Final Report

Transportation Impact Study – Pinnacle Uptown: Hurontario and Eglinton (Phase 4 Part 2 and Phase 5)

Prepared for Pinnacle International
by IBI Group

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1 Introduction

IBI Group has been retained by Pinnacle International to undertake a transportation impact study for the site intensification of the Pinnacle Lands, specifically regarding the future development of five condominium buildings scheduled under Phase 4 Part 2 and Phase 5 of Pinnacle Uptown. Situated in the City of Mississauga, the subject lands for Phase 4 Part 2 are located at the northwest corner of the Watergarden Drive / Hurontario Street intersection, while the Phase 5 lands are located at the southwest corner.

Previously, a report was issued on April 1, 2019 (the "2019 updated report") as an updated version of the June 1, 2018 *Traffic Impact Study – Pinnacle Uptown: Hurontario and Eglinton (Phase 4 Part 2 and Phase 5)* report that was prepared by IBI Group. The 2019 updated report took into consideration the City of Mississauga's comments provided to IBI Group on October 17, 2018, found in **Appendix J**. In addition, the site statistics have changed since the June 1, 2018 report, reflective in the 2019 updated report.

This February 14, 2020 report is an additional update to the 2019 updated report, taking into consideration further changes to the site statistics since the previous report. The new site statistics are described below and in **Section 1.3**

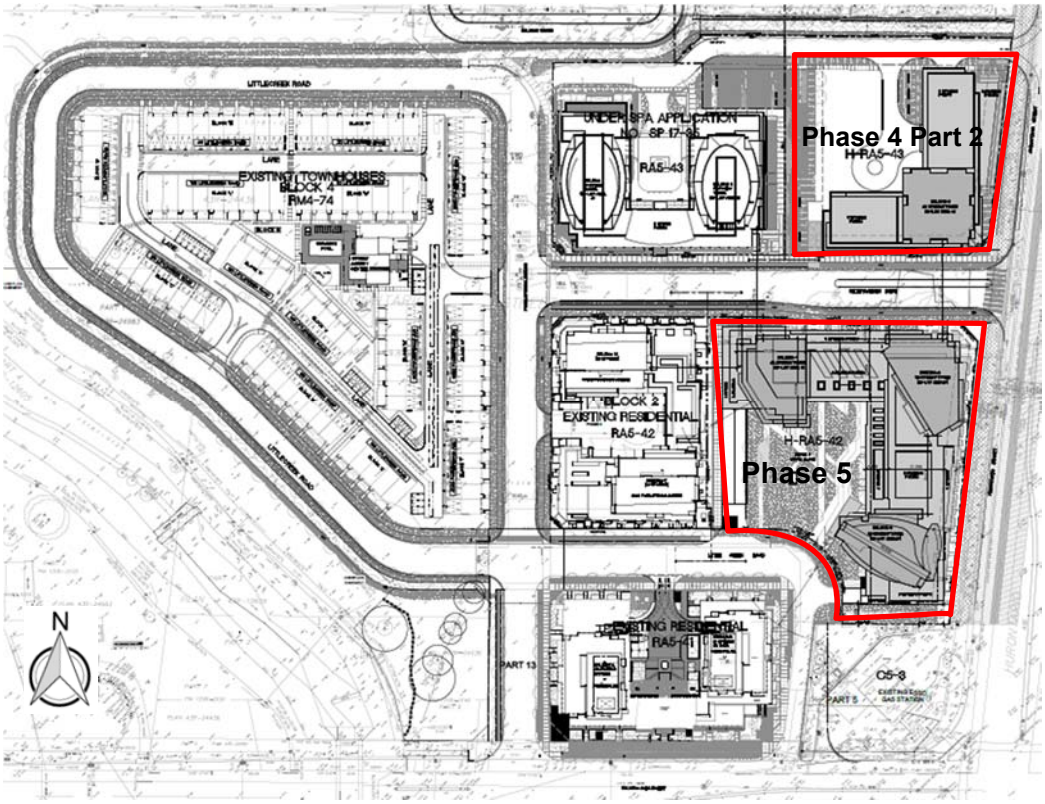
A total of 1,969 units had been approved for Phases 2, 3, 4, and 5 of the Pinnacle Uptown development under previous development approvals. Currently, Phases 2, 3, and 4 (Part 1) have been built or are currently being built, totalling 1,014 units with 233 sq. m. of retail as part of Phase 4 (Part 1).

Pinnacle is seeking to amend the previous approval (1,969 units total approved) to permit 1,355 residential units within the Phase 4 Part 2 and Phase 5 developments, in addition to the 1,014 units already built or currently being built (2,369 units total proposed). This amendment would allow for an increase of 400 units over the existing permissions. The proposed non-residential aspect of the site consists of approximately 3,700 sq. m. of gross floor area (GFA) for retail uses and approximately 5,700 sq. m. of GFA for office use.

The phases and subject lands involved in this study are presented in **Exhibit 1-1** and **Exhibit 1-2,** respectively. The proposed modifications include:

- Phase 4 Part 2: One condominium tower on the north block (35 storeys); and
- Phase 5: Three condominium towers on the south block (35 storeys, 32 storeys, and 38 storeys).

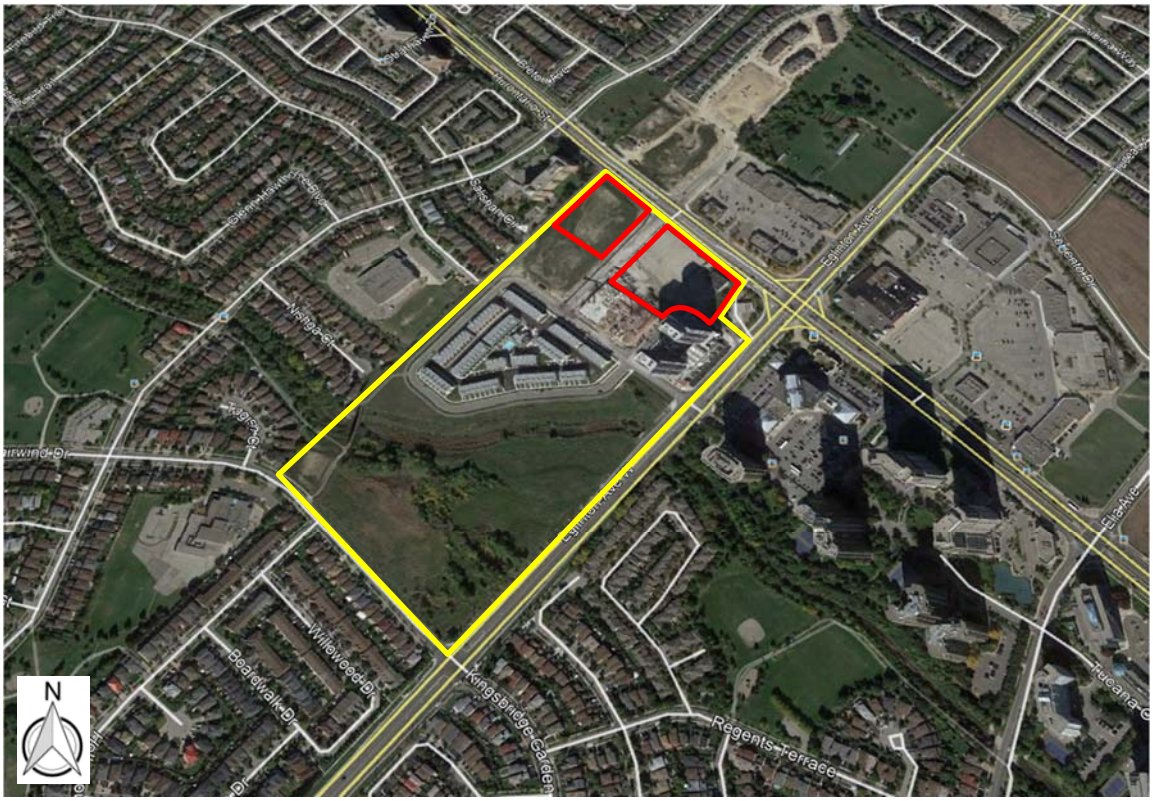
Exhibit 1-1: Development Block Diagram



Legend

Development Phases

Exhibit 1-2: Aerial View of Subject Lands



Legend

Pinnacle Landholding Development Phases

An initial traffic assessment was completed in 2007 by IBI Group for the subject lands. The purpose of this report is to:

- Review current traffic operations since a significant portion of the units have been completed;
- Assess future traffic operations with the proposed additional residential units.
- Examine transit service in the area due to the upcoming Hurontario LRT scheduled for 2022; and
- Parking requirements for the proposed development phases.

This report adheres to the terms of reference developed by IBI Group and discussed with the City of Mississauga and Region of Peel staff sent on September 28, 2017. This correspondence is presented in **Appendix A**.

1.1 Study Area

The Pinnacle lands are located northwest of the Hurontario Street / Eglinton Avenue West intersection in the City of Mississauga, as illustrated below in **Exhibit 1-3**. The site is located approximately 1.5 km north of the Mississauga City Centre within the Hurontario corridor which is planned for higher order transit (i.e. Hurontario LRT), projected for completion by 2022.

There are residential areas to the north and south of the subject lands. In the west is open space, including a portion of Cooksville Creek, which is proposed for park land. Neighbourhood commercial uses and vacant land currently occupy the lands directly to the east of the site.

The study area intersections were determined through consultation with the City of Mississauga and the Region of Peel, and consists of the following locations:

- Hurontario Street & Ceremonial Drive / Nahani Way (signalized);
- Hurontario Street & Watergarden Drive / Armdale Road (signalized);
- Hurontario Street & Eglinton Avenue West (signalized);
- Eglinton Avenue West & Four Springs Avenue / Plaza Entrance (signalized);
- Eglinton Avenue West & Kingsbridge Garden Circle / Fairwind Drive (signalized);
- Little Creek Road & Four Springs Avenue (unsignalized); and
- Watergarden Drive & Four Springs Avenue (unsignalized).

Exhibit 1-3: Development Study Area

1.2 Analysis Periods

Based on the proposed development's residential land use, the following analysis periods were used in this study:

- AM Peak Period – 7:00 a.m. to 9:00 a.m. on a typical weekday; and
- PM Peak Period – 4:00 p.m. to 6:00 p.m. on a typical weekday.

1.3 Proposed Development

As part of the Phase 4 Part 2 and Phase 5 developments, a total of 1,355 residential units, 3,732 sq. m. of GFA for retail use, and 5,676 sq. m. of GFA for office use are proposed:

- Phase 4 Part 2 of Pinnacle Uptown is proposing to construct one 35-storey condominium tower consisting of 406 units. Vehicle access to the tower will be provided via a proposed private access on Hurontario Street (just north of Watergarden Drive), from Four Springs Avenue, and from Watergarden Drive[1]. The proposed non-residential aspect consists of 917 sq. m. of GFA for retail use.
- Phase 5 of Pinnacle Uptown consists of three condominium towers of 35, 32, and 38 storeys, with 323, 291, and 335 units, respectively. The main access to the three towers will be connected to Little Creek Road. The proposed non-residential aspect consists of 2,815 sq. m. of GFA for retail use and 5,676 sq. m. of GFA for office use.

A table of development site statistics, outlining the existing, approved, and proposed number of dwelling units and commercial GFA is provided in **Exhibit 1-4**.

Exhibit 1-4: Development Site Statistics

Land Use	Development Status			
	Approved *(permitted)*	**Existing** *Phases 2, 3, and 4 (Part 1)*	**Proposed** *Phases 4 (Part 2) and 5*	**Total Proposed***
Residential (dwelling units)	1,969	1,014	1,355	**2,369**
Retail GFA (sq. m.)		233	3,732	**3,965**
Office GFA (sq. m.)		-	5,676	**5,676**

**Total Proposed = the sum of the previous development phases and the two proposed development phases.*

The proposed site plan for Phase 4, Part 2 is illustrated in **Exhibit 1-5**.The proposed site plan for Phase 5 is presented in **Exhibit 1-6**.

1.3.1 Proposed Parking Supply

At the start of this study, Pinnacle Uptown was proposing a parking supply of 1,066 spaces for Phase 4 Part 2 and 1,393 spaces for Phase 5. At the time of submission of this TIS, Pinnacle Uptown has updated their proposed parking supply to reflect the results of this TIS, specifically the results of the parking analysis in **Section 6**. Consequently, the new proposed parking supply (as recommended in **Section 6**) is 509 spaces for Phase 4 Part 2 and 1,417 spaces for Phase 5.

[1] For the purpose of this study, a conservative approach was taken to assume that all site trips to and from Phase 4 Part 2 will be made via Four Springs Avenue and Watergarden Drive. It should be noted that, in reality, a portion of the calculated site trips assigned to Watergarden Drive may use the proposed private access instead.

Exhibit 1-5: Proposed Site Plan – Phase 4, Part 2

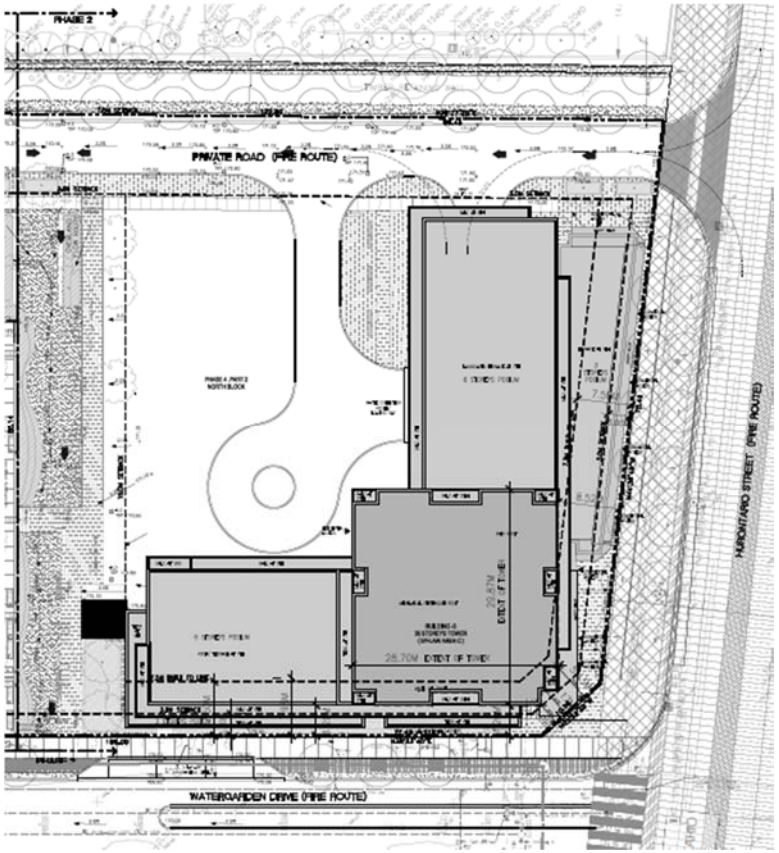
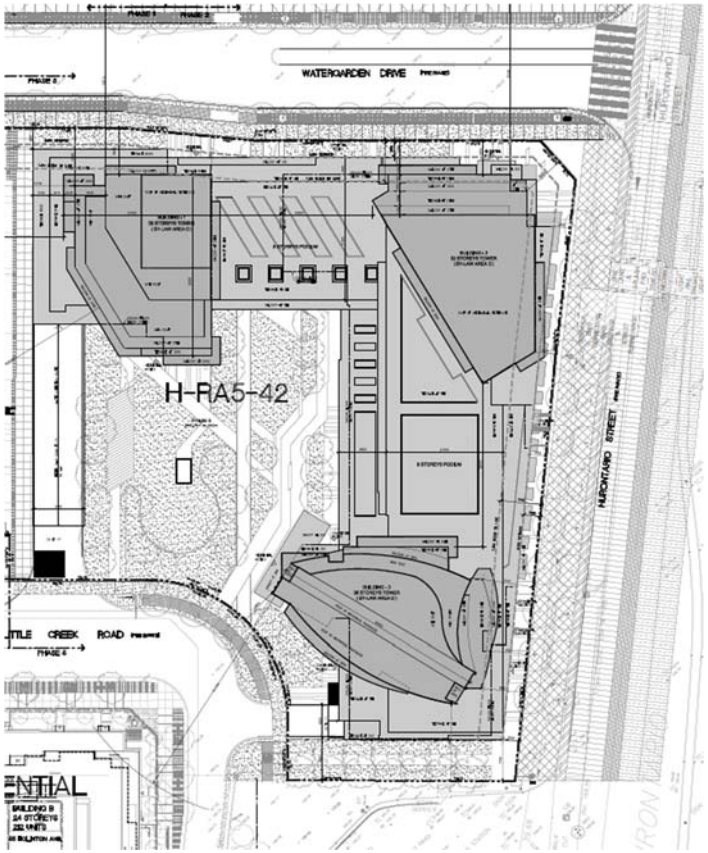


Exhibit 1-6: Proposed Site Plan - Phase 5



2 2017 Existing Conditions

This section documents the transportation network in the study area in 2017, including existing roadways, traffic control measures, intersection performance, walking and cycling facilities, and transit service.

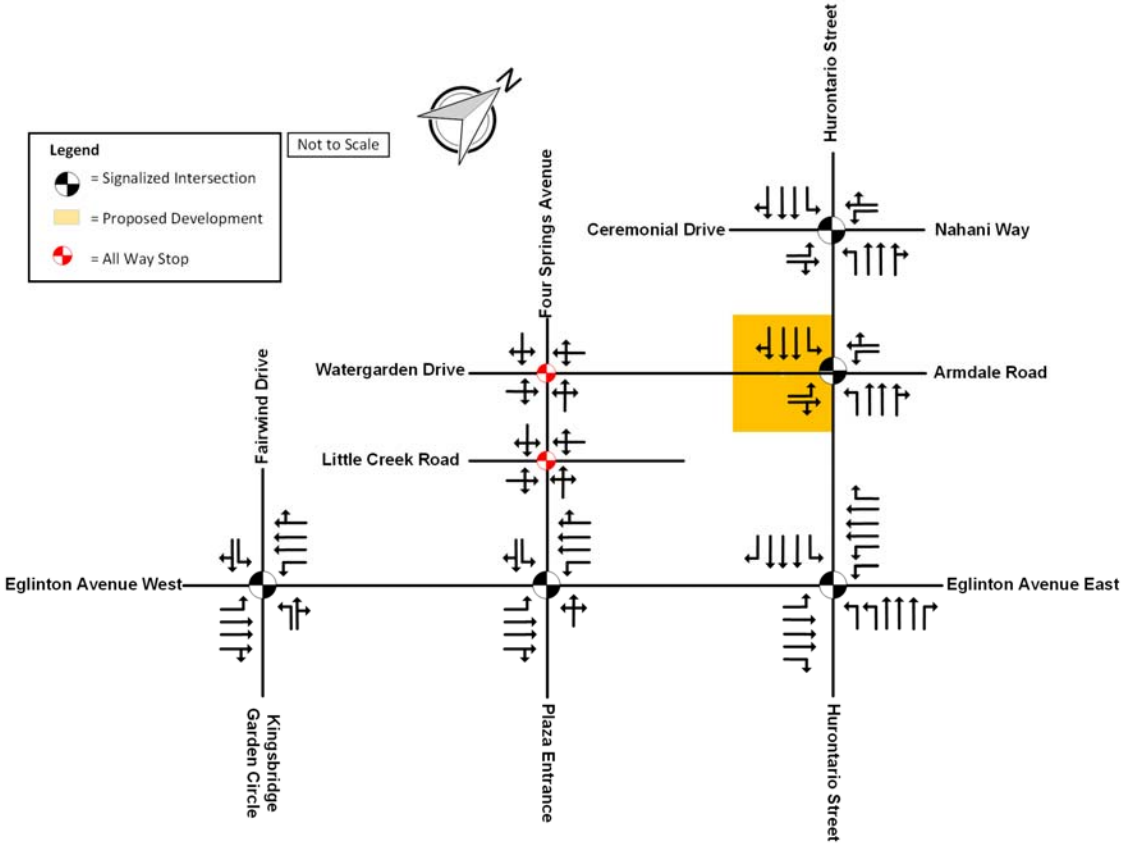
2.1 Existing Road Network

Study area roadways include the following facilities:

- **Hurontario Street** is a six-lane, north-south major arterial corridor. There are three signalized intersections within the study area on Hurontario Street. Sidewalks are provided on both sides of the street, as well as MiWay and Züm bus stops. A raised center median is found along Hurontario Street to restrict left turns from commercial accesses. The posted speed limit is 60 km/h throughout the study area.
- **Eglinton Avenue West** is a six-lane, east-west municipal road which connects the west side of Mississauga to Toronto. Posted speed limit signs of 60 km/h is in effect. Eglinton Avenue West is served by MiWay Route 35 and Route 87 bus service, with bus stops and sidewalks on both sides of the street.
- **Watergarden Drive** is a two-lane east-west local road which serves as an eastern access to the subject site from Hurontario Street. There are no sidewalk provisions and posted speed limit signs were not observed on Watergarden Drive; therefore, the municipal default speed limit of 50 km/h was assumed to be in effect on Watergarden Drive.
- **Little Creek Road** is a two-lane east-west local road which serves as an eastern access to the subject site from Hurontario Street. There are no sidewalk provisions and posted speed limit signs were not observed on Little Creek Road; therefore, the municipal default speed limit of 50 km/h was assumed to be in effect on Little Creek Road.
- **Four Springs Avenue** is a two-lane north-south local road connecting the subject site to Eglinton Avenue West. This road provides the south access to the site, with sidewalks on the east side of the street. Speed limits are unposted; therefore, an assumption of 50 km/h was utilized.
- **Ceremonial Drive / Nahani Way** is a two-lane east-west local road which intersects with Hurontario Street and provides access to residential neighbourhoods and schools. Sidewalks are found on both sides of the street with a posted speed limit of 50 km/h.
- **Fairwind Drive / Kingsbridge Garden Circle** is a two-lane, north-south local roadway which intersects with Eglinton Avenue West and leads to residential neighbourhoods and schools. Sidewalks are found on both sides of Kingsbridge Garden Circle and the west side of Fairwind Drive. The posted speed limit is 50 km/h on this road.

Lane configurations for study area roadways are illustrated in **Exhibit 2-1**.

Exhibit 2-1: Existing Study Area Lane Configurations



2.2 Existing Transit / Active Transportation Network

A total of five bus routes operate along Hurontario Street and Eglinton Avenue West within the study area. **Exhibit 2-2** illustrates the bus stop locations within the immediate study area, and **Exhibit 2-3** presents the service frequency obtained from the MiWay and Brampton Transit website. As noted, transit service is frequent and accessible during the weekday peak hours.

Additionally, the study area is located approximately 1.5 km north of the Mississauga City Centre Transit Terminal. MiWay local and express routes are accessible at this terminal, along with Brampton Transit Züm Express. Furthermore, GO Transit regional bus service is available at the transit terminal, offering connections to Toronto and Southwestern Ontario.

Exhibit 2-2: Existing Transit Network

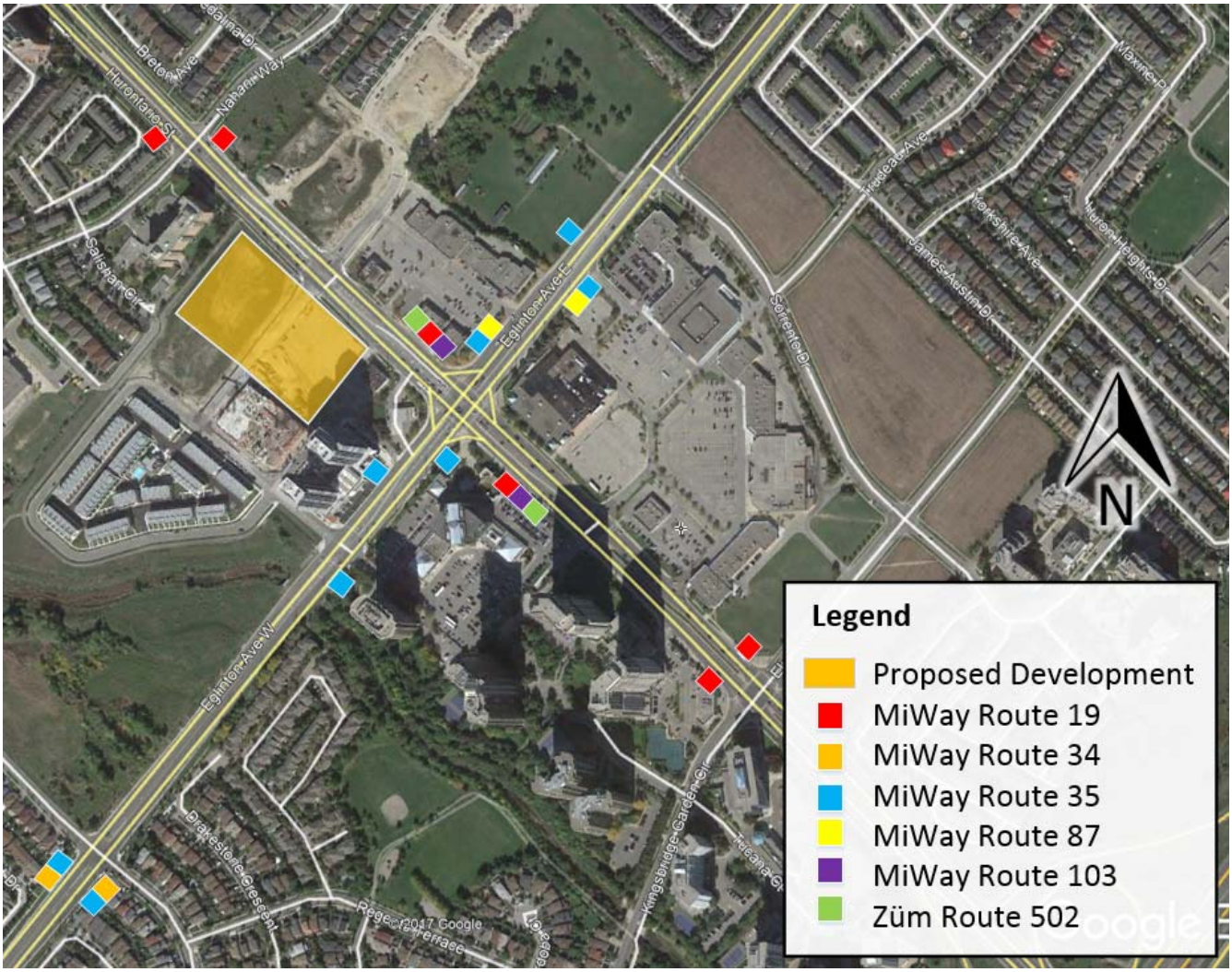


Exhibit 2-3: Existing Transit Peak Hour Frequencies

Route	Weekday Peak Headway (minutes)	
	AM	PM
MiWay - Route 19 (Hurontario)	5	5
MiWay - Route 34 (Credit Valley)	22	23
MiWay - Route 35 (Eglinton)	9	5
MiWay - Route 87 (Meadowvale-Skymark)	20	20
MiWay - Route 103 (Hurontario Express)	9	10
Brampton Transit Züm - Route 502 (Main)	7	8

2.3 Turning Movement Counts

Turning movement counts for the existing study area intersections were collected by Ontario Traffic Inc. (OTI) on October 12, 2017 and the data is provided in **Appendix B**. The survey's study hours were chosen to coincide with weekday AM and PM typical peak hour traffic activity on the adjacent roads, and were confirmed with the City of Mississauga.

IBI Group used the turning movement counts to establish a 2017 existing traffic conditions Synchro model.

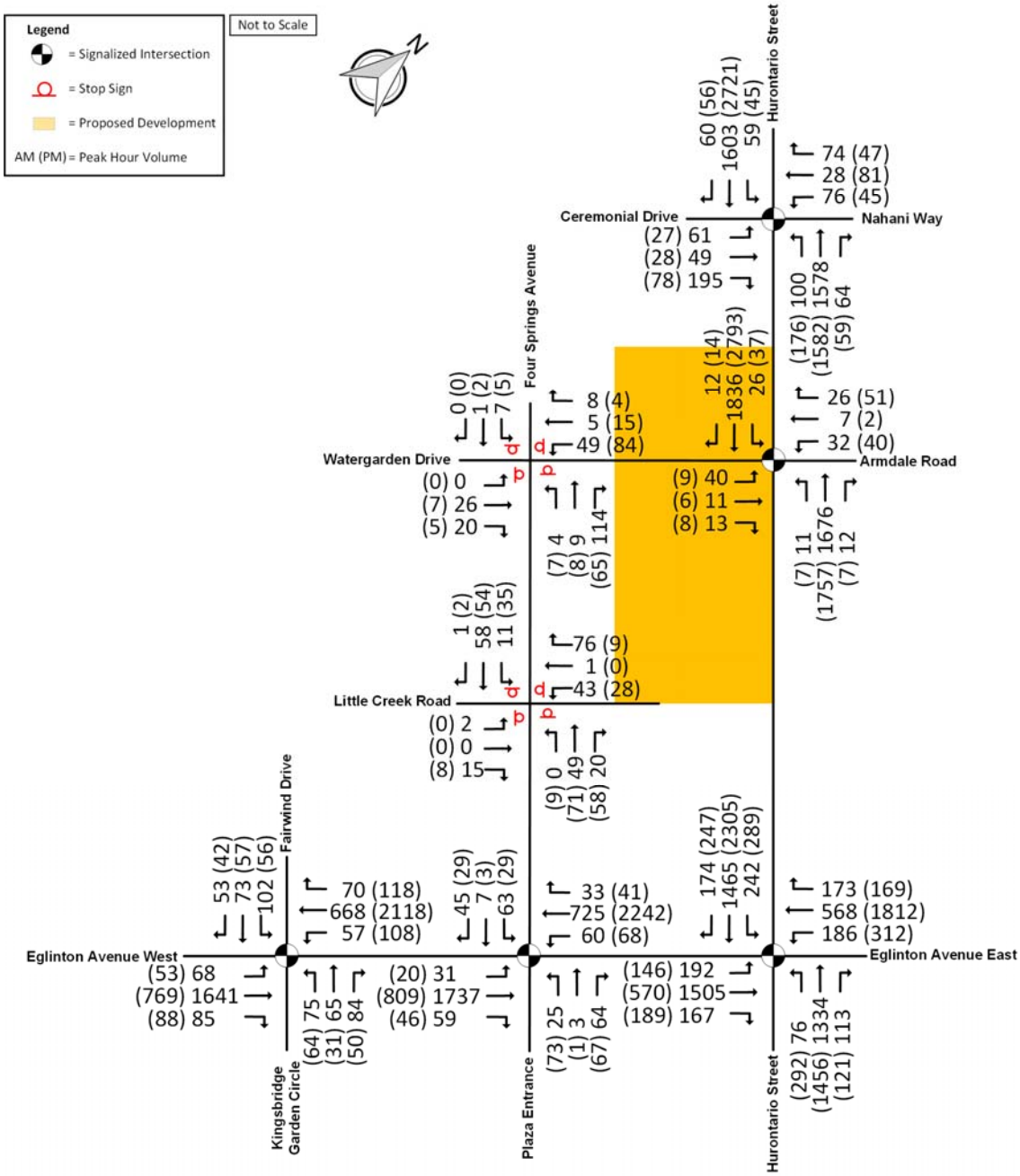
In response to comments received by the City of Mississauga staff on October 17, 2018, turning movement counts for the following unsignalized intersections were collected by Horizon Data Services Ltd. (HDSL) on October 30, 2018:

- Little Creek Road and Four Springs Avenue; and
- Watergarden Drive and Four Springs Avenue.

The new traffic data, also provided in **Appendix B**, was directly used, along with the 2017 counts to establish the updated 2017 existing traffic conditions Synchro model, without making any changes to the volumes. This is a conservative approach taken since Phase 3 of the development has since been fully occupied at the time of the October 17, 2018 counts.

Exhibit 2-4 illustrates the weekday AM and PM peak hour traffic volumes for the study area intersections.

Exhibit 2-4: Existing Conditions Traffic Volumes



NOTE: The arrows in this diagram do not represent the lane configuration. They are only meant to illustrate the turning movement. Not to scale.

2.4 Signal Timing Plans

Signal timing plans for signalized study area intersections were provided by the City of Mississauga, and are presented in **Appendix C**. All intersections operate using a semi-actuated, coordinated mode of control during both peak hours, with Hurontario Street and Eglinton Avenue assigned as the main streets.

2.5 2017 Existing Conditions Analysis

Using the turning movement counts described in **Section 2.3** and the signal timings described in **Section 2.4**, study area intersections were analyzed using the software package Synchro 9.1, which is based on the ***Highway Capacity Manual*** methodology. Based on the ***City of Mississauga Traffic Impact Study Guidelines***, the criteria for identifying critical signalized intersections or movements are as follows:

- Volume to capacity (V/C) ratio exceeds 0.85 for overall intersections operations, through movements, or shared through/turning movements;
- V/C ratio exceeds 0.90 for exclusive movements; or
- 95th percentile queues which exceed available storage.

Exhibit 2-5 details existing traffic operations at the signalized intersections for the AM and PM peak hours. Synchro outputs are found in **Appendix D**. Note that for the analysis of the existing conditions, the peak hour factors (PHF) were calculated for each approach and carried forward to the future background and future total analysis. Queue lengths reported in this study represent the 95th percentile length.

Exhibit 2-5: Existing Traffic Operations - Signalized Intersections

Intersection	Intersection			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)	Storage Capacity (m)
	LOS	Delay	V/C Ratio						
AM Peak Hour									
Ceremonial Drive / Nahani Way & Hurontario St	B	17.9	0.86	EBL	E	57.0	0.32	31	66
				EBTR	E	67.6	0.74	99	-
				WBL	F	154	0.99	50	27
				WBTR	D	54.2	0.30	39	-
				NBL	E	72.9	0.87	75	60
				NBTR	A	4.4	0.48	31	-
				SBL	C	20.3	0.47	29	90
				SBTR	A	9.7	0.51	118	-
Watergarden Dr / Armdale Road & Hurontario St	A	4.6	0.47	EBL	F	84.4	0.60	26	63
				EBTR	E	68.3	0.11	12	-
				WBL	E	77.1	0.51	22	32
				WBTR	E	68.2	0.09	11	-
				NBL	A	1.6	0.09	1	55
				NBTR	A	0.9	0.41	16	-
				SBL	A	3.1	0.16	2	70
				SBTR	A	2.0	0.47	33	-
Hurontario St & Eglinton Ave E	D	53.4	0.84	EBL	C	31.7	0.59	46	100
				EBT	F	86.3	1.03	244	-
				EBR	D	49.6	0.25	37	100
				WBL	E	70.3	0.58	45	150
				WBT	D	43.1	0.37	67	-
				WBR	D	41.4	0.15	19	125
				NBL	E	70.0	0.32	22	100
				NBT	D	45.3	0.74	162	-
				NBR	C	34.1	0.14	20	-
				SBL	F	95.5	0.95	123	100
				SBT	C	31.7	0.73	160	-
				SBR	A	9.6	0.18	6	100
Plaza Entrance / Four Spring Ave & Eglinton Ave W	B	11.4	0.52	EBL	A	5.3	0.07	8	120
				EBTR	A	6.2	0.48	131	-
				WBL	C	23.0	0.50	29	60
				WBTR	A	1.2	0.20	11	-
				NBLTR	E	71.6	0.59	40	-
				SBL	F	118	0.84	39	33
				SBTR	E	62.3	0.07	15	-

Intersection	Intersection			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)	Storage Capacity (m)
	LOS	Delay	V/C Ratio						
Kingsbridge Garden Circle / Fairwind Drive & Eglinton Ave W	C	21.6	0.68	EBL	A	6.9	0.17	16	84
				EBTR	A	8.7	0.54	116	-
				WBL	D	40.2	0.62	40	90
				WBTR	A	3.1	0.21	66	-
				NBL	F	82.5	0.73	40	16
				NBTR	E	62.6	0.58	60	-
				SBL	F	182	1.11	58	35
				SBTR	E	59.3	0.45	49	-
PM Peak Hour									
Ceremonial Drive / Nahani Way & Hurontario St	C	23.4	0.81	EBL	E	69.6	0.39	19	66
				EBTR	E	62.6	0.19	27	-
				WBL	E	70.9	0.51	28	27
				WBTR	E	69.9	0.60	57	-
				NBL	D	54.1	0.63	76	60
				NBTR	A	5.5	0.43	76	-
				SBL	B	18.2	0.33	20	90
				SBTR	C	26.8	0.89	385	-
Watergarden Dr / Armdale Road & Hurontario St	A	3.8	0.67	EBL	E	70.2	0.14	9	63
				EBTR	E	66.8	0.10	11	-
				WBL	E	75.8	0.52	25	32
				WBTR	E	69.3	0.32	22	-
				NBL	A	4.1	0.15	0	55
				NBTR	A	0.6	0.43	6	-
				SBL	A	1.8	0.25	0	70
				SBTR	A	2.3	0.70	1	-
Hurontario St & Eglinton Ave E	F	109	1.16	EBL	E	59.9	0.78	64	100
				EBT	D	36.9	0.39	75	-
				EBR	C	27.4	0.17	2	100
				WBL	F	86.3	0.86	78	150
				WBT	F	108	1.10	281	-
				WBR	D	40.1	0.23	28	125
				NBL	E	67.2	0.65	64	100
				NBT	D	50.6	0.83	186	-
				NBR	D	36.2	0.17	26	-
				SBL	F	161	1.13	160	100
				SBT	F	195	1.35	416	-
				SBR	C	25.1	0.40	40	100

Intersection	Intersection			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)	Storage Capacity (m)
	LOS	Delay	V/C Ratio						
Plaza Entrance / Four Spring Ave & Eglinton Ave W	A	8.7	0.64	EBL	C	24.7	0.38	14	120
				EBTR	A	4.7	0.24	46	-
				WBL	A	1.7	0.18	2	60
				WBTR	A	4.1	0.63	22	-
				NBLTR	E	71.4	0.70	56	-
				SBL	E	60.0	0.21	19	33
				SBTR	E	56.2	0.11	17	-
Kingsbridge Garden Circle / Fairwind Drive & Eglinton Ave W	B	16.2	0.8	EBL	E	69.9	0.82	22	84
				EBTR	A	3.8	0.25	33	-
				WBL	A	9.3	0.29	26	90
				WBTR	A	9.2	0.57	126	-
				NBL	F	144	0.93	38	16
				NBTR	E	63.8	0.27	25	-
				SBL	E	79.5	0.64	33	35
				SBTR	E	68.2	0.54	47	-

**Red font* = *critical movements*

Under existing traffic condition, there are a number of signalized movements in the study area observed to operate with capacity constraints. It is also noted that due to the 160 second cycle length in effect for all signalized intersections in the study area, that long delays were observed for the majority of movements (i.e. LOS 'E' and 'F') despite operations that are within capacity (i.e. V/C ratio). Both unsignalized intersections within the study area operate well within capacity and with minimal delay.

During the AM peak hour, the following observations are noted at the signalized intersections:

- Hurontario Street & Ceremonial Drive / Nahani Way is approaching capacity overall (V/C ratio of 0.86). With regards to specific movements, the westbound left turn movement is approaching capacity (V/C ratio of 0.99), with a queue storage spillover of up to four car lengths for this movement. The northbound left movement also has a queue storage spillover of up to three car lengths;
- Hurontario Street & Eglinton Avenue West is operating at an acceptable level overall, with the exceptions of the eastbound through movement (V/C ratio of 1.03) and the southbound left turn movement (V/C ratio of 0.95, with a queue storage spillover of three car lengths);
- Four Spring Avenue/Plaza Entrance & Eglinton Avenue West is operating well overall. The only exception is the southbound left movement, where the queue spills over the available storage lane by around one car length; and
- Eglinton Avenue West & Kingsbridge Garden Circle / Fairwind Drive is operating with acceptable LOS overall; however, there are individual constraints for the southbound left turn movement (V/C ratio of 1.11). Queue storage spillovers of up to four car lengths are observed for this movement and the northbound left turn movement.

During the PM peak hour, the following observations are noted at the signalized intersections:

- Hurontario Street & Ceremonial Drive / Nahani Way is operating within capacity overall (V/C ratio of 0.81). Individually, the southbound through/right turn movement is experiencing some congestion (V/C ratio of 0.89), and there is a queue spillover of up to three car lengths for the northbound left turn movement;
- Hurontario Street & Eglinton Ave West is operating with overall capacity constraints (V/C ratio of 1.16). The westbound through, southbound left turn, and southbound through movements are noted to operate with V/C ratios over 1. Also, the southbound left queue is exceeding storage capacity by up to ten car lengths; and
- Eglinton Avenue West & Kingsbridge Garden Circle / Fairwind Drive is operating with acceptable overall LOS ‘B’. However, northbound left turn movement is approaching capacity (V/C ratio of 0.93), with a queue spillover of up to approximately three car lengths.

3 2022 Future Background Conditions

This section discusses the development horizon year, growth rate, anticipated future road network improvements, other development related traffic in the study area, and future traffic conditions without subject site trips (i.e. Pinnacle Uptown Phase 4 Part 2 and Phase 5 site traffic).

3.1 Horizon Year and Growth Rate

Upon consultation with the City of Mississauga and as per Mississauga TIS guidelines, a five year horizon (2022) from the date of the TIS report was selected and incorporated for the future background and future total analysis.

Eglinton Avenue annual growth rates were obtained from City staff, summarized in **Exhibit 3-1**. These growth rates were applied to the through movements at study area intersections on Eglinton Avenue West.

Exhibit 3-1: Eglinton Avenue West Annual Growth Rate

Eglinton Avenue West		
Peak Period	Direction of Travel	
	Eastbound	Westbound
AM Peak	0.0%	0.5%
PM Peak	2.0%	0.0%

No annual growth rate was provided by City staff for Hurontario Street due to the proposed Hurontario LRT (light rail transit) corridor scheduled for completion by 2022. Thus, a conservative assumed annual growth rate of 0% was applied to the north and south directions of the study intersections along Hurontario Street. This is based on the assumption that vehicular traffic in the area, as well as existing site trips associated with the occupied Phases 1 and 2 of the Pinnacle Lands will remain identical to existing conditions despite planned significant improvements to transit infrastructure to be located within walking distance.

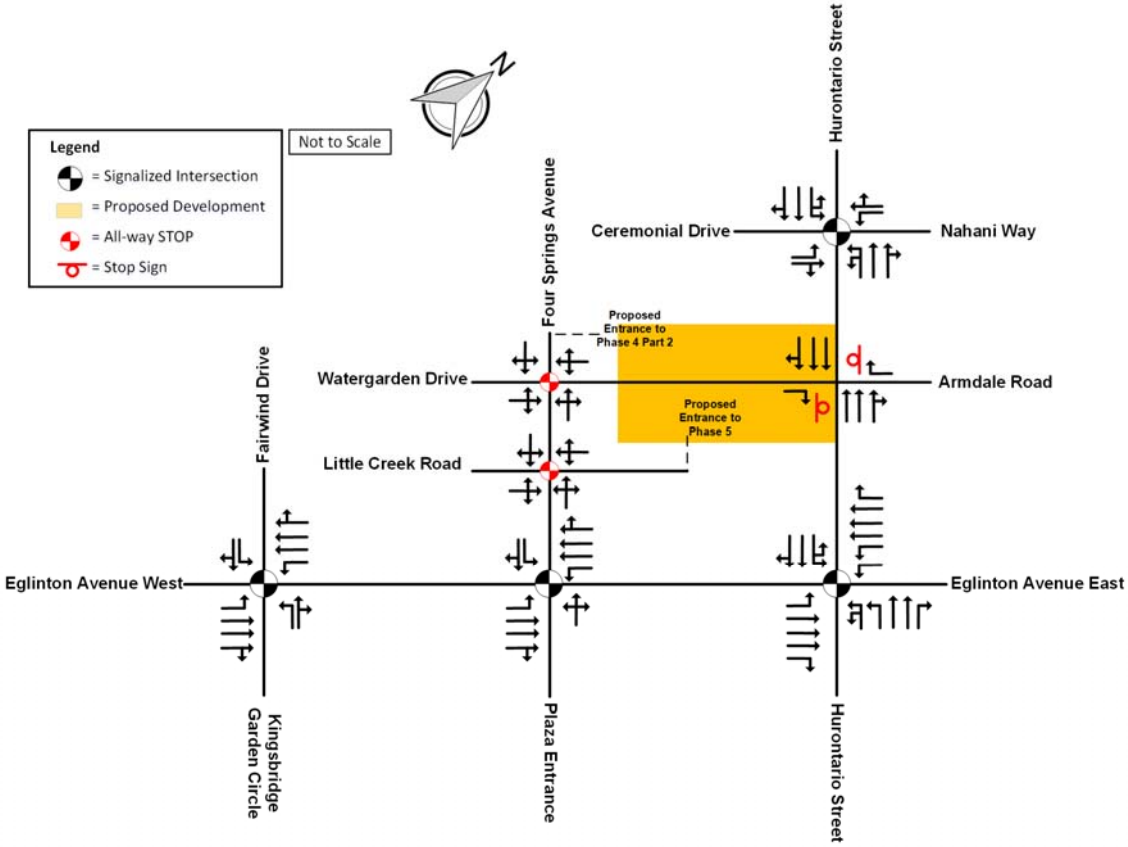
3.2 Future Transportation Network Improvements

Based on a review of the ***City of Mississauga Official Plan***, the 2012 ***Peel Long Range Transportation Plan***, and the 2008 ***Metrolinx 'The Big Move',*** a LRT corridor will be built on Hurontario Street by late 2022. The LRT will connect Mississauga and Brampton from Port Credit to Brampton Terminal.

Understanding that there are unconfirmed lane reconfigurations for the study area's Hurontario intersections, and an absence of documentation regarding the LRT's impact on vehicle traffic volumes, mode choice, and travel behaviour. For the purposes of this TIS report, the Hurontario LRT will be included as part of the future background and future total traffic conditions. It is currently expected that the LRT will operate in a dedicated right-of-way, and the existing six lane Hurontario Street cross section will be reduced.

Lane configurations for future study area roadways, when the Hurontario LRT is full constructed, are illustrated in **Exhibit 3-2**.

Exhibit 3-2: Future Study Area Lane Configurations



As mentioned above, future background and future total conditions will take into consideration the Hurontario LRT project. The following Metrolinx project documents were referenced when creating the Synchro model:

- Appendix B.12, Preliminary System Operations Plan[2];
- Appendix A.1, LRT Infrastructure Design[3]; and
- Appendix C.8, Public Information Centre (PIC) Materials[4].

Based on these documents, a future north-south cross section of two through lanes, one shared right turn lane, and one protected left turn / U-turn lane will be used for the Hurontario corridor intersections. Amber and all-red phases were adjusted to accommodate LRT vehicles, while the cycle lengths were unchanged.

The existing full movement signalized intersection with Watergarden Drive will be removed. Subject site traffic previously making outbound eastbound left turns at Watergarden Drive will instead turn right to make southbound U-turns at the Eglinton Avenue intersection. Similarly, subject site traffic previously making inbound northbound left turns will instead make northbound U-turns at the downstream Ceremonial Drive / Nahani Way intersection.

[2] Metrolinx, Appendix B.12; June 2014. http://www.metrolinx.com/en/docs/pdf/hurontario_epr/Appendix_B12_Preliminary_System_Operations_Plan.pdf.
[3] Metrolinx, Appendix A.1; June 2014. http://www.metrolinx.com/en/docs/pdf/hurontario_epr/Appendix_A1_LRT_Infrastructure_Design.pdf.
[4] Metrolinx, Appendix C.8: June 2014, http://www.metrolinx.com/en/docs/pdf/hurontario_epr/Appendix_C8_June_2014.pdf.

As per the Metrolinx documents, a target transit level of 22% is set for the 2031 horizon year for the City of Mississauga. The current transit level is 11%. As part of this analysis, it was assumed that a 20% overall reduction in automobile traffic for the corridors within the study area and for the site will be achieved for 2022, to assess potential improvements for traffic operations.

3.2.1 Operational Assessment Adjustments

The following updates were made to the operational assessment of future conditions as a result of the future Hurontario LRT:

- Added Advanced turning signal heads for the eastbound left turn movement into the site at the intersection of Plaza Entrance / Four Spring Avenue and Eglinton Avenue West.
- Updated signal timings for the entire study area to account for the future Hurontario LRT operations. This entailed updating the signal timings to not be more than 140 seconds and then optimizing all phase lengths, as well as restricting left-turn movements at specific intersections, as well as accounting for U-Turn movements at other intersections.
- Redistributed site trips for various movements to better reflect trip distribution and trip assignment when the future LRT is constructed.

3.3 Background Developments

Discussions with City of Mississauga and Peel Region Staff identified no background developments in the study area up to the horizon year 2022. With regards to the Pinnacle Lands, the following preceding phases are noted:

- Phase 1 (Crystal at Pinnacle Uptown);
- Phase 2 (The Marquee Townhomes on the Park);
- Phase 3 (Amber at Pinnacle Uptown); and
- Phase 4 Part 1 (Perla at Pinnacle Uptown).

It is noted that Phase 1 and 2 are completed, and are assumed to be fully occupied. Therefore, the TMC data collected for this study contains site trips related to these phases.

At the time when turning movement counts were conducted in 2017, Phase 3 was under construction, and units in Phase 4 Part 1 were not yet occupied. Consequently, both Phase 3 and Phase 4 Part 1 were treated as background developments. During the new turning movement counts conducted in 2018 for the two unsignalized intersections within the study area, Phase 3 was fully occupied but Phase 4 Part 1 was not yet occupied. Consequently, only Phase 4 Part 1 background site trips were applied to the two unsignalized internal intersections. To assess trips associated with these phases, trip generation estimates were calculated, summarized in **Exhibit 3-3** (for both scenarios) and **Exhibit 3-4** (for Phase 4 Part 1 only). It is expected that a portion of trips will be made by drivers passing by the study area to visit the Retail component of the site. Accounting for these travel behaviours, a total of 303 and 374 new trips are expected at the Pinnacle Lands for the background phases (Phase 3 and Phase 4 Part 1) during the weekday AM and PM peak hours, respectively.

Exhibit 3-3: Background Trip Generation Summary (Phase 3 and Phase 4 Part 1)

Land Use		Unit	Weekday AM Peak Hour			Weekday PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Phase 3& Phase 4 Part 1	**Residential Condominium / Townhouse, 914 Units*** (ITE Code 230)	Trips/Unit	0.06	0.28	**0.34**	0.28	0.14	**0.42**
		%	17%	83%	**100%**	67%	33%	**100%**
		Gross Trips	48	255	**303**	244	125	**369**
		Internal Trips	-	-	**-**	-	-	**-**
Phase 4 Part 1	**Specialty Retail, 2,508 sq.ft.** (ITE Code 826)	Trips/1000 sq.ft.	-	-	**-**	1.19	1.52	**2.71**
		%	-	-	**-**	44%	56%	**100%**
		Gross Trips	-	-	**-**	3	4	**7**
		Internal Trips	-	-	**-**	0	0	**0**
		Pass-by Trips	-	-	**-**	1	1	**2**
Total New Site Trips			48	255	**303**	246	128	**374**

**Note: The residential trip rates were calculated using the fitted curve equation identified in ITE's Trip Generation Manual.*

Exhibit 3-4: Background Trip Generation Summary (Phase 4 Part 1)

Land Use		Unit	Weekday AM Peak Hour			Weekday PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Phase 4 Part 1	**Residential Condominium / Townhouse, 468 Units*** (ITE Code 230)	Trips/Unit	0.06	0.28	**0.34**	0.28	0.14	**0.42**
		%	17%	83%	**100%**	67%	33%	**100%**
		Gross Trips	28	149	**177**	141	72	**213**
		Internal Trips	-	-	**-**	-	-	**-**
	Specialty Retail 2,508 sq.ft. (ITE Code 826)	Trips/1000 sq.ft.	-	-	**-**	1.19	1.52	**2.71**
		%	-	-	**-**	44%	56%	**100%**
		Gross Trips	-	-	**-**	3	4	**7**
		Internal Trips	-	-	**-**	0	0	**0**
		Pass-by Trips	-	-	**-**	1	1	**2**
Total New Site Trips			48	255	**303**	246	128	**374**

**Note: The residential trip rates were calculated using the fitted curve equation identified in ITE's Trip Generation Manual.*

3.4 2022 Future Background Analysis

To provide a basis for comparison with existing conditions, the 2022 future background traffic operation analysis will consist of corridor traffic growth as discussed in **Section 3.1.**

Exhibit 3-5 illustrates 2022 future background traffic volumes into the study area during the weekday AM and PM peak hours.

Exhibit 3-5: 2022 Future Background Conditions Traffic Volumes

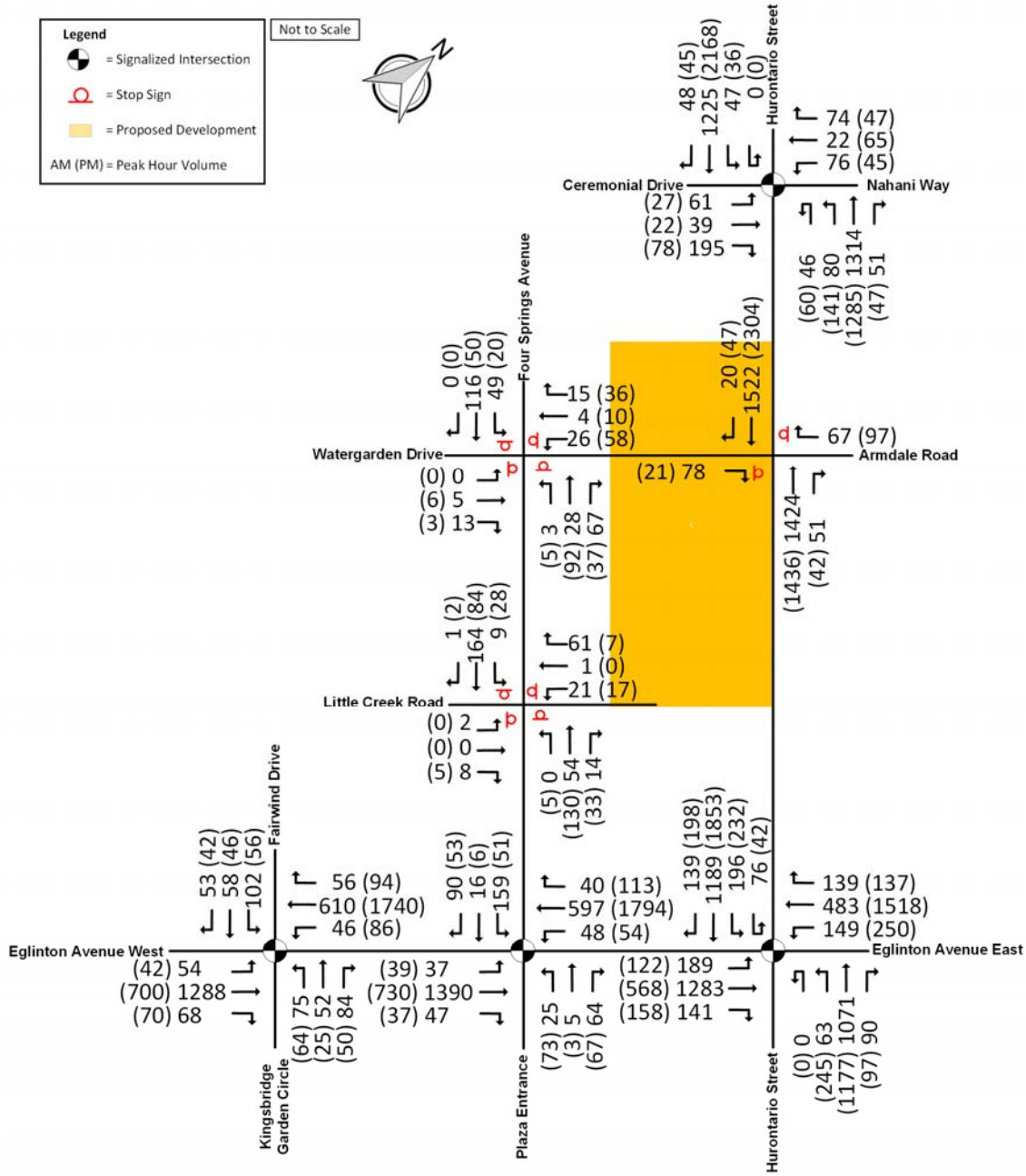


Exhibit 3-6 summarizes the signalized intersection operations in the study area during the AM and PM peak hours. Future background synchro reports are provided in **Appendix E**.

