		1772	1811			1829	1585		1789	
Flt Permitted		1.00		0.55	1.00			0.97	1.00		0.92	
Satd. Flow (perm)		1909		1018	1811			1776	1585		1665	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	313	10	222	259	53	21	249	359	46	232	11
RTOR Reduction (vph)	0	3	0	0	21	0	0	0	198	0	3	0
Lane Group Flow (vph)	0	322	0	222	291	0	0	270	161	0	286	0
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2		6		
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		12.0		12.0	12.0			16.2	16.2		16.2	
Effective Green, g (s)		12.0		12.0	12.0			16.2	16.2		16.2	
Actuated g/C Ratio		0.33		0.33	0.33			0.45	0.45		0.45	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		632		337	600			794	709		745	
v/s Ratio Prot					0.16							
v/s Ratio Perm		0.17		c0.22				0.15	0.10		c0.17	
v/c Ratio		0.51		0.66	0.49			0.34	0.23		0.38	
Uniform Delay, d1		9.7		10.3	9.6			6.5	6.1		6.7	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.6		4.6	0.6			1.2	0.7		1.5	
Delay (s)		10.4		15.0	10.3			7.7	6.9		8.2	
Level of Service		B		B	B			A	A		A	
Approach Delay (s)		10.4			12.2			7.2			8.2	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.5									A
HCM 2000 Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			36.2								8.0	
Intersection Capacity Utilization			73.2%									D
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↖	↕↕			↕	↗		↕↔	
Traffic Volume (vph)	41	817	40	289	438	43	40	112	461	57	156	29
Future Volume (vph)	41	817	40	289	438	43	40	112	461	57	156	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.987				0.850		0.984	
Flt Protected		0.998		0.950				0.987			0.988	
Satd. Flow (prot)	0	3562	0	1789	3477	0	0	1869	1617	0	1833	0
Flt Permitted		0.903		0.153				0.823			0.874	
Satd. Flow (perm)	0	3223	0	288	3477	0	0	1558	1617	0	1621	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			18				388		7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	44	869	43	307	466	46	43	119	490	61	166	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	956	0	307	512	0	0	162	490	0	258	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		28.7		47.9	45.8			17.9	17.9		17.9	
Actuated g/C Ratio		0.38		0.63	0.60			0.23	0.23		0.23	
v/c Ratio		0.79		0.71	0.24			0.45	0.73		0.67	
Control Delay		27.6		21.9	7.6			31.4	13.9		37.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		27.6		21.9	7.6			31.4	13.9		37.1	
LOS		C		C	A			C	B		D	
Approach Delay		27.6			12.9			18.3			37.1	
Approach LOS		C			B			B			D	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 76.4
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 21.8
 Intersection LOS: C
 Intersection Capacity Utilization 81.7%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



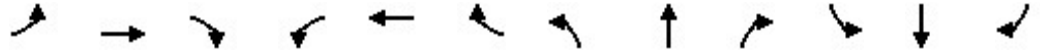
Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	956	307	512	162	490	258
v/c Ratio	0.79	0.71	0.24	0.45	0.73	0.67
Control Delay	27.6	21.9	7.6	31.4	13.9	37.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	21.9	7.6	31.4	13.9	37.1
Queue Length 50th (m)	61.4	18.9	15.2	20.2	12.2	33.3
Queue Length 95th (m)	109.2	56.4	30.2	42.6	48.6	65.6
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1659	556	2744	628	883	657
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.55	0.19	0.26	0.55	0.39

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road























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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕		
Traffic Volume (vph)	41	817	40	289	438	43	40	112	461	57	156	29	
Future Volume (vph)	41	817	40	289	438	43	40	112	461	57	156	29	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.98		
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99		
Satd. Flow (prot)		3562		1789	3475			1868	1617		1833		
Flt Permitted		0.90		0.15	1.00			0.82	1.00		0.87		
Satd. Flow (perm)		3224		288	3475			1558	1617		1621		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	44	869	43	307	466	46	43	119	490	61	166	31	
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	296	0	5	0	
Lane Group Flow (vph)	0	953	0	307	505	0	0	162	194	0	253	0	
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		29.0		45.8	45.8			17.9	17.9		17.9		
Effective Green, g (s)		29.0		45.8	45.8			17.9	17.9		17.9		
Actuated g/C Ratio		0.38		0.61	0.61			0.24	0.24		0.24		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1235		428	2102			368	382		383		
v/s Ratio Prot				c0.12	0.15								
v/s Ratio Perm		0.30		c0.31				0.10	0.12		c0.16		
v/c Ratio		0.77		0.72	0.24			0.44	0.51		0.66		
Uniform Delay, d1		20.4		11.8	6.9			24.6	25.1		26.1		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		3.1		5.7	0.1			0.8	1.1		4.1		
Delay (s)		23.5		17.5	7.0			25.5	26.1		30.2		
Level of Service		C		B	A			C	C		C		
Approach Delay (s)		23.5		10.9				26.0			30.2		
Approach LOS		C		B				C			C		
Intersection Summary													
HCM 2000 Control Delay			20.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.73										
Actuated Cycle Length (s)			75.7									Sum of lost time (s)	16.0
Intersection Capacity Utilization			81.7%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	623	245	538	335	196	154	139	1990	165	76	2632	324
Future Volume (vph)	623	245	538	335	196	154	139	1990	165	76	2632	324
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.897			0.934				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3212	0	1722	3274	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.346			0.222			0.067			0.069		
Satd. Flow (perm)	639	3212	0	402	3274	0	121	4445	1471	117	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			10				129			168
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	670	263	578	360	211	166	149	2140	177	82	2830	348
Shared Lane Traffic (%)												
Lane Group Flow (vph)	670	841	0	360	377	0	149	2140	177	82	2830	348
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	33.0		15.0	24.0		8.0	72.0	72.0	64.0	64.0	64.0
Total Split (%)	20.0%	27.5%		12.5%	20.0%		6.7%	60.0%	60.0%	53.3%	53.3%	53.3%
Maximum Green (s)	20.0	25.0		11.0	16.0		4.0	64.0	64.0	56.0	56.0	56.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	46.0	27.0		35.0	16.0		70.0	64.0	64.0	58.0	58.0	56.0
Actuated g/C Ratio	0.38	0.22		0.29	0.13		0.58	0.53	0.53	0.48	0.48	0.47
v/c Ratio	1.49	1.39dr		1.38	0.85		0.99	0.90	0.21	1.46	1.16	0.41
Control Delay	260.5	97.8		222.4	67.6		96.2	31.8	5.1	312.4	107.7	11.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	260.5	97.8		222.4	67.6		96.2	31.8	5.1	312.4	107.7	11.9
LOS	F	F		F	E		F	C	A	F	F	B
Approach Delay		169.9			143.2			33.8			102.6	
Approach LOS		F			F			C			F	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 120
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.49
 Intersection Signal Delay: 97.9 Intersection LOS: F
 Intersection Capacity Utilization 121.8% ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	670	841	360	377	149	2140	177	82	2830	348
v/c Ratio	1.49	1.39dr	1.38	0.85	0.99	0.90	0.21	1.46	1.16	0.41
Control Delay	260.5	97.8	222.4	67.6	96.2	31.8	5.1	312.4	107.7	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	260.5	97.8	222.4	67.6	96.2	31.8	5.1	312.4	107.7	11.9
Queue Length 50th (m)	~187.6	~109.9	~93.4	45.0	19.3	159.5	5.2	~26.3	~289.1	25.3
Queue Length 95th (m)	#258.9	#149.5	#153.6	#69.8	#61.6	184.7	16.1	#46.1	#315.7	47.7
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	449	776	260	445	150	2370	844	56	2437	851
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.49	1.08	1.38	0.85	0.99	0.90	0.21	1.46	1.16	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.































Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			   			   	
Traffic Volume (vph)	623	245	538	335	196	154	139	1990	165	76	2632	324
Future Volume (vph)	623	245	538	335	196	154	139	1990	165	76	2632	324
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.90		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	3212		1722	3274		1722	4445	1471	1615	5043	1633
Flt Permitted	0.35	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	640	3212		403	3274		121	4445	1471	117	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	670	263	578	360	211	166	149	2140	177	82	2830	348
RTOR Reduction (vph)	0	53	0	0	9	0	0	0	60	0	0	90
Lane Group Flow (vph)	670	788	0	360	368	0	149	2140	117	82	2830	258
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	40.0	25.0		27.0	16.0		64.0	64.0	64.0	56.0	56.0	56.0
Effective Green, g (s)	42.0	27.0		31.0	16.0		66.0	64.0	64.0	58.0	58.0	56.0
Actuated g/C Ratio	0.35	0.22		0.26	0.13		0.55	0.53	0.53	0.48	0.48	0.47
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0
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)	428	722		247	436		146	2370	784	56	2437	762
v/s Ratio Prot	c0.29	0.25		0.16	0.11		c0.05	0.48			0.56	
v/s Ratio Perm	0.26			c0.22			0.51		0.08	c0.70		0.16
v/c Ratio	1.57	1.39dr		1.46	0.84		1.02	0.90	0.15	1.46	1.16	0.34
Uniform Delay, d1	35.1	46.5		41.0	50.8		32.6	25.2	14.2	31.0	31.0	20.3
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	265.6	60.9		226.9	13.9		80.0	5.3	0.1	283.6	77.5	0.3
Delay (s)	300.7	107.4		267.9	64.7		112.6	30.5	14.3	314.6	108.5	20.5
Level of Service	F	F		F	E		F	C	B	F	F	C
Approach Delay (s)		193.1			164.0			34.3			104.3	
Approach LOS		F			F			C			F	
Intersection Summary												
HCM 2000 Control Delay			105.0	HCM 2000 Level of Service				F				
HCM 2000 Volume to Capacity ratio			1.47									
Actuated Cycle Length (s)			120.0	Sum of lost time (s)				18.0				
Intersection Capacity Utilization			121.8%	ICU Level of Service				H				
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	48	754	55	196	652	29	27	295	171	100	423	42
Future Volume (vph)	48	754	55	196	652	29	27	295	171	100	423	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994			0.953			0.990	
Flt Protected		0.997		0.950				0.997			0.991	
Satd. Flow (prot)	0	4861	0	1659	4941	0	0	1756	0	0	1799	0
Flt Permitted		0.857		0.195				0.958			0.765	
Satd. Flow (perm)	0	4179	0	341	4941	0	0	1688	0	0	1389	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			34			5	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	48	762	56	198	659	29	27	298	173	101	427	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	866	0	198	688	0	0	498	0	0	570	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

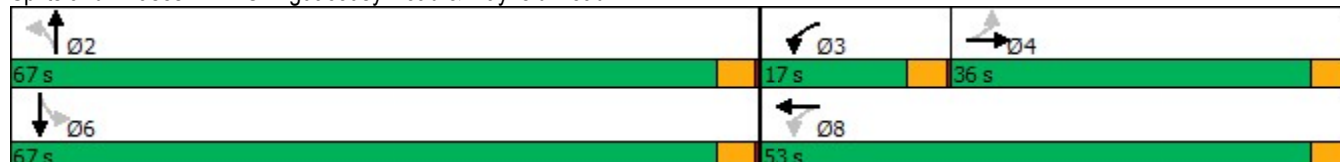


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		17.0	53.0		67.0	67.0		67.0	67.0	
Total Split (%)	30.0%	30.0%		14.2%	44.2%		55.8%	55.8%		55.8%	55.8%	
Maximum Green (s)	32.0	32.0		13.0	49.0		63.0	63.0		63.0	63.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		34.0		49.7	49.7			43.8			43.8	
Actuated g/C Ratio		0.33		0.49	0.49			0.43			0.43	
v/c Ratio		0.62		0.62	0.28			0.67			0.95	
Control Delay		32.9		27.9	17.5			25.4			53.3	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		32.9		27.9	17.5			25.4			53.3	
LOS		C		C	B			C			D	
Approach Delay		32.9			19.8			25.4			53.3	
Approach LOS		C			B			C			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	101.6
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	31.6
Intersection LOS:	C
Intersection Capacity Utilization:	101.1%
ICU Level of Service:	G
Analysis Period (min):	15

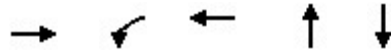
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



























Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	866	198	688	498	570
v/c Ratio	0.62	0.62	0.28	0.67	0.95
Control Delay	32.9	27.9	17.5	25.4	53.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	27.9	17.5	25.4	53.3
Queue Length 50th (m)	52.6	21.9	28.1	70.3	103.2
Queue Length 95th (m)	84.5	#51.9	49.8	101.4	153.8
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1404	337	2421	1074	875
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.59	0.28	0.46	0.65

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 4: Chinguacousy Road & Mayfield Road

06/07/2024

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		  		  				  			  			
Traffic Volume (vph)	48	754	55	196	652	29	27	295	171	100	423	42		
Future Volume (vph)	48	754	55	196	652	29	27	295	171	100	423	42		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0			
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00			
Frt		0.99		1.00	0.99			0.95			0.99			
Flt Protected		1.00		0.95	1.00			1.00			0.99			
Satd. Flow (prot)		4864		1659	4940			1757			1799			
Flt Permitted		0.86		0.20	1.00			0.96			0.77			
Satd. Flow (perm)		4181		341	4940			1688			1389			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99		
Adj. Flow (vph)	48	762	56	198	659	29	27	298	173	101	427	42		
RTOR Reduction (vph)	0	6	0	0	4	0	0	19	0	0	3	0		
Lane Group Flow (vph)	0	860	0	198	684	0	0	479	0	0	567	0		
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%		
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA			
Protected Phases		4		3	8			2			6			
Permitted Phases	4			8			2			6				
Actuated Green, G (s)		34.0		49.7	49.7			43.8			43.8			
Effective Green, g (s)		34.0		49.7	49.7			43.8			43.8			
Actuated g/C Ratio		0.33		0.49	0.49			0.43			0.43			
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0			
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0			
Lane Grp Cap (vph)		1400		318	2418			728			599			
v/s Ratio Prot				c0.07	0.14									
v/s Ratio Perm		0.21		c0.23				0.28			c0.41			
v/c Ratio		0.61		0.62	0.28			0.66			0.95			
Uniform Delay, d1		28.3		16.6	15.3			22.9			27.7			
Progression Factor		1.00		1.00	1.00			1.00			1.00			
Incremental Delay, d2		2.0		3.8	0.3			2.2			24.1			
Delay (s)		30.3		20.4	15.6			25.1			51.8			
Level of Service		C		C	B			C			D			
Approach Delay (s)		30.3			16.7			25.1			51.8			
Approach LOS		C			B			C			D			
Intersection Summary														
HCM 2000 Control Delay			29.4									HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio			0.80											
Actuated Cycle Length (s)			101.5								12.0			
Intersection Capacity Utilization			101.1%										ICU Level of Service	G
Analysis Period (min)			15											
c Critical Lane Group														

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1020	123	142	804	139	54	367	106	353	627	127
Future Volume (vph)	42	1020	123	142	804	139	54	367	106	353	627	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.978			0.966			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4889	0	1706	4753	0	1644	3442	0	1690	3443	0
Flt Permitted	0.285			0.105			0.360			0.273		
Satd. Flow (perm)	548	4889	0	189	4753	0	623	3442	0	486	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			35			29			27	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	43	1041	126	145	820	142	55	374	108	360	640	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	1167	0	145	962	0	55	482	0	360	770	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	40.0	40.0		16.0	56.0		33.0	33.0		31.0	64.0	
Total Split (%)	33.3%	33.3%		13.3%	46.7%		27.5%	27.5%		25.8%	53.3%	
Maximum Green (s)	34.0	34.0		12.0	50.0		27.0	27.0		27.0	58.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	34.0	34.0		52.0	50.0		27.0	27.0		60.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.43	0.42		0.22	0.22		0.50	0.48	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

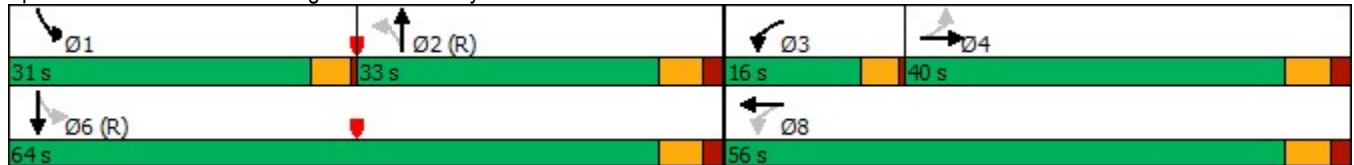


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.28	0.83		0.62	0.48		0.39	0.61		0.70	0.46	
Control Delay	39.4	46.0		35.2	25.5		49.4	42.8		27.4	20.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.4	46.0		35.2	25.5		49.4	42.8		27.4	20.9	
LOS	D	D		D	C		D	D		C	C	
Approach Delay		45.8			26.8			43.5			22.9	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Pretimed
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	33.7
Intersection LOS:	C
Intersection Capacity Utilization	80.1%
ICU Level of Service	D
Analysis Period (min)	15

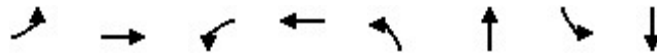
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	1167	145	962	55	482	360	770
v/c Ratio	0.28	0.83	0.62	0.48	0.39	0.61	0.70	0.46
Control Delay	39.4	46.0	35.2	25.5	49.4	42.8	27.4	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	46.0	35.2	25.5	49.4	42.8	27.4	20.9
Queue Length 50th (m)	7.9	93.3	20.8	57.3	11.1	50.6	52.2	59.3
Queue Length 95th (m)	18.7	111.2	38.3	69.8	24.6	68.3	76.0	75.4
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	155	1398	233	2000	140	796	513	1678
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.83	0.62	0.48	0.39	0.61	0.70	0.46

Intersection Summary

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024




































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↗↖		↖	↗↖	
Traffic Volume (vph)	42	1020	123	142	804	139	54	367	106	353	627	127
Future Volume (vph)	42	1020	123	142	804	139	54	367	106	353	627	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4888		1706	4752		1644	3443		1690	3442	
Flt Permitted	0.29	1.00		0.11	1.00		0.36	1.00		0.27	1.00	
Satd. Flow (perm)	548	4888		189	4752		623	3443		486	3442	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	43	1041	126	145	820	142	55	374	108	360	640	130
RTOR Reduction (vph)	0	13	0	0	20	0	0	22	0	0	14	0
Lane Group Flow (vph)	43	1154	0	145	942	0	55	460	0	360	756	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		50.0	50.0		27.0	27.0		58.0	58.0	
Effective Green, g (s)	34.0	34.0		50.0	50.0		27.0	27.0		58.0	58.0	
Actuated g/C Ratio	0.28	0.28		0.42	0.42		0.22	0.22		0.48	0.48	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	155	1384		230	1980		140	774		505	1663	
v/s Ratio Prot		c0.24		c0.06	0.20			0.13		c0.16	0.22	
v/s Ratio Perm	0.08			0.20			0.09			c0.18		
v/c Ratio	0.28	0.83		0.63	0.48		0.39	0.59		0.71	0.45	
Uniform Delay, d1	33.4	40.4		25.8	25.5		39.5	41.6		21.6	20.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	6.0		12.4	0.8		8.1	3.3		8.3	0.9	
Delay (s)	37.8	46.4		38.2	26.3		47.6	44.9		29.9	21.4	
Level of Service	D	D		D	C		D	D		C	C	
Approach Delay (s)		46.1			27.8			45.2			24.1	
Approach LOS		D			C			D			C	

Intersection Summary		
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.77	C
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	80.1%	20.0
Analysis Period (min)	15	ICU Level of Service
		D

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	
Traffic Volume (vph)	272	1020	145	229	646	179	99	525	233	384	1362	363
Future Volume (vph)	272	1020	145	229	646	179	99	525	233	384	1362	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.179			0.950			0.093			0.256		
Satd. Flow (perm)	328	4902	1508	3329	4948	1395	177	3476	1467	460	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			169			214			250
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	289	1085	154	244	687	190	105	559	248	409	1449	386
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	1085	154	244	687	190	105	559	248	409	1449	386
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.77	0.89	0.33	0.84	0.79	0.50	0.81	0.60	0.45	0.72	0.86	0.44
Control Delay	51.1	67.5	16.0	95.2	70.9	15.6	75.6	54.1	11.5	29.5	43.9	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	67.5	16.0	95.2	70.9	15.6	75.6	54.1	11.5	29.5	43.9	10.7
LOS	D	E	B	F	E	B	E	D	B	C	D	B
Approach Delay		59.2			66.8			45.0			35.5	
Approach LOS		E			E			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	49.3
Intersection LOS:	D
Intersection Capacity Utilization	89.9%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	289	1085	154	244	687	190	105	559	248	409	1449	386
v/c Ratio	0.77	0.89	0.33	0.84	0.79	0.50	0.81	0.60	0.45	0.72	0.86	0.44
Control Delay	51.1	67.5	16.0	95.2	70.9	15.6	75.6	54.1	11.5	29.5	43.9	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	67.5	16.0	95.2	70.9	15.6	75.6	54.1	11.5	29.5	43.9	10.7
Queue Length 50th (m)	66.6	122.8	9.4	40.1	77.6	5.7	16.2	82.2	8.2	72.7	212.4	25.6
Queue Length 95th (m)	#100.2	141.2	29.4	#62.1	93.4	30.0	#49.1	102.1	32.9	105.9	244.6	51.7
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	375	1225	464	292	865	383	129	934	550	570	1683	870
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.89	0.33	0.84	0.79	0.50	0.81	0.60	0.45	0.72	0.86	0.44

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

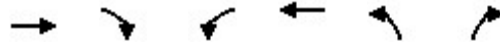


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	1020	145	229	646	179	99	525	233	384	1362	363
Future Volume (vph)	272	1020	145	229	646	179	99	525	233	384	1362	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1706	3544	1557
Flt Permitted	0.18	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	327	4902	1508	3340	4948	1395	177	3476	1467	459	3544	1557
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	289	1085	154	244	687	190	105	559	248	409	1449	386
RTOR Reduction (vph)	0	0	87	0	0	139	0	0	156	0	0	131
Lane Group Flow (vph)	289	1085	67	244	687	51	105	559	92	409	1449	255
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	371	1225	377	292	865	244	126	934	394	561	1683	739
v/s Ratio Prot	c0.14	c0.22		0.07	0.14		0.04	0.16		c0.18	c0.41	
v/s Ratio Perm	0.16		0.04			0.04	0.22		0.06	0.21		0.16
v/c Ratio	0.78	0.89	0.18	0.84	0.79	0.21	0.83	0.60	0.23	0.73	0.86	0.34
Uniform Delay, d1	38.4	57.8	47.1	71.9	63.2	56.5	42.2	51.0	45.6	24.4	37.3	26.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.9	9.6	1.0	23.7	7.4	1.9	44.7	2.8	1.4	8.1	6.0	1.3
Delay (s)	53.2	67.4	48.1	95.6	70.7	58.4	87.0	53.8	47.0	32.5	43.3	27.6
Level of Service	D	E	D	F	E	E	F	D	D	C	D	C
Approach Delay (s)		62.8			74.0			55.8			38.7	
Approach LOS		E			E			E			D	

Intersection Summary		
HCM 2000 Control Delay	54.5	HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio	0.88	
Actuated Cycle Length (s)	160.0	Sum of lost time (s) 23.0
Intersection Capacity Utilization	89.9%	ICU Level of Service E
Analysis Period (min)	15	
c Critical Lane Group		

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	655	20	12	455	48	21
Future Volume (vph)	655	20	12	455	48	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.996			0.959		
Fl _t Protected				0.999	0.966	
Satd. Flow (prot)	3564	0	0	3575	1745	0
Fl _t Permitted				0.999	0.966	
Satd. Flow (perm)	3564	0	0	3575	1745	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	655	20	12	455	48	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	675	0	0	467	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	655	20	12	455	48	21
Future Volume (Veh/h)	655	20	12	455	48	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	655	20	12	455	48	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			675		916	338
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			675		916	338
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		82	97
cM capacity (veh/h)			912		268	658
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	437	238	164	303	69	
Volume Left	0	0	12	0	48	
Volume Right	0	20	0	0	21	
cSH	1700	1700	912	1700	327	
Volume to Capacity	0.26	0.14	0.01	0.18	0.21	
Queue Length 95th (m)	0.0	0.0	0.3	0.0	6.0	
Control Delay (s)	0.0	0.0	0.8	0.0	18.9	
Lane LOS	A			C		
Approach Delay (s)	0.0		0.3		18.9	
Approach LOS				C		
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			31.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	387	76	72	138	28	28	592	54	12	521	6
Future Volume (vph)	18	387	76	72	138	28	28	592	54	12	521	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.979			0.984			0.988			0.998	
Fl _t Protected		0.998			0.985			0.998			0.999	
Satd. Flow (prot)	0	1840	0	0	1826	0	0	3529	0	0	3568	0
Fl _t Permitted		0.983			0.665			0.918			0.937	
Satd. Flow (perm)	0	1813	0	0	1232	0	0	3246	0	0	3346	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			11			13			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	387	76	72	138	28	28	592	54	12	521	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	481	0	0	238	0	0	674	0	0	539	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

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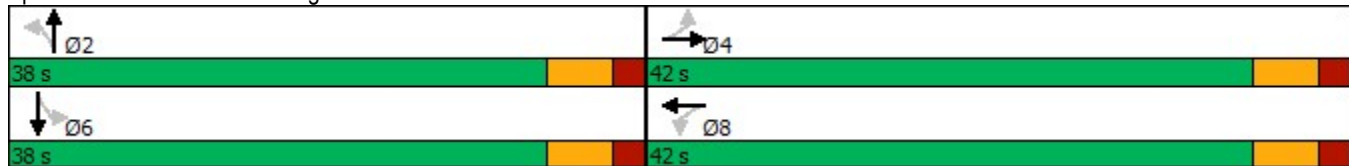


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	42.0	42.0		42.0	42.0		38.0	38.0		38.0	38.0	
Total Split (%)	52.5%	52.5%		52.5%	52.5%		47.5%	47.5%		47.5%	47.5%	
Maximum Green (s)	36.0	36.0		36.0	36.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.6			22.6			32.3			32.3	
Actuated g/C Ratio		0.34			0.34			0.48			0.48	
v/c Ratio		0.77			0.56			0.43			0.33	
Control Delay		28.1			22.3			13.5			12.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		28.1			22.3			13.5			12.7	
LOS		C			C			B			B	
Approach Delay		28.1			22.3			13.5			12.7	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 67.1
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 18.0
 Intersection LOS: B
 Intersection Capacity Utilization 92.5%
 ICU Level of Service F
 Analysis Period (min) 15

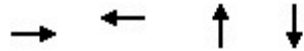
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024

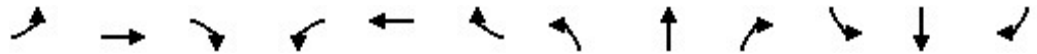


Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	481	238	674	539
v/c Ratio	0.77	0.56	0.43	0.33
Control Delay	28.1	22.3	13.5	12.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.1	22.3	13.5	12.7
Queue Length 50th (m)	50.7	22.4	26.5	20.4
Queue Length 95th (m)	79.9	40.8	51.7	40.5
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	989	673	1571	1613
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.49	0.35	0.43	0.33
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	387	76	72	138	28	28	592	54	12	521	6
Future Volume (vph)	18	387	76	72	138	28	28	592	54	12	521	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.98			0.99			1.00	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1840			1826			3528			3569	
Flt Permitted		0.98			0.67			0.92			0.94	
Satd. Flow (perm)		1812			1233			3245			3347	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	387	76	72	138	28	28	592	54	12	521	6
RTOR Reduction (vph)	0	10	0	0	7	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	471	0	0	231	0	0	667	0	0	538	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)		22.6			22.6			32.3			32.3	
Effective Green, g (s)		22.6			22.6			32.3			32.3	
Actuated g/C Ratio		0.34			0.34			0.48			0.48	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		612			416			1566			1615	
v/s Ratio Prot												
v/s Ratio Perm		c0.26			0.19			c0.21			0.16	
v/c Ratio		0.77			0.55			0.43			0.33	
Uniform Delay, d1		19.8			18.0			11.3			10.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.8			1.6			0.9			0.6	
Delay (s)		25.6			19.7			12.1			11.2	
Level of Service		C			B			B			B	
Approach Delay (s)		25.6			19.7			12.1			11.2	
Approach LOS		C			B			B			B	

Intersection Summary		
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.57	B
Actuated Cycle Length (s)	66.9	Sum of lost time (s)
Intersection Capacity Utilization	92.5%	12.0
Analysis Period (min)	15	ICU Level of Service
		F

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↘	↗
Traffic Volume (vph)	1245	19	53	701	39	213
Future Volume (vph)	1245	19	53	701	39	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.998					0.850
Fl _t Protected				0.996	0.950	
Satd. Flow (prot)	3571	0	0	3564	1789	1601
Fl _t Permitted				0.996	0.950	
Satd. Flow (perm)	3571	0	0	3564	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1245	19	53	701	39	213
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1264	0	0	754	39	213
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.3%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

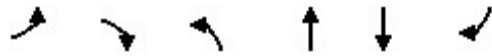
06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↘
Traffic Volume (veh/h)	1245	19	53	701	39	213
Future Volume (Veh/h)	1245	19	53	701	39	213
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1245	19	53	701	39	213
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1264		1711	632
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			885		1430	115
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		59	72
cM capacity (veh/h)			624		94	752
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	830	434	287	467	39	213
Volume Left	0	0	53	0	39	0
Volume Right	0	19	0	0	0	213
cSH	1700	1700	624	1700	94	752
Volume to Capacity	0.49	0.26	0.08	0.27	0.41	0.28
Queue Length 95th (m)	0.0	0.0	2.1	0.0	12.9	8.9
Control Delay (s)	0.0	0.0	3.0	0.0	67.8	11.7
Lane LOS			A		F	B
Approach Delay (s)	0.0		1.1		20.4	
Approach LOS					C	
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			69.3%		ICU Level of Service C	
Analysis Period (min)	15					

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	712	188	2167	3447	59
Future Volume (vph)	128	712	188	2167	3447	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.997	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5126	0
Flt Permitted	0.950		0.048			
Satd. Flow (perm)	1789	1601	90	5142	5126	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					3	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	712	188	2167	3447	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	712	188	2167	3506	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

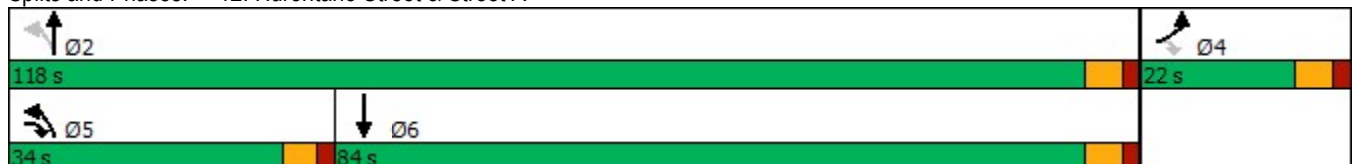


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	9.5	9.5	22.0	22.0	
Total Split (s)	22.0	34.0	34.0	118.0	84.0	
Total Split (%)	15.7%	24.3%	24.3%	84.3%	60.0%	
Maximum Green (s)	16.0	28.5	28.5	112.0	78.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	
Total Lost Time (s)	6.0	3.5	5.5	6.0	4.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	13.8	50.4	112.6	112.1	80.0	
Actuated g/C Ratio	0.10	0.37	0.82	0.81	0.58	
v/c Ratio	0.72	1.22	0.44	0.52	1.18	
Control Delay	81.9	151.7	30.1	4.8	112.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	81.9	151.7	30.1	4.8	112.4	
LOS	F	F	C	A	F	
Approach Delay	141.1			6.9	112.4	
Approach LOS	F			A	F	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	137.9
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.22
Intersection Signal Delay:	78.9
Intersection LOS:	E
Intersection Capacity Utilization	118.7%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	128	712	188	2167	3506
v/c Ratio	0.72	1.22	0.44	0.52	1.18
Control Delay	81.9	151.7	30.1	4.8	112.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	81.9	151.7	30.1	4.8	112.4
Queue Length 50th (m)	34.3	~236.8	28.6	61.4	~426.7
Queue Length 95th (m)	56.1	#311.2	52.6	70.8	#451.0
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	207	584	424	4178	2976
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	1.22	0.44	0.52	1.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	712	188	2167	3447	59
Future Volume (vph)	128	712	188	2167	3447	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	3.5	5.5	6.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5129	
Flt Permitted	0.95	1.00	0.05	1.00	1.00	
Satd. Flow (perm)	1789	1601	90	5142	5129	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	712	188	2167	3447	59
RTOR Reduction (vph)	0	0	0	0	1	0
Lane Group Flow (vph)	128	712	188	2167	3505	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	13.8	42.3	112.0	112.0	78.0	
Effective Green, g (s)	13.8	46.3	112.0	112.0	80.0	
Actuated g/C Ratio	0.10	0.34	0.81	0.81	0.58	
Clearance Time (s)	6.0	5.5	5.5	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	179	537	424	4179	2977	
v/s Ratio Prot	0.07	c0.29	0.09	0.42	c0.68	
v/s Ratio Perm		0.15	0.27			
v/c Ratio	0.72	1.33	0.44	0.52	1.18	
Uniform Delay, d1	60.1	45.8	37.3	4.2	28.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.7	159.2	0.7	0.5	83.6	
Delay (s)	72.8	205.0	38.0	4.6	112.5	
Level of Service	E	F	D	A	F	
Approach Delay (s)	184.8			7.3	112.5	
Approach LOS	F			A	F	

Intersection Summary

HCM 2000 Control Delay	84.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	137.8	Sum of lost time (s)	15.5
Intersection Capacity Utilization	118.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	93	35	557	45	16	425
Future Volume (vph)	93	35	557	45	16	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.990			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1789	1601	1865	0	0	1880
Flt Permitted	0.950					0.998
Satd. Flow (perm)	1789	1601	1865	0	0	1880
Link Speed (k/h)	48		80			80
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		114.4			24.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	101	38	605	49	17	462
Shared Lane Traffic (%)						
Lane Group Flow (vph)	101	38	654	0	0	479
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.1%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	35	557	45	16	425
Future Volume (Veh/h)	93	35	557	45	16	425
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)	101	38	605	49	17	462
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	1126	630			654	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1126	630			654	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	55	92			98	
cM capacity (veh/h)	223	482			933	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	101	38	654	479		
Volume Left	101	0	0	17		
Volume Right	0	38	49	0		
cSH	223	482	1700	933		
Volume to Capacity	0.45	0.08	0.38	0.02		
Queue Length 95th (m)	16.6	1.9	0.0	0.4		
Control Delay (s)	33.9	13.1	0.0	0.5		
Lane LOS	D	B		A		
Approach Delay (s)	28.2		0.0	0.5		
Approach LOS	D					
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			47.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	674	6	65	462	18	224
Future Volume (vph)	674	6	65	462	18	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.999				0.875	
Fl _t Protected				0.994	0.996	
Satd. Flow (prot)	3575	0	0	3557	1641	0
Fl _t Permitted				0.994	0.996	
Satd. Flow (perm)	3575	0	0	3557	1641	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	34.2			32.8	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	733	7	71	502	20	243
Shared Lane Traffic (%)						
Lane Group Flow (vph)	740	0	0	573	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		97	97		97	97
Sign Control	Stop			Free	Free	

















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.3%
ICU Level of Service	B
Analysis Period (min)	15

Intersection Sign configuration not allowed in HCM analysis.

Lanes, Volumes, Timings
15: McLaughlin Road & Street E

















06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	36	36	0	29	17	591	17	11	468	6
Future Volume (vph)	11	0	36	36	0	29	17	591	17	11	468	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.897			0.939			0.996			0.998	
Flt Protected		0.988			0.973			0.999			0.999	
Satd. Flow (prot)	0	1669	0	0	1721	0	0	3561	0	0	3568	0
Flt Permitted		0.988			0.973			0.999			0.999	
Satd. Flow (perm)	0	1669	0	0	1721	0	0	3561	0	0	3568	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			29.9			14.2	
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
Adj. Flow (vph)	12	0	39	39	0	32	18	642	18	12	509	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	71	0	0	678	0	0	528	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97	97		97	97		97
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	43.7%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	36	36	0	29	17	591	17	11	468	6
Future Volume (Veh/h)	11	0	36	36	0	29	17	591	17	11	468	6
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)	12	0	39	39	0	32	18	642	18	12	509	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	926	1232	258	1004	1227	330	516			660		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	926	1232	258	1004	1227	330	516			660		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	94	100	95	78	100	95	98			99		
cM capacity (veh/h)	208	170	741	181	172	666	1046			924		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	51	71	339	339	266	262						
Volume Left	12	39	18	0	12	0						
Volume Right	39	32	0	18	0	7						
cSH	462	270	1046	1700	924	1700						
Volume to Capacity	0.11	0.26	0.02	0.20	0.01	0.15						
Queue Length 95th (m)	2.8	7.8	0.4	0.0	0.3	0.0						
Control Delay (s)	13.7	23.0	0.6	0.0	0.5	0.0						
Lane LOS	B	C	A		A							
Approach Delay (s)	13.7	23.0	0.3		0.3							
Approach LOS	B	C										
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization			43.7%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	299	13	372	408	77	23	380	441	63	247	5
Future Volume (vph)	5	299	13	372	408	77	23	380	441	63	247	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.976				0.850		0.998	
Flt Protected		0.999		0.950				0.997			0.990	
Satd. Flow (prot)	0	1855	0	1825	1822	0	0	1797	1601	0	1830	0
Flt Permitted		0.992		0.352				0.967			0.677	
Satd. Flow (perm)	0	1842	0	676	1822	0	0	1743	1601	0	1251	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			11				242			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	318	14	396	434	82	24	404	469	67	263	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	0	396	516	0	0	428	469	0	335	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

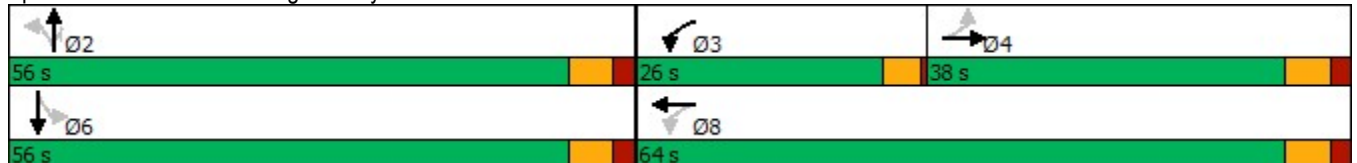
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		26.0	64.0		56.0	56.0	56.0	56.0	56.0	
Total Split (%)	31.7%	31.7%		21.7%	53.3%		46.7%	46.7%	46.7%	46.7%	46.7%	
Maximum Green (s)	32.0	32.0		22.0	58.0		50.0	50.0	50.0	50.0	50.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		34.2		62.0	58.0			50.0	50.0		50.0	
Actuated g/C Ratio		0.28		0.52	0.48			0.42	0.42		0.42	
v/c Ratio		0.64		0.71	0.58			0.59	0.58		0.64	
Control Delay		44.6		25.7	25.1			31.2	15.5		34.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		44.6		25.7	25.1			31.2	15.5		34.7	
LOS		D		C	C			C	B		C	
Approach Delay		44.6			25.3			23.0			34.7	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 28.4
 Intersection LOS: C
 Intersection Capacity Utilization 101.0%
 ICU Level of Service G
 Analysis Period (min) 15

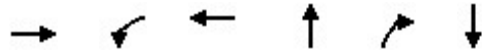
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	337	396	516	428	469	335
v/c Ratio	0.64	0.71	0.58	0.59	0.58	0.64
Control Delay	44.6	25.7	25.1	31.2	15.5	34.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	25.7	25.1	31.2	15.5	34.7
Queue Length 50th (m)	70.5	55.6	83.1	76.7	39.0	61.6
Queue Length 95th (m)	103.2	79.5	117.0	109.5	71.9	94.7
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	526	579	886	726	808	521
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.68	0.58	0.59	0.58	0.64

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↕		↖	↗			↕	↗		↕			
Traffic Volume (vph)	5	299	13	372	408	77	23	380	441	63	247	5		
Future Volume (vph)	5	299	13	372	408	77	23	380	441	63	247	5		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0			
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00			
Frt		0.99		1.00	0.98			1.00	0.85		1.00			
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99			
Satd. Flow (prot)		1856		1825	1822			1797	1601		1830			
Flt Permitted		0.99		0.35	1.00			0.97	1.00		0.68			
Satd. Flow (perm)		1843		677	1822			1743	1601		1251			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94		
Adj. Flow (vph)	5	318	14	396	434	82	24	404	469	67	263	5		
RTOR Reduction (vph)	0	1	0	0	6	0	0	0	141	0	1	0		
Lane Group Flow (vph)	0	336	0	396	510	0	0	428	328	0	334	0		
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%		
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA			
Protected Phases		4		3	8			2			6			
Permitted Phases	4			8			2		2	6				
Actuated Green, G (s)		34.2		58.0	58.0			50.0	50.0		50.0			
Effective Green, g (s)		34.2		60.0	58.0			50.0	50.0		50.0			
Actuated g/C Ratio		0.29		0.50	0.48			0.42	0.42		0.42			
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0			
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)		525		547	880			726	667		521			
v/s Ratio Prot				c0.13	0.28									
v/s Ratio Perm		c0.18		0.23				0.25	0.20		c0.27			
v/c Ratio		0.64		0.72	0.58			0.59	0.49		0.64			
Uniform Delay, d1		37.5		21.1	22.3			27.1	25.7		27.9			
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00			
Incremental Delay, d2		5.9		4.7	2.8			3.5	2.6		6.0			
Delay (s)		43.4		25.8	25.0			30.6	28.3		33.8			
Level of Service		D		C	C			C	C		C			
Approach Delay (s)		43.4		25.4				29.4			33.8			
Approach LOS		D		C				C			C			
Intersection Summary														
HCM 2000 Control Delay			30.4									HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio			0.65											
Actuated Cycle Length (s)			120.0								14.0		Sum of lost time (s)	
Intersection Capacity Utilization			101.0%										ICU Level of Service	G
Analysis Period (min)			15											
c Critical Lane Group														

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔	↔↔			↔	↔		↔↔	
Traffic Volume (vph)	31	812	49	528	950	59	50	179	549	52	91	27
Future Volume (vph)	31	812	49	528	950	59	50	179	549	52	91	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.991				0.850		0.978	
Flt Protected		0.998		0.950				0.989			0.985	
Satd. Flow (prot)	0	3468	0	1755	3575	0	0	1831	1555	0	1793	0
Flt Permitted		0.867		0.147				0.859			0.619	
Satd. Flow (perm)	0	3013	0	272	3575	0	0	1591	1555	0	1127	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			10				447		8	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	33	864	52	562	1011	63	53	190	584	55	97	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	949	0	562	1074	0	0	243	584	0	181	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

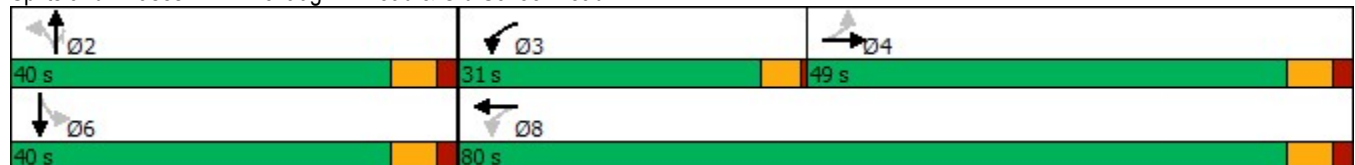


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	49.0	49.0		31.0	80.0		40.0	40.0	40.0	40.0	40.0	
Total Split (%)	40.8%	40.8%		25.8%	66.7%		33.3%	33.3%	33.3%	33.3%	33.3%	
Maximum Green (s)	43.0	43.0		27.0	74.0		34.0	34.0	34.0	34.0	34.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		37.4		73.0	69.0			22.4	22.4		22.4	
Actuated g/C Ratio		0.36		0.70	0.67			0.22	0.22		0.22	
v/c Ratio		0.87		0.92	0.45			0.71	0.85		0.72	
Control Delay		41.2		45.8	9.7			49.7	22.5		53.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		41.2		45.8	9.7			49.7	22.5		53.6	
LOS		D		D	A			D	C		D	
Approach Delay		41.2			22.1			30.5			53.6	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	103.6
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	30.7
Intersection LOS:	C
Intersection Capacity Utilization:	95.7%
ICU Level of Service:	F
Analysis Period (min):	15

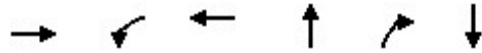
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	949	562	1074	243	584	181
v/c Ratio	0.87	0.92	0.45	0.71	0.85	0.72
Control Delay	41.2	45.8	9.7	49.7	22.5	53.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	45.8	9.7	49.7	22.5	53.6
Queue Length 50th (m)	91.5	85.8	48.7	47.3	27.1	33.9
Queue Length 95th (m)	#144.7	#184.1	82.7	74.5	76.2	58.7
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1276	614	2603	531	817	382
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.92	0.41	0.46	0.71	0.47

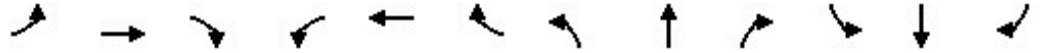
Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	31	812	49	528	950	59	50	179	549	52	91	27
Future Volume (vph)	31	812	49	528	950	59	50	179	549	52	91	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3469		1755	3576			1832	1555		1794	
Flt Permitted		0.87		0.15	1.00			0.86	1.00		0.62	
Satd. Flow (perm)		3014		271	3576			1590	1555		1128	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	33	864	52	562	1011	63	53	190	584	55	97	29
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	350	0	6	0
Lane Group Flow (vph)	0	946	0	562	1071	0	0	243	234	0	175	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		37.5		69.0	69.0			22.4	22.4		22.4	
Effective Green, g (s)		37.5		71.0	69.0			22.4	22.4		22.4	
Actuated g/C Ratio		0.36		0.69	0.67			0.22	0.22		0.22	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1093		609	2386			344	336		244	
v/s Ratio Prot				c0.26	0.30							
v/s Ratio Perm		c0.31		0.37				0.15	0.15		c0.15	
v/c Ratio		0.87		0.92	0.45			0.71	0.70		0.72	
Uniform Delay, d1		30.6		24.8	8.2			37.5	37.4		37.6	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		7.3		19.7	0.1			6.5	6.1		9.6	
Delay (s)		37.9		44.5	8.3			43.9	43.5		47.1	
Level of Service		D		D	A			D	D		D	
Approach Delay (s)		37.9			20.7			43.6			47.1	
Approach LOS		D			C			D			D	

Intersection Summary		
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.84	C
Actuated Cycle Length (s)	103.4	Sum of lost time (s)
Intersection Capacity Utilization	95.7%	14.0
Analysis Period (min)	15	ICU Level of Service
		F
c Critical Lane Group		

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	703	252	290	352	320	166	478	3338	386	172	2049	643
Future Volume (vph)	703	252	290	352	320	166	478	3338	386	172	2049	643
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.920			0.949				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3162	0	1789	3441	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.209			0.198			0.083			0.091		
Satd. Flow (perm)	402	3162	0	373	3441	0	158	5043	1633	175	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		143			68				147			352
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1007.8			440.4			855.3				282.2
Travel Time (s)		51.8			22.6			38.5				12.7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	725	260	299	363	330	171	493	3441	398	177	2112	663
Shared Lane Traffic (%)												
Lane Group Flow (vph)	725	559	0	363	501	0	493	3441	398	177	2112	663
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1		6

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

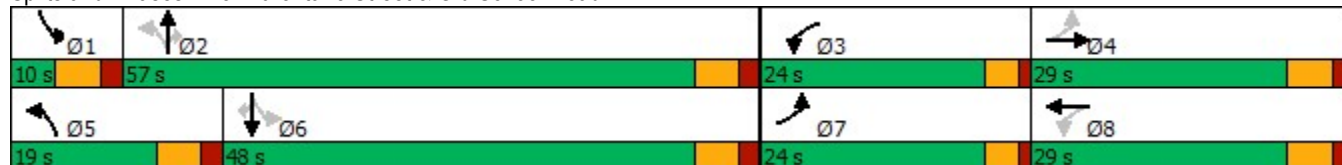


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	29.0		24.0	29.0		19.0	57.0	57.0	10.0	48.0	48.0
Total Split (%)	20.0%	24.2%		20.0%	24.2%		15.8%	47.5%	47.5%	8.3%	40.0%	40.0%
Maximum Green (s)	20.0	23.0		20.0	23.0		13.0	51.0	51.0	4.0	42.0	42.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	46.2	22.2		42.2	22.2		63.1	53.1	51.1	50.1	44.0	42.0
Actuated g/C Ratio	0.39	0.19		0.36	0.19		0.54	0.45	0.44	0.43	0.38	0.36
v/c Ratio	1.71	0.78		0.97	0.71		1.67	1.51	0.50	1.11	1.17	0.85
Control Delay	351.9	41.8		70.9	44.2		340.5	258.8	17.4	131.8	116.7	28.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	351.9	41.8		70.9	44.2		340.5	258.8	17.4	131.8	116.7	28.2
LOS	F	D		E	D		F	F	B	F	F	C
Approach Delay		216.9			55.4			245.9				97.7
Approach LOS		F			E			F				F

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	117.3
Natural Cycle:	140
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.71
Intersection Signal Delay:	178.1
Intersection LOS:	F
Intersection Capacity Utilization:	140.5%
ICU Level of Service:	H
Analysis Period (min):	15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	725	559	363	501	493	3441	398	177	2112	663
v/c Ratio	1.71	0.78	0.97	0.71	1.67	1.51	0.50	1.11	1.17	0.85
Control Delay	351.9	41.8	70.9	44.2	340.5	258.8	17.4	131.8	116.7	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	351.9	41.8	70.9	44.2	340.5	258.8	17.4	131.8	116.7	28.2
Queue Length 50th (m)	~229.9	48.7	65.4	49.5	~155.2	~414.5	41.3	~32.1	~218.7	74.6
Queue Length 95th (m)	#303.5	68.7	#125.3	68.0	#221.7	#441.4	70.1	#77.4	#249.6	#149.1
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	425	786	375	787	296	2281	793	159	1806	778
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.71	0.71	0.97	0.64	1.67	1.51	0.50	1.11	1.17	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			   			   	
Traffic Volume (vph)	703	252	290	352	320	166	478	3338	386	172	2049	643
Future Volume (vph)	703	252	290	352	320	166	478	3338	386	172	2049	643
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.92		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3161		1789	3441		1807	5043	1633	1825	4812	1541
Flt Permitted	0.21	1.00		0.20	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	401	3161		373	3441		159	5043	1633	175	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	725	260	299	363	330	171	493	3441	398	177	2112	663
RTOR Reduction (vph)	0	116	0	0	55	0	0	0	83	0	0	226
Lane Group Flow (vph)	725	443	0	363	446	0	493	3441	315	177	2112	437
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	40.2	20.2		40.2	20.2		61.0	51.0	51.0	46.0	42.0	42.0
Effective Green, g (s)	44.2	22.2		40.2	22.2		63.0	53.0	51.0	50.0	44.0	42.0
Actuated g/C Ratio	0.38	0.19		0.34	0.19		0.54	0.45	0.44	0.43	0.38	0.36
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	418	598		369	651		296	2280	710	159	1806	552
v/s Ratio Prot	c0.33	0.14		0.17	0.13		c0.21	0.68		0.06	0.44	
v/s Ratio Perm	0.33			c0.17			c0.68		0.19	0.42		0.28
v/c Ratio	1.73	0.74		0.98	0.68		1.67	1.51	0.44	1.11	1.17	0.79
Uniform Delay, d1	31.4	44.8		33.0	44.2		37.1	32.1	23.2	30.2	36.6	33.7
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	340.4	4.9		42.2	3.0		314.0	231.5	2.0	105.0	82.6	11.1
Delay (s)	371.8	49.7		75.2	47.2		351.1	263.6	25.2	135.1	119.2	44.8
Level of Service	F	D		E	D		F	F	C	F	F	D
Approach Delay (s)		231.6			59.0			251.6			103.4	
Approach LOS		F			E			F			F	
Intersection Summary												
HCM 2000 Control Delay			184.9				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.58									
Actuated Cycle Length (s)			117.2				Sum of lost time (s)		16.0			
Intersection Capacity Utilization			140.5%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕			↕	
Traffic Volume (vph)	47	800	57	232	756	79	38	548	221	39	345	32
Future Volume (vph)	47	800	57	232	756	79	38	548	221	39	345	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.986			0.963			0.990	
Flt Protected		0.997		0.950				0.998			0.995	
Satd. Flow (prot)	0	5042	0	1825	5034	0	0	1809	0	0	1860	0
Flt Permitted		0.828		0.141				0.963			0.876	
Satd. Flow (perm)	0	4187	0	271	5034	0	0	1746	0	0	1638	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			17			26			6	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	51	870	62	252	822	86	41	596	240	42	375	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	983	0	252	908	0	0	877	0	0	452	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

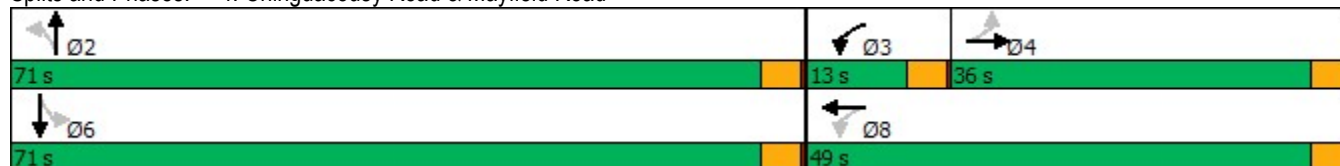


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	36.0	36.0		13.0	49.0		71.0	71.0		71.0	71.0	
Total Split (%)	30.0%	30.0%		10.8%	40.8%		59.2%	59.2%		59.2%	59.2%	
Maximum Green (s)	32.0	32.0		9.0	45.0		67.0	67.0		67.0	67.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		32.3		47.4	45.4			59.0			59.0	
Actuated g/C Ratio		0.29		0.42	0.40			0.52			0.52	
v/c Ratio		0.81		0.94	0.44			0.95			0.52	
Control Delay		44.6		70.4	25.9			43.5			19.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		44.6		70.4	25.9			43.5			19.4	
LOS		D		E	C			D			B	
Approach Delay		44.6			35.6			43.5			19.4	
Approach LOS		D			D			D			B	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	112.4
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	38.0
Intersection LOS:	D
Intersection Capacity Utilization:	95.1%
ICU Level of Service:	F
Analysis Period (min):	15

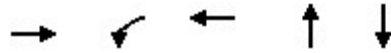
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	983	252	908	877	452
v/c Ratio	0.81	0.94	0.44	0.95	0.52
Control Delay	44.6	70.4	25.9	43.5	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	70.4	25.9	43.5	19.4
Queue Length 50th (m)	79.0	40.4	56.5	169.2	61.0
Queue Length 95th (m)	#100.4	#93.8	70.5	#260.5	88.1
Internal Link Dist (m)	250.5		1395.4	321.5	2517.5
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1208	267	2041	1059	986
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.94	0.44	0.83	0.46

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑↑↑		↑	↑↑↑			↑			↑	
Traffic Volume (vph)	47	800	57	232	756	79	38	548	221	39	345	32
Future Volume (vph)	47	800	57	232	756	79	38	548	221	39	345	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		2.0	4.0			4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00			1.00	
Frbp, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.99			0.96			0.99	
Flt Protected		1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		5041		1825	5033			1809			1860	
Flt Permitted		0.83		0.14	1.00			0.96			0.88	
Satd. Flow (perm)		4183		270	5033			1746			1637	
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)	51	870	62	252	822	86	41	596	240	42	375	35
RTOR Reduction (vph)	0	6	0	0	10	0	0	12	0	0	3	0
Lane Group Flow (vph)	0	977	0	252	898	0	0	865	0	0	449	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.3		45.4	45.4			59.0			59.0	
Effective Green, g (s)		32.3		47.4	45.4			59.0			59.0	
Actuated g/C Ratio		0.29		0.42	0.40			0.52			0.52	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		1202		267	2032			916			859	
v/s Ratio Prot				c0.09	0.18							
v/s Ratio Perm		c0.23		0.30				c0.50			0.27	
v/c Ratio		0.81		0.94	0.44			0.94			0.52	
Uniform Delay, d1		37.2		24.5	24.3			25.1			17.5	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		6.1		39.8	0.7			17.6			0.6	
Delay (s)		43.3		64.3	25.0			42.8			18.1	
Level of Service		D		E	C			D			B	
Approach Delay (s)		43.3			33.5			42.8			18.1	
Approach LOS		D			C			D			B	





