Exhibit 3-6: 2022 Future Background Conditions Traffic Operations - Signalized Intersection Summary

Intersection	Intersection			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)	Storage Capacity (m)
	LOS	Delay	V/C Ratio						
AM Peak Hour									
Ceremonial Drive / Nahani Way & Hurontario St	C	28.2	0.78	EBL	D	53.5	0.36	29	66
				EBTR	E	57.7	0.65	70	-
				WBL	F	256	1.28	51	27
				WBTR	D	48.1	0.14	18	-
				NBL	E	64.3	0.60	46	90
				NBTR	A	8.0	0.65	62	-
				SBL	E	63.4	0.40	28	120
				SBTR	C	21.4	0.70	195	-
Hurontario St & Eglinton Ave E	D	46.4	0.93	EBL	C	24.1	0.64	30	100
				EBT	D	35.8	0.85	85	-
				EBR	B	10.3	0.13	4	100
				WBL	E	75.0	0.73	38	150
				WBT	D	35.9	0.31	49	-
				WBR	D	36.4	0.12	12	125
				NBL	E	64.0	0.37	17	100
				NBT	E	62.6	0.96	209	-
				NBR	C	34.1	0.08	-	-
				SBL	F	109	0.98	144	130
				SBTR	D	39.7	0.93	243	-
Plaza Entrance / Four Spring Ave & Eglinton Ave W	B	15.7	0.53	EBL	A	4.8	0.08	5	120
				EBTR	A	8.6	0.48	54	-
				WBL	A	8.9	0.22	5	60
				WBTR	A	4.2	0.21	16	-
				NBLTR	D	45.8	0.20	17	-
				SBL	F	86.8	0.88	70	33
				SBTR	D	44.8	0.12	18	-
Kingsbridge Garden Circle / Fairwind Drive & Eglinton Ave W	B	18.0	0.51	EBL	A	6.2	0.13	12	84
				EBTR	A	7.1	0.43	74	-
				WBL	A	9.4	0.29	7	90
				WBTR	A	3.9	0.19	18	-
				NBL	E	63.2	0.64	35	16
				NBTR	D	51.9	0.46	42	-
				SBL	F	124	0.96	48	35
				SBTR	D	50.7	0.37	36	-

Intersection	Intersection			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)	Storage Capacity (m)
	LOS	Delay	V/C Ratio						
PM Peak Hour									
Ceremonial Drive / Nahani Way & Hurontario St	F	92.8	0.99	EBL	E	61.3	0.35	18	66
				EBTR	E	58.2	0.42	38	-
				WBL	E	64.5	0.52	25	27
				WBTR	E	59.9	0.52	44	-
				NBL	C	21.7	0.54	48	90
				NBTR	C	23.9	0.58	211	-
				SBL	E	61.4	0.29	22	120
				SBTR	F	145	1.24	483	-
Hurontario St & Eglinton Ave E	F	114	1.23	EBL	F	110	0.95	62	100
				EBT	C	28.6	0.38	34	-
				EBR	B	13.3	0.19	4	100
				WBL	F	193	1.21	74	150
				WBT	D	52.6	0.92	176	-
				WBR	D	35.1	0.13	15	125
				NBL	F	189	1.20	73	100
				NBT	E	70.5	1.00	234	-
				NBR	C	32.8	0.08	4	-
				SBL	F	94.5	1.06	65	130
				SBTR	F	208	1.42	324	-
Plaza Entrance / Four Spring Ave & Eglinton Ave W	A	8.8	0.58	EBL	B	13.1	0.25	7	120
				EBTR	A	7.3	0.24	39	-
				WBL	A	1.2	0.12	1	60
				WBTR	A	2.1	0.58	21	-
				NBLTR	E	60.8	0.68	49	-
				SBL	D	53.7	0.35	26	33
				SBTR	D	47.7	0.06	13	-
Kingsbridge Garden Circle / Fairwind Drive & Eglinton Ave W	A	8.9	0.50	EBL	B	13.4	0.39	14	84
				EBTR	A	3.7	0.23	27	-
				WBL	A	1.8	0.21	3	90
				WBTR	A	1.2	0.48	14	-
				NBL	F	86.7	0.76	33	16
				NBTR	D	54.3	0.18	17	-
				SBL	E	63.9	0.55	29	35
				SBTR	E	56.4	0.38	32	-

**Red font* = *critical movements*

During the AM peak hour traffic conditions, the following is anticipated:

- Hurontario Street & Ceremonial Drive / Nahani Way is anticipated to be operating within capacity overall (V/C ratio of 0.78). However, an individual constraint is anticipated for the westbound left turn movement (V/C ratio of 1.28) with a queue storage spillover of up to four car lengths; and
- Hurontario Street & Eglinton Avenue West is anticipated to approach capacity overall (V/C ratio of 0.93). The eastbound and northbound through movements, and all southbound movements are anticipated to operate close to capacity. There is an anticipated queue spillover of up to three car lengths for the southbound left turn movement.
- Eglinton Avenue West & Kingsbridge Garden Circle / Fairwind Drive is anticipated to continue to operate with acceptable LOS overall; however, there are individual constraints for the southbound left turn movement (V/C ratio of 0.96). Queue storage spillovers of up to three car lengths are anticipated for this movement and the northbound left turn movement.

During the PM peak hour, the following observations are noted at the signalized intersections:

- Hurontario Street & Ceremonial Drive / Nahani Way is anticipated to operate close to capacity overall (V/C ratio of 0.99). With regards to specific movements, the southbound through/right turn movement is anticipated to be over capacity (V/C ratio of more than 1.24); and
- Hurontario Street & Eglinton Avenue West is anticipated to operate over capacity overall (V/C ratio of 1.23 overall). All left turn and through movements, except for the eastbound through movement, are anticipated to operate close to capacity or over capacity.

Both unsignalized intersections within the study area are anticipated to continue to operate well within capacity and with minimal delay during the AM and PM peak hours.

4 2022 Future Total Conditions

This section of the report analyzes the impact of the proposed development on the future background traffic conditions.

4.1 Site Access

Vehicular traffic is proposed to access the developments via the Hurontario Street / Watergarden Drive intersection and the Eglinton Avenue West / Four Springs Avenue intersection. The four towers that compose the subject site, contained within the Phase 4 Part 2 and Phase 5 development schedule, will be served by internal roads connected to Four Springs Avenue and Watergarden Drive.

As noted in **Section 3.2**, an eastbound left turn restriction at the existing signalized Watergarden Drive / Hurontario Street intersection is anticipated when the Hurontario LRT is constructed. This restriction will cause outbound site traffic to turn right and perform a southbound U-turn at the Eglinton Avenue / Hurontario Street intersection, or to exit via the Four Springs Avenue / Eglinton Avenue West intersection or the proposed private access to the north.

Similarly, site traffic previously making inbound northbound left turns will instead make northbound U-turns at the downstream Ceremonial Drive / Nahani Way intersection or enter via the Four Springs Avenue / Eglinton Avenue West intersection or the proposed private access to the north.

For the purposes of the traffic operations sensitivity analysis, it was assumed that all affected vehicles will complete the U-turn movement. These route changes are due to the installation of the Hurontario LRT centre median and the removal of existing full movement signalized operations at the Watergarden Drive / Hurontario Street intersection. Furthermore, a conservative approach was taken to assume that all site trips making the U-turn (as well as site trips to/from the north along Hurontario Street) will use Watergarden Drive. However, in reality, a portion of these site trips may use the proposed private access instead.

4.2 Trip Generation

The gross trips anticipated to be generated by the subject site are examined in this section. The net trips generated are then assigned and distributed to the study area road network.

4.2.1 Trip Reductions Related to Traffic Demand Management Measures

IBI Group has previously used The Region of Waterloo Parking Management Worksheet to calculate parking supply reductions based on whether or not the development is located in an urban growth centre, intensification corridor, or other area of the city, pedestrian and cyclist orientation of the development, public transportation access, and trip reduction incentives.

In the absence of a comparable municipal or regional resource, this Region of Waterloo worksheet is a suitable resource to utilize for this project to calculate a potential reduction in trips based on specific TDM measures and recognizing that the Pinnacle project is also located within an intensification corridor and within the Uptown Major Node Area.

This process assumes that applying TDM measures for a development would cause a shift of the number of trips made by single-occupancy vehicle (SOV) to trips made by another sustainable form of transportation, calculating the TDM impacts on the parking supply can also justify a reduction in the number of trips made by SOV.

After completing the Parking Reduction Worksheet, found in **Appendix F**, the recommended TDM measures would contribute to an estimated 28% reduction in parking demand in an intensification corridor, within 800m of a rapid transit corridor.

It is noted that a parking reduction is not the same as a reduction in trips generated, but can be used to estimate the number of trips that could potentially be reduced as a result of the implemented TDM measures. To be conservative, a 25% reduction factor was applied to site trips generated by residential and office uses. Due to higher turnover rates for retail uses, this TDM reduction factor was not applied to the retail uses on site, although some benefits would likely be recognized by vehicles destined to those uses.

4.2.2 Trip Generation

The trip generation rates were obtained from the publication ***Trip Generation Manual - 9th Edition***. Land Use Code (LUC) 230 (Residential Condominium / Townhouse), LUC 826 (Specialty Retail), and LUC 710 (General Office) were used. **Exhibit 4-1** summarizes the breakdown of the trips generated. A 25% TDM reduction factor in residential and office trips, outlined in **Section 4.2.1**, has also been accounted for. Based on a total of 1,355 residential units, 5,676 sq. m. (61,096 sq. ft.) of office GFA, and 3,732 sq. m. (40,172 sq. ft.) of retail GFA, the site is anticipated to produce a total of 423 and 546 new vehicle trips during the weekday AM peak hour and weekday PM peak hour, respectively.

From the gross trips, a portion is attributed to internal trips (i.e. between the residential and on-site shopping uses). Pass-by (i.e. drivers passing by the site) trip reductions were also applied, based on the retail uses anticipated to occupy the commercial space. It should also be noted that the retail space is assumed to not generate any trips during the weekday AM peak hour, as this is reflective of a typical specialty retail business hours.

Exhibit 4-1: Site Trip Generation Summary

Land Use		Unit	Weekday AM Peak Hour			Weekday PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Phase 4 Part 2 & Phase 5	**Residential Condominium 1,355 Units*** (LUC 230)	Trips/Unit	0.06	0.29	**0.35**	0.28	0.14	**0.42**
		%	17%	83%	**100%**	67%	33%	**100%**
		Gross Trips	80	390	**470**	382	188	**570**
		Internal Trips	-	-	**-**	-9	-4	**-13**
	General Office 61,096 sq. ft. (LUC 710)	Trips/Unit	1.37	0.19	**1.56**	0.25	1.24	**1.49**
		%	88%	12%	**100%**	17%	83%	**100%**
		Gross Trips	84	11	**95**	15	76	**91**
		Internal Trips	-	-	**-**	-1	-2	**-3**
	Specialty Retail 40,172 sq. ft. (LUC 826)	Trips/Unit	-	-	**-**	1.19	1.52	**2.71**
		%	-	-	**-**	44%	56%	**100%**
		Gross Trips	-	-	**-**	48	61	**109**
		Internal Trips	-	-	**-**	-5	-9	**-14**
		Pass-by Trips	-	-	**-**	-14	-14	**-28**
TDM-related Trip Reduction (25% to residential and office trips)			-41	-101	**-142**	-100	-66	**-166**
Total New Site Trips			123	300	**423**	316	230	**546**

**Note: The residential trip rates were calculated using the fitted curve equation identified in ITE's Trip Generation Manual.*

4.2.3 Trip Distribution and Assignment

To distribute the trips forecasted to be generated by the subject site, the existing traffic patterns during the weekday AM and PM peak hours were analyzed using the adjacent road network and the following intersections:

- Hurontario Street & Watergarden Drive / Armdale Road;
- Hurontario Street & Eglinton Avenue West; and
- Eglinton Avenue West & Four Springs Avenue / Plaza Entrance.

Using this method, **Exhibit 4-2** summarizes the trip distribution to apply to the new subject site trips based on the logical travel patterns.

Exhibit 4-2: Site Trip Distribution

Origin / Destination	AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound
To/ From North: via Watergarden & Hurontario	12%	22%	16%	10%
To/ From South: via Watergarden & Hurontario	10%	6%	7%	9%
To/ From East: via Watergarden & Hurontario & Eglinton	2%	1%	1%	1%
To/ From East: via Watergarden/Armdale Road	7%	6%	2%	7%
To/ From South: via Four Springs & Eglinton & Hurontario	4%	3%	7%	9%
To/ From East: via Four Springs & Eglinton	30%	32%	42%	26%
To/ From South: via Four Springs / Plaza Entrance	3%	4%	1%	4%
To/ From West: via Four Springs & Eglinton	32%	25%	24%	35%
Total	**100%**	**100%**	**100%**	**100%**

Pass-by trip assignment for the PM peak hour is presented in **Exhibit 4-3**. The assignment of site traffic, including adjustments made to account for pass-by traffic in the PM peak hour, is presented in **Exhibit 4-4**.

Exhibit 4-3: Pass-by Trips

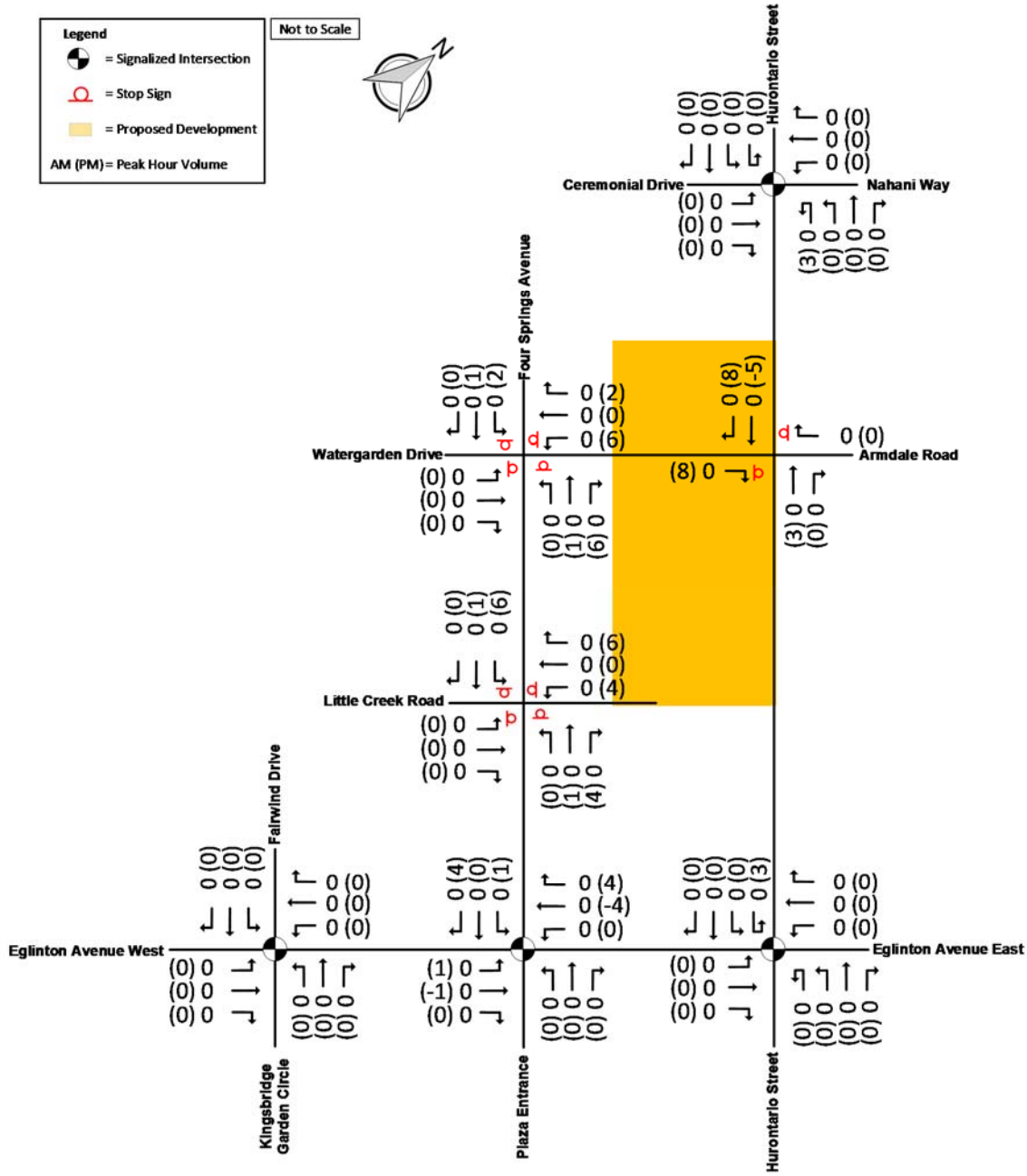
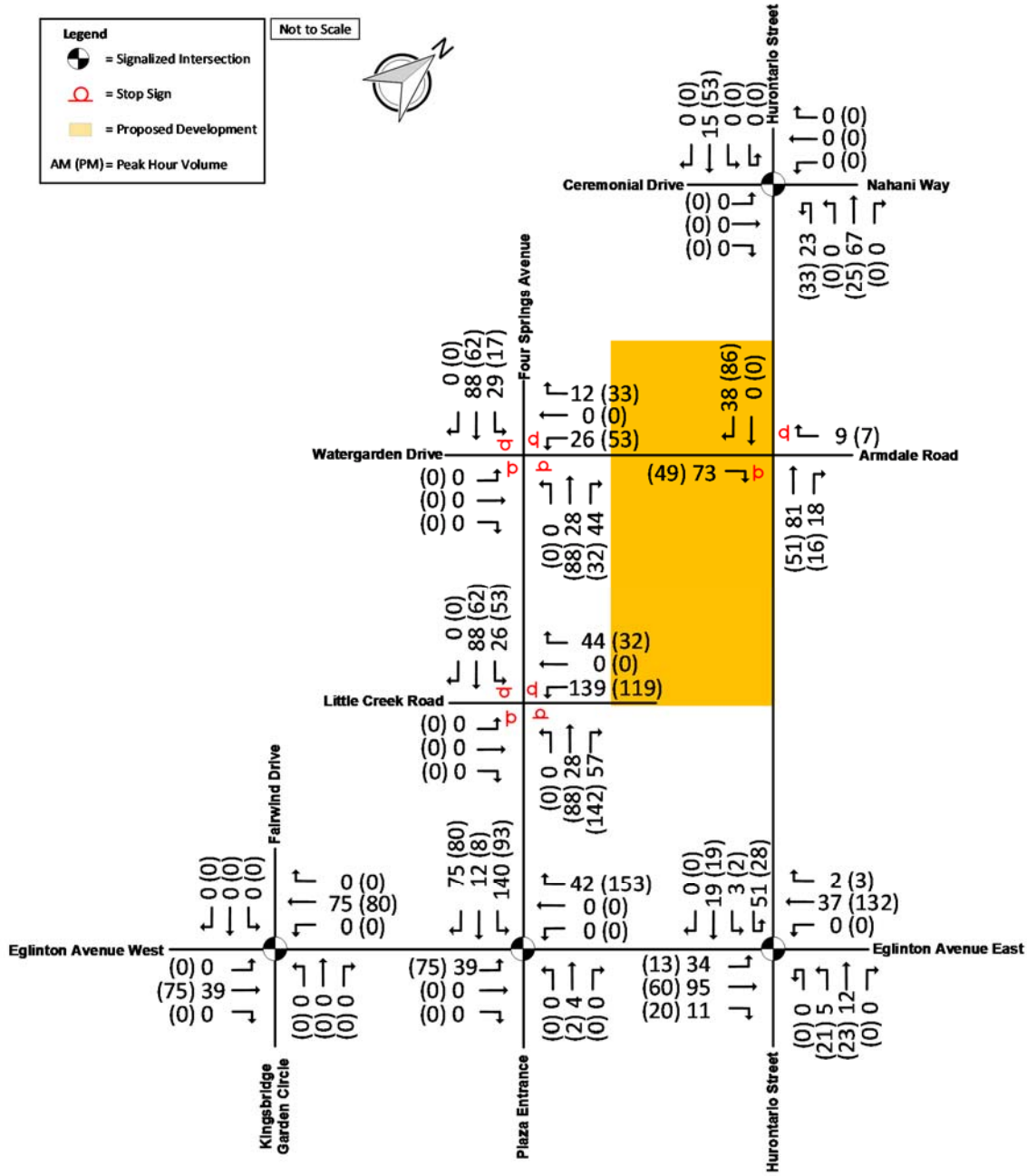


Exhibit 4-4: New Site Traffic Volumes

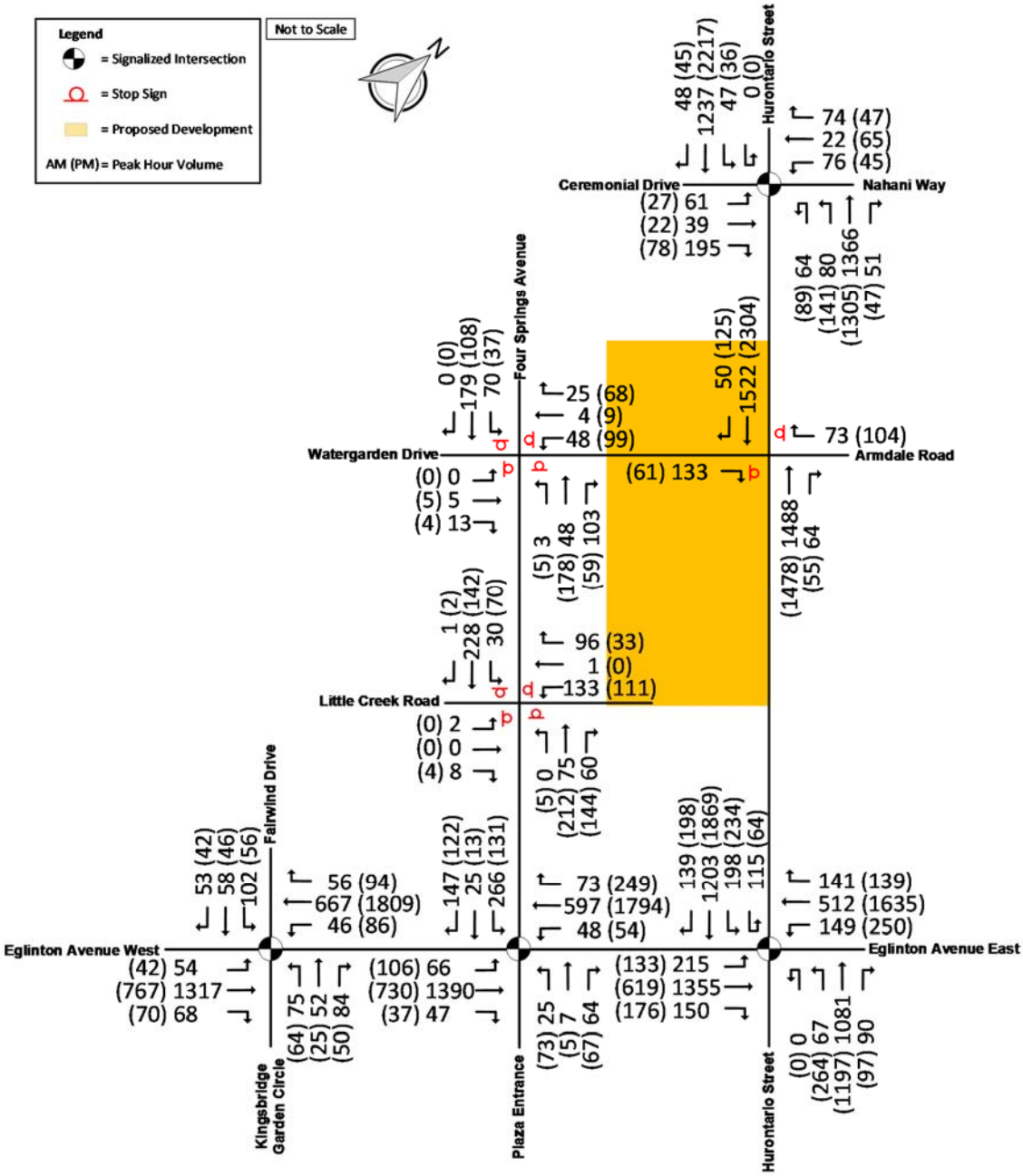


4.3 2022 Future Total Conditions Analysis

New trips resulting from the construction of the proposed development were added to the future background conditions scenario, producing the 2022 future total traffic volumes illustrated in **Exhibit 4-5**.

As mentioned in **Section 3.2**, the Metrolinx documents identify a target transit level of 22% for the 2031 horizon year for the City of Mississauga. The current transit level is 11%. As part of this analysis, it was assumed that a 20% overall reduction in automobile traffic for the corridors within the study area and for the site will be achieved for 2022, to assess potential improvements for traffic operations.

Exhibit 4-5: 2022 Future Total Conditions Traffic Volumes



Using these 2022 future total traffic volumes, a traffic operations analysis was conducted to determine future intersection performance with the impact of the proposed development. The results of this analysis are presented in **Exhibit 4-6**. Future total synchro reports are provided in **Appendix G**.

Exhibit 4-6: 2022 Future Total Conditions Traffic Operations - Signalized Intersection Summary

Intersection	Intersection			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)	Storage Capacity (m)
	LOS	Delay	V/C Ratio						
AM Peak Hour									
Ceremonial Drive / Nahani Way & Hurontario St	C	28.6	0.80	EBL	D	53.5	0.36	29	66
				EBTR	E	57.5	0.64	70	-
				WBL	F	256	1.28	51	27
				WBTR	D	48.1	0.14	18	-
				NBL	E	66.4	0.64	50	90
				NBTR	A	7.6	0.67	54	-
				SBL	E	63.4	0.40	28	120
				SBTR	C	22.9	0.72	205	-
Hurontario St & Eglinton Ave E	D	51.4	0.97	EBL	C	28.9	0.76	30	100
				EBT	D	37.4	0.90	116	-
				EBR	B	10.7	0.14	4	100
				WBL	E	75.0	0.73	38	150
				WBT	D	36.1	0.33	52	-
				WBR	D	36.5	0.12	12	125
				NBL	E	64.1	0.39	18	100
				NBT	E	75.4	1.01	219	-
				NBR	D	35.5	0.08	-	-
				SBL	F	123	1.05	166	130
				SBTR	D	43.5	0.94	249	-
Plaza Entrance / Four Spring Ave & Eglinton Ave W	C	21.6	0.63	EBL	A	9.7	0.17	13	120
				EBTR	B	16.0	0.57	82	-
				WBL	B	19.7	0.26	8	60
				WBTR	B	10.3	0.27	27	-
				NBLTR	C	34.7	0.16	13	-
				SBL	E	67.7	0.87	100	33
				SBTR	C	34.7	0.16	19	-
Kingsbridge Garden Circle / Fairwind Drive & Eglinton Ave W	B	17.0	0.52	EBL	A	6.4	0.14	12	84
				EBTR	A	7.3	0.44	76	-
				WBL	A	8.4	0.30	6	90
				WBTR	A	2.3	0.21	13	-
				NBL	E	62.3	0.63	35	16
				NBTR	D	51.7	0.46	43	-
				SBL	F	118	0.95	48	35
				SBTR	D	50.5	0.37	36	-

Intersection	Intersection			Movement	LOS	Delay (s)	V/C Ratio	95th Percentile Queue (m)	Storage Capacity (m)
	LOS	Delay	V/C Ratio						
PM Peak Hour									
Ceremonial Drive / Nahani Way & Hurontario St	F	107	1.02	EBL	E	61.3	0.35	18	66
				EBTR	E	58.4	0.43	39	-
				WBL	E	64.5	0.52	25	27
				WBTR	E	59.9	0.52	44	-
				NBL	C	22.4	0.59	54	90
				NBTR	C	23.0	0.59	202	-
				SBL	E	61.4	0.29	22	120
				SBTR	F	171	1.30	503	-
Hurontario St & Eglinton Ave E	F	122	1.27	EBL	F	135	1.03	71	100
				EBT	C	30.1	0.42	61	-
				EBR	B	16.3	0.24	10	100
				WBL	F	193	1.21	74	150
				WBT	E	64.6	0.99	208	-
				WBR	D	35.2	0.13	15	125
				NBL	F	226	1.29	81	100
				NBT	F	89.1	1.06	248	-
				NBR	C	34.2	0.08	4	-
				SBL	F	94.1	1.07	68	130
				SBTR	F	213	1.43	311	-
Plaza Entrance / Four Spring Ave & Eglinton Ave W	B	13.6	0.69	EBL	D	45.0	0.61	39	120
				EBTR	A	8.3	0.25	39	-
				WBL	A	1.6	0.13	1	60
				WBTR	A	3.1	0.68	22	-
				NBLTR	E	71.2	0.80	51	-
				SBL	E	70.5	0.76	58	33
				SBTR	D	46.5	0.20	25	-
Kingsbridge Garden Circle / Fairwind Drive & Eglinton Ave W	A	8.8	0.51	EBL	B	16.1	0.43	16	84
				EBTR	A	3.8	0.25	30	-
				WBL	A	2.5	0.23	4	90
				WBTR	A	1.4	0.49	18	-
				NBL	F	86.7	0.76	33	16
				NBTR	D	54.3	0.18	17	-
				SBL	E	63.9	0.55	29	35
				SBTR	E	56.5	0.39	33	-

**Red font* = critical movements*

During the AM peak hour, the following operations are anticipated:

- Hurontario Street & Ceremonial Drive / Nahani Way is anticipated to increase slightly in demand overall from V/C ratio of 0.78 under future background conditions to V/C ratio of 0.80 under future total conditions. With regards to specific movements, similar to the future background conditions, only one constraint is anticipated for the westbound left turn movement (V/C ratio of 1.28) with a queue storage spillover of up to four car lengths; and
- Hurontario Street & Eglinton Avenue West is anticipated to operate closer to capacity, with a slight increase on V/C ratio from 0.93 under future background conditions to 0.97 under future total conditions. Similar to the future background conditions, the eastbound and northbound through movements, and all southbound movements are anticipated to operate close to capacity or slightly over capacity. There is an anticipated queue spillover of up to six car lengths for the southbound left turn movement.

During the PM peak hour, the following observations are anticipated:

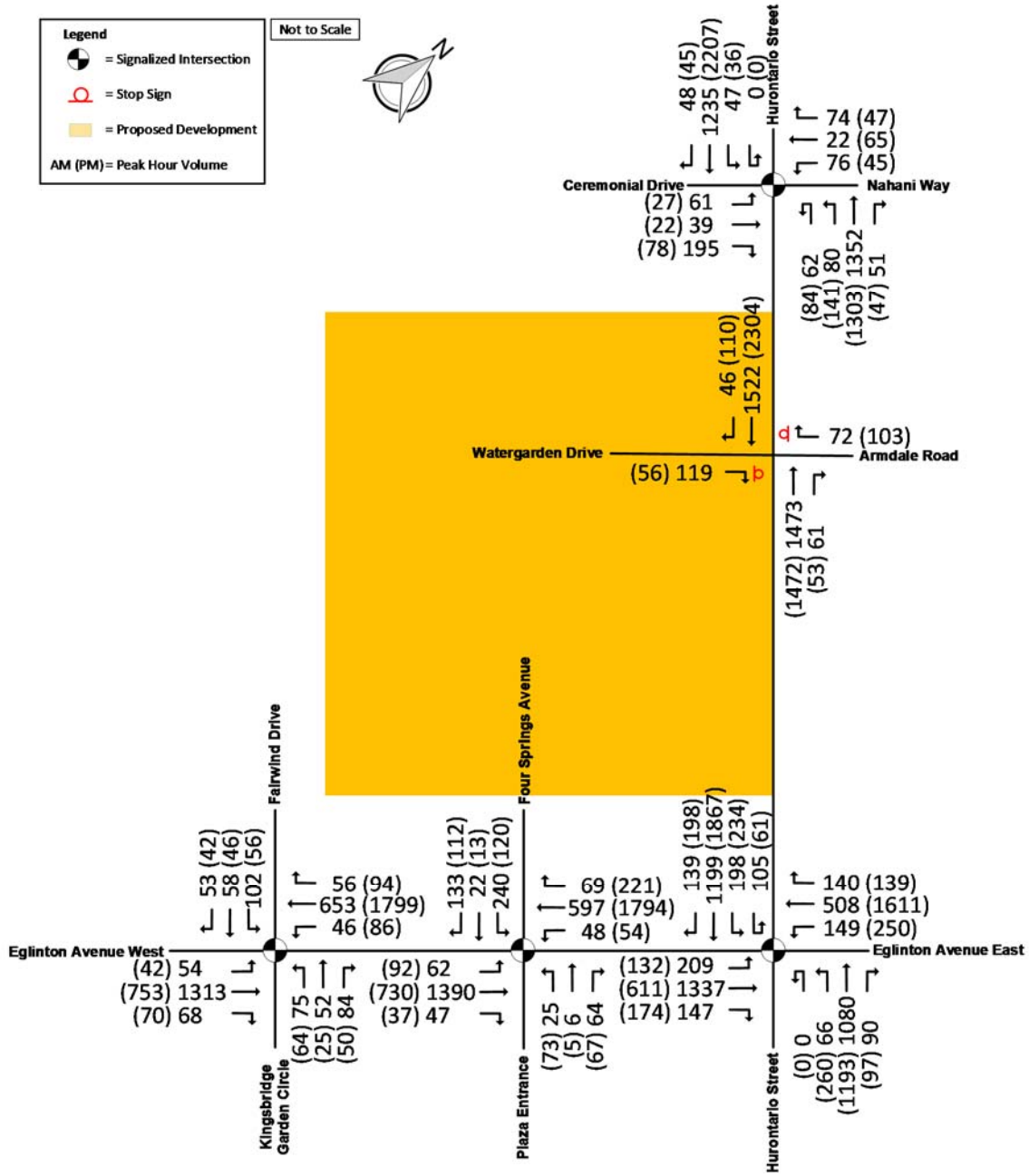
- Hurontario Street & Ceremonial Drive / Nahani Way is anticipated to increase in demand overall from V/C ratio of 0.99 under future background conditions to V/C ratio of 1.02 under future total conditions. With regards to specific movements, the southbound through/right turn movement is anticipated to continue to operate over capacity (V/C ratio of 1.30); and
- Hurontario Street & Eglinton Avenue West is also anticipated to operate closer to capacity, with a slight increase on V/C ratio from 1.23 under future background conditions to 1.27 under future total conditions. Similar to the observations from the future background conditions, all left turn and through movements, except for the eastbound through movement, are anticipated to operate close to capacity or over capacity.

Both unsignalized intersections within the study area are anticipated to continue to operate well within capacity and with minimal delay during the AM and PM peak hours.

5 As-Of-Right Comparison

According to the Mississauga Official Plan, a combined total of 1,969 dwelling units are permitted on the subject lands. The proposed amendment to the official plan would include 2,369 dwelling units, 3,965 sq. m. of GFA for retail use, and 5,676 sq. m. of GFA for office use. The As-Of-Right (AOR) traffic volumes are illustrated in **Exhibit 5-1**.

Exhibit 5-1: AOR Scenario Traffic Volumes



The comparison of future traffic operations for the AOR scenario to the proposed amendment was assessed and the results are presented in **Exhibit 5-2** and **Exhibit 5-3** for the weekday AM and PM peak hours, respectively. Synchro output reports for the AOR scenario are provided in **Appendix H**.

Exhibit 5-2: AOR Comparison (AM Peak Hour)

Intersection	Movement	As-Of-Right		Proposed Amendment		Change in V/C Ratio
		LOS	V/C Ratio	LOS	V/C Ratio	
Ceremonial Drive/Nahani Way & Hurontario St	EBL	D	0.36	D	0.36	0.00
	EBTR	E	0.65	E	0.64	-0.01
	WBL	F	1.26	F	1.28	0.02
	WBTR	D	0.14	D	0.14	0.00
	NBL	E	0.64	E	0.64	0.00
	NBTR	A	0.67	A	0.67	0.00
	SBL	E	0.40	E	0.40	0.00
	SBTR	C	0.71	C	0.72	0.01
	Overall	**C**	**0.79**	**C**	**0.80**	**0.01**
Watergarden Dr / Armdale Road & Hurontario St (Unsignalized)	EBR	B	0.21	B	0.23	0.02
	WBR	B	0.14	B	0.14	0.00
Hurontario St & Eglinton Ave E	EBL	C	0.73	C	0.76	0.03
	EBT	D	0.89	D	0.90	0.01
	EBR	B	0.13	B	0.14	0.01
	WBL	E	0.73	E	0.73	0.00
	WBT	D	0.32	D	0.33	0.01
	WBR	D	0.12	D	0.12	0.00
	NBL	E	0.38	E	0.39	0.01
	NBT	E	0.99	E	1.01	0.02
	NBR	C	0.08	D	0.08	0.00
	SBL	F	1.05	F	1.05	0.00
	SBTR	D	0.94	D	0.94	0.00
	Overall	**D**	**0.96**	**D**	**0.97**	**0.01**
Plaza Entrance/Four Spring Ave & Eglinton Ave W	EBL	A	0.15	A	0.17	0.02
	EBTR	B	0.54	B	0.57	0.03
	WBL	B	0.25	B	0.26	0.01
	WBTR	A	0.25	B	0.27	0.02
	NBLTR	D	0.16	C	0.16	0.00
	SBL	E	0.88	E	0.87	-0.01
	SBTR	D	0.15	C	0.16	0.01
	Overall	**C**	**0.61**	**C**	**0.63**	**0.02**

Intersection	Movement	As-Of-Right		Proposed Amendment		Change in V/C Ratio
		LOS	V/C Ratio	LOS	V/C Ratio	
Kingsbridge Garden Circle/Fairwind Drive & Eglinton Ave W	EBL	A	0.13	A	0.14	0.01
	EBTR	A	0.44	A	0.44	0.00
	WBL	A	0.30	A	0.30	0.00
	WBTR	A	0.20	A	0.21	0.01
	NBL	E	0.63	E	0.63	0.00
	NBTR	D	0.46	D	0.46	0.00
	SBL	F	0.95	F	0.95	0.00
	SBTR	D	0.37	D	0.37	0.00
	Overall	**B**	**0.52**	**B**	**0.52**	**0.00**

**Yellow cell* = unsignalized intersection, red font = critical movement*

Exhibit 5-3: AOR Comparison (PM Peak Hour)

Intersection	Movement	As-Of-Right		Proposed Amendment		Change in V/C Ratio
		LOS	V/C Ratio	LOS	V/C Ratio	
Ceremonial Drive/Nahani Way & Hurontario St	EBL	E	0.35	E	0.35	0.00
	EBTR	E	0.42	E	0.43	0.01
	WBL	E	0.52	E	0.52	0.00
	WBTR	E	0.52	E	0.52	0.00
	NBL	C	0.58	C	0.59	0.01
	NBTR	C	0.59	C	0.59	0.00
	SBL	E	0.29	E	0.29	0.00
	SBTR	F	1.29	F	1.30	0.01
	Overall	**F**	**1.02**	**F**	**1.02**	**0.00**
Watergarden Dr/Armdale Road & Hurontario St (Unsignalized)	EBR	B	0.15	B	0.16	0.01
	WBR	B	0.21	B	0.21	0.00
Hurontario St & Eglinton Ave E	EBL	F	1.03	F	1.03	0.00
	EBT	C	0.41	C	0.42	0.01
	EBR	B	0.23	B	0.24	0.01
	WBL	F	1.21	F	1.21	0.00
	WBT	E	0.97	E	0.99	0.02
	WBR	D	0.13	D	0.13	0.00
	NBL	F	1.27	F	1.29	0.02
	NBT	F	1.03	F	1.06	0.03
	NBR	C	0.08	C	0.08	0.00
	SBL	F	1.10	F	1.07	-0.03
	SBTR	F	1.42	F	1.43	0.01
	Overall	**F**	**1.26**	**F**	**1.27**	**0.01**

Intersection	Movement	As-Of-Right		Proposed Amendment		Change in V/C Ratio
		LOS	V/C Ratio	LOS	V/C Ratio	
Plaza Entrance/Four Spring Ave & Eglinton Ave W	EBL	D	0.54	D	0.61	0.07
	EBTR	A	0.25	A	0.25	0.00
	WBL	A	0.13	A	0.13	0.00
	WBTR	A	0.66	A	0.68	0.02
	NBLTR	E	0.78	E	0.80	0.02
	SBL	E	0.72	E	0.76	0.04
	SBTR	D	0.19	D	0.20	0.01
	Overall	**B**	**0.67**	**B**	**0.69**	**0.02**
Kingsbridge Garden Circle/Fairwind Drive & Eglinton Ave W	EBL	B	0.42	B	0.43	0.01
	EBTR	A	0.24	A	0.25	0.01
	WBL	A	0.22	A	0.23	0.01
	WBTR	A	0.49	A	0.49	0.00
	NBL	F	0.76	F	0.76	0.00
	NBTR	D	0.18	D	0.18	0.00
	SBL	E	0.55	E	0.55	0.00
	SBTR	E	0.39	E	0.39	0.00
	Overall	**A**	**0.51**	**A**	**0.51**	**0.00**

**Yellow cell* = unsignalized intersection, red font = critical movement*

As observed in the tables, all movements anticipated to operate above capacity with the proposed amendment in place would also operate above capacity in the AOR scenario. Furthermore, the change in v/c ratio between the AOR scenario and the proposed amendment is generally negligible with overall intersection v/c ratios not changing by more than 0.02.

Since it is assumed that the majority of local traffic will use the two access points into and out of the subject lands, it is important to ensure that all movements into and out of the subject lands will operate within capacity. As observed in the tables, all movements at the intersection of Watergarden Drive / Armdale Road and Hurontario Street and at the intersection of Plaza Entrance/Four Springs Avenue and Eglinton Avenue West will continue to operate below capacity during the AM peak hour and PM peak hour when the proposed amendment to the Official Plan is considered.

5.1 Queuing Analysis

As requested by the City of Mississauga staff, a queue length summary was prepared for future total conditions of both the AOR scenario and the proposed amendment scenario, summarized in **Appendix I**.

5.1.1 Queue Length Summary - AM Peak Hour

At the intersection of Eglinton Avenue and Hurontario Street, queues related to the southbound through movement are anticipated to extend to the intersection of Hurontario Street and Watergarden Drive / Armdale Road in both the proposed amendment scenario and the AOR scenario. The queue length related to the southbound through movement is anticipated to be

approximately 6 meters longer in the proposed amendment scenario than in the AOR scenario. Queues related to the northbound through movement are anticipated to extend beyond the Plaza Entrances (Mississauga Marketplace) along Hurontario Street in both the proposed amendment scenario and the AOR scenario. Queues related to the eastbound through movement are not anticipated to extend to the intersection of Plaza Entrance / Four Springs Avenue and Eglinton Avenue West in neither the proposed amendment scenario nor the AOR scenario. The queue length related to the eastbound through movement is anticipated to be approximately 7 meters longer in the proposed amendment scenario than in the AOR scenario.

No significant queues are anticipated to occur in both the proposed amendment scenario and the AOR scenario for all other study area intersections.

5.1.2 Queue Length Summary - PM Peak Hour

At the intersection of Ceremonial Drive / Nahani Way and Hurontario Street, queues related to the southbound through movement are anticipated to extend beyond the intersection of Glenn Hawthorne Boulevard / Trailwood Drive and Hurontario Street in both the proposed amendment scenario and the AOR scenario.

At the intersection of Eglinton Avenue and Hurontario Street, queues related to the southbound through movement are anticipated to extend beyond the intersection of Watergarden Drive / Armdale Road and Hurontario Street in both the proposed amendment scenario and the AOR scenario. Queues related to the northbound through movement are anticipated to extend beyond the Plaza Entrances (Mississauga Marketplace) along Hurontario Street in both the proposed amendment scenario and the AOR scenario.

No significant queues are anticipated to occur in both the in both the proposed amendment scenario and the AOR scenario for all other study area intersections.

6 Parking Analysis

The proposed parking supply for Phase 4 Part 2 and Phase 5 is illustrated in **Exhibit 6-1**Error! Reference source not found..

Exhibit 6-1: Proposed Parking Supply

Proposed Parking Supply			
Development Phase	**Parking Use**	**Proposed Supply**	**Total Proposed Supply**
Phase 4 Part 2	Residential	448	509
	Visitor / Non-Res	61	
	Accessible	3	
Phase 5	Residential	998	1,417
	Visitor / Non-Res	419	
	Accessible	15	
Total Proposed (Phase 4 Part 2 and Phase 5)			**1,926**

A total parking supply of 1,926 spaces is proposed for the Phase 4 Part 2 and Phase 5 development.

It is understood that the Mississauga Zoning By-law in effect for the Pinnacle lands is RA5-42 and 43. These By-laws apply to the Subject Site's residential, visitor, and non-residential parking provisions. The accessible parking supply is governed by Table 3.1.3.1 of the City's "Part 3 Parking, Loading, and Stacking Lane Regulations (July 31, 2016)".

The proposed parking provisions and City requirements for Phase 4 Part 2 and Phase 5 of the subject site are summarized in **Exhibit 6-2**.

Exhibit 6-2: Subject Site Parking Requirements

Parking Use	Size	Zoning By-law (RA5-42 / RA5-43)	Required Supply
Phase 4 Part 2			
Resident	233 units	1.1 spaces / 1 bedroom	257
	163 units	1.1 spaces / 2 bedroom	179
	10 units	1.2 spaces / 3 bedroom	12
Visitor	406 units	Greater of 0.15 spaces / unit, or	61
Commercial	917 sq. m.	4.3 spaces / 100 sq. m GFA non-residential	
Accessible*	-	4% of the total non-residential parking space requirement	3
		Total	509
Phase 5			
Resident	458 units	1.1 spaces / 1 bedroom	504
	422 units	1.1 spaces / 2 bedroom	465
	69 units	1.2 spaces / 3 bedroom	83
Visitor	949 units	Greater of 0.15 spaces / unit, or	365
Commercial	8491 sq. m	4.3 spaces / 100 sq. m GFA non-residential	
Accessible*	-	2 spaces + 2% of non-residential spaces required (for non-residential) & 1.0 space + 3% of visitor spaces required	15
		Total	1,417
Overall Total			
		Required	1,926
		Proposed	1,926
		Parking Deficiency	**0**

**As per Part 3 Parking Regulations Table 3.1.3.1 (July 31, 2016)*

According to City of Mississauga's Zoning By-law, a combined total of 1,926 parking spaces are required for the proposed developments (Phase 4 Part 2 and Phase 5), of which:

- 1,500 residential parking spaces are required;
- 426 commercial/visitor spaces are required; and
- 18 accessible spaces are required.

The proposed parking supply for Phase 4 Part 2 and Phase 5 meet the City of Mississauga's Zoning By-law requirements.

7 Transportation Demand Management

A following section outlines the Transportation Demand Management (TDM) Plan for the proposed Phase 4 Part 1 and Phase 5 developments.

7.1 Existing TDM Measures

The following subsection outlines the existing TDM measures in place within the study area.

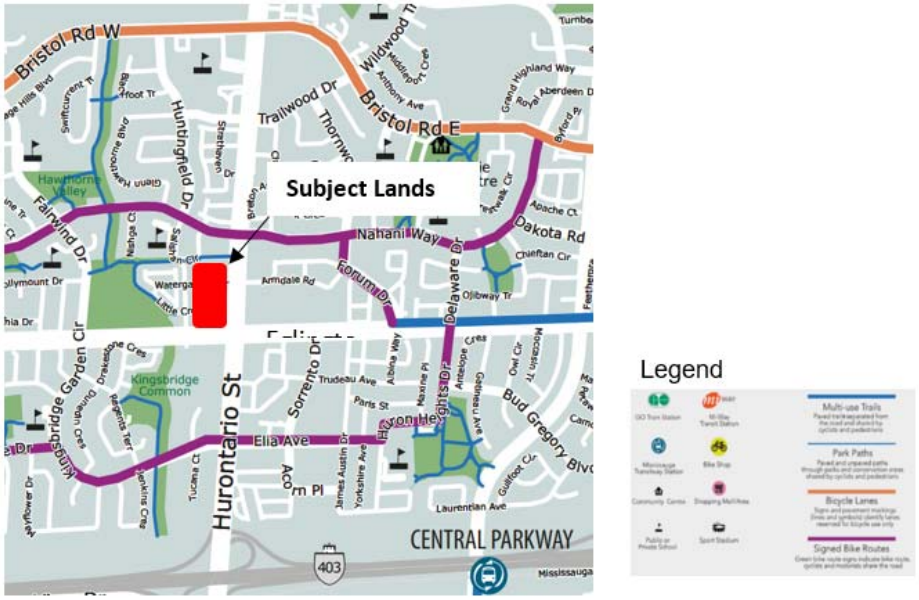
7.1.1 Active Transportation

The subject lands are in close proximity to the following existing active transportation facilities:

- An east-west bike route on Nahani Way/Ceremonial Drive, which is approximately 175 meters north of the site area intersection of Hurontario Street and Watergarden Drive. The cycling facilities on Nahani Way/Ceremonial Drive are planned for an upgrade in the 2018 Cycling Mater Plan for the City of Mississauga.
- An east-west shared on-street bike routes on Elia Avenue approximately 600 meters south of the site location.
- Beginning 600 meters east of the site location there is a multi-use trail along Eglinton Avenue East at the intersection of Eglinton Avenue and Forum Drive. The trail is paved and separated from the road and shared by cyclists and pedestrians.
- A multi-use trail is located along the northern boundary of the site area and runs parallel to Watergarden Drive. This trail connects Hurontario Street to Fairwind Drive as well as to the Cooksville Creek Trail.

These cycling facilities are illustrated in **Exhibit 7-1**.

Exhibit 7-1: Existing Cycling Facilities

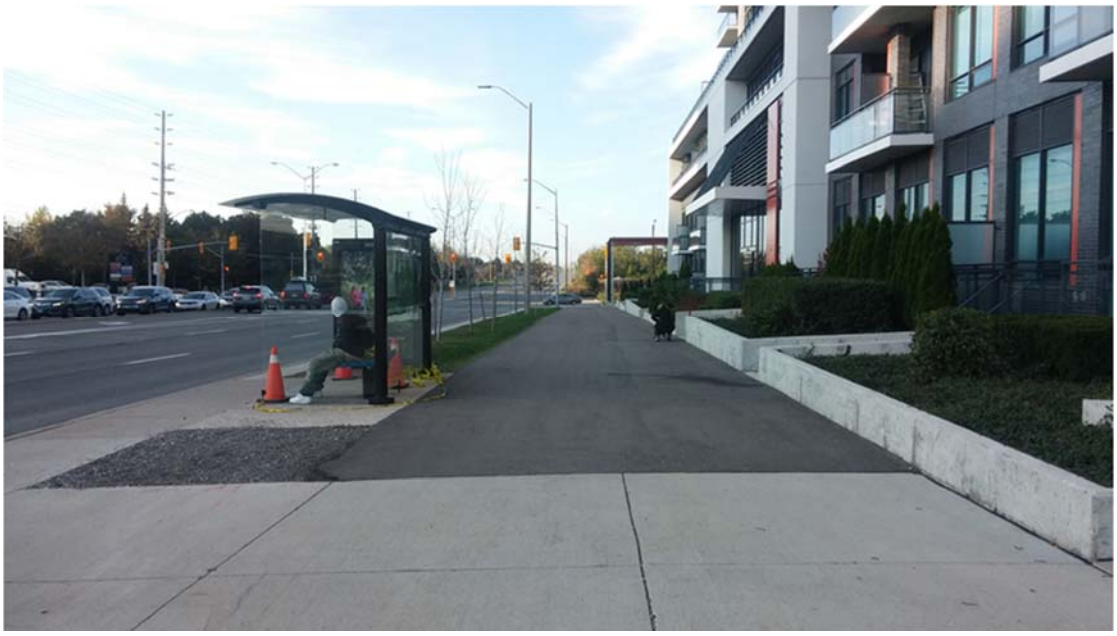


Source: Mississauga Cycling Map

Adjacent to the westbound vehicle lanes of Eglinton Avenue West there is a paved multi-use sidewalk as seen in **Exhibit 7-2**. The sidewalks on the north side of Eglinton Avenue West provide a convenient pedestrian connection to the transit stop while maintaining enough right-of-

way (ROW) to allow for cyclist and pedestrians to share the space while not conflicting with transit riders.

Exhibit 7-2: Photograph of Sidewalk Adjacent to Eglinton Avenue West



At the intersection of Hurontario Street and Eglinton Avenue, enhanced pedestrian crossing treatments have been installed as shown in **Exhibit 7-3**. The contrast between the treatment and the pavement provides enhanced visibility, which serves to increase awareness for drivers' potential conflicts with pedestrians.

Exhibit 7-3: Photograph of Pedestrian Crossing Treatment at Hurontario Street and Eglinton Avenue

7.1.2 Public Transit

As discussed in **Section 2.2**, a total of five bus routes operate along Hurontario Street and Eglinton Avenue West within the study area. Transit service is frequent and accessible during the weekday peak hours.

Additionally, the study area is located approximately 1.5 km north of the Mississauga City Centre Transit Terminal. MiWay local and express routes are accessible at this terminal, along with Brampton Transit Züm Express. Furthermore, GO Transit regional bus service is available at the transit terminal, offering connections to Toronto and Southwestern Ontario.

7.2 Proposed On-Site TDM Measures

The following subsection addresses the proposed on-site TDM measures at the proposed developments.

7.2.1 Walking

The extension of the multi-use path on the north boundary of the site plan area will provide access to the Cooksville Creek Trail, which is a paved pathway for cyclists and pedestrians. The Cooksville Creek Trail is a major pedestrian route that links to other pedestrian facilities nearby.

As seen in **Exhibit 7-4** and **Exhibit 7-5**, there are multiple residential pedestrian entrances facing Watergarden Drive, which will provide pedestrian access to the multi-use trail. There are separate entrances for the different uses of the site. There are also multiple entrances to the commercial units facing Hurontario Street, adjacent to pedestrian facilities.

Exhibit 7-4: Phase 4 Part 2 Access Point Locations

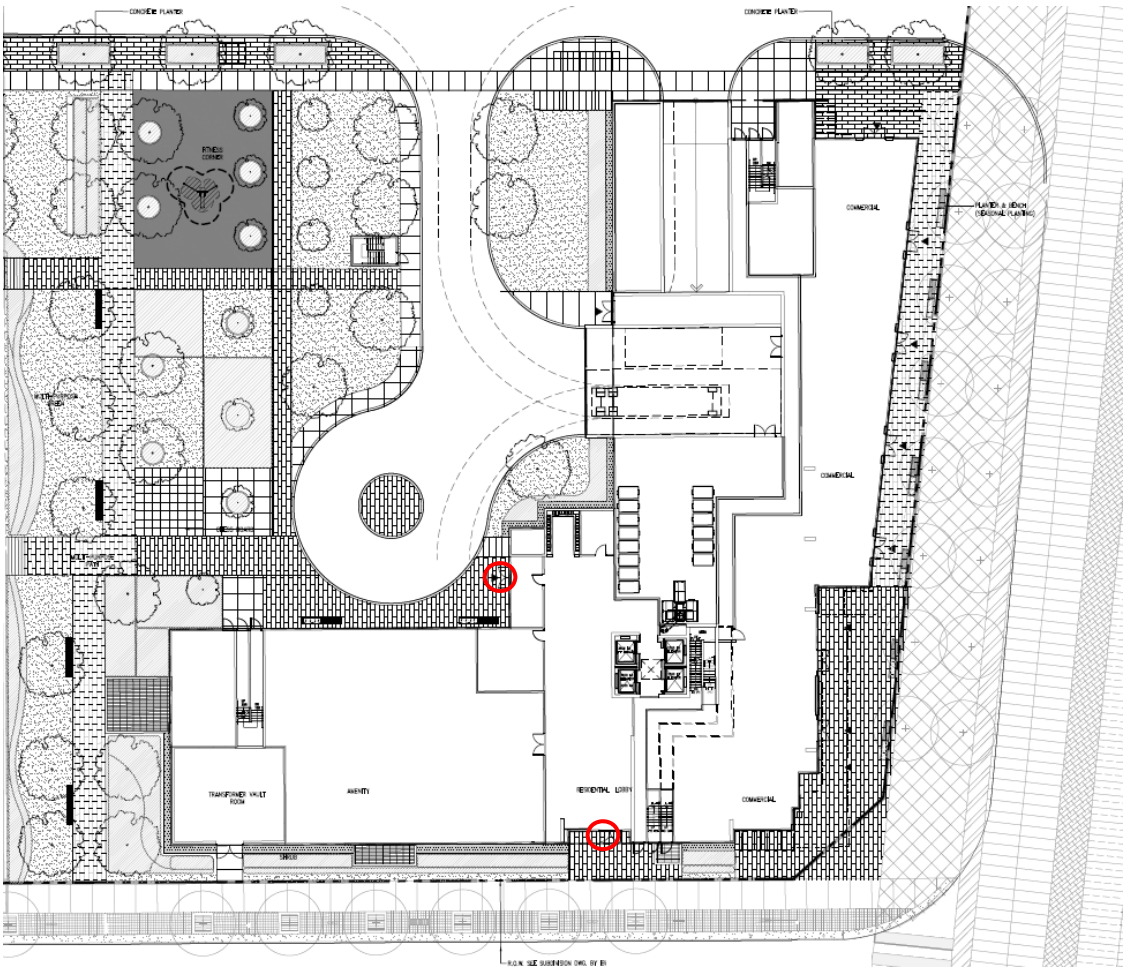
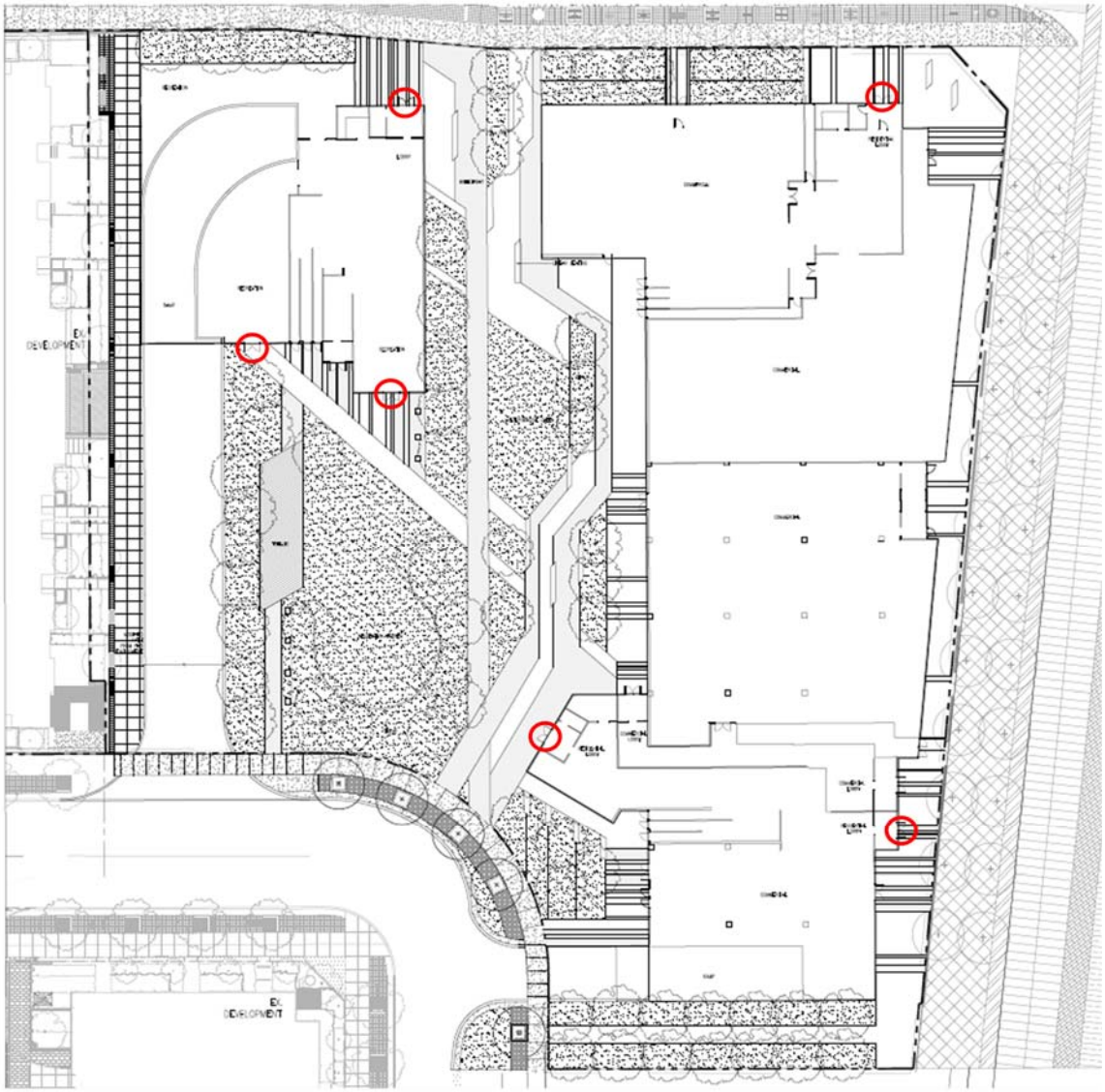


Exhibit 7-5: Phase 5 Access Point Locations



Landscaping around the site location will have pedestrian walkways that connect each building and provide connections to transit stops and cycling facilities. The pedestrian and cycling facilities will be separated from vehicle traffic with wide boulevards with trees and planters to provide a pleasant pedestrian experience as shown in **Exhibit 7-6** and **Exhibit 7-7**

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Exhibit 7-6: North Side Landscape Plan depicting pedestrian and cycling facilities

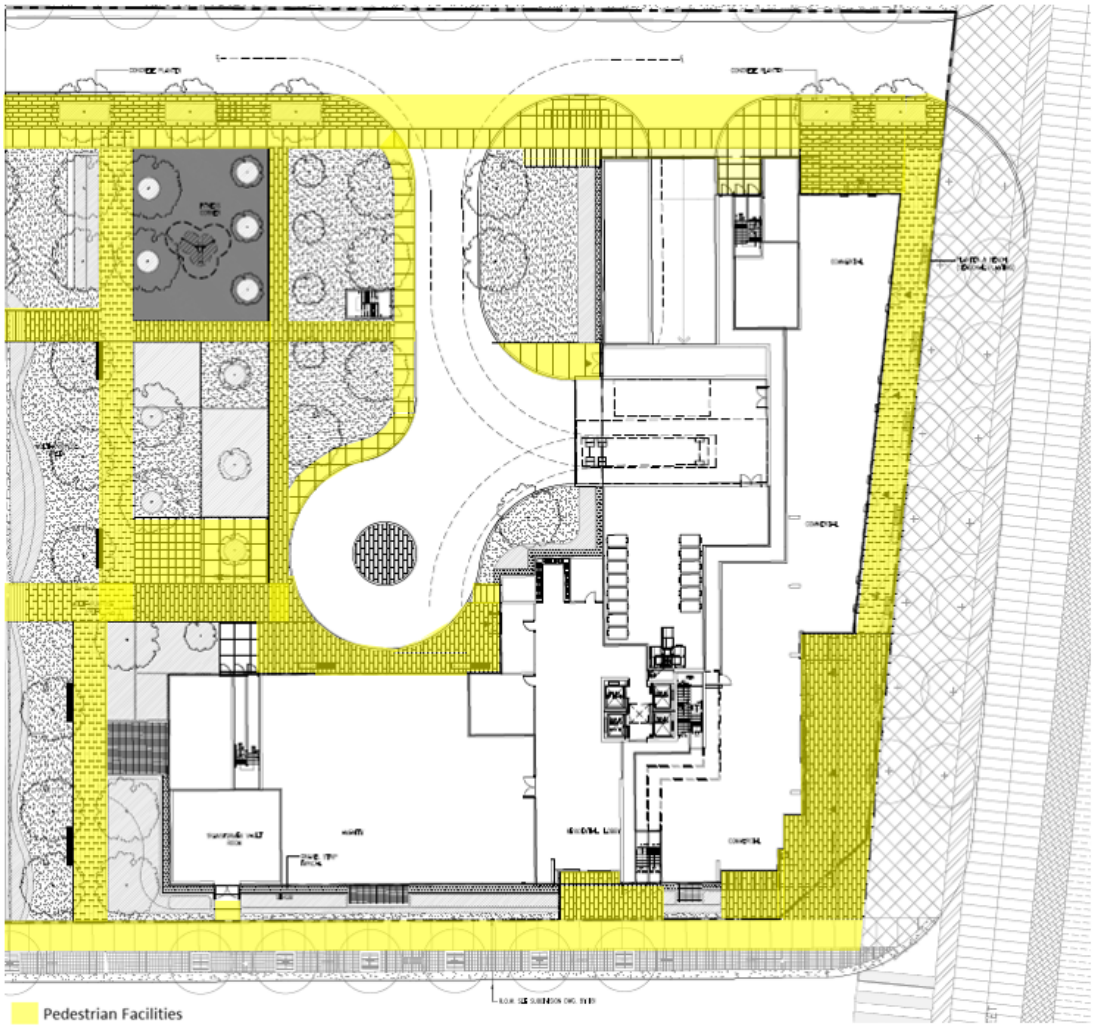
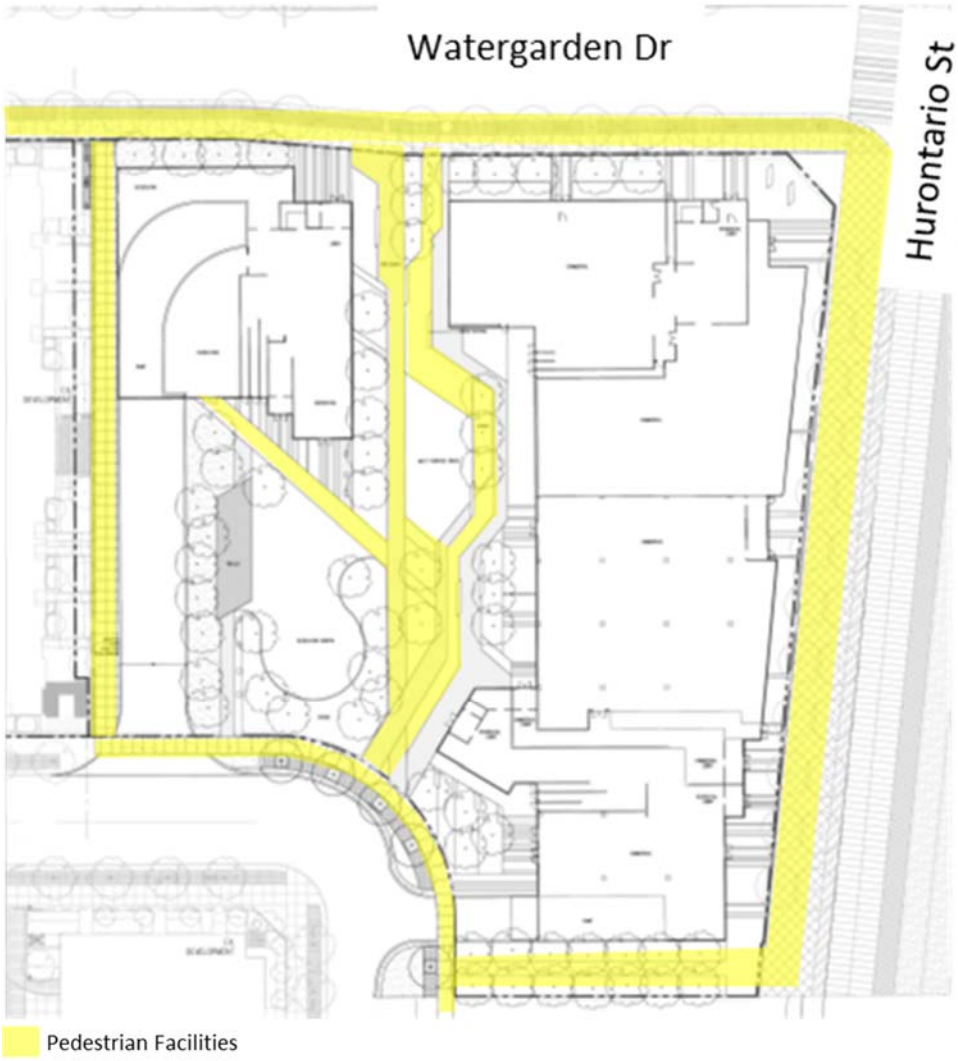


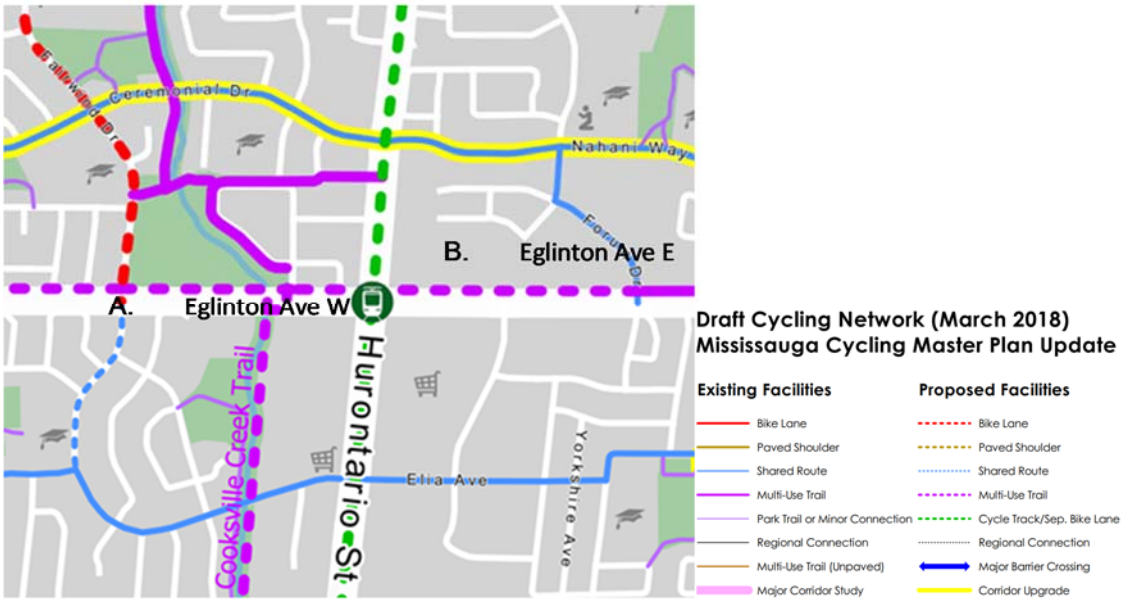
Exhibit 7-7: South Side Landscape Plan Depicting Pedestrian and Cycling Facilities



7.2.2 Cycling

The subject lands are located on the proposed north-south on-road bike lanes on Hurontario Street and the proposed east-west boulevard bike lanes on Eglinton Avenue within the City of Mississauga 2018 Cycling Master Plan. The approved Hurontario-Main Street Corridor Master Plan includes provision for cycling facilities along the proposed LRT corridor shown in **Exhibit 7-8**. The treatment will include a cycle track along Hurontario Street, which is a separated cycling facility. A cycle track will allow for cyclists of all ages and abilities to feel comfortable while using this facility.

Exhibit 7-8: City of Mississauga Existing and Proposed Cycling Routes



Source: Mississauga Cycling Map

According to the comments received from the City of Mississauga staff comments provided to IBI Group on October 17, 2018, found in **Appendix J**, it is recommended that:

- The owner agrees to provide the purchaser/ tenant of each condominium dwelling unit with one (1) PRESTO - transit smart card loaded with a minimum value of $25.00 (twenty-five dollars).
- The owner agrees to provide accessible, secure, and weather protected long-term (indoor) bicycle parking spaces, as well as accessible short-term (outdoor) bicycle parking spaces located adjacent to the main entrances.
    - Recommended bike parking rates are as follows:
        - Residential unit: 0.8 spaces per unit for in-door parking; minimum 6 spaces for visitors.
        - Business office: 0.5 per 500 sq. m. (GFA) for indoor parking; 0.5 per 500 sq. m.(GFA) for outdoor parking.
        - Retail: 0.5 per 500 sq. m. (GFA) for indoor parking; 1.0 per 500 sq. m. (GFA) for outdoor parking.

The recommended bicycle parking supply is summarized in **Exhibit 7-9**.

Exhibit 7-9: City of Mississauga Recommended Bicycle Parking Supply

CATEGORY		RECOMMENDED BIKE PARKING RATE
Residential	Long-term spaces	0.8 spaces per unit for in-door parking = **1,084 spaces**
	Short-term spaces	Minimum 6 spaces.
Business Office	Long-term spaces	0.5 per 500 sq. m. (GFA) for indoor parking = **6 spaces**
	Short-term spaces	0.5 per 500 sq. m. (GFA) for outdoor parking = **6 spaces**
Retail	Long-term spaces	0.5 per 500 sq. m. (GFA) for indoor parking = **4 spaces**
	Short-term spaces	1.0 per 500 sq. m. (GFA) for outdoor parking = **8 spaces**
TOTAL		**Short term: 20 spaces** **Long term: 1,094 spaces**

The recommended bike parking is 1,094 long-term spaces and 20 short-term spaces. However, it is not common practice in Ontario to create a bike room with 1,094 bicycle spaces. It is recommended that each unit have a storage locker that could be used to store a bike if the tenant chooses.

The north and south blocks of the proposed development will each meet the City of Mississauga's requirements for short term bicycle parking. Long-term bike parking is available in the indoor bike room with a capacity of 50 spaces located at grade. In addition, each unit will be sold with a storage locker in the parkade should residents choose to store their bicycles in their lockers. Depending on the underground parking garage level, the location of the storage lockers may vary.

Furthermore, as recommended by the City of Mississauga staff, the tenants of each condominium dwelling unit will be provided with one (1) PRESTO – transit smart card loaded with a minimum value of $25.00 (twenty-five dollars).

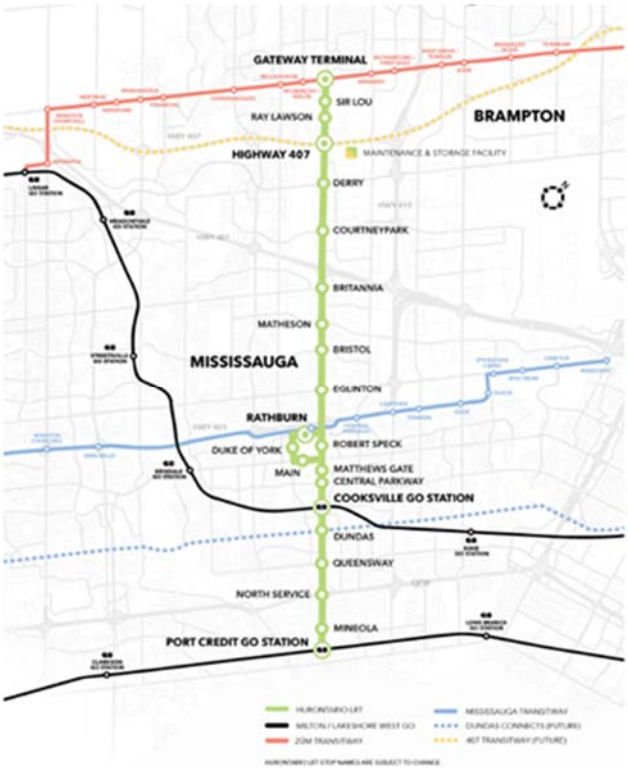
7.2.3 Parking

As discussed in **Section 4.2.1**, as a TDM approach, a 28% reduction in parking demand has been calculated as a result of the subject site being located in an intensification corridor, within 800 m of a rapid transit corridor. This can encourage residents and visitors to choose an alternative mode of transportation and lower auto ownership rates.

7.2.4 Transit

The proposed development is located adjacent to the proposed Hurontario LRT corridor. The Hurontario LRT system will be built adjacent to the site on Hurontario Street by late 2022. The LRT system will connect Mississauga and Brampton from Port Credit to Brampton Terminal. The LRT stops are shown in **Exhibit 7-10**. When the planned Hurontario LRT is completed, a corresponding reduced dependence on automobile usage is anticipated, resulting in a lower automobile mode share for the adjacent road network and the subject lands. A concept of the completed LRT project at the site location in front of the completed Pinnacle project on Hurontario Street is show in **Exhibit 7-11**.

Exhibit 7-10: Future LRT Stop Locations



Source: Metrolinx

Exhibit 7-11: Three-Dimensional Perspective View of Hurontario Street

7.2.5 Wayfinding and Travel Planning

Information will be made available to tenants about a suite of transportation options in the area, including bike maps, bus route maps and bus schedules. This information will be made available in the administrative office of the apartment building, and can also be included in welcome packages for new building tenants.

8 Conclusions and Recommendations

Under existing traffic conditions, there are a number of signalized movements in the study area observed to operate with capacity constraints. The intersection of Hurontario Street and Eglinton Avenue West is currently operating beyond capacity during the weekday PM peak hours.

Under 2022 future background conditions, the intersection of Ceremonial Drive/Nahani Way and Hurontario Street is anticipated to approach capacity during the PM peak hour. The Eglinton Avenue and Hurontario Street intersection is expected to approach capacity during the AM peak hour, and operate over capacity during the PM peak hour. It is noted that this intersection is already operating over capacity during the PM peak hour under existing conditions. It should be noted that a reduction factor of 20% to background traffic was applied to account for the change in modal split when the Hurontario LRT is constructed.

Based on a total of 1,355 residential units, 3,732 sq. m. of GFA for retail use, and 5,676 sq. m. of GFA for office use, the site is anticipated to produce a total of 423 and 546 new vehicle trips during the weekday AM peak hour and weekday PM peak hour, respectively. In addition to trip reductions as a result of pass-by and internal site interaction, the above trips include a trip reduction of 25% based on specific TDM measures. The process assumes that reducing the parking demand for the development by the calculated 28% through TDM measures will cause a shift of trips made by single-occupancy vehicles (SOV) to trips made by another sustainable form of transportation. The 20% overall reduction in automobile traffic for the corridors within the study area was carried over from future background conditions into future total conditions and also applied to the site trips generated.

Under 2022 future total conditions, similar to the observations from the future background conditions, overall congested operations continue to be anticipated throughout the study area, especially during the weekday PM peak hour at the intersection of Hurontario Street and Eglinton Avenue.

When compared to the traffic operations for the as-of-right (AOR) scenario, all movements operating above capacity under future total conditions (proposed amendment) are also anticipated to operate above capacity under the AOR scenario. Furthermore, the change in v/c ratio between the two scenarios is generally negligible with overall intersection v/c ratios not changing by more than 0.02.

All movements at the intersection of Watergarden Drive / Armdale Road and Hurontario Street and at the intersection of Plaza Entrance / Foursprings Avenue and Eglinton Avenue West will continue to operate below capacity during the AM peak hour and PM peak hour when the proposed amendment to the Official Plan is considered.

According to the City of Mississauga’s Zoning By-law, a combined total of 1,926 parking spaces are required for the proposed developments (Phase 4 Part 2 and Phase 5). The proposed development sees that the minimum parking requirements are met (no parking deficiency is proposed). Furthermore, the Pinnacle project is well suited to serve pedestrians, cyclists, and transit users.

Based on the findings of the traffic impact study, no mitigation measures to the road network are recommended in order to accommodate the additional trips above the AOR in support of these development applications, as operational constraints are anticipated to be generally negligible.

Appendix A – Terms of Reference Correspondence

IBI GROUP
7th Floor – 55 St. Clair Avenue West
Toronto ON M4V 2Y7 Canada
tel 416 596 1930 fax 416 596 0644
ibigroup.com

September 26, 2017

Mr. Giancarlo Tedesco
Traffic Planning Technologist
City of Mississauga
300 City Centre Drive, Suite 800
Mississauga, ON L5B 3C1

Dear Mr. Tedesco:

TERMS OF REFERENCE FOR TRAFFIC IMPACT STUDY UPDATE
PINNACLE UPTOWN, NORTHWEST CORNER OF EGLINTON AVE W / HURONTARIO ST, CITY OF MISSISSAUGA, ON

This letter provides our Terms of Reference for an update to the IBI Group December 2007 Traffic Impact Study, regarding the lands located northwest of the Eglinton Avenue West / Hurontario Street intersection. The site is approved for 1,000 units as per the previous development application.

The purpose of the TIS update is to review current traffic operations at the subject site since a significant portion of the units have been completed, as well as to estimate operations in the future with background growth from the adjacent road network. The review of current traffic operations will also serve to compare findings in the previous TIS, as a planned connection to provide access to Ceremonial Drive was not completed. The site's location is illustrated below in **Exhibit 1**.

Exhibit 1: Context Map

Source: Google Maps

The framework of the TIS update will be based on the most recent Mississauga TIS guidelines. The following outlines the proposed Terms of Reference.

Transportation Impact Study Update - Scope

The format and contents of the TIS update is presented below. As some internal street connections proposed in the original TIS were ultimately not constructed, the study area has been reduced.

1. Study Area & Traffic Data

The study area will include an analysis of the following intersections:

1) Hurontario Street / Ceremonial Drive / Nahani Way;
2) Hurontario Street / Watergarden Drive;
3) Hurontario Street / Eglinton Avenue West;
4) Eglinton Avenue West / Foursprings Avenue; and
5) Eglinton Avenue West / Kingsbridge Garden Circle / Fairwind Drive.

The studied intersections are illustrated below in **Exhibit 2**.

Exhibit 2: Study Area Intersections

2. 2017 Existing Conditions

Turning movement counts during the 7:00-9:00 AM peak hour and 4:00-6:00 PM peak hours will be collected for the identified intersections to better determine the most current traffic operations in the study area.

Signal timing plans for signalized intersections in the study area will be obtained from the City.

The Synchro (version 9) software will be used to assess intersection operations during the AM and PM peak hours. Vehicle delays, volume to capacity (V/C) ratios for the overall intersection and individual critical movements will be summarized.

3. 2022 Background Traffic Conditions

As per Mississauga TIS guidelines, a five year horizon from the date of the TIS update will be used for the 2022 background traffic conditions analysis. Annual traffic growth for the adjacent road network will be obtained from the City. Road network improvements and other area development information will be identified in consultation with City staff. The weekday AM and PM peak hours will be analyzed using the Synchro software.

4. Transit Considerations

Existing transit service area will be identified in the TIS update. Transit trips based on the most recent modal split, derived using 2011 Transportation Tomorrow Survey Data and other applicable documents published by the City will be discussed.

5. Site Traffic Generation

The methodology used in the 2007 TIS will be applied in the TIS update, using the most recent reference data. Therefore, trip generation will be conducted using the most recent ITE Trip Generation Manual (9th edition) rates and existing unit statistics (i.e. 1,000 units as per the previously approved development application).

Site trips determined via turning movement counts mentioned in Task 2 will be compared to ITE trip generation estimates. Consultation with the client to determine current occupancy levels will be undertaken to derive an actual trip generation rate (i.e. trips/unit). Trips derived via the ITE rate and site surveys will be summarized and discussed. The applicability of an ITE based automobile trip reduction based on the modal split obtained in Task 4 will be reviewed.

6. Trip Assignment

Trip assignment determined via existing site traffic patterns will be documented and summarized in this Task. Any additional site traffic attributed to incomplete occupancy of the subject site will be assigned accordingly and added to the study area road network.

7. 2022 Total Traffic Conditions

The site traffic volumes associated with full occupancy will be combined with 2022 background traffic volumes to determine 2022 total traffic volumes for the study area intersections. Intersection operation analysis will be undertaken for the weekday AM and PM peak hours.

8. Safety Analysis

As access to the subject site is provided via two access points connected to major roadways, the safety analysis will involve collision data collection from the City and an analysis of the five-year collision history in the study area. Mitigation measures to reduce hazards for all road users will be discussed in this Task.

Should you have any comments with our methodology or have any concerns, please contact me at 416-596-1930.

Yours truly,

IBI Group

Hugo Chan, P.Eng.
Transportation Engineer
416-596-1930 ext. 63421
Hugo.chan@ibigroup.com

Hugo Chan

From: Kol, Rani <rani.kol@peelregion.ca>
Sent: Tuesday, October 03, 2017 8:30 AM
To: Hugo Chan; giancarlo.tedesco@mississauga.ca
Subject: RE: Terms of reference for TIS update - Pinnacle Uptown (Eglinton W / Hurontario)

Hugo,

We offer no comments. In addition, Hurontario is a Municipal road, not a Regional Road. Therefore, I am not able to provide you growth rates.

Regards,

Rani Kol
Technical Analyst, Traffic Development & Permits
Transportation Division, Public Works

Tel: (905) 791-7800 ext. 7858
Fax: (905) 791-1442

Hugo Chan

From: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Sent: Tuesday, October 31, 2017 2:29 PM
To: Hugo Chan
Subject: RE: Have Hurontario as well? RE: Eglinton Ave W - traffic growth rate request

Hello Hugo,

I was in contact with Giancarlo Tedesco and he had informed me that the review of the terms of reference remained ongoing and that additional horizon information would be necessary to capture the LRT. At this point I was asked to withhold any further growth rate information until then.

If you have any questions please contact Giancarlo.tedesco@mississauga.ca

Regards,

Tyler

Appendix B – Turning Movement Counts

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 7:45:00
To: 8:45:00

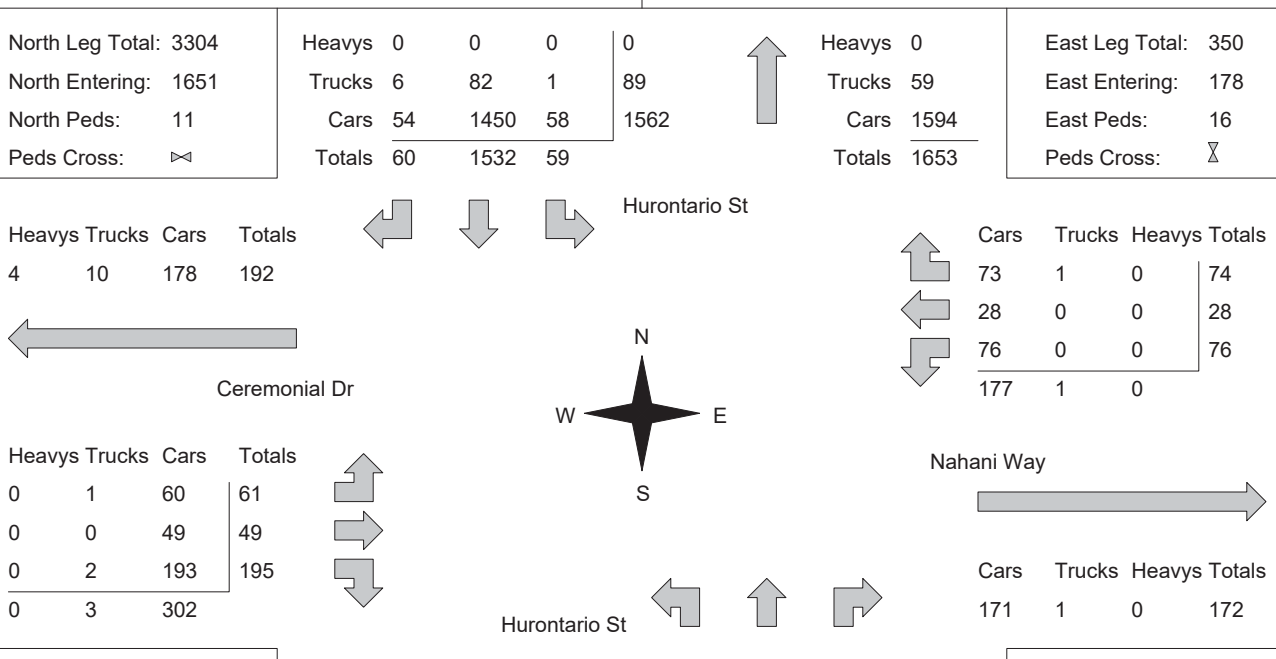
Municipality: Mississauga
Site #: 1729100001
Intersection: Hurontario St & Ceremonial Dr-Nah
TFR File #: 2
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 17:00:00
To: 18:00:00

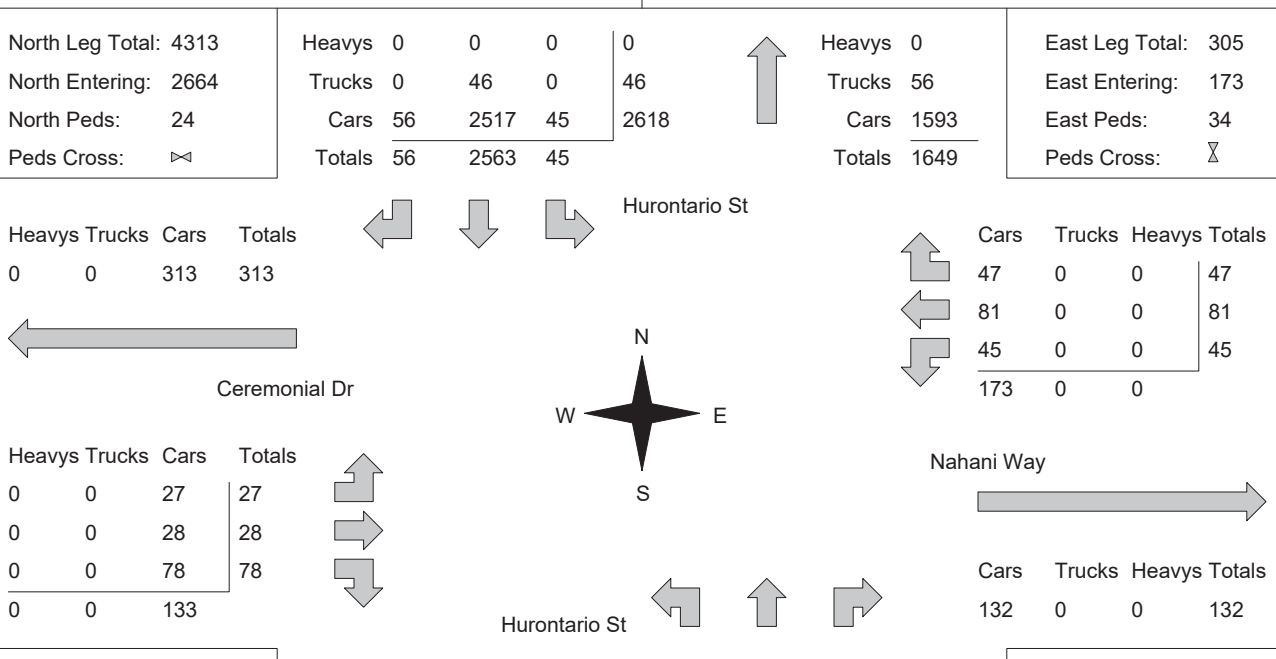
Municipality: Mississauga
Site #: 1729100001
Intersection: Hurontario St & Ceremonial Dr-Nah
TFR File #: 2
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Total Count Diagram

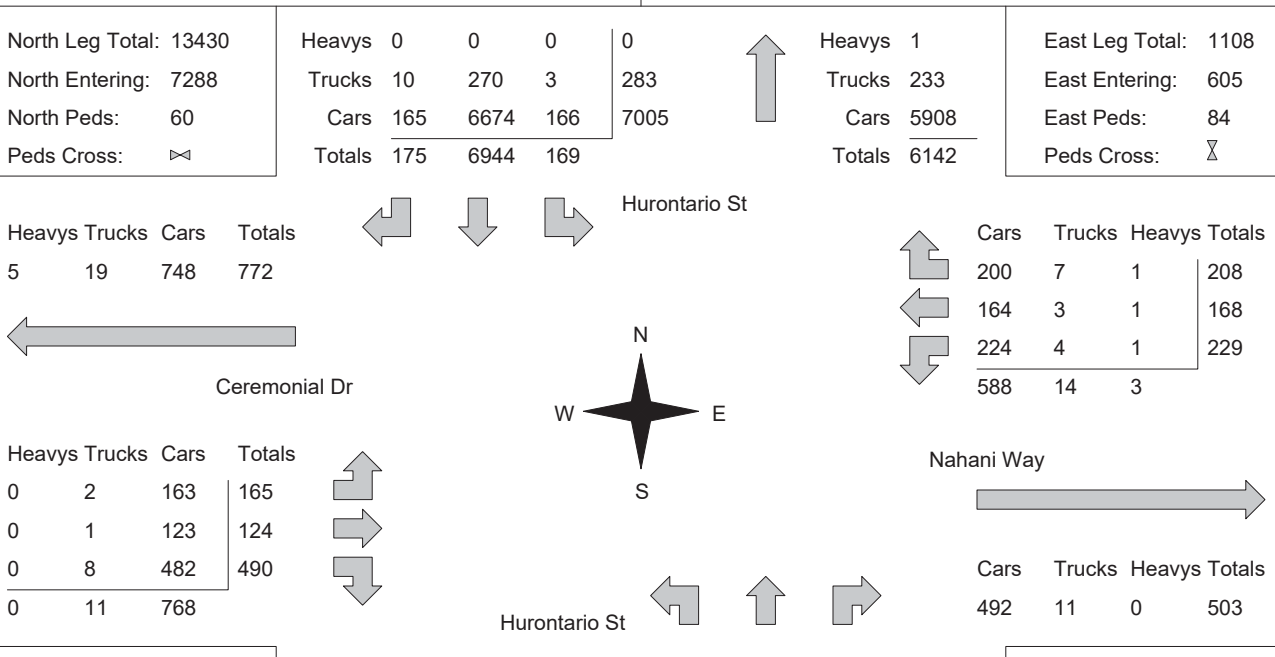
Municipality: Mississauga
Site #: 1729100001
Intersection: Hurontario St & Ceremonial Dr-Nah
TFR File #: 2
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Traffic Count Summary

Intersection: Hurontario St & Ceremonial Dr-Na | **Count Date:** 12-Oct-17 | **Municipality:** Mississauga

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	2	0	2	0	4
8:00:00	29	1053	23	1105	13	2466
9:00:00	60	1578	66	1704	11	3330
16:00:00	1	12	1	14	0	39
17:00:00	34	1736	29	1799	12	3383
18:00:00	45	2563	56	2664	24	4474
Totals:	169	6944	175	7288	60	13696

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	2	0	2	0
8:00:00	55	1269	37	1361	7
9:00:00	89	1483	54	1626	15
16:00:00	2	22	1	25	0
17:00:00	107	1418	59	1584	20
18:00:00	176	1575	59	1810	17
	429	5769	210	6408	59

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	1	0	0	1	0	1
8:00:00	61	17	60	138	13	356
9:00:00	72	29	78	179	18	488
16:00:00	0	0	1	1	0	6
17:00:00	50	41	22	113	19	227
18:00:00	45	78	47	170	34	303
Totals:	229	165	208	602	84	1381

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	49	21	148	218	23
9:00:00	65	49	195	309	21
16:00:00	1	2	2	5	0
17:00:00	23	24	67	114	23
18:00:00	27	28	78	133	13
	165	124	490	779	80

Calculated Values for Traffic Crossing Major Street

Hours Ending:	0:00	0:00	7:00	8:00	9:00	16:00	17:00	18:00
Crossing Values:	0	0	1	151	212	3	146	191

Count Date: 12-Oct-17 Site #: 1729100001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:15:00	7	7	195	194	5	5	0	0	29	28	0	0	0	0	0	0	0	0	2	2
7:30:00	11	4	419	224	5	0	0	0	53	24	0	0	0	0	0	0	0	0	5	3
7:45:00	18	7	687	268	11	6	0	0	68	15	1	1	0	0	0	0	0	0	9	4
8:00:00	29	11	969	282	21	10	0	0	86	18	2	1	0	0	0	0	0	0	13	4
8:15:00	48	19	1339	370	43	22	0	0	110	24	2	0	0	0	0	0	0	0	14	1
8:30:00	64	16	1764	425	52	9	0	0	124	14	6	4	0	0	0	0	0	0	19	5
8:45:00	76	12	2137	373	65	13	1	1	150	26	7	1	0	0	0	0	0	0	20	1
9:00:00	86	10	2464	327	81	16	3	2	169	19	8	1	0	0	0	0	0	0	24	4
9:00:19	86	0	2464	0	81	0	3	0	169	0	8	0	0	0	0	0	0	0	24	0
16:00:00	87	1	2476	12	82	1	3	0	169	0	8	0	0	0	0	0	0	0	24	0
16:15:00	97	10	2927	451	91	9	3	0	189	20	10	2	0	0	0	0	0	0	25	1
16:30:00	107	10	3283	356	95	4	3	0	205	16	10	0	0	0	0	0	0	0	31	6
16:45:00	114	7	3737	454	101	6	3	0	217	12	10	0	0	0	0	0	0	0	34	3
17:00:00	121	7	4157	420	109	8	3	0	224	7	10	0	0	0	0	0	0	0	36	2
17:15:00	129	8	4870	713	118	9	3	0	240	16	10	0	0	0	0	0	0	0	39	3
17:30:00	145	16	5408	538	133	15	3	0	244	4	10	0	0	0	0	0	0	0	45	6
17:45:00	155	10	6046	638	151	18	3	0	256	12	10	0	0	0	0	0	0	0	53	8
18:00:00	166	11	6674	628	165	14	3	0	270	14	10	0	0	0	0	0	0	0	60	7
18:01:03	166	0	6674	0	165	0	3	0	270	0	10	0	0	0	0	0	0	0	60	0
18:15:00	166	0	6674	0	165	0	3	0	270	0	10	0	0	0	0	0	0	0	60	0
18:15:15	166	0	6674	0	165	0	3	0	270	0	10	0	0	0	0	0	0	0	60	0

Count Date: 12-Oct-17 Site #: 1729100001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
7:15:00	11	11	2	2	10	10	0	0	0	0	1	1	1	0	0	0	0	0	3	3
7:30:00	20	9	3	1	22	12	0	0	0	0	3	2	1	0	0	0	0	0	7	4
7:45:00	36	16	11	8	39	17	2	2	0	0	4	1	1	0	0	0	0	0	8	1
8:00:00	59	23	17	6	55	16	2	0	0	0	5	1	1	0	0	0	0	0	13	5
8:15:00	76	17	29	12	80	25	2	0	0	0	5	0	1	0	0	0	0	0	18	5
8:30:00	91	15	35	6	92	12	2	0	0	0	5	0	1	0	0	0	0	0	22	4
8:45:00	112	21	39	4	112	20	2	0	0	0	5	0	1	0	0	0	0	0	24	2
9:00:00	131	19	46	7	131	19	2	0	0	0	7	2	1	0	0	0	0	0	31	7
9:00:19	131	0	46	0	131	0	2	0	0	0	7	0	1	0	0	0	0	0	31	0
16:00:00	131	0	46	0	132	1	2	0	0	0	7	0	1	0	0	0	0	0	31	0
16:15:00	149	18	56	10	139	7	2	0	2	2	7	0	1	0	0	0	0	0	37	6
16:30:00	157	8	63	7	145	6	2	0	2	0	7	0	1	0	0	0	0	0	41	4
16:45:00	168	11	74	11	149	4	4	2	3	1	7	0	1	0	0	0	0	0	43	2
17:00:00	179	11	83	9	153	4	4	0	3	0	7	0	1	0	1	1	1	1	50	7
17:15:00	193	14	93	10	164	11	4	0	3	0	7	0	1	0	1	0	1	0	60	10
17:30:00	199	6	116	23	175	11	4	0	3	0	7	0	1	0	1	0	1	0	69	9
17:45:00	218	19	147	31	189	14	4	0	3	0	7	0	1	0	1	0	1	0	76	7
18:00:00	224	6	161	14	200	11	4	0	3	0	7	0	1	0	1	0	1	0	84	8
18:01:03	224	0	164	3	200	0	4	0	3	0	7	0	1	0	1	0	1	0	84	0
18:15:00	224	0	164	0	200	0	4	0	3	0	7	0	1	0	1	0	1	0	84	0
18:15:15	224	0	164	0	200	0	4	0	3	0	7	0	1	0	1	0	1	0	84	0

Count Date: 12-Oct-17 Site #: 1729100001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	218	216	4	4	0	0	11	11	2	2	0	0	0	0	0	0	0	0
7:30:00	10	6	506	288	12	8	2	2	19	8	5	3	0	0	0	0	0	0	1	1
7:45:00	28	18	831	325	16	4	2	0	27	8	5	0	0	0	0	0	0	0	7	6
8:00:00	52	24	1231	400	32	16	3	1	40	13	5	0	0	0	0	0	0	0	7	0
8:15:00	75	23	1582	351	44	12	3	0	58	18	5	0	0	0	0	0	0	0	16	9
8:30:00	92	17	1942	360	62	18	5	2	73	15	5	0	0	0	0	0	0	0	19	3
8:45:00	124	32	2292	350	80	18	6	1	84	11	5	0	4	4	0	0	0	0	20	1
9:00:00	134	10	2648	356	86	6	6	0	106	22	5	0	4	0	0	0	0	0	22	2
9:00:19	135	1	2657	9	86	0	6	0	106	0	5	0	4	0	0	0	0	0	22	0
16:00:00	136	1	2669	12	87	1	6	0	107	1	5	0	4	0	0	0	0	0	22	0
16:15:00	160	24	2940	271	102	15	6	0	124	17	5	0	4	0	0	0	0	0	27	5
16:30:00	185	25	3320	380	114	12	6	0	139	15	5	0	4	0	0	0	0	0	29	2
16:45:00	214	29	3662	342	126	12	6	0	152	13	7	2	4	0	0	0	0	0	35	6
17:00:00	243	29	4026	364	144	18	6	0	168	16	7	0	4	0	0	0	0	0	42	7
17:15:00	273	30	4394	368	156	12	6	0	182	14	7	0	4	0	0	0	0	0	50	8
17:30:00	320	47	4770	376	165	9	6	0	197	15	7	0	4	0	0	0	0	0	53	3
17:45:00	365	45	5171	401	186	21	6	0	209	12	7	0	4	0	0	0	0	0	55	2
18:00:00	419	54	5545	374	203	17	6	0	224	15	7	0	4	0	0	0	0	0	59	4
18:01:03	419	0	5545	0	203	0	6	0	224	0	7	0	4	0	0	0	0	0	59	0
18:15:00	419	0	5545	0	203	0	6	0	224	0	7	0	4	0	0	0	0	0	59	0
18:15:15	419	0	5545	0	203	0	6	0	224	0	7	0	4	0	0	0	0	0	59	0

Count Date: 12-Oct-17 Site #: 1729100001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	10	10	1	1	32	32	0	0	0	0	0	0	0	0	0	0	0	0	4	4
7:30:00	17	7	4	3	61	29	0	0	0	0	1	1	0	0	0	0	0	0	5	1
7:45:00	29	12	8	4	96	35	1	1	1	1	3	2	0	0	0	0	0	0	13	8
8:00:00	47	18	20	12	145	49	2	1	1	0	3	0	0	0	0	0	0	0	23	10
8:15:00	58	11	38	18	194	49	2	0	1	0	3	0	0	0	0	0	0	0	32	9
8:30:00	69	11	46	8	237	43	2	0	1	0	5	2	0	0	0	0	0	0	33	1
8:45:00	89	20	57	11	289	52	2	0	1	0	5	0	0	0	0	0	0	0	40	7
9:00:00	112	23	69	12	336	47	2	0	1	0	7	2	0	0	0	0	0	0	44	4
9:00:19	113	1	71	2	338	2	2	0	1	0	7	0	0	0	0	0	0	0	44	0
16:00:00	113	0	71	0	338	0	2	0	1	0	7	0	0	0	0	0	0	0	44	0
16:15:00	118	5	79	8	360	22	2	0	1	0	8	1	0	0	0	0	0	0	51	7
16:30:00	126	8	83	4	375	15	2	0	1	0	8	0	0	0	0	0	0	0	59	8
16:45:00	130	4	89	6	389	14	2	0	1	0	8	0	0	0	0	0	0	0	64	5
17:00:00	136	6	95	6	404	15	2	0	1	0	8	0	0	0	0	0	0	0	67	3
17:15:00	143	7	102	7	429	25	2	0	1	0	8	0	0	0	0	0	0	0	68	1
17:30:00	146	3	112	10	448	19	2	0	1	0	8	0	0	0	0	0	0	0	73	5
17:45:00	152	6	114	2	464	16	2	0	1	0	8	0	0	0	0	0	0	0	75	2
18:00:00	163	11	123	9	482	18	2	0	1	0	8	0	0	0	0	0	0	0	80	5
18:01:03	163	0	123	0	482	0	2	0	1	0	8	0	0	0	0	0	0	0	80	0
18:15:00	163	0	123	0	482	0	2	0	1	0	8	0	0	0	0	0	0	0	80	0
18:15:15	163	0	123	0	482	0	2	0	1	0	8	0	0	0	0	0	0	0	80	0

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

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

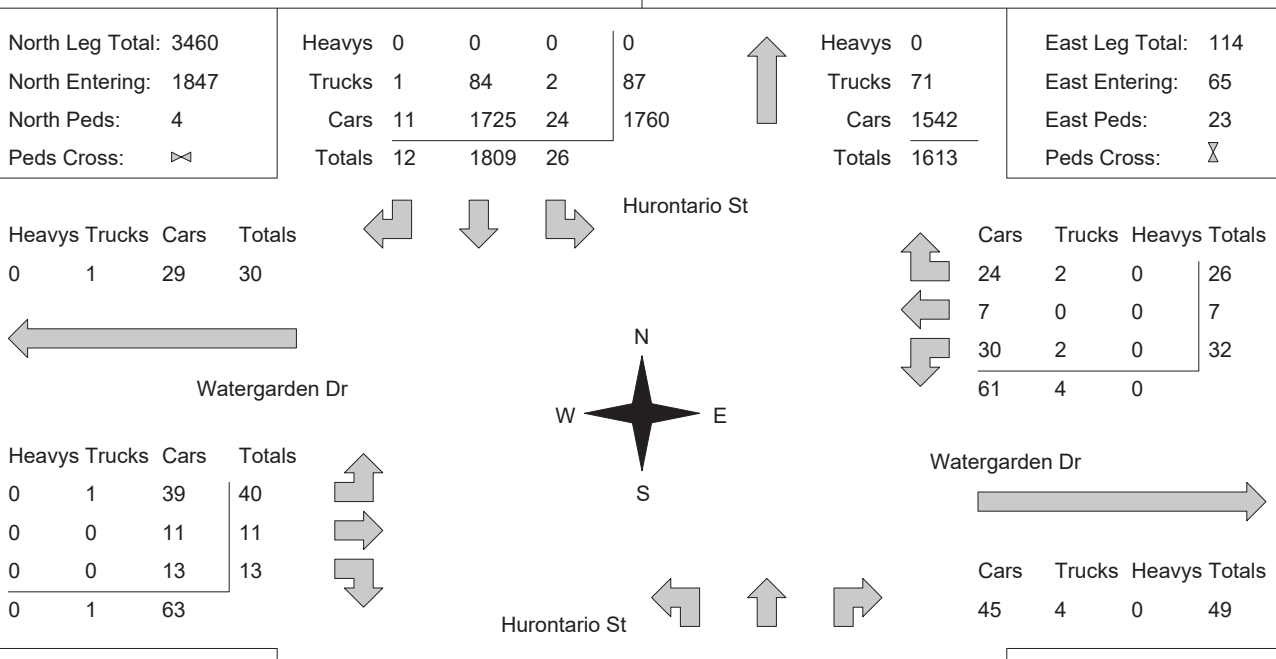
Municipality: Mississauga
Site #: 1729100002
Intersection: Hurontario St & Watergarden Dr
TFR File #: 5
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 17:00:00
To: 18:00:00

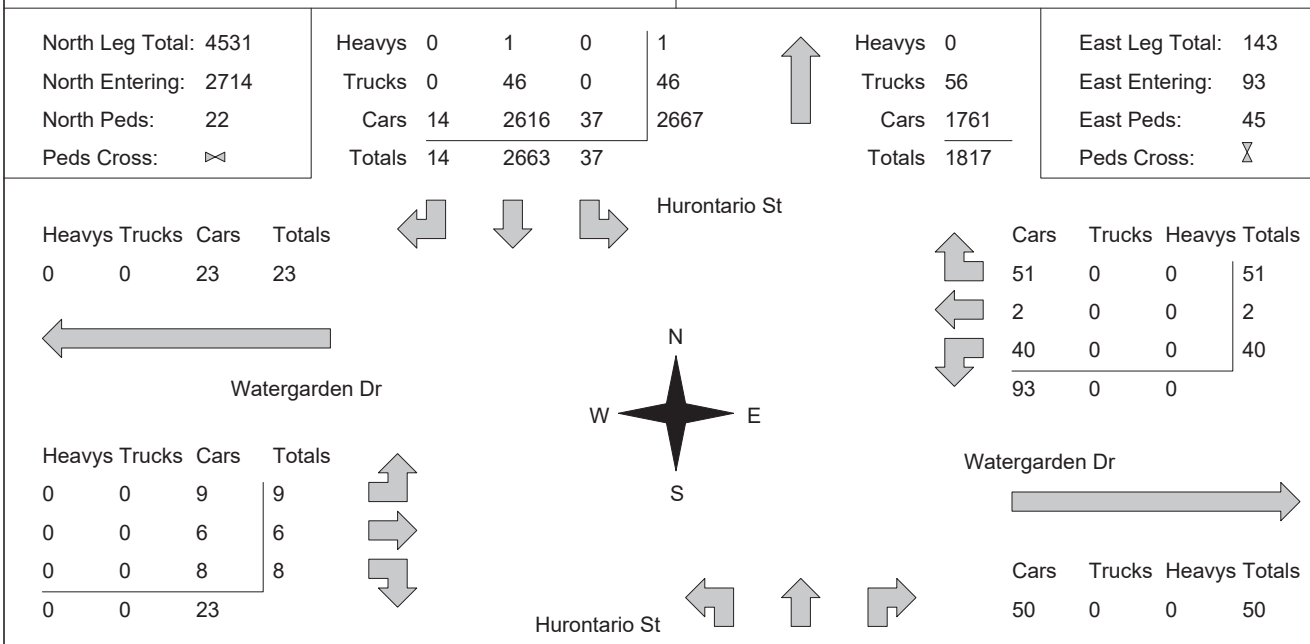
Municipality: Mississauga
Site #: 1729100002
Intersection: Hurontario St & Watergarden Dr
TFR File #: 5
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Total Count Diagram

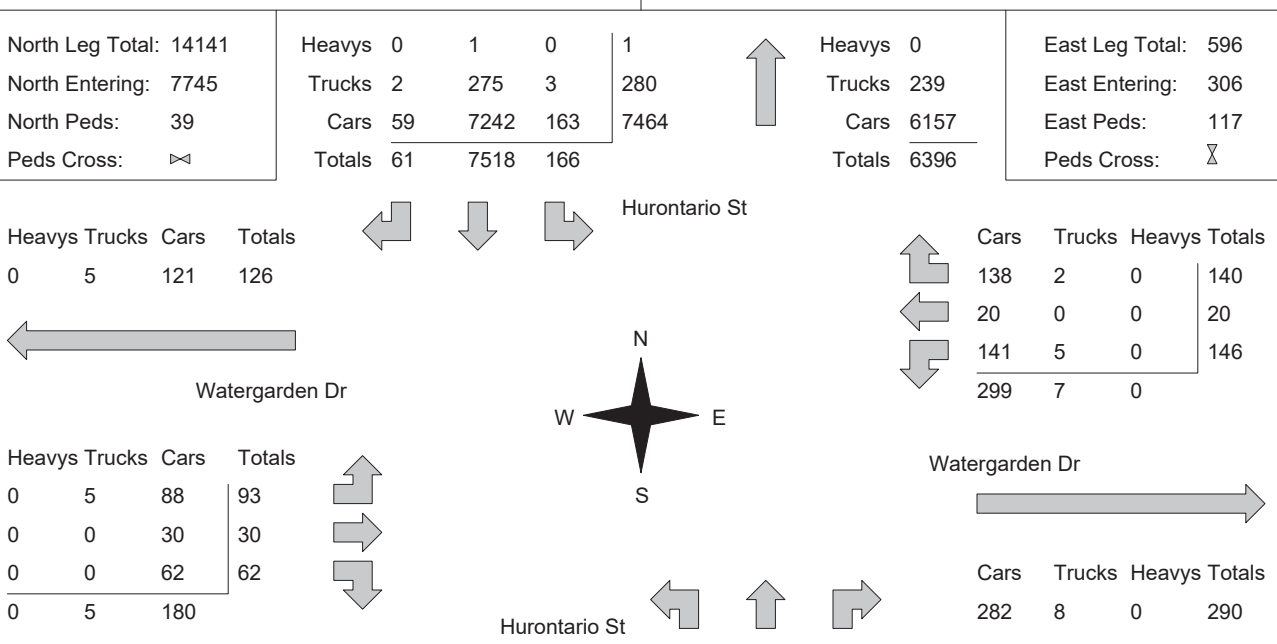
Municipality: Mississauga
Site #: 1729100002
Intersection: Hurontario St & Watergarden Dr
TFR File #: 5
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Traffic Count Summary

Intersection: Hurontario St & Watergarden Dr | **Count Date:** 12-Oct-17 | **Municipality:** Mississauga

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	3	0	3	0	18
8:00:00	31	1234	8	1273	0	2600
9:00:00	26	1809	12	1847	4	3417
16:00:00	0	14	0	14	0	26
17:00:00	72	1795	27	1894	13	3501
18:00:00	37	2663	14	2714	22	4485
Totals:	166	7518	61	7745	39	14047

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	1	14	0	15	0
8:00:00	10	1309	8	1327	7
9:00:00	11	1547	12	1570	0
16:00:00	0	12	0	12	0
17:00:00	16	1524	67	1607	17
18:00:00	7	1757	7	1771	4
	45	6163	94	6302	28

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	15	0	18	33	19	82
9:00:00	32	7	26	65	23	129
16:00:00	0	1	0	1	0	1
17:00:00	59	10	45	114	30	163
18:00:00	40	2	51	93	45	116
Totals:	146	20	140	306	117	491

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	18	9	22	49	22
9:00:00	40	11	13	64	16
16:00:00	0	0	0	0	0
17:00:00	26	4	19	49	10
18:00:00	9	6	8	23	14
	93	30	62	185	62

Calculated Values for Traffic Crossing Major Street

Hours Ending:	0:00	0:00	7:00	8:00	9:00	16:00	17:00	18:00
Crossing Values:	0	0	0	49	87	1	125	81