Intersection Summary

HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	966	78	125	1132	303	132	753	129	242	473	141
Future Volume (vph)	113	966	78	125	1132	303	132	753	129	242	473	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.968			0.978			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4884	0	1825	3524	0	1738	3408	0
Flt Permitted	0.109			0.128			0.370			0.108		
Satd. Flow (perm)	199	5036	0	236	4884	0	711	3524	0	198	3408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			60			16			37	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	118	1006	81	130	1179	316	138	784	134	252	493	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	1087	0	130	1495	0	138	918	0	252	640	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

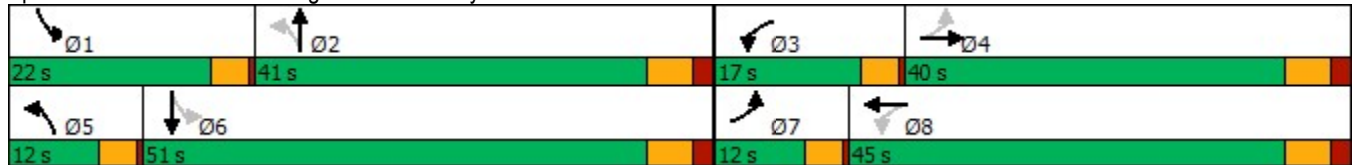
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	12.0	40.0		17.0	45.0		12.0	41.0		22.0	51.0	
Total Split (%)	10.0%	33.3%		14.2%	37.5%		10.0%	34.2%		18.3%	42.5%	
Maximum Green (s)	8.0	34.0		13.0	39.0		8.0	35.0		18.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.4	36.6		51.2	39.1		43.0	33.1		55.1	41.2	
Actuated g/C Ratio	0.40	0.32		0.44	0.34		0.37	0.29		0.47	0.35	
v/c Ratio	0.64	0.68		0.54	0.89		0.41	0.90		0.82	0.52	
Control Delay	39.0	38.0		28.5	43.2		22.0	52.5		49.1	29.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.0	38.0		28.5	43.2		22.0	52.5		49.1	29.2	
LOS	D	D		C	D		C	D		D	C	
Approach Delay		38.1			42.0			48.5			34.9	
Approach LOS		D			D			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 116.1
 Natural Cycle: 80
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 41.1
 Intersection LOS: D
 Intersection Capacity Utilization 89.9%
 ICU Level of Service E
 Analysis Period (min) 15

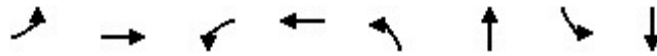
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	1087	130	1495	138	918	252	640
v/c Ratio	0.64	0.68	0.54	0.89	0.41	0.90	0.82	0.52
Control Delay	39.0	38.0	28.5	43.2	22.0	52.5	49.1	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	38.0	28.5	43.2	22.0	52.5	49.1	29.2
Queue Length 50th (m)	16.3	82.5	18.1	119.5	17.3	107.0	39.7	56.6
Queue Length 95th (m)	#36.7	101.5	30.8	#148.0	29.1	#141.1	#77.1	73.6
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	186	1594	278	1684	340	1076	333	1347
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.68	0.47	0.89	0.41	0.85	0.76	0.48

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	113	966	78	125	1132	303	132	753	129	242	473	141
Future Volume (vph)	113	966	78	125	1132	303	132	753	129	242	473	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5035		1755	4886		1825	3525		1738	3407	
Flt Permitted	0.11	1.00		0.13	1.00		0.37	1.00		0.11	1.00	
Satd. Flow (perm)	200	5035		236	4886		711	3525		197	3407	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	118	1006	81	130	1179	316	138	784	134	252	493	147
RTOR Reduction (vph)	0	8	0	0	40	0	0	11	0	0	24	0
Lane Group Flow (vph)	118	1079	0	130	1455	0	138	907	0	252	616	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.4	36.6		49.6	39.2		41.0	33.1		53.1	41.2	
Effective Green, g (s)	44.4	36.6		49.6	39.2		41.0	33.1		53.1	41.2	
Actuated g/C Ratio	0.38	0.32		0.43	0.34		0.35	0.29		0.46	0.35	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	179	1587		236	1649		326	1004		302	1209	
v/s Ratio Prot	c0.04	0.21		c0.05	c0.30		0.03	c0.26		c0.11	0.18	
v/s Ratio Perm	0.21			0.19			0.12			0.27		
v/c Ratio	0.66	0.68		0.55	0.88		0.42	0.90		0.83	0.51	
Uniform Delay, d1	27.1	34.6		22.8	36.3		26.3	40.0		30.0	29.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.5	2.4		2.8	7.2		0.9	11.2		17.7	0.3	
Delay (s)	35.5	37.0		25.5	43.5		27.2	51.1		47.7	29.8	
Level of Service	D	D		C	D		C	D		D	C	
Approach Delay (s)		36.9			42.1			48.0			34.9	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	116.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	693	670	134	305	868	179	404	1059	291	253	1122	980
Future Volume (vph)	693	670	134	305	868	179	404	1059	291	253	1122	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.160			0.950			0.085			0.094		
Satd. Flow (perm)	296	4995	1538	3344	5092	1562	160	3614	1486	181	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138			178			178			517
Link Speed (k/h)		70			70			70				70
Link Distance (m)		142.1			749.9			381.1				609.4
Travel Time (s)		7.3			38.6			19.6				31.3
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	714	691	138	314	895	185	416	1092	300	261	1157	1010
Shared Lane Traffic (%)												
Lane Group Flow (vph)	714	691	138	314	895	185	416	1092	300	261	1157	1010
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	38.0	41.0	41.0	24.0	27.0	27.0	20.0	55.0	55.0	15.0	50.0	50.0
Total Split (%)	28.1%	30.4%	30.4%	17.8%	20.0%	20.0%	14.8%	40.7%	40.7%	11.1%	37.0%	37.0%
Maximum Green (s)	33.0	34.0	34.0	19.0	20.0	20.0	16.0	48.0	48.0	11.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

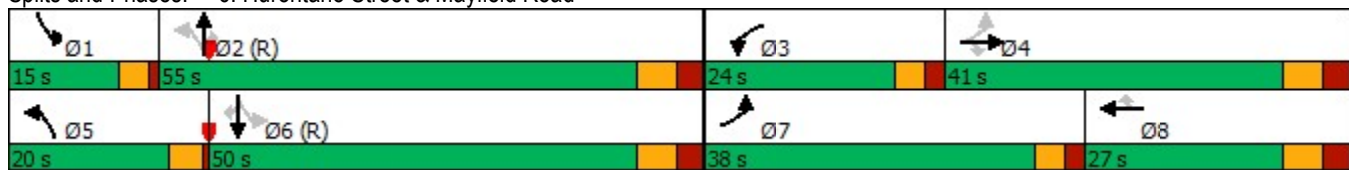


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Act Effect Green (s)	62.0	34.0	34.0	19.0	20.0	20.0	68.0	48.0	48.0	61.0	43.0	45.0	
Actuated g/C Ratio	0.46	0.25	0.25	0.14	0.15	0.15	0.50	0.36	0.36	0.45	0.32	0.33	
v/c Ratio	1.39	0.55	0.28	0.66	1.19	0.48	1.40	0.85	0.47	1.09	1.03	1.17	
Control Delay	218.6	45.8	7.7	62.1	145.9	12.6	231.2	47.8	15.6	117.0	81.1	109.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	218.6	45.8	7.7	62.1	145.9	12.6	231.2	47.8	15.6	117.0	81.1	109.6	
LOS	F	D	A	E	F	B	F	D	B	F	F	F	
Approach Delay		122.4			109.4				84.6			96.8	
Approach LOS		F			F				F			F	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	120
Control Type:	Pretimed
Maximum v/c Ratio:	1.40
Intersection Signal Delay:	101.7
Intersection LOS:	F
Intersection Capacity Utilization	126.9%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	714	691	138	314	895	185	416	1092	300	261	1157	1010
v/c Ratio	1.39	0.55	0.28	0.66	1.19	0.48	1.40	0.85	0.47	1.09	1.03	1.17
Control Delay	218.6	45.8	7.7	62.1	145.9	12.6	231.2	47.8	15.6	117.0	81.1	109.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	218.6	45.8	7.7	62.1	145.9	12.6	231.2	47.8	15.6	117.0	81.1	109.6
Queue Length 50th (m)	~237.6	58.9	0.0	41.3	~104.9	1.6	~131.9	140.7	23.3	~59.8	~174.1	~223.1
Queue Length 95th (m)	#312.3	72.3	16.1	57.2	#133.1	23.2	#195.9	169.1	49.4	#114.3	#216.1	#302.8
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	514	1258	490	479	754	383	297	1284	643	240	1118	863
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.55	0.28	0.66	1.19	0.48	1.40	0.85	0.47	1.09	1.03	1.17

































Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 			 	
Traffic Volume (vph)	693	670	134	305	868	179	404	1059	291	253	1122	980
Future Volume (vph)	693	670	134	305	868	179	404	1059	291	253	1122	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	296	4995	1538	3404	5092	1562	160	3614	1486	181	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	714	691	138	314	895	185	416	1092	300	261	1157	1010
RTOR Reduction (vph)	0	0	103	0	0	152	0	0	115	0	0	345
Lane Group Flow (vph)	714	691	35	314	895	33	416	1092	185	261	1157	665
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	34.0	34.0	19.0	20.0	20.0	63.0	48.0	48.0	54.0	43.0	43.0
Effective Green, g (s)	60.0	34.0	34.0	19.0	20.0	20.0	65.0	48.0	48.0	58.0	43.0	45.0
Actuated g/C Ratio	0.44	0.25	0.25	0.14	0.15	0.15	0.48	0.36	0.36	0.43	0.32	0.33
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	509	1258	387	479	754	231	294	1284	528	236	1118	518
v/s Ratio Prot	c0.36	0.14		0.09	0.18		c0.19	0.30		0.11	0.33	
v/s Ratio Perm	c0.26		0.02			0.02	0.49		0.12	0.37		c0.43
v/c Ratio	1.40	0.55	0.09	0.66	1.19	0.14	1.41	0.85	0.35	1.11	1.03	1.28
Uniform Delay, d1	39.8	43.8	38.7	54.9	57.5	50.1	43.0	40.2	32.0	37.6	46.0	45.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	192.8	1.7	0.5	6.8	97.3	1.3	205.7	7.2	1.8	89.9	36.3	142.1
Delay (s)	232.6	45.6	39.1	61.8	154.8	51.4	248.7	47.4	33.9	127.5	82.3	187.1
Level of Service	F	D	D	E	F	D	F	D	C	F	F	F
Approach Delay (s)		131.6			120.1			91.5			130.8	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM 2000 Control Delay			119.0				HCM 2000 Level of Service		F			
HCM 2000 Volume to Capacity ratio			1.46									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)		21.0			
Intersection Capacity Utilization			126.9%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	
Traffic Volume (vph)	749	53	30	820	38	28
Future Volume (vph)	749	53	30	820	38	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.990			0.943		
Flt Protected				0.998	0.972	
Satd. Flow (prot)	3543	0	0	3571	1726	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	3543	0	0	3571	1726	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	749	53	30	820	38	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	802	0	0	850	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.0%			ICU Level of Service B		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	749	53	30	820	38	28
Future Volume (Veh/h)	749	53	30	820	38	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	749	53	30	820	38	28
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			802		1246	401
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			802		1246	401
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		76	95
cM capacity (veh/h)			817		160	599
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	499	303	303	547	66	
Volume Left	0	0	30	0	38	
Volume Right	0	53	0	0	28	
cSH	1700	1700	817	1700	232	
Volume to Capacity	0.29	0.18	0.04	0.32	0.28	
Queue Length 95th (m)	0.0	0.0	0.9	0.0	8.6	
Control Delay (s)	0.0	0.0	1.3	0.0	26.6	
Lane LOS			A	D		
Approach Delay (s)	0.0		0.5		26.6	
Approach LOS					D	
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			55.0%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	259	50	59	357	21	232	833	134	30	672	7
Future Volume (vph)	0	259	50	59	357	21	232	833	134	30	672	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.978			0.994			0.983			0.999	
Fl _t Protected					0.993			0.990			0.998	
Satd. Flow (prot)	0	1842	0	0	1859	0	0	3483	0	0	3568	0
Fl _t Permitted					0.775			0.649			0.856	
Satd. Flow (perm)	0	1842	0	0	1451	0	0	2283	0	0	3060	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3			22			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	259	50	59	357	21	232	833	134	30	672	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	309	0	0	437	0	0	1199	0	0	709	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

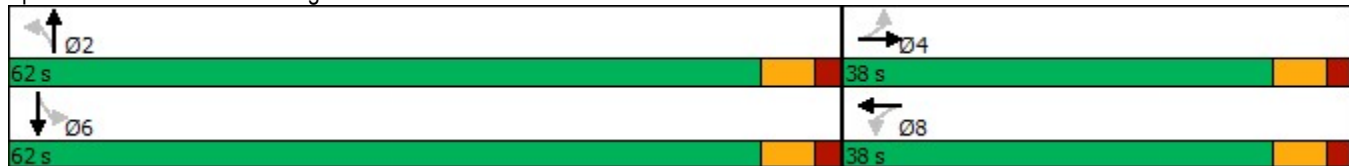


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	38.0	38.0		38.0	38.0		62.0	62.0		62.0	62.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		62.0%	62.0%		62.0%	62.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		56.0	56.0		56.0	56.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		30.8			30.8			56.1			56.1	
Actuated g/C Ratio		0.31			0.31			0.57			0.57	
v/c Ratio		0.53			0.96			0.92			0.41	
Control Delay		30.9			68.4			32.4			13.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.9			68.4			32.4			13.1	
LOS		C			E			C			B	
Approach Delay		30.9			68.4			32.4			13.1	
Approach LOS		C			E			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	98.9
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	33.0
Intersection LOS:	C
Intersection Capacity Utilization:	113.7%
ICU Level of Service:	H
Analysis Period (min):	15

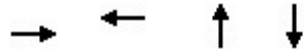
Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	309	437	1199	709
v/c Ratio	0.53	0.96	0.92	0.41
Control Delay	30.9	68.4	32.4	13.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.9	68.4	32.4	13.1
Queue Length 50th (m)	46.9	81.4	104.3	38.8
Queue Length 95th (m)	72.5	#140.8	#157.9	51.5
Internal Link Dist (m)	180.8	1335.2	2472.3	375.3
Turn Bay Length (m)				
Base Capacity (vph)	603	472	1303	1735
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.93	0.92	0.41

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	259	50	59	357	21	232	833	134	30	672	7
Future Volume (vph)	0	259	50	59	357	21	232	833	134	30	672	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.99			0.98			1.00	
Flt Protected		1.00			0.99			0.99			1.00	
Satd. Flow (prot)		1842			1859			3485			3566	
Flt Permitted		1.00			0.77			0.65			0.86	
Satd. Flow (perm)		1842			1450			2284			3060	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	259	50	59	357	21	232	833	134	30	672	7
RTOR Reduction (vph)	0	7	0	0	2	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	302	0	0	435	0	0	1189	0	0	708	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.8			30.8			56.0			56.0	
Effective Green, g (s)		30.8			30.8			56.0			56.0	
Actuated g/C Ratio		0.31			0.31			0.57			0.57	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		574			452			1294			1734	
v/s Ratio Prot		0.16										
v/s Ratio Perm					c0.30			c0.52			0.23	
v/c Ratio		0.53			0.96			0.92			0.41	
Uniform Delay, d1		28.0			33.4			19.4			12.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.9			32.6			11.9			0.7	
Delay (s)		28.9			66.0			31.3			12.8	
Level of Service		C			E			C			B	
Approach Delay (s)		28.9			66.0			31.3			12.8	
Approach LOS		C			E			C			B	

Intersection Summary		
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.93	
Actuated Cycle Length (s)	98.8	Sum of lost time (s) 12.0
Intersection Capacity Utilization	113.7%	ICU Level of Service H
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	1162	41	168	1354	38	117
Future Volume (vph)	1162	41	168	1354	38	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.995					0.850
Fl _t Protected				0.995	0.950	
Satd. Flow (prot)	3561	0	0	3561	1789	1601
Fl _t Permitted				0.995	0.950	
Satd. Flow (perm)	3561	0	0	3561	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1162	41	168	1354	38	117
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1203	0	0	1522	38	117
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	89.1% ICU Level of Service E
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1162	41	168	1354	38	117
Future Volume (Veh/h)	1162	41	168	1354	38	117
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1162	41	168	1354	38	117
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1203		2196	602
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			813		2021	81
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			75		0	85
cM capacity (veh/h)			665		31	791
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	775	428	619	903	38	117
Volume Left	0	0	168	0	38	0
Volume Right	0	41	0	0	0	117
cSH	1700	1700	665	1700	31	791
Volume to Capacity	0.46	0.25	0.25	0.53	1.23	0.15
Queue Length 95th (m)	0.0	0.0	7.6	0.0	32.2	3.9
Control Delay (s)	0.0	0.0	6.4	0.0	430.5	10.3
Lane LOS			A		F	B
Approach Delay (s)	0.0		2.6		113.4	
Approach LOS			F			
Intersection Summary						
Average Delay			7.5			
Intersection Capacity Utilization			89.1%		ICU Level of Service E	
Analysis Period (min)	15					

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	396	606	4143	2563	130
Future Volume (vph)	59	396	606	4143	2563	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.850			0.993	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5106	0
Flt Permitted	0.950		0.062			
Satd. Flow (perm)	1789	1601	117	5142	5106	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		1			9	
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	396	606	4143	2563	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	396	606	4143	2693	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

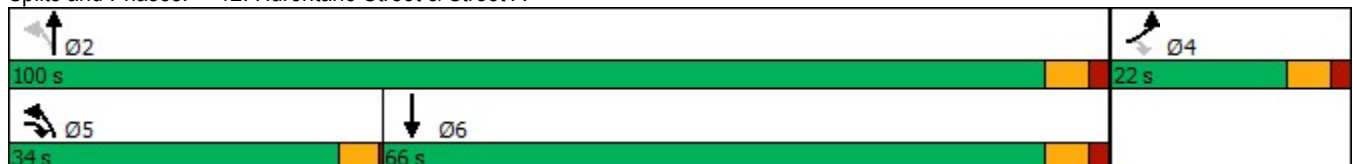


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	
Total Split (s)	22.0	34.0	34.0	100.0	66.0	
Total Split (%)	18.0%	27.9%	27.9%	82.0%	54.1%	
Maximum Green (s)	16.0	30.0	30.0	94.0	60.0	
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	-2.0	0.0	0.0	
Total Lost Time (s)	6.0	4.0	2.0	6.0	6.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	Max	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	9.1	42.6	98.3	95.7	60.2	
Actuated g/C Ratio	0.08	0.38	0.87	0.85	0.53	
v/c Ratio	0.41	0.66	1.05	0.95	0.99	
Control Delay	58.9	34.5	84.7	16.3	41.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.9	34.5	84.7	16.3	41.4	
LOS	E	C	F	B	D	
Approach Delay	37.7			25.1	41.4	
Approach LOS	D			C	D	

Intersection Summary

Area Type:	Other
Cycle Length:	122
Actuated Cycle Length:	112.8
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.05
Intersection Signal Delay:	31.4
Intersection LOS:	C
Intersection Capacity Utilization:	102.7%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	59	396	606	4143	2693
v/c Ratio	0.41	0.66	1.05	0.95	0.99
Control Delay	58.9	34.5	84.7	16.3	41.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	34.5	84.7	16.3	41.4
Queue Length 50th (m)	12.9	71.0	~136.3	251.9	~221.8
Queue Length 95th (m)	26.2	103.4	#214.2	#393.4	#276.2
Internal Link Dist (m)	1335.2			904.0	831.3
Turn Bay Length (m)	30.0		50.0		
Base Capacity (vph)	254	604	577	4361	2729
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.66	1.05	0.95	0.99

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	396	606	4143	2563	130
Future Volume (vph)	59	396	606	4143	2563	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	2.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1789	1601	1789	5142	5105	
Flt Permitted	0.95	1.00	0.06	1.00	1.00	
Satd. Flow (perm)	1789	1601	117	5142	5105	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	396	606	4143	2563	130
RTOR Reduction (vph)	0	1	0	0	4	0
Lane Group Flow (vph)	59	395	606	4143	2689	0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	7.8	37.9	94.4	94.4	60.3	
Effective Green, g (s)	7.8	37.9	96.4	94.4	60.3	
Actuated g/C Ratio	0.07	0.33	0.84	0.83	0.53	
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	122	531	568	4250	2695	
v/s Ratio Prot	0.03	c0.20	c0.30	c0.81	0.53	
v/s Ratio Perm		0.05	0.60			
v/c Ratio	0.48	0.74	1.07	0.97	1.00	
Uniform Delay, d1	51.3	33.9	36.9	8.8	26.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.0	5.6	56.9	9.1	16.8	
Delay (s)	54.3	39.5	93.7	17.9	43.7	
Level of Service	D	D	F	B	D	
Approach Delay (s)	41.4			27.6	43.7	
Approach LOS	D			C	D	

Intersection Summary

HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	114.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	18	826	126	20	614
Future Volume (vph)	82	18	826	126	20	614
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850	0.982			
Fl _t Protected	0.950					0.998
Satd. Flow (prot)	1789	1601	1850	0	0	1880
Fl _t Permitted	0.950					0.998
Satd. Flow (perm)	1789	1601	1850	0	0	1880
Link Speed (k/h)	48		48			48
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		190.6			40.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	20	898	137	22	667
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	20	1035	0	0	689
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.3%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis
 13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	82	18	826	126	20	614
Future Volume (Veh/h)	82	18	826	126	20	614
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)	89	20	898	137	22	667
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	1678	966			1035	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1678	966			1035	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	12	94			97	
cM capacity (veh/h)	101	309			672	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	89	20	1035	689		
Volume Left	89	0	0	22		
Volume Right	0	20	137	0		
cSH	101	309	1700	672		
Volume to Capacity	0.88	0.06	0.61	0.03		
Queue Length 95th (m)	38.5	1.6	0.0	0.8		
Control Delay (s)	135.5	17.5	0.0	0.9		
Lane LOS	F	C		A		
Approach Delay (s)	113.8		0.0	0.9		
Approach LOS	F					
Intersection Summary						
Average Delay			7.1			
Intersection Capacity Utilization			62.3%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↗↗	
Traffic Volume (vph)	769	11	198	842	11	102
Future Volume (vph)	769	11	198	842	11	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998			0.878		
Flt Protected				0.991	0.995	
Satd. Flow (prot)	3571	0	0	3546	1645	0
Flt Permitted				0.991	0.995	
Satd. Flow (perm)	3571	0	0	3546	1645	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	23.4			22.5	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	836	12	215	915	12	111
Shared Lane Traffic (%)						
Lane Group Flow (vph)	848	0	0	1130	123	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	67.5%			ICU Level of Service C		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	769	11	198	842	11	102
Future Volume (Veh/h)	769	11	198	842	11	102
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)	836	12	215	915	12	111
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			848		1730	424
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			848		1730	424
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			73		79	81
cM capacity (veh/h)			785		58	579
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	557	291	520	610	123	
Volume Left	0	0	215	0	12	
Volume Right	0	12	0	0	111	
cSH	1700	1700	785	1700	307	
Volume to Capacity	0.33	0.17	0.27	0.36	0.40	
Queue Length 95th (m)	0.0	0.0	8.5	0.0	14.1	
Control Delay (s)	0.0	0.0	6.9	0.0	24.3	
Lane LOS	A			C		
Approach Delay (s)	0.0		3.2		24.3	
Approach LOS						C
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			67.5%	ICU Level of Service	C	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 15: McLaughlin Road & Street E

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	7	0	32	32	0	17	50	765	50	18	645	7
Future Volume (vph)	7	0	32	32	0	17	50	765	50	18	645	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.890			0.954			0.991			0.998	
Flt Protected		0.991			0.968			0.997			0.999	
Satd. Flow (prot)	0	1661	0	0	1739	0	0	3536	0	0	3568	0
Flt Permitted		0.991			0.968			0.997			0.999	
Satd. Flow (perm)	0	1661	0	0	1739	0	0	3536	0	0	3568	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			18.0			8.5	
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
Adj. Flow (vph)	8	0	35	35	0	18	54	832	54	20	701	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	53	0	0	940	0	0	729	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.7%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	32	32	0	17	50	765	50	18	645	7
Future Volume (Veh/h)	7	0	32	32	0	17	50	765	50	18	645	7
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)	8	0	35	35	0	18	54	832	54	20	701	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)												
								399				189
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85					0.85	
vC, conflicting volume	1287	1739	354	1392	1716	443	709				886	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	982	1515	354	1106	1487	0	709				510	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	95	100	95	72	100	98	94				98	
cM capacity (veh/h)	159	92	642	124	96	920	886				893	
Direction, Lane #												
	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	43	53	470	470	370	358						
Volume Left	8	35	54	0	20	0						
Volume Right	35	18	0	54	0	8						
cSH	410	176	886	1700	893	1700						
Volume to Capacity	0.10	0.30	0.06	0.28	0.02	0.21						
Queue Length 95th (m)	2.7	9.1	1.5	0.0	0.5	0.0						
Control Delay (s)	14.8	34.1	1.7	0.0	0.7	0.0						
Lane LOS	B	D	A		A							
Approach Delay (s)	14.8	34.1	0.9		0.4							
Approach LOS	B	D										
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization			60.7%		ICU Level of Service					B		
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	2	287	4	141	180	45	2	235	293	34	228	11
Future Volume (vph)	2	287	4	141	180	45	2	235	293	34	228	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.970				0.850		0.994	
Flt Protected				0.950							0.994	
Satd. Flow (prot)	0	1917	0	1772	1799	0	0	1830	1585	0	1786	0
Flt Permitted		0.998		0.510				0.998			0.948	
Satd. Flow (perm)	0	1913	0	951	1799	0	0	1827	1585	0	1704	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			38				312			6
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	305	4	150	191	48	2	250	312	36	243	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	311	0	150	239	0	0	252	312	0	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

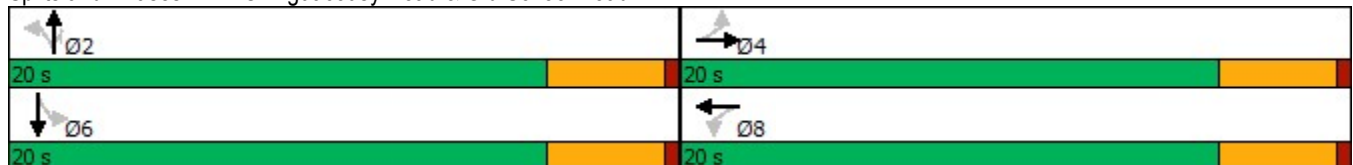


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		10.7		10.5	10.5			19.4	19.4		19.4	
Actuated g/C Ratio		0.31		0.30	0.30			0.56	0.56		0.56	
v/c Ratio		0.53		0.52	0.42			0.25	0.31		0.31	
Control Delay		13.1		16.9	10.1			7.6	2.3		7.9	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		13.1		16.9	10.1			7.6	2.3		7.9	
LOS		B		B	B			A	A		A	
Approach Delay		13.1			12.7			4.7			7.9	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 34.8
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 9.0
 Intersection Capacity Utilization 68.0%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	311	150	239	252	312	291
v/c Ratio	0.53	0.52	0.42	0.25	0.31	0.31
Control Delay	13.1	16.9	10.1	7.6	2.3	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	16.9	10.1	7.6	2.3	7.9
Queue Length 50th (m)	14.1	6.8	8.6	7.8	0.0	9.1
Queue Length 95th (m)	27.6	17.3	19.2	22.8	9.6	26.5
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	889	441	855	1018	1022	953
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.34	0.28	0.25	0.31	0.31

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔	↔		↔	
Traffic Volume (vph)	2	287	4	141	180	45	2	235	293	34	228	11
Future Volume (vph)	2	287	4	141	180	45	2	235	293	34	228	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1917		1772	1798			1830	1585		1787	
Flt Permitted		1.00		0.51	1.00			1.00	1.00		0.95	
Satd. Flow (perm)		1913		951	1798			1827	1585		1705	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	305	4	150	191	48	2	250	312	36	243	12
RTOR Reduction (vph)	0	1	0	0	28	0	0	0	150	0	3	0
Lane Group Flow (vph)	0	310	0	150	211	0	0	252	162	0	288	0
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2		6		
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		9.2		9.2	9.2			18.5	18.5		18.5	
Effective Green, g (s)		9.2		9.2	9.2			18.5	18.5		18.5	
Actuated g/C Ratio		0.26		0.26	0.26			0.52	0.52		0.52	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		492		245	463			946	821		883	
v/s Ratio Prot					0.12							
v/s Ratio Perm		c0.16		0.16				0.14	0.10		c0.17	
v/c Ratio		0.63		0.61	0.46			0.27	0.20		0.33	
Uniform Delay, d1		11.7		11.7	11.1			4.8	4.6		5.0	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		2.5		4.5	0.7			0.7	0.5		1.0	
Delay (s)		14.3		16.2	11.9			5.5	5.2		6.0	
Level of Service		B		B	B			A	A		A	
Approach Delay (s)		14.3			13.5			5.3			6.0	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.3									A
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			35.7								8.0	
Intersection Capacity Utilization			68.0%									C
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	573	35	248	325	29	40	74	435	46	147	14
Future Volume (vph)	8	573	35	248	325	29	40	74	435	46	147	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.988				0.850		0.991	
Flt Protected		0.999		0.950				0.983			0.989	
Satd. Flow (prot)	0	3556	0	1789	3482	0	0	1864	1617	0	1858	0
Flt Permitted		0.947		0.269				0.826			0.891	
Satd. Flow (perm)	0	3371	0	507	3482	0	0	1567	1617	0	1674	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			16				440			4
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	9	610	37	264	346	31	43	79	463	49	156	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	656	0	264	377	0	0	122	463	0	220	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		17.7		33.8	31.7			13.3	13.3		13.3	
Actuated g/C Ratio		0.31		0.59	0.55			0.23	0.23		0.23	
v/c Ratio		0.63		0.51	0.20			0.34	0.65		0.57	
Control Delay		20.5		9.9	6.7			23.1	8.1		27.0	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		20.5		9.9	6.7			23.1	8.1		27.0	
LOS		C		A	A			C	A		C	
Approach Delay		20.5			8.0			11.2			27.0	
Approach LOS		C			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 57.5
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 14.8
 Intersection LOS: B
 Intersection Capacity Utilization 70.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	656	264	377	122	463	220
v/c Ratio	0.63	0.51	0.20	0.34	0.65	0.57
Control Delay	20.5	9.9	6.7	23.1	8.1	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	9.9	6.7	23.1	8.1	27.0
Queue Length 50th (m)	28.8	11.0	8.4	10.2	1.8	19.1
Queue Length 95th (m)	55.8	27.0	18.0	27.4	25.0	46.2
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	2266	717	3270	824	1059	882
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.37	0.12	0.15	0.44	0.25

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	8	573	35	248	325	29	40	74	435	46	147	14
Future Volume (vph)	8	573	35	248	325	29	40	74	435	46	147	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)		3556		1789	3481			1864	1617		1857	
Flt Permitted		0.95		0.27	1.00			0.83	1.00		0.89	
Satd. Flow (perm)		3370		506	3481			1567	1617		1674	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	9	610	37	264	346	31	43	79	463	49	156	15
RTOR Reduction (vph)	0	5	0	0	7	0	0	0	337	0	3	0
Lane Group Flow (vph)	0	651	0	264	370	0	0	122	126	0	217	0
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		17.9		31.7	31.7			13.3	13.3		13.3	
Effective Green, g (s)		17.9		31.7	31.7			13.3	13.3		13.3	
Actuated g/C Ratio		0.31		0.56	0.56			0.23	0.23		0.23	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1058		501	1935			365	377		390	
v/s Ratio Prot				c0.09	0.11							
v/s Ratio Perm		c0.19		0.20				0.08	0.08		c0.13	
v/c Ratio		0.62		0.53	0.19			0.33	0.33		0.56	
Uniform Delay, d1		16.6		7.3	6.3			18.2	18.2		19.3	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.1		1.0	0.0			0.5	0.5		1.7	
Delay (s)		17.7		8.3	6.3			18.7	18.7		21.0	
Level of Service		B		A	A			B	B		C	
Approach Delay (s)		17.7			7.1			18.7			21.0	
Approach LOS		B			A			B			C	
Intersection Summary												
HCM 2000 Control Delay			15.1		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			57.0		Sum of lost time (s)			16.0				
Intersection Capacity Utilization			70.3%		ICU Level of Service				C			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	570	261	212	340	202	158	61	1916	168	77	2665	301
Future Volume (vph)	570	261	212	340	202	158	61	1916	168	77	2665	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.933			0.934				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3317	0	1722	3274	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.332			0.435			0.067			0.069		
Satd. Flow (perm)	613	3317	0	788	3274	0	121	4445	1471	117	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		75			13				137			155
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	613	281	228	366	217	170	66	2060	181	83	2866	324
Shared Lane Traffic (%)												
Lane Group Flow (vph)	613	509	0	366	387	0	66	2060	181	83	2866	324
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	33.0		15.0	24.0		8.0	72.0	72.0	64.0	64.0	64.0
Total Split (%)	20.0%	27.5%		12.5%	20.0%		6.7%	60.0%	60.0%	53.3%	53.3%	53.3%
Maximum Green (s)	20.0	25.0		11.0	16.0		4.0	64.0	64.0	56.0	56.0	56.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	45.6	26.6		34.6	15.6		68.4	62.4	62.4	58.1	58.1	56.1
Actuated g/C Ratio	0.39	0.23		0.29	0.13		0.58	0.53	0.53	0.49	0.49	0.48
v/c Ratio	1.36	0.63		1.10	0.87		0.44	0.88	0.22	1.46	1.16	0.38
Control Delay	205.4	39.2		109.9	69.6		20.2	29.9	4.8	308.4	104.4	11.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	205.4	39.2		109.9	69.6		20.2	29.9	4.8	308.4	104.4	11.6
LOS	F	D		F	E		C	C	A	F	F	B
Approach Delay		130.0			89.2			27.6			100.4	
Approach LOS		F			F			C			F	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 118
 Natural Cycle: 140
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.46
 Intersection Signal Delay: 81.2
 Intersection Capacity Utilization 115.4%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service H

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	613	509	366	387	66	2060	181	83	2866	324
v/c Ratio	1.36	0.63	1.10	0.87	0.44	0.88	0.22	1.46	1.16	0.38
Control Delay	205.4	39.2	109.9	69.6	20.2	29.9	4.8	308.4	104.4	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	205.4	39.2	109.9	69.6	20.2	29.9	4.8	308.4	104.4	11.6
Queue Length 50th (m)	~160.1	48.9	~77.1	46.0	6.4	148.5	4.8	~26.8	~295.6	23.4
Queue Length 95th (m)	#231.1	67.2	#119.1	#72.0	13.1	171.9	15.7	#46.6	#322.0	44.4
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	450	817	334	455	151	2413	861	57	2481	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.36	0.62	1.10	0.85	0.44	0.85	0.21	1.46	1.16	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.





























Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 3: Hurontario Street & Old School Road

06/07/2024

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		 			 			  			  			
Traffic Volume (vph)	570	261	212	340	202	158	61	1916	168	77	2665	301		
Future Volume (vph)	570	261	212	340	202	158	61	1916	168	77	2665	301		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0		
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00		
Frt	1.00	0.93		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		
Satd. Flow (prot)	1755	3317		1722	3275		1722	4445	1471	1615	5043	1633		
Flt Permitted	0.33	1.00		0.43	1.00		0.07	1.00	1.00	0.07	1.00	1.00		
Satd. Flow (perm)	613	3317		788	3275		121	4445	1471	117	5043	1633		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93		
Adj. Flow (vph)	613	281	228	366	217	170	66	2060	181	83	2866	324		
RTOR Reduction (vph)	0	58	0	0	11	0	0	0	64	0	0	82		
Lane Group Flow (vph)	613	451	0	366	376	0	66	2060	117	83	2866	242		
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm		
Protected Phases	7	4		3	8		5	2			6			
Permitted Phases	4			8			2		2	6		6		
Actuated Green, G (s)	39.6	24.6		26.6	15.6		63.2	63.2	63.2	56.1	56.1	56.1		
Effective Green, g (s)	41.6	26.6		30.6	15.6		65.2	63.2	63.2	58.1	58.1	56.1		
Actuated g/C Ratio	0.35	0.22		0.26	0.13		0.55	0.53	0.53	0.49	0.49	0.47		
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0		
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)	426	742		305	430		135	2364	782	57	2466	771		
v/s Ratio Prot	c0.27	0.14		0.13	0.11		0.02	c0.46			0.57			
v/s Ratio Perm	0.24			c0.18			0.25		0.08	c0.71		0.15		
v/c Ratio	1.44	0.61		1.20	0.87		0.49	0.87	0.15	1.46	1.16	0.31		
Uniform Delay, d1	34.6	41.4		41.4	50.6		26.3	24.3	14.1	30.3	30.3	19.4		
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	210.5	1.4		117.2	17.5		2.8	3.8	0.1	279.3	77.9	0.2		
Delay (s)	245.1	42.8		158.6	68.2		29.1	28.1	14.2	309.7	108.2	19.7		
Level of Service	F	D		F	E		C	C	B	F	F	B		
Approach Delay (s)		153.3			112.1			27.0			104.6			
Approach LOS		F			F			C			F			
Intersection Summary														
HCM 2000 Control Delay			88.7									HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio			1.39											
Actuated Cycle Length (s)			118.8								18.0		Sum of lost time (s)	
Intersection Capacity Utilization			115.4%										ICU Level of Service	H
Analysis Period (min)			15											
c Critical Lane Group														

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔		↔	↕↕↕			↕	↕		↕↔	
Traffic Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46
Future Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994				0.850		0.986	
Flt Protected		0.997		0.950				0.994			0.988	
Satd. Flow (prot)	0	4861	0	1659	4942	0	0	1826	1585	0	1782	0
Flt Permitted		0.854		0.204				0.925			0.751	
Satd. Flow (perm)	0	4164	0	356	4942	0	0	1699	1585	0	1355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6				174		7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	52	829	62	179	721	30	30	227	174	102	281	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	943	0	179	751	0	0	257	174	0	429	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	

Lanes, Volumes, Timings

4: Chinguacousy Road & Mayfield Road

06/07/2024

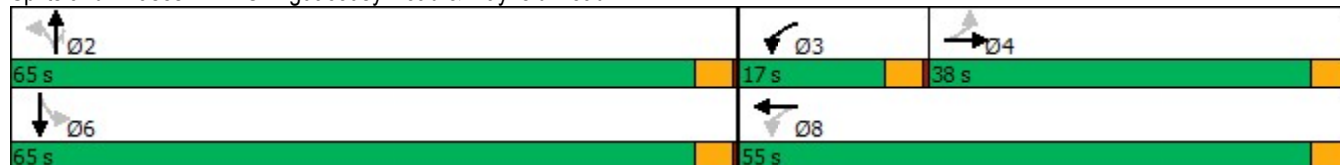


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	38.0	38.0		17.0	55.0		65.0	65.0	65.0	65.0	65.0	
Total Split (%)	31.7%	31.7%		14.2%	45.8%		54.2%	54.2%	54.2%	54.2%	54.2%	
Maximum Green (s)	34.0	34.0		13.0	51.0		61.0	61.0	61.0	61.0	61.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		37.2		51.4	51.4			29.4	29.4		29.4	
Actuated g/C Ratio		0.42		0.58	0.58			0.33	0.33		0.33	
v/c Ratio		0.54		0.50	0.26			0.46	0.27		0.95	
Control Delay		22.5		15.8	10.6			25.6	4.2		59.9	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		22.5		15.8	10.6			25.6	4.2		59.9	
LOS		C		B	B			C	A		E	
Approach Delay		22.5			11.6			17.0			59.9	
Approach LOS		C			B			B			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	88.9
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	23.8
Intersection LOS:	C
Intersection Capacity Utilization:	82.6%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	943	179	751	257	174	429
v/c Ratio	0.54	0.50	0.26	0.46	0.27	0.95
Control Delay	22.5	15.8	10.6	25.6	4.2	59.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	15.8	10.6	25.6	4.2	59.9
Queue Length 50th (m)	42.2	13.1	20.9	33.9	0.0	68.9
Queue Length 95th (m)	72.5	31.7	38.7	53.4	11.8	108.3
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1746	398	2862	1175	1150	939
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.45	0.26	0.22	0.15	0.46

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔↔↔		↔	↔↔↔			↔	↔		↔		
Traffic Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46	
Future Volume (vph)	51	821	61	177	714	30	30	225	172	101	278	46	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00		
Frt		0.99		1.00	0.99			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99		
Satd. Flow (prot)		4863		1659	4942			1826	1585		1782		
Flt Permitted		0.85		0.20	1.00			0.92	1.00		0.75		
Satd. Flow (perm)		4163		357	4942			1699	1585		1354		
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	52	829	62	179	721	30	30	227	174	102	281	46	
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	116	0	5	0	
Lane Group Flow (vph)	0	938	0	179	748	0	0	257	58	0	424	0	
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		37.2		51.4	51.4			29.4	29.4		29.4		
Effective Green, g (s)		37.2		51.4	51.4			29.4	29.4		29.4		
Actuated g/C Ratio		0.42		0.58	0.58			0.33	0.33		0.33		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		1743		356	2860			562	524		448		
v/s Ratio Prot				c0.06	0.15								
v/s Ratio Perm		c0.23		0.23				0.15	0.04		c0.31		
v/c Ratio		0.54		0.50	0.26			0.46	0.11		0.95		
Uniform Delay, d1		19.4		10.1	9.3			23.4	20.6		28.9		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		1.2		1.1	0.2			0.6	0.1		29.2		
Delay (s)		20.5		11.3	9.5			24.0	20.7		58.2		
Level of Service		C		B	A			C	C		E		
Approach Delay (s)		20.5			9.8			22.7			58.2		
Approach LOS		C			A			C			E		
Intersection Summary													
HCM 2000 Control Delay			23.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			88.8									Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.6%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Future Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.980			0.955			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4770	0	1644	3397	0	1690	3444	0
Flt Permitted	0.263			0.100			0.443			0.341		
Satd. Flow (perm)	505	4888	0	180	4770	0	767	3397	0	607	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			31			51			26	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	20	1133	134	159	900	141	59	276	119	339	464	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	1267	0	159	1041	0	59	395	0	339	557	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		16.0	58.0		32.0	32.0		30.0	62.0	
Total Split (%)	35.0%	35.0%		13.3%	48.3%		26.7%	26.7%		25.0%	51.7%	
Maximum Green (s)	36.0	36.0		12.0	52.0		26.0	26.0		26.0	56.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		54.0	52.0		26.0	26.0		58.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.45	0.43		0.22	0.22		0.48	0.47	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

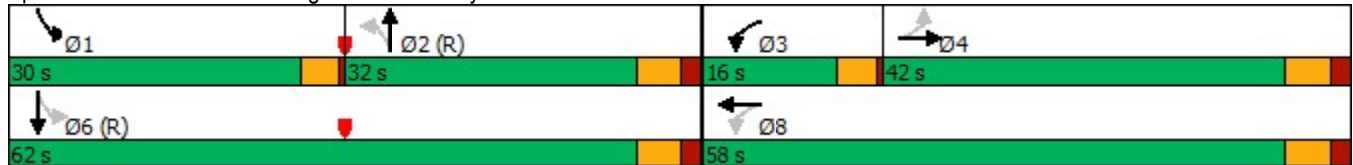


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.13	0.86		0.68	0.50		0.36	0.51		0.64	0.34	
Control Delay	33.5	46.0		38.9	24.8		47.1	38.5		26.4	20.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	33.5	46.0		38.9	24.8		47.1	38.5		26.4	20.0	
LOS	C	D		D	C		D	D		C	C	
Approach Delay		45.8			26.7			39.6			22.4	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Pretimed
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	33.6
Intersection LOS:	C
Intersection Capacity Utilization	79.3%
ICU Level of Service	D
Analysis Period (min)	15

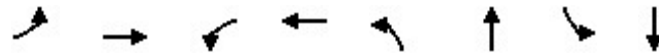
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	1267	159	1041	59	395	339	557
v/c Ratio	0.13	0.86	0.68	0.50	0.36	0.51	0.64	0.34
Control Delay	33.5	46.0	38.9	24.8	47.1	38.5	26.4	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	46.0	38.9	24.8	47.1	38.5	26.4	20.0
Queue Length 50th (m)	3.4	101.6	22.2	61.7	11.9	37.6	50.1	40.6
Queue Length 95th (m)	10.0	120.1	#47.5	74.6	25.2	53.3	73.6	53.6
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	151	1478	233	2084	166	775	528	1621
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.86	0.68	0.50	0.36	0.51	0.64	0.34

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Traffic Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Future Volume (vph)	20	1110	131	156	882	138	58	270	117	332	455	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4889		1706	4768		1644	3397		1690	3444	
Flt Permitted	0.26	1.00		0.10	1.00		0.44	1.00		0.34	1.00	
Satd. Flow (perm)	505	4889		180	4768		767	3397		607	3444	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	1133	134	159	900	141	59	276	119	339	464	93
RTOR Reduction (vph)	0	12	0	0	18	0	0	40	0	0	14	0
Lane Group Flow (vph)	20	1255	0	159	1023	0	59	355	0	339	543	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Effective Green, g (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.43	0.43		0.22	0.22		0.47	0.47	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	151	1466		230	2066		166	736		517	1607	
v/s Ratio Prot		c0.26		c0.07	0.21			0.10		c0.14	0.16	
v/s Ratio Perm	0.04			0.23			0.08			c0.16		
v/c Ratio	0.13	0.86		0.69	0.50		0.36	0.48		0.66	0.34	
Uniform Delay, d1	30.6	39.6		25.5	24.5		39.9	41.1		22.0	20.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	6.6		15.7	0.9		5.9	2.3		6.4	0.6	
Delay (s)	32.4	46.2		41.3	25.4		45.7	43.4		28.4	20.8	
Level of Service	C	D		D	C		D	D		C	C	
Approach Delay (s)		46.0			27.5			43.7			23.7	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399
Future Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98	1.00		0.97	1.00		0.98
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Fl _t Permitted	0.143			0.950			0.259			0.321		
Satd. Flow (perm)	262	4902	1508	3330	4948	1395	492	3476	1467	574	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			162			273			362
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424
Shared Lane Traffic (%)												
Lane Group Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.88	0.95	0.27	0.92	0.86	0.53	0.48	0.50	0.46	0.69	0.65	0.46
Control Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
LOS	E	E	A	F	E	B	C	D	A	C	C	A
Approach Delay	68.1			73.2			34.7			26.6		
Approach LOS	E			E			C			C		

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	49.8
Intersection LOS:	D
Intersection Capacity Utilization	83.7%
ICU Level of Service	E
Analysis Period (min)	15

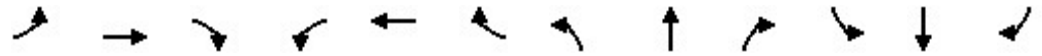
Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424
v/c Ratio	0.88	0.95	0.27	0.92	0.86	0.53	0.48	0.50	0.46	0.69	0.65	0.46
Control Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	9.9	107.2	75.4	18.8	29.6	51.7	7.3	27.1	34.3	6.0
Queue Length 50th (m)	79.9	134.5	1.5	44.5	85.8	9.8	15.1	67.2	0.0	75.3	138.3	10.7
Queue Length 95th (m)	#132.8	#162.4	18.2	#71.6	102.1	35.6	24.9	85.1	23.2	101.7	161.8	34.2
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	361	1225	468	292	865	377	220	934	593	605	1683	929
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.95	0.27	0.92	0.86	0.53	0.48	0.50	0.46	0.69	0.65	0.46

























Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399	
Future Volume (vph)	299	1093	120	253	703	186	99	443	257	395	1034	399	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1806	3476	1467	1703	3544	1557	
Flt Permitted	0.14	1.00	1.00	0.95	1.00	1.00	0.26	1.00	1.00	0.32	1.00	1.00	
Satd. Flow (perm)	263	4902	1508	3340	4948	1395	493	3476	1467	576	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	318	1163	128	269	748	198	105	471	273	420	1100	424	
RTOR Reduction (vph)	0	0	92	0	0	134	0	0	200	0	0	190	
Lane Group Flow (vph)	318	1163	37	269	748	64	105	471	73	420	1100	234	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	358	1225	377	292	865	244	211	934	394	594	1683	739	
v/s Ratio Prot	c0.16	c0.24		0.08	0.15		0.02	0.14		c0.18	0.31		
v/s Ratio Perm	0.18		0.02			0.05	0.13		0.05	c0.21		0.15	
v/c Ratio	0.89	0.95	0.10	0.92	0.86	0.26	0.50	0.50	0.19	0.71	0.65	0.32	
Uniform Delay, d1	44.1	59.0	46.1	72.5	64.2	57.1	40.1	49.5	45.0	23.6	32.0	26.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	26.3	16.1	0.5	35.8	11.2	2.6	8.2	1.9	1.0	6.9	2.0	1.1	
Delay (s)	70.4	75.1	46.6	108.3	75.4	59.7	48.3	51.4	46.1	30.5	34.0	27.1	
Level of Service	E	E	D	F	E	E	D	D	D	C	C	C	
Approach Delay (s)		71.9			80.1			49.3			31.7		
Approach LOS		E			F			D			C		
Intersection Summary													
HCM 2000 Control Delay			56.4									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.84										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			83.7%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	256	2	294	375	55	14	387	336	43	254	5
Future Volume (vph)	5	256	2	294	375	55	14	387	336	43	254	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.981				0.850		0.998	
Flt Protected		0.999		0.950				0.998			0.993	
Satd. Flow (prot)	0	1863	0	1825	1838	0	0	1796	1601	0	1844	0
Flt Permitted		0.991		0.439				0.983			0.780	
Satd. Flow (perm)	0	1848	0	843	1838	0	0	1769	1601	0	1448	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					9				182			1
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	272	2	313	399	59	15	412	357	46	270	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	279	0	313	458	0	0	427	357	0	321	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

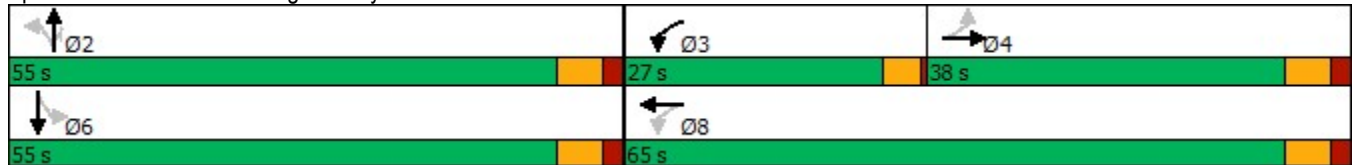
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		37.6		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.31		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.48		0.52	0.50			0.59	0.47		0.54	
Control Delay		37.8		19.8	22.6			31.8	14.3		31.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		37.8		19.8	22.6			31.8	14.3		31.1	
LOS		D		B	C			C	B		C	
Approach Delay		37.8			21.5			23.9			31.1	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 25.9
 Intersection LOS: C
 Intersection Capacity Utilization 94.1%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	279	313	458	427	357	321
v/c Ratio	0.48	0.52	0.50	0.59	0.47	0.54
Control Delay	37.8	19.8	22.6	31.8	14.3	31.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	19.8	22.6	31.8	14.3	31.1
Queue Length 50th (m)	52.9	40.7	69.3	77.2	27.9	56.4
Queue Length 95th (m)	84.5	59.7	98.3	110.2	53.6	84.8
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	579	647	908	722	761	591
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.48	0.50	0.59	0.47	0.54

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↕		↕	↕			↕	↕		↕			
Traffic Volume (vph)	5	256	2	294	375	55	14	387	336	43	254	5		
Future Volume (vph)	5	256	2	294	375	55	14	387	336	43	254	5		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0			
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00			
Frt		1.00		1.00	0.98			1.00	0.85		1.00			
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99			
Satd. Flow (prot)		1863		1825	1837			1796	1601		1843			
Flt Permitted		0.99		0.44	1.00			0.98	1.00		0.78			
Satd. Flow (perm)		1849		843	1837			1769	1601		1447			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94		
Adj. Flow (vph)	5	272	2	313	399	59	15	412	357	46	270	5		
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	108	0	1	0		
Lane Group Flow (vph)	0	279	0	313	453	0	0	427	249	0	320	0		
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%		
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA			
Protected Phases		4		3	8			2			6			
Permitted Phases	4			8			2		2	6				
Actuated Green, G (s)		37.6		59.0	59.0			49.0	49.0		49.0			
Effective Green, g (s)		37.6		61.0	59.0			49.0	49.0		49.0			
Actuated g/C Ratio		0.31		0.51	0.49			0.41	0.41		0.41			
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0			
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)		579		587	903			722	653		590			
v/s Ratio Prot				c0.09	c0.25									
v/s Ratio Perm		0.15		0.18				c0.24	0.16		0.22			
v/c Ratio		0.48		0.53	0.50			0.59	0.38		0.54			
Uniform Delay, d1		33.3		18.6	20.6			27.7	24.9		27.0			
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00			
Incremental Delay, d2		2.9		0.9	2.0			3.5	1.7		3.6			
Delay (s)		36.2		19.5	22.6			31.2	26.6		30.6			
Level of Service		D		B	C			C	C		C			
Approach Delay (s)		36.2			21.3			29.1			30.6			
Approach LOS		D			C			C			C			
Intersection Summary														
HCM 2000 Control Delay			27.5									HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio			0.56											
Actuated Cycle Length (s)			120.0								14.0			
Intersection Capacity Utilization			94.1%										ICU Level of Service	F
Analysis Period (min)			15											
c Critical Lane Group														

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↖	↖		↕↕	
Traffic Volume (vph)	12	588	39	459	666	32	51	168	469	26	71	8
Future Volume (vph)	12	588	39	459	666	32	51	168	469	26	71	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.993				0.850		0.989	
Flt Protected		0.999		0.950				0.989			0.988	
Satd. Flow (prot)	0	3465	0	1755	3584	0	0	1829	1555	0	1804	0
Flt Permitted		0.933		0.268				0.894			0.875	
Satd. Flow (perm)	0	3236	0	495	3584	0	0	1654	1555	0	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8				499			4
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	13	626	41	488	709	34	54	179	499	28	76	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	680	0	488	743	0	0	233	499	0	113	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

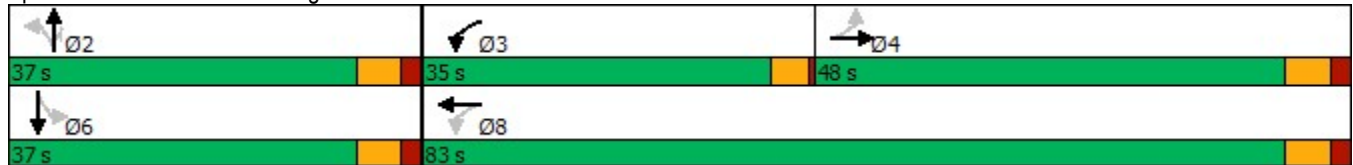
Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	48.0	48.0		35.0	83.0		37.0	37.0	37.0	37.0	37.0	
Total Split (%)	40.0%	40.0%		29.2%	69.2%		30.8%	30.8%	30.8%	30.8%	30.8%	
Maximum Green (s)	42.0	42.0		31.0	77.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		23.0		49.1	44.7			18.0	18.0		18.0	
Actuated g/C Ratio		0.30		0.65	0.59			0.24	0.24		0.24	
v/c Ratio		0.69		0.76	0.35			0.59	0.67		0.30	
Control Delay		28.7		18.0	8.6			35.3	7.9		28.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		28.7		18.0	8.6			35.3	7.9		28.7	
LOS		C		B	A			D	A		C	
Approach Delay		28.7			12.3			16.6			28.7	
Approach LOS		C			B			B			C	