Count Date: 12-Oct-17 Site #: 1729100002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	5	5	232	229	4	4	0	0	28	28	0	0	0	0	0	0	0	0	0	0
7:30:00	10	5	499	267	7	3	0	0	53	25	0	0	0	0	0	0	0	0	0	0
7:45:00	18	8	810	311	7	0	0	0	71	18	1	1	0	0	0	0	0	0	0	0
8:00:00	31	13	1149	339	7	0	0	0	88	17	1	0	0	0	0	0	0	0	0	0
8:15:00	33	2	1576	427	8	1	0	0	112	24	1	0	0	0	0	0	0	0	0	0
8:30:00	39	6	2053	477	9	1	0	0	128	16	1	0	0	0	0	0	0	0	0	0
8:45:00	46	7	2489	436	15	6	2	2	152	24	1	0	0	0	0	0	0	0	0	0
9:00:00	55	9	2874	385	18	3	2	0	172	20	2	1	0	0	0	0	0	0	4	4
9:00:49	55	0	2874	0	18	0	2	0	172	0	2	0	0	0	0	0	0	0	4	0
16:00:00	55	0	2888	14	18	0	2	0	172	0	2	0	0	0	0	0	0	0	4	0
16:15:00	67	12	3358	470	25	7	3	1	192	20	2	0	0	0	0	0	0	0	7	3
16:30:00	86	19	3789	431	31	6	3	0	208	16	2	0	0	0	0	0	0	0	11	4
16:45:00	105	19	4234	445	38	7	3	0	222	14	2	0	0	0	0	0	0	0	15	4
17:00:00	126	21	4626	392	45	7	3	0	229	7	2	0	0	0	0	0	0	0	17	2
17:15:00	139	13	5372	746	50	5	3	0	245	16	2	0	0	0	1	1	0	0	22	5
17:30:00	148	9	5934	562	56	6	3	0	249	4	2	0	0	0	1	0	0	0	27	5
17:45:00	155	7	6600	666	57	1	3	0	261	12	2	0	0	0	1	0	0	0	32	5
18:00:00	163	8	7242	642	59	2	3	0	275	14	2	0	0	0	1	0	0	0	39	7
18:04:46	163	0	7242	0	59	0	3	0	275	0	2	0	0	0	1	0	0	0	39	0
18:15:00	163	0	7242	0	59	0	3	0	275	0	2	0	0	0	1	0	0	0	39	0
18:15:15	163	0	7242	0	59	0	3	0	275	0	2	0	0	0	1	0	0	0	39	0

Count Date: 12-Oct-17 Site #: 1729100002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	3	3	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6	6
7:30:00	6	3	0	0	5	2	1	1	0	0	0	0	0	0	0	0	0	0	14	8
7:45:00	10	4	0	0	16	11	1	0	0	0	0	0	0	0	0	0	0	0	15	1
8:00:00	13	3	0	0	18	2	2	1	0	0	0	0	0	0	0	0	0	0	19	4
8:15:00	24	11	1	1	21	3	2	0	0	0	0	0	0	0	0	0	0	0	24	5
8:30:00	29	5	2	1	25	4	2	0	0	0	0	0	0	0	0	0	0	0	28	4
8:45:00	33	4	7	5	32	7	3	1	0	0	1	1	0	0	0	0	0	0	32	4
9:00:00	43	10	7	0	42	10	4	1	0	0	2	1	0	0	0	0	0	0	42	10
9:00:49	43	0	7	0	42	0	4	0	0	0	2	0	0	0	0	0	0	0	42	0
16:00:00	43	0	8	1	42	0	4	0	0	0	2	0	0	0	0	0	0	0	42	0
16:15:00	58	15	14	6	53	11	5	1	0	0	2	0	0	0	0	0	0	0	51	9
16:30:00	76	18	17	3	67	14	5	0	0	0	2	0	0	0	0	0	0	0	58	7
16:45:00	89	13	18	1	76	9	5	0	0	0	2	0	0	0	0	0	0	0	62	4
17:00:00	101	12	18	0	87	11	5	0	0	0	2	0	0	0	0	0	0	0	72	10
17:15:00	110	9	20	2	103	16	5	0	0	0	2	0	0	0	0	0	0	0	81	9
17:30:00	121	11	20	0	115	12	5	0	0	0	2	0	0	0	0	0	0	0	92	11
17:45:00	131	10	20	0	127	12	5	0	0	0	2	0	0	0	0	0	0	0	106	14
18:00:00	141	10	20	0	138	11	5	0	0	0	2	0	0	0	0	0	0	0	117	11
18:04:46	141	0	20	0	138	0	5	0	0	0	2	0	0	0	0	0	0	0	117	0
18:15:00	141	0	20	0	138	0	5	0	0	0	2	0	0	0	0	0	0	0	117	0
18:15:15	141	0	20	0	138	0	5	0	0	0	2	0	0	0	0	0	0	0	117	0

Count Date: 12-Oct-17 Site #: 1729100002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	1	1	13	13	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:15:00	5	4	232	219	3	3	0	0	13	12	0	0	0	0	0	0	0	0	0	0
7:30:00	7	2	536	304	4	1	0	0	26	13	0	0	0	0	0	0	0	0	1	1
7:45:00	10	3	865	329	6	2	0	0	34	8	1	1	0	0	0	0	0	0	1	0
8:00:00	11	1	1276	411	7	1	0	0	47	13	1	0	0	0	0	0	0	0	7	6
8:15:00	13	2	1646	370	9	2	0	0	66	19	2	1	0	0	0	0	0	0	7	0
8:30:00	14	1	2030	384	10	1	0	0	83	17	3	1	0	0	0	0	0	0	7	0
8:45:00	19	5	2402	372	14	4	0	0	95	12	3	0	0	0	0	0	0	0	7	0
9:00:00	22	3	2755	353	17	3	0	0	115	20	3	0	0	0	0	0	0	0	7	0
9:00:49	22	0	2757	2	17	0	0	0	115	0	3	0	0	0	0	0	0	0	7	0
16:00:00	22	0	2766	9	17	0	0	0	116	1	3	0	0	0	0	0	0	0	7	0
16:15:00	25	3	3055	289	65	48	0	0	130	14	4	1	0	0	0	0	0	0	17	10
16:30:00	29	4	3457	402	70	5	2	2	145	15	5	1	0	0	0	0	0	0	22	5
16:45:00	34	5	3830	373	77	7	2	0	160	15	5	0	0	0	0	0	0	0	24	2
17:00:00	35	1	4230	400	82	5	3	1	176	16	5	0	0	0	0	0	0	0	24	0
17:15:00	40	5	4620	390	85	3	3	0	190	14	5	0	0	0	0	0	0	0	24	0
17:30:00	42	2	5038	418	86	1	3	0	205	15	5	0	0	0	0	0	0	0	26	2
17:45:00	42	0	5505	467	88	2	3	0	217	12	5	0	0	0	0	0	0	0	28	2
18:00:00	42	0	5931	426	89	1	3	0	232	15	5	0	0	0	0	0	0	0	28	0
18:04:46	42	0	5931	0	89	0	3	0	232	0	5	0	0	0	0	0	0	0	28	0
18:15:00	42	0	5931	0	89	0	3	0	232	0	5	0	0	0	0	0	0	0	28	0
18:15:15	42	0	5931	0	89	0	3	0	232	0	5	0	0	0	0	0	0	0	28	0

Count Date: 12-Oct-17 Site #: 1729100002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
7:30:00	3	2	2	2	7	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:45:00	9	6	5	3	12	5	0	0	0	0	0	0	0	0	0	0	0	0	8	6
8:00:00	17	8	9	4	22	10	1	1	0	0	0	0	0	0	0	0	0	0	22	14
8:15:00	29	12	12	3	25	3	1	0	0	0	0	0	0	0	0	0	0	0	29	7
8:30:00	36	7	15	3	26	1	1	0	0	0	0	0	0	0	0	0	0	0	31	2
8:45:00	50	14	18	3	28	2	1	0	0	0	0	0	0	0	0	0	0	0	36	5
9:00:00	56	6	20	2	35	7	2	1	0	0	0	0	0	0	0	0	0	0	38	2
9:00:49	56	0	20	0	35	0	2	0	0	0	0	0	0	0	0	0	0	0	38	0
16:00:00	56	0	20	0	35	0	2	0	0	0	0	0	0	0	0	0	0	0	38	0
16:15:00	64	8	21	1	41	6	5	3	0	0	0	0	0	0	0	0	0	0	44	6
16:30:00	66	2	21	0	45	4	5	0	0	0	0	0	0	0	0	0	0	0	47	3
16:45:00	74	8	22	1	49	4	5	0	0	0	0	0	0	0	0	0	0	0	48	1
17:00:00	79	5	24	2	54	5	5	0	0	0	0	0	0	0	0	0	0	0	48	0
17:15:00	81	2	27	3	58	4	5	0	0	0	0	0	0	0	0	0	0	0	48	0
17:30:00	83	2	28	1	60	2	5	0	0	0	0	0	0	0	0	0	0	0	52	4
17:45:00	87	4	29	1	62	2	5	0	0	0	0	0	0	0	0	0	0	0	57	5
18:00:00	88	1	30	1	62	0	5	0	0	0	0	0	0	0	0	0	0	0	62	5
18:04:46	88	0	30	0	62	0	5	0	0	0	0	0	0	0	0	0	0	0	62	0
18:15:00	88	0	30	0	62	0	5	0	0	0	0	0	0	0	0	0	0	0	62	0
18:15:15	88	0	30	0	62	0	5	0	0	0	0	0	0	0	0	0	0	0	62	0

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

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

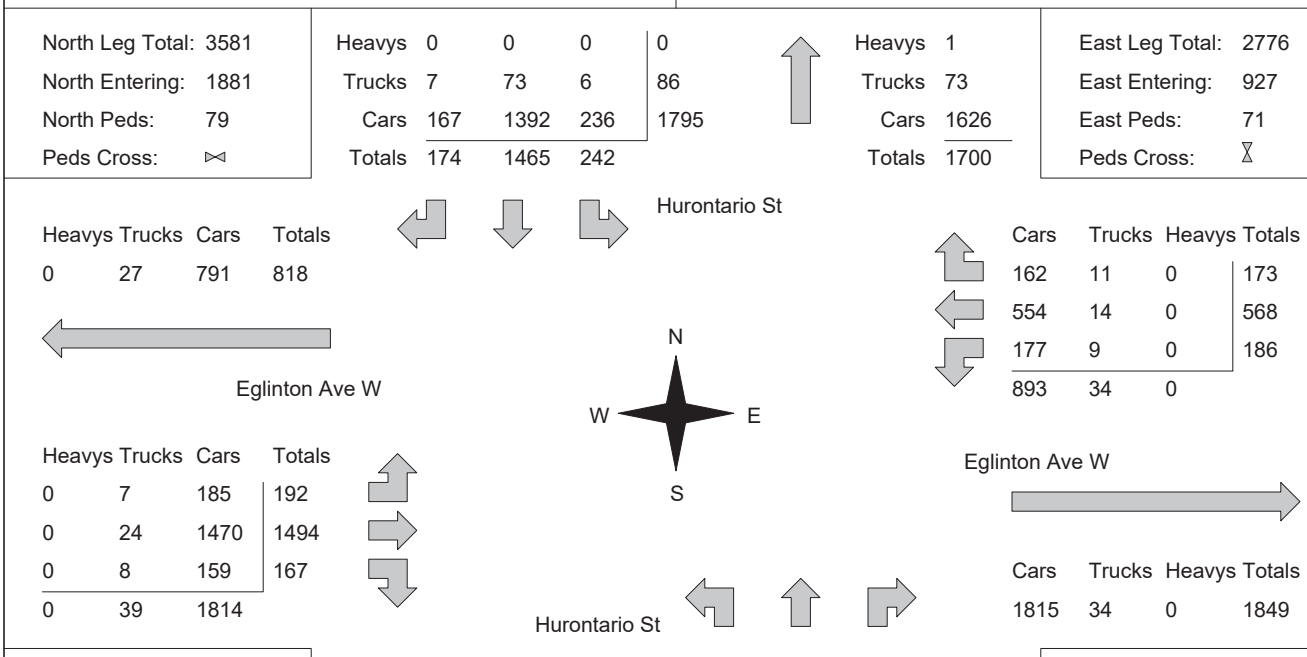
Municipality: Mississauga
Site #: 1729100003
Intersection: Hurontario St & Eglinton Ave W
TFR File #: 16
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 17:00:00
To: 18:00:00

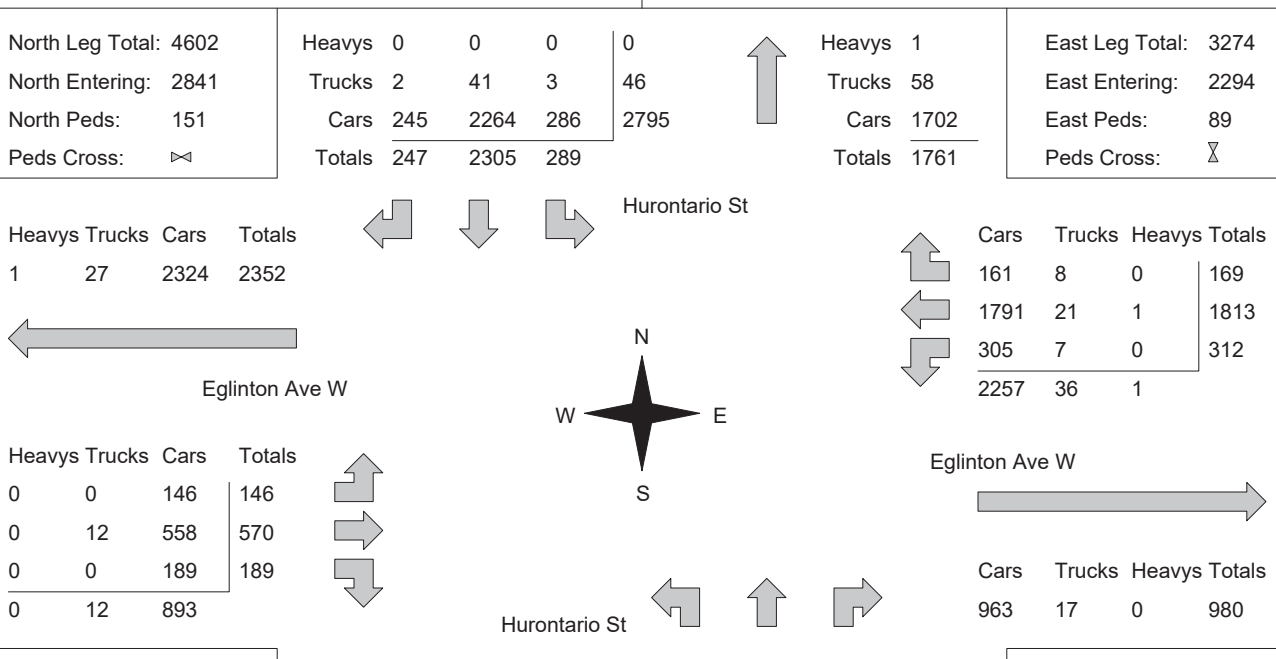
Municipality: Mississauga
Site #: 1729100003
Intersection: Hurontario St & Eglinton Ave W
TFR File #: 16
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Total Count Diagram

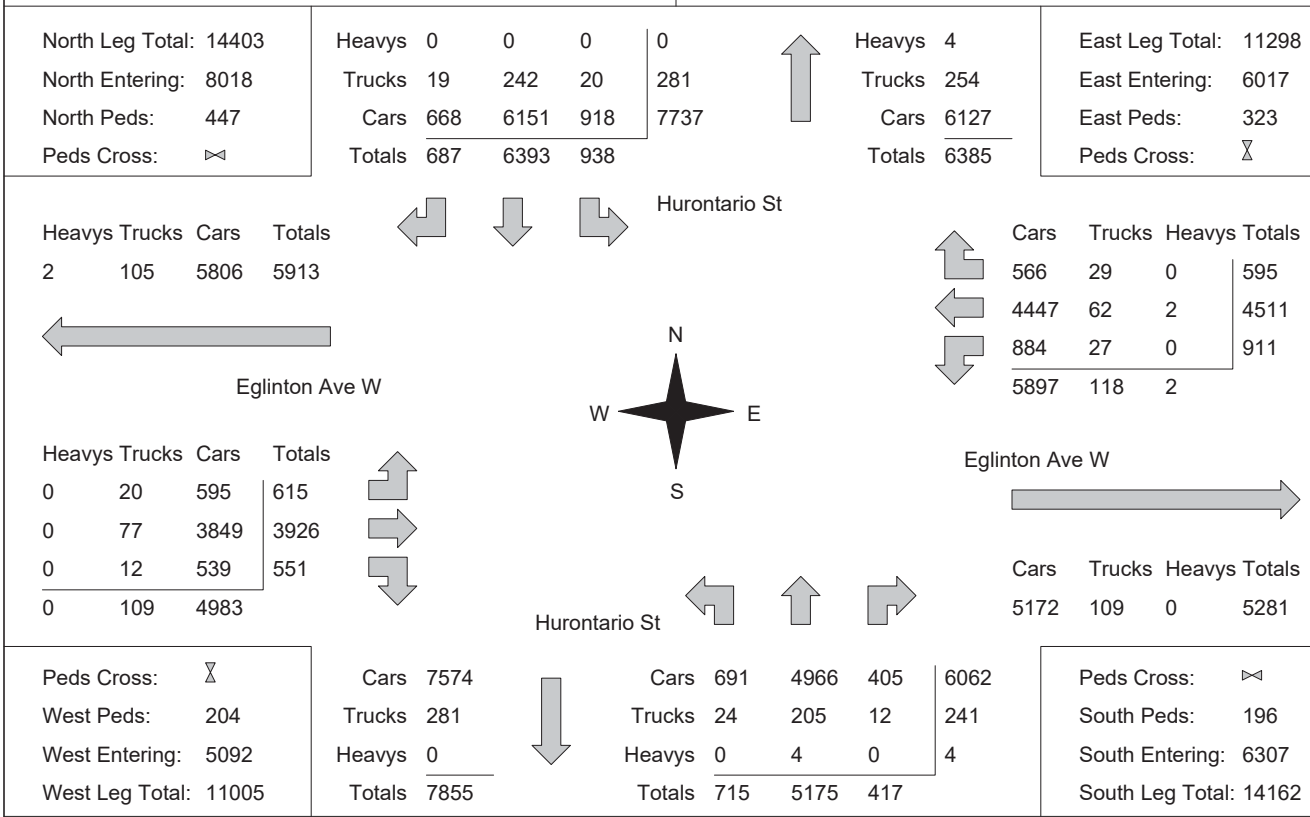
Municipality: Mississauga
Site #: 1729100003
Intersection: Hurontario St & Eglinton Ave W
TFR File #: 16
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hurontario St runs N/S



Comments

Traffic Count Summary

Intersection: Hurontario St & Eglinton Ave W | **Count Date:** 12-Oct-17 | **Municipality:** Mississauga

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	1	0	1	0	1
8:00:00	212	1050	78	1340	79	2620
9:00:00	242	1465	174	1881	79	3405
16:00:00	10	3	1	14	2	14
17:00:00	185	1569	187	1941	136	3585
18:00:00	289	2305	247	2841	151	4696
Totals:	938	6393	687	8018	447	14321

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	54	1139	87	1280	24
9:00:00	76	1335	113	1524	63
16:00:00	0	0	0	0	0
17:00:00	293	1255	96	1644	39
18:00:00	292	1442	121	1855	70
	715	5171	417	6303	196

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	1
8:00:00	110	394	79	583	53	2089
9:00:00	186	568	173	927	71	2780
16:00:00	0	2	2	4	5	5
17:00:00	303	1734	172	2209	105	3035
18:00:00	312	1813	169	2294	89	3198
Totals:	911	4511	595	6017	323	11108

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	1	0	1	0
8:00:00	148	1255	103	1506	46
9:00:00	192	1494	167	1853	52
16:00:00	0	1	0	1	0
17:00:00	129	605	92	826	49
18:00:00	146	569	189	904	57
	615	3925	551	5091	204

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	16:00	17:00	17:00	18:00	18:00
Crossing Values:	1	1616	2014	4	2341	2341	2492	2492

Count Date: 12-Oct-17 Site #: 1729100003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	38	38	218	217	10	10	1	1	25	25	3	3	0	0	0	0	0	0	22	22
7:30:00	82	44	445	227	30	20	5	4	45	20	5	2	0	0	0	0	0	0	36	14
7:45:00	124	42	718	273	48	18	8	3	58	13	6	1	0	0	0	0	0	0	62	26
8:00:00	202	78	979	261	70	22	10	2	72	14	8	2	0	0	0	0	0	0	79	17
8:15:00	254	52	1316	337	118	48	10	0	93	21	11	3	0	0	0	0	0	0	102	23
8:30:00	304	50	1717	401	161	43	13	3	105	12	12	1	0	0	0	0	0	0	126	24
8:45:00	376	72	2067	350	194	33	14	1	129	24	12	0	0	0	0	0	0	0	146	20
9:00:00	438	62	2371	304	237	43	16	2	145	16	15	3	0	0	0	0	0	0	158	12
9:00:13	448	10	2374	3	237	0	16	0	145	0	15	0	0	0	0	0	0	0	158	0
16:00:00	448	0	2374	0	237	0	16	0	145	0	16	1	0	0	0	0	0	0	160	2
16:15:00	495	47	2750	376	292	55	17	1	164	19	17	1	0	0	0	0	0	0	183	23
16:30:00	541	46	3135	385	328	36	17	0	180	16	17	0	0	0	0	0	0	0	221	38
16:45:00	581	40	3526	391	379	51	17	0	194	14	17	0	0	0	0	0	0	0	263	42
17:00:00	632	51	3887	361	423	44	17	0	201	7	17	0	0	0	0	0	0	0	296	33
17:15:00	726	94	4555	668	478	55	18	1	216	15	17	0	0	0	0	0	0	0	316	20
17:30:00	794	68	5014	459	555	77	19	1	219	3	17	0	0	0	0	0	0	0	355	39
17:45:00	854	60	5604	590	613	58	19	0	231	12	17	0	0	0	0	0	0	0	413	58
18:00:00	918	64	6151	547	668	55	20	1	242	11	19	2	0	0	0	0	0	0	447	34
18:00:22	918	0	6151	0	668	0	20	0	242	0	19	0	0	0	0	0	0	0	447	0
18:15:00	918	0	6151	0	668	0	20	0	242	0	19	0	0	0	0	0	0	0	447	0
18:15:15	918	0	6151	0	668	0	20	0	242	0	19	0	0	0	0	0	0	0	447	0

Count Date: 12-Oct-17 Site #: 1729100003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	23	23	68	68	7	7	1	1	1	1	0	0	0	0	0	0	0	0	8	8
7:30:00	43	20	160	92	19	12	4	3	5	4	2	2	0	0	0	0	0	0	19	11
7:45:00	70	27	275	115	40	21	5	1	9	4	4	2	0	0	1	1	0	0	34	15
8:00:00	104	34	383	108	72	32	6	1	10	1	7	3	0	0	1	0	0	0	53	19
8:15:00	157	53	530	147	102	30	9	3	13	3	7	0	0	0	1	0	0	0	75	22
8:30:00	202	45	663	133	138	36	13	4	19	6	14	7	0	0	1	0	0	0	91	16
8:45:00	240	38	776	113	197	59	15	2	23	4	15	1	0	0	1	0	0	0	100	9
9:00:00	281	41	937	161	234	37	15	0	24	1	18	3	0	0	1	0	0	0	124	24
9:00:13	281	0	939	2	234	0	15	0	24	0	18	0	0	0	1	0	0	0	124	0
16:00:00	281	0	939	0	236	2	15	0	24	0	18	0	0	0	1	0	0	0	129	5
16:15:00	361	80	1343	404	276	40	16	1	30	6	19	1	0	0	1	0	0	0	144	15
16:30:00	429	68	1702	359	313	37	17	1	34	4	21	2	0	0	1	0	0	0	169	25
16:45:00	516	87	2169	467	355	42	19	2	38	4	21	0	0	0	1	0	0	0	210	41
17:00:00	579	63	2656	487	405	50	20	1	41	3	21	0	0	0	1	0	0	0	234	24
17:15:00	656	77	3147	491	429	24	20	0	45	4	23	2	0	0	1	0	0	0	254	20
17:30:00	731	75	3610	463	464	35	22	2	49	4	26	3	0	0	1	0	0	0	274	20
17:45:00	810	79	4011	401	509	45	23	1	55	6	26	0	0	0	1	0	0	0	311	37
18:00:00	884	74	4447	436	566	57	27	4	62	7	29	3	0	0	2	1	0	0	323	12
18:00:22	884	0	4447	0	566	0	27	0	62	0	29	0	0	0	2	0	0	0	323	0
18:15:00	884	0	4447	0	566	0	27	0	62	0	29	0	0	0	2	0	0	0	323	0
18:15:15	884	0	4447	0	566	0	27	0	62	0	29	0	0	0	2	0	0	0	323	0

Count Date: 12-Oct-17 Site #: 1729100003

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	10	10	197	197	11	11	2	2	10	10	0	0	0	0	0	0	0	0	5	5
7:30:00	21	11	448	251	28	17	4	2	21	11	3	3	0	0	0	0	0	0	5	0
7:45:00	33	12	730	282	58	30	6	2	31	10	3	0	0	0	0	0	0	0	12	7
8:00:00	47	14	1097	367	83	25	7	1	42	11	4	1	0	0	0	0	0	0	24	12
8:15:00	63	16	1397	300	113	30	9	2	61	19	4	0	0	0	0	0	0	0	40	16
8:30:00	81	18	1730	333	135	22	11	2	72	11	5	1	0	0	1	1	0	0	49	9
8:45:00	101	20	2061	331	164	29	11	0	82	10	8	3	0	0	1	0	0	0	60	11
9:00:00	117	16	2376	315	192	28	13	2	97	15	8	0	0	0	1	0	0	0	87	27
9:00:13	117	0	2376	0	192	0	13	0	97	0	8	0	0	0	1	0	0	0	87	0
16:00:00	117	0	2376	0	192	0	13	0	97	0	8	0	0	0	1	0	0	0	87	0
16:15:00	181	64	2628	252	208	16	15	2	110	13	8	0	0	0	2	1	0	0	95	8
16:30:00	234	53	2940	312	231	23	16	1	128	18	8	0	0	0	3	1	0	0	102	7
16:45:00	315	81	3235	295	264	33	17	1	143	15	8	0	0	0	3	0	0	0	119	17
17:00:00	403	88	3571	336	286	22	20	3	155	12	10	2	0	0	3	0	0	0	126	7
17:15:00	488	85	3890	319	313	27	21	1	170	15	11	1	0	0	3	0	0	0	143	17
17:30:00	556	68	4214	324	341	28	22	1	182	12	11	0	0	0	4	1	0	0	168	25
17:45:00	629	73	4594	380	379	38	23	1	194	12	11	0	0	0	4	0	0	0	186	18
18:00:00	691	62	4962	368	405	26	24	1	205	11	12	1	0	0	4	0	0	0	196	10
18:00:22	691	0	4966	4	405	0	24	0	205	0	12	0	0	0	4	0	0	0	196	0
18:15:00	691	0	4966	0	405	0	24	0	205	0	12	0	0	0	4	0	0	0	196	0
18:15:15	691	0	4966	0	405	0	24	0	205	0	12	0	0	0	4	0	0	0	196	0

Count Date: 12-Oct-17 Site #: 1729100003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	32	32	229	228	21	21	2	2	5	5	2	2	0	0	0	0	0	0	12	12
7:30:00	59	27	542	313	42	21	5	3	11	6	3	1	0	0	0	0	0	0	24	12
7:45:00	95	36	900	358	75	33	5	0	15	4	4	1	0	0	0	0	0	0	35	11
8:00:00	140	45	1230	330	99	24	8	3	26	11	4	0	0	0	0	0	0	0	46	11
8:15:00	198	58	1612	382	136	37	11	3	29	3	5	1	0	0	0	0	0	0	54	8
8:30:00	240	42	1951	339	170	34	12	1	35	6	6	1	0	0	0	0	0	0	81	27
8:45:00	293	53	2353	402	217	47	13	1	43	8	9	3	0	0	0	0	0	0	95	14
9:00:00	325	32	2700	347	258	41	15	2	50	7	12	3	0	0	0	0	0	0	98	3
9:00:13	325	0	2700	0	258	0	15	0	50	0	12	0	0	0	0	0	0	0	98	0
16:00:00	325	0	2701	1	258	0	15	0	50	0	12	0	0	0	0	0	0	0	98	0
16:15:00	365	40	2863	162	279	21	16	1	54	4	12	0	0	0	0	0	0	0	111	13
16:30:00	393	28	3024	161	304	25	16	0	58	4	12	0	0	0	0	0	0	0	123	12
16:45:00	428	35	3149	125	331	27	16	0	61	3	12	0	0	0	0	0	0	0	140	17
17:00:00	449	21	3291	142	350	19	20	4	65	4	12	0	0	0	0	0	0	0	147	7
17:15:00	486	37	3435	144	383	33	20	0	67	2	12	0	0	0	0	0	0	0	159	12
17:30:00	528	42	3575	140	436	53	20	0	70	3	12	0	0	0	0	0	0	0	163	4
17:45:00	562	34	3703	128	493	57	20	0	73	3	12	0	0	0	0	0	0	0	186	23
18:00:00	595	33	3848	145	539	46	20	0	77	4	12	0	0	0	0	0	0	0	204	18
18:00:22	595	0	3849	1	539	0	20	0	77	0	12	0	0	0	0	0	0	0	204	0
18:15:00	595	0	3849	0	539	0	20	0	77	0	12	0	0	0	0	0	0	0	204	0
18:15:15	595	0	3849	0	539	0	20	0	77	0	12	0	0	0	0	0	0	0	204	0

Morning Peak Diagram

Specified Period	One Hour Peak
From: 7:00:00	**From:** 8:00:00
To: 9:00:00	**To:** 9:00:00

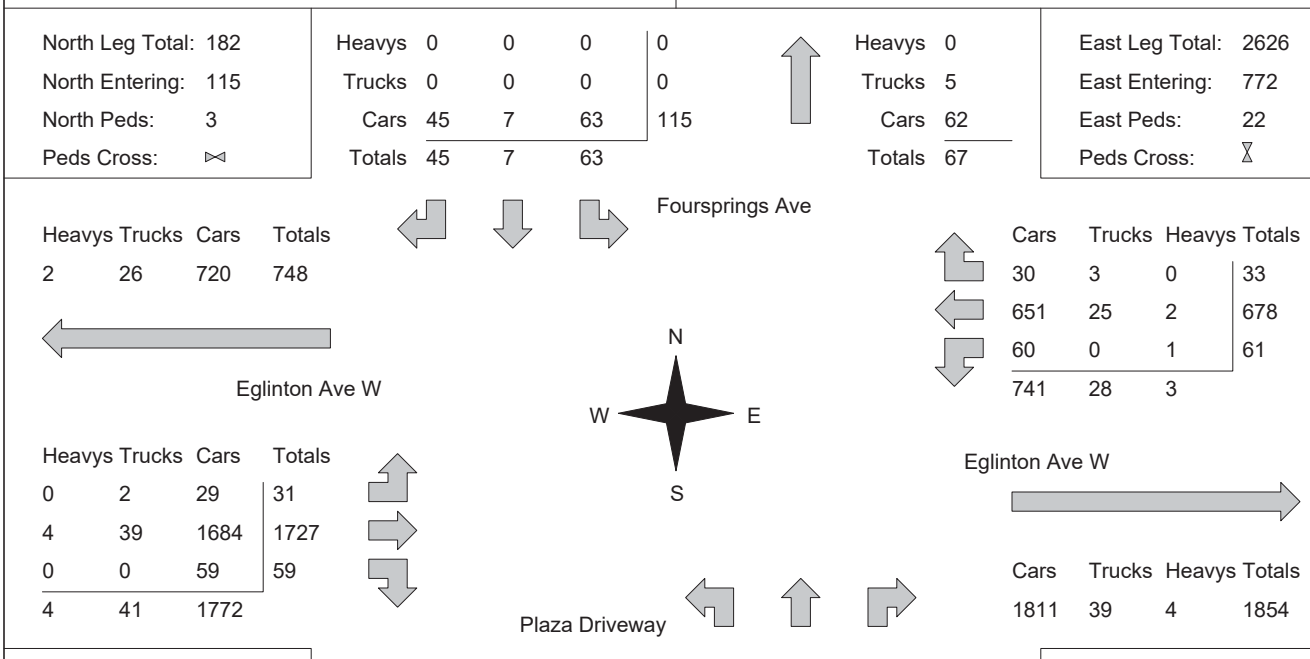
Municipality: Mississauga
Site #: 1729100004
Intersection: Eglinton Ave W & Foursprings Ave-
TFR File #: 3
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Eglinton Ave W runs W/E



Comments

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

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

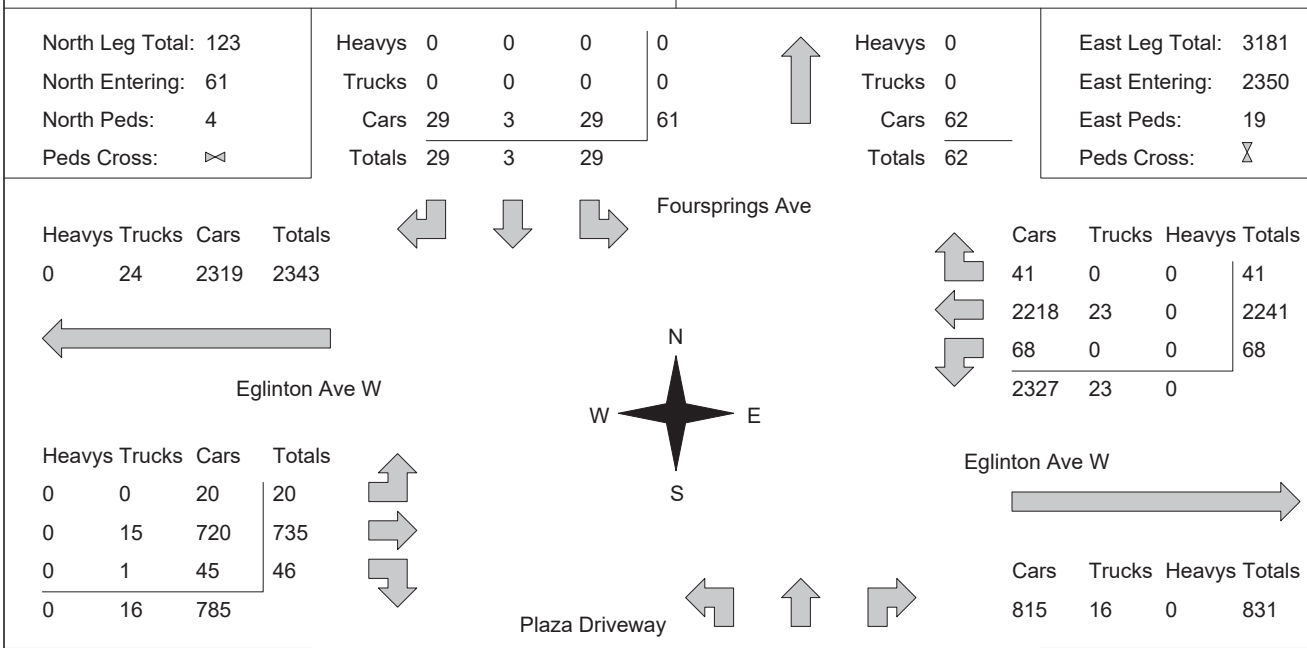
Municipality: Mississauga
Site #: 1729100004
Intersection: Eglinton Ave W & Foursprings Ave-
TFR File #: 3
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Eglinton Ave W runs W/E



Comments

Total Count Diagram

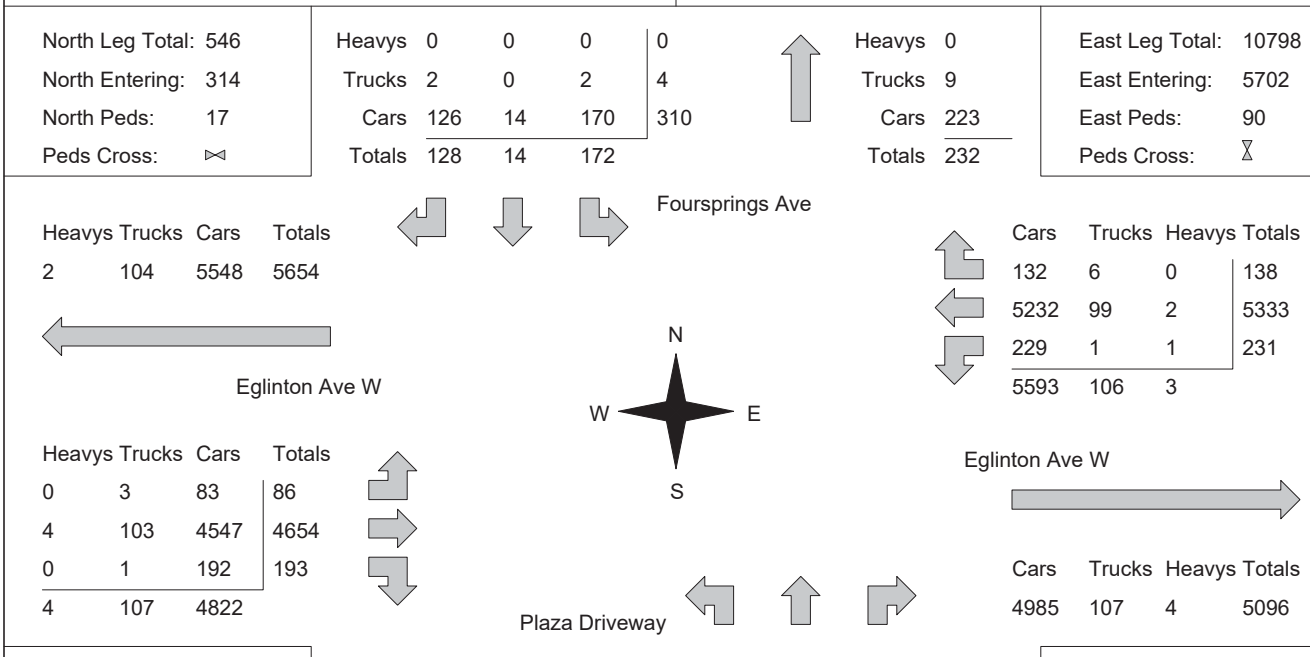
Municipality: Mississauga
Site #: 1729100004
Intersection: Eglinton Ave W & Foursprings Ave-
TFR File #: 3
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Eglinton Ave W runs W/E



Comments

Traffic Count Summary

Intersection: Eglinton Ave W & Foursprings Ave | **Count Date:** 12-Oct-17 | **Municipality:** Mississauga

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	3
8:00:00	52	2	25	79	6	169
9:00:00	63	7	45	115	3	207
16:00:00	0	0	0	0	0	2
17:00:00	33	4	33	70	4	211
18:00:00	24	1	25	50	4	193
Totals:	172	14	128	314	17	785

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	3	3	0
8:00:00	25	3	62	90	10
9:00:00	25	3	64	92	6
16:00:00	0	0	2	2	0
17:00:00	79	1	61	141	8
18:00:00	64	1	78	143	9
Totals:	193	8	270	471	33

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	2	7	0	9	0	17
8:00:00	43	413	26	482	27	1918
9:00:00	61	678	33	772	22	2589
16:00:00	0	4	0	4	0	8
17:00:00	70	2041	47	2158	23	2984
18:00:00	55	2190	32	2277	18	3119
Totals:	231	5333	138	5702	90	10635

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	8	0	8	0
8:00:00	10	1389	37	1436	3
9:00:00	31	1727	59	1817	12
16:00:00	0	3	1	4	0
17:00:00	22	729	75	826	3
18:00:00	23	798	21	842	5
Totals:	86	4654	193	4933	23

Calculated Values for Traffic Crossing Major Street

Hours Ending:	0:00	0:00	7:00	8:00	9:00	16:00	17:00	18:00
Crossing Values:	0	0	0	110	129	0	142	112

Count Date: 12-Oct-17 Site #: 1729100004

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	10	10	2	2	6	6	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	20	10	2	0	6	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0
7:45:00	32	12	2	0	12	6	1	0	0	0	0	0	0	0	0	0	0	0	6	5
8:00:00	50	18	2	0	24	12	2	1	0	0	1	1	0	0	0	0	0	0	6	0
8:15:00	60	10	3	1	37	13	2	0	0	0	1	0	0	0	0	0	0	0	6	0
8:30:00	76	16	7	4	51	14	2	0	0	0	1	0	0	0	0	0	0	0	6	0
8:45:00	94	18	8	1	61	10	2	0	0	0	1	0	0	0	0	0	0	0	8	2
9:00:00	113	19	9	1	69	8	2	0	0	0	1	0	0	0	0	0	0	0	9	1
9:00:54	113	0	9	0	69	0	2	0	0	0	1	0	0	0	0	0	0	0	9	0
16:00:00	113	0	9	0	69	0	2	0	0	0	1	0	0	0	0	0	0	0	9	0
16:15:00	118	5	10	1	77	8	2	0	0	0	2	1	0	0	0	0	0	0	11	2
16:30:00	130	12	11	1	84	7	2	0	0	0	2	0	0	0	0	0	0	0	11	0
16:45:00	137	7	12	1	92	8	2	0	0	0	2	0	0	0	0	0	0	0	13	2
17:00:00	146	9	13	1	101	9	2	0	0	0	2	0	0	0	0	0	0	0	13	0
17:15:00	152	6	13	0	104	3	2	0	0	0	2	0	0	0	0	0	0	0	14	1
17:30:00	159	7	14	1	113	9	2	0	0	0	2	0	0	0	0	0	0	0	15	1
17:45:00	163	4	14	0	116	3	2	0	0	0	2	0	0	0	0	0	0	0	17	2
18:00:00	170	7	14	0	126	10	2	0	0	0	2	0	0	0	0	0	0	0	17	0
18:00:48	170	0	14	0	126	0	2	0	0	0	2	0	0	0	0	0	0	0	17	0
18:15:00	170	0	14	0	126	0	2	0	0	0	2	0	0	0	0	0	0	0	17	0
18:15:15	170	0	14	0	126	0	2	0	0	0	2	0	0	0	0	0	0	0	17	0

Count Date: 12-Oct-17 Site #: 1729100004

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	2	2	6	6	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:15:00	8	6	80	74	1	1	0	0	7	6	0	0	0	0	0	0	0	0	4	4
7:30:00	22	14	168	88	9	8	0	0	15	8	0	0	0	0	0	0	0	0	9	5
7:45:00	36	14	278	110	15	6	0	0	21	6	1	1	0	0	0	0	0	0	23	14
8:00:00	45	9	397	119	23	8	0	0	23	2	3	2	0	0	0	0	0	0	27	4
8:15:00	61	16	566	169	27	4	0	0	31	8	3	0	0	0	0	0	0	0	34	7
8:30:00	75	14	722	156	31	4	0	0	38	7	4	1	0	0	0	0	0	0	37	3
8:45:00	88	13	876	154	43	12	0	0	41	3	6	2	0	0	0	0	0	0	46	9
9:00:00	105	17	1048	172	53	10	0	0	48	7	6	0	1	1	2	2	0	0	49	3
9:00:54	105	0	1049	1	53	0	0	0	48	0	6	0	1	0	2	0	0	0	49	0
16:00:00	105	0	1052	3	53	0	0	0	48	0	6	0	1	0	2	0	0	0	49	0
16:15:00	121	16	1540	488	64	11	1	1	55	7	6	0	1	0	2	0	0	0	53	4
16:30:00	140	19	1983	443	75	11	1	0	60	5	6	0	1	0	2	0	0	0	62	9
16:45:00	158	18	2515	532	89	14	1	0	66	6	6	0	1	0	2	0	0	0	66	4
17:00:00	174	16	3068	553	100	11	1	0	73	7	6	0	1	0	2	0	0	0	72	6
17:15:00	192	18	3638	570	108	8	1	0	78	5	6	0	1	0	2	0	0	0	77	5
17:30:00	208	16	4201	563	116	8	1	0	83	5	6	0	1	0	2	0	0	0	81	4
17:45:00	219	11	4708	507	123	7	1	0	89	6	6	0	1	0	2	0	0	0	85	4
18:00:00	229	10	5232	524	132	9	1	0	99	10	6	0	1	0	2	0	0	0	90	5
18:00:48	229	0	5232	0	132	0	1	0	99	0	6	0	1	0	2	0	0	0	90	0
18:15:00	229	0	5232	0	132	0	1	0	99	0	6	0	1	0	2	0	0	0	90	0
18:15:15	229	0	5232	0	132	0	1	0	99	0	6	0	1	0	2	0	0	0	90	0

Count Date: 12-Oct-17 Site #: 1729100004

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	5	5	1	1	19	16	1	1	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	10	5	1	0	35	16	1	0	0	0	1	1	0	0	0	0	0	0	0	0
7:45:00	10	0	1	0	49	14	1	0	0	0	1	0	0	0	0	0	0	0	3	3
8:00:00	24	14	3	2	64	15	1	0	0	0	1	0	0	0	0	0	0	0	10	7
8:15:00	33	9	5	2	88	24	1	0	0	0	1	0	0	0	0	0	0	0	13	3
8:30:00	39	6	5	0	102	14	2	1	0	0	1	0	0	0	0	0	0	0	13	0
8:45:00	41	2	6	1	114	12	2	0	0	0	1	0	0	0	0	0	0	0	15	2
9:00:00	48	7	6	0	128	14	2	0	0	0	1	0	0	0	0	0	0	0	16	1
9:00:54	48	0	6	0	128	0	2	0	0	0	1	0	0	0	0	0	0	0	16	0
16:00:00	48	0	6	0	130	2	2	0	0	0	1	0	0	0	0	0	0	0	16	0
16:15:00	65	17	6	0	147	17	2	0	0	0	1	0	0	0	0	0	0	0	18	2
16:30:00	93	28	6	0	168	21	2	0	0	0	1	0	0	0	0	0	0	0	19	1
16:45:00	109	16	7	1	180	12	2	0	0	0	1	0	0	0	0	0	0	0	22	3
17:00:00	127	18	7	0	191	11	2	0	0	0	1	0	0	0	0	0	0	0	24	2
17:15:00	146	19	7	0	213	22	3	1	0	0	2	1	0	0	0	0	0	0	26	2
17:30:00	165	19	7	0	234	21	3	0	0	0	2	0	0	0	0	0	0	0	29	3
17:45:00	179	14	7	0	251	17	3	0	0	0	2	0	0	0	0	0	0	0	31	2
18:00:00	190	11	8	1	268	17	3	0	0	0	2	0	0	0	0	0	0	0	33	2
18:00:48	190	0	8	0	268	0	3	0	0	0	2	0	0	0	0	0	0	0	33	0
18:15:00	190	0	8	0	268	0	3	0	0	0	2	0	0	0	0	0	0	0	33	0
18:15:15	190	0	8	0	268	0	3	0	0	0	2	0	0	0	0	0	0	0	33	0

Count Date: 12-Oct-17 Site #: 1729100004

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	263	255	8	8	0	0	9	9	0	0	0	0	0	0	0	0	0	0
7:30:00	2	1	598	335	14	6	0	0	17	8	0	0	0	0	0	0	0	0	0	0
7:45:00	6	4	999	401	25	11	0	0	22	5	0	0	0	0	0	0	0	0	2	2
8:00:00	10	4	1362	363	37	12	0	0	35	13	0	0	0	0	0	0	0	0	3	1
8:15:00	23	13	1805	443	52	15	1	1	42	7	0	0	0	0	0	0	0	0	7	4
8:30:00	32	9	2189	384	59	7	2	1	50	8	0	0	0	0	0	0	0	0	9	2
8:45:00	36	4	2659	470	80	21	2	0	62	12	0	0	0	0	0	0	0	0	13	4
9:00:00	39	3	3046	387	96	16	2	0	74	12	0	0	0	0	4	4	0	0	15	2
9:00:54	39	0	3046	0	96	0	2	0	74	0	0	0	0	0	4	0	0	0	15	0
16:00:00	39	0	3049	3	97	1	2	0	74	0	0	0	0	0	4	0	0	0	15	0
16:15:00	47	8	3248	199	119	22	3	1	79	5	0	0	0	0	4	0	0	0	17	2
16:30:00	53	6	3429	181	135	16	3	0	83	4	0	0	0	0	4	0	0	0	17	0
16:45:00	57	4	3595	166	154	19	3	0	86	3	0	0	0	0	4	0	0	0	17	0
17:00:00	60	3	3758	163	171	17	3	0	94	8	1	1	0	0	4	0	0	0	18	1
17:15:00	67	7	3944	186	180	9	3	0	95	1	1	0	0	0	4	0	0	0	21	3
17:30:00	73	6	4149	205	180	0	3	0	98	3	1	0	0	0	4	0	0	0	22	1
17:45:00	76	3	4347	198	187	7	3	0	101	3	1	0	0	0	4	0	0	0	22	0
18:00:00	83	7	4547	200	192	5	3	0	103	2	1	0	0	0	4	0	0	0	23	1
18:00:48	83	0	4547	0	192	0	3	0	103	0	1	0	0	0	4	0	0	0	23	0
18:15:00	83	0	4547	0	192	0	3	0	103	0	1	0	0	0	4	0	0	0	23	0
18:15:15	83	0	4547	0	192	0	3	0	103	0	1	0	0	0	4	0	0	0	23	0

Morning Peak Diagram

Specified Period	One Hour Peak
From: 7:00:00	**From:** 8:00:00
To: 9:00:00	**To:** 9:00:00

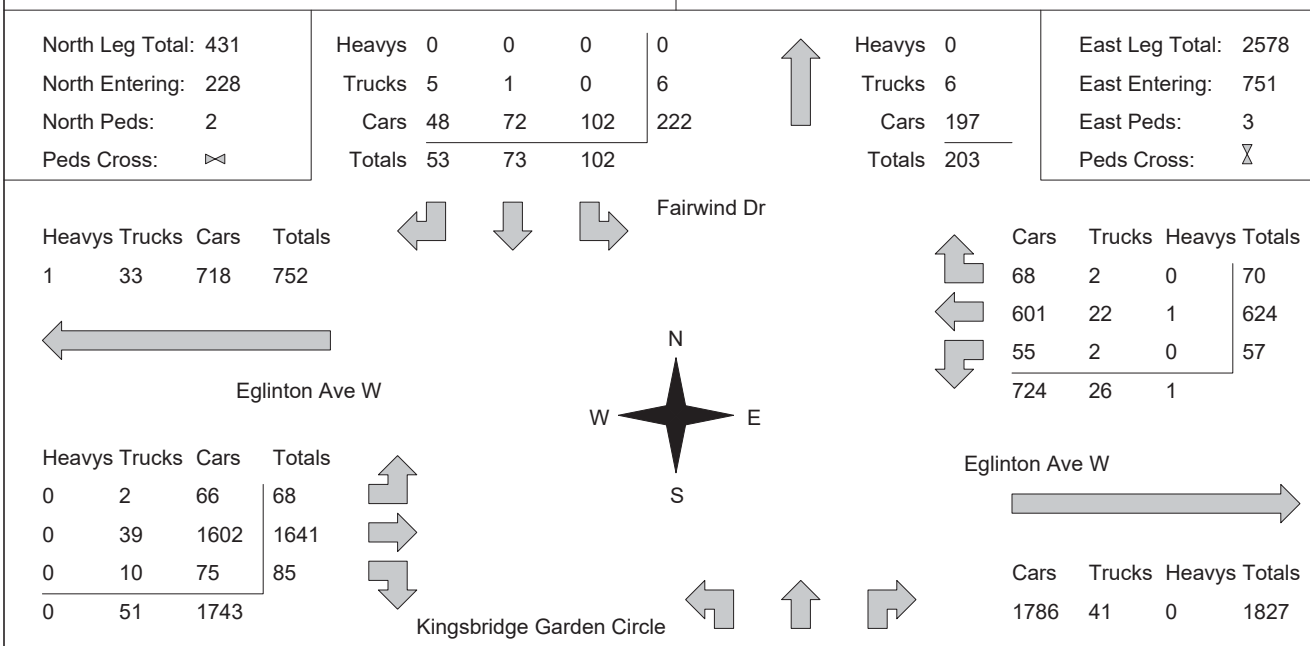
Municipality: Mississauga
Site #: 1729100005
Intersection: Eglinton Ave W & Kingsbridge Garc
TFR File #: 6
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Eglinton Ave W runs W/E



Comments

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

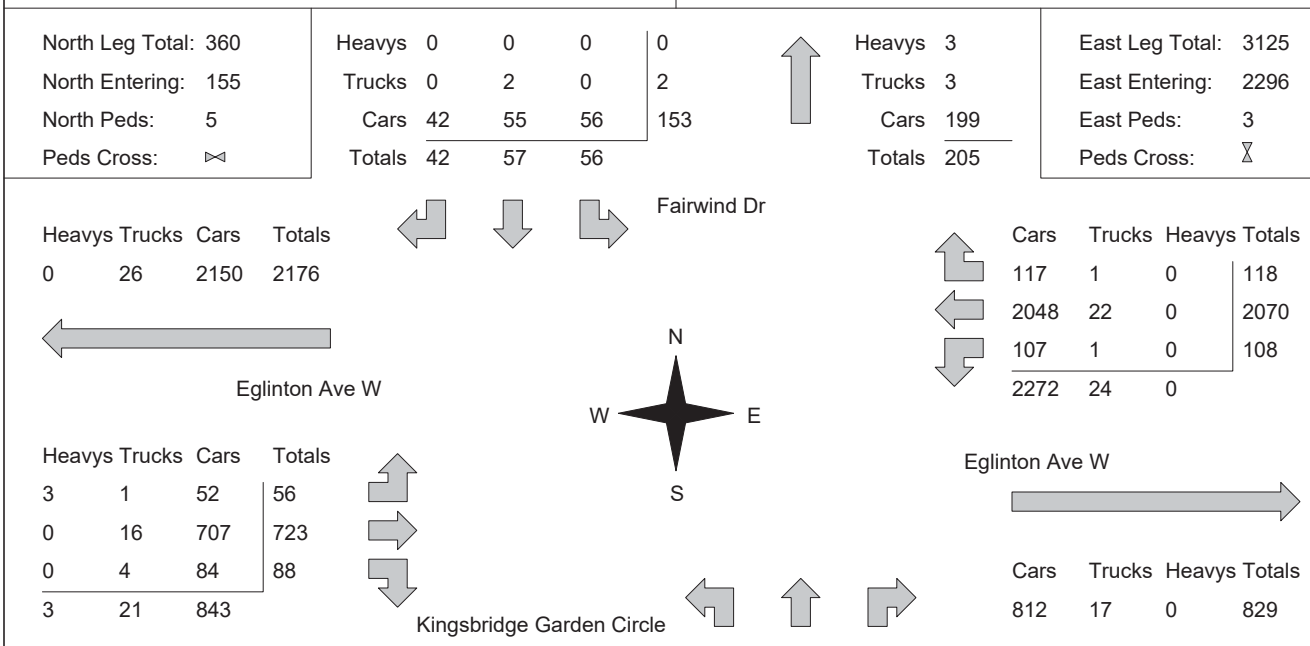
Municipality: Mississauga
Site #: 1729100005
Intersection: Eglinton Ave W & Kingsbridge Garc
TFR File #: 6
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Eglinton Ave W runs W/E



Comments

Total Count Diagram

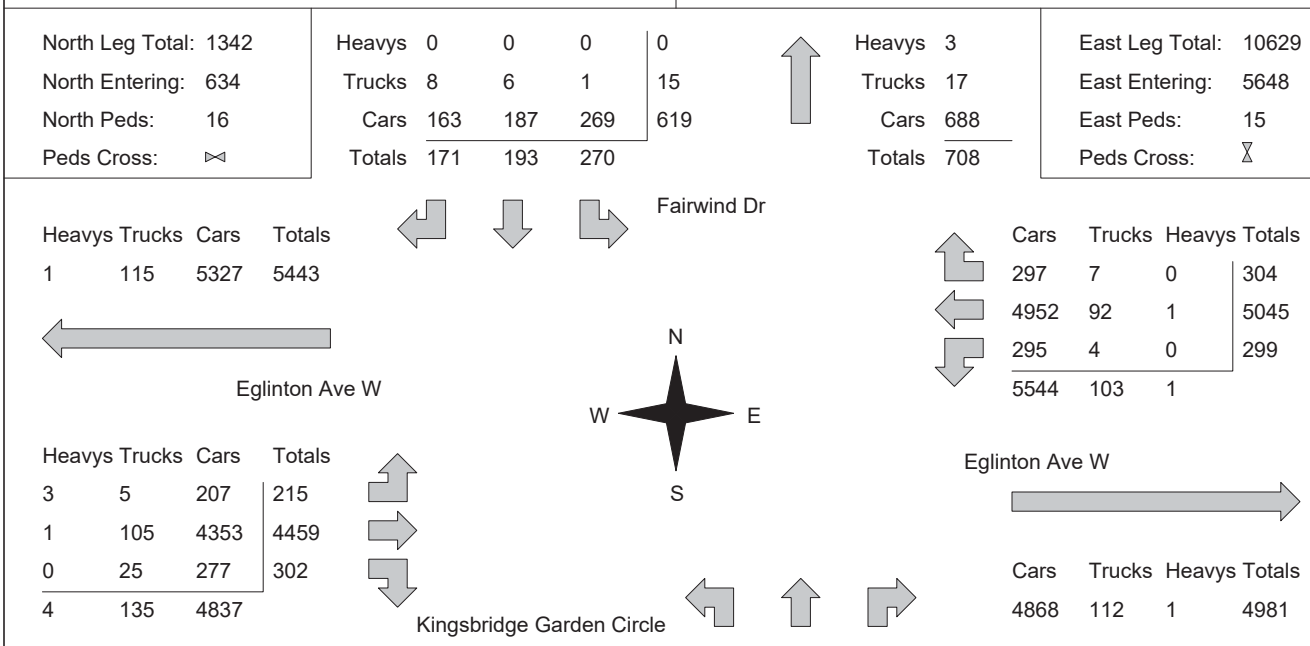
Municipality: Mississauga
Site #: 1729100005
Intersection: Eglinton Ave W & Kingsbridge Garc
TFR File #: 6
Count date: 12-Oct-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Eglinton Ave W runs W/E



Comments

Traffic Count Summary

Intersection: Eglinton Ave W & Kingsbridge Gar | **Count Date:** 12-Oct-17 | **Municipality:** Mississauga

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	70	21	26	117	3	286
9:00:00	102	73	53	228	2	452
16:00:00	0	0	0	0	0	3
17:00:00	45	46	46	137	4	256
18:00:00	50	53	46	149	7	302
Totals:	267	193	171	631	16	1299

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	36	70	63	169	14
9:00:00	75	65	84	224	11
16:00:00	3	0	0	3	0
17:00:00	45	20	54	119	28
18:00:00	68	34	51	153	20
Totals:	227	189	252	668	73

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	1	4	0	5	0	15
8:00:00	29	397	40	466	5	1866
9:00:00	57	624	70	751	3	2545
16:00:00	1	1	0	2	0	24
17:00:00	100	1979	73	2152	3	3006
18:00:00	109	2033	121	2263	4	3154
Totals:	297	5038	304	5639	15	10610

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	1	9	0	10	0
8:00:00	42	1310	48	1400	21
9:00:00	68	1641	85	1794	6
16:00:00	2	17	3	22	0
17:00:00	48	731	75	854	23
18:00:00	54	746	91	891	12
Totals:	215	4454	302	4971	62

Calculated Values for Traffic Crossing Major Street

Hours Ending:	0:00	0:00	7:00	8:00	9:00	16:00	17:00	18:00
Crossing Values:	0	0	0	202	259	3	162	187

Count Date: 12-Oct-17 Site #: 1729100005

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	10	10	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	26	16	4	4	5	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0
7:45:00	44	18	8	4	13	8	0	0	1	1	3	2	0	0	0	0	0	0	1	1
8:00:00	70	26	20	12	23	10	0	0	1	0	3	0	0	0	0	0	0	0	3	2
8:15:00	100	30	47	27	38	15	0	0	1	0	4	1	0	0	0	0	0	0	3	0
8:30:00	129	29	72	25	48	10	0	0	2	1	4	0	0	0	0	0	0	0	4	1
8:45:00	146	17	81	9	54	6	0	0	2	0	7	3	0	0	0	0	0	0	5	1
9:00:00	172	26	92	11	71	17	0	0	2	0	8	1	0	0	0	0	0	0	5	0
9:00:10	172	0	92	0	71	0	0	0	2	0	8	0	0	0	0	0	0	0	5	0
16:00:00	172	0	92	0	71	0	0	0	2	0	8	0	0	0	0	0	0	0	5	0
16:15:00	183	11	101	9	85	14	0	0	2	0	8	0	0	0	0	0	0	0	7	2
16:30:00	189	6	109	8	93	8	0	0	4	2	8	0	0	0	0	0	0	0	8	1
16:45:00	201	12	122	13	106	13	0	0	4	0	8	0	0	0	0	0	0	0	9	1
17:00:00	217	16	135	13	117	11	0	0	5	1	8	0	0	0	0	0	0	0	9	0
17:15:00	225	8	145	10	127	10	0	0	5	0	8	0	0	0	0	0	0	0	11	2
17:30:00	241	16	164	19	136	9	0	0	5	0	8	0	0	0	0	0	0	0	13	2
17:45:00	257	16	177	13	148	12	0	0	6	1	8	0	0	0	0	0	0	0	14	1
18:00:00	266	9	187	10	163	15	1	1	6	0	8	0	0	0	0	0	0	0	16	2
18:00:14	269	3	187	0	163	0	1	0	6	0	8	0	0	0	0	0	0	0	16	0
18:15:00	269	0	187	0	163	0	1	0	6	0	8	0	0	0	0	0	0	0	16	0
18:15:15	269	0	187	0	163	0	1	0	6	0	8	0	0	0	0	0	0	0	16	0

Count Date: 12-Oct-17 Site #: 1729100005

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	1	1	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	5	79	75	5	5	0	0	5	5	2	2	0	0	0	0	0	0	0	0
7:30:00	10	4	162	83	11	6	0	0	12	7	3	1	0	0	0	0	0	0	3	3
7:45:00	17	7	266	104	17	6	0	0	18	6	3	0	0	0	0	0	0	0	4	1
8:00:00	30	13	381	115	36	19	0	0	20	2	4	1	0	0	0	0	0	0	5	1
8:15:00	41	11	542	161	55	19	0	0	27	7	5	1	0	0	1	1	0	0	7	2
8:30:00	62	21	684	142	69	14	0	0	35	8	5	0	0	0	1	0	0	0	7	0
8:45:00	76	14	826	142	83	14	1	1	37	2	5	0	0	0	1	0	0	0	8	1
9:00:00	85	9	982	156	104	21	2	1	42	5	6	1	0	0	1	0	0	0	8	0
9:00:10	85	0	982	0	104	0	2	0	42	0	6	0	0	0	1	0	0	0	8	0
16:00:00	86	1	983	1	104	0	2	0	42	0	6	0	0	0	1	0	0	0	8	0
16:15:00	117	31	1449	466	121	17	2	0	50	8	6	0	0	0	1	0	0	0	9	1
16:30:00	139	22	1887	438	139	18	2	0	55	5	6	0	0	0	1	0	0	0	11	2
16:45:00	164	25	2406	519	156	17	2	0	61	6	6	0	0	0	1	0	0	0	11	0
17:00:00	186	22	2936	530	177	21	2	0	68	7	6	0	0	0	1	0	0	0	11	0
17:15:00	220	34	3468	532	202	25	3	1	72	4	7	1	0	0	1	0	0	0	13	2
17:30:00	243	23	3996	528	242	40	3	0	77	5	7	0	0	0	1	0	0	0	14	1
17:45:00	271	28	4454	458	273	31	3	0	83	6	7	0	0	0	1	0	0	0	14	0
18:00:00	293	22	4945	491	297	24	4	1	92	9	7	0	0	0	1	0	0	0	15	1
18:00:14	295	2	4952	7	297	0	4	0	92	0	7	0	0	0	1	0	0	0	15	0
18:15:00	295	0	4952	0	297	0	4	0	92	0	7	0	0	0	1	0	0	0	15	0
18:15:15	295	0	4952	0	297	0	4	0	92	0	7	0	0	0	1	0	0	0	15	0

Count Date: 12-Oct-17 Site #: 1729100005

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	5	5	3	3	13	13	0	0	0	0	1	1	0	0	0	0	0	0	1	1
7:30:00	9	4	7	4	31	18	1	1	1	1	2	1	0	0	0	0	0	0	3	2
7:45:00	17	8	25	18	46	15	2	1	1	0	2	0	0	0	0	0	0	0	7	4
8:00:00	34	17	68	43	61	15	2	0	2	1	2	0	0	0	0	0	0	0	14	7
8:15:00	48	14	105	37	83	22	4	2	4	2	2	0	0	0	0	0	0	0	19	5
8:30:00	61	13	115	10	101	18	4	0	4	0	2	0	0	0	0	0	0	0	21	2
8:45:00	73	12	122	7	118	17	7	3	4	0	3	1	0	0	0	0	0	0	23	2
9:00:00	103	30	131	9	143	25	8	1	4	0	4	1	0	0	0	0	0	0	25	2
9:00:10	106	3	131	0	143	0	8	0	4	0	4	0	0	0	0	0	0	0	25	0
16:00:00	106	0	131	0	143	0	8	0	4	0	4	0	0	0	0	0	0	0	25	0
16:15:00	119	13	138	7	156	13	9	1	4	0	5	1	0	0	0	0	0	0	32	7
16:30:00	126	7	144	6	165	9	9	0	4	0	5	0	0	0	0	0	0	0	42	10
16:45:00	137	11	144	0	182	17	10	1	4	0	5	0	0	0	0	0	0	0	50	8
17:00:00	148	11	150	6	195	13	11	1	5	1	6	1	0	0	0	0	0	0	53	3
17:15:00	167	19	154	4	205	10	13	2	5	0	6	0	0	0	0	0	0	0	56	3
17:30:00	179	12	162	8	222	17	14	1	5	0	6	0	0	0	0	0	0	0	62	6
17:45:00	197	18	174	12	231	9	14	0	5	0	6	0	0	0	0	0	0	0	68	6
18:00:00	212	15	184	10	246	15	15	1	5	0	6	0	0	0	0	0	0	0	73	5
18:00:14	212	0	184	0	246	0	15	0	5	0	6	0	0	0	0	0	0	0	73	0
18:15:00	212	0	184	0	246	0	15	0	5	0	6	0	0	0	0	0	0	0	73	0
18:15:15	212	0	184	0	246	0	15	0	5	0	6	0	0	0	0	0	0	0	73	0

Count Date: 12-Oct-17 Site #: 1729100005

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	1	1	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	5	250	241	11	11	0	0	8	8	1	1	0	0	0	0	0	0	6	6
7:30:00	13	7	558	308	19	8	0	0	15	7	4	3	0	0	0	0	0	0	7	1
7:45:00	24	11	945	387	24	5	1	1	20	5	6	2	0	0	0	0	0	0	17	10
8:00:00	41	17	1284	339	39	15	2	1	34	14	9	3	0	0	1	1	0	0	21	4
8:15:00	63	22	1706	422	52	13	3	1	42	8	11	2	0	0	1	0	0	0	23	2
8:30:00	75	12	2061	355	69	17	3	0	51	9	13	2	0	0	1	0	0	0	24	1
8:45:00	94	19	2531	470	96	27	4	1	62	11	17	4	0	0	1	0	0	0	24	0
9:00:00	107	13	2886	355	114	18	4	0	73	11	19	2	0	0	1	0	0	0	27	3
9:00:10	107	0	2887	1	114	0	4	0	73	0	19	0	0	0	1	0	0	0	27	0
16:00:00	109	2	2901	14	117	3	4	0	75	2	19	0	0	0	1	0	0	0	27	0
16:15:00	123	14	3103	202	136	19	4	0	80	5	20	1	0	0	1	0	0	0	36	9
16:30:00	136	13	3295	192	153	17	4	0	84	4	20	0	0	0	1	0	0	0	38	2
16:45:00	140	4	3455	160	173	20	4	0	86	2	21	1	0	0	1	0	0	0	44	6
17:00:00	157	17	3613	158	189	16	4	0	94	8	22	1	0	0	1	0	0	0	50	6
17:15:00	173	16	3798	185	213	24	4	0	95	1	23	1	2	2	1	0	0	0	50	0
17:30:00	183	10	3975	177	234	21	4	0	98	3	24	1	3	1	1	0	0	0	56	6
17:45:00	192	9	4162	187	257	23	5	1	102	4	25	1	3	0	1	0	0	0	57	1
18:00:00	207	15	4348	186	277	20	5	0	105	3	25	0	3	0	1	0	0	0	62	5
18:00:14	207	0	4353	5	277	0	5	0	105	0	25	0	3	0	1	0	0	0	62	0
18:15:00	207	0	4353	0	277	0	5	0	105	0	25	0	3	0	1	0	0	0	62	0
18:15:15	207	0	4353	0	277	0	5	0	105	0	25	0	3	0	1	0	0	0	62	0

HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30

Groups Printed- Autos - Heavies - Buses - Cyclists

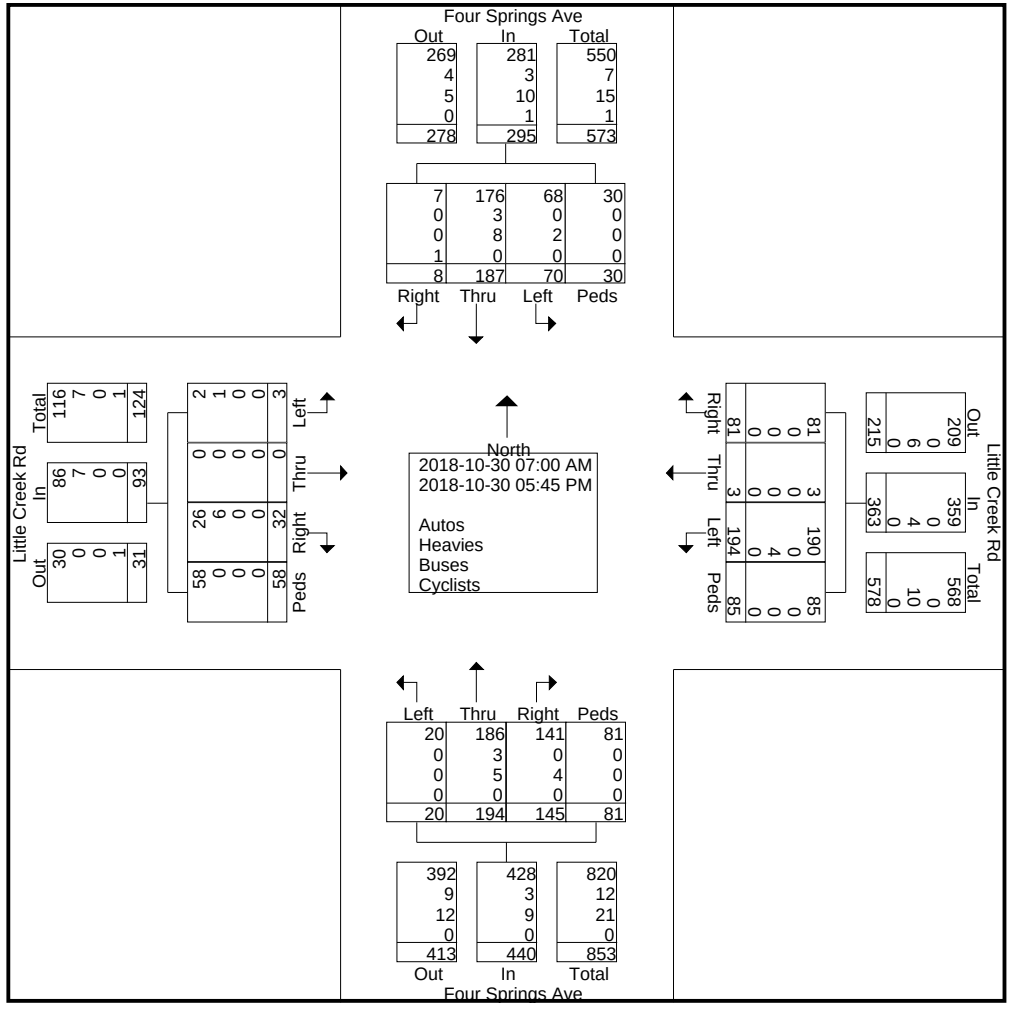
	Four Springs Ave Southbound					Little Creek Rd Westbound					Four Springs Ave Northbound					Little Creek Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	7	0	2	9	5	1	15	4	25	3	7	0	5	15	2	0	0	2	4	53
07:15 AM	0	10	2	0	12	2	0	11	3	16	5	8	1	4	18	1	0	0	3	4	50
07:30 AM	0	10	1	4	15	3	1	16	2	22	2	8	1	2	13	0	0	0	1	1	51
07:45 AM	1	17	2	2	22	8	0	21	4	33	5	8	0	2	15	2	0	0	2	4	74
Total	1	44	5	8	58	18	2	63	13	96	15	31	2	13	61	5	0	0	8	13	228
08:00 AM	1	19	3	0	23	12	0	19	3	34	2	6	0	1	9	1	0	0	1	2	68
08:15 AM	0	9	6	2	17	12	0	18	4	34	3	11	0	5	19	5	0	0	4	9	79
08:30 AM	0	12	1	1	14	10	0	22	13	45	7	14	0	6	27	5	0	1	4	10	96
08:45 AM	0	15	1	3	19	7	1	17	5	30	5	11	0	5	21	3	0	1	7	11	81
Total	1	55	11	6	73	41	1	76	25	143	17	42	0	17	76	14	0	2	16	32	324
04:00 PM	1	9	6	1	17	5	0	8	5	18	15	11	5	5	36	1	0	1	3	5	76
04:15 PM	0	10	4	0	14	2	0	4	4	10	9	10	2	3	24	2	0	0	1	3	51
04:30 PM	0	13	6	1	20	5	0	11	10	26	13	8	2	5	28	0	0	0	6	6	80
04:45 PM	2	4	3	2	11	1	0	4	5	10	18	21	0	11	50	2	0	0	4	6	77
Total	3	36	19	4	62	13	0	27	24	64	55	50	9	24	138	5	0	1	14	20	284
05:00 PM	0	13	7	4	24	2	0	8	4	14	17	15	0	6	38	4	0	0	2	6	82
05:15 PM	2	12	8	2	24	4	0	9	10	23	11	14	4	8	37	0	0	0	4	4	88
05:30 PM	1	12	8	1	22	1	0	4	3	8	17	24	3	10	54	3	0	0	11	14	98
05:45 PM	0	15	12	5	32	2	0	7	6	15	13	18	2	3	36	1	0	0	3	4	87
Total	3	52	35	12	102	9	0	28	23	60	58	71	9	27	165	8	0	0	20	28	355
Grand Total	8	187	70	30	295	81	3	194	85	363	145	194	20	81	440	32	0	3	58	93	1191
Apprch %	2.7	63.4	23.7	10.2		22.3	0.8	53.4	23.4		33	44.1	4.5	18.4		34.4	0	3.2	62.4		
Total %	0.7	15.7	5.9	2.5	24.8	6.8	0.3	16.3	7.1	30.5	12.2	16.3	1.7	6.8	36.9	2.7	0	0.3	4.9	7.8	
Autos	7	176	68	30	281	81	3	190	85	359	141	186	20	81	428	26	0	2	58	86	1154
% Autos	87.5	94.1	97.1	100	95.3	100	100	97.9	100	98.9	97.2	95.9	100	100	97.3	81.2	0	66.7	100	92.5	96.9
Heavies	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	0	1	0	7	13
% Heavies	0	1.6	0	0	1	0	0	0	0	0	0	1.5	0	0	0.7	18.8	0	33.3	0	7.5	1.1
Buses	0	8	2	0	10	0	0	4	0	4	4	5	0	0	9	0	0	0	0	0	23
% Buses	0	4.3	2.9	0	3.4	0	0	2.1	0	1.1	2.8	2.6	0	0	2	0	0	0	0	0	1.9
Cyclists	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Cyclists	12.5	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30
Page No : 2



HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30

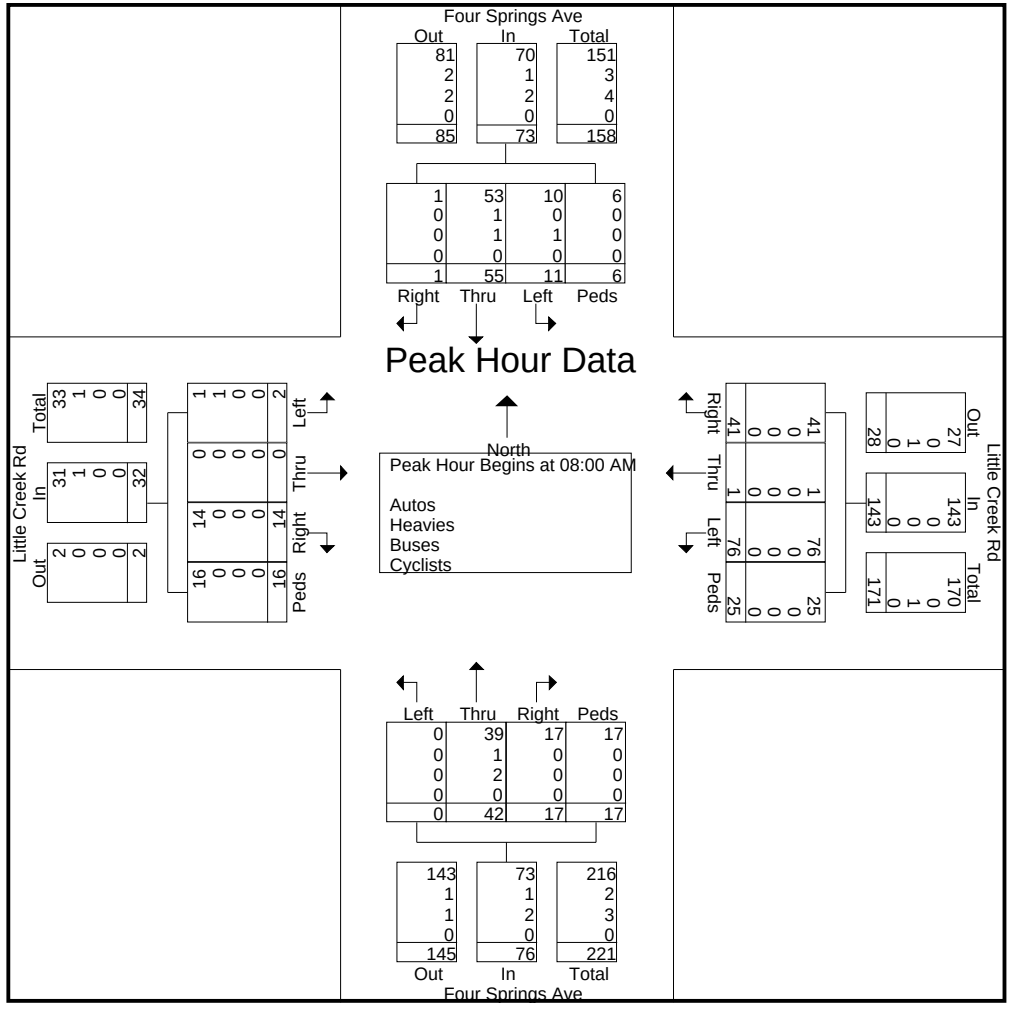
	Four Springs Ave Southbound					Little Creek Rd Westbound					Four Springs Ave Northbound					Little Creek Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**1**	**19**	3	0	**23**	**12**	0	19	3	34	2	6	0	1	9	1	0	0	1	2	68
08:15 AM	0	9	**6**	2	17	12	0	18	4	34	3	11	0	5	19	**5**	0	0	4	9	79
08:30 AM	0	12	1	1	14	10	0	**22**	**13**	**45**	**7**	**14**	0	**6**	**27**	5	0	**1**	4	10	**96**
08:45 AM	0	15	1	**3**	19	7	**1**	17	5	30	5	11	0	5	21	3	0	1	**7**	**11**	81
Total Volume	1	55	11	6	73	41	1	76	25	143	17	42	0	17	76	14	0	2	16	32	324
% App. Total	1.4	75.3	15.1	8.2		28.7	0.7	53.1	17.5		22.4	55.3	0	22.4		43.8	0	6.2	50		
PHF	.250	.724	.458	.500	.793	.854	.250	.864	.481	.794	.607	.750	.000	.708	.704	.700	.000	.500	.571	.727	.844
Autos	1	53	10	6	70	41	1	76	25	143	17	39	0	17	73	14	0	1	16	31	317
% Autos	100	96.4	90.9	100	95.9	100	100	100	100	100	100	92.9	0	100	96.1	100	0	50.0	100	96.9	97.8
Heavies	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	3
% Heavies	0	1.8	0	0	1.4	0	0	0	0	0	0	2.4	0	0	1.3	0	0	50.0	0	3.1	0.9
Buses	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
% Buses	0	1.8	9.1	0	2.7	0	0	0	0	0	0	4.8	0	0	2.6	0	0	0	0	0	1.2
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30

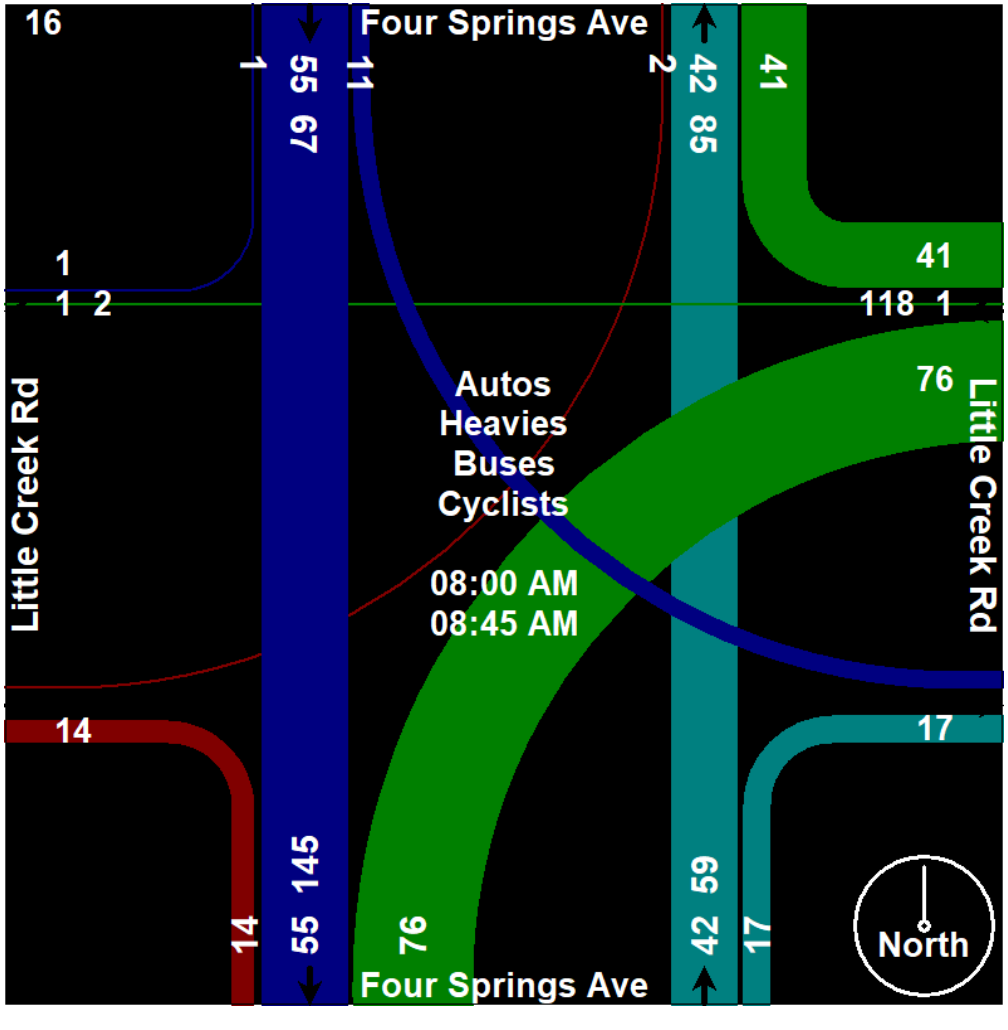


HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30
Page No : 5



HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30
Page No : 6

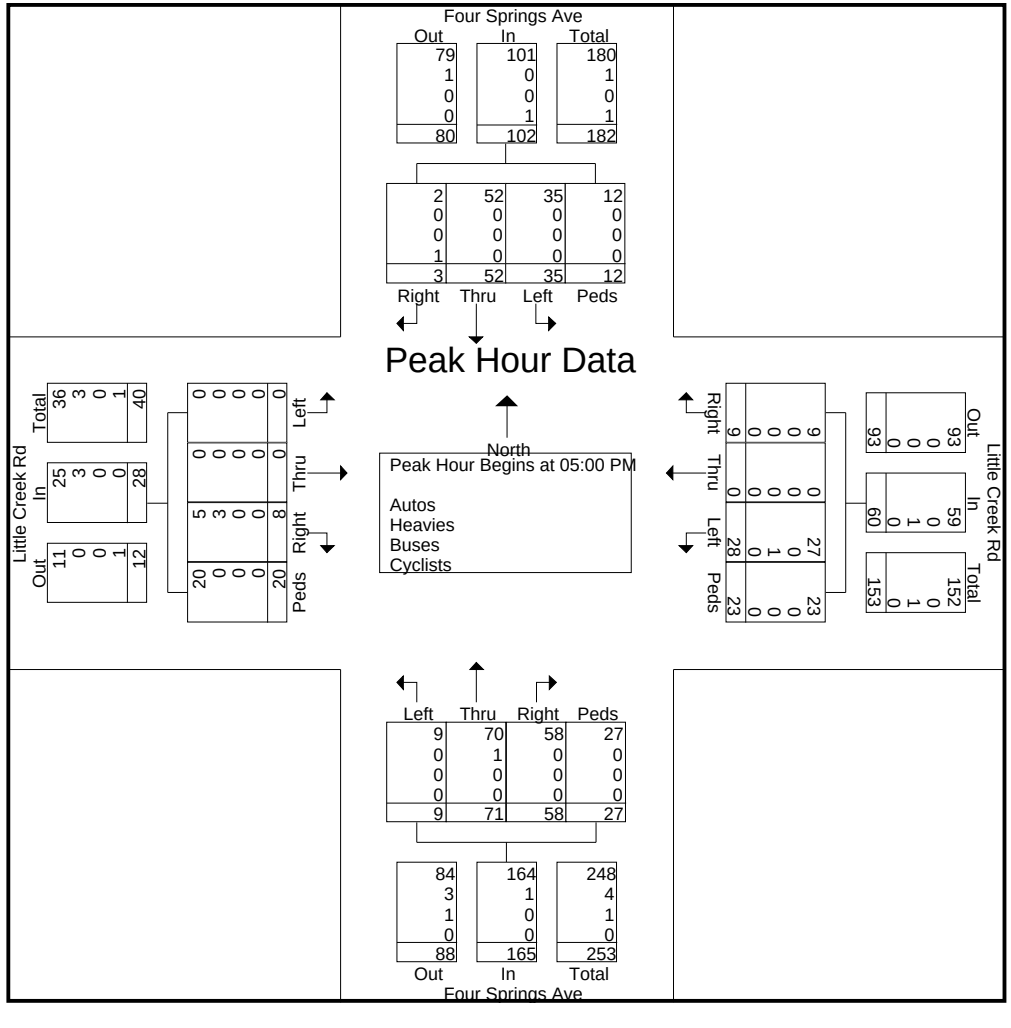
	Four Springs Ave Southbound					Little Creek Rd Westbound					Four Springs Ave Northbound					Little Creek Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	13	7	4	24	2	0	8	4	14	**17**	15	0	6	38	**4**	0	0	2	6	82
05:15 PM	**2**	12	8	2	24	**4**	0	**9**	**10**	**23**	11	14	**4**	8	37	0	0	0	4	4	88
05:30 PM	1	12	8	1	22	1	0	4	3	8	17	**24**	3	**10**	**54**	3	0	0	**11**	**14**	**98**
05:45 PM	0	**15**	**12**	**5**	**32**	2	0	7	6	15	13	18	2	3	36	1	0	0	3	4	87
Total Volume	3	52	35	12	102	9	0	28	23	60	58	71	9	27	165	8	0	0	20	28	355
% App. Total	2.9	51	34.3	11.8		15	0	46.7	38.3		35.2	43	5.5	16.4		28.6	0	0	71.4		
PHF	.375	.867	.729	.600	.797	.563	.000	.778	.575	.652	.853	.740	.563	.675	.764	.500	.000	.000	.455	.500	.906
Autos	2	52	35	12	101	9	0	27	23	59	58	70	9	27	164	5	0	0	20	25	349
% Autos	66.7	100	100	100	99.0	100	0	96.4	100	98.3	100	98.6	100	100	99.4	62.5	0	0	100	89.3	98.3
Heavies	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	4
% Heavies	0	0	0	0	0	0	0	0	0	0	0	1.4	0	0	0.6	37.5	0	0	0	10.7	1.1
Buses	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
% Buses	0	0	0	0	0	0	0	3.6	0	1.7	0	0	0	0	0	0	0	0	0	0	0.3
Cyclists	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Cyclists	33.3	0	0	0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3

HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30
Page No : 7

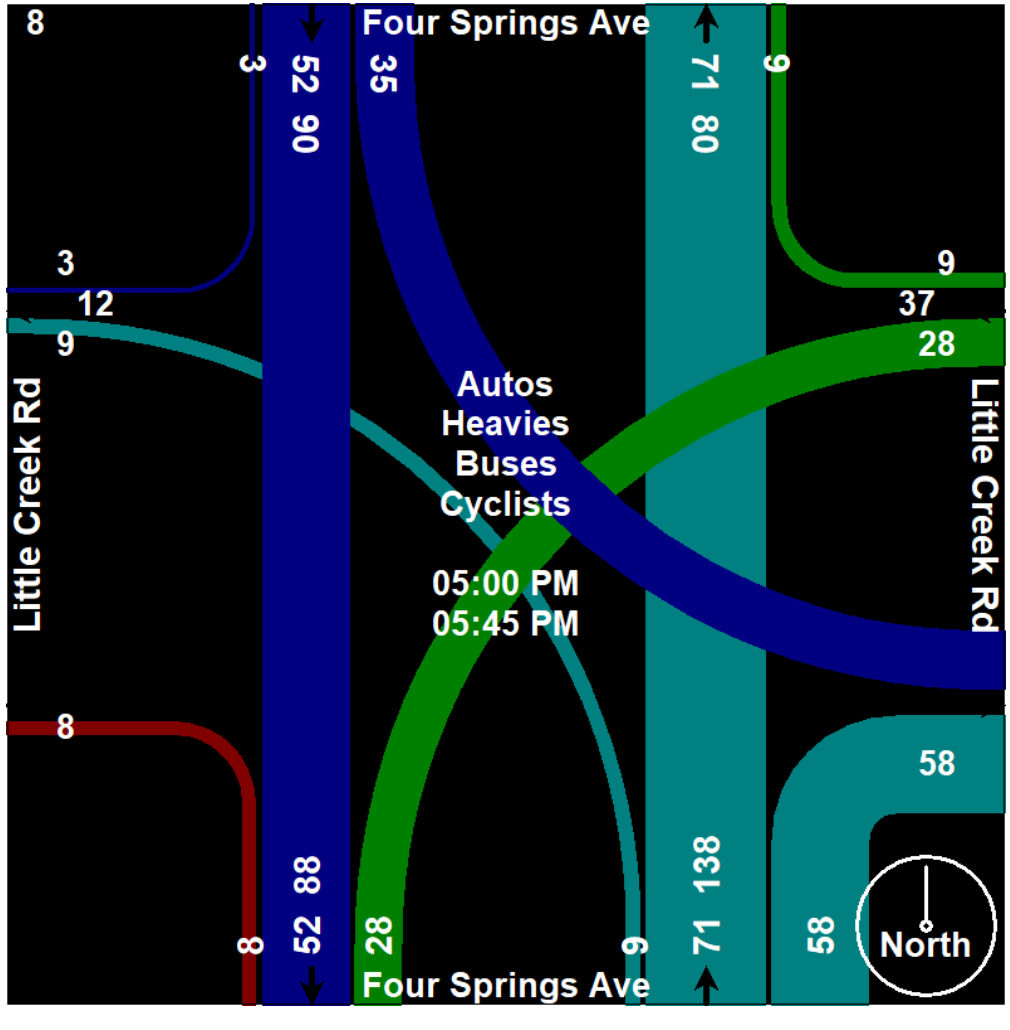


HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Little Creek Rd
Site Code : 00000000
Start Date : 2018-10-30
Page No : 8



HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30

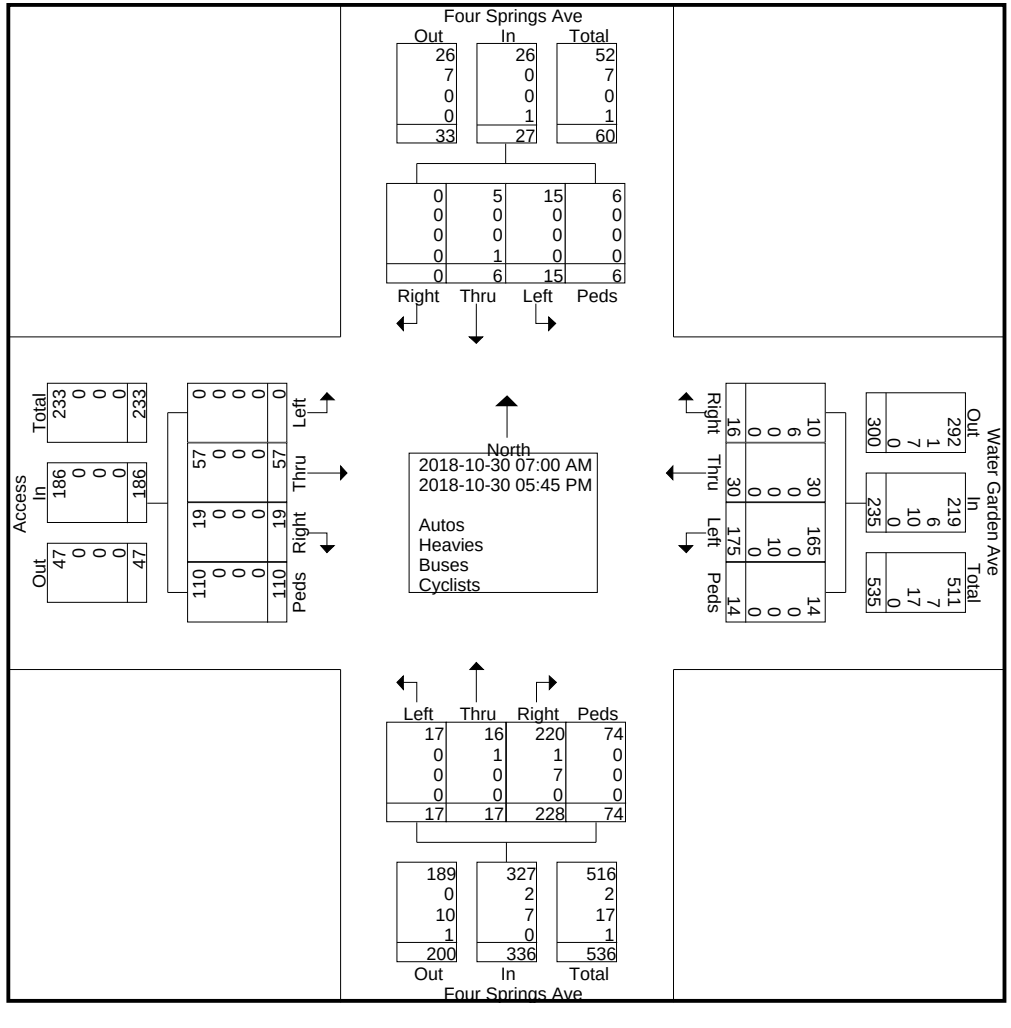
Groups Printed- Autos - Heavies - Buses - Cyclists

	Four Springs Ave Southbound					Water Garden Ave Westbound					Four Springs Ave Northbound					Access Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	0	1	14	1	0	1	16	1	4	0	4	9	26
07:15 AM	0	0	0	0	0	0	1	2	1	4	15	0	0	1	16	2	2	0	3	7	27
07:30 AM	0	0	1	0	1	0	0	4	0	4	14	0	0	0	14	0	2	0	1	3	22
07:45 AM	0	0	1	0	1	0	0	4	0	4	17	1	0	4	22	3	9	0	5	17	44
Total	0	0	2	0	2	0	1	11	1	13	60	2	0	6	68	6	17	0	13	36	119
08:00 AM	0	0	0	0	0	1	1	9	0	11	32	1	0	3	36	2	6	0	8	16	63
08:15 AM	0	0	1	0	1	2	1	6	0	9	26	1	0	4	31	1	8	0	7	16	57
08:30 AM	0	0	3	2	5	3	0	3	2	8	30	4	2	6	42	3	9	0	14	26	81
08:45 AM	0	1	3	2	6	2	3	6	1	12	19	3	2	20	44	1	3	0	28	32	94
Total	0	1	7	4	12	8	5	24	3	40	107	9	4	33	153	7	26	0	57	90	295
04:00 PM	0	2	0	1	3	1	2	17	1	21	10	1	1	4	16	0	2	0	3	5	45
04:15 PM	0	0	1	0	1	1	3	10	0	14	3	0	4	0	7	0	1	0	2	3	25
04:30 PM	0	0	0	0	0	1	1	19	2	23	9	0	1	2	12	1	1	0	10	12	47
04:45 PM	0	0	0	0	0	1	3	10	2	16	5	1	4	8	18	0	3	0	2	5	39
Total	0	2	1	1	4	4	9	56	5	74	27	2	10	14	53	1	7	0	17	25	156
05:00 PM	0	0	1	0	1	0	3	19	1	23	10	0	1	8	19	2	5	0	1	8	51
05:15 PM	0	2	1	0	3	1	4	18	2	25	10	1	1	7	19	1	1	0	8	10	57
05:30 PM	0	0	0	1	1	0	5	22	2	29	6	2	0	4	12	2	1	0	8	11	53
05:45 PM	0	1	3	0	4	3	3	25	0	31	8	1	1	2	12	0	0	0	6	6	53
Total	0	3	5	1	9	4	15	84	5	108	34	4	3	21	62	5	7	0	23	35	214
Grand Total	0	6	15	6	27	16	30	175	14	235	228	17	17	74	336	19	57	0	110	186	784
Apprch %	0	22.2	55.6	22.2		6.8	12.8	74.5	6		67.9	5.1	5.1	22		10.2	30.6	0	59.1		
Total %	0	0.8	1.9	0.8	3.4	2	3.8	22.3	1.8	30	29.1	2.2	2.2	9.4	42.9	2.4	7.3	0	14	23.7	
Autos	0	5	15	6	26	10	30	165	14	219	220	16	17	74	327	19	57	0	110	186	758
% Autos	0	83.3	100	100	96.3	62.5	100	94.3	100	93.2	96.5	94.1	100	100	97.3	100	100	0	100	100	96.7
Heavies	0	0	0	0	0	6	0	0	0	6	1	1	0	0	2	0	0	0	0	0	8
% Heavies	0	0	0	0	0	37.5	0	0	0	2.6	0.4	5.9	0	0	0.6	0	0	0	0	0	1
Buses	0	0	0	0	0	0	0	10	0	10	7	0	0	0	7	0	0	0	0	0	17
% Buses	0	0	0	0	0	0	0	5.7	0	4.3	3.1	0	0	0	2.1	0	0	0	0	0	2.2
Cyclists	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Cyclists	0	16.7	0	0	3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5
"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30
Page No : 2



HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30

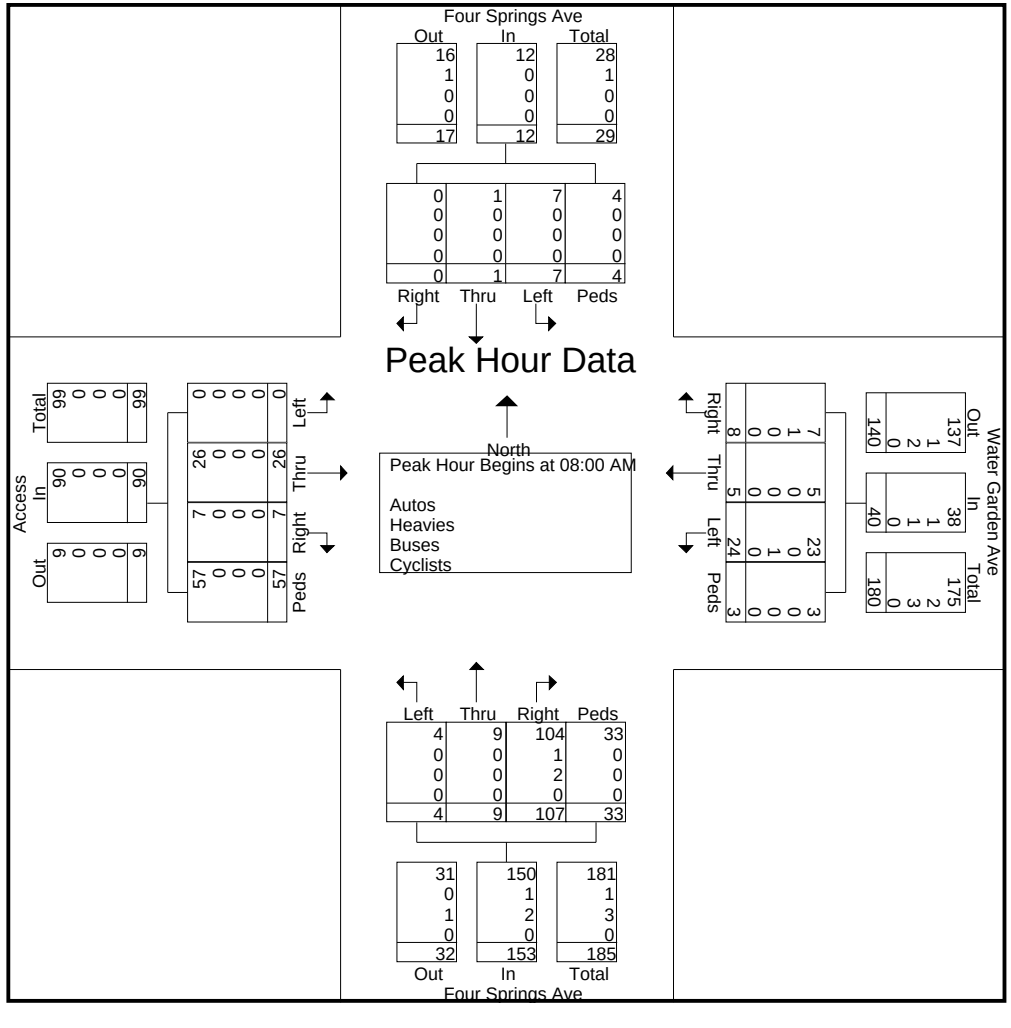
	Four Springs Ave Southbound					Water Garden Ave Westbound					Four Springs Ave Northbound					Access Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	1	1	**9**	0	11	**32**	1	0	3	36	2	6	0	8	16	63
08:15 AM	0	0	1	0	1	2	1	6	0	9	26	1	0	4	31	1	8	0	7	16	57
08:30 AM	0	0	**3**	**2**	5	**3**	0	3	**2**	8	30	**4**	**2**	6	42	**3**	**9**	0	14	26	81
08:45 AM	0	**1**	3	2	**6**	2	**3**	6	1	**12**	19	3	2	**20**	**44**	1	3	0	**28**	**32**	**94**
Total Volume	0	1	7	4	12	8	5	24	3	40	107	9	4	33	153	7	26	0	57	90	295
% App. Total	0	8.3	58.3	33.3		20	12.5	60	7.5		69.9	5.9	2.6	21.6		7.8	28.9	0	63.3		
PHF	.000	.250	.583	.500	.500	.667	.417	.667	.375	.833	.836	.563	.500	.413	.869	.583	.722	.000	.509	.703	.785
Autos	0	1	7	4	12	7	5	23	3	38	104	9	4	33	150	7	26	0	57	90	290
% Autos	0	100	100	100	100	87.5	100	95.8	100	95.0	97.2	100	100	100	98.0	100	100	0	100	100	98.3
Heavies	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
% Heavies	0	0	0	0	0	12.5	0	0	0	2.5	0.9	0	0	0	0.7	0	0	0	0	0	0.7
Buses	0	0	0	0	0	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	3
% Buses	0	0	0	0	0	0	0	4.2	0	2.5	1.9	0	0	0	1.3	0	0	0	0	0	1.0
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30
Page No : 4

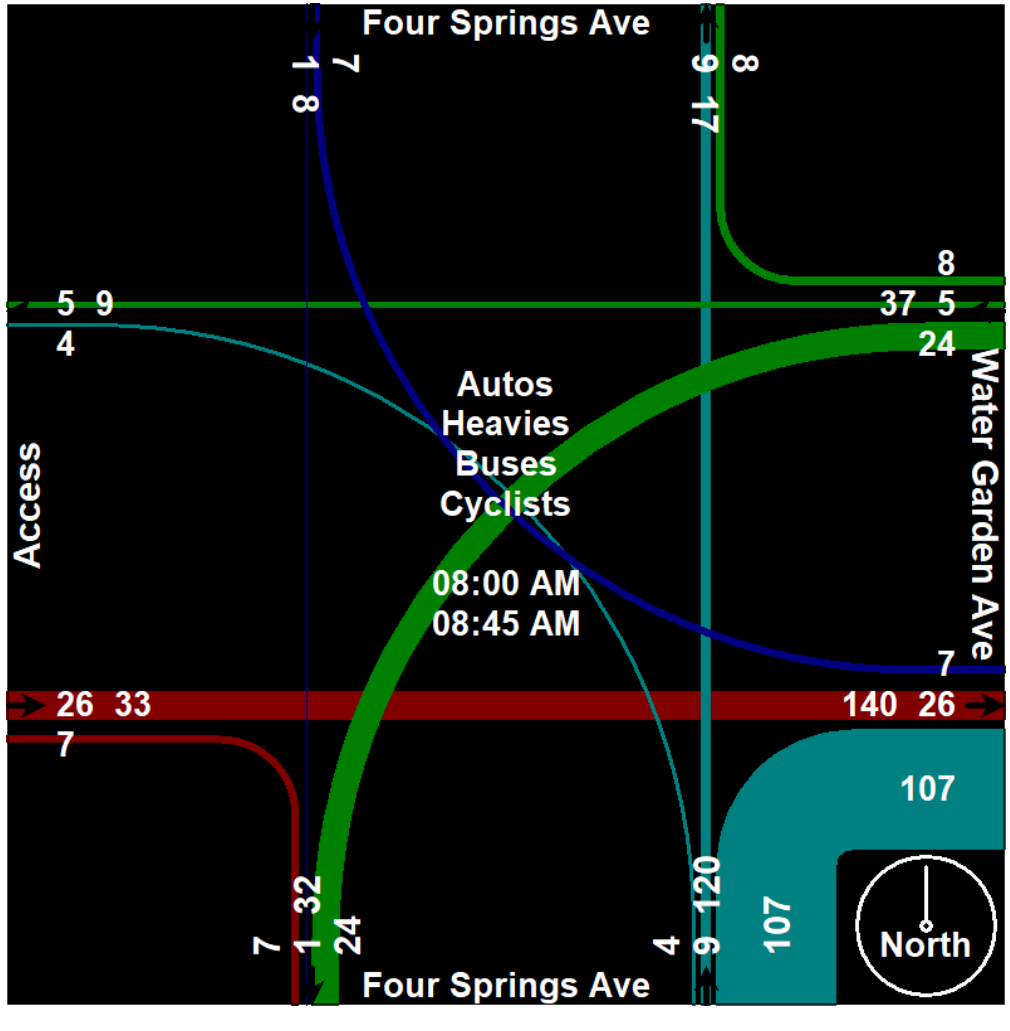


HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30
Page No : 5



HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30

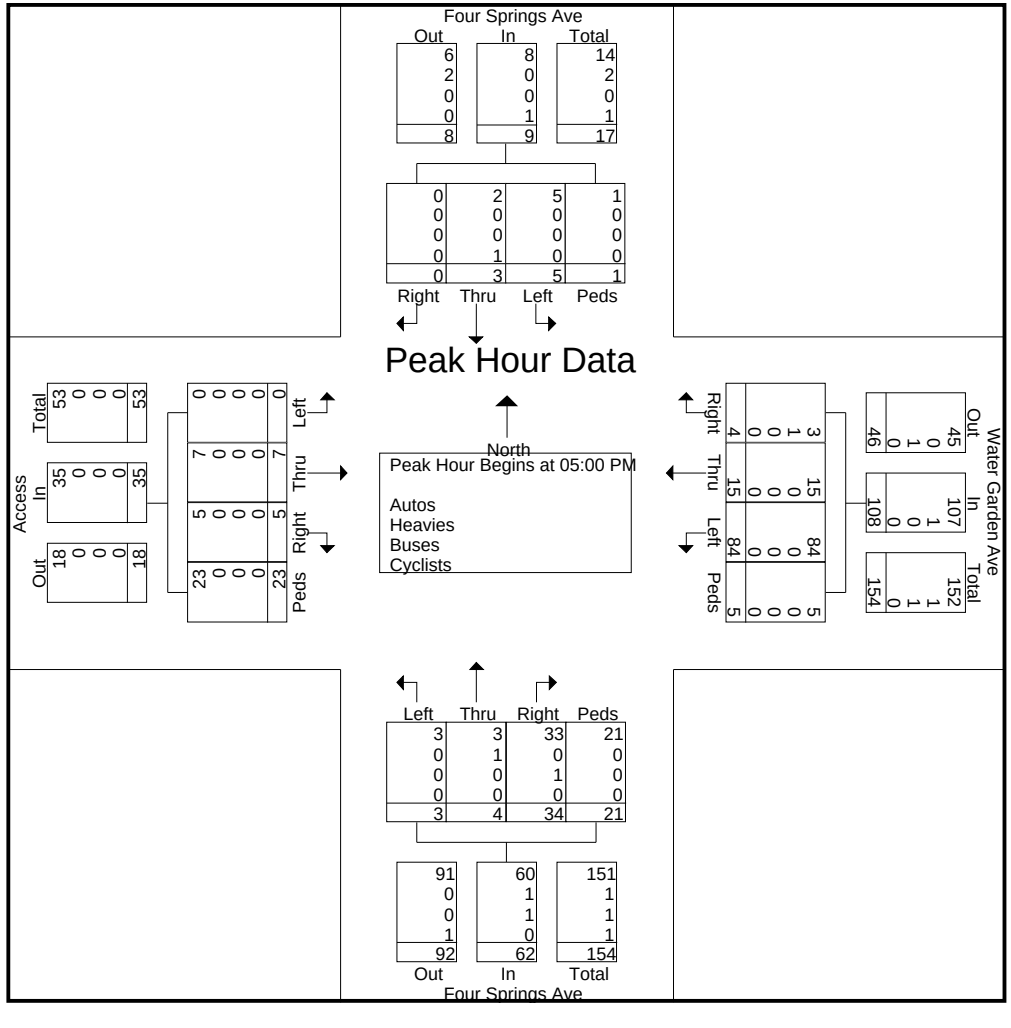
	Four Springs Ave Southbound					Water Garden Ave Westbound					Four Springs Ave Northbound					Access Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	1	0	1	0	3	19	1	23	**10**	0	**1**	**8**	**19**	**2**	**5**	0	1	8	51
05:15 PM	0	**2**	1	0	3	1	4	18	**2**	25	10	1	1	7	19	1	1	0	**8**	10	**57**
05:30 PM	0	0	0	**1**	1	0	**5**	22	2	29	6	**2**	0	4	12	2	1	0	8	**11**	53
05:45 PM	0	1	**3**	0	**4**	**3**	3	**25**	0	**31**	8	1	1	2	12	0	0	0	6	6	53
Total Volume	0	3	5	1	9	4	15	84	5	108	34	4	3	21	62	5	7	0	23	35	214
% App. Total	0	33.3	55.6	11.1		3.7	13.9	77.8	4.6		54.8	6.5	4.8	33.9		14.3	20	0	65.7		
PHF	.000	.375	.417	.250	.563	.333	.750	.840	.625	.871	.850	.500	.750	.656	.816	.625	.350	.000	.719	.795	.939
Autos	0	2	5	1	8	3	15	84	5	107	33	3	3	21	60	5	7	0	23	35	210
% Autos	0	66.7	100	100	88.9	75.0	100	100	100	99.1	97.1	75.0	100	100	96.8	100	100	0	100	100	98.1
Heavies	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
% Heavies	0	0	0	0	0	25.0	0	0	0	0.9	0	25.0	0	0	1.6	0	0	0	0	0	0.9
Buses	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
% Buses	0	0	0	0	0	0	0	0	0	0	2.9	0	0	0	1.6	0	0	0	0	0	0.5
Cyclists	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Cyclists	0	33.3	0	0	11.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5

HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30

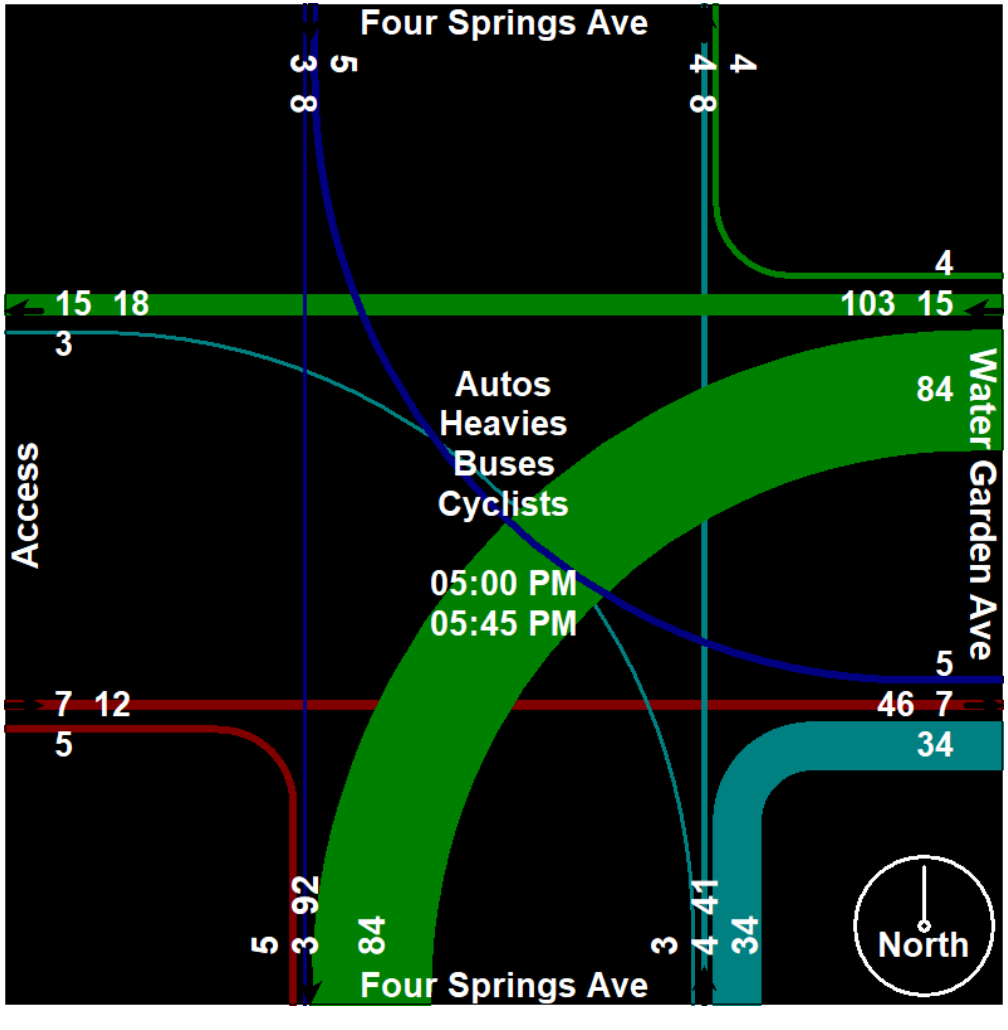


HORIZON DATA SERVICES LTD

318 Simonston Boulevard
Thornhill, ON L3T4T5

"We allways count....not estimate"