Intersection Summary	
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	75.8
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	18.2
Intersection LOS:	B
Intersection Capacity Utilization:	80.6%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	680	488	743	233	499	113
v/c Ratio	0.69	0.76	0.35	0.59	0.67	0.30
Control Delay	28.7	18.0	8.6	35.3	7.9	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	18.0	8.6	35.3	7.9	28.7
Queue Length 50th (m)	39.6	26.7	23.3	26.7	0.0	11.5
Queue Length 95th (m)	87.7	83.9	47.8	69.3	27.0	34.5
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1964	926	3262	739	971	717
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.53	0.23	0.32	0.51	0.16

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road























06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	12	588	39	459	666	32	51	168	469	26	71	8
Future Volume (vph)	12	588	39	459	666	32	51	168	469	26	71	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3465		1755	3584			1829	1555		1804	
Flt Permitted		0.93		0.27	1.00			0.89	1.00		0.88	
Satd. Flow (perm)		3237		495	3584			1654	1555		1599	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	626	41	488	709	34	54	179	499	28	76	9
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	379	0	3	0
Lane Group Flow (vph)	0	676	0	488	740	0	0	233	120	0	110	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		23.4		44.7	44.7			18.0	18.0		18.0	
Effective Green, g (s)		23.4		46.7	44.7			18.0	18.0		18.0	
Actuated g/C Ratio		0.31		0.63	0.60			0.24	0.24		0.24	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1014		635	2144			398	374		385	
v/s Ratio Prot				c0.20	0.21							
v/s Ratio Perm		c0.21		0.28				c0.14	0.08		0.07	
v/c Ratio		0.67		0.77	0.35			0.59	0.32		0.29	
Uniform Delay, d1		22.3		8.8	7.6			25.1	23.3		23.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.7		5.6	0.1			2.2	0.5		0.4	
Delay (s)		23.9		14.4	7.7			27.2	23.8		23.5	
Level of Service		C		B	A			C	C		C	
Approach Delay (s)		23.9			10.3			24.9			23.5	
Approach LOS		C			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			18.1		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			74.7		Sum of lost time (s)			14.0				
Intersection Capacity Utilization			80.6%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	694	247	130	359	325	172	206	3369	391	174	1974	591
Future Volume (vph)	694	247	130	359	325	172	206	3369	391	174	1974	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.948			0.948				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3293	0	1789	3438	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.189			0.318			0.081			0.089		
Satd. Flow (perm)	363	3293	0	599	3438	0	154	5043	1633	171	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			68				147			336
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	715	255	134	370	335	177	212	3473	403	179	2035	609
Shared Lane Traffic (%)												
Lane Group Flow (vph)	715	389	0	370	512	0	212	3473	403	179	2035	609
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	29.0		24.0	29.0		19.0	57.0	57.0	10.0	48.0	48.0
Total Split (%)	20.0%	24.2%		20.0%	24.2%		15.8%	47.5%	47.5%	8.3%	40.0%	40.0%
Maximum Green (s)	20.0	23.0		20.0	23.0		13.0	51.0	51.0	4.0	42.0	42.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	46.2	22.2		41.4	21.8		63.0	53.0	51.0	51.1	45.1	43.1
Actuated g/C Ratio	0.40	0.19		0.35	0.19		0.54	0.45	0.44	0.44	0.39	0.37
v/c Ratio	1.71	0.57		0.90	0.74		0.76	1.52	0.51	1.13	1.10	0.78
Control Delay	353.8	38.2		54.5	45.5		43.9	262.4	17.5	135.1	86.9	22.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	353.8	38.2		54.5	45.5		43.9	262.4	17.5	135.1	86.9	22.8
LOS	F	D		D	D		D	F	B	F	F	C
Approach Delay		242.6			49.3			226.9			76.1	
Approach LOS		F			D			F			E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 116.8
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.71
 Intersection Signal Delay: 163.4 Intersection LOS: F
 Intersection Capacity Utilization 141.0% ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	715	389	370	512	212	3473	403	179	2035	609
v/c Ratio	1.71	0.57	0.90	0.74	0.76	1.52	0.51	1.13	1.10	0.78
Control Delay	353.8	38.2	54.5	45.5	43.9	262.4	17.5	135.1	86.9	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	353.8	38.2	54.5	45.5	43.9	262.4	17.5	135.1	86.9	22.8
Queue Length 50th (m)	~226.5	35.0	64.1	51.1	31.2	~410.1	40.9	~32.4	~199.1	59.3
Queue Length 95th (m)	#302.4	50.6	#104.3	69.4	#65.6	#446.9	71.7	#79.7	#236.0	113.6
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	419	761	417	789	295	2289	796	159	1858	780
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.71	0.51	0.89	0.65	0.72	1.52	0.51	1.13	1.10	0.78

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	694	247	130	359	325	172	206	3369	391	174	1974	591
Future Volume (vph)	694	247	130	359	325	172	206	3369	391	174	1974	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.95		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3295		1789	3438		1807	5043	1633	1825	4812	1541
Flt Permitted	0.19	1.00		0.32	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	364	3295		599	3438		155	5043	1633	170	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	715	255	134	370	335	177	212	3473	403	179	2035	609
RTOR Reduction (vph)	0	58	0	0	55	0	0	0	83	0	0	212
Lane Group Flow (vph)	715	331	0	370	457	0	212	3473	320	179	2035	397
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	40.2	20.2		39.4	19.8		61.0	51.0	51.0	47.1	43.1	43.1
Effective Green, g (s)	44.2	22.2		39.4	21.8		63.0	53.0	51.0	51.1	45.1	43.1
Actuated g/C Ratio	0.38	0.19		0.34	0.19		0.54	0.45	0.44	0.44	0.39	0.37
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	412	626		401	641		280	2288	713	159	1858	568
v/s Ratio Prot	c0.33	0.10		0.15	0.13		0.09	c0.69		c0.06	0.42	
v/s Ratio Perm	0.33			c0.16			0.32		0.20	0.43		0.26
v/c Ratio	1.74	0.53		0.92	0.71		0.76	1.52	0.45	1.13	1.10	0.70
Uniform Delay, d1	32.6	42.6		33.0	44.6		30.7	31.9	23.1	29.2	35.8	31.3
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	341.0	0.8		26.5	3.7		11.1	235.3	2.0	109.1	52.0	7.0
Delay (s)	373.5	43.4		59.5	48.3		41.8	267.2	25.1	138.4	87.9	38.3
Level of Service	F	D		E	D		D	F	C	F	F	D
Approach Delay (s)		257.2			53.0			231.7			80.4	
Approach LOS		F			D			F			F	
Intersection Summary												
HCM 2000 Control Delay			169.1			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.42									
Actuated Cycle Length (s)			116.8			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			141.0%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕↕		↖	↕↕↕			↕	↖		↕↕	
Traffic Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35
Future Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.990			0.986				0.850		0.983	
Flt Protected		0.997		0.950				0.994			0.993	
Satd. Flow (prot)	0	5037	0	1825	5034	0	0	1893	1555	0	1835	0
Flt Permitted		0.832		0.190				0.918			0.624	
Satd. Flow (perm)	0	4203	0	365	5034	0	0	1748	1555	0	1153	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			16				210			8
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				2541.5
Travel Time (s)		14.1			73.0			15.5				114.4
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	55	934	68	245	879	87	46	358	210	45	218	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1057	0	245	966	0	0	404	210	0	301	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

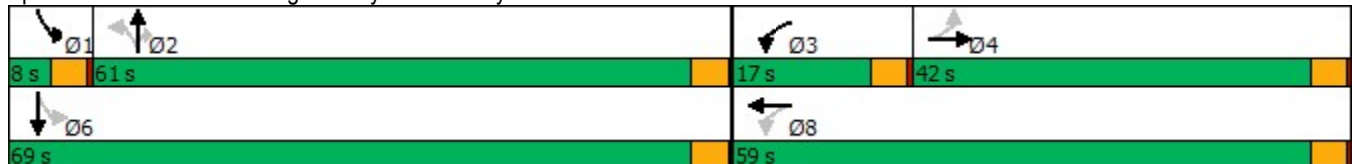


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	42.0	42.0		17.0	59.0		61.0	61.0	61.0	8.0	69.0	
Total Split (%)	32.8%	32.8%		13.3%	46.1%		47.7%	47.7%	47.7%	6.3%	53.9%	
Maximum Green (s)	38.0	38.0		13.0	55.0		57.0	57.0	57.0	4.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0		0	
Act Effct Green (s)		39.7		57.3	55.3			25.7	25.7		25.7	
Actuated g/C Ratio		0.45		0.64	0.62			0.29	0.29		0.29	
v/c Ratio		0.56		0.54	0.31			0.80	0.35		0.89	
Control Delay		20.9		12.3	8.9			41.8	5.0		57.6	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		20.9		12.3	8.9			41.8	5.0		57.6	
LOS		C		B	A			D	A		E	
Approach Delay		20.9			9.6			29.2			57.6	
Approach LOS		C			A			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	128
Actuated Cycle Length:	89
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	21.7
Intersection LOS:	C
Intersection Capacity Utilization	84.4%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024






























Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1057	245	966	404	210	301
v/c Ratio	0.56	0.54	0.31	0.80	0.35	0.89
Control Delay	20.9	12.3	8.9	41.8	5.0	57.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	12.3	8.9	41.8	5.0	57.6
Queue Length 50th (m)	47.9	15.5	25.1	63.2	0.0	47.6
Queue Length 95th (m)	74.6	34.4	43.3	94.8	14.1	79.7
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1880	482	3133	1125	1076	848
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.51	0.31	0.36	0.20	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis
 4: Chinguacousy Road & Mayfield Road





















06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  				  	  		  	
Traffic Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35
Future Volume (vph)	51	859	63	225	809	80	42	329	193	41	201	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		2.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00	
Frbp, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		5040		1825	5036			1893	1555		1835	
Flt Permitted		0.83		0.19	1.00			0.92	1.00		0.62	
Satd. Flow (perm)		4204		366	5036			1748	1555		1153	
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)	55	934	68	245	879	87	46	358	210	45	218	38
RTOR Reduction (vph)	0	5	0	0	6	0	0	0	149	0	6	0
Lane Group Flow (vph)	0	1052	0	245	960	0	0	404	61	0	295	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		39.7		55.3	55.3			25.7	25.7		25.7	
Effective Green, g (s)		39.7		57.3	55.3			25.7	25.7		25.7	
Actuated g/C Ratio		0.45		0.64	0.62			0.29	0.29		0.29	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1875		458	3129			504	449		332	
v/s Ratio Prot				c0.08	0.19							
v/s Ratio Perm		c0.25		0.26				0.23	0.04		c0.26	
v/c Ratio		0.56		0.53	0.31			0.80	0.14		0.89	
Uniform Delay, d1		18.2		8.0	7.9			29.3	23.4		30.3	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.2		1.2	0.3			8.9	0.1		23.8	
Delay (s)		19.4		9.2	8.1			38.2	23.6		54.1	
Level of Service		B		A	A			D	C		D	
Approach Delay (s)		19.4			8.4			33.2			54.1	
Approach LOS		B			A			C			D	
Intersection Summary												
HCM 2000 Control Delay			21.2			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			89.0			Sum of lost time (s)			14.0			
Intersection Capacity Utilization			84.4%			ICU Level of Service			E			
Analysis Period (min)			15									

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Future Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.970			0.966			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4892	0	1825	3475	0	1738	3393	0
Flt Permitted	0.109			0.116			0.520			0.163		
Satd. Flow (perm)	199	5036	0	214	4892	0	999	3475	0	298	3393	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			55			33			44	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	54	1099	86	144	1282	325	146	503	148	248	294	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	1185	0	144	1607	0	146	651	0	248	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

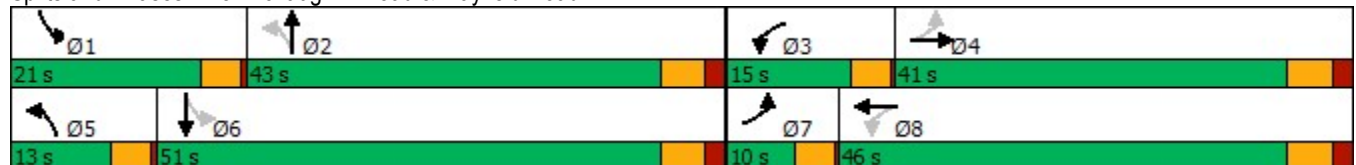


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	10.0	41.0		15.0	46.0		13.0	43.0		21.0	51.0	
Total Split (%)	8.3%	34.2%		12.5%	38.3%		10.8%	35.8%		17.5%	42.5%	
Maximum Green (s)	6.0	35.0		11.0	40.0		9.0	37.0		17.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.8	35.9		51.2	41.7		35.3	24.5		44.7	30.3	
Actuated g/C Ratio	0.42	0.34		0.49	0.40		0.34	0.23		0.43	0.29	
v/c Ratio	0.32	0.68		0.59	0.81		0.36	0.78		0.76	0.39	
Control Delay	21.9	33.1		27.4	32.9		21.3	42.6		36.6	26.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	33.1		27.4	32.9		21.3	42.6		36.6	26.9	
LOS	C	C		C	C		C	D		D	C	
Approach Delay		32.6			32.4			38.7			30.6	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	104.6
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	33.3
Intersection LOS:	C
Intersection Capacity Utilization:	81.8%
ICU Level of Service:	D
Analysis Period (min):	15

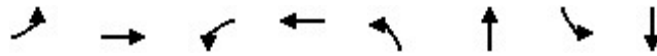
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	54	1185	144	1607	146	651	248	392
v/c Ratio	0.32	0.68	0.59	0.81	0.36	0.78	0.76	0.39
Control Delay	21.9	33.1	27.4	32.9	21.3	42.6	36.6	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	33.1	27.4	32.9	21.3	42.6	36.6	26.9
Queue Length 50th (m)	5.7	76.7	16.0	107.2	18.1	63.4	33.0	29.7
Queue Length 95th (m)	14.3	106.4	33.9	#156.1	30.2	84.5	56.3	42.3
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	172	1733	268	1984	411	1261	364	1496
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.68	0.54	0.81	0.36	0.52	0.68	0.26

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑↑		↘	↑↑	
Traffic Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Future Volume (vph)	52	1055	83	138	1231	312	140	483	142	238	282	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5036		1755	4890		1825	3475		1738	3394	
Flt Permitted	0.11	1.00		0.12	1.00		0.52	1.00		0.16	1.00	
Satd. Flow (perm)	199	5036		215	4890		1000	3475		299	3394	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	54	1099	86	144	1282	325	146	503	148	248	294	98
RTOR Reduction (vph)	0	7	0	0	33	0	0	25	0	0	31	0
Lane Group Flow (vph)	54	1178	0	144	1574	0	146	626	0	248	361	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.3	36.7		50.3	41.7		33.2	24.5		43.0	30.3	
Effective Green, g (s)	41.3	36.7		50.3	41.7		33.2	24.5		43.0	30.3	
Actuated g/C Ratio	0.39	0.35		0.48	0.40		0.32	0.23		0.41	0.29	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	145	1755		243	1936		383	808		320	976	
v/s Ratio Prot	0.02	0.23		c0.05	c0.32		0.03	0.18		c0.11	0.11	
v/s Ratio Perm	0.13			0.23			0.09			c0.21		
v/c Ratio	0.37	0.67		0.59	0.81		0.38	0.77		0.78	0.37	
Uniform Delay, d1	22.2	29.2		18.5	28.3		26.8	37.8		23.6	29.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	2.1		3.8	3.9		0.6	4.7		11.1	0.2	
Delay (s)	23.8	31.2		22.3	32.2		27.5	42.5		34.7	30.1	
Level of Service	C	C		C	C		C	D		C	C	
Approach Delay (s)		30.9			31.4			39.7			31.9	
Approach LOS		C			C			D			C	

Intersection Summary

HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Future Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.154			0.950			0.102			0.183		
Satd. Flow (perm)	284	4995	1538	3349	5092	1562	192	3614	1486	352	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			145			246			520
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
Shared Lane Traffic (%)												
Lane Group Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	37.0	40.0	40.0	25.0	28.0	28.0	18.0	54.0	54.0	16.0	52.0	52.0
Total Split (%)	27.4%	29.6%	29.6%	18.5%	20.7%	20.7%	13.3%	40.0%	40.0%	11.9%	38.5%	38.5%
Maximum Green (s)	32.0	33.0	33.0	20.0	21.0	21.0	14.0	47.0	47.0	12.0	45.0	45.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

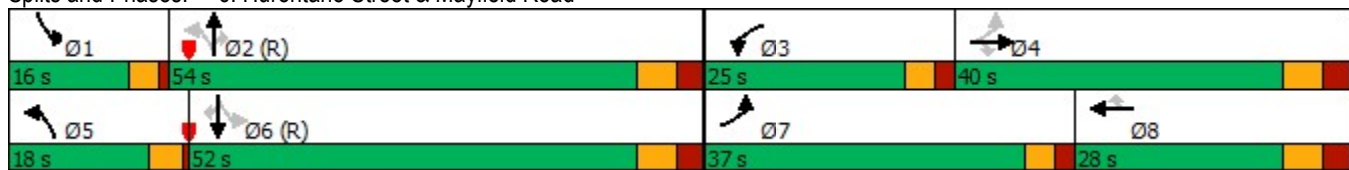


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	62.0	33.0	33.0	20.0	21.0	21.0	68.0	47.0	47.0	64.0	45.0	47.0
Actuated g/C Ratio	0.46	0.24	0.24	0.15	0.16	0.16	0.50	0.35	0.35	0.47	0.33	0.35
v/c Ratio	1.50	0.62	0.27	0.69	1.23	0.53	0.85	0.69	0.49	0.87	0.85	1.21
Control Delay	267.3	48.0	8.0	62.4	159.7	20.9	55.8	41.1	11.7	48.6	49.9	125.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	267.3	48.0	8.0	62.4	159.7	20.9	55.8	41.1	11.7	48.6	49.9	125.1
LOS	F	D	A	E	F	C	E	D	B	D	D	F
Approach Delay	145.5			119.6			36.8			84.0		
Approach LOS	F			F			D			F		

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	120
Control Type:	Pretimed
Maximum v/c Ratio:	1.50
Intersection Signal Delay:	96.5
Intersection LOS:	F
Intersection Capacity Utilization	116.6%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
v/c Ratio	1.50	0.62	0.27	0.69	1.23	0.53	0.85	0.69	0.49	0.87	0.85	1.21
Control Delay	267.3	48.0	8.0	62.4	159.7	20.9	55.8	41.1	11.7	48.6	49.9	125.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	267.3	48.0	8.0	62.4	159.7	20.9	55.8	41.1	11.7	48.6	49.9	125.1
Queue Length 50th (m)	~262.8	66.2	0.0	45.8	~116.5	11.5	42.7	103.4	15.8	42.2	129.0	~249.6
Queue Length 95th (m)	#338.7	80.6	15.8	62.3	#145.1	35.6	#87.3	126.5	42.7	#84.1	156.0	#329.9
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	500	1221	474	504	792	365	285	1258	677	319	1170	880
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.50	0.62	0.27	0.69	1.23	0.53	0.85	0.69	0.49	0.87	0.85	1.21


































Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

6: Hurontario Street & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	
Traffic Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Future Volume (vph)	729	734	126	337	942	188	236	838	322	270	961	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.15	1.00	1.00	0.95	1.00	1.00	0.10	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	284	4995	1538	3404	5092	1562	192	3614	1486	352	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	752	757	130	347	971	194	243	864	332	278	991	1063
RTOR Reduction (vph)	0	0	98	0	0	122	0	0	160	0	0	339
Lane Group Flow (vph)	752	757	32	347	971	72	243	864	172	278	991	724
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	33.0	33.0	20.0	21.0	21.0	61.0	47.0	47.0	57.0	45.0	45.0
Effective Green, g (s)	60.0	33.0	33.0	20.0	21.0	21.0	65.0	47.0	47.0	61.0	45.0	47.0
Actuated g/C Ratio	0.44	0.24	0.24	0.15	0.16	0.16	0.48	0.35	0.35	0.45	0.33	0.35
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	496	1221	375	504	792	242	281	1258	517	311	1170	541
v/s Ratio Prot	c0.38	0.15		0.10	0.19		c0.10	0.24		c0.09	0.28	
v/s Ratio Perm	c0.29		0.02			0.05	0.31		0.12	0.31		c0.47
v/c Ratio	1.52	0.62	0.08	0.69	1.23	0.30	0.86	0.69	0.33	0.89	0.85	1.34
Uniform Delay, d1	40.1	45.4	39.3	54.5	57.0	50.5	33.6	37.7	32.4	26.8	41.8	44.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	242.5	2.4	0.4	7.5	112.8	3.1	28.0	3.1	1.7	30.0	7.7	164.4
Delay (s)	282.6	47.8	39.8	62.0	169.8	53.5	61.7	40.8	34.2	56.7	49.5	208.4
Level of Service	F	D	D	E	F	D	E	D	C	E	D	F
Approach Delay (s)		154.9			130.2			42.8			122.8	
Approach LOS		F			F			D			F	
Intersection Summary												
HCM 2000 Control Delay			115.4	HCM 2000 Level of Service				F				
HCM 2000 Volume to Capacity ratio			1.46									
Actuated Cycle Length (s)			135.0	Sum of lost time (s)				21.0				
Intersection Capacity Utilization			116.6%	ICU Level of Service				H				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	2	320	10	214	258	51	20	239	345	44	228	11
Future Volume (vph)	2	320	10	214	258	51	20	239	345	44	228	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.975				0.850		0.995	
Flt Protected				0.950				0.996			0.992	
Satd. Flow (prot)	0	1913	0	1772	1813	0	0	1829	1585	0	1788	0
Flt Permitted		0.998		0.516				0.967			0.924	
Satd. Flow (perm)	0	1910	0	962	1813	0	0	1776	1585	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			30				363			6
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		590.7			490.2			542.2			342.6	
Travel Time (s)		30.4			25.2			24.4			15.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%
Adj. Flow (vph)	2	340	11	228	274	54	21	254	367	47	243	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	353	0	228	328	0	0	275	367	0	302	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024

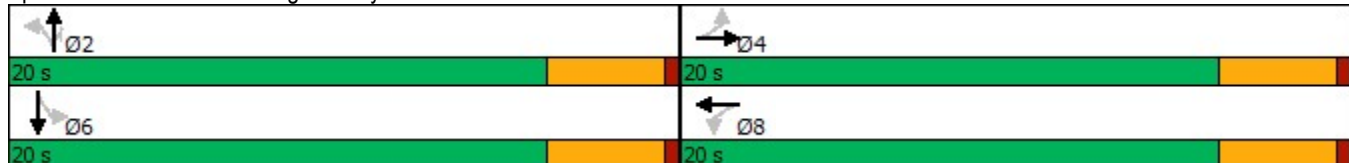


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		12.6		12.6	12.6			16.1	16.1		16.1	
Actuated g/C Ratio		0.34		0.34	0.34			0.44	0.44		0.44	
v/c Ratio		0.54		0.70	0.51			0.35	0.41		0.41	
Control Delay		12.7		23.4	11.6			9.5	3.0		10.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		12.7		23.4	11.6			9.5	3.0		10.1	
LOS		B		C	B			A	A		B	
Approach Delay		12.7			16.5			5.8			10.1	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 36.8
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 11.0
 Intersection Capacity Utilization 76.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	353	228	328	275	367	302
v/c Ratio	0.54	0.70	0.51	0.35	0.41	0.41
Control Delay	12.7	23.4	11.6	9.5	3.0	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	23.4	11.6	9.5	3.0	10.1
Queue Length 50th (m)	16.2	11.4	13.6	11.4	0.2	12.5
Queue Length 95th (m)	31.5	#34.3	27.8	25.2	10.6	28.0
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	840	421	812	779	898	734
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.54	0.40	0.35	0.41	0.41

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road



















06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↕	↕			↕	↕		↕		
Traffic Volume (vph)	2	320	10	214	258	51	20	239	345	44	228	11	
Future Volume (vph)	2	320	10	214	258	51	20	239	345	44	228	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		1.00		1.00	0.98			1.00	0.85		0.99		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1912		1772	1814			1829	1585		1788		
Flt Permitted		1.00		0.52	1.00			0.97	1.00		0.92		
Satd. Flow (perm)		1909		962	1814			1775	1585		1664		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	340	11	228	274	54	21	254	367	47	243	12	
RTOR Reduction (vph)	0	3	0	0	20	0	0	0	203	0	3	0	
Lane Group Flow (vph)	0	350	0	228	308	0	0	275	164	0	299	0	
Heavy Vehicles (%)	0%	0%	0%	3%	2%	10%	0%	5%	3%	0%	7%	10%	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4			8			2		6		6	
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		12.6		12.6	12.6			16.2	16.2		16.2		
Effective Green, g (s)		12.6		12.6	12.6			16.2	16.2		16.2		
Actuated g/C Ratio		0.34		0.34	0.34			0.44	0.44		0.44		
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		653		329	621			781	697		732		
v/s Ratio Prot					0.17								
v/s Ratio Perm		0.18		c0.24				0.15	0.10		c0.18		
v/c Ratio		0.54		0.69	0.50			0.35	0.24		0.41		
Uniform Delay, d1		9.7		10.4	9.6			6.8	6.4		7.0		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		0.8		6.2	0.6			1.2	0.8		1.7		
Delay (s)		10.6		16.6	10.2			8.1	7.2		8.7		
Level of Service		B		B	B			A	A		A		
Approach Delay (s)		10.6			12.8			7.6			8.7		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			9.9									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			36.8									Sum of lost time (s)	8.0
Intersection Capacity Utilization			76.4%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	850	41	297	458	46	40	119	473	62	170	31
Future Volume (vph)	42	850	41	297	458	46	40	119	473	62	170	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.986				0.850		0.984	
Flt Protected		0.998		0.950				0.988			0.988	
Satd. Flow (prot)	0	3563	0	1789	3473	0	0	1870	1617	0	1833	0
Flt Permitted		0.900		0.139				0.813			0.871	
Satd. Flow (perm)	0	3213	0	262	3473	0	0	1539	1617	0	1616	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			18				384		7	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		437.6			349.1			188.9			263.1	
Travel Time (s)		22.5			18.0			8.5			11.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Adj. Flow (vph)	45	904	44	316	487	49	43	127	503	66	181	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	993	0	316	536	0	0	170	503	0	280	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

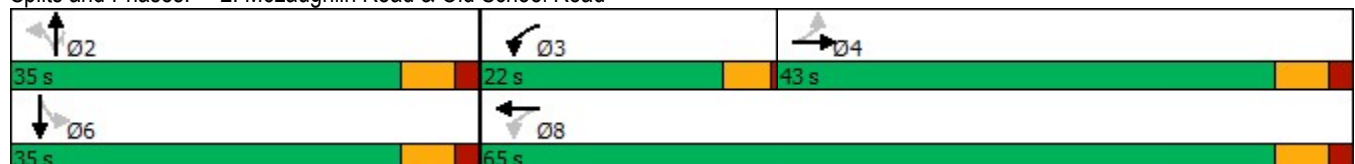
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	43.0	43.0		22.0	65.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	43.0%	43.0%		22.0%	65.0%		35.0%	35.0%	35.0%	35.0%	35.0%	
Maximum Green (s)	37.0	37.0		18.0	59.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		30.6		50.9	48.8			19.3	19.3		19.3	
Actuated g/C Ratio		0.38		0.63	0.60			0.24	0.24		0.24	
v/c Ratio		0.81		0.74	0.25			0.46	0.74		0.71	
Control Delay		29.8		25.7	7.9			32.4	15.2		39.9	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		29.8		25.7	7.9			32.4	15.2		39.9	
LOS		C		C	A			C	B		D	
Approach Delay		29.8			14.5			19.5			39.9	
Approach LOS		C			B			B			D	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 80.7
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 23.7
 Intersection LOS: C
 Intersection Capacity Utilization 84.6%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	993	316	536	170	503	280
v/c Ratio	0.81	0.74	0.25	0.46	0.74	0.71
Control Delay	29.8	25.7	7.9	32.4	15.2	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	25.7	7.9	32.4	15.2	39.9
Queue Length 50th (m)	71.6	24.8	17.5	23.7	15.9	40.8
Queue Length 95th (m)	116.7	#64.7	32.3	44.7	53.6	71.9
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1549	522	2621	580	849	614
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.61	0.20	0.29	0.59	0.46

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	42	850	41	297	458	46	40	119	473	62	170	31
Future Volume (vph)	42	850	41	297	458	46	40	119	473	62	170	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3563		1789	3474			1869	1617		1834	
Flt Permitted		0.90		0.14	1.00			0.81	1.00		0.87	
Satd. Flow (perm)		3215		261	3474			1540	1617		1616	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	45	904	44	316	487	49	43	127	503	66	181	33
RTOR Reduction (vph)	0	3	0	0	7	0	0	0	291	0	5	0
Lane Group Flow (vph)	0	990	0	316	529	0	0	170	212	0	275	0
Heavy Vehicles (%)	0%	1%	14%	2%	3%	10%	0%	2%	1%	3%	0%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		30.9		48.8	48.8			19.3	19.3		19.3	
Effective Green, g (s)		30.9		48.8	48.8			19.3	19.3		19.3	
Actuated g/C Ratio		0.39		0.61	0.61			0.24	0.24		0.24	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1240		424	2116			371	389		389	
v/s Ratio Prot				c0.13	0.15							
v/s Ratio Perm		0.31		c0.32				0.11	0.13		c0.17	
v/c Ratio		0.80		0.75	0.25			0.46	0.54		0.71	
Uniform Delay, d1		21.8		14.9	7.2			25.9	26.6		27.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		3.7		7.0	0.1			0.9	1.6		5.8	
Delay (s)		25.5		21.9	7.3			26.8	28.1		33.6	
Level of Service		C		C	A			C	C		C	
Approach Delay (s)		25.5			12.7			27.8			33.6	
Approach LOS		C			B			C			C	

Intersection Summary		
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.76	C
Actuated Cycle Length (s)	80.1	Sum of lost time (s)
Intersection Capacity Utilization	84.6%	16.0
Analysis Period (min)	15	ICU Level of Service
		E
c Critical Lane Group		

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	630	267	558	340	212	158	142	2044	168	77	2724	326
Future Volume (vph)	630	267	558	340	212	158	142	2044	168	77	2724	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.899			0.936				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3218	0	1722	3281	0	1722	4445	1471	1615	5043	1633
Flt Permitted	0.318			0.222			0.067			0.069		
Satd. Flow (perm)	587	3218	0	402	3281	0	121	4445	1471	117	5043	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			9				129			164
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1007.8			440.4			855.3			282.2	
Travel Time (s)		51.8			22.6			38.5			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Adj. Flow (vph)	677	287	600	366	228	170	153	2198	181	83	2929	351
Shared Lane Traffic (%)												
Lane Group Flow (vph)	677	887	0	366	398	0	153	2198	181	83	2929	351
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0		8.0	24.0		8.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	33.0		15.0	24.0		8.0	72.0	72.0	64.0	64.0	64.0
Total Split (%)	20.0%	27.5%		12.5%	20.0%		6.7%	60.0%	60.0%	53.3%	53.3%	53.3%
Maximum Green (s)	20.0	25.0		11.0	16.0		4.0	64.0	64.0	56.0	56.0	56.0
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	6.0	6.0	6.0	6.0	6.0
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	0.0		-2.0	0.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Walk Time (s)		5.0			5.0			5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0	0	0	0
Act Effct Green (s)	46.0	27.0		35.0	16.0		70.0	64.0	64.0	58.0	58.0	56.0
Actuated g/C Ratio	0.38	0.22		0.29	0.13		0.58	0.53	0.53	0.48	0.48	0.47
v/c Ratio	1.54	1.44dr		1.41	0.89		1.02	0.93	0.21	1.48	1.20	0.41
Control Delay	281.9	118.5		231.9	73.4		103.4	34.1	5.3	319.3	124.9	12.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	281.9	118.5		231.9	73.4		103.4	34.1	5.3	319.3	124.9	12.3
LOS	F	F		F	E		F	C	A	F	F	B
Approach Delay		189.2			149.3			36.3				117.9
Approach LOS		F			F			D				F

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 120
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.54
 Intersection Signal Delay: 109.3 Intersection LOS: F
 Intersection Capacity Utilization 124.7% ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	677	887	366	398	153	2198	181	83	2929	351
v/c Ratio	1.54	1.44dr	1.41	0.89	1.02	0.93	0.21	1.48	1.20	0.41
Control Delay	281.9	118.5	231.9	73.4	103.4	34.1	5.3	319.3	124.9	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	281.9	118.5	231.9	73.4	103.4	34.1	5.3	319.3	124.9	12.3
Queue Length 50th (m)	~196.4	~122.0	~96.3	48.1	~21.0	168.2	5.7	~26.8	~306.9	26.6
Queue Length 95th (m)	#267.7	#162.2	#156.6	#76.0	#64.1	194.2	16.7	#46.6	#333.1	49.3
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	439	776	260	445	150	2370	844	56	2437	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.54	1.14	1.41	0.89	1.02	0.93	0.21	1.48	1.20	0.41































Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			   			   	
Traffic Volume (vph)	630	267	558	340	212	158	142	2044	168	77	2724	326
Future Volume (vph)	630	267	558	340	212	158	142	2044	168	77	2724	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0		2.0	8.0		2.0	8.0	8.0	6.0	6.0	8.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.90		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	3216		1722	3280		1722	4445	1471	1615	5043	1633
Flt Permitted	0.32	1.00		0.22	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	588	3216		403	3280		121	4445	1471	117	5043	1633
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	677	287	600	366	228	170	153	2198	181	83	2929	351
RTOR Reduction (vph)	0	53	0	0	8	0	0	0	60	0	0	87
Lane Group Flow (vph)	677	834	0	366	390	0	153	2198	121	83	2929	264
Heavy Vehicles (%)	4%	4%	1%	6%	5%	3%	6%	18%	11%	13%	4%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	40.0	25.0		27.0	16.0		64.0	64.0	64.0	56.0	56.0	56.0
Effective Green, g (s)	42.0	27.0		31.0	16.0		66.0	64.0	64.0	58.0	58.0	56.0
Actuated g/C Ratio	0.35	0.22		0.26	0.13		0.55	0.53	0.53	0.48	0.48	0.47
Clearance Time (s)	4.0	8.0		4.0	8.0		4.0	8.0	8.0	8.0	8.0	8.0
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)	419	723		247	437		146	2370	784	56	2437	762
v/s Ratio Prot	c0.30	0.26		0.16	0.12		c0.05	0.49			0.58	
v/s Ratio Perm	0.27			c0.22			0.52		0.08	c0.71		0.16
v/c Ratio	1.62	1.44dr		1.48	0.89		1.05	0.93	0.15	1.48	1.20	0.35
Uniform Delay, d1	34.8	46.5		41.0	51.2		32.6	25.9	14.2	31.0	31.0	20.4
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	287.9	84.6		237.3	20.0		87.8	7.0	0.1	290.7	95.1	0.3
Delay (s)	322.7	131.1		278.3	71.2		120.4	32.8	14.3	321.7	126.1	20.6
Level of Service	F	F		F	E		F	C	B	F	F	C
Approach Delay (s)		214.0			170.4			36.8			119.9	
Approach LOS		F			F			D			F	

Intersection Summary

HCM 2000 Control Delay	116.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	124.7%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕↔		↔	↔↕↔			↔	↔		↕↔	
Traffic Volume (vph)	51	831	61	210	720	30	30	308	186	101	437	46
Future Volume (vph)	51	831	61	210	720	30	30	308	186	101	437	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.994				0.850		0.989	
Flt Protected		0.997		0.950				0.996			0.991	
Satd. Flow (prot)	0	4861	0	1659	4943	0	0	1832	1585	0	1798	0
Flt Permitted		0.845		0.164				0.931			0.766	
Satd. Flow (perm)	0	4120	0	286	4943	0	0	1713	1585	0	1390	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6				188			5
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		274.5			1419.4			345.5			2541.5	
Travel Time (s)		14.1			73.0			15.5			114.4	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Adj. Flow (vph)	52	839	62	212	727	30	30	311	188	102	441	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	953	0	212	757	0	0	341	188	0	589	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

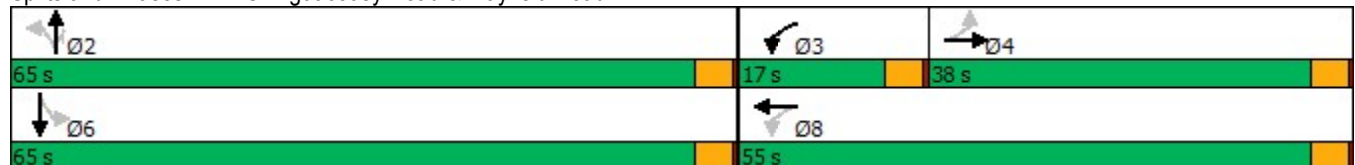
06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	38.0	38.0		17.0	55.0		65.0	65.0	65.0	65.0	65.0	
Total Split (%)	31.7%	31.7%		14.2%	45.8%		54.2%	54.2%	54.2%	54.2%	54.2%	
Maximum Green (s)	34.0	34.0		13.0	51.0		61.0	61.0	61.0	61.0	61.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		35.3		51.6	51.6			46.1	46.1		46.1	
Actuated g/C Ratio		0.33		0.49	0.49			0.44	0.44		0.44	
v/c Ratio		0.69		0.71	0.31			0.46	0.24		0.97	
Control Delay		35.5		33.5	18.3			22.4	3.0		58.3	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		35.5		33.5	18.3			22.4	3.0		58.3	
LOS		D		C	B			C	A		E	
Approach Delay		35.5			21.6			15.5			58.3	
Approach LOS		D			C			B			E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 105.8
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 32.0
 Intersection LOS: C
 Intersection Capacity Utilization 95.6%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024






























Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	953	212	757	341	188	589
v/c Ratio	0.69	0.71	0.31	0.46	0.24	0.97
Control Delay	35.5	33.5	18.3	22.4	3.0	58.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	33.5	18.3	22.4	3.0	58.3
Queue Length 50th (m)	63.2	25.4	33.9	47.6	0.0	113.4
Queue Length 95th (m)	92.9	#62.6	53.5	69.6	11.1	#182.0
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1379	310	2414	999	1003	813
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.68	0.31	0.34	0.19	0.72

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 4: Chinguacousy Road & Mayfield Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  				  	  		  	
Traffic Volume (vph)	51	831	61	210	720	30	30	308	186	101	437	46
Future Volume (vph)	51	831	61	210	720	30	30	308	186	101	437	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		4864		1659	4943			1831	1585		1799	
Flt Permitted		0.85		0.16	1.00			0.93	1.00		0.77	
Satd. Flow (perm)		4123		286	4943			1712	1585		1390	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	52	839	62	212	727	30	30	311	188	102	441	46
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	106	0	3	0
Lane Group Flow (vph)	0	947	0	212	754	0	0	341	82	0	586	0
Heavy Vehicles (%)	0%	7%	5%	10%	5%	17%	9%	4%	3%	10%	4%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		35.3		51.6	51.6			46.1	46.1		46.1	
Effective Green, g (s)		35.3		51.6	51.6			46.1	46.1		46.1	
Actuated g/C Ratio		0.33		0.49	0.49			0.44	0.44		0.44	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1376		299	2413			746	691		606	
v/s Ratio Prot				c0.08	0.15							
v/s Ratio Perm		0.23		c0.26				0.20	0.05		c0.42	
v/c Ratio		0.69		0.71	0.31			0.46	0.12		0.97	
Uniform Delay, d1		30.4		18.2	16.3			21.0	17.7		29.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		2.8		7.5	0.3			0.4	0.1		28.2	
Delay (s)		33.3		25.7	16.7			21.4	17.8		57.3	
Level of Service		C		C	B			C	B		E	
Approach Delay (s)		33.3			18.7			20.1			57.3	
Approach LOS		C			B			C			E	
Intersection Summary												
HCM 2000 Control Delay			31.0		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			105.7		Sum of lost time (s)				12.0			
Intersection Capacity Utilization			95.6%		ICU Level of Service				F			
Analysis Period (min)			15									
c	Critical Lane Group											

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↗↗		↗	↗↗	
Traffic Volume (vph)	44	1110	131	156	882	147	58	381	117	368	654	130
Future Volume (vph)	44	1110	131	156	882	147	58	381	117	368	654	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.979			0.965			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4888	0	1706	4760	0	1644	3438	0	1690	3444	0
Flt Permitted	0.260			0.100			0.349			0.242		
Satd. Flow (perm)	499	4888	0	180	4760	0	604	3438	0	430	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			34			31			26	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Adj. Flow (vph)	45	1133	134	159	900	150	59	389	119	376	667	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	1267	0	159	1050	0	59	508	0	376	800	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0		8.0	23.0	
Total Split (s)	42.0	42.0		16.0	58.0		32.0	32.0		30.0	62.0	
Total Split (%)	35.0%	35.0%		13.3%	48.3%		26.7%	26.7%		25.0%	51.7%	
Maximum Green (s)	36.0	36.0		12.0	52.0		26.0	26.0		26.0	56.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Walk Time (s)	5.0	5.0			5.0		5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	
Act Effct Green (s)	36.0	36.0		54.0	52.0		26.0	26.0		58.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.45	0.43		0.22	0.22		0.48	0.47	

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

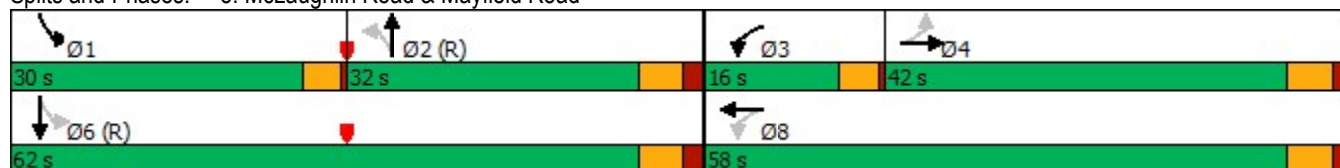


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.30	0.86		0.68	0.50		0.45	0.66		0.78	0.49	
Control Delay	39.2	46.0		38.9	24.8		53.7	45.0		34.4	22.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.2	46.0		38.9	24.8		53.7	45.0		34.4	22.7	
LOS	D	D		D	C		D	D		C	C	
Approach Delay		45.7			26.7			45.9			26.4	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	75
Control Type:	Pretimed
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	35.0
Intersection LOS:	D
Intersection Capacity Utilization	84.3%
ICU Level of Service	E
Analysis Period (min)	15

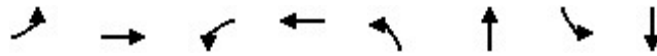
Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	45	1267	159	1050	59	508	376	800
v/c Ratio	0.30	0.86	0.68	0.50	0.45	0.66	0.78	0.49
Control Delay	39.2	46.0	38.9	24.8	53.7	45.0	34.4	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	46.0	38.9	24.8	53.7	45.0	34.4	22.7
Queue Length 50th (m)	8.2	101.6	22.2	62.3	12.2	54.5	57.2	64.7
Queue Length 95th (m)	19.3	120.1	#47.5	75.2	26.4	72.9	#96.3	82.0
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	149	1478	233	2081	130	769	480	1621
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.86	0.68	0.50	0.45	0.66	0.78	0.49

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Traffic Volume (vph)	44	1110	131	156	882	147	58	381	117	368	654	130
Future Volume (vph)	44	1110	131	156	882	147	58	381	117	368	654	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	4889		1706	4758		1644	3437		1690	3444	
Flt Permitted	0.26	1.00		0.10	1.00		0.35	1.00		0.24	1.00	
Satd. Flow (perm)	500	4889		180	4758		605	3437		430	3444	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	45	1133	134	159	900	150	59	389	119	376	667	133
RTOR Reduction (vph)	0	12	0	0	19	0	0	24	0	0	14	0
Lane Group Flow (vph)	45	1255	0	159	1031	0	59	484	0	376	786	0
Heavy Vehicles (%)	0%	6%	2%	7%	6%	19%	11%	2%	4%	8%	2%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Effective Green, g (s)	36.0	36.0		52.0	52.0		26.0	26.0		56.0	56.0	
Actuated g/C Ratio	0.30	0.30		0.43	0.43		0.22	0.22		0.47	0.47	
Clearance Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		4.0	6.0	
Lane Grp Cap (vph)	150	1466		230	2061		131	744		473	1607	
v/s Ratio Prot		c0.26		c0.07	0.22			0.14		c0.17	0.23	
v/s Ratio Perm	0.09			0.23			0.10			c0.20		
v/c Ratio	0.30	0.86		0.69	0.50		0.45	0.65		0.79	0.49	
Uniform Delay, d1	32.3	39.6		25.5	24.6		40.8	42.9		23.5	22.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.1	6.6		15.7	0.9		10.8	4.4		12.9	1.1	
Delay (s)	37.4	46.2		41.3	25.5		51.6	47.2		36.5	23.2	
Level of Service	D	D		D	C		D	D		D	C	
Approach Delay (s)		45.9			27.5			47.7			27.4	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 6: Hurontario Street & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	299	1093	156	253	703	186	108	566	257	395	1459	399
Future Volume (vph)	299	1093	156	253	703	186	108	566	257	395	1459	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.98			0.97			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	4902	1541	3340	4948	1420	1807	3476	1512	1706	3544	1585
Flt Permitted	0.143			0.950			0.093			0.226		
Satd. Flow (perm)	262	4902	1508	3330	4948	1395	177	3476	1467	406	3544	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			162			218			256
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%
Adj. Flow (vph)	318	1163	166	269	748	198	115	602	273	420	1552	424
Shared Lane Traffic (%)												
Lane Group Flow (vph)	318	1163	166	269	748	198	115	602	273	420	1552	424
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	9.0	23.0	23.0	9.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	31.0	47.0	47.0	19.0	35.0	35.0	11.0	50.0	50.0	44.0	83.0	83.0
Total Split (%)	19.4%	29.4%	29.4%	11.9%	21.9%	21.9%	6.9%	31.3%	31.3%	27.5%	51.9%	51.9%
Maximum Green (s)	26.0	40.0	40.0	14.0	28.0	28.0	7.0	43.0	43.0	40.0	76.0	76.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	0.5	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	63.0	40.0	40.0	14.0	28.0	28.0	53.0	43.0	43.0	90.0	76.0	76.0
Actuated g/C Ratio	0.39	0.25	0.25	0.09	0.18	0.18	0.33	0.27	0.27	0.56	0.48	0.48
v/c Ratio	0.88	0.95	0.36	0.92	0.86	0.53	0.89	0.64	0.49	0.76	0.92	0.49
Control Delay	67.2	74.8	18.3	107.2	75.4	18.8	90.5	55.5	14.2	34.3	49.4	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	18.3	107.2	75.4	18.8	90.5	55.5	14.2	34.3	49.4	12.4
LOS	E	E	B	F	E	B	F	E	B	C	D	B
Approach Delay		67.6			73.2			48.2			40.2	
Approach LOS		E			E			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	100
Control Type:	Pretimed
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	55.1
Intersection LOS:	E
Intersection Capacity Utilization	94.8%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	1163	166	269	748	198	115	602	273	420	1552	424
v/c Ratio	0.88	0.95	0.36	0.92	0.86	0.53	0.89	0.64	0.49	0.76	0.92	0.49
Control Delay	67.2	74.8	18.3	107.2	75.4	18.8	90.5	55.5	14.2	34.3	49.4	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	74.8	18.3	107.2	75.4	18.8	90.5	55.5	14.2	34.3	49.4	12.4
Queue Length 50th (m)	79.9	134.5	12.5	44.5	85.8	9.8	19.5	89.7	13.4	77.3	239.4	33.6
Queue Length 95th (m)	#132.8	#162.4	33.8	#71.6	102.1	35.6	#58.4	110.8	41.2	119.3	274.8	62.6
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	361	1225	464	292	865	377	129	934	553	553	1683	873
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.95	0.36	0.92	0.86	0.53	0.89	0.64	0.49	0.76	0.92	0.49

































Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

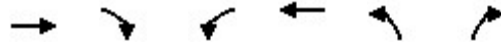
6: Hurontario Street & Mayfield Road

06/07/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		  	  			 			 		
Traffic Volume (vph)	299	1093	156	253	703	186	108	566	257	395	1459	399	
Future Volume (vph)	299	1093	156	253	703	186	108	566	257	395	1459	399	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1738	4902	1508	3340	4948	1395	1807	3476	1467	1706	3544	1557	
Flt Permitted	0.14	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.23	1.00	1.00	
Satd. Flow (perm)	263	4902	1508	3340	4948	1395	177	3476	1467	405	3544	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	318	1163	166	269	748	198	115	602	273	420	1552	424	
RTOR Reduction (vph)	0	0	87	0	0	134	0	0	159	0	0	134	
Lane Group Flow (vph)	318	1163	79	269	748	64	115	602	114	420	1552	290	
Confl. Peds. (#/hr)	2		3	3		2	2		6	6		2	
Heavy Vehicles (%)	5%	7%	6%	6%	6%	15%	1%	5%	8%	7%	3%	3%	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4			8	2		2	6		6	
Actuated Green, G (s)	59.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Effective Green, g (s)	61.0	40.0	40.0	14.0	28.0	28.0	50.0	43.0	43.0	87.0	76.0	76.0	
Actuated g/C Ratio	0.38	0.25	0.25	0.09	0.18	0.18	0.31	0.27	0.27	0.54	0.48	0.48	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	
Lane Grp Cap (vph)	358	1225	377	292	865	244	126	934	394	545	1683	739	
v/s Ratio Prot	c0.16	c0.24		0.08	0.15		0.04	0.17		c0.19	c0.44		
v/s Ratio Perm	0.18		0.05			0.05	0.24		0.08	0.23		0.19	
v/c Ratio	0.89	0.95	0.21	0.92	0.86	0.26	0.91	0.64	0.29	0.77	0.92	0.39	
Uniform Delay, d1	44.1	59.0	47.5	72.5	64.2	57.1	45.5	51.7	46.4	26.5	39.2	27.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	26.3	16.1	1.3	35.8	11.2	2.6	59.4	3.4	1.8	10.1	9.9	1.6	
Delay (s)	70.4	75.1	48.7	108.3	75.4	59.7	104.9	55.2	48.2	36.6	49.1	28.7	
Level of Service	E	E	D	F	E	E	F	E	D	D	D	C	
Approach Delay (s)		71.6			80.1			59.0			43.3		
Approach LOS		E			F			E			D		
Intersection Summary													
HCM 2000 Control Delay			60.4									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.95										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			94.8%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	690	20	12	475	48	21
Future Volume (vph)	690	20	12	475	48	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.996				0.959	
Fl _t Protected				0.999	0.966	
Satd. Flow (prot)	3564	0	0	3575	1745	0
Fl _t Permitted				0.999	0.966	
Satd. Flow (perm)	3564	0	0	3575	1745	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	690	20	12	475	48	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	710	0	0	487	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	32.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	690	20	12	475	48	21
Future Volume (Veh/h)	690	20	12	475	48	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	690	20	12	475	48	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			710		962	355
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			710		962	355
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		81	97
cM capacity (veh/h)			885		250	641
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	460	250	170	317	69	
Volume Left	0	0	12	0	48	
Volume Right	0	20	0	0	21	
cSH	1700	1700	885	1700	307	
Volume to Capacity	0.27	0.15	0.01	0.19	0.22	
Queue Length 95th (m)	0.0	0.0	0.3	0.0	6.4	
Control Delay (s)	0.0	0.0	0.8	0.0	20.1	
Lane LOS			A	C		
Approach Delay (s)	0.0		0.3		20.1	
Approach LOS					C	
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			32.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Volume (vph)	18	387	76	72	138	28	28	611	54	12	544	6
Future Volume (vph)	18	387	76	72	138	28	28	611	54	12	544	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	20.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (m)	2.5			2.5			85.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.984			0.988			0.998	
Flt Protected		0.998			0.985		0.950				0.999	
Satd. Flow (prot)	0	1840	0	0	1826	0	1789	3536	0	0	3568	0
Flt Permitted		0.983			0.665		0.430				0.938	
Satd. Flow (perm)	0	1813	0	0	1232	0	810	3536	0	0	3350	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			11			14			2	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	387	76	72	138	28	28	611	54	12	544	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	481	0	0	238	0	28	665	0	0	562	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
9: McLaughlin Road & Street A

06/07/2024

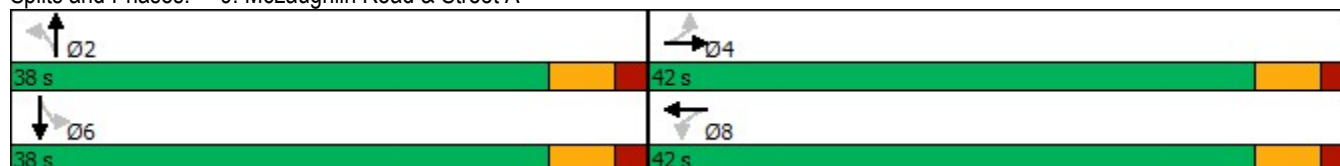


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	42.0	42.0		42.0	42.0		38.0	38.0		38.0	38.0	
Total Split (%)	52.5%	52.5%		52.5%	52.5%		47.5%	47.5%		47.5%	47.5%	
Maximum Green (s)	36.0	36.0		36.0	36.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.6			22.6		32.3	32.3			32.3	
Actuated g/C Ratio		0.34			0.34		0.48	0.48			0.48	
v/c Ratio		0.77			0.56		0.07	0.39			0.35	
Control Delay		28.1			22.3		12.8	12.9			12.9	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		28.1			22.3		12.8	12.9			12.9	
LOS		C			C		B	B			B	
Approach Delay		28.1			22.3			12.9			12.9	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	67.1
Natural Cycle:	45
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	17.7
Intersection LOS:	B
Intersection Capacity Utilization:	77.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	481	238	28	665	562
v/c Ratio	0.77	0.56	0.07	0.39	0.35
Control Delay	28.1	22.3	12.8	12.9	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	22.3	12.8	12.9	12.9
Queue Length 50th (m)	50.7	22.4	1.8	25.4	21.4
Queue Length 95th (m)	79.9	40.8	7.3	49.3	42.3
Internal Link Dist (m)	180.8	1335.2		2472.3	375.3
Turn Bay Length (m)			20.0		
Base Capacity (vph)	989	673	390	1711	1615
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.35	0.07	0.39	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕			↕	
Traffic Volume (vph)	18	387	76	72	138	28	28	611	54	12	544	6
Future Volume (vph)	18	387	76	72	138	28	28	611	54	12	544	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frt		0.98			0.98		1.00	0.99			1.00	
Flt Protected		1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1840			1826		1789	3535			3569	
Flt Permitted		0.98			0.67		0.43	1.00			0.94	
Satd. Flow (perm)		1812			1233		810	3535			3351	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	387	76	72	138	28	28	611	54	12	544	6
RTOR Reduction (vph)	0	10	0	0	7	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	471	0	0	231	0	28	658	0	0	561	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)		22.6			22.6		32.3	32.3			32.3	
Effective Green, g (s)		22.6			22.6		32.3	32.3			32.3	
Actuated g/C Ratio		0.34			0.34		0.48	0.48			0.48	
Clearance Time (s)		6.0			6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		612			416		391	1706			1617	
v/s Ratio Prot								c0.19				
v/s Ratio Perm		c0.26			0.19		0.03				0.17	
v/c Ratio		0.77			0.55		0.07	0.39			0.35	
Uniform Delay, d1		19.8			18.0		9.3	11.0			10.7	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		5.8			1.6		0.4	0.7			0.6	
Delay (s)		25.6			19.7		9.6	11.7			11.3	
Level of Service		C			B		A	B			B	
Approach Delay (s)		25.6			19.7			11.6			11.3	
Approach LOS		C			B			B			B	