File Name : Four Springs Ave at Water Garden Ave
Site Code : 00000000
Start Date : 2018-10-30
Page No : 8



Appendix C – Signal Timing Plans

```
?? SHOW TIMING REPORT,ACT1-3,I371
  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 00:00   /     /     /     /     /     /    LO  101   2     2    2
   371 06:00  1/1    /     /     /    1/1    /    CC  160   1     1    1
1052

  LOCATION:  EGLINTON@KINGSBRIDGE            INTERSECTION NO.:   371
  DATE:      11-OCT-2017                     TIME:              06:00
  SCHEDULE:   1                              SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                          - Walk           =  86 seconds
       EGLINTON AVE                - FL. Don't Walk =  12 seconds
                                   - Amber          =   4 seconds
                                   - All Red        =   3 seconds

  4.   NS                          - Walk           =  15 seconds
       KINGSBRIDGE GDN             - FL. Don't Walk =  21 seconds
                                   - Sd. Don't Walk =  11 seconds
                                   - Maximum        =  47 seconds
                                   - Amber          =   4 seconds
                                   - All Red        =   4 seconds

                                 Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 09:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@KINGSBRIDGE            INTERSECTION NO.:   371
  DATE:      11-OCT-2017                     TIME:              09:30
  SCHEDULE:   1                              SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                          - Walk           =  81 seconds
       EGLINTON AVE                - FL. Don't Walk =  12 seconds
                                   - Amber          =   4 seconds
                                   - All Red        =   3 seconds
```

```
  4.   NS                              - Walk           =  15 seconds
       KINGSBRIDGE GDN                 - FL. Don't Walk =  21 seconds
                                       - Sd. Don't Walk =  16 seconds
                                       - Maximum        =  52 seconds
                                       - Amber          =   4 seconds
                                       - All Red        =   4 seconds

                                     Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 15:00  1/1    /     /     /    1/1    /    CC  160   3     3    3
1052

  LOCATION:  EGLINTON@KINGSBRIDGE           INTERSECTION NO.:   371
  DATE:      11-OCT-2017                    TIME:              15:00
  SCHEDULE:   1                             SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                   CONTROLLER TYPE:   S4
  NO. OF PH: 2                              CONTROL MODE:      CC

  2.   EW                              - Walk           =  86 seconds
       EGLINTON AVE                    - FL. Don't Walk =  12 seconds
                                       - Amber          =   4 seconds
                                       - All Red        =   3 seconds

  4.   NS                              - Walk           =  15 seconds
       KINGSBRIDGE GDN                 - FL. Don't Walk =  21 seconds
                                       - Sd. Don't Walk =  11 seconds
                                       - Maximum        =  47 seconds
                                       - Amber          =   4 seconds
                                       - All Red        =   4 seconds

                                     Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 19:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@KINGSBRIDGE           INTERSECTION NO.:   371
  DATE:      11-OCT-2017                    TIME:              19:30
  SCHEDULE:   1                             SPEC. FUNC.: 1 - Y  2 - N  3
- N
```

```
  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                            - Walk           =  81 seconds
       EGLINTON AVE                  - FL. Don't Walk =  12 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   3 seconds

  4.   NS                            - Walk           =  15 seconds
       KINGSBRIDGE GDN               - FL. Don't Walk =  21 seconds
                                     - Sd. Don't Walk =  16 seconds
                                     - Maximum        =  52 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   4 seconds

                                   Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 00:00   /     /     /     /     /     /    LO  101   2     2    2
   371 07:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@KINGSBRIDGE            INTERSECTION NO.:   371
  DATE:      11-OCT-2017                     TIME:              07:00
  SCHEDULE:   2                              SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                            - Walk           =  81 seconds
       EGLINTON AVE                  - FL. Don't Walk =  12 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   3 seconds

  4.   NS                            - Walk           =  15 seconds
       KINGSBRIDGE GDN               - FL. Don't Walk =  21 seconds
                                     - Sd. Don't Walk =  16 seconds
                                     - Maximum        =  52 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   4 seconds

                                   Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
```

```
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 00:00   /     /     /     /     /     /    LO  101   2     2    2
   371 08:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@KINGSBRIDGE            INTERSECTION NO.:   371
  DATE:      11-OCT-2017                     TIME:              08:00
  SCHEDULE:   3                              SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                            - Walk           =  81 seconds
       EGLINTON AVE                  - FL. Don't Walk =  12 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   3 seconds

  4.   NS                            - Walk           =  15 seconds
       KINGSBRIDGE GDN               - FL. Don't Walk =  21 seconds
                                     - Sd. Don't Walk =  16 seconds
                                     - Maximum        =  52 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   4 seconds

                                   Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 23:00   /     /     /     /     /     /    LO  101   2     2    2
1052
?? SHOW CDT371
CYCLE DEFINITION TABLE: 371
 PHASE  DIR  VEH  PED   PED   AMBER  ALL  COMM  SPECIAL  STREET
             MIN  MIN  CLEAR        RED  DELAY FEATURE  NAME
   1    WBL                              1             EGLINTON AVE
   2    EW         9    12      4     3     1    C       EGLINTON AVE
   3    SBL                              1             KINGSBRIDGE GDN
   4    NS        15    21      4     4     1             KINGSBRIDGE GDN
   5                                     1
   6                                     1
   7                                     1
   8                                     1
     VALID SPECIAL FUNCTIONS(Y/N)
      1   2   3  1&2 1&3 2&3 ALL
      Y   Y   Y   Y   Y   Y   Y
?? SHOW DINTREP,ACT1-3,I371
  DAILY INTERSECTION REPORT FOR ACT SCH  1 ( MON TUE WED THU FRI )
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
```

```
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   371 00:00   /     /     /     /     /     /    LO  101   2     2    2
   371 06:00  1/1    /     /     /    1/1    /    CC  160   1     1    1
1052
   371 09:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
   371 15:00  1/1    /     /     /    1/1    /    CC  160   3     3    3
1052
   371 19:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
  DAILY INTERSECTION REPORT FOR ACT SCH  2 ( SAT )
   371 00:00   /     /     /     /     /     /    LO  101   2     2    2
   371 07:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
  DAILY INTERSECTION REPORT FOR ACT SCH  3 ( SUN HOL )
   371 00:00   /     /     /     /     /     /    LO  101   2     2    2
   371 08:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
   371 23:00   /     /     /     /     /     /    LO  101   2     2    2
1052
?? SHOW SPL1-3,I371
   SPLIT TABLE
    INTERSECTION  371           EGLINTON@KINGSBRIDGE
    TABLE     (SPLIT) PHASE NUMBER            (MAX SPLIT) PHASE NUMBER
    NO.    1   2   3   4   5   6   7   8    1   2   3   4   5   6   7   8
          WBL EW  SBL NS
     1        66      34                        0       0
     2        63      37                        0       0
     3        66      34                        0       0
?? SHOW SPF1-3,I371
   SPECIAL FUNCTIONS
    INTERSECTION  371   EGLINTON@KINGSBRIDGE
    SPECIAL   IN(Y)/OUT(N)
    FUNCTION  #  1   2   3
                 NA PED CAL   PHASE OMIT BUT SPF2 Y=ON
      1          Y   N   N
      2          Y   N   N
      3          Y   N   N
?? SHOW OFF1-3,I371
   OFFSET TABLE
    INTERSECTION  371           EGLINTON@KINGSBRIDGE
    OFFSET #   OFFSET %
        1         59
        2         99
        3         23
??
```

```
?? SHOW TIMING REPORT,ACT1-3,I746
  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 00:00   /     /     /     /     /     /    LO  101   2     2    2
   746 06:00  1/1    /     /     /    1/1    /    CC  160   1     1    1
1052

  LOCATION:  EGLINTON@TIM HORTONS            INTERSECTION NO.:   746
  DATE:      11-OCT-2017                     TIME:              06:00
  SCHEDULE:   1                              SPEC. FUNC.: 1 - Y  2 - N  3
- Y

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                          - Walk           =  96 seconds
       EGLINTON AVE                - FL. Don't Walk =  10 seconds
                                   - Amber          =   4 seconds
                                   - All Red        =   3 seconds

  4.   NS                          - Walk           =  12 seconds
       TIM HORTONS/ACC             - FL. Don't Walk =  16 seconds
                                   - Sd. Don't Walk =  11 seconds
                                   - Maximum        =  39 seconds
                                   - Amber          =   4 seconds
                                   - All Red        =   4 seconds

                                 Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 09:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@TIM HORTONS            INTERSECTION NO.:   746
  DATE:      11-OCT-2017                     TIME:              09:30
  SCHEDULE:   1                              SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                          - Walk           =  87 seconds
       EGLINTON AVE                - FL. Don't Walk =  10 seconds
                                   - Amber          =   4 seconds
                                   - All Red        =   3 seconds
```

```
  4.   NS                              - Walk           =  12 seconds
       TIM HORTONS/ACC                 - FL. Don't Walk =  16 seconds
                                       - Sd. Don't Walk =  20 seconds
                                       - Maximum        =  48 seconds
                                       - Amber          =   4 seconds
                                       - All Red        =   4 seconds

                                     Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 15:00  1/1    /     /     /    1/1    /    CC  160   3     3    3
1052

  LOCATION:  EGLINTON@TIM HORTONS           INTERSECTION NO.:   746
  DATE:      11-OCT-2017                    TIME:              15:00
  SCHEDULE:   1                             SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                   CONTROLLER TYPE:   S4
  NO. OF PH: 2                              CONTROL MODE:      CC

  2.   EW                              - Walk           =  96 seconds
       EGLINTON AVE                    - FL. Don't Walk =  10 seconds
                                       - Amber          =   4 seconds
                                       - All Red        =   3 seconds

  4.   NS                              - Walk           =  12 seconds
       TIM HORTONS/ACC                 - FL. Don't Walk =  16 seconds
                                       - Sd. Don't Walk =  11 seconds
                                       - Maximum        =  39 seconds
                                       - Amber          =   4 seconds
                                       - All Red        =   4 seconds

                                     Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 19:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@TIM HORTONS           INTERSECTION NO.:   746
  DATE:      11-OCT-2017                    TIME:              19:30
  SCHEDULE:   1                             SPEC. FUNC.: 1 - Y  2 - N  3
- N
```

```
  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                            - Walk           =  87 seconds
       EGLINTON AVE                  - FL. Don't Walk =  10 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   3 seconds

  4.   NS                            - Walk           =  12 seconds
       TIM HORTONS/ACC               - FL. Don't Walk =  16 seconds
                                     - Sd. Don't Walk =  20 seconds
                                     - Maximum        =  48 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   4 seconds

                                   Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 00:00   /     /     /     /     /     /    LO  101   2     2    2
   746 07:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@TIM HORTONS            INTERSECTION NO.:   746
  DATE:      11-OCT-2017                     TIME:              07:00
  SCHEDULE:   2                              SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                            - Walk           =  87 seconds
       EGLINTON AVE                  - FL. Don't Walk =  10 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   3 seconds

  4.   NS                            - Walk           =  12 seconds
       TIM HORTONS/ACC               - FL. Don't Walk =  16 seconds
                                     - Sd. Don't Walk =  20 seconds
                                     - Maximum        =  48 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   4 seconds

                                   Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
```

```
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 00:00   /     /     /     /     /     /    LO  101   2     2    2
   746 08:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052

  LOCATION:  EGLINTON@TIM HORTONS            INTERSECTION NO.:   746
  DATE:      11-OCT-2017                     TIME:              08:00
  SCHEDULE:   3                              SPEC. FUNC.: 1 - Y  2 - N  3
- N

  MAIN ST.:  EGLINTON AVE                    CONTROLLER TYPE:   S4
  NO. OF PH: 2                               CONTROL MODE:      CC

  2.   EW                            - Walk           =  87 seconds
       EGLINTON AVE                  - FL. Don't Walk =  10 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   3 seconds

  4.   NS                            - Walk           =  12 seconds
       TIM HORTONS/ACC               - FL. Don't Walk =  16 seconds
                                     - Sd. Don't Walk =  20 seconds
                                     - Maximum        =  48 seconds
                                     - Amber          =   4 seconds
                                     - All Red        =   4 seconds

                                   Total Cycle Length = 160 seconds

  SCHEDULED DATA
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 23:00   /     /     /     /     /     /    LO  101   2     2    2
1052
?? SHOW CDT746
CYCLE DEFINITION TABLE: 746
 PHASE  DIR  VEH  PED   PED   AMBER  ALL  COMM  SPECIAL  STREET
             MIN  MIN  CLEAR         RED  DELAY FEATURE  NAME
   1                                      1
   2    EW      8    10     4     3     1    C       EGLINTON AVE
   3                                      1
   4    NS     12    16     4     4     1            TIM HORTONS/ACC
   5                                      1
   6                                      1
   7                                      1
   8                                      1
     VALID SPECIAL FUNCTIONS(Y/N)
      1   2   3  1&2 1&3 2&3 ALL
      Y   Y   Y   Y   Y   Y   Y
?? SHOW DINTREP,ACT1-3,I746
  DAILY INTERSECTION REPORT FOR ACT SCH  1 ( MON TUE WED THU FRI )
  INT  TIME          SELECTION PLANS  IN USE         ALTERNATES
```

```
             MODE   CYC   OFF  SPLT  SPEC  DUP   MODE CYC  OFF  SPLT SPEC
DUP
                    LEN   NO.  NO.   FUNC  ISEC       LEN  NO.   NO. FUNC
ISEC
   746 00:00   /     /     /     /     /     /    LO  101   2     2    2
   746 06:00  1/1    /     /     /    1/1    /    CC  160   1     1    1
1052
   746 09:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
   746 15:00  1/1    /     /     /    1/1    /    CC  160   3     3    3
1052
   746 19:30  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
  DAILY INTERSECTION REPORT FOR ACT SCH  2 ( SAT )
   746 00:00   /     /     /     /     /     /    LO  101   2     2    2
   746 07:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
  DAILY INTERSECTION REPORT FOR ACT SCH  3 ( SUN HOL )
   746 00:00   /     /     /     /     /     /    LO  101   2     2    2
   746 08:00  1/1    /     /     /    1/1    /    CC  160   2     2    2
1052
   746 23:00   /     /     /     /     /     /    LO  101   2     2    2
1052
?? SHOW SPL1-3,I746
   SPLIT TABLE
    INTERSECTION  746           EGLINTON@TIM HORTONS
    TABLE     (SPLIT) PHASE NUMBER            (MAX SPLIT) PHASE NUMBER
    NO.    1   2   3   4   5   6   7   8    1   2   3   4   5   6   7   8
              EW      NS
     1        71      29                       0       0
     2        65      35                       0       0
     3        71      29                       0       0
?? SHOW SPF1-3,I746
   SPECIAL FUNCTIONS
    INTERSECTION  746   EGLINTON@TIM HORTONS
    SPECIAL   IN(Y)/OUT(N)
    FUNCTION  #  1   2   3
                 NA PED CAL   PHASE OMIT BUT SPF2 Y=ON
      1          Y   N   Y
      2          Y   N   N
      3          Y   N   N
?? SHOW OFF1-3,I746
   OFFSET TABLE
    INTERSECTION  746           EGLINTON@TIM HORTONS
    OFFSET #   OFFSET %
        1         14
        2         57
        3         30
??
```

Signal Timing Report

Time Generated: 2017-10-11 17:36:11

Region: Mississauga **Signal ID:** 2801 **Location:** HURONTARIO STREET N at Eglinton Avenue West

Phase	Units	1	2	3	4	5		7	8
Walk	Sec	0	14	0	15	0	14	0	15
Ped Clear	Sec	0	20	0	22	0	20	0	22
Min Green	Sec	5	8	5	8	5	8	5	8
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Maximum 1	Sec	20	33	15	32	15	33	15	32
Maximum 2	Sec	20	33	15	32	15	33	15	32
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	2.0	3.0	0.0	3.0	0.0	3.0	2.0	3.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry

Coord Pattern	Units	1	2	3	4	5		7	8
Cycle Time	Sec	160	160	160	0	0	0	0	0
Offset	Sec	114	26	142	0	0	0	0	0
Split	Split	1	2	3	0	0	0	0	0
Sequence	Sequence	1	1	1	0	0	0	0	0

Coord Split	Units	1	2	3	4	5		7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	21	67	18	54	22	66	18	54
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	21	62	18	59	21	62	18	59
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	27	59	16	58	22	64	19	55
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5		7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F----------	J----------	-F----------	---A--------
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234 56789012345678	12345678901234 56789012345678	12345678901234 56789012345678	-2----------	----------0----	-2----------	----------0-----	----------4----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13		15	16
Month	Bit	----M-------	------J-----	-------A----	--------S---	---------O--	----------D	----------D	----------D
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	----------2---	--3----------	------7----------	---4----------	--------9----------	---------- 5	---------- 6	---------- 7
Day Plan	Number	3	3	3	3	3	3	3	3

TB Dayplan	Units	1	2	3	4	5		7	8
Plan 1 Hour	Hour	0	6	9	15	19	0	0	0
Plan 1 Minute	Min	0	0	30	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	2	0	0	0
Plan 2 Hour	Hour	0	7	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	0	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	0	0

TB Action	Units	1	2	3	4	5		7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Time Generated: 2017-10-11 18:34:29

Region: Mississauga **Signal ID:** 3617 **Location:** HURONTARIO STREET N at Ceremonial Drive/ Nahani Way

Phase	Units	1	2	3	4	5		7	8
Walk	Sec	0	9	0	16	0	0	0	0
Ped Clear	Sec	0	12	0	23	0	0	0	0
Min Green	Sec	5	8	0	8	0	0	0	0
Passage	Sec	2.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	10	30	0	20	0	0	0	0
Maximum 2	Sec	10	30	0	20	0	0	0	0
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	2.5	0.0	4.0	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	other	phaseNotOn	other	other	other	other
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk	0	Enabled Non Lock Det	0	0	0	0

Coord Pattern	Units	1	2	3	4	5		7	8
Cycle Time	Sec	160	160	160	0	0	0	0	0
Offset	Sec	101	158	117	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5		7	8
Split 1 - Mode	Enum	phaseOmitted	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	102	0	58	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	phaseOmitted	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	98	0	62	0	0	0	0
Split 2 - Coord	Enum	false	true	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	13	90	0	57	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false

TB Schedule	Units	1	2	3	4	5		7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F----------	J----------	-F----------	---A--------
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	123456789012345	123456789012345	12345678901234	-2----------	----------0-----	-2----------	----------0-----	----------4----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13		15	16
Month	Bit	----M-------	------J-----	-------A----	--------S---	---------O--	----------D	----------D	----------D
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	----------2---	--3----------	------7----------	---4----------	--------9----------	----------	----------	----------
Day Plan	Number	3	3	3	3	3	3	3	3

TB Dayplan	Units	1	2	3	4	5		7	8
Plan 1 Hour	Hour	0	6	9	15	19	0	0	0
Plan 1 Minute	Min	0	0	30	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	2	0	0	0
Plan 2 Hour	Hour	0	7	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	0	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	0	0

TB Action	Units	1	2	3	4	5		7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	Special Func 1

Signal Timing Report

Time Generated: 2017-10-11 17:49:57

Region: Mississauga **Signal ID:** 3625 **Location:** HURONTARIO STREET N at Watergarden Drive

Phase	Units	1	2	3	4	5		7	8
Walk	Sec	0	8	0	12	0	8	0	12
Ped Clear	Sec	0	11	0	18	0	11	0	18
Min Green	Sec	0	8	0	8	0	8	0	8
Passage	Sec	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Maximum 1	Sec	0	33	0	30	0	33	0	30
Maximum 2	Sec	0	33	0	30	0	33	0	30
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.0	0.0	4.0	0.0	3.0	0.0	4.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	other	redClear	other	phaseNotOn	other	redClear	other	phaseNotOn
[P2] Options	Bit	0	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	0	Enabled Non Lock Det Dual Entry	0	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	0	Enabled Non Lock Det Dual Entry

Coord Pattern	Units	1	2	3	4	5		7	8
Cycle Time	Sec	160	160	160	0	0	0	0	0
Offset	Sec	98	11	130	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5		7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	120	0	40	0	120	0	40
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	120	0	40	0	120	0	40
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	120	0	40	0	120	0	40
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5		7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F----------	J----------	-F----------	---A--------
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890123456789	12345678901234567890123456789	12345678901234567890123456789	-2----------	----------0----	-2----------	----------0-----	----------4----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13		15	16
Month	Bit	----M-------	------J-----	-------A----	--------S---	---------O--	----------D	----------D	----------D
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	----------2---	--3----------	------7----------	---4----------	--------9----------	----------5----------	----------6----------	----------7----------
Day Plan	Number	3	3	3	3	3	3	3	3

TB Dayplan	Units	1	2	3	4	5		7	8
Plan 1 Hour	Hour	0	6	9	15	19	0	0	0
Plan 1 Minute	Min	0	0	30	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	2	0	0	0
Plan 2 Hour	Hour	0	7	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	0	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	0	0

TB Action	Units	1	2	3	4	5		7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

INT No.: **371**

LOCATION: **Eglinton Avenue @ Kingsbridge Garden Circle/Fairwind Drive**

SCHEDULED DATA

Mode	Cycle Length	OFF No.	Split No.	Spec Func	DUP ISEC
LO	101	2	2	2	1052

PHASING DATA

PHASE	MIN	MAX	WALK	DON'T WALK	AMBER	ALL-RED
2. E/W Eglinton	62	N/A	50	12	4	2.5
4. N/S Kingsbridge/ Fairwind	8	30	15	21	4	4

* ALL VALUES IN SECONDS

INT No.: **746**

LOCATION: **Eglinton Avenue @ Tim Horton's/Private Access**

SCHEDULED DATA

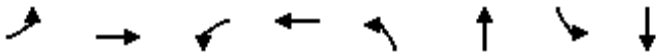
Mode	Cycle Length	OFF No.	Split No.	Spec Func	DUP ISEC
LO	101	2	2	2	1052

PHASING DATA

PHASE	MIN	MAX	WALK	DON'T WALK	AMBER	ALL-RED
2. E/W Eglinton	30	N/A	20	10	4	3
4. N/S Tim Horton's/ Private Access	8	30	12	16	4	4

* ALL VALUES IN SECONDS

Appendix D – Existing Conditions Synchro Reports



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	265	92	123	108	1766	65	1828
v/c Ratio	0.32	0.75	0.99	0.34	0.86	0.48	0.46	0.51
Control Delay	58.1	68.0	153.1	44.5	78.4	4.7	25.2	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	58.1	68.0	153.1	44.5	78.4	4.7	25.2	10.5
Queue Length 50th (m)	18.4	75.1	29.6	27.3	17.6	31.2	8.0	82.7
Queue Length 95th (m)	31.1	99.4	#50.1	39.0	#75.0	31.4	29.2	117.6
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		60.0		90.0	
Base Capacity (vph)	341	555	155	567	125	3691	140	3610
Starvation Cap Reductn	0	0	0	0	0	447	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	0.19	0.48	0.59	0.22	0.86	0.54	0.46	0.51

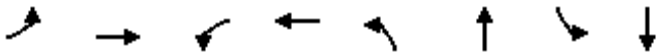
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	49	195	76	28	74	100	1578	64	59	1603	60
Future Volume (vph)	61	49	195	76	28	74	100	1578	64	59	1603	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	5.0		8.0	5.0		6.5	5.0		6.5	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.89		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)	1788	1640		1809	1669		1748	5052		1802	4938	
Flt Permitted	0.58	1.00		0.26	1.00		0.09	1.00		0.10	1.00	
Satd. Flow (perm)	1093	1640		497	1669		173	5052		193	4938	
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.93	0.93	0.93	0.91	0.91	0.91
Adj. Flow (vph)	66	53	212	92	34	89	108	1697	69	65	1762	66
RTOR Reduction (vph)	0	14	0	0	18	0	0	2	0	0	2	0
Lane Group Flow (vph)	66	251	0	92	105	0	108	1764	0	65	1826	0
Confl. Peds. (#/hr)	11		13	13		11	27		16	16		27
Heavy Vehicles (%)	1%	0%	1%	0%	0%	1%	4%	3%	0%	1%	5%	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)	30.1	30.1		30.1	30.1		115.4	115.4		115.4	115.4	
Effective Green, g (s)	30.1	33.1		30.1	33.1		115.4	116.9		115.4	116.9	
Actuated g/C Ratio	0.19	0.21		0.19	0.21		0.72	0.73		0.72	0.73	
Clearance Time (s)	8.0	8.0		8.0	8.0		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	205	339		93	345		124	3691		139	3607	
v/s Ratio Prot		0.15			0.06			0.35			0.37	
v/s Ratio Perm	0.06			c0.18			c0.63			0.34		
v/c Ratio	0.32	0.74		0.99	0.30		0.87	0.48		0.47	0.51	
Uniform Delay, d1	56.1	59.4		64.8	53.7		16.7	8.9		9.4	9.2	
Progression Factor	1.00	1.00		1.00	1.00		1.40	0.44		1.00	1.00	
Incremental Delay, d2	0.9	8.2		88.9	0.5		49.6	0.4		10.9	0.5	
Delay (s)	57.0	67.6		153.7	54.2		72.9	4.4		20.3	9.7	
Level of Service	E	E		F	D		E	A		C	A	
Approach Delay (s)		65.5			96.8			8.3			10.1	
Approach LOS		E			F			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

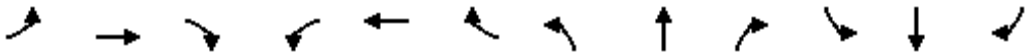
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	31	43	44	12	1777	28	2009
v/c Ratio	0.52	0.17	0.44	0.25	0.08	0.41	0.16	0.46
Control Delay	88.5	38.8	83.5	27.9	2.0	0.9	3.6	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.5	38.8	83.5	27.9	2.0	1.0	3.6	2.1
Queue Length 50th (m)	16.3	4.2	13.4	2.7	0.1	5.3	1.1	32.9
Queue Length 95th (m)	25.6	11.6	21.5	10.5	m0.5	16.3	m2.0	32.5
Internal Link Dist (m)		187.8		92.9		183.5		161.8
Turn Bay Length (m)	63.1		32.1		55.0		70.0	
Base Capacity (vph)	272	399	267	372	142	4381	174	4385
Starvation Cap Reductn	0	0	0	0	0	604	0	333
Spillback Cap Reductn	0	0	0	0	0	0	0	62
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.16	0.12	0.08	0.47	0.16	0.50

Intersection Summary

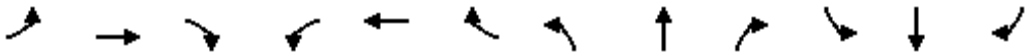
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	11	13	32	7	26	11	1676	12	26	1836	12
Future Volume (vph)	40	11	13	32	7	26	11	1676	12	26	1836	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	5.0		8.0	5.0		7.0	5.0		7.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.92		1.00	0.88		1.00	1.00		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)	1778	1763		1722	1579		1820	5029		1695	5034	
Flt Permitted	0.73	1.00		0.74	1.00		0.09	1.00		0.11	1.00	
Satd. Flow (perm)	1364	1763		1336	1579		165	5029		202	5034	
Peak-hour factor, PHF	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	52	14	17	43	9	35	12	1764	13	28	1996	13
RTOR Reduction (vph)	0	16	0	0	32	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	15	0	43	12	0	12	1777	0	28	2009	0
Confl. Peds. (#/hr)	4					4	16		23	23		16
Heavy Vehicles (%)	2%	0%	0%	6%	0%	7%	0%	4%	16%	7%	4%	8%
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)	10.2	10.2		10.2	10.2		134.8	134.8		134.8	134.8	
Effective Green, g (s)	10.2	13.2		10.2	13.2		134.8	136.8		134.8	136.8	
Actuated g/C Ratio	0.06	0.08		0.06	0.08		0.84	0.86		0.84	0.86	
Clearance Time (s)	8.0	8.0		8.0	8.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	86	145		85	130		139	4299		170	4304	
v/s Ratio Prot		0.01			0.01			0.35			c0.40	
v/s Ratio Perm	c0.04			0.03			0.07			0.14		
v/c Ratio	0.60	0.11		0.51	0.09		0.09	0.41		0.16	0.47	
Uniform Delay, d1	72.9	67.9		72.5	67.9		2.1	2.6		2.3	2.8	
Progression Factor	1.00	1.00		1.00	1.00		0.36	0.26		0.55	0.59	
Incremental Delay, d2	11.4	0.3		4.7	0.3		0.9	0.2		1.8	0.3	
Delay (s)	84.4	68.3		77.1	68.2		1.6	0.9		3.1	2.0	
Level of Service	F	E		E	E		A	A		A	A	
Approach Delay (s)		78.4			72.6			0.9			2.0	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

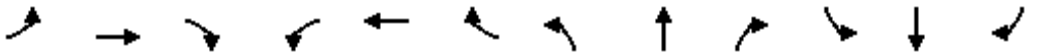


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	213	1672	186	196	598	182	82	1434	122	263	1592	189
v/c Ratio	0.58	1.03	0.40	0.58	0.37	0.38	0.33	0.74	0.24	0.94	0.73	0.31
Control Delay	32.7	83.8	17.6	76.0	43.9	7.7	72.8	45.6	10.9	88.6	32.1	3.0
Queue Delay	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	32.7	94.8	17.6	76.0	43.9	7.7	72.8	45.6	10.9	88.6	32.3	3.0
Queue Length 50th (m)	50.8	~213.3	21.1	31.0	54.9	0.0	12.9	144.2	5.6	60.1	161.8	2.6
Queue Length 95th (m)	45.5	#243.9	37.1	44.6	66.8	19.0	21.8	161.7	20.4	#123.0	160.2	5.6
Internal Link Dist (m)		163.7			348.9			293.8			183.5	
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			100.0		100.0
Base Capacity (vph)	377	1617	464	354	1600	480	404	1929	510	283	2191	619
Starvation Cap Reductn	0	44	0	0	0	0	0	0	0	0	142	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	0.56	1.06	0.40	0.55	0.37	0.38	0.20	0.74	0.24	0.93	0.78	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

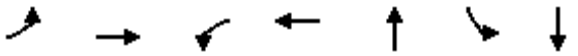
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	1505	167	186	568	173	76	1334	113	242	1465	174
Future Volume (vph)	192	1505	167	186	568	173	76	1334	113	242	1465	174
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1900	1640
Total Lost time (s)	1.0	5.0	7.0	1.0	5.0	7.0	1.0	5.0	7.0	1.0	5.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.91	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.92
Flpb, ped/bikes	0.99	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)	1715	5193	1230	3333	5142	1180	3239	5043	1218	1752	5043	1242
Flt Permitted	0.33	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	595	5193	1230	3333	5142	1180	3239	5043	1218	131	5043	1242
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	213	1672	186	196	598	182	82	1434	122	263	1592	189
RTOR Reduction (vph)	0	0	96	0	0	128	0	0	60	0	0	95
Lane Group Flow (vph)	213	1672	90	196	598	54	82	1434	62	263	1592	94
Confl. Peds. (#/hr)	79		63	63		79	52		71	71		52
Heavy Vehicles (%)	3%	1%	4%	4%	2%	6%	7%	4%	3%	2%	4%	4%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Actuated Green, G (s)	62.0	47.8	47.8	12.2	47.8	47.8	8.5	59.2	59.2	81.0	67.5	67.5
Effective Green, g (s)	66.0	49.8	47.8	16.2	49.8	47.8	12.5	61.2	59.2	83.0	69.5	67.5
Actuated g/C Ratio	0.41	0.31	0.30	0.10	0.31	0.30	0.08	0.38	0.37	0.52	0.43	0.42
Clearance Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	3.0	7.0	7.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	358	1616	367	337	1600	352	253	1928	450	278	2190	523
v/s Ratio Prot	c0.06	c0.32		0.06	0.12		0.03	0.28		c0.12	c0.32	
v/s Ratio Perm	0.18		0.07			0.05			0.05	0.37		0.08
v/c Ratio	0.59	1.03	0.25	0.58	0.37	0.15	0.32	0.74	0.14	0.95	0.73	0.18
Uniform Delay, d1	32.0	55.1	42.4	68.7	42.9	41.2	69.8	42.6	33.5	49.6	37.4	28.9
Progression Factor	0.94	1.01	1.16	1.00	1.00	1.00	1.00	1.00	1.00	1.19	0.79	0.31
Incremental Delay, d2	1.6	30.8	0.3	1.6	0.1	0.2	0.3	2.6	0.6	36.7	2.0	0.7
Delay (s)	31.7	86.3	49.6	70.3	43.1	41.4	70.0	45.3	34.1	95.5	31.7	9.6
Level of Service	C	F	D	E	D	D	E	D	C	F	C	A
Approach Delay (s)		77.4			48.3			45.7			37.9	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

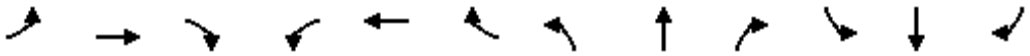
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	34	1996	65	824	126	72	59
v/c Ratio	0.07	0.48	0.50	0.20	0.63	0.84	0.24
Control Delay	6.8	6.7	31.1	1.3	68.1	129.0	20.2
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	6.9	31.1	1.3	68.1	129.0	20.2
Queue Length 50th (m)	1.7	49.8	9.4	5.0	32.0	22.9	2.3
Queue Length 95th (m)	m8.0	130.6	28.7	10.6	39.9	38.9	15.0
Internal Link Dist (m)		387.1		163.7	30.4		65.7
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	474	4167	129	4106	403	203	464
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	1010	0	0	4	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.63	0.50	0.20	0.32	0.35	0.13

Intersection Summary

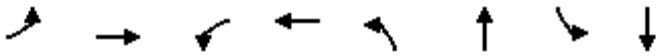
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1737	59	60	725	33	25	3	64	63	7	45
Future Volume (vph)	31	1737	59	60	725	33	25	3	64	63	7	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.97		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99		0.97	1.00	
Frt	1.00	1.00		1.00	0.99			0.91		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1715	5112		1823	5038			1632		1779	1626	
Flt Permitted	0.33	1.00		0.08	1.00			0.89		0.45	1.00	
Satd. Flow (perm)	590	5112		161	5038			1474		834	1626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	34	1930	66	65	788	36	34	4	88	72	8	51
RTOR Reduction (vph)	0	1	0	0	2	0	0	19	0	0	45	0
Lane Group Flow (vph)	34	1995	0	65	822	0	0	107	0	72	14	0
Confl. Peds. (#/hr)	3		6	6		3	12		22	22		12
Heavy Vehicles (%)	6%	2%	0%	0%	3%	9%	4%	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		
Actuated Green, G (s)	128.4	128.4		128.4	128.4			16.6		16.6	16.6	
Effective Green, g (s)	128.4	130.4		128.4	130.4			19.6		16.6	19.6	
Actuated g/C Ratio	0.80	0.82		0.80	0.82			0.12		0.10	0.12	
Clearance Time (s)	7.0	7.0		7.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	473	4166		129	4105			180		86	199	
v/s Ratio Prot		0.39			0.16						0.01	
v/s Ratio Perm	0.06			c0.40				0.07		c0.09		
v/c Ratio	0.07	0.48		0.50	0.20			0.59		0.84	0.07	
Uniform Delay, d1	3.3	4.5		5.2	3.3			66.4		70.4	62.1	
Progression Factor	1.53	1.31		1.94	0.33			1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.3		12.8	0.1			5.2		47.5	0.2	
Delay (s)	5.3	6.2		23.0	1.2			71.6		117.9	62.3	
Level of Service	A	A		C	A			E		F	E	
Approach Delay (s)		6.2			2.8			71.6			92.9	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

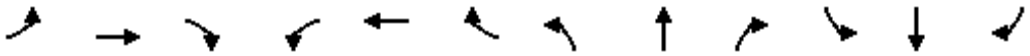


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	81	2055	61	785	97	193	131	162
v/c Ratio	0.17	0.54	0.62	0.21	0.73	0.60	1.11	0.49
Control Delay	8.6	9.5	51.6	3.4	91.6	61.9	172.8	53.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.6	9.5	51.6	3.4	91.6	61.9	172.8	53.0
Queue Length 50th (m)	6.9	88.7	14.4	4.5	29.7	52.9	~47.1	39.8
Queue Length 95th (m)	15.6	115.5	#40.1	65.7	39.5	60.3	#57.6	48.6
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	467	3824	99	3784	237	541	212	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	0.17	0.54	0.62	0.21	0.41	0.36	0.62	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

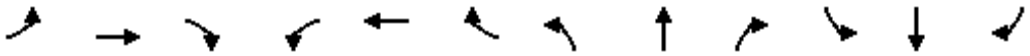
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	1641	85	57	668	70	75	65	84	102	73	53
Future Volume (vph)	68	1641	85	57	668	70	75	65	84	102	73	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	5067		1772	5011		1680	1701		1820	1711	
Flt Permitted	0.34	1.00		0.07	1.00		0.46	1.00		0.38	1.00	
Satd. Flow (perm)	630	5067		134	5011		809	1701		723	1711	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	81	1954	101	61	711	74	97	84	109	131	94	68
RTOR Reduction (vph)	0	2	0	0	5	0	0	11	0	0	20	0
Lane Group Flow (vph)	81	2053	0	61	780	0	97	182	0	131	142	0
Confl. Peds. (#/hr)	2		11	11		2	6		3	3		6
Heavy Vehicles (%)	2%	2%	11%	3%	3%	2%	8%	3%	2%	0%	1%	9%
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)	118.7	118.7		118.7	118.7		26.3	26.3		26.3	26.3	
Effective Green, g (s)	118.7	120.7		118.7	120.7		26.3	29.3		26.3	29.3	
Actuated g/C Ratio	0.74	0.75		0.74	0.75		0.16	0.18		0.16	0.18	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	467	3822		99	3780		132	311		118	313	
v/s Ratio Prot		0.41			0.16			0.11			0.08	
v/s Ratio Perm	0.13			c0.46			0.12			c0.18		
v/c Ratio	0.17	0.54		0.62	0.21		0.73	0.58		1.11	0.45	
Uniform Delay, d1	6.1	8.1		9.8	5.7		63.5	59.8		66.8	58.2	
Progression Factor	1.00	1.00		1.53	0.53		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.5		25.2	0.1		19.0	2.8		115.5	1.1	
Delay (s)	6.9	8.7		40.2	3.1		82.5	62.6		182.4	59.3	
Level of Service	A	A		D	A		F	E		F	E	
Approach Delay (s)		8.6			5.8			69.2			114.3	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	114.8%	ICU Level of Service	H
Analysis Period (min)	15		

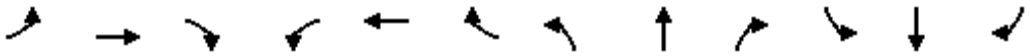
c Critical Lane Group



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	0	15	43	1	76	0	49	20	11	58	1
Future Volume (vph)	2	0	15	43	1	76	0	49	20	11	58	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
Hourly flow rate (vph)	2	0	16	47	1	83	0	53	22	12	63	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	18	131	75	76
Volume Left (vph)	2	47	0	12
Volume Right (vph)	16	83	22	1
Hadj (s)	-0.42	-0.31	-0.09	0.09
Departure Headway (s)	4.0	4.0	4.2	4.4
Degree Utilization, x	0.02	0.14	0.09	0.09
Capacity (veh/h)	863	877	817	789
Control Delay (s)	7.0	7.6	7.6	7.8
Approach Delay (s)	7.0	7.6	7.6	7.8
Approach LOS	A	A	A	A

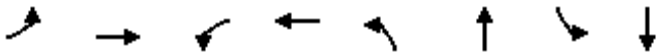
Intersection Summary				
Delay	7.6			
Level of Service	A			
Intersection Capacity Utilization	32.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	26	20	49	5	8	4	9	114	7	1	0
Future Volume (vph)	0	26	20	49	5	8	4	9	114	7	1	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	28	22	53	5	9	4	10	124	8	1	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	50	67	138	9
Volume Left (vph)	0	53	4	8
Volume Right (vph)	22	9	124	0
Hadj (s)	-0.26	0.16	-0.50	0.18
Departure Headway (s)	4.0	4.4	3.7	4.5
Degree Utilization, x	0.06	0.08	0.14	0.01
Capacity (veh/h)	861	789	945	775
Control Delay (s)	7.2	7.8	7.3	7.5
Approach Delay (s)	7.2	7.8	7.3	7.5
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.4			
Level of Service	A			
Intersection Capacity Utilization	29.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	29	115	54	155	189	1764	49	3052
v/c Ratio	0.39	0.40	0.51	0.62	0.63	0.43	0.32	0.90
Control Delay	79.5	23.2	82.1	68.2	48.9	5.9	22.2	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Delay	79.5	23.2	82.1	68.2	48.9	6.0	22.2	28.0
Queue Length 50th (m)	8.7	8.6	16.5	41.7	49.9	44.5	6.5	276.3
Queue Length 95th (m)	19.3	26.9	27.8	57.1	75.6	75.5	20.0	#384.8
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		60.0		90.0	
Base Capacity (vph)	204	599	294	593	302	4076	151	3410
Starvation Cap Reductn	0	0	0	0	0	565	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	21
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.19	0.18	0.26	0.63	0.50	0.32	0.90

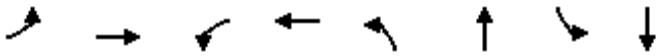
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	28	78	45	81	47	176	1582	59	45	2721	56
Future Volume (vph)	27	28	78	45	81	47	176	1582	59	45	2721	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1860	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	5.0		8.0	5.0		1.0	5.0		6.5	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.89		1.00	0.94		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)	1786	1667		1794	1788		1787	5043		1805	5171	
Flt Permitted	0.36	1.00		0.51	1.00		0.04	1.00		0.12	1.00	
Satd. Flow (perm)	670	1667		962	1788		70	5043		232	5171	
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.93	0.93	0.93	0.91	0.91	0.91
Adj. Flow (vph)	29	30	85	54	98	57	189	1701	63	49	2990	62
RTOR Reduction (vph)	0	74	0	0	17	0	0	1	0	0	1	0
Lane Group Flow (vph)	29	41	0	54	138	0	189	1763	0	49	3051	0
Confl. Peds. (#/hr)	24		17	17		24	13		34	34		13
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm	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)	17.7	17.7		17.7	17.7		127.8	127.8		104.0	104.0	
Effective Green, g (s)	17.7	20.7		17.7	20.7		129.8	129.3		104.0	105.5	
Actuated g/C Ratio	0.11	0.13		0.11	0.13		0.81	0.81		0.65	0.66	
Clearance Time (s)	8.0	8.0		8.0	8.0		3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	215		106	231		301	4075		150	3409	
v/s Ratio Prot		0.02			c0.08		c0.09	0.35			c0.59	
v/s Ratio Perm	0.04			0.06			0.42			0.21		
v/c Ratio	0.39	0.19		0.51	0.60		0.63	0.43		0.33	0.89	
Uniform Delay, d1	66.1	62.2		67.1	65.7		52.1	4.5		12.4	22.6	
Progression Factor	1.00	1.00		1.00	1.00		0.97	1.15		1.00	1.00	
Incremental Delay, d2	3.4	0.4		3.8	4.1		3.8	0.3		5.7	4.1	
Delay (s)	69.6	62.6		70.9	69.9		54.1	5.5		18.2	26.8	
Level of Service	E	E		E	E		D	A		B	C	
Approach Delay (s)		64.0			70.1			10.2			26.6	
Approach LOS		E			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	12	18	54	72	7	1856	40	3051
v/c Ratio	0.14	0.11	0.52	0.42	0.15	0.43	0.25	0.70
Control Delay	70.9	58.1	88.0	50.0	4.3	0.6	1.8	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.2
Total Delay	70.9	58.1	88.0	50.0	4.3	0.7	1.8	3.7
Queue Length 50th (m)	3.7	4.5	16.9	13.4	0.1	4.7	0.1	0.9
Queue Length 95th (m)	8.9	10.5	25.2	22.1	m0.1	5.7	m0.1	0.8
Internal Link Dist (m)		187.8		92.9		183.5		161.8
Turn Bay Length (m)	63.1		32.1		55.0		70.0	
Base Capacity (vph)	240	383	284	365	48	4297	163	4384
Starvation Cap Reductn	0	0	0	0	0	918	0	901
Spillback Cap Reductn	0	0	0	0	0	0	0	1021
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.19	0.20	0.15	0.55	0.25	0.91

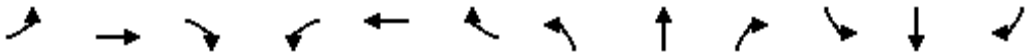
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	6	8	40	2	51	7	1757	7	37	2793	14
Future Volume (vph)	9	6	8	40	2	51	7	1757	7	37	2793	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	5.0		8.0	5.0		7.0	5.0		7.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.92		1.00	0.86		1.00	1.00		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)	1768	1743		1814	1572		1825	5086		1806	5187	
Flt Permitted	0.65	1.00		0.75	1.00		0.03	1.00		0.10	1.00	
Satd. Flow (perm)	1202	1743		1424	1572		58	5086		195	5187	
Peak-hour factor, PHF	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	12	8	10	54	3	69	7	1849	7	40	3036	15
RTOR Reduction (vph)	0	3	0	0	25	0	0	0	0	0	0	0
Lane Group Flow (vph)	12	15	0	54	47	0	7	1856	0	40	3051	0
Confl. Peds. (#/hr)	22		4	4		22	14		45	45		14
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	11.7	11.7		11.7	11.7		133.3	133.3		133.3	133.3	
Effective Green, g (s)	11.7	14.7		11.7	14.7		133.3	135.3		133.3	135.3	
Actuated g/C Ratio	0.07	0.09		0.07	0.09		0.83	0.85		0.83	0.85	
Clearance Time (s)	8.0	8.0		8.0	8.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	87	160		104	144		48	4300		162	4386	
v/s Ratio Prot		0.01			0.03			0.36			c0.59	
v/s Ratio Perm	0.01			c0.04			0.12			0.21		
v/c Ratio	0.14	0.10		0.52	0.32		0.15	0.43		0.25	0.70	
Uniform Delay, d1	69.4	66.6		71.4	68.0		2.5	3.0		2.8	4.6	
Progression Factor	1.00	1.00		1.00	1.00		0.12	0.14		0.02	0.40	
Incremental Delay, d2	0.7	0.3		4.3	1.3		3.8	0.2		1.7	0.4	
Delay (s)	70.2	66.8		75.8	69.3		4.1	0.6		1.8	2.3	
Level of Service	E	E		E	E		A	A		A	A	
Approach Delay (s)		68.2			72.1			0.6			2.3	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	3.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

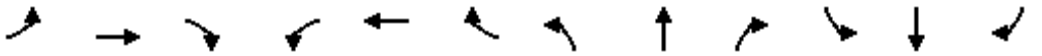


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	162	633	210	328	1907	178	314	1566	130	314	2505	268
v/c Ratio	0.76	0.39	0.40	0.86	1.10	0.40	0.65	0.83	0.27	1.12	1.34	0.50
Control Delay	61.9	37.6	5.5	90.8	103.0	12.2	71.3	50.9	14.6	139.8	189.0	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	61.9	37.6	5.5	90.8	103.0	12.2	71.3	50.9	14.6	139.8	189.1	14.1
Queue Length 50th (m)	21.0	62.4	18.3	53.7	~252.6	7.0	49.3	166.2	9.1	~96.0	~378.3	9.5
Queue Length 95th (m)	#64.4	75.4	2.3	#78.4	#280.6	28.0	64.3	185.5	25.6	#159.6	#416.0	40.0
Internal Link Dist (m)		163.7			348.9			293.8			183.5	
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			100.0		100.0
Base Capacity (vph)	218	1606	527	382	1734	446	557	1877	486	281	1864	533
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	38	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	0.74	0.39	0.40	0.86	1.10	0.40	0.56	0.83	0.27	1.12	1.37	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

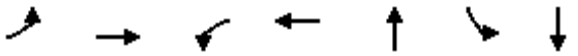
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	146	570	189	312	1812	169	292	1456	121	289	2305	247
Future Volume (vph)	146	570	189	312	1812	169	292	1456	121	289	2305	247
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1900	1640
Total Lost time (s)	1.0	5.0	7.0	1.0	5.0	7.0	1.0	5.0	7.0	1.0	5.0	7.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.90	1.00	1.00	0.80	1.00	1.00	0.86	1.00	1.00	0.91
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)	1787	5142	1267	3398	5193	1079	3432	5092	1207	1769	5193	1281
Flt Permitted	0.08	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	150	5142	1267	3398	5193	1079	3432	5092	1207	130	5193	1281
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	162	633	210	328	1907	178	314	1566	130	314	2505	268
RTOR Reduction (vph)	0	0	147	0	0	100	0	0	56	0	0	90
Lane Group Flow (vph)	162	633	63	328	1907	78	314	1566	74	314	2505	178
Confl. Peds. (#/hr)	151		70	70		151	57		89	89		57
Heavy Vehicles (%)	0%	2%	0%	2%	1%	4%	1%	3%	1%	1%	1%	0%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Actuated Green, G (s)	60.6	48.0	48.0	14.0	51.4	51.4	18.6	57.0	57.0	74.4	55.4	55.4
Effective Green, g (s)	64.6	50.0	48.0	18.0	53.4	51.4	22.6	59.0	57.0	78.4	57.4	55.4
Actuated g/C Ratio	0.40	0.31	0.30	0.11	0.33	0.32	0.14	0.37	0.36	0.49	0.36	0.35
Clearance Time (s)	3.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	3.0	7.0	7.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	209	1606	380	382	1733	346	484	1877	429	278	1862	443
v/s Ratio Prot	0.07	0.12		c0.10	c0.37		c0.09	0.31		c0.15	c0.48	
v/s Ratio Perm	0.24		0.05			0.07			0.06	0.40		0.14
v/c Ratio	0.78	0.39	0.17	0.86	1.10	0.23	0.65	0.83	0.17	1.13	1.35	0.40
Uniform Delay, d1	40.8	43.1	41.3	69.8	53.3	39.7	64.9	46.0	35.3	52.6	51.3	39.7
Progression Factor	1.11	0.85	0.66	1.00	1.00	1.00	1.00	1.00	1.00	1.42	0.71	0.58
Incremental Delay, d2	14.7	0.2	0.2	16.6	54.6	0.3	2.2	4.6	0.9	85.8	158.1	1.9
Delay (s)	59.9	36.9	27.4	86.3	107.9	40.1	67.2	50.6	36.2	160.7	194.6	25.1
Level of Service	E	D	C	F	F	D	E	D	D	F	F	C
Approach Delay (s)		38.6			100.0			52.3			176.4	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	109.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		

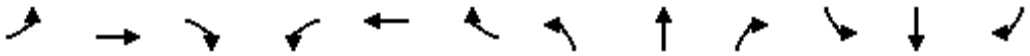
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	22	950	74	2482	193	33	36
v/c Ratio	0.37	0.24	0.18	0.63	0.73	0.21	0.13
Control Delay	31.4	5.0	2.1	4.5	68.5	59.3	45.4
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	31.4	5.0	2.1	4.7	68.5	59.3	45.4
Queue Length 50th (m)	1.8	16.1	1.2	25.6	50.7	9.3	7.9
Queue Length 95th (m)	14.0	45.9	m2.1	m22.1	55.8	18.8	17.0
Internal Link Dist (m)		387.1		163.7	30.4		65.7
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	59	3901	402	3970	393	257	431
Starvation Cap Reductn	0	0	0	581	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.24	0.18	0.73	0.49	0.13	0.08

Intersection Summary

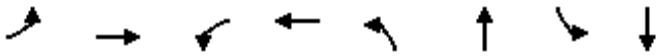
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	809	46	68	2242	41	73	1	67	29	3	29
Future Volume (vph)	20	809	46	68	2242	41	73	1	67	29	3	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00		0.98	1.00	
Frt	1.00	0.99		1.00	1.00			0.94		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1825	5083		1806	5176			1691		1792	1626	
Flt Permitted	0.04	1.00		0.28	1.00			0.82		0.56	1.00	
Satd. Flow (perm)	78	5083		531	5176			1419		1057	1626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	22	899	51	74	2437	45	100	1	92	33	3	33
RTOR Reduction (vph)	0	3	0	0	1	0	0	23	0	0	6	0
Lane Group Flow (vph)	22	947	0	74	2481	0	0	170	0	33	30	0
Confl. Peds. (#/hr)	4		10	10		4	5		19	19		5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	0%	1%	0%	1%	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		
Actuated Green, G (s)	120.7	120.7		120.7	120.7			24.3		24.3	24.3	
Effective Green, g (s)	120.7	122.7		120.7	122.7			27.3		24.3	27.3	
Actuated g/C Ratio	0.75	0.77		0.75	0.77			0.17		0.15	0.17	
Clearance Time (s)	7.0	7.0		7.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	58	3898		400	3969			242		160	277	
v/s Ratio Prot		0.19			c0.48						0.02	
v/s Ratio Perm	0.28			0.14				c0.12		0.03		
v/c Ratio	0.38	0.24		0.18	0.63			0.70		0.21	0.11	
Uniform Delay, d1	6.8	5.3		5.6	8.4			62.5		59.4	56.1	
Progression Factor	1.06	0.85		0.24	0.46			1.00		1.00	1.00	
Incremental Delay, d2	17.5	0.1		0.3	0.3			8.9		0.6	0.2	
Delay (s)	24.7	4.7		1.7	4.1			71.4		60.0	56.2	
Level of Service	C	A		A	A			E		E	E	
Approach Delay (s)		5.1			4.0			71.4			58.1	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		

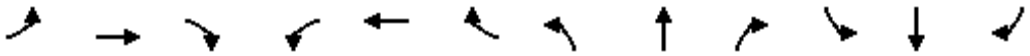
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	63	1020	115	2379	83	105	72	127
v/c Ratio	0.82	0.25	0.29	0.57	0.93	0.40	0.64	0.55
Control Delay	81.2	4.0	11.3	10.0	148.8	35.8	91.2	70.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.2	4.0	11.3	10.0	148.8	35.8	91.2	70.0
Queue Length 50th (m)	10.0	23.4	13.4	100.8	26.6	15.1	22.3	36.4
Queue Length 95th (m)	#21.8	32.9	25.6	126.1	37.9	25.1	32.8	47.2
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	77	4060	396	4166	240	563	306	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	0.82	0.25	0.29	0.57	0.35	0.19	0.24	0.23

Intersection Summary

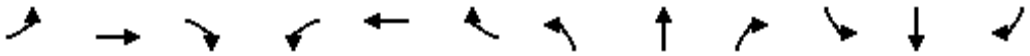
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	769	88	108	2118	118	64	31	50	56	57	42
Future Volume (vph)	53	769	88	108	2118	118	64	31	50	56	57	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.91		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1807	5007		1797	5144		1699	1685		1819	1746	
Flt Permitted	0.05	1.00		0.26	1.00		0.46	1.00		0.54	1.00	
Satd. Flow (perm)	97	5007		496	5144		819	1685		1043	1746	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	63	915	105	115	2253	126	83	40	65	72	73	54
RTOR Reduction (vph)	0	4	0	0	2	0	0	46	0	0	6	0
Lane Group Flow (vph)	63	1016	0	115	2377	0	83	59	0	72	121	0
Confl. Peds. (#/hr)	5		18	18		5	13		3	3		13
Heavy Vehicles (%)	1%	2%	4%	0%	1%	0%	6%	3%	2%	0%	3%	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)	127.6	127.6		127.6	127.6		17.4	17.4		17.4	17.4	
Effective Green, g (s)	127.6	129.6		127.6	129.6		17.4	20.4		17.4	20.4	
Actuated g/C Ratio	0.80	0.81		0.80	0.81		0.11	0.13		0.11	0.13	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	77	4055		395	4166		89	214		113	222	
v/s Ratio Prot		0.20			0.46			0.03			0.07	
v/s Ratio Perm	c0.65			0.23			c0.10			0.07		
v/c Ratio	0.82	0.25		0.29	0.57		0.93	0.27		0.64	0.54	
Uniform Delay, d1	9.4	3.6		4.3	5.4		70.7	63.1		68.3	65.4	
Progression Factor	1.00	1.00		1.83	1.63		1.00	1.00		1.00	1.00	
Incremental Delay, d2	60.5	0.1		1.5	0.5		73.0	0.7		11.2	2.7	
Delay (s)	69.9	3.8		9.3	9.2		143.7	63.8		79.5	68.2	
Level of Service	E	A		A	A		F	E		E	E	
Approach Delay (s)		7.6			9.2			99.1			72.3	
Approach LOS		A			A			F			E	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.0%	ICU Level of Service	H
Analysis Period (min)	15		

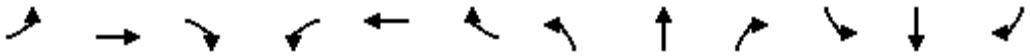
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	8	28	0	9	9	71	58	35	54	2
Future Volume (vph)	0	0	8	28	0	9	9	71	58	35	54	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
Hourly flow rate (vph)	0	0	9	30	0	10	10	77	63	38	59	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	9	40	150	99
Volume Left (vph)	0	30	10	38
Volume Right (vph)	9	10	63	2
Hadj (s)	0.03	0.04	-0.23	0.06
Departure Headway (s)	4.5	4.5	3.9	4.2
Degree Utilization, x	0.01	0.05	0.16	0.12
Capacity (veh/h)	751	750	903	835
Control Delay (s)	7.6	7.7	7.6	7.8
Approach Delay (s)	7.6	7.7	7.6	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		

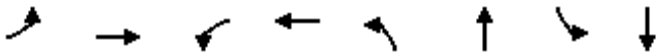


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	7	5	84	15	4	7	8	65	5	2	0
Future Volume (vph)	0	7	5	84	15	4	7	8	65	5	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	8	5	91	16	4	8	9	71	5	2	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	13	111	88	7
Volume Left (vph)	0	91	8	5
Volume Right (vph)	5	4	71	0
Hadj (s)	-0.23	0.16	-0.40	0.14
Departure Headway (s)	4.0	4.3	3.8	4.4
Degree Utilization, x	0.01	0.13	0.09	0.01
Capacity (veh/h)	874	824	912	787
Control Delay (s)	7.0	7.9	7.2	7.4
Approach Delay (s)	7.0	7.9	7.2	7.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	27.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix E – Future Background Conditions Synchro Reports



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	254	92	116	136	1468	52	1399
v/c Ratio	0.36	0.71	1.26	0.31	0.61	0.64	0.36	0.70
Control Delay	55.1	47.0	238.9	15.4	68.5	8.8	67.7	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	47.0	238.9	15.4	68.5	8.8	67.7	23.6
Queue Length 50th (m)	16.5	47.4	~32.0	6.3	39.2	45.1	13.6	137.1
Queue Length 95th (m)	28.7	70.1	#50.9	17.7	m46.0	m62.3	28.1	195.2
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		90.0		120.0	
Base Capacity (vph)	272	485	109	502	240	2290	143	2011
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	0.52	0.84	0.23	0.57	0.64	0.36	0.70

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.