Intersection Summary

HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↘	↗
Traffic Volume (vph)	1295	19	53	731	39	213
Future Volume (vph)	1295	19	53	731	39	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.998					0.850
Fl _t Protected				0.997	0.950	
Satd. Flow (prot)	3571	0	0	3568	1789	1601
Fl _t Permitted				0.997	0.950	
Satd. Flow (perm)	3571	0	0	3568	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1295	19	53	731	39	213
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1314	0	0	784	39	213
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	70.4%			ICU Level of Service C		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↵	↵
Traffic Volume (veh/h)	1295	19	53	731	39	213
Future Volume (Veh/h)	1295	19	53	731	39	213
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1295	19	53	731	39	213
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1314		1776	657
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			904		1479	88
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		54	72
cM capacity (veh/h)			602		85	767
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	863	451	297	487	39	213
Volume Left	0	0	53	0	39	0
Volume Right	0	19	0	0	0	213
cSH	1700	1700	602	1700	85	767
Volume to Capacity	0.51	0.27	0.09	0.29	0.46	0.28
Queue Length 95th (m)	0.0	0.0	2.2	0.0	14.4	8.6
Control Delay (s)	0.0	0.0	3.0	0.0	78.4	11.5
Lane LOS			A		F	B
Approach Delay (s)	0.0		1.2		21.9	
Approach LOS			C			
Intersection Summary						
Average Delay			2.7			
Intersection Capacity Utilization			70.4%		ICU Level of Service	
Analysis Period (min)			15			
					C	

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	712	188	2227	3564	59
Future Volume (vph)	128	712	188	2227	3564	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	85.0		50.0			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5142	1601
Flt Permitted	0.950		0.050			
Satd. Flow (perm)	1789	1601	94	5142	5142	1601
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						27
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	712	188	2227	3564	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	712	188	2227	3564	59
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			6

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

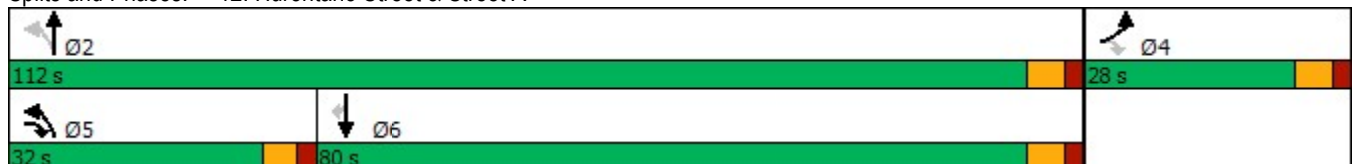


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.5	9.5	22.0	22.0	22.0
Total Split (s)	28.0	32.0	32.0	112.0	80.0	80.0
Total Split (%)	20.0%	22.9%	22.9%	80.0%	57.1%	57.1%
Maximum Green (s)	22.0	26.5	26.5	106.0	74.0	74.0
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	3.5	5.5	6.0	4.0	6.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	Max	Max
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	14.7	49.3	106.6	106.1	76.0	74.0
Actuated g/C Ratio	0.11	0.37	0.80	0.80	0.57	0.56
v/c Ratio	0.65	1.20	0.46	0.54	1.21	0.07
Control Delay	71.6	142.9	29.4	5.6	126.1	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.6	142.9	29.4	5.6	126.1	9.1
LOS	E	F	C	A	F	A
Approach Delay	132.0			7.5	124.2	
Approach LOS	F			A	F	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	132.8
Natural Cycle:	130
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.21
Intersection Signal Delay:	84.2
Intersection LOS:	F
Intersection Capacity Utilization	119.6%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	128	712	188	2227	3564	59
v/c Ratio	0.65	1.20	0.46	0.54	1.21	0.07
Control Delay	71.6	142.9	29.4	5.6	126.1	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.6	142.9	29.4	5.6	126.1	9.1
Queue Length 50th (m)	32.6	~225.7	26.7	62.9	~416.4	3.6
Queue Length 95th (m)	53.5	#297.8	53.6	90.4	#469.3	11.0
Internal Link Dist (m)	1335.2		904.0		831.3	
Turn Bay Length (m)	30.0		50.0			
Base Capacity (vph)	296	593	413	4106	2944	904
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.20	0.46	0.54	1.21	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	712	188	2227	3564	59
Future Volume (vph)	128	712	188	2227	3564	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	3.5	5.5	6.0	4.0	6.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1789	1601	1789	5142	5142	1601
Flt Permitted	0.95	1.00	0.05	1.00	1.00	1.00
Satd. Flow (perm)	1789	1601	95	5142	5142	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	712	188	2227	3564	59
RTOR Reduction (vph)	0	0	0	0	0	12
Lane Group Flow (vph)	128	712	188	2227	3564	47
Turn Type	Prot	pm+ov	pm+pt	NA	NA	Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	14.7	41.2	106.1	106.1	74.1	74.1
Effective Green, g (s)	14.7	45.2	106.1	106.1	76.1	74.1
Actuated g/C Ratio	0.11	0.34	0.80	0.80	0.57	0.56
Clearance Time (s)	6.0	5.5	5.5	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	198	544	413	4108	2946	893
v/s Ratio Prot	0.07	c0.28	0.09	0.43	c0.69	
v/s Ratio Perm		0.16	0.27			0.03
v/c Ratio	0.65	1.31	0.46	0.54	1.21	0.05
Uniform Delay, d1	56.6	43.8	35.8	4.7	28.4	13.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.1	151.8	0.8	0.5	97.8	0.1
Delay (s)	63.6	195.6	36.6	5.3	126.2	13.5
Level of Service	E	F	D	A	F	B
Approach Delay (s)	175.5			7.7	124.3	
Approach LOS	F			A	F	

Intersection Summary

HCM 2000 Control Delay	89.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	132.8	Sum of lost time (s)	15.5
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	93	35	571	45	16	440
Future Volume (vph)	93	35	571	45	16	440
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.990			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1789	1601	1865	0	0	1880
Flt Permitted	0.950					0.998
Satd. Flow (perm)	1789	1601	1865	0	0	1880
Link Speed (k/h)	48		80			80
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		114.4			24.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	101	38	621	49	17	478
Shared Lane Traffic (%)						
Lane Group Flow (vph)	101	38	670	0	0	495
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.9%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	35	571	45	16	440
Future Volume (Veh/h)	93	35	571	45	16	440
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)	101	38	621	49	17	478
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	1158	646			670	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1158	646			670	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	53	92			98	
cM capacity (veh/h)	213	472			920	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	101	38	670	495		
Volume Left	101	0	0	17		
Volume Right	0	38	49	0		
cSH	213	472	1700	920		
Volume to Capacity	0.47	0.08	0.39	0.02		
Queue Length 95th (m)	17.7	2.0	0.0	0.4		
Control Delay (s)	36.3	13.3	0.0	0.5		
Lane LOS	E	B		A		
Approach Delay (s)	30.0		0.0	0.5		
Approach LOS	D					
Intersection Summary						
Average Delay			3.4			
Intersection Capacity Utilization			47.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	709	6	65	482	18	224
Future Volume (vph)	709	6	65	482	18	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.999			0.875		
Flt Protected				0.994	0.996	
Satd. Flow (prot)	3575	0	0	3557	1641	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	3575	0	0	3557	1641	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	34.2			32.8	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	771	7	71	524	20	243
Shared Lane Traffic (%)						
Lane Group Flow (vph)	778	0	0	595	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.8%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

















06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	709	6	65	482	18	224
Future Volume (Veh/h)	709	6	65	482	18	224
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)	771	7	71	524	20	243
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			778	1178	389	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			778	1178	389	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			91	88	60	
cM capacity (veh/h)			834	168	610	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	514	264	246	349	263	
Volume Left	0	0	71	0	20	
Volume Right	0	7	0	0	243	
cSH	1700	1700	834	1700	508	
Volume to Capacity	0.30	0.16	0.09	0.21	0.52	
Queue Length 95th (m)	0.0	0.0	2.1	0.0	22.3	
Control Delay (s)	0.0	0.0	3.5	0.0	19.4	
Lane LOS	A			C		
Approach Delay (s)	0.0		1.4		19.4	
Approach LOS				C		
Intersection Summary						
Average Delay			3.6			
Intersection Capacity Utilization			59.8%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 15: McLaughlin Road & Street E

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	36	36	0	29	17	610	17	11	491	6
Future Volume (vph)	11	0	36	36	0	29	17	610	17	11	491	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Fr _t		0.897			0.939			0.996			0.998	
Fl _t Protected		0.988			0.973			0.999			0.999	
Satd. Flow (prot)	0	1669	0	0	1721	0	0	3561	0	0	3568	0
Fl _t Permitted		0.988			0.973			0.999			0.999	
Satd. Flow (perm)	0	1669	0	0	1721	0	0	3561	0	0	3568	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			29.9			14.2	
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
Adj. Flow (vph)	12	0	39	39	0	32	18	663	18	12	534	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	71	0	0	699	0	0	553	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97		97	97		97	97		97	97		97
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	44.2%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

15: McLaughlin Road & Street E

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	11	0	36	36	0	29	17	610	17	11	491	6
Future Volume (Veh/h)	11	0	36	36	0	29	17	610	17	11	491	6
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)	12	0	39	39	0	32	18	663	18	12	534	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (m)												
								399			189	
pX, platoon unblocked	1.00	1.00		1.00	1.00	1.00				1.00		
vC, conflicting volume	961	1278	270	1038	1273	340	541			681		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	953	1272	270	1031	1266	330	541			672		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	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 %	94	100	95	77	100	95	98			99		
cM capacity (veh/h)	198	161	727	173	162	663	1024			911		
Direction, Lane #												
	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	51	71	350	350	279	274						
Volume Left	12	39	18	0	12	0						
Volume Right	39	32	0	18	0	7						
cSH	446	259	1024	1700	911	1700						
Volume to Capacity	0.11	0.27	0.02	0.21	0.01	0.16						
Queue Length 95th (m)	2.9	8.2	0.4	0.0	0.3	0.0						
Control Delay (s)	14.1	24.1	0.6	0.0	0.5	0.0						
Lane LOS	B	C	A		A							
Approach Delay (s)	14.1	24.1	0.3		0.3							
Approach LOS	B	C										
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization			44.2%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings
1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	320	13	378	441	78	25	388	448	64	255	5
Future Volume (vph)	5	320	13	378	441	78	25	388	448	64	255	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		25.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.977				0.850		0.998	
Flt Protected		0.999		0.950				0.997			0.990	
Satd. Flow (prot)	0	1857	0	1825	1826	0	0	1797	1601	0	1830	0
Flt Permitted		0.992		0.336				0.962			0.646	
Satd. Flow (perm)	0	1844	0	645	1826	0	0	1734	1601	0	1194	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			10				236			1
Link Speed (k/h)		70			70			80				80
Link Distance (m)		590.7			490.2			542.2				342.6
Travel Time (s)		30.4			25.2			24.4				15.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%
Adj. Flow (vph)	5	340	14	402	469	83	27	413	477	68	271	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	359	0	402	552	0	0	440	477	0	344	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 1: Chinguacousy Road & Old School Road

06/07/2024

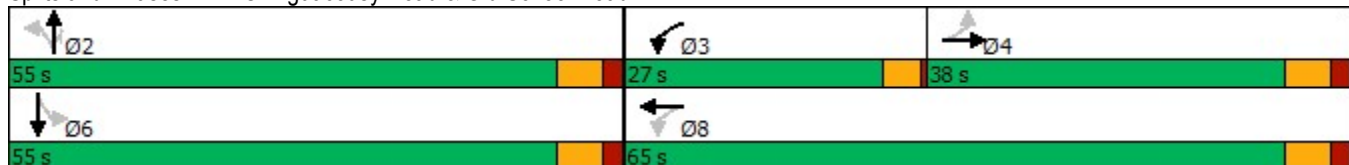


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	38.0	38.0		27.0	65.0		55.0	55.0	55.0	55.0	55.0	
Total Split (%)	31.7%	31.7%		22.5%	54.2%		45.8%	45.8%	45.8%	45.8%	45.8%	
Maximum Green (s)	32.0	32.0		23.0	59.0		49.0	49.0	49.0	49.0	49.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)		34.7		63.0	59.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.29		0.52	0.49			0.41	0.41		0.41	
v/c Ratio		0.67		0.72	0.61			0.62	0.60		0.70	
Control Delay		45.5		25.6	25.4			32.9	16.9		38.8	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		45.5		25.6	25.4			32.9	16.9		38.8	
LOS		D		C	C			C	B		D	
Approach Delay		45.5			25.5			24.6			38.8	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 29.7
 Intersection LOS: C
 Intersection Capacity Utilization 104.9%
 ICU Level of Service G
 Analysis Period (min) 15

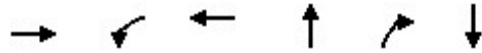
Splits and Phases: 1: Chinguacousy Road & Old School Road



Queues

1: Chinguacousy Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	359	402	552	440	477	344
v/c Ratio	0.67	0.72	0.61	0.62	0.60	0.70
Control Delay	45.5	25.6	25.4	32.9	16.9	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.5	25.6	25.4	32.9	16.9	38.8
Queue Length 50th (m)	75.5	55.6	90.0	81.0	42.9	66.1
Queue Length 95th (m)	110.9	79.4	126.2	115.4	77.3	102.5
Internal Link Dist (m)	566.7		466.2	518.2		318.6
Turn Bay Length (m)					25.0	
Base Capacity (vph)	535	584	902	708	793	488
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.69	0.61	0.62	0.60	0.70

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: Chinguacousy Road & Old School Road



















06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕		↖	↗			↕	↖		↕		
Traffic Volume (vph)	5	320	13	378	441	78	25	388	448	64	255	5	
Future Volume (vph)	5	320	13	378	441	78	25	388	448	64	255	5	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0		
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Frt		0.99		1.00	0.98			1.00	0.85		1.00		
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99		
Satd. Flow (prot)		1857		1825	1827			1797	1601		1831		
Flt Permitted		0.99		0.34	1.00			0.96	1.00		0.65		
Satd. Flow (perm)		1843		645	1827			1734	1601		1194		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	5	340	14	402	469	83	27	413	477	68	271	5	
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	140	0	1	0	
Lane Group Flow (vph)	0	358	0	402	547	0	0	440	337	0	343	0	
Heavy Vehicles (%)	0%	3%	0%	0%	1%	13%	0%	7%	2%	10%	2%	10%	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		4		3	8			2			6		
Permitted Phases	4			8			2		2	6			
Actuated Green, G (s)		34.7		59.0	59.0			49.0	49.0		49.0		
Effective Green, g (s)		34.7		61.0	59.0			49.0	49.0		49.0		
Actuated g/C Ratio		0.29		0.51	0.49			0.41	0.41		0.41		
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0		
Lane Grp Cap (vph)		532		547	898			708	653		487		
v/s Ratio Prot				c0.14	0.30								
v/s Ratio Perm		c0.19		0.24				0.25	0.21		c0.29		
v/c Ratio		0.67		0.73	0.61			0.62	0.52		0.71		
Uniform Delay, d1		37.6		20.8	22.1			28.1	26.6		29.5		
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00		
Incremental Delay, d2		6.6		5.1	3.1			4.1	2.9		8.3		
Delay (s)		44.3		25.9	25.2			32.2	29.5		37.8		
Level of Service		D		C	C			C	C		D		
Approach Delay (s)		44.3			25.5			30.8			37.8		
Approach LOS		D			C			C			D		
Intersection Summary													
HCM 2000 Control Delay			31.7									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	14.0
Intersection Capacity Utilization			104.9%									ICU Level of Service	G
Analysis Period (min)			15										
c	Critical Lane Group												

Lanes, Volumes, Timings
2: McLaughlin Road & Old School Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	840	50	538	989	62	51	195	560	54	98	28
Future Volume (vph)	32	840	50	538	989	62	51	195	560	54	98	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			85.0			2.5			2.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.991				0.850		0.979	
Flt Protected		0.998		0.950				0.990			0.985	
Satd. Flow (prot)	0	3468	0	1755	3575	0	0	1835	1555	0	1794	0
Flt Permitted		0.859		0.129				0.850			0.554	
Satd. Flow (perm)	0	2985	0	238	3575	0	0	1575	1555	0	1009	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			11				483		8	
Link Speed (k/h)		70			70			80		80		
Link Distance (m)		437.6			349.1			188.9		263.1		
Travel Time (s)		22.5			18.0			8.5		11.8		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Adj. Flow (vph)	34	894	53	572	1052	66	54	207	596	57	104	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	981	0	572	1118	0	0	261	596	0	191	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0		0.0		0.0
Link Offset(m)		0.0			0.0			0.0		0.0		0.0
Crosswalk Width(m)		1.6			1.6			1.6		1.6		1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6

Lanes, Volumes, Timings
 2: McLaughlin Road & Old School Road

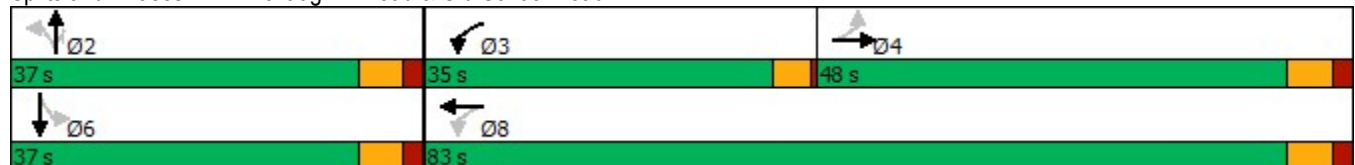
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0		8.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	48.0	48.0		35.0	83.0		37.0	37.0	37.0	37.0	37.0	
Total Split (%)	40.0%	40.0%		29.2%	69.2%		30.8%	30.8%	30.8%	30.8%	30.8%	
Maximum Green (s)	42.0	42.0		31.0	77.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		39.9		79.2	75.2			24.0	24.0		24.0	
Actuated g/C Ratio		0.36		0.71	0.68			0.22	0.22		0.22	
v/c Ratio		0.91		0.92	0.46			0.77	0.83		0.86	
Control Delay		48.1		48.5	9.8			56.9	19.9		73.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		48.1		48.5	9.8			56.9	19.9		73.1	
LOS		D		D	A			E	B		E	
Approach Delay		48.1			22.9			31.2			73.1	
Approach LOS		D			C			C			E	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	111.2
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	34.0
Intersection LOS:	C
Intersection Capacity Utilization:	98.5%
ICU Level of Service:	F
Analysis Period (min):	15

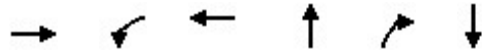
Splits and Phases: 2: McLaughlin Road & Old School Road



Queues

2: McLaughlin Road & Old School Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	981	572	1118	261	596	191
v/c Ratio	0.91	0.92	0.46	0.77	0.83	0.86
Control Delay	48.1	48.5	9.8	56.9	19.9	73.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	48.5	9.8	56.9	19.9	73.1
Queue Length 50th (m)	106.5	98.6	55.3	54.8	22.3	39.5
Queue Length 95th (m)	#158.0	#182.3	80.8	83.6	71.9	#72.5
Internal Link Dist (m)	413.6		325.1	164.9		239.1
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1138	622	2495	441	783	289
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.92	0.45	0.59	0.76	0.66

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: McLaughlin Road & Old School Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕			↕	↖		↕↕	
Traffic Volume (vph)	32	840	50	538	989	62	51	195	560	54	98	28
Future Volume (vph)	32	840	50	538	989	62	51	195	560	54	98	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		2.0	6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)		3469		1755	3576			1834	1555		1794	
Flt Permitted		0.86		0.13	1.00			0.85	1.00		0.55	
Satd. Flow (perm)		2986		237	3576			1575	1555		1008	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	894	53	572	1052	66	54	207	596	57	104	30
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	379	0	6	0
Lane Group Flow (vph)	0	978	0	572	1114	0	0	261	217	0	185	0
Heavy Vehicles (%)	0%	4%	10%	4%	1%	4%	10%	2%	5%	0%	6%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		40.0		75.2	75.2			24.0	24.0		24.0	
Effective Green, g (s)		40.0		77.2	75.2			24.0	24.0		24.0	
Actuated g/C Ratio		0.36		0.69	0.68			0.22	0.22		0.22	
Clearance Time (s)		6.0		4.0	6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1074		617	2418			339	335		217	
v/s Ratio Prot				c0.28	0.31							
v/s Ratio Perm		c0.33		0.37				0.17	0.14		c0.18	
v/c Ratio		0.91		0.93	0.46			0.77	0.65		0.85	
Uniform Delay, d1		33.9		27.9	8.5			41.0	39.8		41.9	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		11.4		20.1	0.1			10.1	4.3		26.0	
Delay (s)		45.3		48.0	8.6			51.1	44.0		67.9	
Level of Service		D		D	A			D	D		E	
Approach Delay (s)		45.3			21.9			46.2			67.9	
Approach LOS		D			C			D			E	

Intersection Summary

HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	111.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	712	270	303	359	346	172	488	3428	391	174	2104	645
Future Volume (vph)	712	270	303	359	346	172	488	3428	391	174	2104	645
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	65.0		0.0	35.0		60.0	35.0		60.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	100.0			100.0			85.0			95.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.921			0.950				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3166	0	1789	3445	0	1807	5043	1633	1825	4812	1541
Flt Permitted	0.183			0.192			0.083			0.091		
Satd. Flow (perm)	352	3166	0	362	3445	0	158	5043	1633	175	4812	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		141			64				144			343
Link Speed (k/h)		70			70			80				80
Link Distance (m)		1007.8			440.4			855.3				282.2
Travel Time (s)		51.8			22.6			38.5				12.7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Adj. Flow (vph)	734	278	312	370	357	177	503	3534	403	179	2169	665
Shared Lane Traffic (%)												
Lane Group Flow (vph)	734	590	0	370	534	0	503	3534	403	179	2169	665
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1		6

Lanes, Volumes, Timings
3: Hurontario Street & Old School Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	29.0	29.0	10.0	29.0	29.0
Total Split (s)	24.0	29.0		24.0	29.0		19.0	57.0	57.0	10.0	48.0	48.0
Total Split (%)	20.0%	24.2%		20.0%	24.2%		15.8%	47.5%	47.5%	8.3%	40.0%	40.0%
Maximum Green (s)	20.0	23.0		20.0	23.0		13.0	51.0	51.0	4.0	42.0	42.0
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		0.0	-2.0		-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	46.8	22.8		42.8	22.8		63.1	53.1	51.0	50.0	44.0	42.0
Actuated g/C Ratio	0.40	0.19		0.36	0.19		0.54	0.45	0.43	0.42	0.37	0.36
v/c Ratio	1.77	0.81		0.99	0.74		1.71	1.56	0.51	1.13	1.21	0.86
Control Delay	381.9	44.1		77.1	46.2		358.6	280.3	18.0	138.5	132.4	29.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	381.9	44.1		77.1	46.2		358.6	280.3	18.0	138.5	132.4	29.9
LOS	F	D		E	D		F	F	B	F	F	C
Approach Delay		231.3			58.8			265.3			110.2	
Approach LOS		F			E			F			F	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 117.9
 Natural Cycle: 150
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.77
 Intersection Signal Delay: 193.1 Intersection LOS: F
 Intersection Capacity Utilization 143.7% ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Old School Road



Queues

3: Hurontario Street & Old School Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	734	590	370	534	503	3534	403	179	2169	665
v/c Ratio	1.77	0.81	0.99	0.74	1.71	1.56	0.51	1.13	1.21	0.86
Control Delay	381.9	44.1	77.1	46.2	358.6	280.3	18.0	138.5	132.4	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	381.9	44.1	77.1	46.2	358.6	280.3	18.0	138.5	132.4	29.9
Queue Length 50th (m)	~240.9	53.4	68.5	54.5	~161.4	~434.3	43.3	~33.6	~230.9	78.5
Queue Length 95th (m)	#313.7	74.1	#129.9	73.5	#227.2	#457.5	72.4	#78.9	#259.8	#152.6
Internal Link Dist (m)		983.8		416.4		831.3			258.2	
Turn Bay Length (m)	40.0		65.0		35.0		60.0	35.0		60.0
Base Capacity (vph)	414	783	373	781	294	2269	788	158	1797	770
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.77	0.75	0.99	0.68	1.71	1.56	0.51	1.13	1.21	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.





























Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 3: Hurontario Street & Old School Road

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			  	
Traffic Volume (vph)	712	270	303	359	346	172	488	3428	391	174	2104	645
Future Volume (vph)	712	270	303	359	346	172	488	3428	391	174	2104	645
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		4.0	4.0		4.0	4.0	6.0	4.0	4.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.92		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3165		1789	3446		1807	5043	1633	1825	4812	1541
Flt Permitted	0.18	1.00		0.19	1.00		0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	352	3165		362	3446		159	5043	1633	175	4812	1541
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	734	278	312	370	357	177	503	3534	403	179	2169	665
RTOR Reduction (vph)	0	114	0	0	52	0	0	0	82	0	0	221
Lane Group Flow (vph)	734	476	0	370	482	0	503	3534	321	179	2169	444
Heavy Vehicles (%)	0%	3%	9%	2%	1%	0%	1%	4%	0%	0%	9%	6%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	40.8	20.8		40.8	20.8		61.0	51.0	51.0	46.0	42.0	42.0
Effective Green, g (s)	44.8	22.8		40.8	22.8		63.0	53.0	51.0	50.0	44.0	42.0
Actuated g/C Ratio	0.38	0.19		0.35	0.19		0.53	0.45	0.43	0.42	0.37	0.36
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
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)	408	612		367	666		294	2268	706	158	1797	549
v/s Ratio Prot	c0.34	0.15		0.17	0.14		c0.22	0.70		0.06	0.45	
v/s Ratio Perm	0.35			c0.18			c0.70		0.20	0.42		0.29
v/c Ratio	1.80	0.78		1.01	0.72		1.71	1.56	0.46	1.13	1.21	0.81
Uniform Delay, d1	33.1	45.1		33.3	44.6		37.3	32.4	23.6	30.4	36.9	34.3
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	369.2	6.2		49.0	3.9		334.0	253.4	2.1	111.8	98.7	12.2
Delay (s)	402.3	51.3		82.3	48.5		371.3	285.8	25.7	142.2	135.6	46.5
Level of Service	F	D		F	D		F	F	C	F	F	D
Approach Delay (s)		245.9			62.3			271.9			116.3	
Approach LOS		F			E			F			F	
Intersection Summary												
HCM 2000 Control Delay			200.3				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.62									
Actuated Cycle Length (s)			117.8				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			143.7%				ICU Level of Service			H		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔		↔	↔↔↔			↔	↔		↔	
Traffic Volume (vph)	51	880	63	252	832	80	42	560	236	41	359	35
Future Volume (vph)	51	880	63	252	832	80	42	560	236	41	359	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.991			0.987				0.850		0.989	
Flt Protected		0.997		0.950				0.997			0.995	
Satd. Flow (prot)	0	5041	0	1825	5039	0	0	1898	1555	0	1858	0
Flt Permitted		0.813		0.129				0.943			0.621	
Satd. Flow (perm)	0	4111	0	248	5039	0	0	1795	1555	0	1160	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			16				219			5
Link Speed (k/h)		70			70			80				80
Link Distance (m)		274.5			1419.4			345.5				2541.5
Travel Time (s)		14.1			73.0			15.5				114.4
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Adj. Flow (vph)	55	957	68	274	904	87	46	609	257	45	390	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1080	0	274	991	0	0	655	257	0	473	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		1.6			1.6			1.6				1.6
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1		30.5
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1		1.8
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		28.7			28.7			28.7				28.7
Detector 2 Size(m)		1.8			1.8			1.8				1.8
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings
4: Chinguacousy Road & Mayfield Road

06/07/2024

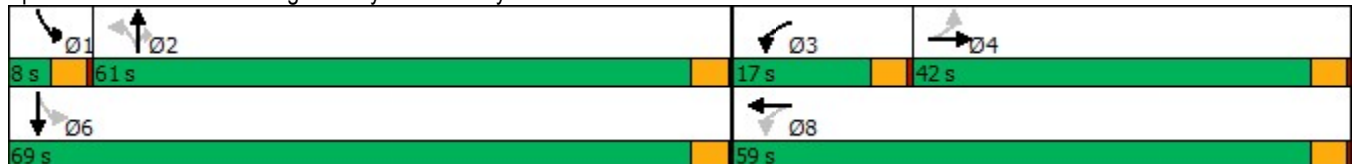


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	42.0	42.0		17.0	59.0		61.0	61.0	61.0	8.0	69.0	
Total Split (%)	32.8%	32.8%		13.3%	46.1%		47.7%	47.7%	47.7%	6.3%	53.9%	
Maximum Green (s)	38.0	38.0		13.0	55.0		57.0	57.0	57.0	4.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)		0.0		-2.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0		2.0	4.0			4.0	4.0		4.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0		0	
Act Effct Green (s)		38.3		57.5	55.5			55.7	55.7		55.7	
Actuated g/C Ratio		0.32		0.48	0.47			0.47	0.47		0.47	
v/c Ratio		0.81		0.86	0.42			0.78	0.30		0.87	
Control Delay		44.3		51.4	22.8			33.7	4.5		45.5	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		44.3		51.4	22.8			33.7	4.5		45.5	
LOS		D		D	C			C	A		D	
Approach Delay		44.3			29.0			25.4			45.5	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 128
 Actuated Cycle Length: 119.3
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 34.6
 Intersection LOS: C
 Intersection Capacity Utilization 102.9%
 ICU Level of Service G
 Analysis Period (min) 15

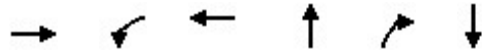
Splits and Phases: 4: Chinguacousy Road & Mayfield Road



Queues

4: Chinguacousy Road & Mayfield Road

06/07/2024



Lane Group	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1080	274	991	655	257	473
v/c Ratio	0.81	0.86	0.42	0.78	0.30	0.87
Control Delay	44.3	51.4	22.8	33.7	4.5	45.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	51.4	22.8	33.7	4.5	45.5
Queue Length 50th (m)	92.0	45.6	60.8	124.1	4.7	95.1
Queue Length 95th (m)	#113.8	#98.3	75.1	169.9	18.2	#149.9
Internal Link Dist (m)	250.5		1395.4	321.5		2517.5
Turn Bay Length (m)		50.0				
Base Capacity (vph)	1326	319	2352	927	909	640
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.86	0.42	0.71	0.28	0.74

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: Chinguacousy Road & Mayfield Road

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔		↔	↔↔↔			↔	↔		↔	
Traffic Volume (vph)	51	880	63	252	832	80	42	560	236	41	359	35
Future Volume (vph)	51	880	63	252	832	80	42	560	236	41	359	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		2.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		0.91		1.00	0.91			1.00	1.00		1.00	
Frbp, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (prot)		5042		1825	5038			1897	1555		1859	
Flt Permitted		0.81		0.13	1.00			0.94	1.00		0.62	
Satd. Flow (perm)		4110		247	5038			1795	1555		1160	
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)	55	957	68	274	904	87	46	609	257	45	390	38
RTOR Reduction (vph)	0	5	0	0	9	0	0	0	117	0	3	0
Lane Group Flow (vph)	0	1075	0	274	982	0	0	655	140	0	470	0
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	0%	3%	2%	0%	3%	0%	0%	1%	5%	0%	1%	10%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		38.4		55.5	55.5			55.7	55.7		55.7	
Effective Green, g (s)		38.4		57.5	55.5			55.7	55.7		55.7	
Actuated g/C Ratio		0.32		0.48	0.47			0.47	0.47		0.47	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1324		319	2345			838	726		542	
v/s Ratio Prot				c0.11	0.20							
v/s Ratio Perm		c0.26		0.30				0.36	0.09		c0.41	
v/c Ratio		0.81		0.86	0.42			0.78	0.19		0.87	
Uniform Delay, d1		37.1		25.4	21.1			26.6	18.6		28.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		5.5		19.9	0.6			4.8	0.1		13.7	
Delay (s)		42.6		45.3	21.7			31.4	18.7		42.2	
Level of Service		D		D	C			C	B		D	
Approach Delay (s)		42.6			26.8			27.8			42.2	
Approach LOS		D			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			33.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			119.2			Sum of lost time (s)			14.0			
Intersection Capacity Utilization			102.9%			ICU Level of Service			G			
Analysis Period (min)			15									

c Critical Lane Group

Lanes, Volumes, Timings
5: McLaughlin Road & Mayfield Road

06/07/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1055	83	138	1231	312	140	778	142	255	491	144
Future Volume (vph)	116	1055	83	138	1231	312	140	778	142	255	491	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	50.0		30.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	85.0			55.0			85.0			85.0		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.970			0.977			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1738	5036	0	1755	4892	0	1825	3520	0	1738	3408	0
Flt Permitted	0.111			0.100			0.350			0.103		
Satd. Flow (perm)	203	5036	0	185	4892	0	672	3520	0	188	3408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			55			18			36	
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		1419.4			1263.7			341.6			2496.3	
Travel Time (s)		73.0			65.0			15.4			112.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Adj. Flow (vph)	121	1099	86	144	1282	325	146	810	148	266	511	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	1185	0	144	1607	0	146	958	0	266	661	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lanes, Volumes, Timings
 5: McLaughlin Road & Mayfield Road

06/07/2024

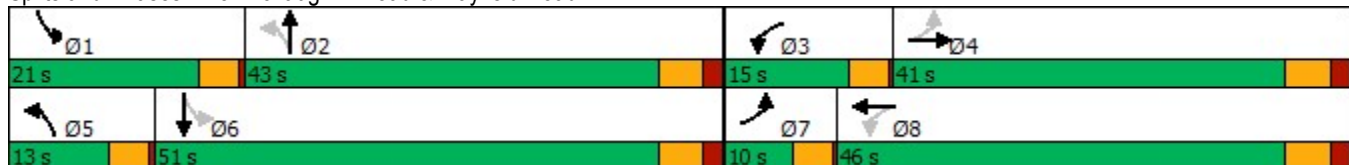


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0		8.0	22.0	
Total Split (s)	10.0	41.0		15.0	46.0		13.0	43.0		21.0	51.0	
Total Split (%)	8.3%	34.2%		12.5%	38.3%		10.8%	35.8%		17.5%	42.5%	
Maximum Green (s)	6.0	35.0		11.0	40.0		9.0	37.0		17.0	45.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.5	2.0		0.5	2.0		0.5	2.0		0.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.1	36.1		51.5	40.1		45.7	35.0		57.2	42.4	
Actuated g/C Ratio	0.38	0.31		0.44	0.34		0.39	0.30		0.49	0.36	
v/c Ratio	0.79	0.76		0.67	0.94		0.42	0.90		0.87	0.53	
Control Delay	57.2	41.0		38.2	48.5		21.2	51.3		56.9	29.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	57.2	41.0		38.2	48.5		21.2	51.3		56.9	29.4	
LOS	E	D		D	D		C	D		E	C	
Approach Delay		42.5			47.7			47.3			37.3	
Approach LOS		D			D			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	117.3
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	44.4
Intersection LOS:	D
Intersection Capacity Utilization:	94.0%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 5: McLaughlin Road & Mayfield Road



Queues

5: McLaughlin Road & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	121	1185	144	1607	146	958	266	661
v/c Ratio	0.79	0.76	0.67	0.94	0.42	0.90	0.87	0.53
Control Delay	57.2	41.0	38.2	48.5	21.2	51.3	56.9	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.2	41.0	38.2	48.5	21.2	51.3	56.9	29.4
Queue Length 50th (m)	17.0	93.8	20.6	131.8	18.1	110.3	44.2	59.1
Queue Length 95th (m)	#44.1	111.2	#39.2	#165.1	30.0	#139.9	#88.9	76.8
Internal Link Dist (m)		1395.4		1239.7		317.6		2472.3
Turn Bay Length (m)	30.0		30.0		50.0		50.0	
Base Capacity (vph)	154	1554	230	1708	352	1124	316	1332
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.76	0.63	0.94	0.41	0.85	0.84	0.50

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: McLaughlin Road & Mayfield Road

06/07/2024




































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (vph)	116	1055	83	138	1231	312	140	778	142	255	491	144
Future Volume (vph)	116	1055	83	138	1231	312	140	778	142	255	491	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	5036		1755	4890		1825	3519		1738	3408	
Flt Permitted	0.11	1.00		0.10	1.00		0.35	1.00		0.10	1.00	
Satd. Flow (perm)	203	5036		184	4890		672	3519		188	3408	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	121	1099	86	144	1282	325	146	810	148	266	511	150
RTOR Reduction (vph)	0	7	0	0	36	0	0	13	0	0	23	0
Lane Group Flow (vph)	121	1178	0	144	1571	0	146	945	0	266	638	0
Heavy Vehicles (%)	5%	3%	3%	4%	5%	0%	0%	1%	3%	5%	3%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.1	36.1		50.1	40.1		43.7	35.0		55.2	42.5	
Effective Green, g (s)	42.1	36.1		50.1	40.1		43.7	35.0		55.2	42.5	
Actuated g/C Ratio	0.36	0.31		0.43	0.34		0.37	0.30		0.47	0.36	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	1549		212	1671		335	1050		302	1234	
v/s Ratio Prot	0.04	0.23		c0.06	c0.32		0.03	0.27		c0.12	0.19	
v/s Ratio Perm	0.25			0.23			0.13			c0.29		
v/c Ratio	0.80	0.76		0.68	0.94		0.44	0.90		0.88	0.52	
Uniform Delay, d1	29.7	36.7		24.5	37.4		25.2	39.5		32.1	29.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.4	3.6		8.4	11.8		0.9	10.5		24.4	0.4	
Delay (s)	55.1	40.3		32.9	49.2		26.1	50.0		56.6	29.7	
Level of Service	E	D		C	D		C	D		E	C	
Approach Delay (s)		41.6			47.9			46.9			37.4	
Approach LOS		D			D			D			D	

Intersection Summary

HCM 2000 Control Delay	44.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	117.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  			 		 	 	
Traffic Volume (vph)	729	734	143	337	942	188	416	1131	322	270	1206	1031
Future Volume (vph)	729	734	143	337	942	188	416	1131	322	270	1206	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	75.0			45.0			30.0			70.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.96	0.98		0.99			0.96			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	4995	1601	3404	5092	1585	1789	3614	1555	1825	3510	1585
Flt Permitted	0.154			0.950			0.082			0.085		
Satd. Flow (perm)	284	4995	1538	3349	5092	1562	154	3614	1486	163	3510	1555
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			147			145			182			496
Link Speed (k/h)		70			70			70			70	
Link Distance (m)		142.1			749.9			381.1			609.4	
Travel Time (s)		7.3			38.6			19.6			31.3	
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Adj. Flow (vph)	752	757	147	347	971	194	429	1166	332	278	1243	1063
Shared Lane Traffic (%)												
Lane Group Flow (vph)	752	757	147	347	971	194	429	1166	332	278	1243	1063
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	37.0	40.0	40.0	25.0	28.0	28.0	18.0	54.0	54.0	16.0	52.0	52.0
Total Split (%)	27.4%	29.6%	29.6%	18.5%	20.7%	20.7%	13.3%	40.0%	40.0%	11.9%	38.5%	38.5%
Maximum Green (s)	32.0	33.0	33.0	20.0	21.0	21.0	14.0	47.0	47.0	12.0	45.0	45.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.5	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	0.5	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0

Lanes, Volumes, Timings
6: Hurontario Street & Mayfield Road

06/07/2024

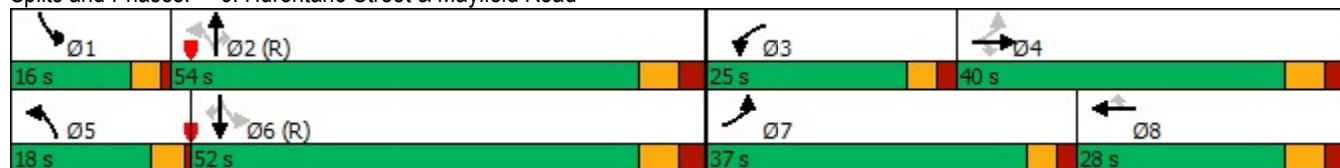


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	62.0	33.0	33.0	20.0	21.0	21.0	68.0	47.0	47.0	64.0	45.0	47.0
Actuated g/C Ratio	0.46	0.24	0.24	0.15	0.16	0.16	0.50	0.35	0.35	0.47	0.33	0.35
v/c Ratio	1.50	0.62	0.30	0.69	1.23	0.53	1.58	0.93	0.52	1.12	1.06	1.23
Control Delay	267.3	48.0	7.8	62.4	159.7	20.9	308.2	55.6	18.4	126.5	87.7	135.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	267.3	48.0	7.8	62.4	159.7	20.9	308.2	55.6	18.4	126.5	87.7	135.3
LOS	F	D	A	E	F	C	F	E	B	F	F	F
Approach Delay		144.1			119.6			105.4			111.4	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	120
Control Type:	Pretimed
Maximum v/c Ratio:	1.58
Intersection Signal Delay:	118.5
Intersection LOS:	F
Intersection Capacity Utilization	133.3%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 6: Hurontario Street & Mayfield Road



Queues

6: Hurontario Street & Mayfield Road

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	752	757	147	347	971	194	429	1166	332	278	1243	1063
v/c Ratio	1.50	0.62	0.30	0.69	1.23	0.53	1.58	0.93	0.52	1.12	1.06	1.23
Control Delay	267.3	48.0	7.8	62.4	159.7	20.9	308.2	55.6	18.4	126.5	87.7	135.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	267.3	48.0	7.8	62.4	159.7	20.9	308.2	55.6	18.4	126.5	87.7	135.3
Queue Length 50th (m)	~262.8	66.2	0.0	45.8	~116.5	11.5	~146.7	156.9	30.5	~67.8	~191.6	~258.5
Queue Length 95th (m)	#338.7	80.6	16.7	62.3	#145.1	35.6	#211.9	#198.3	59.5	#124.0	#233.8	#338.8
Internal Link Dist (m)		118.1			725.9			357.1			585.4	
Turn Bay Length (m)	105.0		105.0	45.0		55.0	45.0		55.0	140.0		80.0
Base Capacity (vph)	500	1221	487	504	792	365	271	1258	635	249	1170	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.50	0.62	0.30	0.69	1.23	0.53	1.58	0.93	0.52	1.12	1.06	1.23

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

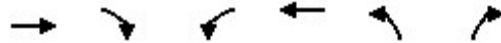
6: Hurontario Street & Mayfield Road

06/07/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	729	734	143	337	942	188	416	1131	322	270	1206	1031
Future Volume (vph)	729	734	143	337	942	188	416	1131	322	270	1206	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0	7.0	5.0	7.0	7.0	2.0	7.0	7.0	2.0	7.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1755	4995	1538	3404	5092	1562	1789	3614	1486	1825	3510	1555
Flt Permitted	0.15	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	284	4995	1538	3404	5092	1562	154	3614	1486	163	3510	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	752	757	147	347	971	194	429	1166	332	278	1243	1063
RTOR Reduction (vph)	0	0	111	0	0	122	0	0	119	0	0	323
Lane Group Flow (vph)	752	757	36	347	971	72	429	1166	213	278	1243	740
Confl. Peds. (#/hr)	1		11	11		1	3		13	13		3
Heavy Vehicles (%)	4%	5%	2%	4%	3%	3%	2%	1%	5%	0%	4%	3%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Actuated Green, G (s)	58.0	33.0	33.0	20.0	21.0	21.0	61.0	47.0	47.0	57.0	45.0	45.0
Effective Green, g (s)	60.0	33.0	33.0	20.0	21.0	21.0	65.0	47.0	47.0	61.0	45.0	47.0
Actuated g/C Ratio	0.44	0.24	0.24	0.15	0.16	0.16	0.48	0.35	0.35	0.45	0.33	0.35
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	496	1221	375	504	792	242	267	1258	517	246	1170	541
v/s Ratio Prot	c0.38	0.15		0.10	0.19		c0.19	0.32		0.12	0.35	
v/s Ratio Perm	c0.29		0.02			0.05	0.58		0.14	0.39		c0.48
v/c Ratio	1.52	0.62	0.10	0.69	1.23	0.30	1.61	0.93	0.41	1.13	1.06	1.37
Uniform Delay, d1	40.1	45.4	39.5	54.5	57.0	50.5	42.8	42.3	33.5	40.5	45.0	44.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	242.5	2.4	0.5	7.5	112.8	3.1	289.9	13.0	2.4	96.9	44.6	176.8
Delay (s)	282.6	47.8	40.0	62.0	169.8	53.5	332.6	55.3	35.9	137.5	89.6	220.8
Level of Service	F	D	D	E	F	D	F	E	D	F	F	F
Approach Delay (s)		153.7			130.2			113.7			148.7	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM 2000 Control Delay			137.4			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.57									
Actuated Cycle Length (s)			135.0			Sum of lost time (s)			21.0			
Intersection Capacity Utilization			133.3%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
8: Street B & Old School Road

06/07/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	778	53	30	860	38	28
Future Volume (vph)	778	53	30	860	38	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.990			0.943		
Flt Protected				0.998	0.972	
Satd. Flow (prot)	3543	0	0	3571	1726	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	3543	0	0	3571	1726	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	490.2			455.6	162.7	
Travel Time (s)	25.2			23.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	778	53	30	860	38	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	831	0	0	890	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.1%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis
 8: Street B & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	778	53	30	860	38	28
Future Volume (Veh/h)	778	53	30	860	38	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	778	53	30	860	38	28
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			831		1294	416
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			831		1294	416
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		74	95
cM capacity (veh/h)			797		148	586
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	519	312	317	573	66	
Volume Left	0	0	30	0	38	
Volume Right	0	53	0	0	28	
cSH	1700	1700	797	1700	217	
Volume to Capacity	0.31	0.18	0.04	0.34	0.30	
Queue Length 95th (m)	0.0	0.0	0.9	0.0	9.4	
Control Delay (s)	0.0	0.0	1.3	0.0	28.7	
Lane LOS	A			D		
Approach Delay (s)	0.0		0.5		28.7	
Approach LOS						D
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			56.1%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Volume (vph)	0	259	50	59	357	21	232	860	134	30	690	7
Future Volume (vph)	0	259	50	59	357	21	232	860	134	30	690	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	20.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (m)	2.5			2.5			85.0			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Frt		0.978			0.994			0.980			0.999	
Flt Protected					0.993		0.950				0.998	
Satd. Flow (prot)	0	1842	0	0	1859	0	1789	3507	0	0	3568	0
Flt Permitted					0.798		0.259				0.874	
Satd. Flow (perm)	0	1842	0	0	1494	0	488	3507	0	0	3125	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			3			24			1	
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		204.8			1359.2			2496.3			399.3	
Travel Time (s)		15.4			101.9			112.3			18.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	259	50	59	357	21	232	860	134	30	690	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	309	0	0	437	0	232	994	0	0	727	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases		4			8		2				6	

Lanes, Volumes, Timings
 9: McLaughlin Road & Street A

06/07/2024

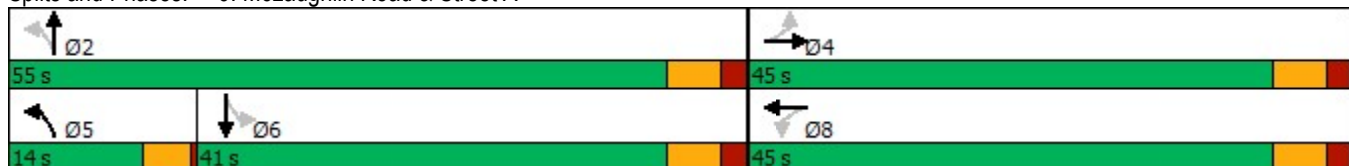


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		8.0	22.0		22.0	22.0	
Total Split (s)	45.0	45.0		45.0	45.0		14.0	55.0		41.0	41.0	
Total Split (%)	45.0%	45.0%		45.0%	45.0%		14.0%	55.0%		41.0%	41.0%	
Maximum Green (s)	39.0	39.0		39.0	39.0		10.0	49.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0			6.0		4.0	6.0			6.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		27.9			27.9		51.4	49.4			36.0	
Actuated g/C Ratio		0.31			0.31		0.58	0.55			0.40	
v/c Ratio		0.53			0.93		0.56	0.51			0.58	
Control Delay		27.3			57.7		16.5	14.4			24.5	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		27.3			57.7		16.5	14.4			24.5	
LOS		C			E		B	B			C	
Approach Delay		27.3			57.7			14.8			24.5	
Approach LOS		C			E			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	89.3
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	25.8
Intersection LOS:	C
Intersection Capacity Utilization:	108.2%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 9: McLaughlin Road & Street A



Queues

9: McLaughlin Road & Street A

06/07/2024



Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	309	437	232	994	727
v/c Ratio	0.53	0.93	0.56	0.51	0.58
Control Delay	27.3	57.7	16.5	14.4	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	57.7	16.5	14.4	24.5
Queue Length 50th (m)	41.4	71.3	17.9	50.5	50.1
Queue Length 95th (m)	64.1	109.3	38.7	86.3	82.0
Internal Link Dist (m)	180.8	1335.2		2472.3	375.3
Turn Bay Length (m)			20.0		
Base Capacity (vph)	816	658	427	1949	1260
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.66	0.54	0.51	0.58

Intersection Summary

HCM Signalized Intersection Capacity Analysis

9: McLaughlin Road & Street A

06/07/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Volume (vph)	0	259	50	59	357	21	232	860	134	30	690	7
Future Volume (vph)	0	259	50	59	357	21	232	860	134	30	690	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		4.0	6.0			6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frt		0.98			0.99		1.00	0.98			1.00	
Flt Protected		1.00			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1842			1859		1789	3506			3566	
Flt Permitted		1.00			0.80		0.26	1.00			0.87	
Satd. Flow (perm)		1842			1493		489	3506			3123	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	259	50	59	357	21	232	860	134	30	690	7
RTOR Reduction (vph)	0	8	0	0	2	0	0	11	0	0	1	0
Lane Group Flow (vph)	0	301	0	0	435	0	232	983	0	0	726	0
Turn Type		NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.9			27.9		49.3	49.3			36.0	
Effective Green, g (s)		27.9			27.9		49.3	49.3			36.0	
Actuated g/C Ratio		0.31			0.31		0.55	0.55			0.40	
Clearance Time (s)		6.0			6.0		4.0	6.0			6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		576			466		405	1937			1260	
v/s Ratio Prot		0.16					c0.06	0.28				
v/s Ratio Perm					c0.29		c0.26				0.23	
v/c Ratio		0.52			0.93		0.57	0.51			0.58	
Uniform Delay, d1		25.2			29.7		11.5	12.4			20.7	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		0.9			25.8		2.0	1.0			1.9	
Delay (s)		26.0			55.6		13.5	13.4			22.6	
Level of Service		C			E		B	B			C	
Approach Delay (s)		26.0			55.6			13.4			22.6	
Approach LOS		C			E			B			C	

Intersection Summary		
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.73	
Actuated Cycle Length (s)	89.2	Sum of lost time (s) 16.0
Intersection Capacity Utilization	108.2%	ICU Level of Service G
Analysis Period (min)	15	

c Critical Lane Group

Lanes, Volumes, Timings
 10: Street D & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↑	↘	↗
Traffic Volume (vph)	1203	41	168	1406	38	117
Future Volume (vph)	1203	41	168	1406	38	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.995			0.850		
Flt Protected				0.995	0.950	
Satd. Flow (prot)	3561	0	0	3561	1789	1601
Flt Permitted				0.995	0.950	
Satd. Flow (perm)	3561	0	0	3561	1789	1601
Link Speed (k/h)	70			70	48	
Link Distance (m)	349.1			1007.8	330.5	
Travel Time (s)	18.0			51.8	24.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1203	41	168	1406	38	117
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1244	0	0	1574	38	117
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	14		24	24		14
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	91.6%
Analysis Period (min)	15
	ICU Level of Service F

HCM Unsignalized Intersection Capacity Analysis
 10: Street D & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↗	↗
Traffic Volume (veh/h)	1203	41	168	1406	38	117
Future Volume (Veh/h)	1203	41	168	1406	38	117
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1203	41	168	1406	38	117
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	349					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1244		2262	622
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			813		2082	39
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			74		0	86
cM capacity (veh/h)			650		27	823
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	802	442	637	937	38	117
Volume Left	0	0	168	0	38	0
Volume Right	0	41	0	0	0	117
cSH	1700	1700	650	1700	27	823
Volume to Capacity	0.47	0.26	0.26	0.55	1.39	0.14
Queue Length 95th (m)	0.0	0.0	7.8	0.0	34.2	3.8
Control Delay (s)	0.0	0.0	6.6	0.0	525.2	10.1
Lane LOS			A		F	B
Approach Delay (s)	0.0		2.7		136.4	
Approach LOS			F			
Intersection Summary						
Average Delay			8.5			
Intersection Capacity Utilization			91.6%		ICU Level of Service	
Analysis Period (min)			15			
						F

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	396	606	4249	2637	130
Future Volume (vph)	59	396	606	4249	2637	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	85.0		50.0			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1789	5142	5142	1601
Flt Permitted	0.950		0.062			
Satd. Flow (perm)	1789	1601	117	5142	5142	1601
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		1				86
Link Speed (k/h)	48			70	70	
Link Distance (m)	1359.2			928.0	855.3	
Travel Time (s)	101.9			47.7	44.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	396	606	4249	2637	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	396	606	4249	2637	130
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	pm+pt	NA	NA	Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			6

Lanes, Volumes, Timings
12: Hurontario Street & Street A

06/07/2024

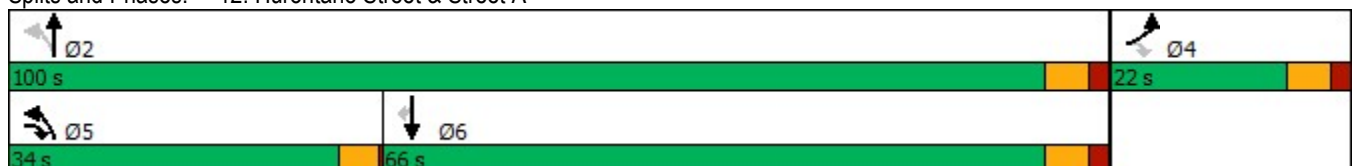


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	8.0	8.0	22.0	22.0	22.0
Total Split (s)	22.0	34.0	34.0	100.0	66.0	66.0
Total Split (%)	18.0%	27.9%	27.9%	82.0%	54.1%	54.1%
Maximum Green (s)	16.0	30.0	30.0	94.0	60.0	60.0
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	0.5	0.5	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	-2.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	4.0	4.0	6.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	Max	Max
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	9.1	42.6	98.3	97.2	62.2	60.2
Actuated g/C Ratio	0.08	0.38	0.87	0.86	0.55	0.53
v/c Ratio	0.41	0.66	1.05	0.96	0.93	0.15
Control Delay	58.9	34.5	84.7	16.4	31.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	34.5	84.7	16.4	31.6	6.3
LOS	E	C	F	B	C	A
Approach Delay	37.7			24.9	30.4	
Approach LOS	D			C	C	

Intersection Summary

Area Type:	Other
Cycle Length:	122
Actuated Cycle Length:	112.8
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.05
Intersection Signal Delay:	27.5
Intersection LOS:	C
Intersection Capacity Utilization:	99.5%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 12: Hurontario Street & Street A



Queues

12: Hurontario Street & Street A

06/07/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	59	396	606	4249	2637	130
v/c Ratio	0.41	0.66	1.05	0.96	0.93	0.15
Control Delay	58.9	34.5	84.7	16.4	31.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	34.5	84.7	16.4	31.6	6.3
Queue Length 50th (m)	12.9	71.0	~136.3	250.8	197.6	4.7
Queue Length 95th (m)	26.2	103.4	#214.2	#404.0	#257.1	15.0
Internal Link Dist (m)	1335.2		904.0		831.3	
Turn Bay Length (m)	30.0		50.0			
Base Capacity (vph)	254	604	577	4432	2835	894
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.66	1.05	0.96	0.93	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

12: Hurontario Street & Street A

06/07/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	396	606	4249	2637	130
Future Volume (vph)	59	396	606	4249	2637	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0	2.0	4.0	4.0	6.0
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1789	1601	1789	5142	5142	1601
Flt Permitted	0.95	1.00	0.06	1.00	1.00	1.00
Satd. Flow (perm)	1789	1601	117	5142	5142	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	59	396	606	4249	2637	130
RTOR Reduction (vph)	0	1	0	0	0	41
Lane Group Flow (vph)	59	395	606	4249	2637	89
Turn Type	Prot	pm+ov	pm+pt	NA	NA	Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	7.8	37.9	94.4	94.4	60.3	60.3
Effective Green, g (s)	7.8	37.9	96.4	96.4	62.3	60.3
Actuated g/C Ratio	0.07	0.33	0.84	0.84	0.55	0.53
Clearance Time (s)	6.0	4.0	4.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	122	531	568	4340	2805	845
v/s Ratio Prot	0.03	c0.20	c0.30	c0.83	0.51	
v/s Ratio Perm		0.05	0.60			0.06
v/c Ratio	0.48	0.74	1.07	0.98	0.94	0.11
Uniform Delay, d1	51.3	33.9	36.7	8.0	24.2	13.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	5.6	56.9	9.6	7.8	0.3
Delay (s)	54.3	39.5	93.6	17.6	32.0	13.7
Level of Service	D	D	F	B	C	B
Approach Delay (s)	41.4			27.1	31.2	
Approach LOS	D			C	C	

Intersection Summary

HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	114.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
 13: Chinguacousy Road & Street A

06/07/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	18	842	126	20	628
Future Volume (vph)	82	18	842	126	20	628
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850	0.982			
Fl _t Protected	0.950					0.998
Satd. Flow (prot)	1789	1601	1850	0	0	1880
Fl _t Permitted	0.950					0.998
Satd. Flow (perm)	1789	1601	1850	0	0	1880
Link Speed (k/h)	48		48			48
Link Distance (m)	1161.8		2541.5			542.2
Travel Time (s)	87.1		190.6			40.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	20	915	137	22	683
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	20	1052	0	0	705
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	63.2%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis

13: Chinguacousy Road & Street A

06/07/2024



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	82	18	842	126	20	628
Future Volume (Veh/h)	82	18	842	126	20	628
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)	89	20	915	137	22	683
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	1710	984			1052	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1710	984			1052	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	8	93			97	
cM capacity (veh/h)	96	302			662	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	89	20	1052	705		
Volume Left	89	0	0	22		
Volume Right	0	20	137	0		
cSH	96	302	1700	662		
Volume to Capacity	0.92	0.07	0.62	0.03		
Queue Length 95th (m)	40.5	1.6	0.0	0.8		
Control Delay (s)	150.8	17.8	0.0	0.9		
Lane LOS	F	C		A		
Approach Delay (s)	126.4		0.0	0.9		
Approach LOS	F					
Intersection Summary						
Average Delay			7.7			
Intersection Capacity Utilization			63.2%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 14: Street F & Old School Road

06/07/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	
Traffic Volume (vph)	799	11	198	882	11	102
Future Volume (vph)	799	11	198	882	11	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t	0.998				0.878	
Fl _t Protected				0.991	0.995	
Satd. Flow (prot)	3571	0	0	3546	1645	0
Fl _t Permitted				0.991	0.995	
Satd. Flow (perm)	3571	0	0	3546	1645	0
Link Speed (k/h)	70			70	48	
Link Distance (m)	455.6			437.6	183.7	
Travel Time (s)	23.4			22.5	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	868	12	215	959	12	111
Shared Lane Traffic (%)						
Lane Group Flow (vph)	880	0	0	1174	123	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	69.5%			ICU Level of Service C		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 14: Street F & Old School Road

06/07/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	799	11	198	882	11	102
Future Volume (Veh/h)	799	11	198	882	11	102
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)	868	12	215	959	12	111
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			880		1784	440
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			880		1784	440
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			72		77	80
cM capacity (veh/h)			764		52	565
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	579	301	535	639	123	
Volume Left	0	0	215	0	12	
Volume Right	0	12	0	0	111	
cSH	1700	1700	764	1700	289	
Volume to Capacity	0.34	0.18	0.28	0.38	0.43	
Queue Length 95th (m)	0.0	0.0	8.8	0.0	15.4	
Control Delay (s)	0.0	0.0	7.0	0.0	26.4	
Lane LOS	A			D		
Approach Delay (s)	0.0		3.2		26.4	
Approach LOS	D					
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			69.5%	ICU Level of Service	C	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 15: McLaughlin Road & Street E

06/07/2024



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	7	0	32	32	0	17	50	792	50	18	663	7
Future Volume (vph)	7	0	32	32	0	17	50	792	50	18	663	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.890			0.954			0.992			0.998	
Flt Protected		0.991			0.968			0.997			0.999	
Satd. Flow (prot)	0	1661	0	0	1739	0	0	3539	0	0	3568	0
Flt Permitted		0.991			0.968			0.997			0.999	
Satd. Flow (perm)	0	1661	0	0	1739	0	0	3539	0	0	3568	0
Link Speed (k/h)		48			48			80			80	
Link Distance (m)		168.6			139.2			399.3			188.9	
Travel Time (s)		12.6			10.4			18.0			8.5	
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
Adj. Flow (vph)	8	0	35	35	0	18	54	861	54	20	721	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	53	0	0	969	0	0	749	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.0%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 15: McLaughlin Road & Street E

06/07/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	32	32	0	17	50	792	50	18	663	7
Future Volume (Veh/h)	7	0	32	32	0	17	50	792	50	18	663	7
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)	8	0	35	35	0	18	54	861	54	20	721	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)												
								399				189
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85				0.85		
vC, conflicting volume	1322	1788	364	1432	1765	458	729			915		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1030	1577	364	1159	1550	15	729			552		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	94	69	100	98	94			98		
cM capacity (veh/h)	147	85	632	114	88	903	871			864		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	43	53	484	484	380	368						
Volume Left	8	35	54	0	20	0						
Volume Right	35	18	0	54	0	8						
cSH	391	162	871	1700	864	1700						
Volume to Capacity	0.11	0.33	0.06	0.28	0.02	0.22						
Queue Length 95th (m)	2.8	10.1	1.5	0.0	0.5	0.0						
Control Delay (s)	15.3	37.8	1.7	0.0	0.7	0.0						
Lane LOS	C	E	A		A							
Approach Delay (s)	15.3	37.8	0.9		0.4							
Approach LOS	C	E										
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			62.0%	ICU Level of Service		B						
Analysis Period (min)			15									

SimTraffic Outputs - No GTA West

Queuing and Blocking Report
AM Peak Hour

06/07/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	16.4	22.4	21.6	20.0
Average Queue (m)	10.9	11.5	10.2	8.9
95th Queue (m)	16.5	18.3	18.0	15.5
Link Distance (m)	584.1	1366.4	3068.6	336.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	27.9	29.1	26.6	21.0
Average Queue (m)	16.1	16.4	11.4	9.9
95th Queue (m)	24.8	25.3	20.6	16.3
Link Distance (m)	1366.4	1337.7	3066.8	254.7
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	27.6	89.8	25.9	46.3	38.2	82.0	66.1	19.0	96.3	81.2
Average Queue (m)	10.6	48.7	7.6	21.5	13.9	36.6	28.2	7.1	55.8	45.8
95th Queue (m)	23.3	80.0	20.1	39.0	30.4	63.9	53.7	16.4	82.8	75.0
Link Distance (m)		1337.7		428.2		418.6	418.6		273.4	273.4
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	40.0		65.0		35.0			35.0		
Storage Blk Time (%)		22			2	5			16	
Queuing Penalty (veh)		11			12	3			5	

Queuing and Blocking Report
AM Peak Hour

06/07/2024

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	119.1	173.1	117.0	78.2
Average Queue (m)	46.6	79.6	59.6	33.9
95th Queue (m)	89.9	147.1	108.4	62.2
Link Distance (m)	267.7	1404.3	337.1	3068.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	WB	WB	B36	NB	NB	SB	SB
Directions Served	L	TR	L	TR	T	LT	R	L	TR
Maximum Queue (m)	52.0	163.8	84.8	170.2	61.8	57.2	29.2	56.6	66.1
Average Queue (m)	4.7	86.5	31.4	61.2	2.1	27.1	10.0	26.6	40.5
95th Queue (m)	31.4	147.6	68.9	133.1	31.3	47.8	21.4	49.0	63.2
Link Distance (m)		1404.3		1248.3	123.7	333.2		3066.8	3066.8
Upstream Blk Time (%)					0				
Queuing Penalty (veh)					0				
Storage Bay Dist (m)	30.0		30.0				30.0		
Storage Blk Time (%)		26	14	16		8	0		
Queuing Penalty (veh)		3	93	17		7	0		

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	T	T
Maximum Queue (m)	106.5	108.4	101.4	26.9	57.5	89.9	221.8	215.2	62.8	33.7	50.7	44.9
Average Queue (m)	48.4	60.9	62.8	10.9	25.4	54.3	119.9	89.3	12.2	13.9	28.3	17.1
95th Queue (m)	84.8	95.6	95.0	21.6	50.1	105.5	223.7	211.2	51.4	28.6	46.4	37.5
Link Distance (m)		123.7	123.7				736.6	736.6			362.9	362.9
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (m)	105.0			105.0	45.0	45.0			55.0	45.0		
Storage Blk Time (%)	0	0	0		1	4	57	8		0	1	0
Queuing Penalty (veh)	0	1	0		3	9	102	5		0	1	0

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	R
Maximum Queue (m)	47.0	44.2	89.0	84.0	33.4
Average Queue (m)	14.2	15.6	53.1	49.3	12.2
95th Queue (m)	31.4	34.7	78.6	75.4	24.8
Link Distance (m)			591.2	591.2	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	55.0	140.0			80.0
Storage Blk Time (%)	0			0	
Queuing Penalty (veh)	0			1	

Zone Summary

Zone wide Queuing Penalty: 271

Queuing and Blocking Report
PM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	20.3	27.5	23.9	15.4
Average Queue (m)	11.3	16.3	11.5	7.4
95th Queue (m)	17.7	24.1	19.9	12.8
Link Distance (m)	584.1	1366.4	3068.6	336.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	30.4	54.2	31.6	19.2
Average Queue (m)	15.0	26.0	15.3	8.2
95th Queue (m)	24.5	44.0	26.6	14.7
Link Distance (m)	1366.4	1337.7	3066.8	254.7
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	30.2	82.4	26.8	94.2	76.6	125.8	120.8	17.2	105.4	95.6
Average Queue (m)	12.6	42.0	8.6	46.5	24.5	72.5	71.3	6.2	63.5	51.4
95th Queue (m)	25.3	70.7	19.8	78.8	53.2	110.0	110.7	15.0	99.6	87.6
Link Distance (m)		1337.7		428.2		418.6	418.6		273.4	273.4
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	40.0		65.0		35.0			35.0		
Storage Blk Time (%)	0	15		4	3	21			22	
Queuing Penalty (veh)	0	10		2	22	36			6	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	111.8	241.0	114.1	63.5
Average Queue (m)	43.0	111.6	58.4	32.6
95th Queue (m)	85.7	214.0	102.7	57.0
Link Distance (m)	267.7	1404.3	337.1	3068.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	WB	WB	B36	NB	NB	SB	SB
Directions Served	L	TR	L	TR	T	LT	R	L	TR
Maximum Queue (m)	94.8	148.3	84.8	142.0	113.8	84.4	52.8	45.7	54.2
Average Queue (m)	7.9	81.9	22.2	64.4	4.6	49.0	14.4	22.6	26.8
95th Queue (m)	44.8	138.7	56.2	121.1	45.9	77.4	38.8	41.1	47.3
Link Distance (m)		1404.3		1248.3	123.7	333.2		3066.8	3066.8
Upstream Blk Time (%)					0				
Queuing Penalty (veh)					0				
Storage Bay Dist (m)	30.0		30.0				30.0		
Storage Blk Time (%)	0	25	4	18		27	1		
Queuing Penalty (veh)	0	5	35	18		26	2		

Queuing and Blocking Report
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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	B36	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	R	T	L	L	T	T	R	L	T
Maximum Queue (m)	118.7	125.8	107.9	26.4	134.2	57.7	90.0	617.0	604.9	104.4	60.5	106.9
Average Queue (m)	82.3	68.9	52.0	7.9	35.7	26.8	83.7	439.9	426.3	24.4	23.7	52.8
95th Queue (m)	129.6	132.8	99.2	18.5	202.5	49.7	115.1	770.0	759.5	88.4	50.2	85.2
Link Distance (m)		123.7	123.7		1248.3			736.6	736.6			362.9
Upstream Blk Time (%)	7	7	0					13	10			
Queuing Penalty (veh)	0	32	1					0	0			
Storage Bay Dist (m)	105.0			105.0		45.0	45.0			55.0	45.0	
Storage Blk Time (%)	16	1	0			3	5	82	23		4	13
Queuing Penalty (veh)	38	3	0			9	15	197	14		10	12

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (m)	94.8	57.0	49.8	93.4	91.4	45.5
Average Queue (m)	44.2	18.4	22.1	51.0	47.0	19.0
95th Queue (m)	78.5	38.7	40.9	78.6	77.3	36.3
Link Distance (m)	362.9			591.2	591.2	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		55.0	140.0			80.0
Storage Blk Time (%)	3				1	
Queuing Penalty (veh)	6				3	

Zone Summary

Zone wide Queuing Penalty: 503

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	23.2	23.6	25.9	50.0	24.6
Average Queue (m)	13.4	9.4	13.3	21.0	12.4
95th Queue (m)	20.3	17.1	21.6	38.3	21.1
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	73.1	29.6	39.7	15.8	48.2	22.7
Average Queue (m)	30.8	14.0	18.2	7.2	18.7	11.0
95th Queue (m)	58.2	24.2	32.2	12.4	37.4	18.0
Link Distance (m)	1366.0		1330.9	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		0	1			
Queuing Penalty (veh)		0	2			

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.8	199.1	128.4	153.4	59.8	103.5	99.7	92.9	35.9	76.4	163.1	161.8
Average Queue (m)	89.3	76.3	78.3	51.8	26.4	69.8	63.6	48.5	7.6	9.8	114.1	104.9
95th Queue (m)	145.6	150.8	148.5	145.9	55.5	95.0	91.2	82.2	23.4	37.7	148.4	142.9
Link Distance (m)		1330.9		422.7		576.5	576.5	576.5			273.0	273.0
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	58	21	31	0	22	24		2		0	37	
Queuing Penalty (veh)	204	70	58	1	104	13		2		1	12	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	131.9	56.5
Average Queue (m)	78.5	9.9
95th Queue (m)	114.5	31.2
Link Distance (m)	273.0	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	8	
Queuing Penalty (veh)	14	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	60.2	53.0	18.1	69.5	60.1	66.1	141.0	126.8
Average Queue (m)	31.9	17.2	5.1	32.4	29.8	34.1	61.4	62.7
95th Queue (m)	52.4	39.4	13.9	59.5	55.8	60.3	120.3	105.9
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	9.8	54.2	59.1	64.8	50.2	56.7	65.7	71.9	152.5	69.0	129.3	104.5
Average Queue (m)	1.9	32.0	35.9	35.9	17.6	16.2	22.9	28.3	72.1	24.8	57.8	59.3
95th Queue (m)	7.3	49.6	54.7	56.6	38.8	43.1	51.3	60.1	145.0	76.2	103.7	93.7
Link Distance (m)		1402.4	1402.4	1402.4		1035.9	1035.9	1035.9	325.8		2472.6	2472.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)		7			5	3			45	0		
Queuing Penalty (veh)		1			10	3			39	0		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB	
Directions Served	L	T	T	T	R	L	L	T	T	T		R	L
Maximum Queue (m)	73.4	82.5	84.0	82.8	33.1	49.2	59.1	72.6	70.3	57.1		37.7	52.8
Average Queue (m)	36.6	43.1	48.3	50.9	11.0	24.2	32.3	47.1	44.8	31.0		13.2	19.8
95th Queue (m)	63.0	72.9	77.3	80.4	24.9	44.2	50.6	66.4	62.3	56.3		25.8	40.2
Link Distance (m)		332.2	332.2	332.2					736.2	736.2		736.2	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (m)	105.0				105.0	45.0	45.0					55.0	45.0
Storage Blk Time (%)						0	2	11		1			2
Queuing Penalty (veh)						0	3	21		1			3

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	61.8	45.2	31.6	97.8	112.7	106.2	35.3
Average Queue (m)	32.0	19.5	13.8	51.2	63.2	62.6	15.9
95th Queue (m)	52.8	41.4	27.3	87.7	93.9	92.6	29.1
Link Distance (m)	359.1	359.1			587.4	587.4	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	2	0				2	
Queuing Penalty (veh)	1	0				5	

Zone Summary

Zone wide Queuing Penalty: 569

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	30.5	21.7	29.9	64.9	25.1
Average Queue (m)	14.1	12.4	17.5	27.9	12.5
95th Queue (m)	24.5	19.3	26.1	50.5	20.7
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	81.1	39.6	50.7	30.4	46.3	18.3
Average Queue (m)	36.2	21.7	28.3	12.8	19.2	8.5
95th Queue (m)	67.9	35.9	45.8	22.7	35.6	14.6
Link Distance (m)	1366.0		1330.9	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		3	8			
Queuing Penalty (veh)		13	21			

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.9	574.4	102.8	171.3	119.8	182.4	184.5	172.8	110.0	71.3	155.7	142.6
Average Queue (m)	128.9	333.9	39.7	83.8	52.6	117.2	117.2	108.9	35.6	21.1	110.1	96.7
95th Queue (m)	166.3	710.9	84.8	147.8	114.6	172.8	171.7	164.3	101.3	59.4	145.5	133.5
Link Distance (m)		1330.9		422.7		576.5	576.5	576.5			273.0	273.0
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	81	28	0	38	15	38		23	0	11	48	
Queuing Penalty (veh)	229	111	1	77	119	67		68	2	55	15	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	109.8	64.7
Average Queue (m)	68.2	24.1
95th Queue (m)	102.3	51.3
Link Distance (m)	273.0	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	4	0
Queuing Penalty (veh)	14	1

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	75.1	63.7	40.9	82.1	73.5	79.5	88.7	52.0
Average Queue (m)	46.6	33.4	12.0	49.0	51.3	56.3	47.9	25.4
95th Queue (m)	69.4	61.1	31.9	70.7	70.1	75.9	78.1	45.7
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	25.4	70.5	70.6	69.3	43.3	71.5	89.5	90.7	116.2	79.9	54.1	50.8
Average Queue (m)	6.9	41.2	39.8	41.1	17.9	33.8	45.9	53.7	65.4	18.4	23.8	23.6
95th Queue (m)	18.6	63.3	59.4	61.7	35.7	62.9	77.0	83.6	98.7	59.5	44.9	47.1
Link Distance (m)		1402.4	1402.4	1402.4		1035.9	1035.9	1035.9	325.8		2472.6	2472.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)	0	12			4	9			34	0		
Queuing Penalty (veh)	1	4			13	10			36	0		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	159.5	101.1	55.7	61.6	30.6	59.6	89.8	144.1	140.2	126.8	67.4	74.9
Average Queue (m)	96.1	29.2	33.5	36.3	11.3	32.5	58.1	90.5	87.8	78.1	26.6	59.8
95th Queue (m)	149.5	62.5	53.2	58.9	23.8	54.7	100.5	165.8	158.6	145.1	83.7	88.1
Link Distance (m)		332.2	332.2	332.2				736.2	736.2	736.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)	10	0				3	6	51		30	0	62
Queuing Penalty (veh)	18	0				6	14	129		36	0	188

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	204.4	183.3	59.4	92.6	96.6	84.6	112.5
Average Queue (m)	95.9	84.4	18.3	42.3	53.0	49.1	61.0
95th Queue (m)	197.3	179.9	43.5	87.3	80.2	74.7	103.3
Link Distance (m)	359.1	359.1			587.4	587.4	
Upstream Blk Time (%)	0						
Queuing Penalty (veh)	0						
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	15	7	0	1	0	1	4
Queuing Penalty (veh)	22	16	0	2	0	3	13

Zone Summary

Zone wide Queuing Penalty: 1305

Queuing and Blocking Report
AM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	25.9	18.4	21.8	43.2	26.3
Average Queue (m)	13.4	9.2	12.5	20.4	12.2
95th Queue (m)	21.1	15.6	19.2	34.7	21.1
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	72.2	30.9	42.2	17.5	54.4	25.2
Average Queue (m)	31.1	13.3	18.0	8.1	18.1	11.2
95th Queue (m)	58.0	23.6	31.1	14.7	36.4	19.5
Link Distance (m)	1366.0		1330.9	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		0	1			
Queuing Penalty (veh)		1	2			

Queuing and Blocking Report
AM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.2	241.1	147.3	153.0	65.4	111.2	110.7	94.5	28.4	50.6	154.4	153.8
Average Queue (m)	94.0	128.8	72.6	52.2	28.2	70.5	66.4	52.6	8.1	11.6	107.5	98.2
95th Queue (m)	153.1	345.1	142.5	138.9	72.9	100.0	96.3	84.5	19.8	38.4	141.7	132.9
Link Distance (m)		1330.9		422.7		576.5	576.5	576.5			273.0	273.0
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	62	25	29	0	21	26		2		0	36	
Queuing Penalty (veh)	220	83	54	0	99	14		2		1	12	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	126.2	56.9
Average Queue (m)	73.0	10.3
95th Queue (m)	105.4	31.5
Link Distance (m)	273.0	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	6	
Queuing Penalty (veh)	11	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	59.5	44.9	26.7	69.4	62.5	66.1	101.3	113.7
Average Queue (m)	30.8	16.2	5.3	32.4	29.9	33.8	58.4	58.5
95th Queue (m)	50.9	35.8	16.2	59.4	56.4	60.5	92.2	95.3
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
AM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	11.2	63.4	64.2	68.7	43.4	63.4	63.5	77.2	206.2	80.0	112.1	112.8
Average Queue (m)	2.3	34.3	36.6	38.4	19.3	16.2	22.0	28.5	85.3	23.0	58.9	67.9
95th Queue (m)	8.4	54.1	55.9	59.0	38.1	42.1	50.2	59.7	202.6	73.3	125.0	102.2
Link Distance (m)		1402.4	1402.4	1402.4		1035.9	1035.9	1035.9	325.8		2472.6	2472.6
Upstream Blk Time (%)									1			
Queuing Penalty (veh)									0			
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)		9			5	2			48	0		
Queuing Penalty (veh)		2			11	3			41	0		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	79.0	86.1	90.4	85.6	28.6	50.7	53.0	72.5	71.5	63.5	28.8	42.8
Average Queue (m)	38.6	45.3	51.5	54.3	10.2	25.2	34.1	47.6	46.6	34.0	13.0	19.1
95th Queue (m)	66.6	75.2	82.2	84.1	21.8	45.9	49.8	65.0	65.5	59.9	24.2	37.5
Link Distance (m)		332.2	332.2	332.2				736.2	736.2	736.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)		0				1	3	13		0		1
Queuing Penalty (veh)		0				1	5	24		0		2

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	57.0	44.2	36.6	103.0	95.1	92.7	40.6
Average Queue (m)	32.0	18.9	14.0	58.6	56.8	55.3	16.8
95th Queue (m)	52.6	40.5	28.8	97.4	86.2	85.1	32.5
Link Distance (m)	359.1	359.1			587.4	587.4	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	2	0				1	
Queuing Penalty (veh)	1	0				3	

Intersection: 9: McLaughlin Road & Street A

Movement	WB	SB
Directions Served	LTR	LT
Maximum Queue (m)	16.6	1.4
Average Queue (m)	9.2	0.1
95th Queue (m)	15.7	1.4
Link Distance (m)	191.9	574.3
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 592

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	33.8	24.1	32.8	55.9	24.1
Average Queue (m)	14.9	12.4	17.9	27.6	11.9
95th Queue (m)	24.4	20.1	26.4	47.3	19.9
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	94.3	38.2	63.0	28.5	38.0	19.2
Average Queue (m)	38.2	19.9	26.9	13.7	17.9	8.4
95th Queue (m)	73.2	32.1	45.5	23.4	30.7	15.2
Link Distance (m)	1366.0		1330.9	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		1	6			
Queuing Penalty (veh)		7	17			

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.9	376.8	106.6	183.2	119.9	218.1	211.2	208.2	110.0	121.7	166.2	153.0
Average Queue (m)	122.5	196.7	48.5	96.5	63.9	131.7	129.1	122.7	55.5	33.3	114.0	100.7
95th Queue (m)	172.2	410.5	118.5	199.3	136.3	192.7	188.2	185.8	133.1	85.2	154.4	143.0
Link Distance (m)		1330.9		422.7		576.5	576.5	576.5			273.0	273.0
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	76	22	1	39	13	40		28		27	48	
Queuing Penalty (veh)	213	90	3	79	103	72		83		131	15	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	117.3	71.2
Average Queue (m)	72.9	22.8
95th Queue (m)	111.9	48.9
Link Distance (m)	273.0	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	5	0
Queuing Penalty (veh)	17	1

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	77.6	65.7	40.2	77.7	79.3	85.9	91.2	49.8
Average Queue (m)	47.2	33.4	9.5	51.4	52.7	58.8	49.2	23.1
95th Queue (m)	69.6	62.3	24.7	73.0	72.8	78.4	82.3	41.1
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	30.0	70.4	73.6	69.9	50.5	72.7	81.8	93.5	132.7	79.6	46.6	57.8
Average Queue (m)	8.7	41.6	41.8	41.5	18.8	33.5	45.5	54.7	71.3	17.0	21.3	26.6
95th Queue (m)	20.9	64.1	63.7	63.5	39.6	63.4	76.1	86.8	111.7	56.9	38.7	49.7
Link Distance (m)		1402.4	1402.4	1402.4		1035.9	1035.9	1035.9	325.8		2472.6	2472.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)	0	13			6	10			37	0		
Queuing Penalty (veh)	1	6			18	10			38	0		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	172.2	158.7	70.2	58.7	25.4	61.1	89.9	208.0	196.7	178.0	85.9	74.9
Average Queue (m)	103.0	36.8	34.5	35.2	11.0	29.9	67.4	121.5	117.7	105.6	39.2	62.2
95th Queue (m)	163.6	97.9	56.9	55.5	22.6	52.5	112.1	220.1	211.6	191.0	114.9	93.4
Link Distance (m)		332.2	332.2	332.2				736.2	736.2	736.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)	15	0				2	6	67		50		68
Queuing Penalty (veh)	27	0				4	13	168		60		209

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	174.7	154.4	69.9	90.8	103.5	92.0	127.5
Average Queue (m)	106.4	92.2	18.0	53.7	58.8	52.6	60.8
95th Queue (m)	184.1	168.6	42.0	113.0	95.0	81.9	106.3
Link Distance (m)	359.1	359.1			587.4	587.4	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	16	10		0	0	1	4
Queuing Penalty (veh)	24	24		0	0	5	14

Intersection: 9: McLaughlin Road & Street A

Movement	WB	SB
Directions Served	LTR	LT
Maximum Queue (m)	19.4	7.5
Average Queue (m)	8.4	0.9
95th Queue (m)	16.4	4.8
Link Distance (m)	191.9	574.3
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1452

Queuing and Blocking Report
AM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	33.0	30.2	40.6	58.0	42.0
Average Queue (m)	17.1	15.1	17.7	25.4	15.6
95th Queue (m)	27.9	27.2	33.4	45.6	32.2
Link Distance (m)	583.9		1365.9	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	1		
Queuing Penalty (veh)		1	1		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	375.4	55.0	60.1	30.8	92.4	85.8
Average Queue (m)	114.7	27.1	28.6	14.5	37.0	27.4
95th Queue (m)	300.3	47.9	51.7	27.5	76.3	64.4
Link Distance (m)	1365.9		333.1	574.2	574.2	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		7	5			
Queuing Penalty (veh)		22	10			

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	140.0	990.7	164.9	387.9	65.8	132.5	123.2	112.9	63.2	129.9	277.8	266.6
Average Queue (m)	139.0	712.5	141.7	218.8	20.9	81.3	76.4	70.4	13.4	33.7	219.1	207.1
95th Queue (m)	150.4	1183.2	202.0	437.4	48.1	116.9	107.5	99.7	39.5	113.8	303.3	294.7
Link Distance (m)		987.0		422.7		837.5	837.5	837.5			273.0	273.0
Upstream Blk Time (%)		10		9							11	9
Queuing Penalty (veh)		88		0							0	0
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	54	87	70	28	10	27		12		2	52	
Queuing Penalty (veh)	210	397	160	106	57	14		22		13	17	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	253.4	110.0
Average Queue (m)	180.6	70.1
95th Queue (m)	282.5	147.7
Link Distance (m)	273.0	
Upstream Blk Time (%)	9	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	41	
Queuing Penalty (veh)	100	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	85.5	76.0	55.1	149.6	101.0	87.3	84.9	98.2
Average Queue (m)	54.7	44.4	15.7	86.0	48.5	51.7	45.7	48.6
95th Queue (m)	79.0	71.8	41.7	166.3	82.2	80.4	74.5	81.3
Link Distance (m)	266.7	266.7	266.7	1398.6	1398.6	1398.6	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B36	NB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	T	L	T	TR
Maximum Queue (m)	27.9	75.6	80.1	85.3	62.8	66.6	78.8	103.5	1.0	27.4	43.5	38.0
Average Queue (m)	8.8	42.5	48.2	56.2	22.4	24.2	32.0	38.9	0.0	10.0	24.3	15.8
95th Queue (m)	20.8	63.9	70.3	82.0	48.1	54.8	67.0	79.7	0.7	22.9	39.0	31.7
Link Distance (m)		1398.6	1398.6	1398.6		1244.9	1244.9	1244.9	123.2		325.2	325.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					50.0		
Storage Blk Time (%)	0	11			9	5					0	
Queuing Penalty (veh)	0	6			21	6					0	

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (m)	91.0	67.4	63.7
Average Queue (m)	49.1	31.4	39.4
95th Queue (m)	79.3	50.1	56.4
Link Distance (m)		2469.7	2469.7
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	50.0		
Storage Blk Time (%)	11	0	
Queuing Penalty (veh)	23	1	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	L	L	T	T	T	R
Maximum Queue (m)	91.5	100.6	104.9	117.8	68.3	3.3	49.8	63.5	84.4	80.7	75.4	39.4
Average Queue (m)	48.8	64.6	71.4	75.4	15.6	0.1	26.5	35.3	55.1	53.4	44.1	16.5
95th Queue (m)	81.0	90.3	99.5	106.3	40.3	2.3	47.3	58.1	75.5	72.1	67.0	30.2
Link Distance (m)		123.2	123.2	123.2		1244.9			736.2	736.2	736.2	
Upstream Blk Time (%)			0	0	0							
Queuing Penalty (veh)			0	1	0							
Storage Bay Dist (m)	105.0				105.0		45.0	45.0				55.0
Storage Blk Time (%)	0	0		1			1	3	21		2	0
Queuing Penalty (veh)	0	0		1			2	5	43		3	0

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (m)	40.5	59.9	54.3	50.6	149.8	144.0	137.2	44.4
Average Queue (m)	17.5	31.5	21.2	17.0	88.3	68.3	63.2	18.1
95th Queue (m)	34.1	50.6	43.1	38.0	164.6	148.4	134.6	34.8
Link Distance (m)		359.2	359.2			587.4	587.4	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	45.0			55.0	140.0			80.0
Storage Blk Time (%)	1	2	0	0	9	0	1	
Queuing Penalty (veh)	1	2	0	0	38	0	2	

Intersection: 9: McLaughlin Road & Street A

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	41.6	1.4	11.5
Average Queue (m)	16.5	0.0	2.2
95th Queue (m)	29.1	1.0	8.2
Link Distance (m)	1332.4	2469.7	574.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

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Intersection: 10: Street D & Old School Road

Movement	EB	NB
Directions Served	TR	LR
Maximum Queue (m)	335.7	16.5
Average Queue (m)	92.4	5.1
95th Queue (m)	320.6	13.2
Link Distance (m)	333.1	322.7
Upstream Blk Time (%)	4	
Queuing Penalty (veh)	37	
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	114.9	231.7	32.4	28.9	37.6	34.0	540.2	556.4	275.4
Average Queue (m)	34.8	133.8	15.1	7.8	11.7	9.9	69.7	95.7	73.5
95th Queue (m)	111.8	240.7	28.9	22.2	31.2	28.4	253.2	346.0	228.0
Link Distance (m)		1332.4		921.8	921.8	921.8	837.5	837.5	837.5
Upstream Blk Time (%)							0	0	0
Queuing Penalty (veh)							0	0	0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	0	76							
Queuing Penalty (veh)	0	21							

Network Summary

Network wide Queuing Penalty: 1432

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	92.5	90.5	86.0	178.4	150.9
Average Queue (m)	36.0	45.9	48.2	67.5	50.1
95th Queue (m)	68.7	78.4	81.0	144.9	115.3
Link Distance (m)	583.9		1365.9	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		33	18		
Queuing Penalty (veh)		134	47		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	1268.2	114.9	230.7	66.4	152.8	67.0
Average Queue (m)	588.8	77.1	105.2	30.1	65.4	26.2
95th Queue (m)	1248.0	125.7	222.3	55.1	137.8	50.7
Link Distance (m)	1365.9		333.1	574.2	574.2	254.7
Upstream Blk Time (%)	3		1			
Queuing Penalty (veh)	21		5			
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		55	24			
Queuing Penalty (veh)		383	100			

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	140.0	991.4	165.0	434.8	119.9	848.8	852.5	850.9	110.0	129.6	201.2	186.8
Average Queue (m)	139.8	835.9	147.2	329.0	84.9	775.9	781.7	784.3	106.5	16.2	135.9	123.9
95th Queue (m)	140.0	1235.3	215.1	517.7	156.8	988.2	987.6	983.8	133.8	67.9	184.2	171.1
Link Distance (m)		987.0		422.7		837.5	837.5	837.5			273.0	273.0
Upstream Blk Time (%)		21		34		3	5	7				
Queuing Penalty (veh)		193		0		31	55	78				
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	85	28	14	87	19	51		52	1		53	
Queuing Penalty (veh)	290	155	47	257	180	92		228	9		19	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	146.9	109.9
Average Queue (m)	94.9	53.8
95th Queue (m)	137.4	105.6
Link Distance (m)	273.0	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	15	4
Queuing Penalty (veh)	72	23

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	80.4	70.5	48.0	84.6	65.0	71.2	125.4	71.9
Average Queue (m)	56.0	44.0	16.1	49.2	42.5	49.3	76.2	35.8
95th Queue (m)	75.0	66.0	40.4	74.1	61.3	66.9	115.0	61.7
Link Distance (m)	266.7	266.7	266.7	1398.6	1398.6	1398.6	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	53.6	81.7	77.2	76.4	40.3	73.8	82.8	98.3	41.9	74.3	75.8	48.3
Average Queue (m)	19.0	46.5	45.1	46.5	14.9	36.9	49.9	60.2	21.0	48.0	44.1	28.6
95th Queue (m)	37.1	70.4	67.4	68.9	31.0	63.6	76.2	88.3	36.4	68.9	66.1	44.6
Link Distance (m)		1398.6	1398.6	1398.6		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	3	15			2	10			0	7		0
Queuing Penalty (veh)	8	18			7	11			0	8		0

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	46.6	58.7
Average Queue (m)	22.4	32.2
95th Queue (m)	40.1	49.7
Link Distance (m)	2469.7	2469.7
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	149.8	67.8	64.9	38.3	421.3	389.8	217.1	66.6	89.9	500.2	490.1
Average Queue (m)	120.7	132.7	38.4	40.4	12.9	241.2	70.5	24.3	35.6	85.1	313.5	301.9
95th Queue (m)	134.7	175.2	61.4	61.1	27.5	473.6	305.0	162.2	62.9	109.3	565.8	547.4
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	55	61										
Queuing Penalty (veh)	0	231										
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	71	0							9	12	88	
Queuing Penalty (veh)	137	3							23	29	233	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	461.6	125.0	75.0	370.3	366.1	91.9	209.0	432.1	456.3	170.0
Average Queue (m)	283.2	99.9	74.3	320.8	285.5	20.6	146.0	256.0	253.6	131.6
95th Queue (m)	520.3	173.7	78.7	442.0	463.2	58.4	261.3	600.0	605.6	196.4
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)				58	15			5	17	
Queuing Penalty (veh)				0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	85	1	98	9	14	0	55	0	4	39
Queuing Penalty (veh)	127	3	379	17	36	1	235	0	30	165

Intersection: 9: McLaughlin Road & Street A

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	36.5	14.9	24.6
Average Queue (m)	15.4	1.1	6.3
95th Queue (m)	28.7	6.7	17.2
Link Distance (m)	1332.4	2469.7	574.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Street D & Old School Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (m)	337.6	30.8	52.4
Average Queue (m)	192.6	2.2	16.2
95th Queue (m)	455.0	27.7	45.9
Link Distance (m)	333.1	987.0	322.7
Upstream Blk Time (%)	12		
Queuing Penalty (veh)	128		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	30.0	48.8	52.4	938.6	936.3	936.5	93.8	247.0	104.6
Average Queue (m)	10.3	21.4	46.4	548.6	549.3	550.3	36.4	47.3	42.4
95th Queue (m)	24.5	38.1	64.2	1187.0	1183.0	1181.6	79.9	158.8	90.6
Link Distance (m)		1332.4		921.8	921.8	921.8	837.5	837.5	837.5
Upstream Blk Time (%)				29	23	25			
Queuing Penalty (veh)				0	0	0			
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	1	4	5	26					
Queuing Penalty (veh)	1	2	55	80					

Network Summary

Network wide Queuing Penalty: 4385

Queuing and Blocking Report
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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	32.7	35.2	36.7	33.6	34.1	36.5
Average Queue (m)	15.4	16.0	14.2	12.7	16.6	14.2
95th Queue (m)	27.6	28.8	26.8	26.2	28.9	28.1
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				1	1	
Queuing Penalty (veh)				2	2	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	49.5	43.3	46.7	35.6	28.0	36.1	68.7	38.3
Average Queue (m)	28.2	25.4	23.5	8.6	14.4	12.5	28.8	15.9
95th Queue (m)	43.1	39.3	41.2	24.1	26.1	26.9	52.4	32.1
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			0	0				
Queuing Penalty (veh)			0	0				

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	990.7	988.3	164.7	338.6	305.8	49.0	114.1	113.5	103.2	42.1	129.8
Average Queue (m)	139.9	756.1	524.7	142.5	206.9	169.1	11.5	75.6	73.6	68.3	8.7	38.4
95th Queue (m)	139.9	1153.9	1161.6	196.3	477.3	440.0	30.8	108.8	103.7	98.4	25.3	123.3
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		23	6		14	4						
Queuing Penalty (veh)		113	29		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	82	7		75	0		0	22		10		2
Queuing Penalty (veh)	94	39		70	0		1	12		18		20

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	286.2	285.0	283.2	110.0
Average Queue (m)	270.2	268.0	261.8	94.8
95th Queue (m)	302.3	304.3	316.5	150.8
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	39	36	41	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	50		50	0
Queuing Penalty (veh)	17		148	0

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	87.8	76.5	55.8	49.0	50.6	58.4	58.0	87.5	112.9
Average Queue (m)	51.6	40.2	17.9	20.0	12.8	19.1	24.9	42.7	53.0
95th Queue (m)	78.9	71.8	44.2	41.1	34.7	44.8	50.4	74.1	91.3
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				1	0				
Queuing Penalty (veh)				1	0				

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	15.1	90.8	91.7	96.0	59.8	67.0	82.0	92.7	28.3	55.4	50.9	85.8
Average Queue (m)	3.8	52.3	56.1	59.1	25.5	33.2	41.5	52.6	12.3	32.5	24.9	40.5
95th Queue (m)	11.4	80.4	84.9	90.9	47.8	64.0	75.6	87.5	25.1	48.9	44.6	71.8
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)		28			8	10				0		5
Queuing Penalty (veh)		5			20	13				0		10

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	57.0	56.9
Average Queue (m)	23.1	28.6
95th Queue (m)	43.4	47.9
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	96.9	104.4	112.3	116.1	53.7	58.8	79.3	87.2	80.0	72.8	43.2	58.4
Average Queue (m)	46.5	65.2	73.1	77.2	13.2	29.7	38.2	56.0	55.1	45.4	18.8	15.8
95th Queue (m)	79.1	96.5	103.5	108.9	34.4	51.6	59.5	77.7	74.4	68.3	33.8	36.5
Link Distance (m)		123.2	123.2	123.2				736.2	736.2	736.2		
Upstream Blk Time (%)		0	0	0	0							
Queuing Penalty (veh)		0	0	0	0							
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)	0	0		2		2	4	21		2	0	0
Queuing Penalty (veh)	0	0		2		3	8	43		4	0	0

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	82.9	73.3	52.0	119.6	108.8	110.8	45.4
Average Queue (m)	47.8	39.2	21.2	68.0	66.6	65.4	19.8
95th Queue (m)	71.6	64.7	42.3	105.9	95.9	96.0	36.6
Link Distance (m)	359.2	359.2			587.4	587.4	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	12	1	1	0		3	
Queuing Penalty (veh)	10	3	1	0		9	

Zone Summary

Zone wide Queuing Penalty: 698

Queuing and Blocking Report
PM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	66.0	80.6	77.0	137.6	75.0	84.2
Average Queue (m)	35.6	36.4	35.3	66.7	36.9	47.6
95th Queue (m)	61.2	63.9	65.1	110.5	80.8	76.1
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				30	3	
Queuing Penalty (veh)				97	11	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	427.2	430.4	52.3	98.7	60.4	147.4	174.6	65.9
Average Queue (m)	161.9	160.6	42.2	35.0	27.7	33.5	90.6	24.1
95th Queue (m)	419.9	420.8	60.5	83.2	47.9	94.4	198.1	70.2
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	10	10				1	26	
Queuing Penalty (veh)	31	31				2	82	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			7	0				
Queuing Penalty (veh)			20	2				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	139.9	989.9	988.1	111.4	66.0	52.0	119.9	847.8	848.5	844.4	110.0	129.9
Average Queue (m)	139.9	908.1	794.9	62.0	34.6	30.0	81.2	799.0	803.5	804.5	104.3	23.1
95th Queue (m)	139.9	1171.2	1266.7	101.5	55.9	49.7	157.2	957.7	956.5	954.0	139.4	92.5
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		58	17					3	5	6		
Queuing Penalty (veh)		296	89					42	61	82		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	89	1		14	0		6	46		48	0	
Queuing Penalty (veh)	101	9		19	0		62	86		215	1	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	257.1	240.0	201.7	110.0
Average Queue (m)	176.0	162.1	129.7	73.3
95th Queue (m)	251.1	232.7	205.8	130.9
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	0	0	0	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	55		29	7
Queuing Penalty (veh)	20		170	46

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	84.3	78.7	49.1	51.6	40.6	53.9	61.7	99.5	62.0
Average Queue (m)	50.3	38.5	15.7	19.0	14.2	21.3	28.5	54.8	28.3
95th Queue (m)	74.9	68.8	41.6	37.1	32.8	43.7	52.3	89.4	51.1
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				1	0				
Queuing Penalty (veh)				2	0				

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	23.6	73.0	69.4	63.7	34.9	60.4	69.2	82.3	41.6	65.7	69.2	57.2
Average Queue (m)	7.3	38.8	36.8	35.6	14.3	29.2	40.4	51.5	17.8	40.5	37.0	30.4
95th Queue (m)	17.4	64.6	59.8	58.8	28.3	54.2	64.6	78.3	32.7	60.9	62.2	51.8
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	16			1	7			0	3		1
Queuing Penalty (veh)	1	7			3	8			0	4		1

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	41.0	45.1
Average Queue (m)	17.7	24.6
95th Queue (m)	33.8	41.5
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	149.9	74.9	74.8	32.2	1076.2	1058.5	1020.3	63.9	89.9	750.5	747.2
Average Queue (m)	122.9	139.9	46.1	48.1	12.9	706.8	631.7	532.1	25.6	82.7	585.1	576.0
95th Queue (m)	123.6	145.4	67.9	67.6	24.8	1203.9	1262.3	1181.7	52.3	118.0	893.1	890.5
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	68	74				1	0				41	31
Queuing Penalty (veh)	0	300				2	0				0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	82	0							4	5	92	
Queuing Penalty (veh)	168	0							10	14	255	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	748.7	125.0	74.8	112.4	94.2	47.5	119.7	599.2	605.3	170.0
Average Queue (m)	559.8	117.3	38.9	63.4	55.8	20.1	51.8	582.7	589.1	170.0
95th Queue (m)	884.0	162.1	69.8	92.9	82.7	38.9	110.2	646.4	634.6	170.2
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	31							22	76	
Queuing Penalty (veh)	0							0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	93	2	6	21	7	0	3		3	74
Queuing Penalty (veh)	159	5	20	45	19	1	11		24	296

Zone Summary

Zone wide Queuing Penalty: 2930

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	39.3	48.2	38.2	45.8	43.9	43.6
Average Queue (m)	18.7	25.9	16.1	18.8	19.6	17.7
95th Queue (m)	32.1	43.1	31.2	36.9	34.1	34.9
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				2	2	
Queuing Penalty (veh)				8	5	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	125.6	128.9	51.5	55.2	43.2	69.4	105.9	63.6
Average Queue (m)	54.0	54.2	30.8	17.1	20.1	23.5	51.1	29.9
95th Queue (m)	118.7	119.5	49.9	39.8	35.7	50.8	101.0	51.9
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)							2	
Queuing Penalty (veh)							5	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			1	0				
Queuing Penalty (veh)			2	0				

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	993.5	999.2	165.0	436.4	428.5	83.4	141.9	135.3	122.2	74.4	129.8
Average Queue (m)	139.9	828.9	783.2	162.0	343.6	307.7	40.8	80.4	79.1	72.0	14.5	33.9
95th Queue (m)	139.9	1197.6	1221.9	179.8	544.1	539.0	81.1	121.1	119.3	106.2	52.8	113.8
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		29	16		40	11						
Queuing Penalty (veh)		207	114		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	83	26		90	0		31	24		12		1
Queuing Penalty (veh)	97	151		88	0		194	33		21		5

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	284.4	285.6	284.5	110.0
Average Queue (m)	275.3	274.8	274.5	97.0
95th Queue (m)	286.6	286.8	291.9	149.9
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	48	47	57	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	54		54	
Queuing Penalty (veh)	19		172	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	113.1	101.0	85.6	84.7	66.2	67.4	73.2	190.5	262.9
Average Queue (m)	71.4	61.1	39.7	37.1	23.4	31.4	37.7	71.9	128.7
95th Queue (m)	101.0	91.5	75.9	73.5	52.8	61.0	67.7	157.2	247.6
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				8	1				
Queuing Penalty (veh)				16	1				

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	34.2	86.0	95.1	98.2	73.6	80.4	80.6	98.7	35.4	64.9	60.1	102.2
Average Queue (m)	9.4	50.8	55.9	60.5	27.2	35.4	40.5	50.7	13.7	44.3	37.3	49.1
95th Queue (m)	23.6	81.0	87.5	91.7	54.1	69.1	74.3	89.7	29.2	60.7	57.4	84.7
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	22			9	10			0	3		12
Queuing Penalty (veh)	1	9			22	13			1	1		40

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	80.7	84.8
Average Queue (m)	40.6	47.7
95th Queue (m)	67.5	76.1
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	3	
Queuing Penalty (veh)	11	

Queuing and Blocking Report
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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	99.6	106.1	110.6	117.8	48.4	60.8	73.2	91.1	90.8	83.4	45.2	67.9
Average Queue (m)	52.3	67.5	76.3	80.8	18.1	28.8	36.5	56.6	55.5	46.5	20.2	20.7
95th Queue (m)	85.2	98.0	102.7	108.4	36.6	50.3	59.4	78.4	77.9	71.9	35.3	47.4
Link Distance (m)		123.2	123.2	123.2				736.2	736.2	736.2		
Upstream Blk Time (%)		0	0	0								
Queuing Penalty (veh)		0	0	1								
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)	1	0		1		2	4	23		4	0	0
Queuing Penalty (veh)	2	1		2		4	8	47		6	0	1

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	88.9	74.6	53.6	153.1	135.7	138.3	44.7
Average Queue (m)	56.1	47.8	20.5	81.2	93.1	92.5	21.0
95th Queue (m)	80.1	69.5	39.1	136.6	131.4	131.6	41.1
Link Distance (m)	359.2	359.2		587.4	587.4		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0		80.0	
Storage Blk Time (%)	21	3	0	1	0	14	
Queuing Penalty (veh)	18	6	1	7	1	47	

Intersection: 8: Street B & Old School Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	15.5	28.0
Average Queue (m)	2.9	12.5
95th Queue (m)	10.5	22.1
Link Distance (m)	445.2	153.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	95.7	83.9	60.3	67.0	42.6	42.7
Average Queue (m)	49.2	41.6	28.3	35.2	19.4	22.6
95th Queue (m)	77.6	73.0	51.2	58.5	34.3	36.7
Link Distance (m)	187.2	1332.4	2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	293.8	295.8	52.6	25.2	280.5	318.3
Average Queue (m)	96.8	94.3	13.6	1.2	61.3	114.3
95th Queue (m)	291.9	290.7	38.3	10.7	241.1	315.2
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	2	2			11	15
Queuing Penalty (veh)	11	15			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	114.9	833.1	67.2	44.4	37.7	46.2	516.7	524.5	599.1
Average Queue (m)	59.2	701.5	33.4	14.6	16.8	15.7	267.6	282.0	284.4
95th Queue (m)	147.5	895.4	58.3	35.9	37.2	38.4	467.7	495.7	500.4
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)							0	0	0
Queuing Penalty (veh)							0	0	0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	1	73	3	0					
Queuing Penalty (veh)	9	49	21	0					

Queuing and Blocking Report
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Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	8.5	10.1	11.8
Average Queue (m)	0.8	2.0	0.7
95th Queue (m)	5.0	8.0	5.6
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	WB	WB	NB
Directions Served	LT	T	LR
Maximum Queue (m)	19.6	3.1	33.5
Average Queue (m)	6.7	0.1	17.6
95th Queue (m)	16.7	2.2	28.1
Link Distance (m)	423.0	423.0	174.7
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	16.4	27.6	25.7	20.9	12.7	1.4
Average Queue (m)	7.6	10.5	2.4	2.1	1.5	0.0
95th Queue (m)	14.5	19.9	14.8	21.8	7.2	1.0
Link Distance (m)	158.5	129.2	383.0	383.0	169.5	169.5
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 1495

Queuing and Blocking Report
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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	91.3	97.4	108.9	142.7	75.0	119.2
Average Queue (m)	51.3	48.9	42.7	71.9	47.6	57.4
95th Queue (m)	81.4	83.0	87.4	119.6	85.4	96.1
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				33	13	
Queuing Penalty (veh)				143	51	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	429.8	433.1	52.4	174.7	143.1	164.4	177.8	132.9
Average Queue (m)	227.3	226.9	48.5	81.5	56.7	45.0	120.9	47.4
95th Queue (m)	499.3	499.6	60.9	159.9	117.5	119.9	215.3	111.9
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	21	22				0	35	
Queuing Penalty (veh)	93	95				1	133	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			25	6				
Queuing Penalty (veh)			114	31				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	991.8	994.8	138.2	133.7	86.8	120.0	841.0	847.5	849.2	110.0	129.8
Average Queue (m)	139.9	919.1	837.6	79.0	50.3	39.1	119.7	783.3	786.1	789.3	90.4	26.6
95th Queue (m)	139.9	1167.5	1316.9	139.8	121.7	94.1	121.0	961.8	963.2	965.5	151.1	102.7
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		59	30					1	2	3		
Queuing Penalty (veh)		399	205					18	33	36		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	90	5		29	0		86	38		37	0	
Queuing Penalty (veh)	112	37		43	0		929	186		167	1	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.4	283.6	287.1	110.0
Average Queue (m)	272.0	269.2	276.6	107.3
95th Queue (m)	289.9	291.2	293.6	129.6
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	31	25	59	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	63		62	20
Queuing Penalty (veh)	23		380	129

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	108.5	99.5	73.3	60.0	51.9	56.1	66.1	258.4	213.0
Average Queue (m)	74.2	63.6	39.5	30.8	21.8	28.7	36.6	176.9	72.6
95th Queue (m)	99.1	88.9	68.7	53.6	42.1	52.4	60.8	326.6	151.6
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)								10	
Queuing Penalty (veh)								0	
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				3	0				
Queuing Penalty (veh)				7	0				

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	41.8	83.5	80.9	87.9	33.9	69.1	84.2	110.7	51.2	100.7	99.0	65.4
Average Queue (m)	18.1	47.2	46.2	48.7	13.4	40.0	52.9	70.2	17.9	67.6	63.2	31.4
95th Queue (m)	34.3	81.2	79.0	79.6	26.8	64.9	80.0	101.4	36.4	94.9	92.7	56.3
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	2	21			1	13			0	22		2
Queuing Penalty (veh)	7	23			3	15			0	28		6

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	58.7	64.5
Average Queue (m)	30.6	39.1
95th Queue (m)	54.7	63.9
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	1	
Queuing Penalty (veh)	2	

Queuing and Blocking Report
PM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	148.5	74.8	77.2	32.6	1122.7	1097.7	1068.9	65.8	89.9	750.5	748.2
Average Queue (m)	122.9	139.7	46.5	47.5	14.4	670.7	582.9	490.8	27.6	84.9	580.9	571.5
95th Queue (m)	123.6	144.6	69.8	68.4	27.1	1191.1	1235.2	1145.0	55.2	113.6	873.4	868.4
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	69	75									37	26
Queuing Penalty (veh)	0	307									0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	84	1							5	6	92	
Queuing Penalty (veh)	171	4							12	17	254	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	748.3	125.0	75.0	373.4	368.4	102.8	115.7	602.1	605.0	170.0
Average Queue (m)	553.4	112.1	74.8	362.8	344.0	31.1	49.0	581.1	587.6	170.0
95th Queue (m)	858.3	171.0	74.8	385.6	451.0	90.3	107.9	655.8	649.6	170.2
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	26			87	16			20	73	
Queuing Penalty (veh)	0			0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	93	2	89	15	19	0	1		8	75
Queuing Penalty (veh)	159	6	372	60	51	0	3		78	375

Intersection: 8: Street B & Old School Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (m)	25.2	25.4	24.1	29.0
Average Queue (m)	1.4	1.5	4.7	11.2
95th Queue (m)	18.1	19.3	15.9	21.7
Link Distance (m)	474.9	474.9	445.2	153.5
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	94.0	188.8	434.0	445.9	52.0	53.3
Average Queue (m)	46.0	90.9	101.2	102.5	24.3	26.7
95th Queue (m)	77.6	189.1	295.5	301.0	45.7	48.5
Link Distance (m)	187.2	1332.4	2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	343.7	342.6	116.9	107.1	315.9	321.8
Average Queue (m)	218.3	217.4	38.3	7.6	66.7	150.6
95th Queue (m)	466.0	468.7	93.0	49.6	239.7	348.3
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	23	29			9	14
Queuing Penalty (veh)	162	204			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	40.4	96.1	134.9	934.1	935.0	933.6	137.9	419.9	147.6
Average Queue (m)	15.4	48.5	128.2	736.0	758.0	743.5	76.7	92.7	85.5
95th Queue (m)	31.6	85.9	154.2	1255.5	1242.1	1227.8	131.4	245.0	142.8
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)				29	15	8			0
Queuing Penalty (veh)				0	0	0			0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	2	27	46	37					
Queuing Penalty (veh)	8	18	639	241					

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	1.7	7.2	8.3
Average Queue (m)	0.1	0.3	0.5
95th Queue (m)	1.2	3.1	8.0
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	397.6	401.7	39.4	22.0	156.2
Average Queue (m)	63.4	64.9	12.7	1.3	40.6
95th Queue (m)	263.4	268.3	29.9	10.9	123.4
Link Distance (m)	445.2	445.2	423.0	423.0	174.7
Upstream Blk Time (%)	1	2			4
Queuing Penalty (veh)	5	6			0
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	25.8	62.2	391.2	392.0	21.7	5.8
Average Queue (m)	8.4	16.7	147.0	148.9	2.9	0.4
95th Queue (m)	23.3	46.2	424.8	431.1	13.5	5.9
Link Distance (m)	158.5	129.2	383.0	383.0	169.5	169.5
Upstream Blk Time (%)			12	14		
Queuing Penalty (veh)			50	58		
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 6712