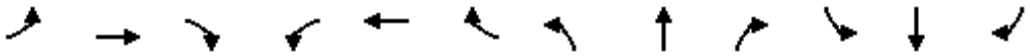
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	61	39	195	76	22	74	46	80	1314	51	47	1225
Future Volume (vph)	61	39	195	76	22	74	46	80	1314	51	47	1225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1860	1860	1900	1900	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5
Total Lost time (s)	8.0	5.0		8.0	5.0			1.0	5.0		1.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	0.98		1.00	0.98			1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.87		1.00	0.88			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)	1787	1628		1809	1654			1609	3441		1633	3362
Flt Permitted	0.60	1.00		0.24	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	1121	1628		450	1654			1609	3441		1633	3362
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.93	0.93	0.93	0.91	0.91
Adj. Flow (vph)	66	42	212	92	27	89	50	86	1413	55	52	1346
RTOR Reduction (vph)	0	61	0	0	73	0	0	0	2	0	0	2
Lane Group Flow (vph)	66	193	0	92	43	0	0	136	1466	0	52	1397
Confl. Peds. (#/hr)	11		13	13		11		27		16	16	
Heavy Vehicles (%)	1%	0%	1%	0%	0%	1%	0%	4%	3%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA		Prot	NA
Protected Phases		4			8		5	5	2		1	6
Permitted Phases	4			8								
Actuated Green, G (s)	22.7	22.7		22.7	22.7			15.6	89.2		7.1	80.7
Effective Green, g (s)	22.7	25.7		22.7	25.7			19.6	92.2		11.1	83.7
Actuated g/C Ratio	0.16	0.18		0.16	0.18			0.14	0.66		0.08	0.60
Clearance Time (s)	8.0	8.0		8.0	8.0			5.0	8.0		5.0	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)	181	298		72	303			225	2266		129	2009
v/s Ratio Prot		0.12			0.03			c0.08	0.43		0.03	c0.42
v/s Ratio Perm	0.06			c0.20								
v/c Ratio	0.36	0.65		1.28	0.14			0.60	0.65		0.40	0.70
Uniform Delay, d1	52.2	52.9		58.6	47.9			56.6	14.2		61.3	19.4
Progression Factor	1.00	1.00		1.00	1.00			1.09	0.50		1.00	1.00
Incremental Delay, d2	1.3	4.8		197.7	0.2			2.6	0.8		2.1	2.0
Delay (s)	53.5	57.7		256.4	48.1			64.3	8.0		63.4	21.4
Level of Service	D	E		F	D			E	A		E	C
Approach Delay (s)		56.8			140.2				12.8			22.9
Approach LOS		E			F				B			C

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	48
Future Volume (vph)	48
Ideal Flow (vphpl)	1900
Lane Width	3.5
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	53
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	27
Heavy Vehicles (%)	10%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	78	0	0	67	0	1424	51	0	1522	20
Future Volume (Veh/h)	0	0	78	0	0	67	0	1424	51	0	1522	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	101	0	0	91	0	1499	54	0	1654	22
Pedestrians		16			23						4	
Lane Width (m)		3.7			3.7						3.7	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		2			2						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								208			186	
pX, platoon unblocked	0.82	0.82	0.71	0.82	0.82	0.68	0.71			0.68		
vC, conflicting volume	2526	3257	854	2477	3241	804	1692			1576		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	850	1740	0	791	1720	0	1164			902		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.3		
p0 queue free %	100	100	87	100	100	87	100			100		
cM capacity (veh/h)	173	70	765	185	72	706	426			477		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	101	91	999	554	1103	573
Volume Left	0	0	0	0	0	0
Volume Right	101	91	0	54	0	22
cSH	765	706	1700	1700	1700	1700
Volume to Capacity	0.13	0.13	0.59	0.33	0.65	0.34
Queue Length 95th (m)	3.4	3.4	0.0	0.0	0.0	0.0
Control Delay (s)	10.4	10.9	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	10.4	10.9	0.0		0.0	
Approach LOS	B	B				

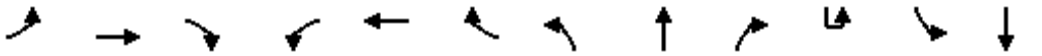
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	54.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	210	1426	157	157	508	146	68	1152	97	296	1443
v/c Ratio	0.60	0.85	0.33	0.73	0.31	0.31	0.33	0.96	0.19	0.98	0.92
Control Delay	24.6	37.2	2.9	84.3	36.4	5.5	67.1	62.6	0.8	108.1	38.4
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	37.3	2.9	84.3	36.4	5.5	67.1	62.6	0.8	108.1	38.4
Queue Length 50th (m)	20.9	140.7	0.1	22.4	38.7	0.0	9.4	163.8	0.0	85.8	105.8
Queue Length 95th (m)	30.0	85.3	4.3	#38.1	49.0	12.0	17.4	#208.6	0.0	m#143.9	#243.1
Internal Link Dist (m)		163.7			348.9			293.8			183.5
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			130.0	
Base Capacity (vph)	352	1669	482	214	1652	469	208	1203	505	301	1575
Starvation Cap Reductn	0	12	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	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
Reduced v/c Ratio	0.60	0.86	0.33	0.73	0.31	0.31	0.33	0.96	0.19	0.98	0.92

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.

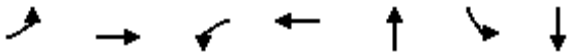


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	189	1283	141	149	483	139	63	1071	90	76	196	1189
Future Volume (vph)	189	1283	141	149	483	139	63	1071	90	76	196	1189
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.3
Total Lost time (s)	1.0	5.0	9.0	1.0	5.0	9.0	1.0	5.0	9.0		1.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.91	1.00	1.00	0.91		1.00	0.99
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.98
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	5193	1253	3333	5142	1208	3239	3510	1252		1626	3280
Flt Permitted	0.39	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	706	5193	1253	3333	5142	1208	3239	3510	1252		1626	3280
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	210	1426	157	157	508	146	68	1152	97	83	213	1292
RTOR Reduction (vph)	0	0	111	0	0	103	0	0	67	0	0	6
Lane Group Flow (vph)	210	1426	46	157	508	43	68	1152	30	0	296	1437
Confl. Peds. (#/hr)	79		63	63		79	52		71		71	
Heavy Vehicles (%)	3%	1%	4%	4%	2%	6%	7%	4%	3%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4		4			8			2			
Actuated Green, G (s)	48.0	41.0	41.0	5.0	41.0	41.0	4.0	44.0	44.0		22.0	62.0
Effective Green, g (s)	52.0	45.0	41.0	9.0	45.0	41.0	8.0	48.0	44.0		26.0	66.0
Actuated g/C Ratio	0.37	0.32	0.29	0.06	0.32	0.29	0.06	0.34	0.31		0.19	0.47
Clearance Time (s)	3.0	9.0	9.0	5.0	9.0	9.0	5.0	9.0	9.0		5.0	9.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0		2.0	3.0
Lane Grp Cap (vph)	326	1669	366	214	1652	353	185	1203	393		301	1546
v/s Ratio Prot	0.04	c0.27		c0.05	0.10		0.02	0.33			c0.18	c0.44
v/s Ratio Perm	0.20		0.04			0.04			0.02			
v/c Ratio	0.64	0.85	0.13	0.73	0.31	0.12	0.37	0.96	0.08		0.98	0.93
Uniform Delay, d1	33.5	44.4	36.3	64.3	35.8	36.3	63.6	45.0	33.7		56.8	34.8
Progression Factor	0.63	0.71	0.28	1.00	1.00	1.00	1.00	1.00	1.00		1.21	0.88
Incremental Delay, d2	2.9	4.1	0.1	10.6	0.1	0.2	0.5	17.6	0.4		40.6	9.1
Delay (s)	24.1	35.8	10.3	75.0	35.9	36.4	64.0	62.6	34.1		109.2	39.7
Level of Service	C	D	B	E	D	D	E	E	C		F	D
Approach Delay (s)		32.1			43.5			60.6				51.6
Approach LOS		C			D			E				D

Intersection Summary			
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	139
Future Volume (vph)	139
Ideal Flow (vphpl)	1900
Lane Width	3.3
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	151
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	52
Heavy Vehicles (%)	4%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

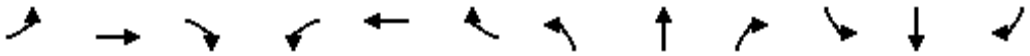
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	41	1596	52	692	129	181	120
v/c Ratio	0.08	0.47	0.20	0.21	0.34	0.88	0.28
Control Delay	5.0	9.3	8.4	4.6	18.6	92.3	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	9.3	8.4	4.6	18.6	92.3	11.9
Queue Length 50th (m)	2.0	49.3	1.6	11.2	10.0	49.3	4.0
Queue Length 95th (m)	m5.2	54.4	m5.4	m16.3	16.6	69.7	17.7
Internal Link Dist (m)		387.1		163.7	30.4		68.2
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	541	3378	266	3324	572	355	636
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	9	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.47	0.20	0.21	0.23	0.51	0.19

Intersection Summary

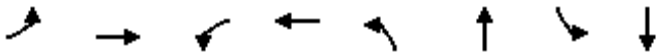
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1390	47	48	597	40	25	5	64	159	16	90
Future Volume (vph)	37	1390	47	48	597	40	25	5	64	159	16	90
Ideal Flow (vphpl)	1860	1900	1900	1860	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		1.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.96		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		0.97	1.00	
Frt	1.00	1.00		1.00	0.99			0.91		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1683	5113		1787	5016			1636		1775	1628	
Flt Permitted	0.37	1.00		0.12	1.00			0.89		0.58	1.00	
Satd. Flow (perm)	648	5113		221	5016			1477		1086	1628	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	41	1544	52	52	649	43	34	7	88	181	18	102
RTOR Reduction (vph)	0	2	0	0	4	0	0	67	0	0	80	0
Lane Group Flow (vph)	41	1594	0	52	688	0	0	62	0	181	40	0
Confl. Peds. (#/hr)	3		6	6		3	12		22	22		12
Heavy Vehicles (%)	6%	2%	0%	0%	3%	9%	4%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	95.3	89.9		95.5	90.0			26.6		26.6	26.6	
Effective Green, g (s)	99.3	91.9		99.5	92.0			29.6		26.6	29.6	
Actuated g/C Ratio	0.71	0.66		0.71	0.66			0.21		0.19	0.21	
Clearance Time (s)	3.0	7.0		3.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	514	3356		240	3296			312		206	344	
v/s Ratio Prot	0.00	c0.31		c0.01	0.14						0.02	
v/s Ratio Perm	0.05			0.14				0.04		c0.17		
v/c Ratio	0.08	0.48		0.22	0.21			0.20		0.88	0.12	
Uniform Delay, d1	6.1	12.0		7.5	9.5			45.4		55.1	44.6	
Progression Factor	0.78	0.68		1.13	0.43			1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4		0.4	0.1			0.3		31.7	0.1	
Delay (s)	4.8	8.6		8.9	4.2			45.8		86.8	44.8	
Level of Service	A	A		A	A			D		F	D	
Approach Delay (s)		8.5			4.5			45.8			70.1	
Approach LOS		A			A			D			E	

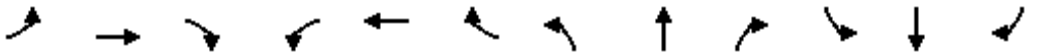
Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	1614	49	709	97	177	131	142
v/c Ratio	0.13	0.43	0.29	0.19	0.64	0.51	0.96	0.42
Control Delay	7.8	7.8	11.9	4.2	71.7	42.6	123.6	40.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	7.8	11.9	4.2	71.7	42.6	123.6	40.4
Queue Length 50th (m)	4.8	54.5	2.6	12.6	25.4	33.8	36.4	26.7
Queue Length 95th (m)	11.5	73.7	6.9	18.2	34.7	42.4	47.7	35.8
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	502	3765	171	3735	246	512	220	504
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	0.43	0.29	0.19	0.39	0.35	0.60	0.28

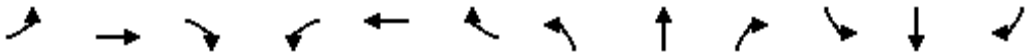
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	1288	68	46	610	56	75	52	84	102	58	53
Future Volume (vph)	54	1288	68	46	610	56	75	52	84	102	58	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1784	5065		1767	5020		1678	1686		1819	1684	
Flt Permitted	0.37	1.00		0.13	1.00		0.53	1.00		0.44	1.00	
Satd. Flow (perm)	689	5065		234	5020		932	1686		835	1684	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	64	1533	81	49	649	60	97	68	109	131	74	68
RTOR Reduction (vph)	0	3	0	0	6	0	0	34	0	0	27	0
Lane Group Flow (vph)	64	1611	0	49	703	0	97	143	0	131	115	0
Confl. Peds. (#/hr)	2		11	11		2	6		3	3		6
Heavy Vehicles (%)	2%	2%	11%	3%	3%	2%	8%	3%	2%	0%	1%	9%
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)	102.1	102.1		102.1	102.1		22.9	22.9		22.9	22.9	
Effective Green, g (s)	102.1	104.1		102.1	104.1		22.9	25.9		22.9	25.9	
Actuated g/C Ratio	0.73	0.74		0.73	0.74		0.16	0.18		0.16	0.18	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	502	3766		170	3732		152	311		136	311	
v/s Ratio Prot		c0.32			0.14			0.08			0.07	
v/s Ratio Perm	0.09			0.21			0.10			c0.16		
v/c Ratio	0.13	0.43		0.29	0.19		0.64	0.46		0.96	0.37	
Uniform Delay, d1	5.7	6.8		6.5	5.4		54.7	50.8		58.1	49.9	
Progression Factor	1.00	1.00		0.80	0.71		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4		4.2	0.1		8.5	1.1		65.5	0.7	
Delay (s)	6.2	7.1		9.4	3.9		63.2	51.9		123.6	50.7	
Level of Service	A	A		A	A		E	D		F	D	
Approach Delay (s)		7.1			4.2			55.9			85.7	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

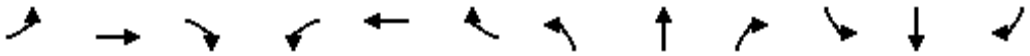
c Critical Lane Group



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	0	8	21	1	61	0	54	14	9	164	1
Future Volume (vph)	2	0	8	21	1	61	0	54	14	9	164	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
Hourly flow rate (vph)	2	0	9	23	1	66	0	59	15	10	178	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	11	90	74	189
Volume Left (vph)	2	23	0	10
Volume Right (vph)	9	66	15	1
Hadj (s)	-0.30	-0.39	-0.03	0.06
Departure Headway (s)	4.3	4.1	4.3	4.3
Degree Utilization, x	0.01	0.10	0.09	0.22
Capacity (veh/h)	771	814	804	823
Control Delay (s)	7.3	7.6	7.7	8.5
Approach Delay (s)	7.3	7.6	7.7	8.5
Approach LOS	A	A	A	A

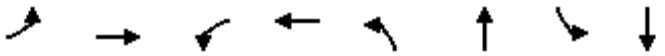
Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	5	13	26	4	15	3	28	67	49	116	0
Future Volume (vph)	0	5	13	26	4	15	3	28	67	49	116	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	5	14	28	4	16	3	30	73	53	126	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	48	106	179
Volume Left (vph)	0	28	3	53
Volume Right (vph)	14	16	73	0
Hadj (s)	-0.44	0.02	-0.38	0.06
Departure Headway (s)	4.1	4.6	3.9	4.2
Degree Utilization, x	0.02	0.06	0.11	0.21
Capacity (veh/h)	800	733	902	836
Control Delay (s)	7.2	7.8	7.3	8.3
Approach Delay (s)	7.2	7.8	7.3	8.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.9			
Level of Service	A			
Intersection Capacity Utilization	32.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	29	109	54	135	217	1433	40	2431
v/c Ratio	0.35	0.48	0.52	0.57	0.54	0.58	0.27	1.24
Control Delay	68.8	47.8	76.3	55.1	24.5	26.6	62.7	143.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	47.8	76.3	55.1	24.5	26.6	62.7	143.0
Queue Length 50th (m)	7.6	20.7	14.4	28.8	34.6	200.4	10.5	~437.5
Queue Length 95th (m)	17.5	38.1	25.2	43.5	m47.6	m210.5	22.0	#483.1
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		90.0		120.0	
Base Capacity (vph)	198	458	249	486	401	2485	150	1957
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	0.15	0.24	0.22	0.28	0.54	0.58	0.27	1.24

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.

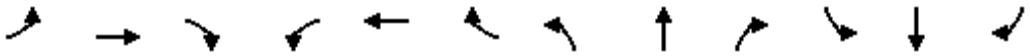
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	27	22	78	45	65	47	60	141	1285	47	36	2168
Future Volume (vph)	27	22	78	45	65	47	60	141	1285	47	36	2168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1860	1860	1900	1900	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5
Total Lost time (s)	8.0	5.0		8.0	5.0			1.0	5.0		1.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	0.97		1.00	0.98			1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.98	1.00		0.98	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.88		1.00	0.94			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)	1783	1653		1794	1768			1649	3436		1649	3520
Flt Permitted	0.43	1.00		0.54	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	816	1653		1028	1768			1649	3436		1649	3520
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.93	0.93	0.93	0.91	0.91
Adj. Flow (vph)	29	24	85	54	78	57	65	152	1382	51	40	2382
RTOR Reduction (vph)	0	25	0	0	23	0	0	0	1	0	0	1
Lane Group Flow (vph)	29	84	0	54	112	0	0	217	1432	0	40	2430
Confl. Peds. (#/hr)	24		17	17		24		13		34	34	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	1%
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA		Prot	NA
Protected Phases		4			8		5	5	2		1	6
Permitted Phases	4			8								
Actuated Green, G (s)	14.1	14.1		14.1	14.1			30.1	97.2		7.7	74.8
Effective Green, g (s)	14.1	17.1		14.1	17.1			34.1	100.2		11.7	77.8
Actuated g/C Ratio	0.10	0.12		0.10	0.12			0.24	0.72		0.08	0.56
Clearance Time (s)	8.0	8.0		8.0	8.0			5.0	8.0		5.0	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)	82	201		103	215			401	2459		137	1956
v/s Ratio Prot		0.05			c0.06			c0.13	0.42		0.02	c0.69
v/s Ratio Perm	0.04			0.05								
v/c Ratio	0.35	0.42		0.52	0.52			0.54	0.58		0.29	1.24
Uniform Delay, d1	58.7	56.8		59.8	57.6			46.1	9.7		60.3	31.1
Progression Factor	1.00	1.00		1.00	1.00			0.46	2.42		1.00	1.00
Incremental Delay, d2	2.6	1.4		4.7	2.3			0.7	0.5		1.2	113.6
Delay (s)	61.3	58.2		64.5	59.9			21.7	23.9		61.4	144.7
Level of Service	E	E		E	E			C	C		E	F
Approach Delay (s)		58.9			61.2				23.7			143.4
Approach LOS		E			E				C			F

Intersection Summary			
HCM 2000 Control Delay	92.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	45
Future Volume (vph)	45
Ideal Flow (vphpl)	1900
Lane Width	3.5
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	49
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	13
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	21	0	0	97	0	1436	42	0	2304	47
Future Volume (Veh/h)	0	0	21	0	0	97	0	1436	42	0	2304	47
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	27	0	0	131	0	1512	44	0	2504	51
Pedestrians		14			45			4			22	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		1			4			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								208			186	
pX, platoon unblocked	0.63	0.63	0.45	0.63	0.63	0.65	0.45			0.65		
vC, conflicting volume	3452	4144	1296	2862	4148	845	2569			1601		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1213	2320	0	269	2325	0	2044			851		
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	94	100	100	80	100			100		
cM capacity (veh/h)	65	22	483	359	22	664	124			495		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	27	131	1008	548	1669	886
Volume Left	0	0	0	0	0	0
Volume Right	27	131	0	44	0	51
cSH	483	664	1700	1700	1700	1700
Volume to Capacity	0.06	0.20	0.59	0.32	0.98	0.52
Queue Length 95th (m)	1.3	5.5	0.0	0.0	0.0	0.0
Control Delay (s)	12.9	11.7	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	12.9	11.7	0.0		0.0	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	76.5%	ICU Level of Service	D	
Analysis Period (min)	15			

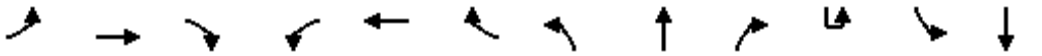
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	136	631	176	263	1598	144	263	1266	104	298	2229
v/c Ratio	0.91	0.38	0.36	1.21	0.92	0.32	1.20	1.00	0.20	1.06	1.41
Control Delay	90.2	29.3	5.2	181.1	53.9	6.9	177.2	70.2	2.3	90.6	208.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.2	29.3	5.2	181.1	53.9	6.9	177.2	70.2	2.3	90.6	208.6
Queue Length 50th (m)	16.3	48.9	4.6	~45.5	155.2	0.0	~45.2	~183.9	0.0	~89.3	~442.3
Queue Length 95th (m)	#62.1	34.2	4.2	#73.6	175.7	14.9	#73.3	#234.0	4.2	m65.1	m#324.3
Internal Link Dist (m)		163.7			348.9			293.8			183.5
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			130.0	
Base Capacity (vph)	149	1652	483	218	1743	450	220	1265	510	280	1578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.38	0.36	1.21	0.92	0.32	1.20	1.00	0.20	1.06	1.41

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.

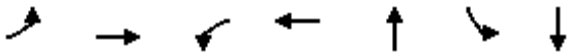
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	122	568	158	250	1518	137	245	1177	97	42	232	1853
Future Volume (vph)	122	568	158	250	1518	137	245	1177	97	42	232	1853
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.3
Total Lost time (s)	1.0	5.0	9.0	1.0	5.0	9.0	1.0	5.0	9.0		1.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.84	1.00	1.00	0.90		1.00	0.99
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
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1786	5142	1294	3398	5193	1134	3432	3544	1251		1635	3385
Flt Permitted	0.09	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	175	5142	1294	3398	5193	1134	3432	3544	1251		1635	3385
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	136	631	176	263	1598	144	263	1266	104	46	252	2014
RTOR Reduction (vph)	0	0	105	0	0	100	0	0	70	0	0	6
Lane Group Flow (vph)	136	631	71	263	1598	44	263	1266	34	0	298	2223
Confl. Peds. (#/hr)	151		70	70		151	57		89		89	
Heavy Vehicles (%)	0%	2%	0%	2%	1%	4%	1%	3%	1%	0%	1%	1%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4		4			8			2			
Actuated Green, G (s)	46.0	41.0	41.0	5.0	43.0	43.0	5.0	46.0	46.0		20.0	61.0
Effective Green, g (s)	50.0	45.0	41.0	9.0	47.0	43.0	9.0	50.0	46.0		24.0	65.0
Actuated g/C Ratio	0.36	0.32	0.29	0.06	0.34	0.31	0.06	0.36	0.33		0.17	0.46
Clearance Time (s)	3.0	9.0	9.0	5.0	9.0	9.0	5.0	9.0	9.0		5.0	9.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0		2.0	3.0
Lane Grp Cap (vph)	143	1652	378	218	1743	348	220	1265	411		280	1571
v/s Ratio Prot	0.05	0.12		c0.08	c0.31		c0.08	0.36			0.18	c0.66
v/s Ratio Perm	0.29		0.06			0.04			0.03			
v/c Ratio	0.95	0.38	0.19	1.21	0.92	0.13	1.20	1.00	0.08		1.06	1.42
Uniform Delay, d1	38.5	36.7	37.1	65.5	44.6	35.0	65.5	45.0	32.4		58.0	37.5
Progression Factor	1.33	0.78	0.35	1.00	1.00	1.00	1.00	1.00	1.00		1.00	0.54
Incremental Delay, d2	59.1	0.1	0.2	127.9	8.0	0.2	123.6	25.5	0.4		36.5	187.1
Delay (s)	110.2	28.6	13.3	193.4	52.6	35.1	189.1	70.5	32.8		94.5	207.5
Level of Service	F	C	B	F	D	D	F	E	C		F	F
Approach Delay (s)		37.5			69.9			87.2				194.2
Approach LOS		D			E			F				F

Intersection Summary			
HCM 2000 Control Delay	113.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	123.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

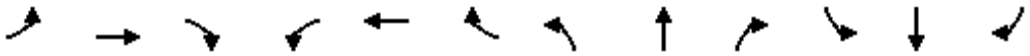
Movement	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width	3.3
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	215
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	57
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	43	852	59	2073	196	58	67
v/c Ratio	0.23	0.24	0.12	0.58	0.71	0.35	0.20
Control Delay	9.8	7.9	1.2	2.3	58.5	55.9	13.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	9.8	7.9	1.2	2.4	58.5	55.9	13.6
Queue Length 50th (m)	2.1	26.8	0.8	16.1	43.6	14.5	1.6
Queue Length 95th (m)	6.6	38.6	m1.1	m20.5	49.1	25.8	12.9
Internal Link Dist (m)		387.1		163.7	30.4		68.2
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	190	3528	513	3569	391	255	475
Starvation Cap Reductn	0	0	0	480	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.24	0.12	0.67	0.50	0.23	0.14

Intersection Summary

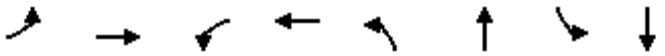
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	730	37	54	1794	113	73	3	67	51	6	53
Future Volume (vph)	39	730	37	54	1794	113	73	3	67	51	6	53
Ideal Flow (vphpl)	1860	1900	1900	1860	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		1.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		0.98	1.00	
Frt	1.00	0.99		1.00	0.99			0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	
Satd. Flow (prot)	1787	5090		1781	5138			1693		1791	1632	
Flt Permitted	0.06	1.00		0.31	1.00			0.80		0.56	1.00	
Satd. Flow (perm)	119	5090		573	5138			1396		1055	1632	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	43	811	41	59	1950	123	100	4	92	58	7	60
RTOR Reduction (vph)	0	3	0	0	4	0	0	25	0	0	49	0
Lane Group Flow (vph)	43	849	0	59	2069	0	0	171	0	58	18	0
Confl. Peds. (#/hr)	4		10	10		4	5		19	19		5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	0%	1%	0%	1%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	99.6	94.3		100.0	94.5			22.2		22.2	22.2	
Effective Green, g (s)	103.6	96.3		104.0	96.5			25.2		22.2	25.2	
Actuated g/C Ratio	0.74	0.69		0.74	0.69			0.18		0.16	0.18	
Clearance Time (s)	3.0	7.0		3.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	175	3501		490	3541			251		167	293	
v/s Ratio Prot	c0.01	0.17		c0.01	c0.40						0.01	
v/s Ratio Perm	0.17			0.08				c0.12		0.05		
v/c Ratio	0.25	0.24		0.12	0.58			0.68		0.35	0.06	
Uniform Delay, d1	8.3	8.2		4.9	11.3			53.6		52.4	47.6	
Progression Factor	1.50	0.87		0.24	0.17			1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.2		0.0	0.2			7.1		1.3	0.1	
Delay (s)	13.1	7.3		1.2	2.1			60.8		53.7	47.7	
Level of Service	B	A		A	A			E		D	D	
Approach Delay (s)		7.5			2.1			60.8			50.5	
Approach LOS		A			A			E			D	

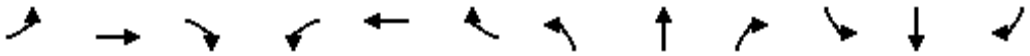
Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	50	916	91	1951	83	97	72	113
v/c Ratio	0.39	0.23	0.21	0.48	0.76	0.35	0.55	0.44
Control Delay	16.7	3.9	2.0	1.2	98.3	23.6	73.3	44.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	3.9	2.0	1.2	98.3	23.6	73.3	44.8
Queue Length 50th (m)	3.8	18.9	1.5	10.4	22.7	7.9	19.2	21.2
Queue Length 95th (m)	14.0	27.2	2.9	13.6	32.7	17.4	29.1	31.7
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	128	3999	434	4093	195	420	233	406
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	0.39	0.23	0.21	0.48	0.43	0.23	0.31	0.28

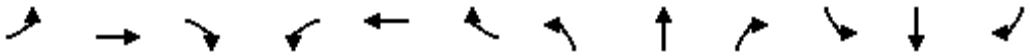
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	700	70	86	1740	94	64	25	50	56	46	42
Future Volume (vph)	42	700	70	86	1740	94	64	25	50	56	46	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.90		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1806	5024		1793	5145		1695	1670		1818	1730	
Flt Permitted	0.09	1.00		0.30	1.00		0.55	1.00		0.61	1.00	
Satd. Flow (perm)	166	5024		557	5145		978	1670		1167	1730	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	50	833	83	91	1851	100	83	32	65	72	59	54
RTOR Reduction (vph)	0	6	0	0	3	0	0	56	0	0	26	0
Lane Group Flow (vph)	50	910	0	91	1948	0	83	41	0	72	87	0
Confl. Peds. (#/hr)	5		18	18		5	13		3	3		13
Heavy Vehicles (%)	1%	2%	4%	0%	1%	0%	6%	3%	2%	0%	3%	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)	109.3	109.3		109.3	109.3		15.7	15.7		15.7	15.7	
Effective Green, g (s)	109.3	111.3		109.3	111.3		15.7	18.7		15.7	18.7	
Actuated g/C Ratio	0.78	0.79		0.78	0.79		0.11	0.13		0.11	0.13	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	129	3994		434	4090		109	223		130	231	
v/s Ratio Prot		0.18			c0.38			0.02			0.05	
v/s Ratio Perm	0.30			0.16			c0.08			0.06		
v/c Ratio	0.39	0.23		0.21	0.48		0.76	0.18		0.55	0.38	
Uniform Delay, d1	4.8	3.6		4.0	4.7		60.3	53.9		58.8	55.3	
Progression Factor	1.00	1.00		0.22	0.18		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.6	0.1		0.9	0.3		26.4	0.4		5.0	1.0	
Delay (s)	13.4	3.7		1.8	1.2		86.7	54.3		63.9	56.4	
Level of Service	B	A		A	A		F	D		E	E	
Approach Delay (s)		4.2			1.2			69.2			59.3	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

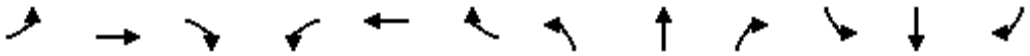
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	5	17	0	7	5	130	33	28	84	2
Future Volume (vph)	0	0	5	17	0	7	5	130	33	28	84	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
Hourly flow rate (vph)	0	0	5	18	0	8	5	141	36	30	91	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	5	26	182	123
Volume Left (vph)	0	18	5	30
Volume Right (vph)	5	8	36	2
Hadj (s)	0.03	-0.01	-0.10	0.04
Departure Headway (s)	4.6	4.5	4.0	4.2
Degree Utilization, x	0.01	0.03	0.20	0.14
Capacity (veh/h)	718	731	881	845
Control Delay (s)	7.6	7.7	8.0	7.9
Approach Delay (s)	7.6	7.7	8.0	7.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.9			
Level of Service	A			
Intersection Capacity Utilization	35.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	6	3	58	10	36	5	92	37	20	50	0
Future Volume (vph)	0	6	3	58	10	36	5	92	37	20	50	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	7	3	63	11	39	5	100	40	22	54	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	10	113	145	76
Volume Left (vph)	0	63	5	22
Volume Right (vph)	3	39	40	0
Hadj (s)	-0.18	0.05	0.14	0.06
Departure Headway (s)	4.4	4.5	4.4	4.4
Degree Utilization, x	0.01	0.14	0.18	0.09
Capacity (veh/h)	773	758	785	777
Control Delay (s)	7.4	8.2	8.4	7.9
Approach Delay (s)	7.4	8.2	8.4	7.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	32.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix F – City of Waterloo Parking Reduction Worksheet

Parking Management Worksheet

Appendix I

Version 9/18/2013

Case Study: _____ **Site Context:** _____

Date: _____ **Reduction Worksheet No:** _____

"**Urban Growth Centres -** (UGC) area classification includes the Downtown / Uptown and RT Station Areas of Kitchener, Waterloo and Cambridge.

"**Intensification Corridor**" (IC) classification is applied to sites within 800 metres of the future CTC line

"**Other**" classification applies to all other sites

Please highlight the cell percentages applicable to your development under the appropriate classification. Please note that the Parking Management Worksheet and the Transportation Demand Management (TDM) Checklist are not designed for residential properties, but can be used for mixed-use developments. Local municipalities are the decision-making bodies with respect to consideration of parking reductions below Zoning By-law requirements.

TABLE A	Pedestrian and Cyclist Orientation			
In creating an environment that supports pedestrian and cycling activity, the public realm must be accessible, safe, and comfortable to encourage movement on the street and in the surrounding area(s). These facilities and features should encourage walking and cycling.				
	Features	**UGC**	**IC**	**Other**
A1	Development incorporates functional building entrances that are oriented to public space or to locations where pedestrians and transit users arrive from such as a street, square, park or plaza.	1%	1%	1%
A2	Continuous sidewalks (1.5m min. width) are provided along both sides of all adjacent public streets and pedestrian walkways (1.5m min width) are provided through large parking areas to link the building with the public street sidewalk system	0%	0%	1%
A3	Non-Residential: Development provides secure bike storage for 4% of the building occupants	2%	2%	1%
A4	Shower and change facilities provided on-site consistent with LEED requirements.	1%	1%	1%
A5	Provision of active uses at-grade along street frontages.	1%	1%	1%
	Category Maximum	**4%**	**4%**	**4%**
	Available Parking Reduction		**2%**	
TABLE B	**Public Transportation Access**			
The availability and proximity of convenient public transit service with direct pedestrian linkages to the building will provide viable travel options for employees, visitors and residents.				
	Features	**UGC**	**IC**	**Other**
B1	Bus shelters with seating are provided at the transit stop immediately adjacent to the development, in consultation with Transportation Planning at the Region of Waterloo	0%	0%	1%
B2	Information regarding public transit routes, schedules and fares are provided in an accessible and visible location on site and in adjacent bus stops	0%	0%	1%
B3a	Located in an UGC or within 800 m of a future Rapid Transit Station	24%	12%	0%
B3b	Located within 600m a transit route with 15 minute headways (or less) or is located in a designated mixed use corridor or node. **Note: Points are awarded for either B3a, B3b or B3c only. Please choose whichever represents the highest order of transit.**	-	-	3%
B3c	Located within 400 metres of a bus service with headways of 15 min to 30 min. **Note: Points are awarded for either B3a, B3b or B3c only. Please choose whichever represents the highest order of transit.**	-	-	1%
	Category Maximum	**24%**	**12%**	**5%**
	Available Parking Reduction		**12%**	
TABLE C	**Parking**			
Vehicle parking facilities can affect the character, travel mode and cost of a development. Reducing parking supply to match expected demand can have a positive influence on the selection of alternative travel modes.				
	Features	**UGC**	**IC**	**Other**
C1	Provides priority parking for carpooling/vanpooling participants equivalent to 5% of employee spaces	0%	0%	5%
C2	Commercial Uses: Provide car-share spaces equivalent to 2% of building occupants	2%	2%	0%
C3	Implements paid parking system on all or part of the site (e.g. parking permits, paid parking zones near main entrances)	2%	2%	1%
C4	Parking is not located on major street frontage.	0%	0%	1%
C5	25% to 50% of parking is located underground or in a structure	2%	1%	0%
C6	50% to 75% of parking is located underground or in a structure	4%	2%	0%
C7	75% of parking or more is located underground or in a structure	5%	3%	0%
	Category Maximum	**6%**	**4%**	**6%**
	Available Parking Reduction		**3%**	

Region of Waterloo

Sample Parking Reduction Worksheet

FORM-2

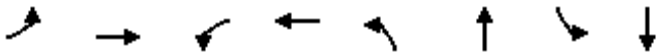
Case Study:	0	**Site Context:**	0
Date:	1/0/1900	**Worksheet No:**	0

TABLE D	Trip Reduction Incentives			
A formal TDM plan will identify specific initiatives that will be initiated in order to encourage reduced single occupant vehicle travel.				
	Features	**UGC**	**IC**	**Other**
D1	The building owner/occupant will provide a ride matching service for car/vanpooling	0%	0%	1%
D2	The building owner/occupant will provide emergency ride home options	3%	2%	1%
D3	The building owner/occupant will provide subsidized transit passes for all occupants for a period of two years	10%	4%	2%
D4	The building owner/occupant agrees to charge for parking as a separate cost to occupants	10%	5%	2%
D5	The building owner/occupant agrees to provide reduced cost for users of car/van pool, bicycle, moped/motorcycle spaces	0%	0%	1%
D6	The development agrees to join Travelwise (TMA) that provides the same services outlined under items D1 and D2	9%	6%	4%
	Category Maximum	**23%**	**11%**	**7%**
	Available Parking Reduction		**11%**	

TABLE E	Parking Reduction Summary				
Please indicate the total reduction available based upon Tables A through D above.					
		Maximum Achievable Reduction			
Category	**Reduction Achieved**	**UGC**	**IC**	**Other**	**Comments**
Pedestrian & Cyclist Orientation	**2%**	4%	4%	4%	
Public Transit Access	**12%**	24%	12%	5%	
Parking	**3%**	6%	4%	6%	
Trip Reduction Incentives	**11%**	23%	11%	7%	
TOTAL	**28%**	**57%**	**31%**	**22%**	

TABLE F	TOTAL REDUCTION ACHIEVED	28%

Appendix G – Future Total Conditions Synchro Reports



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	254	92	116	156	1524	52	1412
v/c Ratio	0.36	0.70	1.26	0.31	0.64	0.66	0.36	0.72
Control Delay	55.1	46.4	238.9	15.4	69.9	8.4	67.7	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	46.4	238.9	15.4	69.9	8.4	67.7	25.3
Queue Length 50th (m)	16.5	46.8	~32.0	6.3	45.1	46.2	13.6	143.8
Queue Length 95th (m)	28.7	69.5	#50.9	17.7	m49.7	m54.0	28.1	204.7
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		90.0		120.0	
Base Capacity (vph)	272	486	109	502	263	2293	143	1972
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	0.52	0.84	0.23	0.59	0.66	0.36	0.72

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.

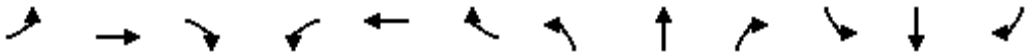
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	61	39	195	76	22	74	64	80	1366	51	47	1237
Future Volume (vph)	61	39	195	76	22	74	64	80	1366	51	47	1237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1860	1860	1900	1900	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5
Total Lost time (s)	8.0	5.0		8.0	5.0			1.0	5.0		1.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	0.98		1.00	0.98			1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.87		1.00	0.88			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)	1787	1628		1809	1654			1614	3442		1633	3362
Flt Permitted	0.60	1.00		0.24	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	1121	1628		450	1654			1614	3442		1633	3362
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.93	0.93	0.93	0.91	0.91
Adj. Flow (vph)	66	42	212	92	27	89	70	86	1469	55	52	1359
RTOR Reduction (vph)	0	63	0	0	73	0	0	0	2	0	0	2
Lane Group Flow (vph)	66	191	0	92	43	0	0	156	1522	0	52	1410
Confl. Peds. (#/hr)	11		13	13		11		27		16	16	
Heavy Vehicles (%)	1%	0%	1%	0%	0%	1%	0%	4%	3%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA		Prot	NA
Protected Phases		4			8		5	5	2		1	6
Permitted Phases	4			8								
Actuated Green, G (s)	22.7	22.7		22.7	22.7			17.2	89.2		7.1	79.1
Effective Green, g (s)	22.7	25.7		22.7	25.7			21.2	92.2		11.1	82.1
Actuated g/C Ratio	0.16	0.18		0.16	0.18			0.15	0.66		0.08	0.59
Clearance Time (s)	8.0	8.0		8.0	8.0			5.0	8.0		5.0	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)	181	298		72	303			244	2266		129	1971
v/s Ratio Prot		0.12			0.03			c0.10	0.44		0.03	c0.42
v/s Ratio Perm	0.06			c0.20								
v/c Ratio	0.36	0.64		1.28	0.14			0.64	0.67		0.40	0.72
Uniform Delay, d1	52.2	52.9		58.6	47.9			55.8	14.6		61.3	20.6
Progression Factor	1.00	1.00		1.00	1.00			1.14	0.46		1.00	1.00
Incremental Delay, d2	1.3	4.7		197.7	0.2			2.8	0.8		2.1	2.3
Delay (s)	53.5	57.5		256.4	48.1			66.4	7.6		63.4	22.9
Level of Service	D	E		F	D			E	A		E	C
Approach Delay (s)		56.7			140.2				13.1			24.3
Approach LOS		E			F				B			C

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	48
Future Volume (vph)	48
Ideal Flow (vphpl)	1900
Lane Width	3.5
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	53
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	27
Heavy Vehicles (%)	10%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	133	0	0	73	0	1488	64	0	1522	50
Future Volume (Veh/h)	0	0	133	0	0	73	0	1488	64	0	1522	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	173	0	0	99	0	1566	67	0	1654	54
Pedestrians		16			23						4	
Lane Width (m)		3.7			3.7						3.7	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		2			2						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								208			186	
pX, platoon unblocked	0.83	0.83	0.70	0.83	0.83	0.68	0.70			0.68		
vC, conflicting volume	2583	3353	870	2622	3346	844	1724			1656		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	868	1796	0	916	1788	0	1175			1023		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.3		
p0 queue free %	100	100	77	100	100	86	100			100		
cM capacity (veh/h)	167	65	751	134	66	707	414			429		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	173	99	1044	589	1103	605
Volume Left	0	0	0	0	0	0
Volume Right	173	99	0	67	0	54
cSH	751	707	1700	1700	1700	1700
Volume to Capacity	0.23	0.14	0.61	0.35	0.65	0.36
Queue Length 95th (m)	6.7	3.7	0.0	0.0	0.0	0.0
Control Delay (s)	11.2	10.9	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	11.2	10.9	0.0		0.0	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	58.6%	ICU Level of Service	B	
Analysis Period (min)	15			

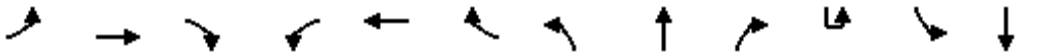
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	239	1506	167	157	539	148	72	1162	97	340	1459
v/c Ratio	0.70	0.90	0.35	0.73	0.33	0.32	0.35	1.01	0.20	1.05	0.93
Control Delay	28.1	38.8	3.3	84.3	36.7	5.7	67.6	74.9	0.9	118.2	41.8
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	39.0	3.3	84.3	36.7	5.7	67.6	74.9	0.9	118.2	41.8
Queue Length 50th (m)	22.4	151.9	5.1	22.4	41.4	0.0	10.0	~171.8	0.0	~103.3	125.0
Queue Length 95th (m)	30.4	116.0	4.3	#38.1	52.0	12.4	18.2	#219.0	0.0	m#165.8	#248.9
Internal Link Dist (m)		163.7			348.9			293.8			183.5
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			130.0	
Base Capacity (vph)	340	1669	482	214	1652	469	208	1153	490	325	1575
Starvation Cap Reductn	0	12	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	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
Reduced v/c Ratio	0.70	0.91	0.35	0.73	0.33	0.32	0.35	1.01	0.20	1.05	0.93

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.

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

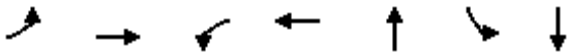


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	215	1355	150	149	512	141	67	1081	90	115	198	1203
Future Volume (vph)	215	1355	150	149	512	141	67	1081	90	115	198	1203
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.3
Total Lost time (s)	1.0	5.0	9.0	1.0	5.0	9.0	1.0	5.0	9.0		1.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.91	1.00	1.00	0.91		1.00	0.99
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.98
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1714	5193	1253	3333	5142	1208	3239	3510	1252		1629	3281
Flt Permitted	0.37	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	671	5193	1253	3333	5142	1208	3239	3510	1252		1629	3281
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	239	1506	167	157	539	148	72	1162	97	125	215	1308
RTOR Reduction (vph)	0	0	116	0	0	105	0	0	68	0	0	6
Lane Group Flow (vph)	239	1506	51	157	539	43	72	1162	29	0	340	1453
Confl. Peds. (#/hr)	79		63	63		79	52		71		71	
Heavy Vehicles (%)	3%	1%	4%	4%	2%	6%	7%	4%	3%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4		4			8			2			
Actuated Green, G (s)	48.0	41.0	41.0	5.0	41.0	41.0	4.0	42.0	42.0		24.0	62.0
Effective Green, g (s)	52.0	45.0	41.0	9.0	45.0	41.0	8.0	46.0	42.0		28.0	66.0
Actuated g/C Ratio	0.37	0.32	0.29	0.06	0.32	0.29	0.06	0.33	0.30		0.20	0.47
Clearance Time (s)	3.0	9.0	9.0	5.0	9.0	9.0	5.0	9.0	9.0		5.0	9.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0		2.0	3.0
Lane Grp Cap (vph)	316	1669	366	214	1652	353	185	1153	375		325	1546
v/s Ratio Prot	c0.05	c0.29		0.05	0.10		0.02	c0.33			c0.21	0.44
v/s Ratio Perm	0.23		0.04			0.04			0.02			
v/c Ratio	0.76	0.90	0.14	0.73	0.33	0.12	0.39	1.01	0.08		1.05	0.94
Uniform Delay, d1	35.6	45.4	36.5	64.3	36.0	36.3	63.6	47.0	35.1		56.0	35.1
Progression Factor	0.60	0.69	0.29	1.00	1.00	1.00	1.00	1.00	1.00		1.18	0.95
Incremental Delay, d2	7.5	6.2	0.1	10.6	0.1	0.2	0.5	28.4	0.4		56.6	10.2
Delay (s)	28.9	37.4	10.7	75.0	36.1	36.5	64.1	75.4	35.5		122.8	43.5
Level of Service	C	D	B	E	D	D	E	E	D		F	D
Approach Delay (s)		34.0			43.4			71.9				58.5
Approach LOS		C			D			E				E

Intersection Summary			
HCM 2000 Control Delay	51.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	139
Future Volume (vph)	139
Ideal Flow (vphpl)	1900
Lane Width	3.3
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	151
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	52
Heavy Vehicles (%)	4%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

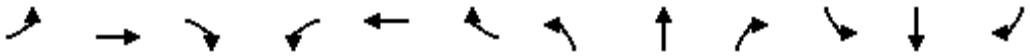
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	73	1596	52	728	132	302	195
v/c Ratio	0.16	0.56	0.24	0.27	0.25	0.88	0.31
Control Delay	10.6	17.4	18.3	11.0	12.5	71.0	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	17.4	18.3	11.0	12.5	71.0	7.5
Queue Length 50th (m)	6.2	74.9	3.0	19.9	8.6	79.3	5.4
Queue Length 95th (m)	m12.9	82.4	m8.0	m26.8	13.4	99.6	18.6
Internal Link Dist (m)		387.1		163.7	30.4		68.2
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	450	2839	220	2747	680	479	792
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	45	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.57	0.24	0.27	0.19	0.63	0.25

Intersection Summary

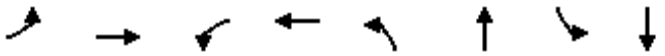
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	1390	47	48	597	73	25	7	64	266	25	147
Future Volume (vph)	66	1390	47	48	597	73	25	7	64	266	25	147
Ideal Flow (vphpl)	1860	1900	1900	1860	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		1.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.97		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		0.97	1.00	
Frt	1.00	1.00		1.00	0.98			0.91		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1684	5113		1787	4960			1644		1773	1626	
Flt Permitted	0.33	1.00		0.10	1.00			0.88		0.63	1.00	
Satd. Flow (perm)	590	5113		186	4960			1469		1179	1626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	73	1544	52	52	649	79	34	10	88	302	28	167
RTOR Reduction (vph)	0	2	0	0	9	0	0	60	0	0	114	0
Lane Group Flow (vph)	73	1594	0	52	719	0	0	72	0	302	81	0
Confl. Peds. (#/hr)	3		6	6		3	12		22	22		12
Heavy Vehicles (%)	6%	2%	0%	0%	3%	9%	4%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	81.4	75.1		80.4	74.6			41.1		41.1	41.1	
Effective Green, g (s)	85.4	77.1		84.4	76.6			44.1		41.1	44.1	
Actuated g/C Ratio	0.61	0.55		0.60	0.55			0.32		0.29	0.32	
Clearance Time (s)	3.0	7.0		3.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	424	2815		201	2713			462		346	512	
v/s Ratio Prot	c0.01	c0.31		c0.01	0.15						0.05	
v/s Ratio Perm	0.09			0.14				0.05		c0.26		
v/c Ratio	0.17	0.57		0.26	0.27			0.16		0.87	0.16	
Uniform Delay, d1	11.3	20.5		14.1	16.8			34.5		47.0	34.6	
Progression Factor	0.85	0.74		1.36	0.60			1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.8		0.6	0.2			0.2		20.8	0.1	
Delay (s)	9.7	16.0		19.7	10.3			34.7		67.7	34.7	
Level of Service	A	B		B	B			C		E	C	
Approach Delay (s)		15.8			10.9			34.7			54.8	
Approach LOS		B			B			C			D	

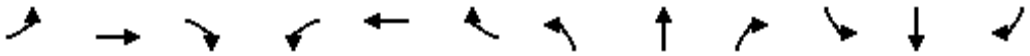
Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	1649	49	770	97	177	131	142
v/c Ratio	0.14	0.44	0.30	0.21	0.63	0.51	0.95	0.42
Control Delay	8.0	7.9	10.4	2.5	71.0	43.1	120.4	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	7.9	10.4	2.5	71.0	43.1	120.4	40.3
Queue Length 50th (m)	4.8	56.7	1.4	6.5	25.3	34.3	36.3	26.7
Queue Length 95th (m)	11.8	76.3	6.3	12.6	34.6	42.8	47.6	35.7
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	468	3764	163	3733	240	498	215	492
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	0.44	0.30	0.21	0.40	0.36	0.61	0.29

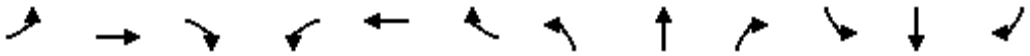
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	1317	68	46	667	56	75	52	84	102	58	53
Future Volume (vph)	54	1317	68	46	667	56	75	52	84	102	58	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	5067		1767	5025		1678	1686		1819	1684	
Flt Permitted	0.34	1.00		0.12	1.00		0.53	1.00		0.44	1.00	
Satd. Flow (perm)	643	5067		224	5025		935	1686		839	1684	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	64	1568	81	49	710	60	97	68	109	131	74	68
RTOR Reduction (vph)	0	3	0	0	5	0	0	33	0	0	27	0
Lane Group Flow (vph)	64	1646	0	49	765	0	97	144	0	131	115	0
Confl. Peds. (#/hr)	2		11	11		2	6		3	3		6
Heavy Vehicles (%)	2%	2%	11%	3%	3%	2%	8%	3%	2%	0%	1%	9%
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)	101.9	101.9		101.9	101.9		23.1	23.1		23.1	23.1	
Effective Green, g (s)	101.9	103.9		101.9	103.9		23.1	26.1		23.1	26.1	
Actuated g/C Ratio	0.73	0.74		0.73	0.74		0.17	0.19		0.17	0.19	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	468	3760		163	3729		154	314		138	313	
v/s Ratio Prot		c0.32			0.15			0.09			0.07	
v/s Ratio Perm	0.10			0.22			0.10			c0.16		
v/c Ratio	0.14	0.44		0.30	0.21		0.63	0.46		0.95	0.37	
Uniform Delay, d1	5.8	6.9		6.6	5.5		54.5	50.7		57.9	49.7	
Progression Factor	1.00	1.00		0.58	0.39		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.4		4.6	0.1		7.8	1.1		60.5	0.7	
Delay (s)	6.4	7.3		8.4	2.3		62.3	51.7		118.3	50.5	
Level of Service	A	A		A	A		E	D		F	D	
Approach Delay (s)		7.2			2.6			55.5			83.0	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

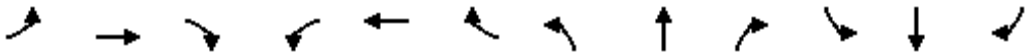
c Critical Lane Group



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	0	8	133	1	96	0	75	60	30	228	1
Future Volume (vph)	2	0	8	133	1	96	0	75	60	30	228	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
Hourly flow rate (vph)	2	0	9	145	1	104	0	82	65	33	248	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	11	250	147	282
Volume Left (vph)	2	145	0	33
Volume Right (vph)	9	104	65	1
Hadj (s)	-0.30	-0.13	-0.20	0.08
Departure Headway (s)	5.0	4.8	4.7	4.8
Degree Utilization, x	0.02	0.34	0.19	0.38
Capacity (veh/h)	624	693	708	706
Control Delay (s)	8.1	10.3	8.9	10.8
Approach Delay (s)	8.1	10.3	8.9	10.8
Approach LOS	A	B	A	B

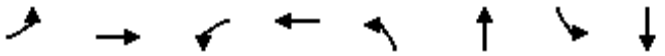
Intersection Summary				
Delay	10.1			
Level of Service	B			
Intersection Capacity Utilization	55.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	5	13	48	4	25	3	48	103	70	179	0
Future Volume (vph)	0	5	13	48	4	25	3	48	103	70	179	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	5	14	52	4	27	3	52	112	76	195	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	83	167	271
Volume Left (vph)	0	52	3	76
Volume Right (vph)	14	27	112	0
Hadj (s)	-0.44	0.04	-0.38	0.06
Departure Headway (s)	4.5	4.9	4.1	4.4
Degree Utilization, x	0.02	0.11	0.19	0.33
Capacity (veh/h)	704	666	846	791
Control Delay (s)	7.7	8.6	8.0	9.5
Approach Delay (s)	7.7	8.6	8.0	9.5
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.9			
Level of Service	A			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	29	109	54	135	249	1454	40	2485
v/c Ratio	0.35	0.49	0.52	0.57	0.59	0.59	0.27	1.30
Control Delay	68.8	49.7	76.3	55.1	24.9	25.5	62.7	168.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	49.7	76.3	55.1	24.9	25.5	62.7	168.4
Queue Length 50th (m)	7.6	21.6	14.4	28.8	40.3	201.6	10.5	~464.5
Queue Length 95th (m)	17.5	38.9	25.2	43.5	m54.1	m201.6	22.0	#503.2
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		90.0		120.0	
Base Capacity (vph)	198	455	249	486	422	2485	150	1912
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	0.15	0.24	0.22	0.28	0.59	0.59	0.27	1.30

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.