Queuing and Blocking Report
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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	38.2	31.8	41.1	30.3	33.4	43.7
Average Queue (m)	17.6	15.9	15.5	12.9	15.3	16.1
95th Queue (m)	30.6	27.2	29.9	25.9	26.8	31.9
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				1	1	
Queuing Penalty (veh)				2	1	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	59.5	58.7	55.8	29.9	39.4	27.8	82.6	39.3
Average Queue (m)	28.8	27.8	25.6	9.3	16.5	11.2	30.7	18.8
95th Queue (m)	47.8	46.8	44.9	23.4	31.6	22.5	60.9	33.6
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			0					
Queuing Penalty (veh)			1					

Queuing and Blocking Report
 AM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	993.9	987.6	165.0	436.4	419.8	73.3	136.8	123.6	124.3	109.9	129.9
Average Queue (m)	139.9	753.6	510.4	163.5	355.5	313.8	13.7	77.9	76.9	73.7	15.0	36.6
95th Queue (m)	140.2	1125.2	1112.2	177.0	523.4	533.2	40.3	114.4	108.6	107.4	55.5	117.7
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		18	4		46	9						
Queuing Penalty (veh)		92	22		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	82	8		89	0		0	23		11		2
Queuing Penalty (veh)	102	43		89	0		0	14		21		17

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.8	287.1	284.3	110.0
Average Queue (m)	273.0	270.2	267.7	91.7
95th Queue (m)	295.9	302.0	311.6	153.0
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	44	40	48	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	51		51	0
Queuing Penalty (veh)	18		152	0

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	95.8	86.8	60.3	67.0	53.9	63.4	67.4	82.2	118.2
Average Queue (m)	62.0	50.3	24.9	25.4	18.4	25.6	30.9	46.0	56.6
95th Queue (m)	88.3	80.0	57.5	51.6	44.1	55.2	59.6	75.3	96.7
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				2	0				
Queuing Penalty (veh)				4	0				

Queuing and Blocking Report
AM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B36	NB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	T	L	T	TR
Maximum Queue (m)	12.6	102.3	101.1	106.0	63.6	74.2	88.5	108.3	17.1	32.9	54.4	49.9
Average Queue (m)	2.9	62.0	66.5	69.3	27.9	38.2	45.5	56.1	0.6	13.5	34.3	27.3
95th Queue (m)	9.7	91.2	94.9	98.9	50.5	72.9	83.6	96.7	12.0	27.7	50.6	48.1
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9	123.2		325.2	325.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					50.0		
Storage Blk Time (%)		32			9	11						1
Queuing Penalty (veh)		6			25	16						1

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (m)	81.8	47.3	55.7
Average Queue (m)	42.4	23.2	27.9
95th Queue (m)	71.0	41.0	47.5
Link Distance (m)		2470.4	2470.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	50.0		
Storage Blk Time (%)	7	0	
Queuing Penalty (veh)	15	0	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	L	L	T	T	T	R
Maximum Queue (m)	107.4	115.3	122.1	129.7	69.8	2.0	61.2	81.2	87.7	93.4	81.0	38.4
Average Queue (m)	61.9	77.1	85.9	89.2	17.5	0.1	31.5	41.0	62.7	62.8	54.7	19.1
95th Queue (m)	97.6	106.0	114.9	117.1	49.5	1.9	53.0	67.3	85.2	85.4	78.6	33.0
Link Distance (m)		123.2	123.2	123.2		1244.9			736.2	736.2	736.2	
Upstream Blk Time (%)		0	0	0	0							
Queuing Penalty (veh)		0	0	2	0							
Storage Bay Dist (m)	105.0				105.0		45.0	45.0				55.0
Storage Blk Time (%)	1	0		3			2	5	32		7	
Queuing Penalty (veh)	3	1		4			5	11	74		13	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (m)	49.0	77.9	69.4	61.3	147.1	146.6	132.8	84.3
Average Queue (m)	16.0	47.8	38.9	26.2	76.6	77.5	75.5	24.5
95th Queue (m)	33.4	69.8	62.4	50.5	137.1	120.9	112.3	55.0
Link Distance (m)		359.2	359.2			587.4	587.4	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	45.0			55.0	140.0			80.0
Storage Blk Time (%)	0	12	1	1	3	0	6	
Queuing Penalty (veh)	0	11	3	2	12	1	22	

Zone Summary

Zone wide Queuing Penalty: 805

Queuing and Blocking Report
PM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	69.2	71.3	92.8	157.9	75.0	98.4
Average Queue (m)	36.4	34.1	40.9	72.7	36.9	54.0
95th Queue (m)	63.8	62.1	77.4	129.4	79.7	87.0
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				34	4	
Queuing Penalty (veh)				112	16	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	319.1	319.6	101.6	51.9	54.8	137.3	177.1	59.4
Average Queue (m)	115.7	114.1	49.7	21.8	26.5	42.2	76.7	20.4
95th Queue (m)	317.1	319.2	83.8	41.4	45.5	113.6	180.9	57.7
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	1	1				1	19	
Queuing Penalty (veh)	3	4				4	61	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			8	0				
Queuing Penalty (veh)			25	1				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	990.6	989.7	121.4	71.6	61.2	119.9	847.0	850.1	846.7	110.0	129.9
Average Queue (m)	139.9	868.1	741.8	59.6	39.5	34.5	73.0	826.9	830.3	828.8	103.2	31.3
95th Queue (m)	140.1	1199.5	1316.4	99.7	60.3	55.8	152.5	886.1	888.4	883.5	142.1	112.3
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		49	20					5	8	9		
Queuing Penalty (veh)		259	108					60	108	114		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	86	4		12	0		6	49		50	0	
Queuing Penalty (veh)	105	27		18	0		62	97		229	1	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	275.1	272.2	269.6	110.0
Average Queue (m)	240.1	231.5	221.2	101.6
95th Queue (m)	318.1	315.5	329.9	136.3
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	17	11	24	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	59		51	16
Queuing Penalty (veh)	22		301	102

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	101.8	90.4	62.5	51.8	45.6	56.3	62.6	114.6	68.3
Average Queue (m)	60.6	47.6	24.9	22.9	14.7	21.5	28.0	60.1	30.9
95th Queue (m)	91.1	78.9	54.6	43.6	33.6	45.9	54.3	98.1	59.1
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				1	0				
Queuing Penalty (veh)				3	0				

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	25.1	101.6	99.8	98.5	35.4	70.4	84.0	87.8	43.0	77.1	72.5	63.6
Average Queue (m)	8.4	48.6	47.4	46.9	14.7	33.6	44.5	54.8	18.2	43.6	40.3	34.4
95th Queue (m)	19.4	84.8	80.5	80.2	28.6	60.0	72.6	83.2	33.2	65.4	63.2	57.7
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	23			1	9			0	4		3
Queuing Penalty (veh)	0	11			4	11			0	6		4

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	44.6	60.9
Average Queue (m)	17.0	25.0
95th Queue (m)	35.0	45.8
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	148.7	81.6	82.4	39.8	1226.1	1227.5	1231.8	62.8	89.9	744.5	747.6
Average Queue (m)	122.9	139.6	50.8	51.2	12.7	773.1	710.7	646.7	30.2	84.4	552.9	542.3
95th Queue (m)	123.5	144.1	74.6	75.7	27.5	1323.0	1379.4	1332.0	57.7	113.4	876.3	869.5
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	68	73				2	1	0			30	20
Queuing Penalty (veh)	0	322				8	6	2			0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	82	0		0					5	9	90	
Queuing Penalty (veh)	183	0		0					14	26	274	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	744.8	125.0	74.8	114.1	100.2	57.6	124.7	601.5	604.6	170.0
Average Queue (m)	523.5	112.7	45.9	69.6	62.9	22.2	46.3	588.1	593.0	170.0
95th Queue (m)	855.6	166.9	80.2	98.4	89.7	43.1	94.6	632.6	621.3	170.2
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	19							23	84	
Queuing Penalty (veh)	0							0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	91	2	8	26	11	0	0		3	76
Queuing Penalty (veh)	162	7	32	57	32	2	2		28	332

Zone Summary

Zone wide Queuing Penalty: 3369

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	33.4	56.6	34.3	36.4	46.4	38.8
Average Queue (m)	18.4	24.9	16.5	16.0	20.4	16.8
95th Queue (m)	30.1	44.4	28.7	30.1	36.2	31.2
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				1	3	
Queuing Penalty (veh)				5	6	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	188.4	186.1	68.0	38.9	38.5	118.9	163.1	73.2
Average Queue (m)	66.4	65.5	34.9	13.3	19.3	27.6	67.4	33.5
95th Queue (m)	135.0	133.4	59.0	30.4	33.1	75.3	136.0	59.9
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)						0	3	
Queuing Penalty (veh)						0	10	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			2	0				
Queuing Penalty (veh)			5	0				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	992.0	1000.6	165.0	441.0	431.4	107.3	143.7	138.6	123.9	92.7	129.9
Average Queue (m)	139.9	827.2	761.7	163.5	392.1	351.3	59.8	85.2	79.1	72.5	13.5	26.6
95th Queue (m)	139.9	1197.0	1242.2	177.1	540.1	557.4	112.4	127.7	116.9	107.8	50.1	97.8
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		30	17		71	16						
Queuing Penalty (veh)		215	122		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	83	30		91	0		58	23		12		0
Queuing Penalty (veh)	105	175		95	0		372	33		22		0

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.0	284.9	285.0	110.0
Average Queue (m)	275.7	275.4	275.2	96.8
95th Queue (m)	281.6	281.4	285.9	150.6
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	49	48	58	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	54		54	0
Queuing Penalty (veh)	19		173	0

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	130.0	120.2	75.7	99.9	51.7	59.6	68.3	249.8	234.2
Average Queue (m)	77.8	66.0	41.0	42.3	21.8	31.6	37.8	99.2	125.8
95th Queue (m)	112.1	98.5	72.6	83.4	47.5	58.4	65.3	209.2	221.6
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				14	0				
Queuing Penalty (veh)				31	1				

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B36	NB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	T	L	T	TR
Maximum Queue (m)	23.9	97.2	101.5	104.3	62.9	83.6	84.4	100.6	1.9	31.8	67.5	68.8
Average Queue (m)	9.5	57.3	61.3	67.2	28.8	41.0	46.9	55.8	0.1	14.0	45.6	39.3
95th Queue (m)	19.7	85.9	91.3	97.8	52.6	77.7	80.7	93.4	1.4	28.2	64.5	61.5
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9	123.2		325.2	325.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					50.0		
Storage Blk Time (%)	0	32			13	13					3	
Queuing Penalty (veh)	0	14			35	19					2	

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (m)	103.8	75.5	81.9
Average Queue (m)	51.9	39.3	44.4
95th Queue (m)	88.4	64.5	70.7
Link Distance (m)		2470.4	2470.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	50.0		
Storage Blk Time (%)	13	2	
Queuing Penalty (veh)	43	8	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	L	L	T	T	T
Maximum Queue (m)	112.6	124.4	127.8	126.2	108.2	246.4	4.1	64.4	81.6	102.0	94.1	84.3
Average Queue (m)	62.6	75.7	82.1	87.0	25.2	8.2	0.1	33.8	43.5	63.2	62.5	54.0
95th Queue (m)	101.6	115.6	115.0	119.1	66.3	170.1	2.9	55.4	71.1	89.2	85.7	80.2
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9			736.2	736.2	736.2
Upstream Blk Time (%)	0	1	0	1	0							
Queuing Penalty (veh)	0	2	1	3	0							
Storage Bay Dist (m)	105.0				105.0			45.0	45.0			
Storage Blk Time (%)	2	1		3	0			3	8	28		6
Queuing Penalty (veh)	6	3		4	0			6	17	65		11

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	56.5	74.8	99.1	90.2	65.2	150.1	157.1	155.1	79.1
Average Queue (m)	20.7	30.0	64.9	56.4	25.0	79.2	103.5	101.7	25.4
95th Queue (m)	39.9	65.7	92.8	81.4	48.7	133.4	140.0	139.7	54.1
Link Distance (m)			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)	55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	1	2	27	7	1	1	1	18	
Queuing Penalty (veh)	1	4	26	17	2	8	4	66	

Intersection: 8: Street B & Old School Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (m)	1.4	11.2	25.5
Average Queue (m)	0.0	2.6	12.3
95th Queue (m)	1.0	9.1	20.7
Link Distance (m)	474.9	445.2	153.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
AM Peak Hour

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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	99.1	84.4	74.8	81.8	47.8	47.7
Average Queue (m)	52.2	40.6	30.9	40.7	21.8	25.0
95th Queue (m)	84.7	70.2	56.3	67.7	38.4	40.8
Link Distance (m)	187.2	1332.4	2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	339.7	341.6	49.8	36.8	231.9	302.1
Average Queue (m)	118.8	117.5	13.7	1.8	49.7	110.9
95th Queue (m)	350.5	351.8	38.2	17.3	202.3	302.5
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	4	6			7	13
Queuing Penalty (veh)	30	39			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	114.9	825.0	58.7	46.0	50.2	50.8	495.2	660.6	464.7
Average Queue (m)	62.6	707.5	29.5	16.2	19.9	18.8	255.8	273.4	269.6
95th Queue (m)	149.0	899.1	51.2	37.4	43.8	42.3	425.9	473.1	438.6
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)									0
Queuing Penalty (veh)									1
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	2	74	2	0					
Queuing Penalty (veh)	14	49	11	0					

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	8.5	9.0	10.7
Average Queue (m)	1.0	2.4	0.7
95th Queue (m)	5.5	8.8	5.0
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	19.7	35.7
Average Queue (m)	6.0	16.7
95th Queue (m)	15.7	27.7
Link Distance (m)	423.0	174.7
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (m)	24.6	23.7	42.7	51.9	45.7
Average Queue (m)	9.0	10.3	3.7	4.0	2.3
95th Queue (m)	18.6	18.8	20.8	30.8	28.5
Link Distance (m)	158.5	129.2	383.0	383.0	169.5
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 1904

Queuing and Blocking Report
PM Peak Hour

06/06/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	105.8	85.2	95.6	167.7	75.0	128.0
Average Queue (m)	53.7	43.4	45.3	72.4	45.8	64.8
95th Queue (m)	90.0	74.5	84.2	128.9	88.2	116.2
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				35	9	
Queuing Penalty (veh)				155	36	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	429.0	429.0	120.7	116.0	59.1	158.9	175.3	151.3
Average Queue (m)	196.0	194.9	66.7	36.2	31.9	50.5	110.6	58.2
95th Queue (m)	454.9	456.0	113.5	86.4	54.3	123.5	208.0	143.8
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	17	17				0	30	
Queuing Penalty (veh)	76	76				1	118	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			23	1				
Queuing Penalty (veh)			110	3				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	990.7	998.5	112.4	102.4	94.8	119.9	840.9	846.8	846.7	110.0	129.9
Average Queue (m)	139.9	904.3	803.1	67.8	50.2	42.3	118.6	805.5	809.5	810.2	90.7	26.7
95th Queue (m)	140.1	1170.1	1341.2	124.0	117.2	99.3	133.5	931.1	931.7	932.0	151.7	103.2
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		54	31					2	3	3		
Queuing Penalty (veh)		377	213					23	37	40		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	87	6		17	0		86	41		39		0
Queuing Penalty (veh)	116	43		28	0		959	202		179		0

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	286.0	284.9	287.8	110.0
Average Queue (m)	273.4	273.7	278.1	107.2
95th Queue (m)	289.3	286.7	285.4	130.0
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	36	31	62	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	66		65	16
Queuing Penalty (veh)	24		396	107

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	114.4	102.1	87.0	87.4	57.1	55.0	67.1	332.1	170.0
Average Queue (m)	79.7	69.6	49.1	40.1	21.5	28.7	36.7	218.2	62.5
95th Queue (m)	105.0	95.6	78.3	76.3	44.2	49.9	58.9	386.6	138.6
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)								20	
Queuing Penalty (veh)								0	
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				12	0				
Queuing Penalty (veh)				29	0				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	61.2	152.6	147.1	148.8	32.0	76.5	94.5	116.0	74.6	150.1	141.7	89.6
Average Queue (m)	21.1	59.1	57.1	58.8	14.3	44.4	57.1	72.9	22.6	78.8	75.7	39.9
95th Queue (m)	49.9	141.2	136.3	137.0	27.7	71.1	85.4	104.9	58.7	133.7	128.1	78.8
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	4	29			0	16			0	28		9
Queuing Penalty (veh)	14	33			2	19			0	38		22

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	91.5	73.2
Average Queue (m)	35.8	40.0
95th Queue (m)	83.6	63.7
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	1	
Queuing Penalty (veh)	3	

Queuing and Blocking Report
PM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	147.3	85.2	88.1	45.5	1217.6	1211.6	1205.5	62.5	89.9	746.0	748.1
Average Queue (m)	122.8	139.5	50.8	53.3	18.7	814.1	748.4	670.9	30.8	84.8	566.2	555.2
95th Queue (m)	123.8	143.9	78.5	80.6	38.2	1344.1	1405.0	1383.7	58.5	113.0	865.7	860.8
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	67	74				3	3	3			28	20
Queuing Penalty (veh)	0	330				15	13	11			0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	83	0							5	9	90	
Queuing Penalty (veh)	184	3							14	26	274	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	747.4	125.0	75.0	375.6	371.2	119.9	135.4	600.4	605.2	170.0
Average Queue (m)	537.3	115.5	74.8	363.9	355.4	30.8	48.3	591.5	593.9	170.0
95th Queue (m)	845.3	165.5	74.9	377.8	405.3	79.9	112.0	611.0	608.2	170.0
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	19			88	18			21	76	
Queuing Penalty (veh)	0			0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	91	3	91	15	19	1	2	3	17	76
Queuing Penalty (veh)	162	10	406	60	56	4	10	7	169	410

Intersection: 8: Street B & Old School Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (m)	40.9	42.0	26.3	25.4
Average Queue (m)	2.0	2.1	6.0	11.0
95th Queue (m)	29.7	29.8	19.2	19.2
Link Distance (m)	474.9	474.9	445.2	153.5
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	82.0	140.3	256.4	267.3	48.8	53.0
Average Queue (m)	44.2	72.0	90.0	88.8	24.5	27.1
95th Queue (m)	72.2	132.5	298.3	297.4	44.6	48.2
Link Distance (m)	187.2	1332.4	2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	341.2	343.8	112.6	51.5	229.9	317.4
Average Queue (m)	197.8	198.2	30.4	5.7	55.6	132.8
95th Queue (m)	450.1	452.3	79.5	37.3	209.8	329.6
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	20	24			6	10
Queuing Penalty (veh)	145	173			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	49.4	104.6	134.9	935.7	936.5	934.3	136.6	146.3	152.4
Average Queue (m)	17.3	51.1	128.9	784.3	816.2	786.0	78.5	84.6	86.3
95th Queue (m)	36.0	87.2	156.8	1245.4	1223.1	1221.6	136.7	144.7	151.4
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)				42	24	12			
Queuing Penalty (veh)				0	0	0			
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	1	25	39	46					
Queuing Penalty (veh)	3	17	551	299					

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB
Directions Served	L	R
Maximum Queue (m)	1.7	5.2
Average Queue (m)	0.1	0.3
95th Queue (m)	1.4	2.9
Link Distance (m)	1150.5	1150.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	297.4	301.5	41.3	14.3	111.6
Average Queue (m)	43.6	43.8	13.7	0.5	26.9
95th Queue (m)	215.7	216.7	29.2	7.5	83.6
Link Distance (m)	445.2	445.2	423.0	423.0	174.7
Upstream Blk Time (%)	1	1			
Queuing Penalty (veh)	6	6			
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (m)	39.6	68.2	354.9	357.7	16.5
Average Queue (m)	11.5	18.9	101.2	105.6	2.5
95th Queue (m)	34.4	52.9	340.1	346.2	10.0
Link Distance (m)	158.5	129.2	383.0	383.0	169.5
Upstream Blk Time (%)			5	7	
Queuing Penalty (veh)			22	31	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 6900

Queuing and Blocking Report
AM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	39.5	34.8	31.3	33.9	33.8	37.5
Average Queue (m)	19.1	16.5	14.2	14.0	17.5	16.7
95th Queue (m)	32.5	30.5	27.9	27.4	29.2	30.4
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				1	1	
Queuing Penalty (veh)				2	3	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	60.0	54.4	50.3	31.6	38.7	31.1	77.5	42.8
Average Queue (m)	31.8	30.7	24.6	8.4	16.2	13.7	34.1	20.6
95th Queue (m)	50.3	48.7	41.8	22.4	29.7	26.8	63.8	36.5
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			0	0				
Queuing Penalty (veh)			0	0				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	990.6	988.2	165.0	440.4	433.2	50.2	135.5	126.4	120.3	92.3	129.8
Average Queue (m)	139.9	730.2	550.8	164.8	403.5	373.0	13.5	82.7	80.3	74.3	13.5	24.0
95th Queue (m)	139.9	1156.1	1171.8	166.9	497.3	525.3	35.0	124.4	115.6	107.9	47.5	89.9
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		23	8		67	17						
Queuing Penalty (veh)		121	42		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	83	10		91	0		1	24		12		1
Queuing Penalty (veh)	112	55		98	0		8	14		23		12

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.0	287.8	285.6	110.0
Average Queue (m)	275.7	275.9	276.2	96.7
95th Queue (m)	281.6	282.3	282.4	150.8
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	49	48	56	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	52		52	
Queuing Penalty (veh)	19		156	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	113.8	97.6	77.5	67.7	55.3	68.1	74.0	66.3	52.1	111.7
Average Queue (m)	66.9	54.7	31.3	31.4	17.9	27.1	33.0	32.5	13.4	56.6
95th Queue (m)	99.3	86.5	64.8	58.4	43.0	57.0	64.1	58.4	34.3	92.2
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6		2518.8
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)				85.0					50.0	
Storage Blk Time (%)				0				1	0	
Queuing Penalty (veh)				0				2	0	

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	20.2	106.7	112.1	116.1	69.7	84.1	96.4	103.0	37.5	57.1	58.3	99.7
Average Queue (m)	4.3	65.1	70.3	75.1	31.0	39.7	47.8	57.4	16.0	36.3	32.9	48.2
95th Queue (m)	12.9	97.7	103.8	111.2	56.5	75.8	86.5	98.6	32.4	52.9	54.8	82.4
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	35			12	12				1		10
Queuing Penalty (veh)	1	7			37	18				1		23

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	70.6	66.3
Average Queue (m)	28.0	32.1
95th Queue (m)	53.5	54.9
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	2	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	119.9	139.9	140.2	140.5	123.2	12.8	19.8	22.2	67.4	89.9	135.4	130.0
Average Queue (m)	74.7	90.8	98.2	101.4	28.6	0.6	0.8	1.3	46.1	62.3	81.2	76.2
95th Queue (m)	117.9	128.4	134.1	135.3	87.6	6.0	7.8	9.5	73.1	98.5	124.2	113.6
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	0	1	2	3	0							
Queuing Penalty (veh)	0	5	11	14	0							
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	3	3		9	0				21	30	39	
Queuing Penalty (veh)	11	10		11	0				49	71	98	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	102.8	41.4	74.3	91.6	79.3	60.7	140.3	126.6	119.0	69.8
Average Queue (m)	64.5	21.4	22.8	57.1	48.3	24.9	72.5	78.6	77.9	29.8
95th Queue (m)	92.9	35.4	51.0	83.4	71.8	47.1	120.4	111.5	110.4	56.4
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	16		1	20	4	1	1	0	7	0
Queuing Penalty (veh)	30		2	20	9	2	4	0	29	1

Zone Summary

Zone wide Queuing Penalty: 1133

Queuing and Blocking Report
PM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	87.5	74.4	83.6	155.4	75.0	109.4
Average Queue (m)	43.0	31.4	38.3	67.4	34.7	58.3
95th Queue (m)	73.4	58.8	71.7	119.9	75.8	100.0
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				30	4	
Queuing Penalty (veh)				100	17	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	427.1	427.5	87.9	42.2	48.5	141.1	176.0	87.1
Average Queue (m)	144.1	143.8	47.5	20.5	26.7	36.4	95.9	27.2
95th Queue (m)	373.0	376.0	77.2	38.4	43.8	97.3	205.0	69.7
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	5	6				1	31	
Queuing Penalty (veh)	17	19				2	108	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			6	0				
Queuing Penalty (veh)			20	0				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	990.1	988.6	128.9	120.2	87.6	119.9	845.3	849.5	847.0	110.0	129.9
Average Queue (m)	139.9	902.4	807.3	76.7	52.7	37.4	79.7	829.3	835.0	834.0	105.6	31.9
95th Queue (m)	139.9	1180.0	1280.4	138.0	128.3	86.9	157.0	879.1	875.8	872.2	136.9	112.5
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		58	20					4	8	10		
Queuing Penalty (veh)		318	108					53	113	129		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	88	4		26	0		6	48		49	0	0
Queuing Penalty (veh)	115	25		42	0		69	100		228	2	0

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	278.7	275.7	268.0	110.0
Average Queue (m)	241.2	232.5	220.9	97.6
95th Queue (m)	323.4	322.9	343.1	142.7
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	19	13	28	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	59		48	12
Queuing Penalty (veh)	23		286	76

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	93.5	79.4	63.7	47.6	38.5	50.0	61.4	97.7	52.5	79.3
Average Queue (m)	58.9	45.0	23.0	24.1	14.6	21.6	27.3	50.5	25.9	37.6
95th Queue (m)	87.4	74.9	51.9	42.2	31.9	43.3	51.3	83.2	57.6	68.0
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6		2518.8
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)				85.0					50.0	
Storage Blk Time (%)								6	0	
Queuing Penalty (veh)								12	2	

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	22.7	123.4	123.9	121.0	33.2	68.5	76.4	90.7	38.2	78.2	80.1	86.8
Average Queue (m)	8.5	54.4	53.3	53.4	16.9	36.3	46.9	57.1	18.3	49.6	46.8	40.8
95th Queue (m)	18.9	112.6	111.0	107.4	30.8	63.5	73.6	84.9	32.5	73.0	73.1	75.6
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	28			1	10			0	8		8
Queuing Penalty (veh)	0	14			6	14			0	11		11

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	79.4	47.7
Average Queue (m)	21.8	24.9
95th Queue (m)	56.9	42.4
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	150.9	96.6	93.5	45.4	1241.5	1234.5	1234.2	67.3	90.0	752.0	751.8
Average Queue (m)	122.9	139.1	57.4	59.4	17.2	781.3	713.6	649.5	33.4	84.6	611.1	601.9
95th Queue (m)	123.7	148.1	84.2	84.1	36.4	1336.3	1389.0	1351.4	61.4	113.6	898.1	895.5
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	65	72				4	3	1			46	36
Queuing Penalty (veh)	0	346				19	14	4			0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	82	0		0					6	10	90	
Queuing Penalty (veh)	200	3		0					19	31	301	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	747.9	125.0	74.9	140.6	116.3	71.0	180.1	599.2	605.3	170.0
Average Queue (m)	585.8	111.2	56.3	81.4	70.7	27.7	146.8	586.8	590.3	170.0
95th Queue (m)	888.1	169.4	87.1	123.4	106.1	54.8	254.3	642.9	642.5	170.4
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	34							23	83	
Queuing Penalty (veh)	0							0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	90	4	21	29	15	1	56	0	4	76
Queuing Penalty (veh)	169	13	86	68	48	5	269	0	38	364

Zone Summary

Zone wide Queuing Penalty: 4038

Queuing and Blocking Report
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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	39.9	52.6	41.3	43.9	48.3	39.6
Average Queue (m)	20.1	26.3	16.0	18.2	23.0	18.8
95th Queue (m)	33.7	44.5	29.3	34.2	41.3	33.5
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				2	4	
Queuing Penalty (veh)				6	11	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	252.6	256.4	79.0	35.7	46.3	97.6	161.0	97.1
Average Queue (m)	84.3	85.1	38.7	15.4	20.1	25.0	74.4	41.8
95th Queue (m)	204.7	206.6	66.3	31.0	35.6	60.8	148.1	76.2
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)							4	
Queuing Penalty (veh)							14	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			5	0				
Queuing Penalty (veh)			12	0				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	994.1	999.7	165.0	441.0	435.1	109.8	201.4	195.5	176.4	109.9	129.7
Average Queue (m)	139.9	848.3	815.6	164.7	394.2	342.2	72.0	110.7	102.0	91.6	22.7	23.3
95th Queue (m)	140.2	1176.4	1219.8	168.8	510.8	554.0	127.6	187.1	176.0	151.1	79.3	93.0
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		31	18		67	20						
Queuing Penalty (veh)		236	138		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	83	30		92	0		70	27		17		1
Queuing Penalty (veh)	114	177		103	1		462	39		33		5

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	286.4	287.8	287.1	110.0
Average Queue (m)	275.7	276.1	275.8	95.1
95th Queue (m)	282.3	283.5	281.9	150.6
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	50	49	60	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	55		56	0
Queuing Penalty (veh)	21		178	0

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	118.4	109.5	88.3	87.2	128.0	78.5	80.1	255.6	52.5	248.3
Average Queue (m)	80.4	70.4	47.8	56.0	45.5	41.2	47.4	87.3	25.0	131.3
95th Queue (m)	110.3	99.4	81.2	94.9	108.5	72.4	77.2	216.9	58.4	245.0
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6		2518.8
Upstream Blk Time (%)								2		
Queuing Penalty (veh)								0		
Storage Bay Dist (m)				85.0					50.0	
Storage Blk Time (%)				12	3			20	1	
Queuing Penalty (veh)				28	6			38	2	

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B36	NB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	T	L	T	TR
Maximum Queue (m)	40.3	102.8	105.6	111.9	69.9	92.0	94.9	103.5	2.3	47.6	73.8	68.8
Average Queue (m)	8.6	57.9	62.0	66.3	32.6	41.5	48.3	57.9	0.1	17.5	47.4	42.9
95th Queue (m)	25.9	92.7	96.4	104.9	58.3	79.7	87.6	99.6	1.6	35.6	68.0	63.8
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9	123.2		325.2	325.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					50.0		
Storage Blk Time (%)	0	30			15	13				0	5	
Queuing Penalty (veh)	0	13			45	20				0	3	

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (m)	118.2	102.7	94.8
Average Queue (m)	60.1	48.4	51.0
95th Queue (m)	109.2	92.2	78.9
Link Distance (m)		2470.4	2470.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	50.0		
Storage Blk Time (%)	21	5	
Queuing Penalty (veh)	73	16	

Queuing and Blocking Report
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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	114.9	126.0	133.3	131.9	107.7	25.0	13.0	9.2	63.0	89.8	117.4	114.1
Average Queue (m)	75.0	87.2	92.5	96.3	30.1	2.5	0.8	0.8	40.6	54.4	76.1	73.9
95th Queue (m)	116.3	126.3	127.7	128.6	79.6	21.8	9.2	9.9	65.1	89.0	105.0	99.4
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	1	3	1	1	0							
Queuing Penalty (veh)	0	14	7	8	0							
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	6	2		8					11	19	42	
Queuing Penalty (veh)	21	7		11					25	45	107	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	102.6	60.4	74.8	109.7	102.6	63.9	153.1	173.6	159.9	83.0
Average Queue (m)	64.8	23.3	34.1	66.1	57.9	26.5	87.8	105.2	103.6	29.6
95th Queue (m)	90.8	43.0	67.8	95.4	87.0	49.5	139.3	149.5	144.3	60.9
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	16	0	9	26	9	1	2	1	19	0
Queuing Penalty (veh)	30	1	25	28	24	2	10	6	75	0

Intersection: 8: Street B & Old School Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	19.0	25.0
Average Queue (m)	2.2	12.3
95th Queue (m)	10.5	21.3
Link Distance (m)	445.2	153.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	LT	TR
Maximum Queue (m)	95.4	92.5	19.0	65.8	80.8	48.4	48.5
Average Queue (m)	54.2	45.9	5.2	28.1	38.8	21.4	25.3
95th Queue (m)	86.4	84.9	13.4	52.1	65.9	38.3	42.4
Link Distance (m)	187.2	1332.4		2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			25.0				
Storage Blk Time (%)			0	6			
Queuing Penalty (veh)			1	2			

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	341.3	342.6	62.1	31.1	318.1	323.6
Average Queue (m)	140.8	140.2	12.8	1.3	83.4	130.8
95th Queue (m)	387.6	388.7	39.4	11.6	287.8	342.3
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	5	8			12	20
Queuing Penalty (veh)	38	56			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	114.9	801.0	51.7	66.3	55.5	47.2	472.3	602.8	365.3
Average Queue (m)	71.9	716.9	32.1	18.3	22.8	21.8	166.6	188.3	183.5
95th Queue (m)	155.3	841.8	51.0	44.9	46.3	45.7	311.5	378.9	323.6
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)							0	0	0
Queuing Penalty (veh)							0	1	0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	4	74	2	0					
Queuing Penalty (veh)	27	50	18	0					

Queuing and Blocking Report
 AM Peak Hour

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Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	8.6	9.0	17.7
Average Queue (m)	0.4	2.2	1.6
95th Queue (m)	3.5	8.3	9.8
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	18.6	37.4
Average Queue (m)	6.5	17.3
95th Queue (m)	15.8	28.8
Link Distance (m)	423.0	174.7
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (m)	25.6	22.9	81.4	79.2	8.9
Average Queue (m)	9.0	10.6	8.8	9.3	0.9
95th Queue (m)	19.5	18.8	61.0	71.7	5.4
Link Distance (m)	158.5	129.2	383.0	383.0	169.5
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 2433

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	114.5	91.6	99.0	206.7	75.0	135.2
Average Queue (m)	62.2	47.6	48.0	82.7	51.2	65.8
95th Queue (m)	99.3	79.5	87.0	158.3	90.9	143.3
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				35	13	
Queuing Penalty (veh)				157	53	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	429.9	430.2	124.9	118.6	79.5	170.3	176.2	227.3
Average Queue (m)	241.0	240.1	66.2	38.9	36.2	52.2	122.9	79.3
95th Queue (m)	519.6	520.3	116.3	80.6	62.8	127.0	212.3	191.2
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	29	30				1	35	1
Queuing Penalty (veh)	135	139				3	142	0
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			21	1				
Queuing Penalty (veh)			102	5				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	992.6	995.3	136.9	132.5	106.4	119.9	835.9	836.3	838.8	110.0	130.0
Average Queue (m)	139.9	915.3	833.6	75.0	56.3	45.9	119.3	647.6	656.2	662.4	95.2	29.4
95th Queue (m)	139.9	1173.0	1303.3	134.0	144.2	117.3	124.9	912.5	920.0	925.6	150.5	108.8
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		60	27					0	0	1		
Queuing Penalty (veh)		428	195					5	6	11		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	90	8		24	0		86	40		40		
Queuing Penalty (veh)	127	55		41	0		982	205		186		

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	286.4	286.3	287.1	110.0
Average Queue (m)	274.1	273.1	278.2	107.6
95th Queue (m)	286.7	286.8	288.1	129.2
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	33	29	61	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	65		64	19
Queuing Penalty (veh)	25		391	127

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	121.7	108.3	80.6	62.2	49.1	56.2	63.5	328.3	52.5	242.9
Average Queue (m)	83.9	73.0	47.8	33.5	21.9	28.9	36.4	246.7	41.9	105.2
95th Queue (m)	112.2	101.4	75.8	54.4	44.5	53.3	62.6	413.4	71.7	219.7
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6		2518.8
Upstream Blk Time (%)								30		
Queuing Penalty (veh)								0		
Storage Bay Dist (m)				85.0					50.0	
Storage Blk Time (%)								47	1	
Queuing Penalty (veh)								111	9	

Queuing and Blocking Report
PM Peak Hour

06/06/2024

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	92.1	258.2	252.5	255.2	36.6	74.3	93.0	116.7	88.2	144.7	146.0	101.1
Average Queue (m)	26.2	79.5	78.4	79.9	15.1	43.6	56.9	70.8	27.0	84.5	82.4	45.6
95th Queue (m)	68.1	191.7	187.0	188.5	30.2	69.4	86.1	106.1	72.7	132.0	132.4	89.3
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	5	39			2	16			0	33		15
Queuing Penalty (veh)	16	45			8	22			1	46		37

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	119.1	93.7
Average Queue (m)	39.0	43.3
95th Queue (m)	85.1	73.5
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	5	

Queuing and Blocking Report
PM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	147.0	91.8	92.2	53.1	1197.7	1198.6	1170.7	63.3	90.0	751.5	748.9
Average Queue (m)	122.9	139.5	54.7	55.9	16.8	809.1	750.1	670.9	32.2	87.6	632.4	624.9
95th Queue (m)	123.6	144.0	83.4	85.4	35.3	1365.7	1426.6	1413.3	57.8	106.0	894.8	893.0
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	71	73				8	7	5			52	41
Queuing Penalty (veh)	0	353				39	35	24			0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	83	0		0					6	10	89	
Queuing Penalty (veh)	202	0		0					18	31	299	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	750.8	125.0	75.0	376.3	370.6	119.0	167.9	601.9	605.3	170.0
Average Queue (m)	612.7	116.0	74.9	365.5	359.3	32.0	59.7	591.7	594.7	170.0
95th Queue (m)	893.7	163.3	74.9	371.5	404.2	88.2	137.1	605.6	609.1	170.2
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	41			95	22			24	77	
Queuing Penalty (veh)	0			0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	90	1	91	14	18	1	5	2	14	76
Queuing Penalty (veh)	169	4	441	57	58	4	27	4	145	443

Intersection: 8: Street B & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	226.4	236.8	23.9	8.1	47.2
Average Queue (m)	22.7	23.8	5.6	0.3	12.8
95th Queue (m)	144.4	149.1	17.6	5.7	29.7
Link Distance (m)	474.9	474.9	445.2	445.2	153.5
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	LT	TR
Maximum Queue (m)	85.8	125.3	109.8	344.7	341.6	51.7	59.3
Average Queue (m)	43.4	62.6	39.2	77.6	85.2	25.2	27.8
95th Queue (m)	70.8	109.5	91.1	264.3	270.9	46.4	51.5
Link Distance (m)	187.2	1332.4		2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			25.0				
Storage Blk Time (%)			16	25			
Queuing Penalty (veh)			69	59			

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	342.0	343.9	108.7	74.3	156.5	256.9
Average Queue (m)	226.1	225.8	32.5	7.2	55.6	131.6
95th Queue (m)	471.5	472.9	85.3	40.1	215.4	311.0
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	27	32			6	12
Queuing Penalty (veh)	203	235			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	36.3	100.9	52.4	938.3	936.7	931.7	122.2	134.9	137.8
Average Queue (m)	15.4	48.9	52.2	883.8	881.7	837.2	75.7	82.1	84.0
95th Queue (m)	30.8	82.8	53.2	1083.1	1073.9	1104.9	124.8	133.9	138.5
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)				34	18	8			
Queuing Penalty (veh)				0	0	0			
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	2	26	44	10					
Queuing Penalty (veh)	7	17	643	63					

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	1.7	5.4	9.9
Average Queue (m)	0.1	0.3	0.3
95th Queue (m)	1.2	3.1	5.9
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	439.8	442.5	30.9	14.9	164.0
Average Queue (m)	117.7	118.8	11.0	0.5	49.5
95th Queue (m)	401.8	404.0	25.3	6.5	140.1
Link Distance (m)	445.2	445.2	423.0	423.0	174.7
Upstream Blk Time (%)	9	9			4
Queuing Penalty (veh)	39	39			0
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	45.9	81.9	391.6	392.9	19.5	6.0
Average Queue (m)	11.6	29.6	137.2	140.7	2.1	0.2
95th Queue (m)	33.7	91.2	413.1	418.9	10.4	3.0
Link Distance (m)	158.5	129.2	383.0	383.0	169.5	169.5
Upstream Blk Time (%)		5	14	15		
Queuing Penalty (veh)		0	61	68		
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 7677

SimTraffic Outputs - With GTA West

Queuing and Blocking Report
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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	22.0	16.2	22.0	40.4	25.2
Average Queue (m)	12.2	8.4	12.7	19.0	11.8
95th Queue (m)	19.3	14.7	19.8	32.8	19.8
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	60.7	23.1	33.0	20.4	55.1	20.0
Average Queue (m)	26.1	12.7	16.1	8.0	18.0	10.9
95th Queue (m)	45.1	20.3	26.3	15.6	36.5	17.9
Link Distance (m)	1366.0		333.1	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		0	0			
Queuing Penalty (veh)		0	0			

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	132.2	203.4	105.1	89.5	86.6	112.3	102.6	89.5	24.4	58.9	130.9	123.8
Average Queue (m)	91.9	87.9	47.7	36.5	42.7	68.6	65.9	51.3	6.7	16.1	89.2	85.3
95th Queue (m)	153.7	186.1	86.0	70.7	93.4	98.0	94.1	82.4	16.9	37.1	117.7	114.0
Link Distance (m)		987.0		422.6		732.9	732.9	732.9			547.4	547.4
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	59	22	9	1	44	23		3		3	32	
Queuing Penalty (veh)	206	72	21	1	204	12		3		18	18	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	108.6	21.5
Average Queue (m)	74.0	8.4
95th Queue (m)	101.6	17.5
Link Distance (m)	547.4	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	10	
Queuing Penalty (veh)	18	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	60.6	53.1	15.4	68.0	63.4	68.0	89.4	88.8
Average Queue (m)	33.1	18.6	5.5	30.8	28.7	32.4	52.3	53.3
95th Queue (m)	55.1	42.1	14.3	57.8	54.7	58.6	82.5	80.9
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	11.3	60.1	66.2	63.9	45.1	55.3	64.2	71.8	157.6	80.0	114.3	112.9
Average Queue (m)	2.2	32.9	37.3	37.9	16.4	15.2	21.7	27.8	66.7	18.0	53.8	63.7
95th Queue (m)	8.3	50.7	57.7	58.7	35.2	40.9	50.9	58.3	138.4	60.8	97.7	99.2
Link Distance (m)		1402.4	1402.4	1402.4		1245.0	1245.0	1245.0	325.8		2472.6	2472.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)		8			4	2			48	0		
Queuing Penalty (veh)		1			9	2			41	0		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	77.8	78.4	84.5	88.4	39.6	54.6	59.0	70.9	69.5	62.0	34.5	40.4
Average Queue (m)	36.9	43.5	50.2	54.0	10.7	26.3	34.1	44.3	44.1	32.8	14.3	16.0
95th Queue (m)	67.0	72.6	79.3	85.0	24.4	45.8	50.2	62.6	63.7	59.9	28.1	32.3
Link Distance (m)		123.2	123.2	123.2				736.2	736.2	736.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)				0		1	3	10		0		0
Queuing Penalty (veh)				0		2	5	18		1		1

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	61.4	50.4	34.2	111.0	90.9	89.8	37.6
Average Queue (m)	31.8	20.6	13.9	52.6	59.0	58.9	15.2
95th Queue (m)	52.5	42.9	27.3	88.7	83.6	85.5	30.3
Link Distance (m)	359.2	359.2			587.4	587.4	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	2	0				1	
Queuing Penalty (veh)	1	0				3	

Zone Summary

Zone wide Queuing Penalty: 659

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	27.9	25.6	28.5	65.9	24.8
Average Queue (m)	14.2	12.5	16.8	27.4	11.7
95th Queue (m)	22.6	21.2	24.9	48.0	20.2
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	78.6	51.4	55.3	30.1	48.3	21.5
Average Queue (m)	38.1	21.0	25.8	12.7	20.2	9.3
95th Queue (m)	69.4	38.5	43.9	22.9	37.3	17.5
Link Distance (m)	1366.0		333.1	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		3	5			
Queuing Penalty (veh)		13	15			

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.9	427.9	164.9	437.3	119.8	164.8	172.4	165.7	110.0	130.0	557.1	547.0
Average Queue (m)	126.6	225.1	151.4	382.2	51.1	112.8	113.5	109.1	38.5	127.6	401.9	381.6
95th Queue (m)	168.9	461.5	217.5	546.4	113.8	154.8	156.8	155.7	111.9	136.4	639.9	633.7
Link Distance (m)		987.0		422.6		732.9	732.9	732.9			547.4	547.4
Upstream Blk Time (%)				72							20	11
Queuing Penalty (veh)				0							0	0
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	80	24	2	89	11	36		25		100	22	
Queuing Penalty (veh)	218	97	6	195	88	64		64		479	25	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	500.9	110.0
Average Queue (m)	184.1	32.7
95th Queue (m)	477.5	85.0
Link Distance (m)	547.4	
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	16	1
Queuing Penalty (veh)	53	3

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	83.3	68.6	42.4	78.9	77.1	83.8	77.8	46.9
Average Queue (m)	47.6	34.5	11.0	50.0	51.6	56.7	47.0	24.0
95th Queue (m)	72.1	62.2	29.4	72.8	73.0	78.2	72.9	42.8
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	24.1	81.2	70.1	70.3	45.2	64.9	78.0	88.6	106.1	67.5	48.9	51.8
Average Queue (m)	6.4	41.2	40.4	42.2	18.0	33.2	44.4	53.8	60.0	10.9	21.5	24.8
95th Queue (m)	17.5	66.7	61.7	65.2	34.8	58.8	70.0	80.5	91.9	37.1	40.8	47.7
Link Distance (m)		1402.4	1402.4	1402.4		1245.0	1245.0	1245.0	325.8		2472.6	2472.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)	0	12			3	9			28	0		
Queuing Penalty (veh)	0	4			9	9			29	0		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	L	L	T	T	T	R
Maximum Queue (m)	118.1	123.2	74.1	63.0	28.6	16.6	57.6	89.5	119.1	109.0	106.4	40.5
Average Queue (m)	85.5	42.0	34.7	34.5	11.3	2.0	27.9	52.7	75.9	73.4	65.9	16.4
95th Queue (m)	123.6	102.7	59.1	57.2	22.9	15.5	51.3	94.9	112.8	107.6	101.5	32.2
Link Distance (m)		123.2	123.2	123.2		1245.0			736.2	736.2	736.2	
Upstream Blk Time (%)	3	3										
Queuing Penalty (veh)	0	11										
Storage Bay Dist (m)	105.0				105.0		45.0	45.0				55.0
Storage Blk Time (%)	7	0					2	5	48		23	0
Queuing Penalty (veh)	12	2					4	10	120		27	0

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (m)	74.9	214.2	199.0	73.7	124.3	128.3	92.3	126.0
Average Queue (m)	67.3	156.3	144.4	19.0	65.8	56.9	50.8	62.3
95th Queue (m)	93.9	261.8	247.6	43.7	138.9	99.1	79.7	108.8
Link Distance (m)		359.2	359.2			587.4	587.4	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	45.0			55.0	140.0			80.0
Storage Blk Time (%)	78	9	13	0	6	0	1	5
Queuing Penalty (veh)	238	14	32	0	20	0	4	19

Zone Summary

Zone wide Queuing Penalty: 1885

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	23.8	17.6	23.7	46.0	26.6
Average Queue (m)	12.7	9.0	13.1	20.4	11.8
95th Queue (m)	20.3	15.9	20.5	36.2	20.2
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	68.8	29.9	32.0	17.9	44.8	24.2
Average Queue (m)	29.9	13.4	16.6	8.3	17.8	11.1
95th Queue (m)	54.8	23.9	26.9	14.6	33.5	18.1
Link Distance (m)	1366.0		333.1	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		0	0			
Queuing Penalty (veh)		1	0			

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	137.0	375.1	102.2	97.5	47.3	100.5	100.0	97.3	19.2	50.0	121.9	121.0
Average Queue (m)	109.3	163.8	49.7	39.8	22.3	66.2	65.6	55.8	6.5	16.6	88.4	86.2
95th Queue (m)	163.6	428.2	88.4	76.5	44.9	92.2	92.1	85.3	15.0	38.6	114.6	115.2
Link Distance (m)		987.0		422.6		732.9	732.9	732.9			547.4	547.4
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	72	28	10	1	12	24		3		4	33	
Queuing Penalty (veh)	248	93	25	2	56	13		4		27	18	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	116.5	24.8
Average Queue (m)	74.9	8.5
95th Queue (m)	106.4	18.7
Link Distance (m)	547.4	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	10	
Queuing Penalty (veh)	18	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	64.9	55.2	27.3	73.7	61.1	64.2	120.2	134.5
Average Queue (m)	33.0	17.5	6.5	30.1	28.8	33.5	58.8	64.7
95th Queue (m)	56.1	41.0	18.6	58.6	53.6	59.5	101.0	119.7
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	13.6	64.8	64.1	66.0	49.5	56.0	62.6	77.8	174.0	67.9	131.7	103.0
Average Queue (m)	3.1	32.6	36.6	37.2	16.9	15.8	21.2	27.4	80.7	20.8	64.7	66.2
95th Queue (m)	10.6	53.0	57.3	59.5	37.5	43.3	49.8	60.8	196.6	67.9	116.2	97.8
Link Distance (m)		1402.4	1402.4	1402.4		1245.0	1245.0	1245.0	325.8		2472.6	2472.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)	0	8			4	4			44	0		
Queuing Penalty (veh)	0	1			9	4			38	1		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	74.3	75.7	83.8	90.9	38.1	55.2	59.2	75.2	70.8	60.8	26.6	36.6
Average Queue (m)	39.3	42.7	50.4	53.5	12.4	24.0	32.0	46.3	44.8	32.8	12.1	17.5
95th Queue (m)	66.0	72.7	80.1	86.3	27.3	44.9	49.6	65.4	64.2	60.3	22.3	34.3
Link Distance (m)		123.2	123.2	123.2				736.2	736.2	736.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)						1	2	12		0		1
Queuing Penalty (veh)						1	3	23		1		1

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	59.4	47.5	45.9	122.9	96.7	98.0	39.3
Average Queue (m)	32.6	20.6	14.0	59.2	60.2	59.3	15.1
95th Queue (m)	52.3	41.8	29.9	107.2	86.5	88.5	29.5
Link Distance (m)	359.2	359.2			587.4	587.4	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	3	0	0	1		2	
Queuing Penalty (veh)	2	0	0	3		5	

Intersection: 9: McLaughlin Road & Street A

Movement	WB	SB
Directions Served	LTR	LT
Maximum Queue (m)	19.2	5.7
Average Queue (m)	9.5	0.4
95th Queue (m)	17.3	3.1
Link Distance (m)	670.0	574.3
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Street D & Old School Road

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 597

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	30.2	27.0	30.2	67.3	27.6
Average Queue (m)	14.8	12.2	17.5	28.4	12.3
95th Queue (m)	24.3	20.6	25.9	50.2	20.9
Link Distance (m)	583.9		1366.0	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	83.6	33.2	52.2	27.2	43.4	19.1
Average Queue (m)	38.1	18.6	25.4	12.6	19.3	8.4
95th Queue (m)	69.5	29.0	41.7	21.7	33.8	15.8
Link Distance (m)	1366.0		333.1	574.3	574.3	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		1	4			
Queuing Penalty (veh)		3	12			

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.9	418.9	164.9	432.5	119.8	227.8	239.2	233.9	110.0	130.0	553.4	545.7
Average Queue (m)	119.1	191.6	150.0	357.2	52.2	143.1	146.2	139.9	58.5	128.3	370.2	354.8
95th Queue (m)	165.3	455.8	218.5	535.8	115.3	256.1	258.3	254.7	138.1	134.4	595.8	586.1
Link Distance (m)		987.0		422.6		732.9	732.9	732.9			547.4	547.4
Upstream Blk Time (%)				59							13	7
Queuing Penalty (veh)				0							0	0
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	76	19	3	90	12	40		30		100	23	
Queuing Penalty (veh)	206	78	11	197	94	70		79		479	26	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	528.6	99.5
Average Queue (m)	173.1	28.9
95th Queue (m)	439.7	72.3
Link Distance (m)	547.4	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	14	0
Queuing Penalty (veh)	47	0

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	80.1	73.2	46.8	90.8	91.5	87.4	85.2	51.0
Average Queue (m)	49.3	37.9	12.2	52.9	53.5	58.6	48.5	26.2
95th Queue (m)	70.4	64.8	34.1	80.0	76.5	80.0	73.3	44.6
Link Distance (m)	266.7	266.7	266.7	1402.4	1402.4	1402.4	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (m)	29.5	75.3	69.6	71.0	55.2	71.3	80.4	91.9	110.6	79.3	48.9	63.6
Average Queue (m)	9.9	42.8	41.6	42.1	18.8	36.8	48.1	57.1	62.0	13.1	21.7	25.4
95th Queue (m)	23.6	65.6	61.9	63.1	39.7	62.9	74.9	85.8	93.8	44.8	41.0	51.9
Link Distance (m)		1402.4	1402.4	1402.4		1245.0	1245.0	1245.0	325.8		2472.6	2472.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					30.0		
Storage Blk Time (%)	0	13			6	10			31	0		
Queuing Penalty (veh)	1	6			18	10			32	1		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	L	L	T	T	T	R
Maximum Queue (m)	122.6	137.2	74.2	61.1	29.4	19.9	61.2	89.8	153.0	144.6	127.4	72.1
Average Queue (m)	84.1	42.0	34.6	36.1	11.0	1.1	31.2	58.3	91.6	87.6	77.0	21.1
95th Queue (m)	120.1	96.6	59.5	58.8	23.1	9.6	53.0	101.5	152.4	142.6	126.5	61.2
Link Distance (m)		123.2	123.2	123.2		1245.0			736.2	736.2	736.2	
Upstream Blk Time (%)	1	1										
Queuing Penalty (veh)	0	4										
Storage Bay Dist (m)	105.0				105.0		45.0	45.0				55.0
Storage Blk Time (%)	4	0					2	5	55			32
Queuing Penalty (veh)	8	0					5	12	137			38

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (m)	74.9	181.7	170.6	87.1	110.7	115.0	144.3	148.0
Average Queue (m)	62.4	98.9	86.8	19.8	65.1	59.3	57.2	66.2
95th Queue (m)	90.0	176.3	160.6	48.1	123.0	98.0	104.4	122.1
Link Distance (m)		359.2	359.2			587.4	587.4	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	45.0			55.0	140.0			80.0
Storage Blk Time (%)	65	15	9		0		0	6
Queuing Penalty (veh)	202	24	21		1		1	22

Intersection: 9: McLaughlin Road & Street A

Movement	WB	SB
Directions Served	LTR	LT
Maximum Queue (m)	20.5	7.3
Average Queue (m)	7.9	1.0
95th Queue (m)	15.6	5.0
Link Distance (m)	670.0	574.3
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Street D & Old School Road

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 1845

Queuing and Blocking Report
AM Peak Hour

06/07/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	33.5	28.3	38.3	58.8	39.9
Average Queue (m)	16.2	12.3	14.4	25.4	13.7
95th Queue (m)	27.7	23.3	29.0	47.4	30.0
Link Distance (m)	583.9		1365.9	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	113.9	45.9	57.1	23.8	57.6	41.0
Average Queue (m)	60.1	23.0	23.8	9.4	25.4	17.0
95th Queue (m)	98.9	38.4	45.5	20.7	46.8	31.7
Link Distance (m)	1365.9		333.1	572.4	572.4	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		4	4			
Queuing Penalty (veh)		11	7			

Queuing and Blocking Report
AM Peak Hour

06/07/2024

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	140.0	755.9	165.0	438.4	60.1	130.9	120.1	127.3	91.5	129.9	263.4	248.1
Average Queue (m)	132.3	400.8	156.6	382.2	32.2	81.6	78.7	70.6	12.9	81.8	195.3	180.5
95th Queue (m)	165.9	746.6	205.7	533.0	73.2	115.6	108.7	105.2	44.3	158.6	284.0	268.3
Link Distance (m)		987.0		422.7		837.4	837.4	837.4			273.0	273.0
Upstream Blk Time (%)		0		66							6	2
Queuing Penalty (veh)		0		0							0	0
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	66	72	15	92	28	26		11		48	49	
Queuing Penalty (veh)	246	328	47	286	151	14		17		365	36	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	222.4	110.0
Average Queue (m)	148.6	50.7
95th Queue (m)	243.2	129.2
Link Distance (m)	273.0	
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	33	0
Queuing Penalty (veh)	80	0

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	87.2	70.5	51.1	85.1	88.5	87.8	71.9	81.2
Average Queue (m)	54.1	42.8	15.3	47.3	48.2	51.6	39.6	45.7
95th Queue (m)	77.5	68.5	39.0	76.4	78.2	80.3	66.5	73.9
Link Distance (m)	266.7	266.7	266.7	1398.6	1398.6	1398.6	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
AM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	9.9	68.8	83.3	87.8	56.4	71.9	84.5	92.0	29.7	41.0	37.6	86.5
Average Queue (m)	3.0	40.9	48.2	52.7	24.0	24.8	32.6	40.3	10.3	21.4	13.7	49.4
95th Queue (m)	9.1	61.7	70.9	77.8	47.7	56.9	69.5	79.2	22.7	37.1	28.8	78.6
Link Distance (m)		1398.6	1398.6	1398.6		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)		11			10	6			0	0		10
Queuing Penalty (veh)		2			24	8			0	0		19

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	51.5	52.7
Average Queue (m)	27.0	33.1
95th Queue (m)	46.1	49.8
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	95.9	107.1	112.4	113.2	36.9	58.0	78.6	96.4	89.0	76.8	31.8	46.4
Average Queue (m)	48.6	65.5	73.0	77.3	13.2	27.5	36.9	57.5	56.5	47.0	16.2	17.9
95th Queue (m)	81.9	93.6	101.0	104.7	26.9	51.4	61.6	80.1	79.6	71.6	27.4	36.0
Link Distance (m)		123.2	123.2	123.2				736.2	736.2	736.2		
Upstream Blk Time (%)			0	0								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)	0	0		1		2	5	25		4		1
Queuing Penalty (veh)	1	0		1		3	8	49		6		1

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	48.8	44.3	43.7	132.3	95.8	78.2	52.3
Average Queue (m)	26.9	17.2	17.4	69.6	51.6	49.0	19.3
95th Queue (m)	43.0	37.2	37.0	114.6	75.6	69.8	41.0
Link Distance (m)	359.2	359.2			587.4	587.4	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0			80.0
Storage Blk Time (%)	1	0	0	0		0	
Queuing Penalty (veh)	0	0	0	2		0	

Zone Summary

Zone wide Queuing Penalty: 1714

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	51.1	60.9	72.4	113.1	88.7
Average Queue (m)	24.6	26.6	33.3	57.7	32.0
95th Queue (m)	42.9	48.8	59.8	100.1	69.2
Link Distance (m)	583.9		1365.9	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		8	10		
Queuing Penalty (veh)		29	24		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	610.5	68.9	96.4	51.4	121.8	46.0
Average Queue (m)	202.1	34.2	38.0	22.7	48.0	16.9
95th Queue (m)	616.1	62.5	77.0	41.7	110.5	42.0
Link Distance (m)	1365.9		333.1	572.4	572.4	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		14	10			
Queuing Penalty (veh)		75	35			

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.9	990.8	165.0	437.0	119.9	850.7	853.0	850.8	110.0	130.0	287.0	282.8
Average Queue (m)	139.8	841.1	161.5	414.9	73.6	823.1	826.5	826.1	100.2	124.8	245.5	218.6
95th Queue (m)	140.3	1211.6	191.1	505.2	153.5	907.7	907.3	900.4	146.8	146.8	340.6	344.3
Link Distance (m)		987.0		422.7		837.4	837.4	837.4			273.0	273.0
Upstream Blk Time (%)		18		83		8	12	13			58	1
Queuing Penalty (veh)		159		0		94	137	147			0	0
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	85	31	10	92	6	55		57	0	99	26	
Queuing Penalty (veh)	258	170	40	299	60	100		208	0	555	45	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	205.9	103.1
Average Queue (m)	90.3	45.4
95th Queue (m)	171.0	97.9
Link Distance (m)	273.0	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	16	2
Queuing Penalty (veh)	77	12

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	83.2	68.2	41.0	94.5	79.4	71.9	100.6	65.6
Average Queue (m)	52.9	40.6	11.2	50.4	46.0	51.8	57.2	29.6
95th Queue (m)	75.6	64.1	29.0	78.0	67.6	70.3	88.9	55.2
Link Distance (m)	266.7	266.7	266.7	1398.6	1398.6	1398.6	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	26.4	81.8	80.0	81.4	48.3	74.9	85.6	95.0	36.8	49.9	47.3	54.4
Average Queue (m)	8.5	49.9	48.2	49.3	18.4	36.4	48.4	58.9	17.1	30.3	22.1	28.1
95th Queue (m)	20.3	72.9	70.1	71.5	36.3	62.8	74.3	86.0	33.3	46.0	40.8	45.6
Link Distance (m)		1398.6	1398.6	1398.6		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	20			4	10			0	0		1
Queuing Penalty (veh)	1	8			13	11			0	0		1

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	28.9	36.5
Average Queue (m)	11.2	17.2
95th Queue (m)	23.0	31.6
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	L	L	T	T	T
Maximum Queue (m)	123.2	146.0	85.2	69.6	28.8	131.5	19.1	63.6	89.9	398.7	387.0	369.0
Average Queue (m)	113.4	102.1	39.6	39.4	11.3	33.5	1.3	36.5	81.6	247.4	237.1	219.0
95th Queue (m)	138.5	180.6	65.7	61.8	24.1	107.3	14.0	63.0	115.2	429.4	417.6	389.3
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9			736.2	736.2	736.2
Upstream Blk Time (%)	25	26										
Queuing Penalty (veh)	0	97										
Storage Bay Dist (m)	105.0				105.0			45.0	45.0			
Storage Blk Time (%)	45	0						9	12	86		83
Queuing Penalty (veh)	86	2						22	29	229		124

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	125.0	74.9	343.5	340.8	88.6	209.9	482.0	541.4	170.0
Average Queue (m)	90.3	74.3	273.9	254.6	24.4	179.3	285.3	280.6	127.6
95th Queue (m)	171.7	78.7	425.4	417.8	67.1	258.3	552.6	591.1	194.4
Link Distance (m)			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)			27	6			1	4	
Queuing Penalty (veh)			0	0			0	0	
Storage Bay Dist (m)	55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	2	97	10	15	0	75	0	1	35
Queuing Penalty (veh)	4	321	18	39	0	284	0	8	134

Zone Summary

Zone wide Queuing Penalty: 3956

Queuing and Blocking Report
AM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	31.8	31.3	34.9	57.7	41.2
Average Queue (m)	16.0	13.0	15.9	23.5	14.5
95th Queue (m)	28.3	24.1	30.5	43.6	31.1
Link Distance (m)	583.9		1365.9	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		0	1		
Queuing Penalty (veh)		1	1		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	100.3	44.8	51.7	38.2	58.7	44.0
Average Queue (m)	57.5	22.7	22.7	12.7	26.3	19.2
95th Queue (m)	92.2	36.7	43.6	27.2	48.4	37.3
Link Distance (m)	1365.9		333.1	572.4	572.4	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		3	3			
Queuing Penalty (veh)		9	5			

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.9	616.1	165.0	438.7	93.5	127.2	123.9	114.7	61.6	129.9	276.5	259.4
Average Queue (m)	135.2	379.0	155.4	361.7	28.0	79.2	77.2	70.6	12.7	66.9	210.9	200.4
95th Queue (m)	158.9	748.8	207.2	526.7	58.9	116.7	111.3	102.7	38.8	145.6	304.8	297.6
Link Distance (m)		987.0		422.7		837.4	837.4	837.4			273.0	273.0
Upstream Blk Time (%)		1		53							12	8
Queuing Penalty (veh)		7		0							0	0
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	65	75	16	92	21	26		12		38	51	
Queuing Penalty (veh)	243	341	49	286	117	14		19		294	37	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	245.3	110.0
Average Queue (m)	175.4	62.2
95th Queue (m)	288.2	142.7
Link Distance (m)	273.0	
Upstream Blk Time (%)	8	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	37	
Queuing Penalty (veh)	91	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	77.3	69.9	51.2	109.7	85.6	90.2	92.6	87.0
Average Queue (m)	52.9	41.1	14.8	61.7	48.4	51.1	43.5	50.9
95th Queue (m)	75.0	64.0	39.2	97.3	80.3	81.7	75.9	80.7
Link Distance (m)	266.7	266.7	266.7	1398.6	1398.6	1398.6	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
AM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B36	NB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	T	L	T	TR
Maximum Queue (m)	25.4	65.9	80.7	83.0	62.7	72.5	82.0	93.3	10.9	24.9	42.4	36.7
Average Queue (m)	7.7	43.0	49.1	54.5	24.3	25.0	32.9	39.9	0.4	9.1	24.2	15.0
95th Queue (m)	19.0	62.6	72.1	77.4	51.8	58.0	71.1	81.1	7.7	21.5	39.3	30.9
Link Distance (m)		1398.6	1398.6	1398.6		1244.9	1244.9	1244.9	123.2		325.2	325.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					50.0		
Storage Blk Time (%)	0	12			12	6					0	
Queuing Penalty (veh)	1	5			29	8					0	

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (m)	102.2	66.2	61.2
Average Queue (m)	56.3	30.4	36.4
95th Queue (m)	91.2	50.7	53.8
Link Distance (m)		2470.4	2470.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	50.0		
Storage Blk Time (%)	17	0	
Queuing Penalty (veh)	35	1	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	90.9	98.5	112.7	118.8	87.4	52.7	77.0	88.3	92.2	81.9	39.6	38.9
Average Queue (m)	53.4	66.4	75.1	78.5	16.9	27.4	34.9	56.8	55.7	46.3	16.3	16.4
95th Queue (m)	83.6	87.6	100.1	105.2	48.3	48.8	58.5	78.5	79.0	71.5	29.7	32.4
Link Distance (m)		123.2	123.2	123.2				736.2	736.2	736.2		
Upstream Blk Time (%)			0	0	0							
Queuing Penalty (veh)			0	1	0							
Storage Bay Dist (m)	105.0				105.0	45.0	45.0				55.0	45.0
Storage Blk Time (%)		0		1		2	3	24		3	0	0
Queuing Penalty (veh)		0		1		3	6	48		4	0	0

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	48.5	47.2	51.1	135.7	111.4	92.9	43.0
Average Queue (m)	31.1	20.4	16.8	67.9	58.8	56.2	15.6
95th Queue (m)	49.0	43.7	37.9	119.0	89.8	84.0	32.0
Link Distance (m)	359.2	359.2		587.4	587.4		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			55.0	140.0		80.0	
Storage Blk Time (%)	1	0	0	1	0	1	
Queuing Penalty (veh)	1	0	0	5	0	3	

Intersection: 9: McLaughlin Road & Street A

Movement	WB	WB	SB
Directions Served	L	TR	LT
Maximum Queue (m)	27.6	25.0	7.5
Average Queue (m)	11.6	7.8	1.3
95th Queue (m)	21.2	17.1	5.6
Link Distance (m)		1332.4	572.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	30.0		
Storage Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	

Queuing and Blocking Report
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Intersection: 10: Street D & Old School Road

Movement	EB
Directions Served	TR
Maximum Queue (m)	45.6
Average Queue (m)	3.9
95th Queue (m)	45.1
Link Distance (m)	333.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	32.3	147.5	27.0	31.1	34.7	40.4	405.1	271.0	416.6
Average Queue (m)	19.0	85.5	11.3	11.1	14.6	12.0	73.8	82.1	76.4
95th Queue (m)	38.2	158.0	23.9	26.7	32.4	30.8	260.5	266.2	232.9
Link Distance (m)		1332.4		921.8	921.8	921.8	837.4	837.4	837.4
Upstream Blk Time (%)							0	0	0
Queuing Penalty (veh)							0	0	0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	2	57							
Queuing Penalty (veh)	5	25							

Network Summary

Network wide Queuing Penalty: 1695

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (m)	59.3	61.4	71.4	110.7	83.7
Average Queue (m)	26.2	30.7	34.3	57.9	29.1
95th Queue (m)	45.8	51.6	59.9	97.5	61.5
Link Distance (m)	583.9		1365.9	3059.3	334.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		30.0			
Storage Blk Time (%)		13	11		
Queuing Penalty (veh)		46	25		

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	707.3	79.4	94.6	62.5	150.5	59.3
Average Queue (m)	213.1	38.6	46.1	28.9	58.5	17.8
95th Queue (m)	568.1	70.5	82.8	53.4	120.1	47.3
Link Distance (m)	1365.9		333.1	572.4	572.4	254.7
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)		30.0				
Storage Blk Time (%)		16	13			
Queuing Penalty (veh)		91	46			

Queuing and Blocking Report
PM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (m)	139.9	991.2	165.0	435.5	119.9	849.3	851.6	849.7	110.0	130.0	289.4	283.1
Average Queue (m)	139.8	832.8	162.9	420.8	85.6	811.8	815.3	815.9	105.3	125.7	260.0	233.8
95th Queue (m)	140.2	1232.1	190.4	473.7	160.5	941.5	943.2	939.6	136.7	147.1	339.8	348.9
Link Distance (m)		987.0		422.7		837.4	837.4	837.4			273.0	273.0
Upstream Blk Time (%)		20		85		6	9	12			65	3
Queuing Penalty (veh)		176		0		68	107	137			0	0
Storage Bay Dist (m)	40.0		65.0		35.0				60.0	35.0		
Storage Blk Time (%)	85	25	9	92	10	55		57	0	100	29	
Queuing Penalty (veh)	259	139	40	300	96	100		208	0	572	49	

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	262.2	110.0
Average Queue (m)	118.0	56.3
95th Queue (m)	234.4	120.9
Link Distance (m)	273.0	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		60.0
Storage Blk Time (%)	22	3
Queuing Penalty (veh)	107	20

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	LT	T	TR	LTR	LTR
Maximum Queue (m)	84.3	68.7	48.4	89.3	72.7	73.4	107.5	67.7
Average Queue (m)	51.7	40.1	13.2	54.5	44.8	49.4	64.2	30.7
95th Queue (m)	74.0	66.8	36.3	82.3	63.7	68.0	99.7	57.4
Link Distance (m)	266.7	266.7	266.7	1398.6	1398.6	1398.6	329.6	3059.3
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	42.7	73.9	67.4	74.6	38.9	73.8	81.6	99.8	44.0	74.5	72.5	58.9
Average Queue (m)	16.1	42.9	42.8	43.1	15.4	37.1	49.2	61.0	21.2	45.8	42.1	28.7
95th Queue (m)	32.6	65.6	64.1	65.4	32.3	66.9	77.3	92.7	37.3	64.4	64.0	50.1
Link Distance (m)		1398.6	1398.6	1398.6		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	1	13			2	10			0	4		1
Queuing Penalty (veh)	4	14			7	10			0	5		1

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	35.9	47.4
Average Queue (m)	17.3	24.5
95th Queue (m)	33.3	42.4
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
PM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	148.1	81.1	68.5	33.9	240.0	105.8	55.5	67.2	89.9	476.8	453.0
Average Queue (m)	119.1	127.9	38.0	38.8	12.4	125.3	4.9	1.8	37.1	82.6	276.7	265.6
95th Queue (m)	139.6	180.7	63.3	60.8	27.5	268.5	55.6	39.1	68.0	111.3	536.0	521.3
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	54	55										
Queuing Penalty (veh)	0	208										
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	67	1							12	17	85	
Queuing Penalty (veh)	129	4							29	41	225	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	438.2	125.0	75.0	367.6	358.7	88.6	210.0	568.4	577.7	170.0
Average Queue (m)	245.3	81.8	74.8	309.8	279.6	24.2	189.3	415.5	427.6	128.8
95th Queue (m)	488.9	167.1	75.3	426.1	434.4	69.9	268.1	692.6	699.2	202.8
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)				40	9			10	29	
Queuing Penalty (veh)				0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	81	1	98	12	21	0	85	0	2	37
Queuing Penalty (veh)	120	4	378	23	52	0	344	0	16	152

Intersection: 9: McLaughlin Road & Street A

Movement	WB	WB	NB	SB
Directions Served	L	TR	TR	LT
Maximum Queue (m)	21.7	15.3	2.5	10.8
Average Queue (m)	9.1	4.4	0.1	1.6
95th Queue (m)	18.2	11.9	1.5	6.9
Link Distance (m)		1332.4	2470.4	572.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	30.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Street D & Old School Road

Movement	EB
Directions Served	TR
Maximum Queue (m)	338.2
Average Queue (m)	179.6
95th Queue (m)	441.7
Link Distance (m)	333.1
Upstream Blk Time (%)	15
Queuing Penalty (veh)	127
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	29.6	49.5	52.4	936.5	939.0	936.8	90.5	233.8	243.5
Average Queue (m)	8.1	17.3	46.5	645.0	646.3	643.3	24.7	40.7	43.0
95th Queue (m)	21.6	35.0	66.7	1241.5	1238.0	1233.3	63.0	194.0	195.5
Link Distance (m)		1332.4		921.8	921.8	921.8	837.4	837.4	837.4
Upstream Blk Time (%)				46	42	42			
Queuing Penalty (veh)				0	0	0			
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	0	2	2	40					
Queuing Penalty (veh)	0	1	22	104					

Network Summary

Network wide Queuing Penalty: 4606

Queuing and Blocking Report
AM Peak Hour

06/07/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	33.4	32.5	34.4	37.4	35.4	32.5
Average Queue (m)	15.1	14.8	13.5	12.5	14.3	15.0
95th Queue (m)	26.9	28.2	26.2	26.7	25.5	28.6
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					50.0	
Storage Blk Time (%)				0	0	
Queuing Penalty (veh)				0	0	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	51.0	45.9	46.4	25.6	32.2	30.0	72.6	41.0
Average Queue (m)	26.3	25.3	24.0	7.2	13.5	11.3	28.6	16.7
95th Queue (m)	43.0	41.4	39.9	18.9	26.0	24.5	55.9	31.6
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			0					
Queuing Penalty (veh)			0					

Queuing and Blocking Report
AM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	991.7	988.4	164.4	279.7	247.2	42.6	120.4	113.3	112.6	92.4	129.9
Average Queue (m)	139.9	764.4	516.9	138.4	146.8	117.8	10.7	75.2	74.6	67.4	10.6	78.0
95th Queue (m)	139.9	1153.6	1160.6	203.3	333.8	288.1	29.2	111.9	106.3	98.3	39.6	149.8
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		23	6									
Queuing Penalty (veh)		113	29									
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	84	4		78	0		0	23		9		50
Queuing Penalty (veh)	92	25		66	0		0	12		15		412

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	284.3	281.9	280.8	110.0
Average Queue (m)	263.9	257.6	247.9	94.0
95th Queue (m)	314.2	316.9	320.6	152.5
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	33	26	29	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	49		47	
Queuing Penalty (veh)	36		141	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	89.1	76.5	50.5	51.7	57.9	64.9	64.9	76.6	114.6
Average Queue (m)	49.6	36.4	14.0	21.6	14.8	20.7	26.6	40.9	54.4
95th Queue (m)	80.3	66.1	36.6	42.5	41.6	50.2	56.5	70.4	94.3
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				1	0				
Queuing Penalty (veh)				1	0				

Queuing and Blocking Report
AM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	24.2	93.5	94.4	92.4	72.2	80.0	85.6	105.1	31.2	53.5	45.7	89.1
Average Queue (m)	3.9	52.4	55.9	57.9	25.7	34.8	41.7	52.8	13.2	31.8	23.5	41.5
95th Queue (m)	13.9	79.3	83.2	84.9	49.2	67.7	76.0	91.4	25.8	49.1	43.3	73.2
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)		28			7	11				1		5
Queuing Penalty (veh)		5			18	14				0		11

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	56.0	55.3
Average Queue (m)	23.0	29.1
95th Queue (m)	43.8	48.6
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	L	L	T	T	T	R
Maximum Queue (m)	99.9	111.5	116.2	118.8	71.5	2.6	61.4	82.6	93.5	99.0	93.8	40.9
Average Queue (m)	50.3	70.2	79.1	82.9	15.0	0.1	32.6	43.9	60.8	61.1	52.7	18.4
95th Queue (m)	85.9	105.1	111.2	112.6	40.8	1.8	56.4	72.8	86.5	86.4	80.0	32.5
Link Distance (m)		123.2	123.2	123.2		1244.9			736.2	736.2	736.2	
Upstream Blk Time (%)	0	0	0	0	0							
Queuing Penalty (veh)	0	0	0	1	0							
Storage Bay Dist (m)	105.0				105.0		45.0	45.0				55.0
Storage Blk Time (%)	1	1		2			3	8	27		5	0
Queuing Penalty (veh)	2	2		2			7	15	56		9	0

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (m)	44.0	77.0	71.1	58.5	110.4	109.2	110.6	46.2
Average Queue (m)	15.1	46.3	38.7	19.2	60.6	64.5	64.5	18.6
95th Queue (m)	32.4	70.2	65.5	41.5	97.2	94.2	95.2	36.4
Link Distance (m)		359.2	359.2			587.4	587.4	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	45.0			55.0	140.0			80.0
Storage Blk Time (%)	0	12	2	0			3	
Queuing Penalty (veh)	0	10	4	1			10	

Zone Summary

Zone wide Queuing Penalty: 1109

Queuing and Blocking Report
PM Peak Hour

06/07/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	74.5	64.9	68.7	162.8	52.5	94.1
Average Queue (m)	32.6	28.6	31.3	74.7	35.1	46.6
95th Queue (m)	61.2	54.5	59.0	132.9	64.5	80.0
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					50.0	
Storage Blk Time (%)				11	1	
Queuing Penalty (veh)				34	3	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	352.1	348.0	93.6	68.0	43.2	135.9	177.5	54.6
Average Queue (m)	104.6	101.6	44.7	18.4	22.9	36.1	78.1	14.8
95th Queue (m)	296.0	295.0	82.3	44.8	37.6	98.9	186.2	37.9
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	1	1				0	19	
Queuing Penalty (veh)	3	3				0	61	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			7	0				
Queuing Penalty (veh)			19	0				

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	990.0	988.5	121.3	79.8	79.9	119.9	849.1	850.4	848.4	110.0	130.0
Average Queue (m)	139.9	860.9	704.0	68.9	41.2	44.3	80.4	833.2	835.7	835.8	101.8	123.6
95th Queue (m)	140.2	1199.4	1280.6	111.0	65.3	68.9	158.2	870.8	871.6	858.0	144.6	159.6
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		49	12					9	13	14		
Queuing Penalty (veh)		245	62					107	168	181		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	86	2		15	1		6	55		56		91
Queuing Penalty (veh)	91	12		20	2		63	102		212		565

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	288.4	285.6	286.3	110.0
Average Queue (m)	272.7	265.8	243.8	98.2
95th Queue (m)	304.6	321.3	359.7	142.7
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	65	19	26	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	51		47	15
Queuing Penalty (veh)	88		277	92

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	90.2	74.6	58.0	47.8	39.7	52.4	65.2	108.0	62.2
Average Queue (m)	53.0	39.9	19.3	21.2	12.5	19.6	26.4	59.9	29.0
95th Queue (m)	80.2	70.4	49.0	39.8	29.9	43.9	53.1	96.3	54.1
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				0	0				
Queuing Penalty (veh)				1	0				

Queuing and Blocking Report
PM Peak Hour

06/07/2024

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	22.7	70.9	71.7	72.1	32.1	64.6	73.0	87.4	43.3	65.1	73.3	66.5
Average Queue (m)	7.4	40.2	39.8	39.5	15.0	33.7	43.2	53.8	16.8	40.5	36.7	31.6
95th Queue (m)	16.7	66.3	63.8	63.2	27.2	59.4	68.6	79.4	34.3	58.9	59.7	57.2
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	17			1	8			0	3		4
Queuing Penalty (veh)	0	8			2	10			1	3		5

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	39.4	52.4
Average Queue (m)	16.1	23.8
95th Queue (m)	32.0	42.5
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
PM Peak Hour

06/07/2024

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	148.4	72.3	76.6	41.4	1094.6	1073.8	1047.7	66.2	89.9	632.6	613.5
Average Queue (m)	122.9	139.9	47.8	49.1	13.6	649.8	566.7	481.5	31.7	84.9	411.7	398.6
95th Queue (m)	123.7	145.7	68.7	71.5	28.6	1161.2	1200.3	1117.5	58.9	112.4	718.5	702.2
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	69	73									4	1
Queuing Penalty (veh)	0	297									0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	83	0							5	10	89	
Queuing Penalty (veh)	170	1							13	26	245	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	585.9	125.0	74.8	107.3	90.3	47.0	111.1	601.4	604.6	170.0
Average Queue (m)	378.0	107.1	39.7	62.1	55.9	20.0	51.3	579.1	586.1	170.0
95th Queue (m)	668.6	168.9	70.1	91.0	81.7	37.3	101.9	659.1	648.8	170.2
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	1							20	75	
Queuing Penalty (veh)	0							0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	88	4	4	22	8	0	1		2	74
Queuing Penalty (veh)	152	10	13	46	22	1	4		15	298

Zone Summary

Zone wide Queuing Penalty: 3754

Queuing and Blocking Report
AM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	35.2	45.2	40.0	36.8	36.6	41.2
Average Queue (m)	18.2	22.0	16.3	15.7	17.5	16.6
95th Queue (m)	30.6	38.0	30.9	29.3	29.6	31.7
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					50.0	
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	284.8	283.5	72.0	42.3	37.5	100.8	162.7	97.1
Average Queue (m)	88.8	87.8	33.5	14.2	18.2	25.7	74.7	35.4
95th Queue (m)	234.6	236.1	57.6	31.9	32.5	76.2	166.0	77.9
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	1	1				0	12	
Queuing Penalty (veh)	6	6				1	35	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			2					
Queuing Penalty (veh)			4					

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	992.3	1001.9	165.0	413.6	403.5	105.9	143.4	126.0	118.5	74.9	129.9
Average Queue (m)	139.9	871.3	812.3	160.5	313.8	272.3	38.7	81.4	79.2	72.1	10.7	59.0
95th Queue (m)	140.2	1187.3	1255.9	188.0	504.7	481.0	77.5	120.7	112.0	106.7	42.3	140.4
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		40	22		10	2						
Queuing Penalty (veh)		283	155		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	84	12		91	0		32	23		11		27
Queuing Penalty (veh)	95	73		82	0		207	32		18		227

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.3	286.7	285.0	110.0
Average Queue (m)	276.1	275.1	274.5	100.6
95th Queue (m)	282.2	283.2	289.7	145.1
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	45	43	53	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	53		53	
Queuing Penalty (veh)	39		170	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	105.8	96.8	70.0	52.3	79.1	69.0	74.6	159.9	208.1
Average Queue (m)	67.4	55.7	26.3	32.3	23.6	28.2	35.5	57.1	95.2
95th Queue (m)	97.4	87.4	59.4	56.4	61.1	59.1	66.5	112.9	167.7
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				6	1				
Queuing Penalty (veh)				11	1				

Queuing and Blocking Report
AM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	22.4	85.5	91.0	99.9	53.2	81.9	88.6	95.2	28.8	68.2	71.7	106.9
Average Queue (m)	7.8	53.1	55.9	63.7	24.4	35.3	43.7	50.8	12.9	45.3	37.7	53.5
95th Queue (m)	18.2	78.3	82.7	92.3	41.8	67.5	77.4	85.9	26.2	62.2	63.6	89.6
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	28			6	11				4		14
Queuing Penalty (veh)	0	12			15	14				2		42

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	68.2	70.0
Average Queue (m)	36.3	41.5
95th Queue (m)	60.1	63.5
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	1	
Queuing Penalty (veh)	5	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	L	L	T	T	T
Maximum Queue (m)	98.5	115.0	115.5	127.1	94.7	1.1	6.4	60.8	88.6	100.6	88.1	77.7
Average Queue (m)	55.6	69.2	79.4	84.4	23.9	0.0	0.2	32.1	42.2	59.5	57.8	49.5
95th Queue (m)	89.9	104.9	112.8	116.2	62.3	0.8	4.5	55.9	70.0	82.5	78.4	72.3
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9			736.2	736.2	736.2
Upstream Blk Time (%)	0	0	0	0	0							
Queuing Penalty (veh)	0	1	1	1	0							
Storage Bay Dist (m)	105.0				105.0			45.0	45.0			
Storage Blk Time (%)	1	0		2				4	9	26		4
Queuing Penalty (veh)	2	0		3				8	18	53		6

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	42.3	74.8	107.6	87.0	58.9	135.4	158.1	157.4	68.9
Average Queue (m)	20.8	28.9	64.2	53.7	21.0	75.6	98.8	99.2	19.9
95th Queue (m)	36.2	64.1	93.4	78.9	42.0	118.7	142.0	142.8	46.5
Link Distance (m)			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)	55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	0	5	26	6	0	0	1	16	
Queuing Penalty (veh)	0	11	23	12	1	1	4	53	

Intersection: 8: Street B & Old School Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (m)	1.4	9.5	20.7
Average Queue (m)	0.0	1.0	9.1
95th Queue (m)	1.0	5.6	16.3
Link Distance (m)	474.9	445.2	153.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
AM Peak Hour

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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	92.8	72.1	63.5	68.4	40.4	42.9
Average Queue (m)	49.9	32.9	26.7	35.5	20.3	23.3
95th Queue (m)	78.7	62.2	50.5	60.9	36.5	38.3
Link Distance (m)	187.2	1332.4	2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	342.2	341.8	53.6	26.6	313.8	323.1
Average Queue (m)	146.5	145.7	10.4	1.3	101.5	154.1
95th Queue (m)	386.0	386.5	33.7	14.4	320.4	375.9
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	9	11			17	30
Queuing Penalty (veh)	59	72			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	32.3	810.7	50.6	66.3	58.1	47.7	507.8	473.8	502.0
Average Queue (m)	25.6	728.0	32.2	20.3	24.7	23.5	288.6	299.5	303.6
95th Queue (m)	40.7	815.0	53.9	50.3	48.2	44.6	455.3	464.2	466.6
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)							0	0	0
Queuing Penalty (veh)							0	0	0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	12	63	3	0					
Queuing Penalty (veh)	86	80	19	0					

Queuing and Blocking Report
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Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	30.4	17.0	16.4
Average Queue (m)	13.3	6.0	2.0
95th Queue (m)	23.6	14.1	10.0
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	14.5	17.4	21.6	3.4	62.9
Average Queue (m)	1.3	1.3	6.6	0.1	19.2
95th Queue (m)	16.3	17.4	17.0	2.4	41.8
Link Distance (m)	445.2	445.2	423.0	423.0	174.7
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (m)	32.9	56.2	204.5	209.7	10.6
Average Queue (m)	10.7	14.6	25.5	28.7	1.2
95th Queue (m)	33.2	45.9	139.7	151.6	6.1
Link Distance (m)	158.5	129.2	383.0	383.0	169.5
Upstream Blk Time (%)		1	0	0	
Queuing Penalty (veh)		0	0	1	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 2053

Queuing and Blocking Report
PM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	86.6	91.0	91.2	164.5	52.5	134.5
Average Queue (m)	44.6	41.7	40.4	80.5	41.8	55.8
95th Queue (m)	76.1	74.3	74.3	146.6	66.9	106.3
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					50.0	
Storage Blk Time (%)				11	2	
Queuing Penalty (veh)				46	7	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	428.0	433.0	130.0	136.9	78.1	88.7	98.2	128.3
Average Queue (m)	215.4	216.1	61.0	36.5	32.9	33.3	77.0	41.3
95th Queue (m)	482.4	484.5	112.5	89.6	60.5	75.9	112.0	100.1
Link Distance (m)	423.0	423.0		333.4	333.4			250.9
Upstream Blk Time (%)	18	19						
Queuing Penalty (veh)	75	78						
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			17	0				
Queuing Penalty (veh)			78	2				

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	992.8	999.3	131.9	101.1	72.3	120.0	843.4	845.3	847.4	110.0	130.0
Average Queue (m)	139.9	904.3	828.6	68.8	45.1	45.4	117.9	793.0	794.9	797.4	94.1	104.1
95th Queue (m)	139.9	1190.5	1323.1	116.6	79.4	67.3	133.6	963.8	965.5	966.1	151.5	172.1
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		58	32					3	3	6		
Queuing Penalty (veh)		357	201					36	45	77		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	87	5		18	1		85	50		50	0	62
Queuing Penalty (veh)	101	38		26	2		924	234		191	1	411

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.6	286.2	287.1	110.0
Average Queue (m)	272.2	271.1	277.9	107.5
95th Queue (m)	291.7	288.5	284.7	129.2
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	31	23	57	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	67		65	16
Queuing Penalty (veh)	114		418	106

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	97.2	91.8	69.4	50.8	45.9	56.8	63.3	331.7	194.0
Average Queue (m)	72.1	59.9	33.2	26.5	17.2	26.0	34.1	239.3	67.8
95th Queue (m)	92.5	84.1	63.7	45.7	38.2	48.2	56.4	398.9	150.5
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)								28	
Queuing Penalty (veh)								0	
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				2	0				
Queuing Penalty (veh)				4	0				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	34.4	87.9	84.8	84.9	36.1	66.6	82.9	97.8	38.0	103.0	103.8	72.6
Average Queue (m)	18.1	45.9	45.2	46.0	14.1	40.9	50.5	62.6	17.2	65.7	62.4	39.0
95th Queue (m)	31.8	77.7	75.0	74.8	28.0	65.6	76.2	90.9	32.3	91.7	90.9	64.1
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	2	25			1	16			0	20		6
Queuing Penalty (veh)	7	27			3	18			0	25		14

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	62.2	71.0
Average Queue (m)	34.6	40.2
95th Queue (m)	58.4	63.4
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	4	

Queuing and Blocking Report
PM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	148.7	79.4	80.2	43.4	1206.1	1198.0	1193.2	65.4	89.9	607.8	594.7
Average Queue (m)	122.8	139.5	49.0	50.3	16.2	793.6	721.0	639.2	30.3	83.3	374.0	361.2
95th Queue (m)	123.8	144.1	71.2	73.6	31.8	1291.9	1368.8	1337.2	55.8	115.0	619.3	603.0
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	69	75				1	1	0				
Queuing Penalty (veh)	0	308				5	3	1				
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	84	1							4	8	89	
Queuing Penalty (veh)	171	4							9	21	247	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	555.0	125.0	75.0	377.1	368.0	119.8	143.1	600.3	603.3	170.0
Average Queue (m)	340.6	112.4	74.9	361.9	353.5	31.2	59.2	589.5	593.4	170.0
95th Queue (m)	569.9	166.8	75.0	391.3	409.9	93.7	124.1	617.8	618.1	170.3
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)				89	20			19	75	
Queuing Penalty (veh)				0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	90	4	92	19	23	1	2	0	9	74
Queuing Penalty (veh)	154	10	457	75	62	3	10	0	79	388

Intersection: 8: Street B & Old School Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (m)	1.4	19.4	21.9
Average Queue (m)	0.0	2.9	9.9
95th Queue (m)	1.0	11.5	18.4
Link Distance (m)	474.9	445.2	153.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
PM Peak Hour

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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	82.4	122.8	95.0	93.6	75.2	70.8
Average Queue (m)	42.8	65.0	57.3	52.0	42.0	29.7
95th Queue (m)	70.4	109.4	89.2	88.3	70.7	59.7
Link Distance (m)	187.2	1332.4	2470.4	2470.4		
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	341.8	343.6	127.2	97.2	142.3	250.0
Average Queue (m)	214.1	214.1	36.8	9.9	24.7	100.7
95th Queue (m)	461.5	464.1	95.8	53.9	113.6	250.0
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	21	28			0	1
Queuing Penalty (veh)	145	192			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	32.3	93.0	52.4	939.7	935.0	938.2	411.8	275.1	416.2
Average Queue (m)	19.0	50.6	52.3	887.9	890.2	868.3	72.9	74.2	86.9
95th Queue (m)	37.6	86.5	52.5	1092.5	1082.4	1120.5	228.9	190.6	272.7
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)				60	38	23	0	0	0
Queuing Penalty (veh)				0	0	0	0	0	0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	0	24	40	18					
Queuing Penalty (veh)	2	14	533	107					

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	27.6	11.7	62.2
Average Queue (m)	12.1	3.3	8.9
95th Queue (m)	22.8	10.8	38.0
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	271.8	273.8	44.3	23.6	116.7
Average Queue (m)	43.8	44.5	13.4	1.0	29.6
95th Queue (m)	189.4	190.9	30.3	9.7	96.2
Link Distance (m)	445.2	445.2	423.0	423.0	174.7
Upstream Blk Time (%)					2
Queuing Penalty (veh)					0
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: McLaughlin Road & Street E

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 6671

Queuing and Blocking Report
AM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	35.5	37.7	31.0	31.7	32.6	37.1
Average Queue (m)	17.6	16.3	13.8	13.3	15.6	15.2
95th Queue (m)	30.0	31.5	25.7	27.1	27.9	29.5
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				1	1	
Queuing Penalty (veh)				3	2	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	58.1	58.9	47.2	28.9	33.0	62.2	95.4	47.9
Average Queue (m)	30.5	29.5	24.0	10.6	17.0	13.0	35.4	21.2
95th Queue (m)	53.9	53.4	41.4	23.9	30.0	37.7	86.0	40.6
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)						0	1	
Queuing Penalty (veh)						0	4	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			0					
Queuing Penalty (veh)			0					

Queuing and Blocking Report
AM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	991.4	991.3	164.9	255.3	226.7	28.2	119.6	114.8	106.6	57.9	129.9
Average Queue (m)	139.8	780.6	617.0	141.4	129.4	88.2	11.9	76.6	74.8	68.2	10.3	79.9
95th Queue (m)	140.7	1190.4	1243.3	193.5	277.4	216.9	23.3	109.9	103.0	98.1	31.8	156.2
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		31	10									
Queuing Penalty (veh)		158	52									
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	84	7		83	0		0	23		9		56
Queuing Penalty (veh)	100	37		77	2		0	13		15		484

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	286.4	286.4	285.8	110.0
Average Queue (m)	273.7	269.4	264.9	98.0
95th Queue (m)	295.2	298.1	310.7	149.2
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	42	34	41	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	50		50	0
Queuing Penalty (veh)	38		150	1

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	108.1	91.6	72.3	50.5	57.4	70.2	73.2	94.6	122.0
Average Queue (m)	61.1	49.0	25.9	23.6	16.9	25.0	31.1	45.7	61.0
95th Queue (m)	97.8	84.7	60.9	44.4	44.3	56.8	64.7	78.9	100.5
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				1	0				
Queuing Penalty (veh)				3	0				

Queuing and Blocking Report
AM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	15.0	94.5	97.4	99.6	55.3	88.8	96.3	108.5	32.8	54.3	54.2	78.5
Average Queue (m)	3.9	57.8	62.9	67.7	28.3	40.3	46.9	58.9	13.0	32.0	27.5	41.4
95th Queue (m)	11.4	85.4	91.3	96.2	49.9	74.5	84.3	99.1	27.6	49.4	49.5	70.0
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)		32			10	12			0	1		6
Queuing Penalty (veh)		6			28	17			0	0		12

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	53.6	56.3
Average Queue (m)	23.2	29.1
95th Queue (m)	42.5	49.6
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	L	L	T	T	T	R
Maximum Queue (m)	112.6	120.3	125.3	132.6	92.1	2.6	61.8	87.2	106.3	100.9	89.8	41.2
Average Queue (m)	62.8	74.8	82.4	87.5	18.3	0.1	37.8	47.7	67.8	65.1	55.3	20.0
95th Queue (m)	106.5	106.3	113.8	117.2	51.4	1.8	60.1	77.8	95.9	91.8	80.5	34.6
Link Distance (m)		123.2	123.2	123.2		1244.9			736.2	736.2	736.2	
Upstream Blk Time (%)	0	0	0	1	0							
Queuing Penalty (veh)	0	0	1	2	0							
Storage Bay Dist (m)	105.0				105.0		45.0	45.0				55.0
Storage Blk Time (%)	2	1		3			7	12	33		8	0
Queuing Penalty (veh)	5	2		4			14	26	75		14	0

Intersection: 6: Hurontario Street & Mayfield Road

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (m)	47.7	81.2	75.6	52.7	114.4	112.9	117.7	49.2
Average Queue (m)	16.0	51.3	43.1	22.4	67.3	70.1	70.2	23.1
95th Queue (m)	33.2	72.8	65.9	45.1	105.1	100.4	100.6	42.6
Link Distance (m)		359.2	359.2			587.4	587.4	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	45.0			55.0	140.0		80.0	
Storage Blk Time (%)	0	16	2	0			4	
Queuing Penalty (veh)	0	14	5	1			15	

Zone Summary

Zone wide Queuing Penalty: 1380

Queuing and Blocking Report
PM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	75.3	71.8	76.8	118.0	75.0	96.1
Average Queue (m)	33.8	32.1	35.0	61.6	30.5	49.0
95th Queue (m)	61.5	58.7	64.8	99.9	69.1	79.8
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				28	3	
Queuing Penalty (veh)				91	11	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	329.5	329.6	101.1	46.4	51.2	140.6	180.4	70.4
Average Queue (m)	104.5	101.3	47.9	22.4	27.4	40.7	81.4	18.6
95th Queue (m)	272.5	271.5	82.1	42.5	46.5	117.6	189.6	51.6
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)						2	22	
Queuing Penalty (veh)						7	72	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			7	0				
Queuing Penalty (veh)			23	1				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	990.4	988.1	135.4	92.8	75.0	119.9	847.3	847.3	844.9	110.0	130.0
Average Queue (m)	139.9	875.6	723.8	71.7	41.8	45.3	79.7	834.0	836.5	836.1	98.6	123.1
95th Queue (m)	140.2	1193.7	1275.8	117.9	67.6	67.5	158.9	862.6	867.1	849.9	147.6	153.8
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		51	11					9	14	15		
Queuing Penalty (veh)		266	60					113	185	191		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	86	2		17	0		5	55		56	0	97
Queuing Penalty (veh)	98	17		25	0		53	108		217	0	620

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	287.8	286.4	285.4	110.0
Average Queue (m)	269.2	262.9	232.6	100.4
95th Queue (m)	304.5	308.8	348.0	141.0
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	53	17	25	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	52		49	13
Queuing Penalty (veh)	89		286	82

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	94.5	83.5	61.7	46.9	53.7	57.3	62.0	114.0	65.3
Average Queue (m)	61.6	50.6	27.4	23.9	16.6	22.8	30.5	60.5	28.6
95th Queue (m)	88.8	79.0	56.9	43.1	42.0	46.9	55.2	97.0	54.6
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				2	1				
Queuing Penalty (veh)				4	1				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	21.8	87.6	85.0	82.0	33.0	65.8	80.0	89.5	42.1	73.8	72.1	72.8
Average Queue (m)	8.0	47.7	47.6	46.5	14.9	34.2	45.9	55.5	17.7	42.4	39.1	28.9
95th Queue (m)	17.7	79.6	76.3	72.9	27.4	60.1	73.8	82.8	34.1	64.0	60.3	52.9
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	21			1	10			0	4		1
Queuing Penalty (veh)	0	10			4	13			0	5		2

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	41.2	48.6
Average Queue (m)	17.8	24.4
95th Queue (m)	34.6	43.0
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	150.3	92.0	81.5	45.2	1072.4	1060.3	1024.7	60.9	89.9	751.2	748.3
Average Queue (m)	122.8	140.5	51.8	54.2	14.5	653.3	584.8	484.3	29.5	85.2	569.1	559.0
95th Queue (m)	123.7	146.6	77.0	76.6	30.0	1111.3	1139.6	1054.0	58.1	112.8	872.9	865.6
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	65	74									33	20
Queuing Penalty (veh)	0	324									0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	83	1							6	9	90	
Queuing Penalty (veh)	185	7							18	26	275	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	747.3	125.0	74.8	133.6	115.2	50.3	133.9	598.8	605.3	170.0
Average Queue (m)	538.0	112.4	47.9	74.8	66.1	24.0	90.7	588.2	592.9	170.0
95th Queue (m)	851.6	168.4	82.5	111.8	97.3	43.1	179.1	632.4	628.1	170.0
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	19							21	82	
Queuing Penalty (veh)	0							0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	91	3	16	25	13	0	15	0	4	75
Queuing Penalty (veh)	162	9	62	56	38	1	64	0	37	330

Zone Summary

Zone wide Queuing Penalty: 4248

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	44.4	52.7	43.2	42.4	33.8	34.4
Average Queue (m)	19.3	25.1	17.4	17.3	19.0	15.9
95th Queue (m)	35.8	42.3	33.3	32.7	30.7	28.7
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				2	2	
Queuing Penalty (veh)				7	4	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	302.8	309.4	64.6	36.1	41.1	122.6	165.6	75.0
Average Queue (m)	84.7	86.1	32.3	15.7	20.2	28.5	75.0	35.0
95th Queue (m)	214.4	218.4	53.1	31.1	36.4	79.4	157.4	66.0
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)						0	8	
Queuing Penalty (veh)						1	24	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			2					
Queuing Penalty (veh)			4					

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB	
Directions Served	L	T	TR	L	T	TR	L	T	T	T		R	L
Maximum Queue (m)	140.0	991.7	1000.3	165.0	408.9	402.2	88.6	145.4	144.9	120.6		91.2	129.9
Average Queue (m)	139.9	867.7	821.0	157.0	335.9	300.2	44.7	81.5	79.8	72.8		12.9	71.5
95th Queue (m)	140.2	1175.8	1231.2	198.9	541.6	532.1	83.8	119.0	117.0	105.7		49.4	156.5
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7			
Upstream Blk Time (%)		36	22		37	10							
Queuing Penalty (veh)		266	159		0	0							
Storage Bay Dist (m)	40.0			65.0			35.0					60.0	35.0
Storage Blk Time (%)	84	21		89	0		42	23			12		38
Queuing Penalty (veh)	103	132		88	0		280	31			20		331

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	287.1	286.3	285.3	110.0
Average Queue (m)	276.4	276.3	275.8	96.8
95th Queue (m)	283.0	282.9	282.1	149.0
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	51	47	53	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	52		52	
Queuing Penalty (veh)	40		170	

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	114.2	100.8	76.0	52.1	84.0	66.1	62.2	237.5	285.8
Average Queue (m)	75.3	63.6	37.6	32.1	22.1	23.8	30.2	89.7	152.5
95th Queue (m)	102.7	93.2	71.6	55.7	66.1	52.1	54.9	185.1	328.5
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)								0	
Queuing Penalty (veh)								0	
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				9	2				
Queuing Penalty (veh)				20	5				

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B36	NB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	T	L	T	TR
Maximum Queue (m)	21.6	101.3	106.3	113.5	63.5	87.0	95.8	103.6	2.7	34.3	70.6	70.7
Average Queue (m)	8.4	58.1	61.6	65.8	27.5	40.0	48.0	58.1	0.1	12.8	44.4	38.5
95th Queue (m)	19.2	90.2	94.2	100.3	49.7	76.4	85.3	95.7	1.9	27.2	66.1	62.7
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9	123.2		325.2	325.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0					50.0		
Storage Blk Time (%)	0	36			10	12				0	4	
Queuing Penalty (veh)	0	15			26	18				0	2	

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (m)	93.0	66.2	75.2
Average Queue (m)	50.1	35.2	41.9
95th Queue (m)	83.7	58.7	66.8
Link Distance (m)		2470.4	2470.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	50.0		
Storage Blk Time (%)	11	1	
Queuing Penalty (veh)	36	5	

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	118.7	124.4	118.6	125.3	94.4	5.6	5.7	5.0	63.8	83.7	97.4	96.1
Average Queue (m)	63.0	71.0	78.7	84.1	28.8	0.2	0.2	0.3	38.9	48.0	65.3	65.3
95th Queue (m)	101.0	106.7	108.2	112.9	66.0	4.0	4.0	4.0	61.2	76.0	88.9	90.3
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	0	0	0	1	0							
Queuing Penalty (veh)	0	1	1	3	0							
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	1	1		2	0				7	13	33	
Queuing Penalty (veh)	3	1		3	0				16	29	75	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	92.7	50.6	74.4	109.0	101.0	53.8	154.4	166.2	167.3	106.6
Average Queue (m)	56.3	22.5	33.3	64.0	55.9	22.0	85.0	111.3	112.1	26.8
95th Queue (m)	82.0	41.6	70.8	92.9	84.2	42.1	140.1	154.9	153.6	62.6
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	8	0	11	27	7	0	2	2	22	0
Queuing Penalty (veh)	14	0	28	27	17	0	14	9	79	0

Intersection: 8: Street B & Old School Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	11.2	23.4
Average Queue (m)	1.4	9.9
95th Queue (m)	6.8	18.6
Link Distance (m)	445.2	153.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
AM Peak Hour

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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	93.3	70.5	59.5	70.6	40.2	43.4
Average Queue (m)	51.6	33.6	25.5	34.8	19.9	21.2
95th Queue (m)	83.1	59.0	47.5	59.3	34.4	36.5
Link Distance (m)	187.2	1332.4	2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	340.3	342.7	41.4	7.8	324.2	326.1
Average Queue (m)	150.0	149.3	9.3	0.6	100.1	145.7
95th Queue (m)	397.8	400.0	27.8	6.4	322.9	364.9
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	8	10			23	25
Queuing Penalty (veh)	53	67			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	32.3	776.6	50.7	64.4	57.4	54.4	430.3	530.4	526.9
Average Queue (m)	27.0	713.1	32.0	20.7	26.1	25.1	251.3	267.1	271.1
95th Queue (m)	40.5	809.1	50.3	45.2	48.6	46.6	403.4	440.0	442.6
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)							0	0	0
Queuing Penalty (veh)							0	0	0
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	14	60	2	0					
Queuing Penalty (veh)	98	77	13	0					

Queuing and Blocking Report
AM Peak Hour

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Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (m)	31.5	19.4	1.4	19.0
Average Queue (m)	13.6	5.8	0.0	3.3
95th Queue (m)	25.7	14.4	1.0	13.2
Link Distance (m)	1150.5	1150.5	2518.8	524.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (m)	28.5	33.8	3.2	12.3
Average Queue (m)	17.5	18.7	0.1	0.7
95th Queue (m)	25.1	26.8	2.2	5.6
Link Distance (m)	445.2	445.2	423.0	174.7
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (m)	19.7	52.4	50.3	67.7	9.0
Average Queue (m)	8.2	15.5	5.1	8.5	0.7
95th Queue (m)	16.3	54.0	33.4	47.2	4.8
Link Distance (m)	158.5	129.2	383.0	383.0	169.5
Upstream Blk Time (%)		2			
Queuing Penalty (veh)		0			
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 2412

Queuing and Blocking Report
PM Peak Hour

06/06/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	101.2	86.2	104.3	139.6	75.0	85.5
Average Queue (m)	49.3	42.5	48.8	70.8	44.9	51.9
95th Queue (m)	83.6	73.6	88.1	121.3	84.3	80.7
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				36	10	
Queuing Penalty (veh)				158	40	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	428.3	431.1	123.3	130.8	111.9	164.5	175.4	201.3
Average Queue (m)	200.2	200.5	70.9	43.3	38.0	53.6	114.4	75.7
95th Queue (m)	460.0	462.5	122.5	108.1	79.1	130.5	205.6	206.5
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	18	19				1	30	9
Queuing Penalty (veh)	77	81				3	118	0
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			27	1				
Queuing Penalty (veh)			129	6				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	991.0	998.9	146.7	138.5	99.9	120.0	841.6	846.7	846.4	110.0	130.0
Average Queue (m)	139.9	898.5	814.9	75.0	47.2	48.8	115.5	803.8	808.0	809.5	92.6	106.2
95th Queue (m)	140.1	1187.8	1324.1	120.9	86.4	78.4	141.5	928.3	928.1	930.2	153.3	168.2
Link Distance (m)		984.0	984.0		423.1	423.1		833.7	833.7	833.7		
Upstream Blk Time (%)		56	27					3	4	7		
Queuing Penalty (veh)		358	172					47	59	93		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	87	7		21	1		80	52		52		71
Queuing Penalty (veh)	110	52		33	3		885	246		201		483

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.0	283.7	285.8	110.0
Average Queue (m)	274.7	272.2	277.6	108.4
95th Queue (m)	284.0	285.4	284.4	123.4
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	37	23	57	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	66		65	19
Queuing Penalty (veh)	113		415	126

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LTR	LTR
Maximum Queue (m)	127.5	109.7	82.2	52.4	91.0	66.6	68.6	298.8	153.3
Average Queue (m)	83.8	71.4	46.8	37.1	34.6	31.2	37.9	202.3	65.3
95th Queue (m)	115.0	102.0	76.0	59.2	80.8	56.4	63.9	342.3	126.9
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	2518.8
Upstream Blk Time (%)								13	
Queuing Penalty (veh)								0	
Storage Bay Dist (m)				50.0					
Storage Blk Time (%)				16	4				
Queuing Penalty (veh)				41	10				

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B36	B36	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	T	T	L	T
Maximum Queue (m)	59.6	107.0	98.3	100.3	32.3	73.4	83.1	89.3	22.2	22.1	82.1	123.2
Average Queue (m)	23.0	54.2	53.8	55.3	14.7	40.6	50.7	61.5	0.7	0.7	22.2	74.7
95th Queue (m)	48.6	93.4	90.5	92.4	28.3	66.5	75.8	85.7	15.6	15.6	48.6	108.7
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9	123.2	123.2		325.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0						50.0	
Storage Blk Time (%)	6	26			1	15					0	27
Queuing Penalty (veh)	20	29			4	18					0	36

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	NB	SB	SB	SB
Directions Served	TR	L	T	TR
Maximum Queue (m)	118.4	69.8	66.1	67.6
Average Queue (m)	71.0	36.6	29.5	36.4
95th Queue (m)	105.3	62.3	54.3	60.9
Link Distance (m)	325.2		2470.4	2470.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)		50.0		
Storage Blk Time (%)		5	1	
Queuing Penalty (veh)		11	3	

Queuing and Blocking Report
PM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	147.7	72.4	74.4	51.3	1145.4	1143.8	1133.9	63.7	89.9	753.6	747.2
Average Queue (m)	122.8	139.9	49.6	50.8	18.2	732.5	657.4	563.8	30.4	85.4	589.4	579.7
95th Queue (m)	123.8	144.8	71.0	71.2	35.5	1249.8	1304.0	1247.0	56.4	112.9	888.1	882.6
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	69	74				1	1	0			40	32
Queuing Penalty (veh)	0	330				6	5	2			0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	83	0							6	9	90	
Queuing Penalty (veh)	184	0							17	25	274	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	747.7	125.0	75.0	376.3	370.1	120.0	164.5	601.9	606.0	170.0
Average Queue (m)	564.4	111.4	74.9	365.3	359.8	33.3	54.8	592.3	595.3	170.0
95th Queue (m)	876.9	168.0	75.0	370.7	401.3	93.6	127.8	597.7	602.3	170.3
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	31			95	22			22	77	
Queuing Penalty (veh)	0			0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	91	2	90	16	21	0	4	2	17	76
Queuing Penalty (veh)	162	7	479	65	61	1	23	5	168	425

Intersection: 8: Street B & Old School Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (m)	11.0	10.6	20.7	27.2
Average Queue (m)	0.4	0.4	4.0	11.3
95th Queue (m)	7.8	7.6	13.9	21.2
Link Distance (m)	474.9	474.9	445.2	153.5
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
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Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	81.1	135.8	451.4	453.0	49.3	54.4
Average Queue (m)	43.9	62.0	106.7	106.7	23.2	26.9
95th Queue (m)	70.3	110.4	333.4	335.6	43.1	48.6
Link Distance (m)	187.2	1332.4	2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	343.6	344.0	152.7	130.6	193.6	298.3
Average Queue (m)	198.5	198.1	41.0	13.3	43.8	124.2
95th Queue (m)	451.3	452.9	107.3	66.6	156.8	309.3
Link Distance (m)	333.4	333.4	984.0	984.0	319.0	319.0
Upstream Blk Time (%)	22	25				6
Queuing Penalty (veh)	156	179				0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (m)	32.3	89.1	52.4	936.7	938.0	936.8	128.6	136.6	285.1
Average Queue (m)	18.2	49.0	52.1	890.3	895.7	879.0	60.0	67.3	75.2
95th Queue (m)	38.6	83.0	54.7	1103.0	1083.7	1106.4	110.8	120.3	193.5
Link Distance (m)		1332.4		921.8	921.8	921.8	833.7	833.7	833.7
Upstream Blk Time (%)				66	42	28			
Queuing Penalty (veh)				0	0	0			
Storage Bay Dist (m)	30.0		50.0						
Storage Blk Time (%)	2	24	38	19					
Queuing Penalty (veh)	7	14	528	115					

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (m)	29.7	11.5	1.3	51.9
Average Queue (m)	11.0	2.9	0.0	7.2
95th Queue (m)	22.5	10.1	0.9	29.0
Link Distance (m)	1150.5	1150.5	2518.8	524.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	321.2	325.3	41.8	17.2	114.5
Average Queue (m)	45.0	45.6	13.7	0.9	23.8
95th Queue (m)	208.0	210.1	31.0	8.9	72.1
Link Distance (m)	445.2	445.2	423.0	423.0	174.7
Upstream Blk Time (%)	0	0			
Queuing Penalty (veh)	2	2			
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	38.6	105.5	360.9	365.1	20.2	11.8
Average Queue (m)	13.0	27.8	104.4	106.6	2.2	0.4
95th Queue (m)	39.5	87.6	350.8	357.8	10.2	5.6
Link Distance (m)	158.5	129.2	383.0	383.0	169.5	169.5
Upstream Blk Time (%)		5	9	11		
Queuing Penalty (veh)		0	38	49		
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 7508

Queuing and Blocking Report
AM Peak Hour

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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	42.0	45.8	36.9	39.7	40.6	37.6
Average Queue (m)	19.0	18.0	15.6	15.1	17.2	15.3
95th Queue (m)	32.9	33.9	29.9	29.7	31.9	29.5
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				1	2	
Queuing Penalty (veh)				3	4	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	96.4	98.3	57.1	37.8	37.0	31.5	102.8	65.3
Average Queue (m)	35.8	34.9	26.1	11.1	16.3	13.7	36.5	22.9
95th Queue (m)	68.9	69.9	46.1	27.6	31.1	26.5	79.0	50.9
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			1					
Queuing Penalty (veh)			1					

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	987.1	991.4	164.9	305.6	293.1	23.8	145.3	123.6	120.7	108.6	129.9
Average Queue (m)	139.9	832.5	662.9	155.8	206.2	175.0	10.0	81.6	78.2	72.4	12.7	62.9
95th Queue (m)	140.1	1164.3	1264.7	185.2	435.1	407.9	20.2	120.8	110.1	106.7	50.5	144.1
Link Distance (m)		980.9	980.9		423.1	423.1		833.0	833.0	833.0		
Upstream Blk Time (%)		37	12		13	2						
Queuing Penalty (veh)		194	66		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	84	7		90	0			24		11		23
Queuing Penalty (veh)	109	37		91	1			15		18		204

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	284.1	285.6	285.9	110.0
Average Queue (m)	274.4	273.5	272.0	95.5
95th Queue (m)	294.5	295.5	302.8	150.3
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	41	37	47	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	48		49	0
Queuing Penalty (veh)	37		146	0

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	107.8	102.7	69.7	52.2	77.7	65.4	76.0	83.0	25.4	131.3
Average Queue (m)	69.1	58.3	33.8	30.0	20.4	25.7	31.5	34.1	9.1	64.4
95th Queue (m)	99.1	89.1	65.8	52.6	55.9	56.9	63.3	63.6	18.3	107.8
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	329.6	2518.8
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)				50.0						
Storage Blk Time (%)				2	1					
Queuing Penalty (veh)				6	2					

Queuing and Blocking Report
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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	12.2	109.6	114.1	110.0	66.6	86.7	97.9	105.2	38.7	53.6	59.7	93.0
Average Queue (m)	3.3	67.8	72.3	75.3	32.9	40.4	48.9	57.7	15.6	35.3	31.6	45.9
95th Queue (m)	9.6	96.7	101.7	104.8	57.0	76.8	86.9	97.5	35.1	51.0	53.8	81.9
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)		36			17	11				1		10
Queuing Penalty (veh)		7			49	18				0		23

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	55.1	55.7
Average Queue (m)	27.2	32.1
95th Queue (m)	47.0	50.3
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
AM Peak Hour

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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	116.1	127.2	133.4	138.6	123.2	8.8	18.9	15.5	67.4	89.8	128.1	117.8
Average Queue (m)	68.5	85.1	95.5	100.2	28.5	0.5	1.0	1.2	50.3	62.6	82.7	78.0
95th Queue (m)	112.0	118.4	127.6	132.0	83.4	5.0	10.5	9.5	75.1	98.1	129.3	118.5
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	0	1	1	2	0							
Queuing Penalty (veh)	0	3	8	12	0							
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	1	3		9					30	39	35	
Queuing Penalty (veh)	5	7		11					69	91	88	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	98.5	48.1	73.8	86.3	72.5	70.3	113.5	114.3	115.3	68.4
Average Queue (m)	62.7	21.2	21.0	55.5	46.5	26.2	67.6	75.8	77.5	28.0
95th Queue (m)	89.8	37.5	48.4	79.1	67.6	50.2	105.0	104.1	106.3	53.5
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	13	0	1	18	2	1			6	0
Queuing Penalty (veh)	25	0	3	18	6	2			25	0

Zone Summary

Zone wide Queuing Penalty: 1407

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	72.9	73.7	90.1	141.1	75.0	98.1
Average Queue (m)	38.8	32.0	36.3	65.9	30.9	51.6
95th Queue (m)	67.2	59.4	73.3	109.7	67.9	86.4
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				33	4	
Queuing Penalty (veh)				111	15	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	342.9	344.7	92.7	46.0	45.8	170.9	175.0	64.4
Average Queue (m)	124.3	123.3	43.8	20.3	24.9	46.5	87.7	19.7
95th Queue (m)	332.4	333.0	74.8	40.0	41.7	126.2	198.4	50.7
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	5	5				2	24	
Queuing Penalty (veh)	17	16				6	82	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			6	0				
Queuing Penalty (veh)			19	0				

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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	988.5	985.7	144.7	146.0	81.8	119.9	845.6	849.2	847.0	110.0	130.0
Average Queue (m)	139.9	896.1	769.8	76.4	51.2	48.3	82.3	833.6	836.5	836.8	99.9	124.6
95th Queue (m)	140.2	1176.1	1286.8	130.3	96.8	74.3	161.7	863.0	867.0	845.6	147.6	147.0
Link Distance (m)		980.9	980.9		423.1	423.1		833.0	833.0	833.0		
Upstream Blk Time (%)		55	18					9	14	15		
Queuing Penalty (veh)		300	100					123	189	199		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	87	3		22	1		6	55		56	0	98
Queuing Penalty (veh)	107	18		36	2		72	114		219	0	648

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	288.4	285.6	287.2	110.0
Average Queue (m)	272.0	268.3	266.7	107.5
95th Queue (m)	305.0	305.1	322.4	130.0
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	41	20	40	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	57		55	15
Queuing Penalty (veh)	100		325	96

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	106.4	90.5	66.5	49.6	40.7	54.9	64.5	83.3	25.4	75.0
Average Queue (m)	60.7	48.5	24.6	25.4	15.5	22.3	28.9	47.5	10.8	36.5
95th Queue (m)	94.0	82.7	57.1	45.6	33.5	44.8	54.3	75.1	20.0	63.9
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	329.6	2518.8
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)				50.0						
Storage Blk Time (%)				1	0					
Queuing Penalty (veh)				1	0					

Queuing and Blocking Report
PM Peak Hour

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Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	98.6	206.0	205.9	203.7	51.5	78.7	91.4	92.8	43.7	76.5	88.4	106.1
Average Queue (m)	14.2	66.8	67.7	66.7	17.8	38.4	50.4	59.2	18.3	46.6	45.1	40.4
95th Queue (m)	50.3	148.2	147.3	146.1	36.5	68.5	82.0	88.1	34.3	70.8	75.2	87.4
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	0	35			2	12			0	7		10
Queuing Penalty (veh)	1	18			9	17			0	10		15

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	84.2	54.6
Average Queue (m)	22.4	24.3
95th Queue (m)	71.6	45.2
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
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Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	148.4	92.8	92.1	37.5	1226.1	1224.7	1223.5	65.6	89.9	750.3	747.6
Average Queue (m)	122.8	139.6	54.9	55.6	13.8	844.2	797.5	741.7	30.5	85.3	609.4	600.8
95th Queue (m)	123.8	144.0	85.2	84.6	27.3	1421.7	1468.9	1458.3	57.3	111.3	891.1	888.7
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	66	74				8	5	3			44	31
Queuing Penalty (veh)	0	353				39	22	15			0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	83	0		0					5	8	89	
Queuing Penalty (veh)	202	4		0					16	26	300	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	747.9	125.0	74.9	159.1	149.2	95.7	151.0	601.0	604.6	170.0
Average Queue (m)	586.1	113.2	57.1	90.3	80.0	28.6	116.8	592.4	595.3	170.0
95th Queue (m)	885.2	167.4	89.7	147.0	132.0	61.5	227.4	601.8	602.1	170.3
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	29							25	83	
Queuing Penalty (veh)	0							0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	90	4	26	27	16	1	37	0	3	75
Queuing Penalty (veh)	169	11	108	63	52	4	177	0	30	361

Zone Summary

Zone wide Queuing Penalty: 4937

Queuing and Blocking Report
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Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	43.7	55.7	55.2	42.7	35.4	48.6
Average Queue (m)	20.3	24.9	20.0	17.8	18.6	19.6
95th Queue (m)	36.1	43.4	38.3	34.7	31.3	36.9
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				2	2	
Queuing Penalty (veh)				8	5	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	431.9	428.3	70.9	43.0	41.3	172.6	177.3	137.2
Average Queue (m)	168.8	168.9	35.1	16.3	20.6	40.1	101.2	59.7
95th Queue (m)	424.7	426.5	61.2	32.5	37.2	119.7	201.2	143.5
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	11	11				0	22	
Queuing Penalty (veh)	51	51				1	71	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			4	0				
Queuing Penalty (veh)			9	0				

Queuing and Blocking Report
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Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	989.5	998.8	165.0	409.0	392.2	117.3	165.5	156.5	133.8	110.0	129.9
Average Queue (m)	139.9	897.1	842.0	164.2	348.1	317.3	58.9	95.2	89.2	78.7	17.6	72.0
95th Queue (m)	139.9	1169.4	1283.5	174.0	491.6	487.4	113.0	152.2	142.3	119.2	68.8	150.7
Link Distance (m)		980.9	980.9		423.1	423.1		833.0	833.0	833.0		
Upstream Blk Time (%)		49	27		23	6						
Queuing Penalty (veh)		371	202		0	0						
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	85	9		92	2		53	25		14		44
Queuing Penalty (veh)	113	56		98	7		360	35		23		397

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	287.1	283.2	284.2	110.0
Average Queue (m)	275.9	275.2	275.5	92.0
95th Queue (m)	282.9	282.0	280.8	151.4
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	46	42	55	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	52		53	0
Queuing Penalty (veh)	40		173	2

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	120.8	105.5	84.4	52.3	102.2	95.2	82.3	134.8	27.0	258.5
Average Queue (m)	78.0	67.1	43.2	41.6	43.0	43.8	46.9	49.4	9.1	143.2
95th Queue (m)	108.5	95.6	75.1	61.2	94.9	81.0	81.1	106.7	18.7	278.2
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	329.6	2518.8
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)				50.0						
Storage Blk Time (%)				12	2					
Queuing Penalty (veh)				28	4					

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	54.9	111.4	122.7	124.7	69.8	86.5	92.5	107.9	38.8	73.6	72.3	101.7
Average Queue (m)	9.9	72.5	78.9	84.0	30.6	42.0	50.7	60.4	14.9	47.0	43.5	56.2
95th Queue (m)	30.5	108.7	117.8	120.5	55.1	77.7	88.4	99.9	29.6	67.3	67.1	97.9
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	1	32			13	13				6		17
Queuing Penalty (veh)	2	14			38	20				3		56

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	99.9	86.6
Average Queue (m)	41.3	46.1
95th Queue (m)	73.7	73.6
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	3	
Queuing Penalty (veh)	10	

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	121.6	134.8	127.8	133.3	108.2	31.5	28.5	15.3	67.5	89.9	146.1	129.6
Average Queue (m)	80.7	94.5	95.3	98.3	39.5	6.3	1.5	1.0	58.3	72.7	82.8	76.9
95th Queue (m)	128.6	139.9	127.1	130.0	94.4	40.6	18.2	9.2	77.8	99.4	124.2	113.8
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	5	6	1	2	0							
Queuing Penalty (veh)	0	34	4	11	0							
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	14	3		8	0				46	59	36	
Queuing Penalty (veh)	51	10		12	0				108	137	91	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	96.1	49.7	74.9	143.3	130.7	74.8	162.9	178.8	183.2	144.6
Average Queue (m)	63.5	22.8	55.2	85.2	74.7	27.1	87.0	126.6	126.3	45.0
95th Queue (m)	90.7	39.6	89.9	137.2	123.9	53.1	140.7	173.9	176.3	120.2
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	16	0	52	29	15	1	2	6	26	0
Queuing Penalty (veh)	29	1	147	31	39	2	17	25	105	0

Intersection: 8: Street B & Old School Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	13.9	23.8
Average Queue (m)	1.5	10.4
95th Queue (m)	7.5	18.3
Link Distance (m)	445.2	153.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
AM Peak Hour

06/06/2024

Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	LT	TR
Maximum Queue (m)	96.1	91.2	17.3	55.3	73.1	41.3	43.8
Average Queue (m)	51.8	37.1	4.5	23.6	34.1	18.8	22.0
95th Queue (m)	83.5	72.5	12.9	44.1	60.9	34.6	37.7
Link Distance (m)	187.2	1328.6		2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			20.0				
Storage Blk Time (%)			0	9			
Queuing Penalty (veh)			1	3			

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	LT	L	R
Maximum Queue (m)	342.6	343.5	44.3	324.2	323.8
Average Queue (m)	189.0	189.0	9.9	148.5	184.0
95th Queue (m)	442.5	444.0	31.0	397.1	411.3
Link Distance (m)	333.4	333.4	980.9	319.0	319.0
Upstream Blk Time (%)	16	19		39	42
Queuing Penalty (veh)	109	132		0	0
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	T	R
Maximum Queue (m)	115.0	779.4	71.5	61.0	53.3	54.2	533.5	551.5	552.2	461.3
Average Queue (m)	91.4	686.2	31.3	24.8	30.5	28.7	406.4	423.4	424.1	236.6
95th Queue (m)	157.4	852.3	58.5	47.0	50.6	51.8	635.9	650.9	653.1	521.2
Link Distance (m)		1328.6		921.8	921.8	921.8	833.0	833.0	833.0	833.0
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	30.0		50.0							
Storage Blk Time (%)	19	74	3	0						
Queuing Penalty (veh)	133	95	24	0						

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	28.2	19.8	26.9
Average Queue (m)	13.3	6.5	2.3
95th Queue (m)	25.1	15.9	12.4
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (m)	133.4	131.8	20.3	131.6
Average Queue (m)	18.3	18.4	6.0	34.6
95th Queue (m)	106.7	106.5	16.4	108.9
Link Distance (m)	445.2	445.2	423.0	174.7
Upstream Blk Time (%)				7
Queuing Penalty (veh)				0
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: McLaughlin Road & Street E

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (m)	38.4	85.3	259.8	265.6	13.1
Average Queue (m)	10.6	21.8	53.5	60.6	1.5
95th Queue (m)	27.8	70.1	211.3	225.5	7.5
Link Distance (m)	158.5	129.2	383.0	383.0	169.5
Upstream Blk Time (%)		2	1	1	
Queuing Penalty (veh)		0	3	3	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 3604

Queuing and Blocking Report
PM Peak Hour

06/06/2024

Intersection: 1: Chinguacousy Road & Old School Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	LT	R	LTR
Maximum Queue (m)	100.0	86.3	108.2	172.5	75.0	143.7
Average Queue (m)	53.9	42.3	50.6	74.6	48.7	66.0
95th Queue (m)	87.0	72.8	91.3	137.8	89.3	126.7
Link Distance (m)	584.1	474.9	474.9	524.4		334.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)					25.0	
Storage Blk Time (%)				32	10	
Queuing Penalty (veh)				143	42	

Intersection: 2: McLaughlin Road & Old School Road

Movement	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	LT	TR	L	T	TR	LT	R	LTR
Maximum Queue (m)	429.4	429.9	111.6	76.7	66.8	160.0	178.3	143.0
Average Queue (m)	219.7	218.2	59.0	32.2	34.1	48.5	127.6	51.7
95th Queue (m)	481.5	482.5	97.9	57.0	56.2	118.1	213.9	119.4
Link Distance (m)	423.0	423.0		333.4	333.4	169.5	169.5	250.9
Upstream Blk Time (%)	21	21				0	35	
Queuing Penalty (veh)	95	97				0	143	
Storage Bay Dist (m)			50.0					
Storage Blk Time (%)			17	1				
Queuing Penalty (veh)			85	5				

Queuing and Blocking Report
PM Peak Hour

06/06/2024

Intersection: 3: Hurontario Street & Old School Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	140.0	989.0	992.9	142.9	119.8	108.7	120.0	842.5	847.9	845.7	110.0	130.0
Average Queue (m)	139.9	911.7	847.9	79.0	53.5	54.1	118.1	825.9	829.6	829.9	92.1	122.7
95th Queue (m)	139.9	1172.3	1299.3	137.0	101.5	85.5	132.3	884.5	883.8	884.7	153.2	158.8
Link Distance (m)		980.9	980.9		423.1	423.1		833.0	833.0	833.0		
Upstream Blk Time (%)		58	29					4	6	8		
Queuing Penalty (veh)		385	194					60	84	117		
Storage Bay Dist (m)	40.0			65.0			35.0				60.0	35.0
Storage Blk Time (%)	87	7		28	3		83	51		52		88
Queuing Penalty (veh)	118	50		48	9		954	249		204		614

Intersection: 3: Hurontario Street & Old School Road

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	285.3	285.3	287.0	110.0
Average Queue (m)	274.6	274.0	277.4	108.7
95th Queue (m)	288.2	287.1	284.6	123.1
Link Distance (m)	269.2	269.2	269.2	
Upstream Blk Time (%)	51	25	50	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (m)				60.0
Storage Blk Time (%)	65		63	18
Queuing Penalty (veh)	113		409	124

Intersection: 4: Chinguacousy Road & Mayfield Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	LT	T	TR	L	T	T	TR	LT	R	LTR
Maximum Queue (m)	114.2	106.1	79.5	52.2	71.6	61.2	65.1	318.9	279.5	276.5
Average Queue (m)	81.9	69.4	45.3	34.0	24.5	27.1	33.6	160.1	66.8	143.4
95th Queue (m)	108.9	94.1	78.8	54.5	56.4	51.7	60.2	330.5	264.0	301.3
Link Distance (m)	266.7	266.7	266.7		1398.4	1398.4	1398.4	329.6	329.6	2518.8
Upstream Blk Time (%)								11	7	
Queuing Penalty (veh)								0	0	
Storage Bay Dist (m)				50.0						
Storage Blk Time (%)				6	1					
Queuing Penalty (veh)				16	1					

Queuing and Blocking Report
PM Peak Hour

06/06/2024

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	T	TR	L
Maximum Queue (m)	98.3	290.0	286.0	280.0	43.0	82.4	87.7	95.3	115.5	179.0	166.7	109.1
Average Queue (m)	30.1	85.8	84.7	84.8	18.7	42.3	53.0	63.1	25.4	86.6	84.5	48.1
95th Queue (m)	75.4	217.6	214.2	213.6	35.1	68.0	79.8	89.8	68.3	144.6	142.0	98.9
Link Distance (m)		1398.4	1398.4	1398.4		1244.9	1244.9	1244.9		325.2	325.2	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0				30.0				50.0			50.0
Storage Blk Time (%)	9	40			4	16			0	33		18
Queuing Penalty (veh)	33	47			17	21			0	47		44

Intersection: 5: McLaughlin Road & Mayfield Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	112.8	89.0
Average Queue (m)	38.0	40.1
95th Queue (m)	95.2	72.2
Link Distance (m)	2470.4	2470.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)	1	
Queuing Penalty (veh)	4	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	EB	EB	EB	EB	EB	B36	B36	B36	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (m)	123.2	147.8	98.4	95.1	50.7	1254.0	1252.7	1255.4	63.3	89.9	749.4	750.1
Average Queue (m)	122.9	139.7	55.5	56.2	18.0	886.3	844.9	777.6	29.5	84.7	639.5	631.3
95th Queue (m)	123.6	144.3	88.2	88.4	37.7	1423.8	1470.6	1472.7	55.1	113.6	886.9	888.6
Link Distance (m)		123.2	123.2	123.2		1244.9	1244.9	1244.9			736.2	736.2
Upstream Blk Time (%)	70	75	0			7	7	5			51	38
Queuing Penalty (veh)	0	365	0			36	36	26			0	0
Storage Bay Dist (m)	105.0				105.0				45.0	45.0		
Storage Blk Time (%)	84	0		0					5	9	89	
Queuing Penalty (veh)	204	1		0					15	28	299	

Intersection: 6: Hurontario Street & Mayfield Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	749.3	125.0	75.0	376.4	372.1	120.0	157.2	601.7	605.3	170.0
Average Queue (m)	617.7	109.7	74.8	365.3	358.2	36.7	68.0	592.2	595.5	170.0
95th Queue (m)	888.5	169.4	74.9	370.9	419.2	101.8	173.5	600.4	602.2	170.0
Link Distance (m)	736.2			359.2	359.2			587.4	587.4	
Upstream Blk Time (%)	38			95	25			22	77	
Queuing Penalty (veh)	0			0	0			0	0	
Storage Bay Dist (m)		55.0	45.0			55.0	140.0			80.0
Storage Blk Time (%)	90	4	92	20	24	0	16	1	10	74
Queuing Penalty (veh)	169	12	522	83	77	0	97	2	108	448

Intersection: 8: Street B & Old School Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (m)	16.4	20.2	20.1	23.4
Average Queue (m)	0.6	0.8	3.5	10.6
95th Queue (m)	8.7	10.1	13.1	18.9
Link Distance (m)	474.9	474.9	445.2	153.5
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
PM Peak Hour

06/06/2024

Intersection: 9: McLaughlin Road & Street A

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	LT	TR
Maximum Queue (m)	77.8	105.8	95.6	492.2	490.1	57.3	60.0
Average Queue (m)	39.6	52.1	34.3	100.2	111.8	28.8	32.3
95th Queue (m)	66.8	97.3	84.3	373.9	380.9	50.7	55.6
Link Distance (m)	187.2	1328.6		2470.4	2470.4	383.0	383.0
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			20.0				
Storage Blk Time (%)			12	29			
Queuing Penalty (veh)			50	67			

Intersection: 10: Street D & Old School Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	343.6	345.8	124.6	95.1	199.5	288.8
Average Queue (m)	222.7	222.7	32.5	9.2	64.5	140.5
95th Queue (m)	468.9	471.7	85.1	50.2	223.0	334.3
Link Distance (m)	333.4	333.4	980.9	980.9	319.0	319.0
Upstream Blk Time (%)	21	27			8	17
Queuing Penalty (veh)	149	198			0	0
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Hurontario Street & Street A

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	T	R
Maximum Queue (m)	64.4	114.0	100.0	937.6	938.6	938.3	107.6	121.9	125.4	35.1
Average Queue (m)	12.7	50.3	99.3	857.1	864.2	847.4	53.7	62.5	62.4	8.4
95th Queue (m)	36.1	90.4	105.0	1176.4	1157.1	1200.0	97.7	110.4	114.0	22.3
Link Distance (m)		1328.6		921.8	921.8	921.8	833.0	833.0	833.0	833.0
Upstream Blk Time (%)				65	44	31				
Queuing Penalty (veh)				0	0	0				
Storage Bay Dist (m)	30.0		50.0							
Storage Blk Time (%)	0	27	28	59						
Queuing Penalty (veh)	1	16	391	358						

Intersection: 13: Chinguacousy Road & Street A

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (m)	31.5	11.5	59.0
Average Queue (m)	12.1	3.8	10.0
95th Queue (m)	24.6	11.2	38.8
Link Distance (m)	1150.5	1150.5	524.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Street F & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (m)	373.1	374.9	40.9	16.8	146.4
Average Queue (m)	63.0	63.8	12.7	0.6	36.4
95th Queue (m)	262.6	265.7	29.6	7.4	113.3
Link Distance (m)	445.2	445.2	423.0	423.0	174.7
Upstream Blk Time (%)	1	1			4
Queuing Penalty (veh)	5	6			0
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: McLaughlin Road & Street E

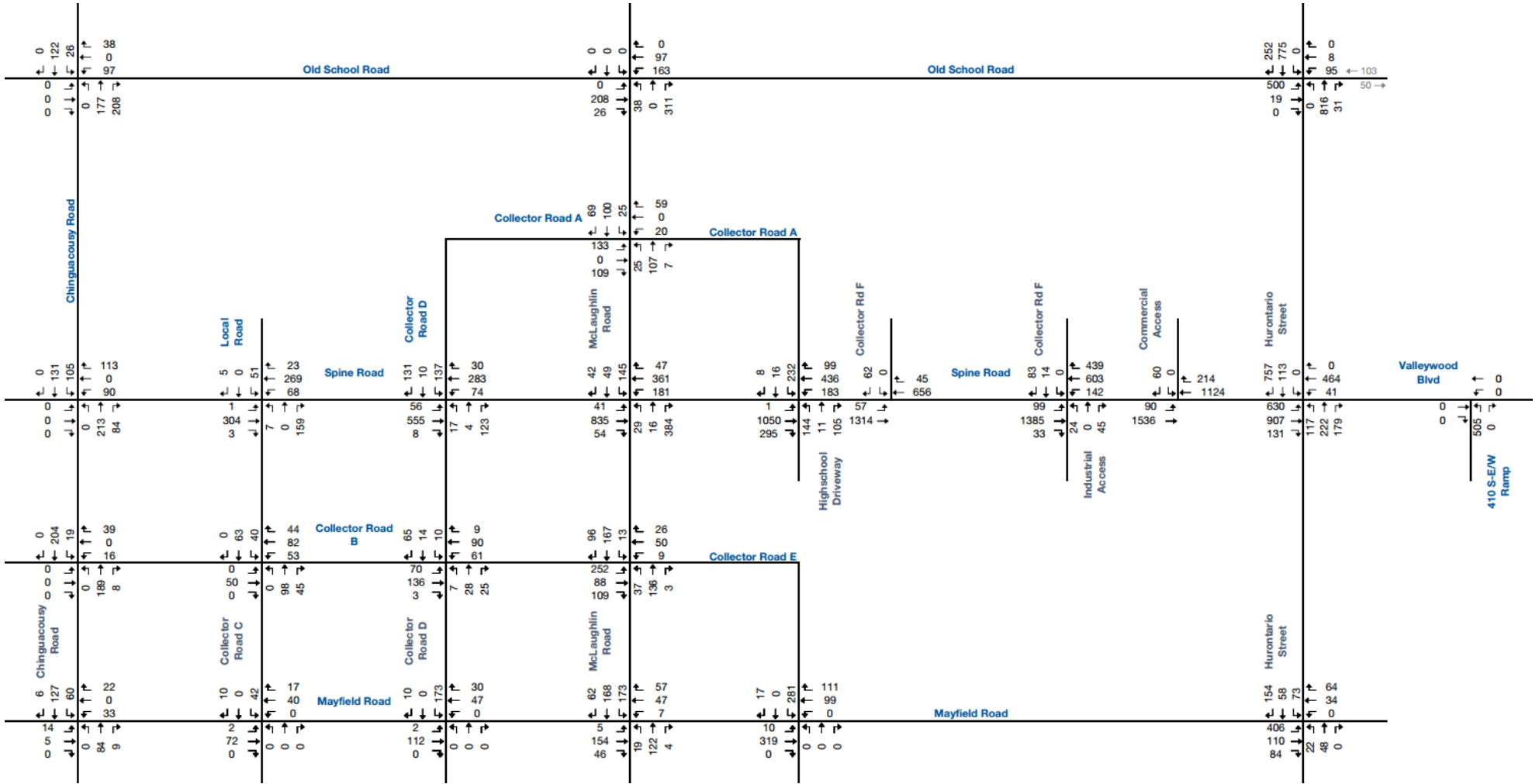
Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (m)	26.6	61.6	393.2	394.3	23.9	10.3
Average Queue (m)	8.5	18.7	144.6	148.8	3.8	0.8
95th Queue (m)	23.3	50.9	420.4	428.0	14.6	7.6
Link Distance (m)	158.5	129.2	383.0	383.0	169.5	169.5
Upstream Blk Time (%)			16	17		
Queuing Penalty (veh)			69	76		
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 8487

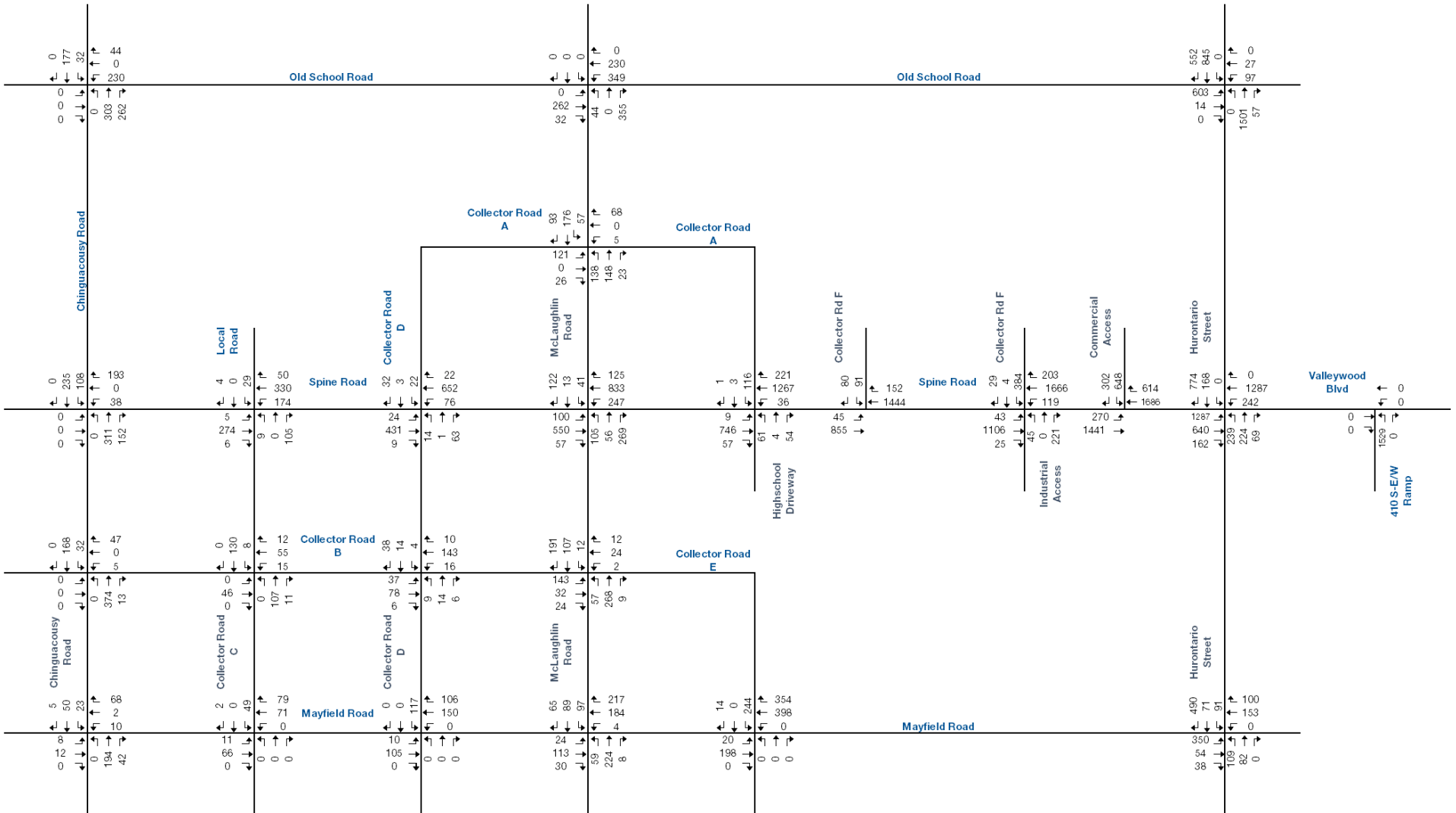
Appendix E

Background Developments



Site Trip Assignment – AM Peak Hour

Figure 2.4



Site Trip Assignment – PM Peak Hour

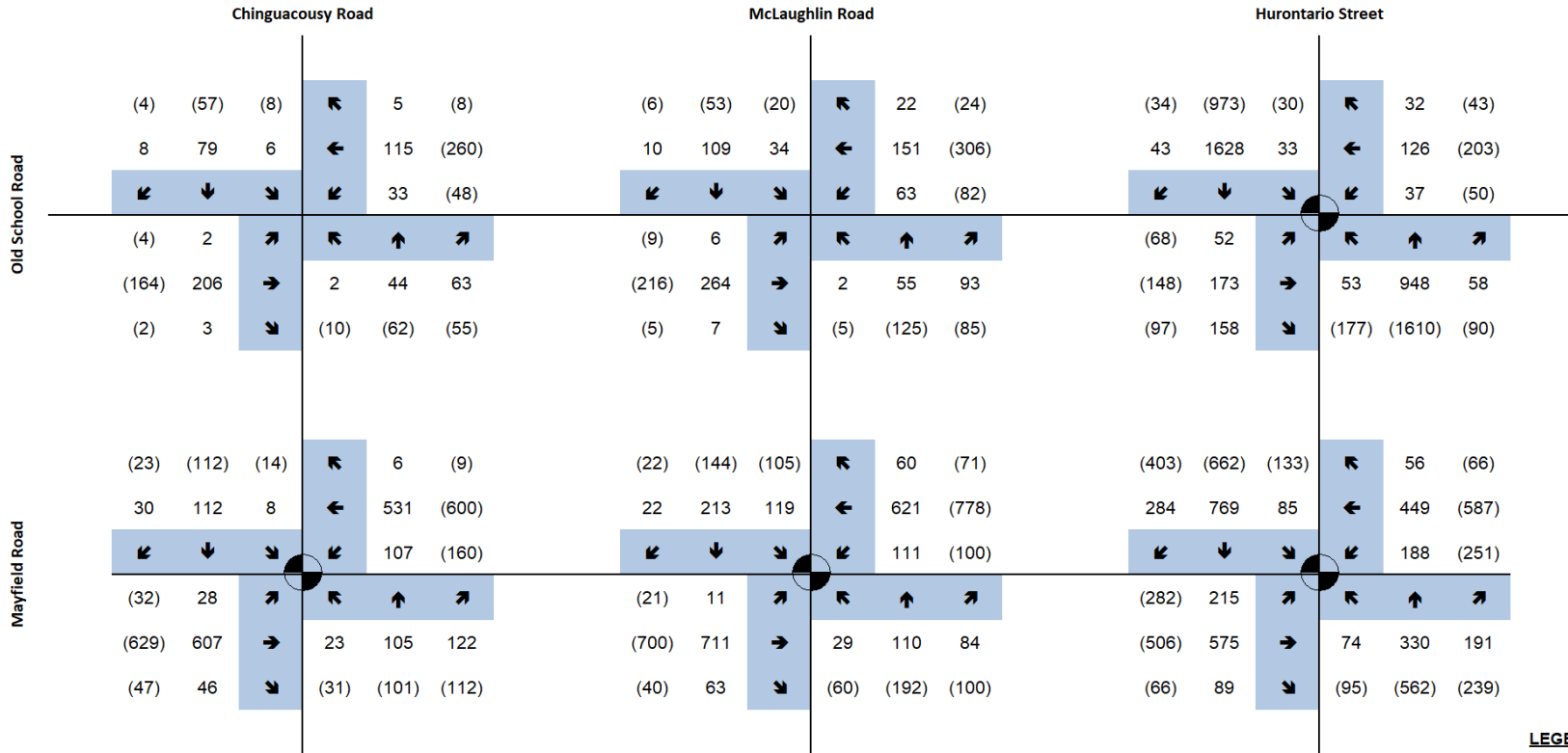
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FIGURE 16 SITE TRAFFIC VOLUMES WITH THE GTA WEST HIGHWAY

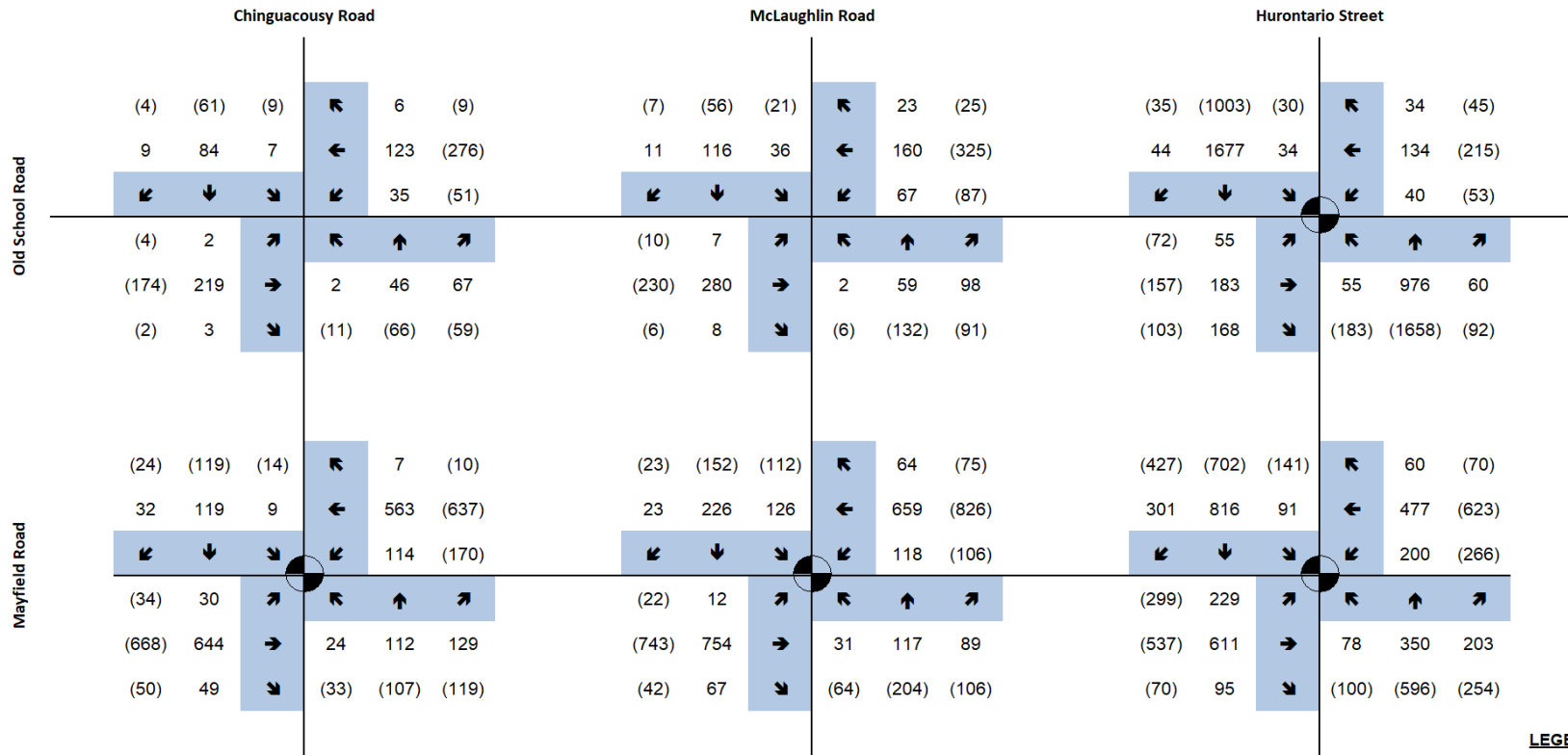


FIGURE 17 SITE TRAFFIC VOLUMES WITHOUT THE GTA WEST HIGHWAY



LEGEND
 XX AM Peak Hour Volumes
 (XX) PM Peak Hour Volumes
 Traffic Signal

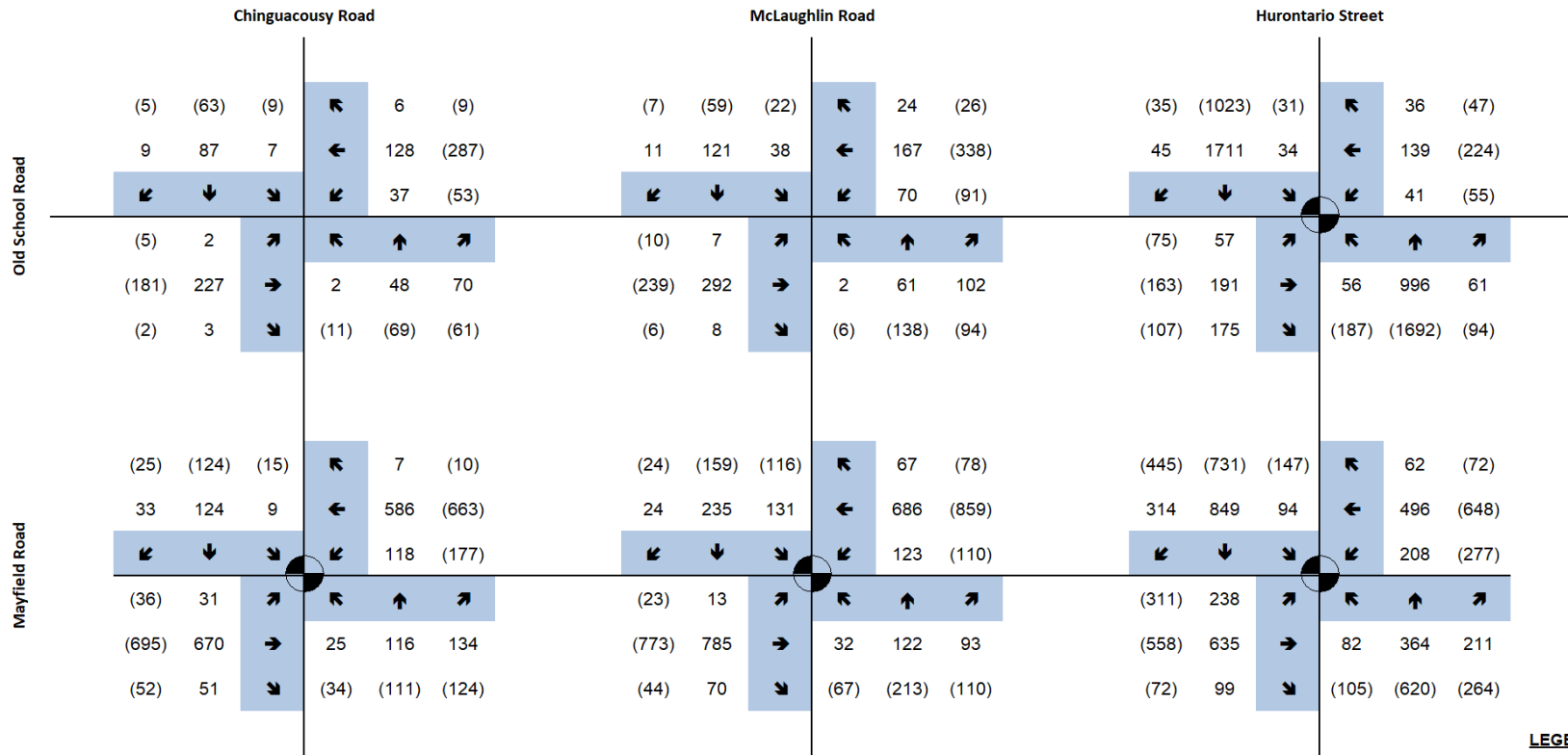
Corridor Growth - 2026



LEGEND

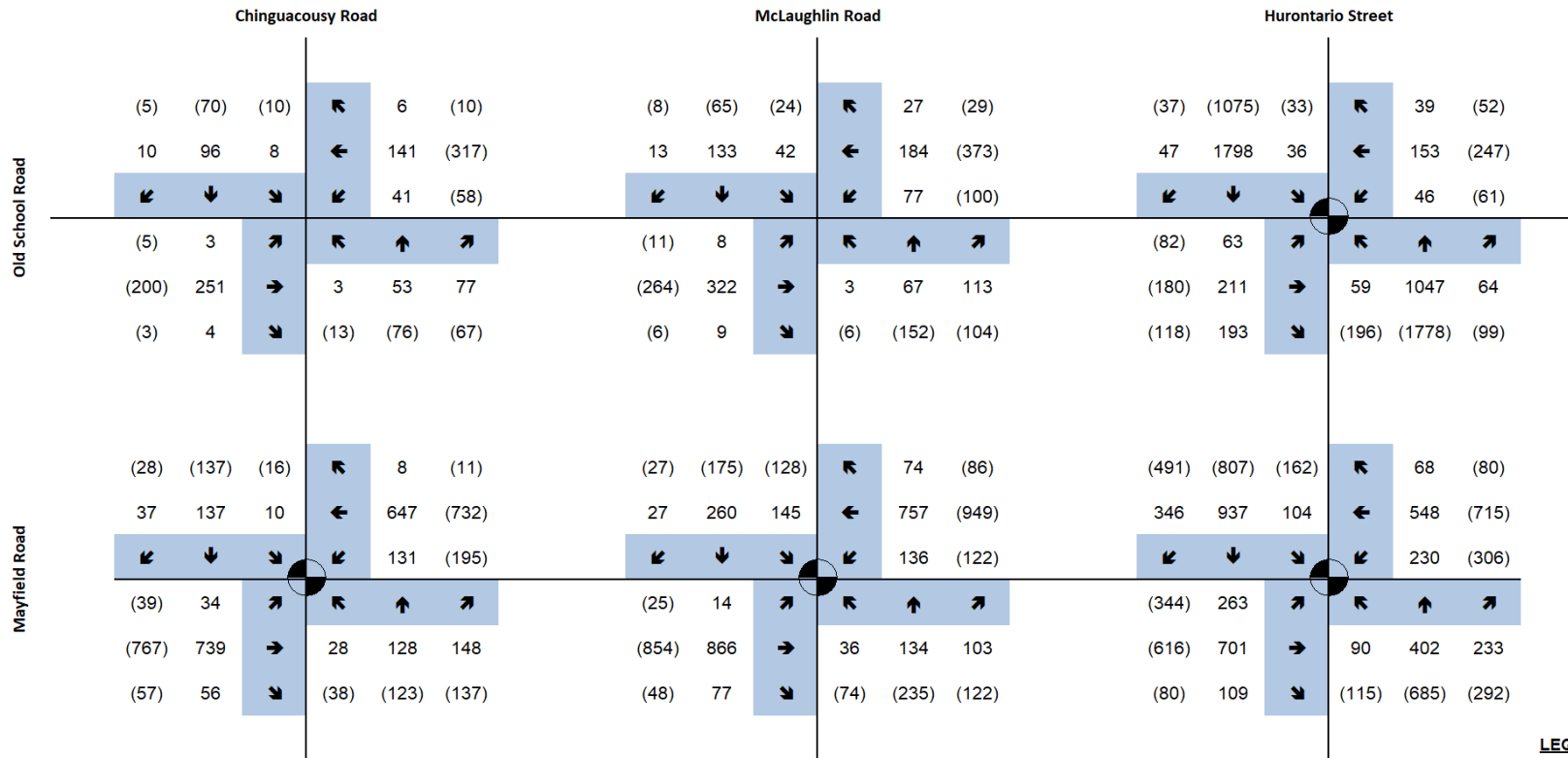
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

Corridor Growth - 2029



LEGEND
 XX AM Peak Hour Volumes
 (XX) PM Peak Hour Volumes
 Traffic Signal

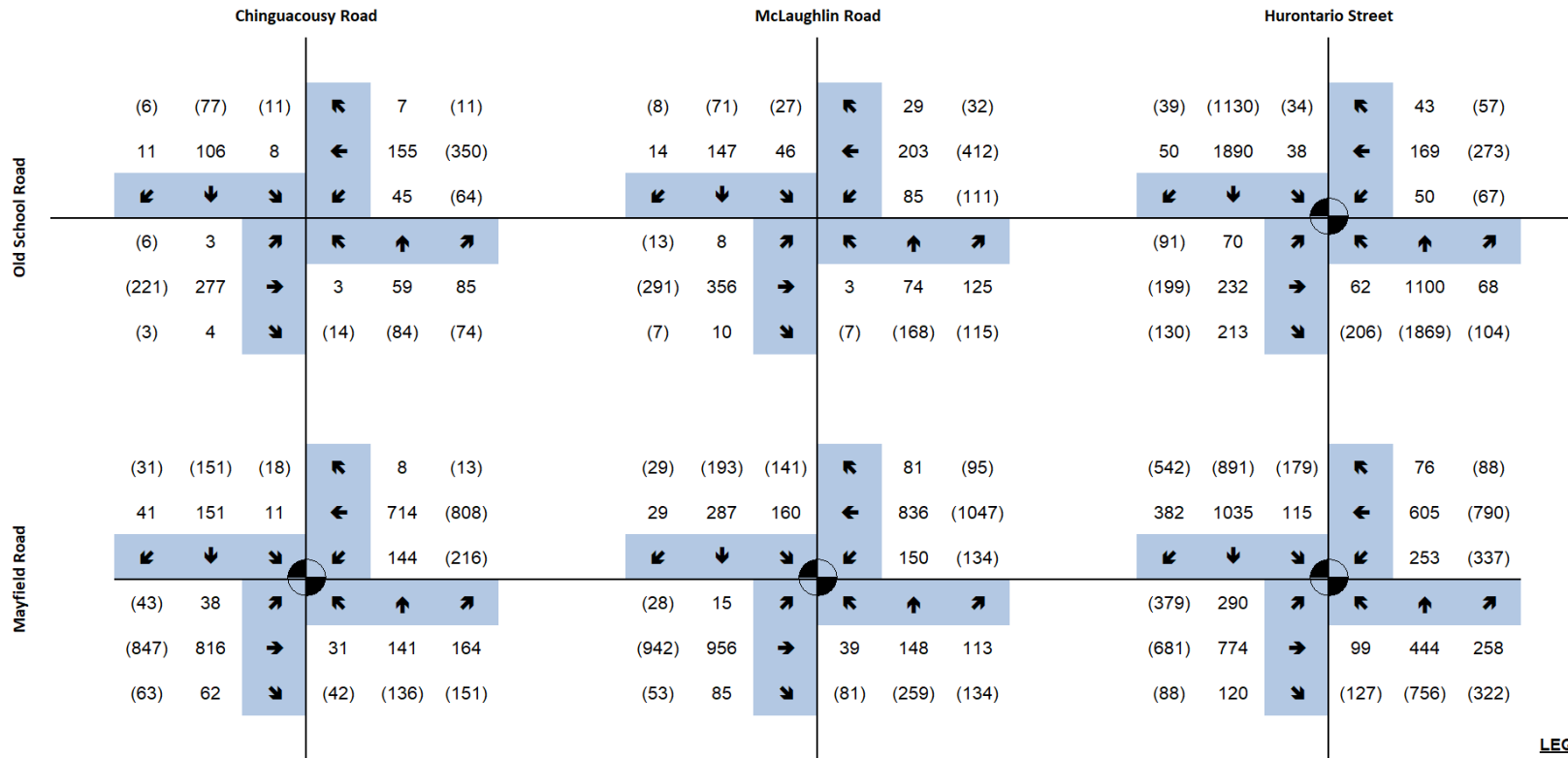
Corridor Growth - 2031



LEGEND

- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

Corridor Growth - 2036



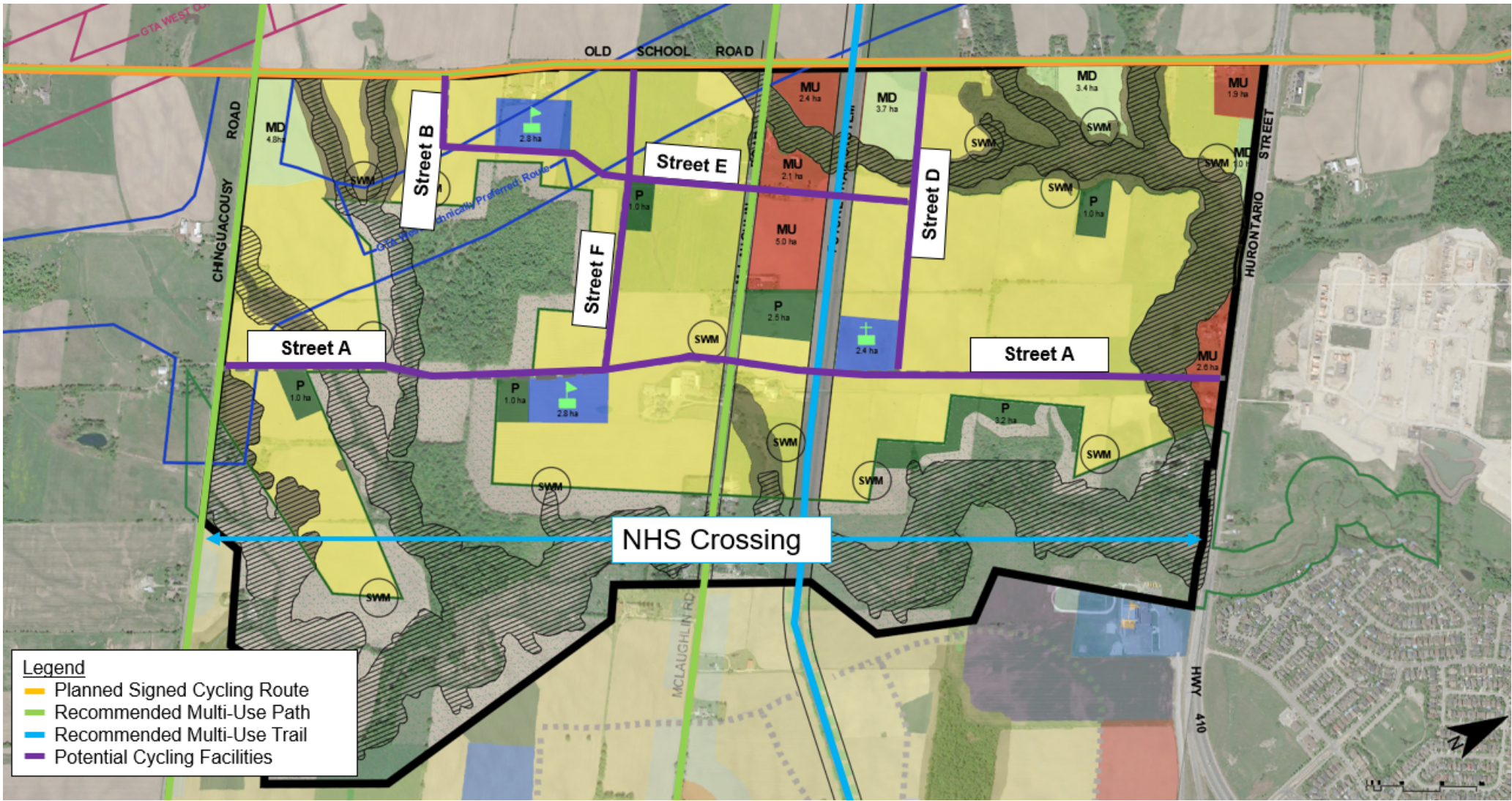
LEGEND

- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

Corridor Growth - 2041

Appendix F

Active Transportation Plan



- Legend**
- Planned Signed Cycling Route
 - Recommended Multi-Use Path
 - Recommended Multi-Use Trail
 - Potential Cycling Facilities