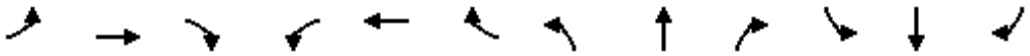
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	27	22	78	45	65	47	89	141	1305	47	36	2217
Future Volume (vph)	27	22	78	45	65	47	89	141	1305	47	36	2217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1860	1860	1900	1900	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5
Total Lost time (s)	8.0	5.0		8.0	5.0			1.0	5.0		1.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	0.97		1.00	0.98			1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.98	1.00		0.98	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.88		1.00	0.94			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)	1783	1653		1794	1768			1649	3437		1649	3521
Flt Permitted	0.43	1.00		0.54	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	816	1653		1028	1768			1649	3437		1649	3521
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.93	0.93	0.93	0.91	0.91
Adj. Flow (vph)	29	24	85	54	78	57	97	152	1403	51	40	2436
RTOR Reduction (vph)	0	23	0	0	23	0	0	0	1	0	0	1
Lane Group Flow (vph)	29	86	0	54	112	0	0	249	1453	0	40	2484
Confl. Peds. (#/hr)	24		17	17		24		13		34	34	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	1%
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA		Prot	NA
Protected Phases		4			8		5	5	2		1	6
Permitted Phases	4			8								
Actuated Green, G (s)	14.1	14.1		14.1	14.1			31.9	97.2		7.7	73.0
Effective Green, g (s)	14.1	17.1		14.1	17.1			35.9	100.2		11.7	76.0
Actuated g/C Ratio	0.10	0.12		0.10	0.12			0.26	0.72		0.08	0.54
Clearance Time (s)	8.0	8.0		8.0	8.0			5.0	8.0		5.0	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)	82	201		103	215			422	2459		137	1911
v/s Ratio Prot		0.05			c0.06			c0.15	0.42		0.02	c0.71
v/s Ratio Perm	0.04			0.05								
v/c Ratio	0.35	0.43		0.52	0.52			0.59	0.59		0.29	1.30
Uniform Delay, d1	58.7	56.9		59.8	57.6			45.6	9.8		60.3	32.0
Progression Factor	1.00	1.00		1.00	1.00			0.47	2.30		1.00	1.00
Incremental Delay, d2	2.6	1.5		4.7	2.3			0.9	0.4		1.2	138.9
Delay (s)	61.3	58.4		64.5	59.9			22.4	23.0		61.4	170.9
Level of Service	E	E		E	E			C	C		E	F
Approach Delay (s)		59.0			61.2				22.9			169.2
Approach LOS		E			E				C			F

Intersection Summary			
HCM 2000 Control Delay	106.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	45
Future Volume (vph)	45
Ideal Flow (vphpl)	1900
Lane Width	3.5
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	49
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	13
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	61	0	0	104	0	1478	55	0	2304	125
Future Volume (Veh/h)	0	0	61	0	0	104	0	1478	55	0	2304	125
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	79	0	0	141	0	1556	58	0	2504	136
Pedestrians		14			45			4			22	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		1			4			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								208			186	
pX, platoon unblocked	0.63	0.63	0.46	0.63	0.63	0.66	0.46			0.66		
vC, conflicting volume	3527	4245	1338	2965	4284	874	2654			1659		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1441	2577	0	551	2639	0	2254			980		
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	84	100	100	79	100			100		
cM capacity (veh/h)	44	16	497	204	14	678	106			452		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	79	141	1037	577	1669	971
Volume Left	0	0	0	0	0	0
Volume Right	79	141	0	58	0	136
cSH	497	678	1700	1700	1700	1700
Volume to Capacity	0.16	0.21	0.61	0.34	0.98	0.57
Queue Length 95th (m)	4.3	5.9	0.0	0.0	0.0	0.0
Control Delay (s)	13.6	11.7	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	13.6	11.7	0.0		0.0	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	79.8%	ICU Level of Service	D	
Analysis Period (min)	15			

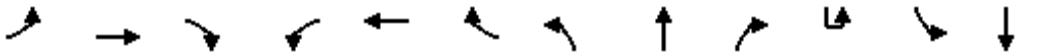
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	148	688	196	263	1721	146	284	1287	104	324	2247
v/c Ratio	0.99	0.42	0.41	1.21	0.99	0.32	1.29	1.06	0.21	1.07	1.42
Control Delay	106.0	30.8	7.1	181.1	64.8	7.2	210.0	87.0	2.4	90.3	213.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.0	30.8	7.1	181.1	64.8	7.2	210.0	87.0	2.4	90.3	213.8
Queue Length 50th (m)	19.1	54.7	8.3	~45.5	173.0	0.0	~51.4	~205.4	0.0	~97.2	~447.7
Queue Length 95th (m)	#70.5	60.9	10.1	#73.6	#207.9	15.4	#80.7	#247.7	4.3	m67.7	m#311.0
Internal Link Dist (m)		163.7			348.9			293.8			183.5
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			130.0	
Base Capacity (vph)	150	1652	483	218	1743	450	220	1215	494	303	1578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.42	0.41	1.21	0.99	0.32	1.29	1.06	0.21	1.07	1.42

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.

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

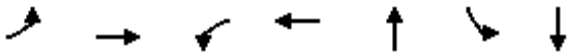


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	133	619	176	250	1635	139	264	1197	97	64	234	1869
Future Volume (vph)	133	619	176	250	1635	139	264	1197	97	64	234	1869
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.3
Total Lost time (s)	1.0	5.0	9.0	1.0	5.0	9.0	1.0	5.0	9.0		1.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.84	1.00	1.00	0.90		1.00	0.99
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
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1787	5142	1294	3398	5193	1134	3432	3544	1251		1636	3386
Flt Permitted	0.09	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	175	5142	1294	3398	5193	1134	3432	3544	1251		1636	3386
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	148	688	196	263	1721	146	284	1287	104	70	254	2032
RTOR Reduction (vph)	0	0	105	0	0	101	0	0	71	0	0	6
Lane Group Flow (vph)	148	688	91	263	1721	45	284	1287	33	0	324	2241
Confl. Peds. (#/hr)	151		70	70		151	57		89		89	
Heavy Vehicles (%)	0%	2%	0%	2%	1%	4%	1%	3%	1%	0%	1%	1%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4		4			8			2			
Actuated Green, G (s)	46.0	41.0	41.0	5.0	43.0	43.0	5.0	44.0	44.0		22.0	61.0
Effective Green, g (s)	50.0	45.0	41.0	9.0	47.0	43.0	9.0	48.0	44.0		26.0	65.0
Actuated g/C Ratio	0.36	0.32	0.29	0.06	0.34	0.31	0.06	0.34	0.31		0.19	0.46
Clearance Time (s)	3.0	9.0	9.0	5.0	9.0	9.0	5.0	9.0	9.0		5.0	9.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0		2.0	3.0
Lane Grp Cap (vph)	143	1652	378	218	1743	348	220	1215	393		303	1572
v/s Ratio Prot	0.05	0.13		c0.08	c0.33		c0.08	0.36			0.20	c0.66
v/s Ratio Perm	0.32		0.07			0.04			0.03			
v/c Ratio	1.03	0.42	0.24	1.21	0.99	0.13	1.29	1.06	0.08		1.07	1.43
Uniform Delay, d1	40.2	37.2	37.7	65.5	46.2	35.0	65.5	46.0	33.8		57.0	37.5
Progression Factor	1.28	0.80	0.42	1.00	1.00	1.00	1.00	1.00	1.00		0.98	0.55
Incremental Delay, d2	83.4	0.2	0.3	127.9	18.4	0.2	160.5	43.1	0.4		38.0	191.9
Delay (s)	134.9	30.1	16.3	193.4	64.6	35.2	226.0	89.1	34.2		94.1	212.5
Level of Service	F	C	B	F	E	D	F	F	C		F	F
Approach Delay (s)		42.5			78.5			108.9				197.5
Approach LOS		D			E			F				F

Intersection Summary			
HCM 2000 Control Delay	121.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width	3.3
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	215
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	57
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

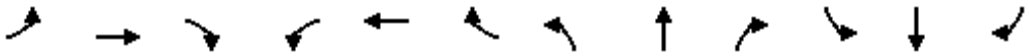
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	118	852	59	2221	199	149	154
v/c Ratio	0.60	0.25	0.12	0.68	0.82	0.76	0.37
Control Delay	45.4	8.9	1.3	3.4	69.6	77.6	16.1
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	45.4	8.9	1.3	3.6	69.6	77.6	16.1
Queue Length 50th (m)	17.2	29.0	0.9	18.5	45.5	39.5	9.6
Queue Length 95th (m)	38.9	39.1	m1.1	m21.7	51.4	58.3	25.4
Internal Link Dist (m)		387.1		163.7	30.4		68.2
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	223	3423	496	3254	313	267	524
Starvation Cap Reductn	0	0	0	361	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.25	0.12	0.77	0.64	0.56	0.29

Intersection Summary

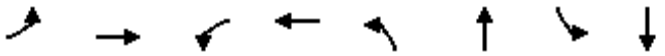
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	730	37	54	1794	249	73	5	67	131	13	122
Future Volume (vph)	106	730	37	54	1794	249	73	5	67	131	13	122
Ideal Flow (vphpl)	1860	1900	1900	1860	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		1.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		0.98	1.00	
Frt	1.00	0.99		1.00	0.98			0.94		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	
Satd. Flow (prot)	1787	5090		1780	5081			1698		1791	1630	
Flt Permitted	0.04	1.00		0.32	1.00			0.62		0.57	1.00	
Satd. Flow (perm)	83	5090		595	5081			1076		1069	1630	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	118	811	41	59	1950	271	100	7	92	149	15	139
RTOR Reduction (vph)	0	3	0	0	11	0	0	24	0	0	89	0
Lane Group Flow (vph)	118	849	0	59	2210	0	0	175	0	149	65	0
Confl. Peds. (#/hr)	4		10	10		4	5		19	19		5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	0%	1%	0%	1%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	99.4	91.4		92.3	87.3			25.6		25.6	25.6	
Effective Green, g (s)	101.4	93.4		96.3	89.3			28.6		25.6	28.6	
Actuated g/C Ratio	0.72	0.67		0.69	0.64			0.20		0.18	0.20	
Clearance Time (s)	3.0	7.0		3.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	195	3395		468	3240			219		195	332	
v/s Ratio Prot	c0.05	0.17		0.01	c0.44						0.04	
v/s Ratio Perm	0.39			0.08				c0.16		0.14		
v/c Ratio	0.61	0.25		0.13	0.68			0.80		0.76	0.20	
Uniform Delay, d1	30.9	9.3		7.1	16.3			53.0		54.3	46.2	
Progression Factor	1.29	0.87		0.22	0.18			1.00		1.00	1.00	
Incremental Delay, d2	5.1	0.2		0.0	0.1			18.2		16.2	0.3	
Delay (s)	45.0	8.3		1.6	3.1			71.2		70.5	46.5	
Level of Service	D	A		A	A			E		E	D	
Approach Delay (s)		12.8			3.1			71.2			58.3	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

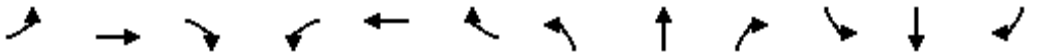
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	50	996	91	2024	83	97	72	113
v/c Ratio	0.42	0.25	0.23	0.49	0.76	0.35	0.55	0.45
Control Delay	19.6	4.0	2.9	1.5	98.3	23.6	73.3	46.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	4.0	2.9	1.5	98.3	23.6	73.3	46.5
Queue Length 50th (m)	3.9	21.0	2.0	13.8	22.7	7.9	19.2	22.0
Queue Length 95th (m)	15.7	30.0	m4.1	17.8	32.7	17.4	29.1	32.5
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	118	4005	398	4097	195	420	233	403
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	0.42	0.25	0.23	0.49	0.43	0.23	0.31	0.28

Intersection Summary

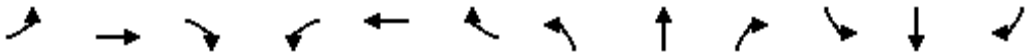
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	767	70	86	1809	94	64	25	50	56	46	42
Future Volume (vph)	42	767	70	86	1809	94	64	25	50	56	46	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.90		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1806	5033		1797	5147		1695	1670		1818	1730	
Flt Permitted	0.08	1.00		0.27	1.00		0.55	1.00		0.61	1.00	
Satd. Flow (perm)	151	5033		510	5147		978	1670		1167	1730	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	50	913	83	91	1924	100	83	32	65	72	59	54
RTOR Reduction (vph)	0	5	0	0	3	0	0	56	0	0	23	0
Lane Group Flow (vph)	50	991	0	91	2021	0	83	41	0	72	90	0
Confl. Peds. (#/hr)	5		18	18		5	13		3	3		13
Heavy Vehicles (%)	1%	2%	4%	0%	1%	0%	6%	3%	2%	0%	3%	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)	109.3	109.3		109.3	109.3		15.7	15.7		15.7	15.7	
Effective Green, g (s)	109.3	111.3		109.3	111.3		15.7	18.7		15.7	18.7	
Actuated g/C Ratio	0.78	0.79		0.78	0.79		0.11	0.13		0.11	0.13	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	117	4001		398	4091		109	223		130	231	
v/s Ratio Prot		0.20			c0.39			0.02			0.05	
v/s Ratio Perm	0.33			0.18			c0.08			0.06		
v/c Ratio	0.43	0.25		0.23	0.49		0.76	0.18		0.55	0.39	
Uniform Delay, d1	5.1	3.7		4.1	4.8		60.3	53.9		58.8	55.4	
Progression Factor	1.00	1.00		0.37	0.22		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.0	0.1		1.0	0.3		26.4	0.4		5.0	1.1	
Delay (s)	16.1	3.8		2.5	1.4		86.7	54.3		63.9	56.5	
Level of Service	B	A		A	A		F	D		E	E	
Approach Delay (s)		4.4			1.4			69.2			59.4	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

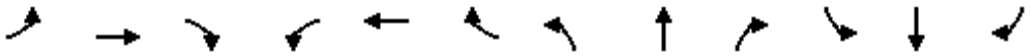
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	4	111	0	33	5	212	144	70	142	2
Future Volume (vph)	0	0	4	111	0	33	5	212	144	70	142	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
Hourly flow rate (vph)	0	0	4	121	0	36	5	230	157	76	154	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	4	157	392	232
Volume Left (vph)	0	121	5	76
Volume Right (vph)	4	36	157	2
Hadj (s)	0.03	0.06	-0.23	0.06
Departure Headway (s)	5.7	5.4	4.4	4.9
Degree Utilization, x	0.01	0.24	0.48	0.31
Capacity (veh/h)	539	604	787	704
Control Delay (s)	8.7	10.1	11.5	10.1
Approach Delay (s)	8.7	10.1	11.5	10.1
Approach LOS	A	B	B	B

Intersection Summary				
Delay	10.8			
Level of Service	B			
Intersection Capacity Utilization	58.6%	ICU Level of Service	B	
Analysis Period (min)	15			

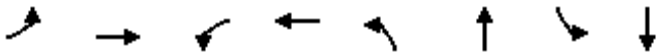


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	5	4	99	9	68	5	178	59	37	108	0
Future Volume (vph)	0	5	4	99	9	68	5	178	59	37	108	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	4	108	10	74	5	193	64	40	117	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	9	192	262	157
Volume Left (vph)	0	108	5	40
Volume Right (vph)	4	74	64	0
Hadj (s)	-0.27	0.05	0.18	0.05
Departure Headway (s)	5.0	5.0	4.8	4.8
Degree Utilization, x	0.01	0.27	0.35	0.21
Capacity (veh/h)	639	670	718	705
Control Delay (s)	8.0	9.8	10.4	9.1
Approach Delay (s)	8.0	9.8	10.4	9.1
Approach LOS	A	A	B	A

Intersection Summary				
Delay	9.8			
Level of Service	A			
Intersection Capacity Utilization	50.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix H – As-of-Right Synchro Reports



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	254	92	116	153	1509	52	1410
v/c Ratio	0.36	0.71	1.24	0.31	0.64	0.66	0.36	0.71
Control Delay	55.0	47.6	232.5	15.4	70.8	8.0	67.7	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	47.6	232.5	15.4	70.8	8.0	67.7	24.9
Queue Length 50th (m)	16.5	48.0	~31.8	6.3	44.0	43.8	13.6	142.6
Queue Length 95th (m)	28.7	70.6	#50.6	17.7	m50.2	m53.5	28.1	201.0
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		90.0		120.0	
Base Capacity (vph)	272	483	110	502	255	2291	143	1978
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	0.84	0.23	0.60	0.66	0.36	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.

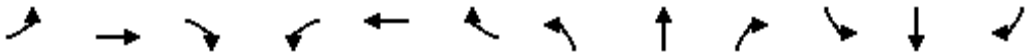
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	61	39	195	76	22	74	62	80	1352	51	47	1235
Future Volume (vph)	61	39	195	76	22	74	62	80	1352	51	47	1235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1860	1860	1900	1900	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5
Total Lost time (s)	8.0	5.0		8.0	5.0			1.0	5.0		1.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	0.98		1.00	0.98			1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.87		1.00	0.88			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)	1787	1628		1809	1654			1613	3442		1633	3362
Flt Permitted	0.60	1.00		0.24	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	1122	1628		454	1654			1613	3442		1633	3362
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.93	0.93	0.93	0.91	0.91
Adj. Flow (vph)	66	42	212	92	27	89	67	86	1454	55	52	1357
RTOR Reduction (vph)	0	60	0	0	73	0	0	0	2	0	0	2
Lane Group Flow (vph)	66	194	0	92	43	0	0	153	1507	0	52	1408
Confl. Peds. (#/hr)	11		13	13		11		27		16	16	
Heavy Vehicles (%)	1%	0%	1%	0%	0%	1%	0%	4%	3%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA		Prot	NA
Protected Phases		4			8		5	5	2		1	6
Permitted Phases	4			8								
Actuated Green, G (s)	22.8	22.8		22.8	22.8			16.8	89.1		7.1	79.4
Effective Green, g (s)	22.8	25.8		22.8	25.8			20.8	92.1		11.1	82.4
Actuated g/C Ratio	0.16	0.18		0.16	0.18			0.15	0.66		0.08	0.59
Clearance Time (s)	8.0	8.0		8.0	8.0			5.0	8.0		5.0	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)	182	300		73	304			239	2264		129	1978
v/s Ratio Prot		0.12			0.03			c0.09	0.44		0.03	c0.42
v/s Ratio Perm	0.06			c0.20								
v/c Ratio	0.36	0.65		1.26	0.14			0.64	0.67		0.40	0.71
Uniform Delay, d1	52.1	52.9		58.6	47.8			56.1	14.6		61.3	20.4
Progression Factor	1.00	1.00		1.00	1.00			1.14	0.44		1.00	1.00
Incremental Delay, d2	1.2	4.8		190.5	0.2			3.1	0.8		2.1	2.2
Delay (s)	53.4	57.7		249.1	48.1			67.2	7.3		63.4	22.6
Level of Service	D	E		F	D			E	A		E	C
Approach Delay (s)		56.8			137.0				12.8			24.1
Approach LOS		E			F				B			C

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	48
Future Volume (vph)	48
Ideal Flow (vphpl)	1900
Lane Width	3.5
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	53
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	27
Heavy Vehicles (%)	10%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	119	0	0	72	0	1473	61	0	1522	46
Future Volume (Veh/h)	0	0	119	0	0	72	0	1473	61	0	1522	46
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	155	0	0	97	0	1551	64	0	1654	50
Pedestrians		16			23						4	
Lane Width (m)		3.7			3.7						3.7	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		2			2						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								208			186	
pX, platoon unblocked	0.83	0.83	0.70	0.83	0.83	0.68	0.70			0.68		
vC, conflicting volume	2572	3333	868	2588	3326	834	1720			1638		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	859	1779	0	879	1771	0	1176			991		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.3		
p0 queue free %	100	100	79	100	100	86	100			100		
cM capacity (veh/h)	170	66	753	147	67	705	415			440		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	155	97	1034	581	1103	601
Volume Left	0	0	0	0	0	0
Volume Right	155	97	0	64	0	50
cSH	753	705	1700	1700	1700	1700
Volume to Capacity	0.21	0.14	0.61	0.34	0.65	0.35
Queue Length 95th (m)	5.8	3.6	0.0	0.0	0.0	0.0
Control Delay (s)	11.0	10.9	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	11.0	10.9	0.0		0.0	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	57.6%	ICU Level of Service	B	
Analysis Period (min)	15			

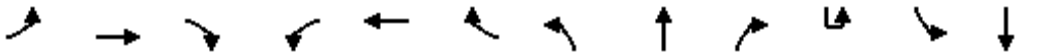
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	232	1486	163	157	535	147	71	1161	97	329	1454
v/c Ratio	0.68	0.89	0.34	0.73	0.32	0.31	0.34	0.99	0.19	1.05	0.92
Control Delay	26.8	38.3	3.1	84.3	36.7	5.6	67.5	69.0	0.9	120.4	41.2
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	38.5	3.1	84.3	36.7	5.6	67.5	69.0	0.9	120.4	41.2
Queue Length 50th (m)	23.2	149.1	5.4	22.4	41.0	0.0	9.8	167.7	0.0	~100.6	123.2
Queue Length 95th (m)	28.3	109.2	3.6	#38.1	51.6	12.2	17.9	#215.2	0.0	m#161.0	#247.3
Internal Link Dist (m)		163.7			348.9			293.8			183.5
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			130.0	
Base Capacity (vph)	342	1669	482	214	1652	469	208	1178	498	313	1575
Starvation Cap Reductn	0	12	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	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
Reduced v/c Ratio	0.68	0.90	0.34	0.73	0.32	0.31	0.34	0.99	0.19	1.05	0.92

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.

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

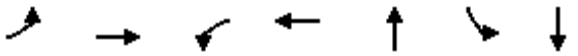


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	209	1337	147	149	508	140	66	1080	90	105	198	1199
Future Volume (vph)	209	1337	147	149	508	140	66	1080	90	105	198	1199
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.3
Total Lost time (s)	1.0	5.0	9.0	1.0	5.0	9.0	1.0	5.0	9.0		1.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.91	1.00	1.00	0.91		1.00	0.99
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.98
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1714	5193	1253	3333	5142	1208	3239	3510	1252		1628	3281
Flt Permitted	0.37	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	676	5193	1253	3333	5142	1208	3239	3510	1252		1628	3281
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	232	1486	163	157	535	147	71	1161	97	114	215	1303
RTOR Reduction (vph)	0	0	115	0	0	104	0	0	67	0	0	6
Lane Group Flow (vph)	232	1486	48	157	535	43	71	1161	30	0	329	1448
Confl. Peds. (#/hr)	79		63	63		79	52		71		71	
Heavy Vehicles (%)	3%	1%	4%	4%	2%	6%	7%	4%	3%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4		4			8			2			
Actuated Green, G (s)	48.0	41.0	41.0	5.0	41.0	41.0	4.0	43.0	43.0		23.0	62.0
Effective Green, g (s)	52.0	45.0	41.0	9.0	45.0	41.0	8.0	47.0	43.0		27.0	66.0
Actuated g/C Ratio	0.37	0.32	0.29	0.06	0.32	0.29	0.06	0.34	0.31		0.19	0.47
Clearance Time (s)	3.0	9.0	9.0	5.0	9.0	9.0	5.0	9.0	9.0		5.0	9.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0		2.0	3.0
Lane Grp Cap (vph)	317	1669	366	214	1652	353	185	1178	384		313	1546
v/s Ratio Prot	0.05	c0.29		c0.05	0.10		0.02	0.33			c0.20	c0.44
v/s Ratio Perm	0.22		0.04			0.04			0.02			
v/c Ratio	0.73	0.89	0.13	0.73	0.32	0.12	0.38	0.99	0.08		1.05	0.94
Uniform Delay, d1	35.1	45.2	36.4	64.3	36.0	36.3	63.6	46.2	34.4		56.5	35.0
Progression Factor	0.60	0.69	0.28	1.00	1.00	1.00	1.00	1.00	1.00		1.18	0.94
Incremental Delay, d2	6.3	5.6	0.1	10.6	0.1	0.2	0.5	23.0	0.4		58.8	9.9
Delay (s)	27.3	36.9	10.3	75.0	36.1	36.5	64.1	69.2	34.8		125.4	42.8
Level of Service	C	D	B	E	D	D	E	E	C		F	D
Approach Delay (s)		33.4			43.4			66.4				58.0
Approach LOS		C			D			E				E

Intersection Summary			
HCM 2000 Control Delay	49.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	139
Future Volume (vph)	139
Ideal Flow (vphpl)	1900
Lane Width	3.3
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	151
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	52
Heavy Vehicles (%)	4%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

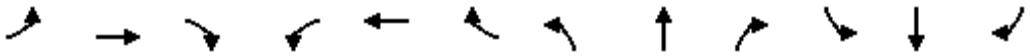
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	69	1596	52	724	130	273	176
v/c Ratio	0.15	0.54	0.23	0.25	0.27	0.88	0.31
Control Delay	9.0	15.3	15.0	9.7	13.4	75.8	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	15.3	15.0	9.7	13.4	75.8	8.3
Queue Length 50th (m)	5.2	69.4	2.9	18.2	8.6	72.8	5.0
Queue Length 95th (m)	m11.2	76.5	m6.1	m25.4	13.8	93.5	18.7
Internal Link Dist (m)		387.1		163.7	30.4		68.2
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	473	2969	231	2868	660	457	761
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	36	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.54	0.23	0.25	0.20	0.60	0.23

Intersection Summary

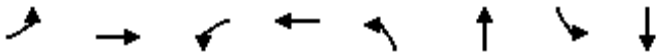
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1390	47	48	597	69	25	6	64	240	22	133
Future Volume (vph)	62	1390	47	48	597	69	25	6	64	240	22	133
Ideal Flow (vphpl)	1860	1900	1900	1860	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		1.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.97		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		0.97	1.00	
Frt	1.00	1.00		1.00	0.98			0.91		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1684	5113		1787	4966			1639		1773	1626	
Flt Permitted	0.34	1.00		0.10	1.00			0.88		0.62	1.00	
Satd. Flow (perm)	599	5113		196	4966			1468		1166	1626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	69	1544	52	52	649	75	34	8	88	273	25	151
RTOR Reduction (vph)	0	2	0	0	8	0	0	63	0	0	107	0
Lane Group Flow (vph)	69	1594	0	52	716	0	0	67	0	273	69	0
Confl. Peds. (#/hr)	3		6	6		3	12		22	22		12
Heavy Vehicles (%)	6%	2%	0%	0%	3%	9%	4%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	85.2	78.7		84.0	78.1			37.4		37.4	37.4	
Effective Green, g (s)	89.2	80.7		88.0	80.1			40.4		37.4	40.4	
Actuated g/C Ratio	0.64	0.58		0.63	0.57			0.29		0.27	0.29	
Clearance Time (s)	3.0	7.0		3.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	447	2947		212	2841			423		311	469	
v/s Ratio Prot	c0.01	c0.31		c0.01	0.14						0.04	
v/s Ratio Perm	0.09			0.14				0.05		c0.23		
v/c Ratio	0.15	0.54		0.25	0.25			0.16		0.88	0.15	
Uniform Delay, d1	9.8	18.2		12.3	15.0			37.1		49.1	37.0	
Progression Factor	0.84	0.74		1.27	0.59			1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.7		0.6	0.2			0.2		23.2	0.1	
Delay (s)	8.3	14.1		16.2	9.0			37.3		72.3	37.1	
Level of Service	A	B		B	A			D		E	D	
Approach Delay (s)		13.8			9.5			37.3			58.5	
Approach LOS		B			A			D			E	

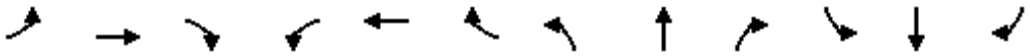
Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	1644	49	755	97	177	131	142
v/c Ratio	0.13	0.44	0.30	0.20	0.63	0.51	0.95	0.42
Control Delay	8.0	7.9	10.7	2.8	71.0	42.7	120.4	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	7.9	10.7	2.8	71.0	42.7	120.4	40.3
Queue Length 50th (m)	4.8	56.4	1.6	7.5	25.3	34.0	36.3	26.7
Queue Length 95th (m)	11.7	76.0	6.5	13.5	34.6	42.6	47.6	35.7
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	475	3764	164	3733	240	499	215	492
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	0.44	0.30	0.20	0.40	0.35	0.61	0.29

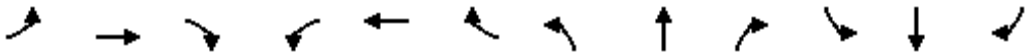
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	1313	68	46	653	56	75	52	84	102	58	53
Future Volume (vph)	54	1313	68	46	653	56	75	52	84	102	58	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	5067		1767	5024		1678	1686		1819	1684	
Flt Permitted	0.35	1.00		0.12	1.00		0.53	1.00		0.44	1.00	
Satd. Flow (perm)	654	5067		225	5024		935	1686		839	1684	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	64	1563	81	49	695	60	97	68	109	131	74	68
RTOR Reduction (vph)	0	3	0	0	5	0	0	33	0	0	27	0
Lane Group Flow (vph)	64	1641	0	49	750	0	97	144	0	131	115	0
Confl. Peds. (#/hr)	2		11	11		2	6		3	3		6
Heavy Vehicles (%)	2%	2%	11%	3%	3%	2%	8%	3%	2%	0%	1%	9%
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)	101.9	101.9		101.9	101.9		23.1	23.1		23.1	23.1	
Effective Green, g (s)	101.9	103.9		101.9	103.9		23.1	26.1		23.1	26.1	
Actuated g/C Ratio	0.73	0.74		0.73	0.74		0.17	0.19		0.17	0.19	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	476	3760		163	3728		154	314		138	313	
v/s Ratio Prot		c0.32			0.15			0.09			0.07	
v/s Ratio Perm	0.10			0.22			0.10			c0.16		
v/c Ratio	0.13	0.44		0.30	0.20		0.63	0.46		0.95	0.37	
Uniform Delay, d1	5.7	6.9		6.6	5.5		54.5	50.7		57.9	49.7	
Progression Factor	1.00	1.00		0.62	0.46		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.4		4.6	0.1		7.8	1.1		60.5	0.7	
Delay (s)	6.3	7.3		8.7	2.6		62.3	51.7		118.3	50.5	
Level of Service	A	A		A	A		E	D		F	D	
Approach Delay (s)		7.2			3.0			55.5			83.0	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

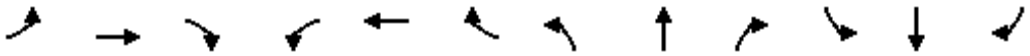
c Critical Lane Group



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	0	8	107	1	87	0	72	54	27	212	1
Future Volume (vph)	2	0	8	107	1	87	0	72	54	27	212	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
Hourly flow rate (vph)	2	0	9	116	1	95	0	78	59	29	230	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	11	212	137	260
Volume Left (vph)	2	116	0	29
Volume Right (vph)	9	95	59	1
Hadj (s)	-0.30	-0.16	-0.19	0.08
Departure Headway (s)	4.9	4.7	4.6	4.7
Degree Utilization, x	0.01	0.28	0.17	0.34
Capacity (veh/h)	655	710	737	727
Control Delay (s)	7.9	9.5	8.6	10.1
Approach Delay (s)	7.9	9.5	8.6	10.1
Approach LOS	A	A	A	B

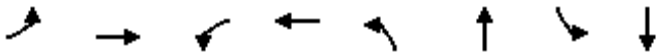
Intersection Summary				
Delay	9.5			
Level of Service	A			
Intersection Capacity Utilization	52.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	5	13	45	4	24	3	45	94	65	163	0
Future Volume (vph)	0	5	13	45	4	24	3	45	94	65	163	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	5	14	49	4	26	3	49	102	71	177	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	79	154	248
Volume Left (vph)	0	49	3	71
Volume Right (vph)	14	26	102	0
Hadj (s)	-0.44	0.04	-0.37	0.06
Departure Headway (s)	4.4	4.8	4.0	4.4
Degree Utilization, x	0.02	0.11	0.17	0.30
Capacity (veh/h)	723	681	854	796
Control Delay (s)	7.6	8.4	7.9	9.2
Approach Delay (s)	7.6	8.4	7.9	9.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	43.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	29	109	54	135	243	1452	40	2474
v/c Ratio	0.35	0.48	0.52	0.57	0.58	0.58	0.27	1.29
Control Delay	68.8	48.5	76.3	55.1	24.0	24.1	62.7	165.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	48.5	76.3	55.1	24.0	24.1	62.7	165.9
Queue Length 50th (m)	7.6	21.0	14.4	28.8	36.3	202.0	10.5	~461.2
Queue Length 95th (m)	17.5	38.4	25.2	43.5	m49.7	m205.3	22.0	#499.8
Internal Link Dist (m)		115.8		151.2		161.8		155.1
Turn Bay Length (m)	66.0		26.8		90.0		120.0	
Base Capacity (vph)	198	457	249	486	422	2485	150	1912
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	0.15	0.24	0.22	0.28	0.58	0.58	0.27	1.29

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.

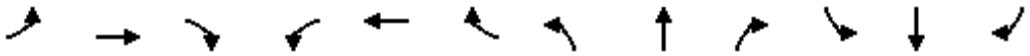
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	27	22	78	45	65	47	84	141	1303	47	36	2207
Future Volume (vph)	27	22	78	45	65	47	84	141	1303	47	36	2207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1860	1860	1900	1900	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.5	3.5	3.0	3.5
Total Lost time (s)	8.0	5.0		8.0	5.0			1.0	5.0		1.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	0.97		1.00	0.98			1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.98	1.00		0.98	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.88		1.00	0.94			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)	1783	1653		1794	1768			1649	3436		1649	3521
Flt Permitted	0.43	1.00		0.54	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	816	1653		1028	1768			1649	3436		1649	3521
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.93	0.93	0.93	0.91	0.91
Adj. Flow (vph)	29	24	85	54	78	57	91	152	1401	51	40	2425
RTOR Reduction (vph)	0	25	0	0	23	0	0	0	1	0	0	1
Lane Group Flow (vph)	29	84	0	54	112	0	0	243	1451	0	40	2473
Confl. Peds. (#/hr)	24		17	17		24		13		34	34	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	1%
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA		Prot	NA
Protected Phases		4			8		5	5	2		1	6
Permitted Phases	4			8								
Actuated Green, G (s)	14.1	14.1		14.1	14.1			31.9	97.2		7.7	73.0
Effective Green, g (s)	14.1	17.1		14.1	17.1			35.9	100.2		11.7	76.0
Actuated g/C Ratio	0.10	0.12		0.10	0.12			0.26	0.72		0.08	0.54
Clearance Time (s)	8.0	8.0		8.0	8.0			5.0	8.0		5.0	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)	82	201		103	215			422	2459		137	1911
v/s Ratio Prot		0.05			c0.06			c0.15	0.42		0.02	c0.70
v/s Ratio Perm	0.04			0.05								
v/c Ratio	0.35	0.42		0.52	0.52			0.58	0.59		0.29	1.29
Uniform Delay, d1	58.7	56.9		59.8	57.6			45.4	9.8		60.3	32.0
Progression Factor	1.00	1.00		1.00	1.00			0.45	2.16		1.00	1.00
Incremental Delay, d2	2.6	1.4		4.7	2.3			0.8	0.5		1.2	136.4
Delay (s)	61.3	58.3		64.5	59.9			21.4	21.6		61.4	168.4
Level of Service	E	E		E	E			C	C		E	F
Approach Delay (s)		58.9			61.2				21.6			166.7
Approach LOS		E			E				C			F

Intersection Summary			
HCM 2000 Control Delay	104.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	45
Future Volume (vph)	45
Ideal Flow (vphpl)	1900
Lane Width	3.5
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	49
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	13
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	56	0	0	103	0	1472	53	0	2304	110
Future Volume (Veh/h)	0	0	56	0	0	103	0	1472	53	0	2304	110
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.74	0.74	0.74	0.95	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	73	0	0	139	0	1549	56	0	2504	120
Pedestrians		14			45			4			22	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		1			4			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								208			186	
pX, platoon unblocked	0.64	0.64	0.46	0.64	0.64	0.66	0.46			0.66		
vC, conflicting volume	3514	4228	1330	2951	4260	870	2638			1650		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1378	2502	0	492	2553	0	2219			945		
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	85	100	100	79	100			100		
cM capacity (veh/h)	49	17	497	229	16	670	109			461		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	73	139	1033	572	1669	955
Volume Left	0	0	0	0	0	0
Volume Right	73	139	0	56	0	120
cSH	497	670	1700	1700	1700	1700
Volume to Capacity	0.15	0.21	0.61	0.34	0.98	0.56
Queue Length 95th (m)	3.9	5.9	0.0	0.0	0.0	0.0
Control Delay (s)	13.5	11.8	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	13.5	11.8	0.0		0.0	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	79.0%	ICU Level of Service	D	
Analysis Period (min)	15			

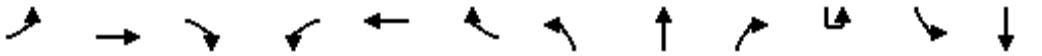
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	147	679	193	263	1696	146	280	1283	104	320	2244
v/c Ratio	0.98	0.41	0.40	1.21	0.97	0.32	1.27	1.03	0.21	1.10	1.42
Control Delay	103.9	30.9	7.2	181.1	61.8	7.2	203.6	79.2	2.3	99.3	214.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	30.9	7.2	181.1	61.8	7.2	203.6	79.2	2.3	99.3	214.0
Queue Length 50th (m)	18.5	53.4	13.3	~45.5	169.5	0.0	~50.2	~200.3	0.0	~98.5	~451.2
Queue Length 95th (m)	#69.3	63.5	9.2	#73.6	#202.9	15.4	#79.2	#243.0	4.2	m68.2	m#311.4
Internal Link Dist (m)		163.7			348.9			293.8			183.5
Turn Bay Length (m)	100.0		100.0	150.0		125.0	100.0			130.0	
Base Capacity (vph)	150	1652	483	218	1743	450	220	1240	502	292	1578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.41	0.40	1.21	0.97	0.32	1.27	1.03	0.21	1.10	1.42

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.

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

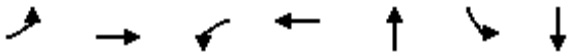


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	132	611	174	250	1611	139	260	1193	97	61	234	1867
Future Volume (vph)	132	611	174	250	1611	139	260	1193	97	61	234	1867
Ideal Flow (vphpl)	1860	1900	1640	1860	1900	1640	1860	1900	1640	1860	1860	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.3
Total Lost time (s)	1.0	5.0	9.0	1.0	5.0	9.0	1.0	5.0	9.0		1.0	5.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.84	1.00	1.00	0.90		1.00	0.99
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
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1787	5142	1294	3398	5193	1134	3432	3544	1251		1636	3386
Flt Permitted	0.09	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	175	5142	1294	3398	5193	1134	3432	3544	1251		1636	3386
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	147	679	193	263	1696	146	280	1283	104	66	254	2029
RTOR Reduction (vph)	0	0	105	0	0	101	0	0	71	0	0	6
Lane Group Flow (vph)	147	679	88	263	1696	45	280	1283	33	0	320	2238
Confl. Peds. (#/hr)	151		70	70		151	57		89		89	
Heavy Vehicles (%)	0%	2%	0%	2%	1%	4%	1%	3%	1%	0%	1%	1%
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4		4			8			2			
Actuated Green, G (s)	46.0	41.0	41.0	5.0	43.0	43.0	5.0	45.0	45.0		21.0	61.0
Effective Green, g (s)	50.0	45.0	41.0	9.0	47.0	43.0	9.0	49.0	45.0		25.0	65.0
Actuated g/C Ratio	0.36	0.32	0.29	0.06	0.34	0.31	0.06	0.35	0.32		0.18	0.46
Clearance Time (s)	3.0	9.0	9.0	5.0	9.0	9.0	5.0	9.0	9.0		5.0	9.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0		2.0	3.0
Lane Grp Cap (vph)	143	1652	378	218	1743	348	220	1240	402		292	1572
v/s Ratio Prot	0.05	0.13		c0.08	c0.33		c0.08	0.36			0.20	c0.66
v/s Ratio Perm	0.32		0.07			0.04			0.03			
v/c Ratio	1.03	0.41	0.23	1.21	0.97	0.13	1.27	1.03	0.08		1.10	1.42
Uniform Delay, d1	40.2	37.1	37.6	65.5	45.9	35.0	65.5	45.5	33.1		57.5	37.5
Progression Factor	1.26	0.81	0.45	1.00	1.00	1.00	1.00	1.00	1.00		0.96	0.61
Incremental Delay, d2	81.5	0.2	0.3	127.9	15.5	0.2	153.3	34.9	0.4		48.8	191.0
Delay (s)	132.2	30.2	17.2	193.4	61.4	35.2	218.8	80.4	33.5		104.1	213.9
Level of Service	F	C	B	F	E	D	F	F	C		F	F
Approach Delay (s)		42.5			76.1			100.8				200.2
Approach LOS		D			E			F				F

Intersection Summary			
HCM 2000 Control Delay	120.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width	3.3
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	215
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	57
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

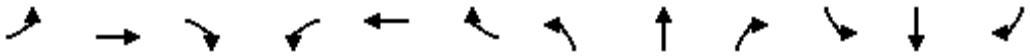
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	102	852	59	2190	199	136	142
v/c Ratio	0.53	0.25	0.12	0.66	0.81	0.72	0.35
Control Delay	38.5	8.7	1.3	3.0	67.9	73.7	17.4
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	38.5	8.7	1.3	3.2	67.9	73.7	17.4
Queue Length 50th (m)	12.1	28.9	0.9	17.8	45.3	35.7	9.9
Queue Length 95th (m)	32.7	37.9	m1.1	m21.2	51.4	53.6	25.1
Internal Link Dist (m)		387.1		163.7	30.4		68.2
Turn Bay Length (m)	120.0		60.0			32.5	
Base Capacity (vph)	213	3443	499	3308	317	258	504
Starvation Cap Reductn	0	0	0	329	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.25	0.12	0.74	0.63	0.53	0.28

Intersection Summary

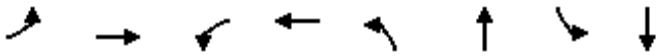
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	730	37	54	1794	221	73	5	67	120	13	112
Future Volume (vph)	92	730	37	54	1794	221	73	5	67	120	13	112
Ideal Flow (vphpl)	1860	1900	1900	1860	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		1.0	5.0			5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		0.98	1.00	
Frt	1.00	0.99		1.00	0.98			0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00	
Satd. Flow (prot)	1787	5090		1781	5093			1697		1791	1632	
Flt Permitted	0.05	1.00		0.32	1.00			0.64		0.56	1.00	
Satd. Flow (perm)	89	5090		591	5093			1118		1065	1632	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.88	0.88	0.88
Adj. Flow (vph)	102	811	41	59	1950	240	100	7	92	136	15	127
RTOR Reduction (vph)	0	3	0	0	9	0	0	24	0	0	79	0
Lane Group Flow (vph)	102	849	0	59	2181	0	0	175	0	136	63	0
Confl. Peds. (#/hr)	4		10	10		4	5		19	19		5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	0%	1%	0%	1%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	100.0	92.0		93.7	88.7			25.0		25.0	25.0	
Effective Green, g (s)	102.0	94.0		97.7	90.7			28.0		25.0	28.0	
Actuated g/C Ratio	0.73	0.67		0.70	0.65			0.20		0.18	0.20	
Clearance Time (s)	3.0	7.0		3.0	7.0			8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	189	3417		471	3299			223		190	326	
v/s Ratio Prot	c0.04	0.17		0.01	c0.43						0.04	
v/s Ratio Perm	0.35			0.08				c0.16		0.13		
v/c Ratio	0.54	0.25		0.13	0.66			0.78		0.72	0.19	
Uniform Delay, d1	23.1	9.1		6.6	15.2			53.1		54.2	46.6	
Progression Factor	1.41	0.87		0.22	0.18			1.00		1.00	1.00	
Incremental Delay, d2	2.9	0.2		0.0	0.1			16.4		12.1	0.3	
Delay (s)	35.4	8.1		1.5	2.8			69.5		66.2	46.9	
Level of Service	D	A		A	A			E		E	D	
Approach Delay (s)		11.0			2.8			69.5			56.3	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

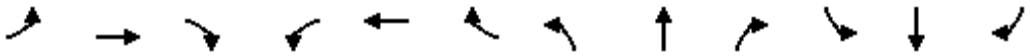
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	50	979	91	2014	83	97	72	113
v/c Ratio	0.42	0.24	0.22	0.49	0.76	0.35	0.55	0.45
Control Delay	19.1	4.0	3.1	1.4	98.3	23.6	73.3	46.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	4.0	3.1	1.4	98.3	23.6	73.3	46.5
Queue Length 50th (m)	3.9	20.6	2.4	13.7	22.7	7.9	19.2	22.0
Queue Length 95th (m)	15.4	29.5	m4.2	17.1	32.7	17.4	29.1	32.5
Internal Link Dist (m)		299.3		387.1		116.5		184.0
Turn Bay Length (m)	84.0		90.0		16.2		34.8	
Base Capacity (vph)	120	4004	406	4097	195	420	233	403
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	0.42	0.24	0.22	0.49	0.43	0.23	0.31	0.28

Intersection Summary

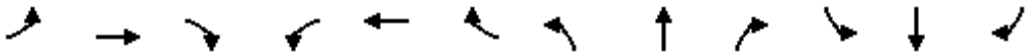
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	753	70	86	1799	94	64	25	50	56	46	42
Future Volume (vph)	42	753	70	86	1799	94	64	25	50	56	46	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	5.0		7.0	5.0		8.0	5.0		8.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.90		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1806	5031		1796	5147		1695	1670		1818	1730	
Flt Permitted	0.08	1.00		0.27	1.00		0.55	1.00		0.61	1.00	
Satd. Flow (perm)	153	5031		520	5147		978	1670		1167	1730	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	50	896	83	91	1914	100	83	32	65	72	59	54
RTOR Reduction (vph)	0	5	0	0	3	0	0	56	0	0	23	0
Lane Group Flow (vph)	50	974	0	91	2011	0	83	41	0	72	90	0
Confl. Peds. (#/hr)	5		18	18		5	13		3	3		13
Heavy Vehicles (%)	1%	2%	4%	0%	1%	0%	6%	3%	2%	0%	3%	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)	109.3	109.3		109.3	109.3		15.7	15.7		15.7	15.7	
Effective Green, g (s)	109.3	111.3		109.3	111.3		15.7	18.7		15.7	18.7	
Actuated g/C Ratio	0.78	0.79		0.78	0.79		0.11	0.13		0.11	0.13	
Clearance Time (s)	7.0	7.0		7.0	7.0		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)	119	3999		405	4091		109	223		130	231	
v/s Ratio Prot		0.19			c0.39			0.02			0.05	
v/s Ratio Perm	0.33			0.18			c0.08			0.06		
v/c Ratio	0.42	0.24		0.22	0.49		0.76	0.18		0.55	0.39	
Uniform Delay, d1	5.0	3.6		4.1	4.8		60.3	53.9		58.8	55.4	
Progression Factor	1.00	1.00		0.40	0.21		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.5	0.1		1.0	0.3		26.4	0.4		5.0	1.1	
Delay (s)	15.5	3.8		2.6	1.3		86.7	54.3		63.9	56.5	
Level of Service	B	A		A	A		F	D		E	E	
Approach Delay (s)		4.4			1.4			69.2			59.4	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

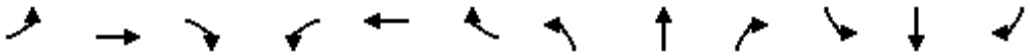
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	4	96	0	29	5	196	118	61	135	2
Future Volume (vph)	0	0	4	96	0	29	5	196	118	61	135	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
Hourly flow rate (vph)	0	0	4	104	0	32	5	213	128	66	147	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	4	136	346	215
Volume Left (vph)	0	104	5	66
Volume Right (vph)	4	32	128	2
Hadj (s)	0.03	0.05	-0.21	0.06
Departure Headway (s)	5.4	5.2	4.3	4.7
Degree Utilization, x	0.01	0.20	0.42	0.28
Capacity (veh/h)	571	624	803	726
Control Delay (s)	8.5	9.5	10.4	9.6
Approach Delay (s)	8.5	9.5	10.4	9.6
Approach LOS	A	A	B	A

Intersection Summary				
Delay	10.0			
Level of Service	A			
Intersection Capacity Utilization	54.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	5	4	90	9	63	5	162	55	35	101	0
Future Volume (vph)	0	5	4	90	9	63	5	162	55	35	101	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	5	4	98	10	68	5	176	60	38	110	0

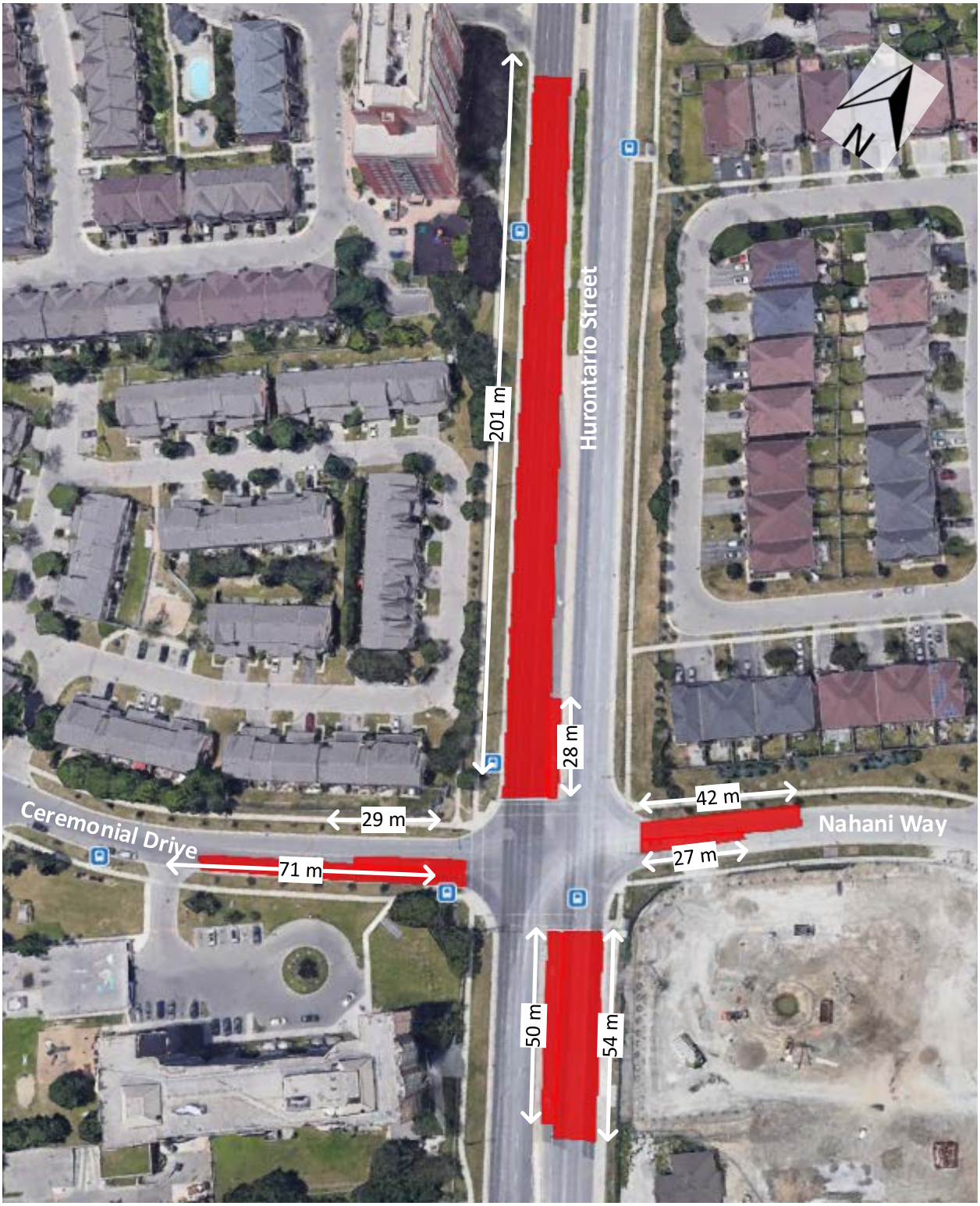
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	9	176	241	148
Volume Left (vph)	0	98	5	38
Volume Right (vph)	4	68	60	0
Hadj (s)	-0.27	0.04	0.17	0.05
Departure Headway (s)	4.8	4.9	4.7	4.7
Degree Utilization, x	0.01	0.24	0.32	0.19
Capacity (veh/h)	660	682	729	719
Control Delay (s)	7.9	9.4	9.9	8.9
Approach Delay (s)	7.9	9.4	9.9	8.9
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.5		
Level of Service	A		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix I – Queuing Analysis

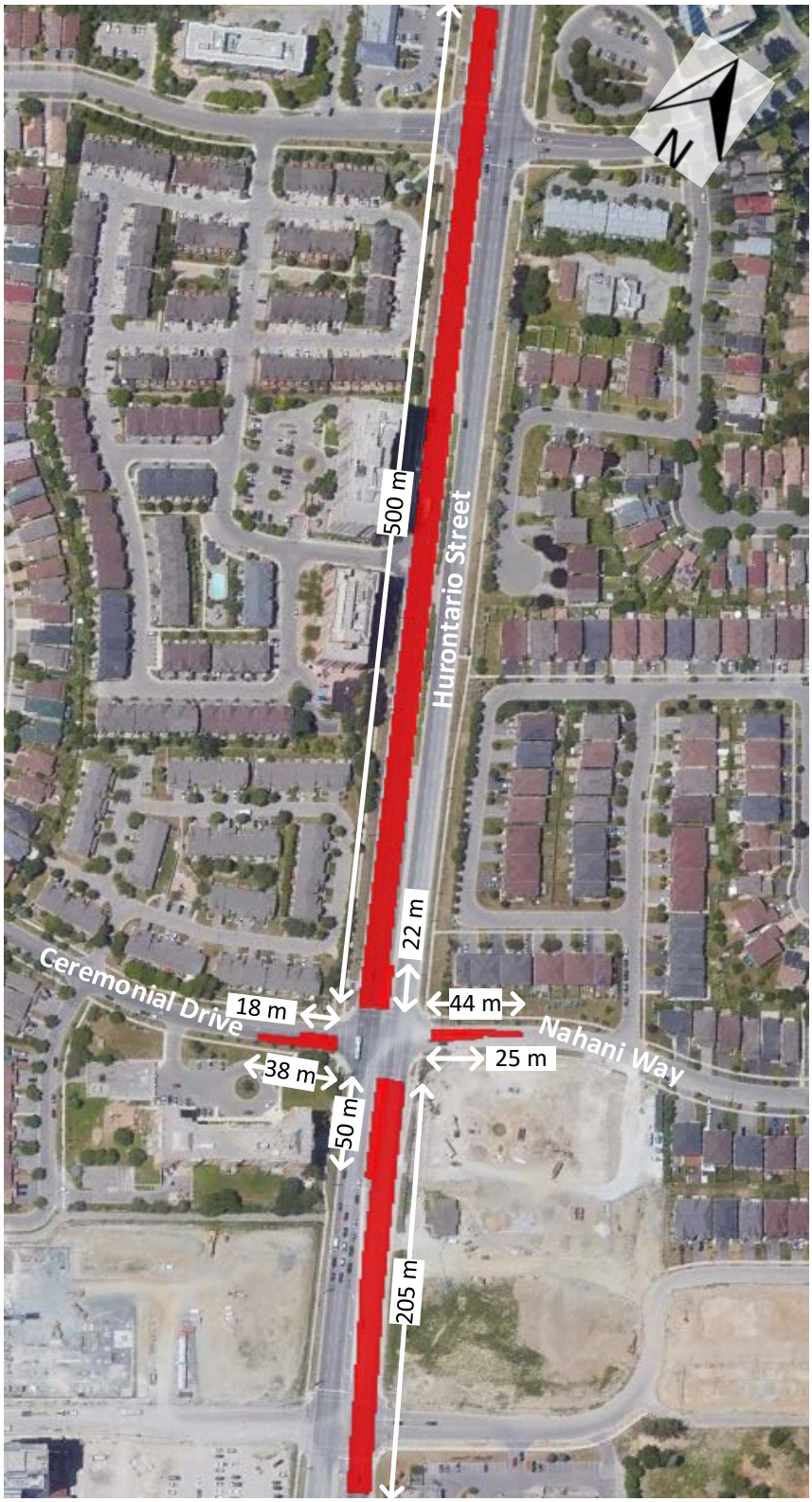
Future Total AM Peak Hour – Hurontario Street at Ceremonial Drive / Nahani Way

As-Of-Right AM Peak Hour – Hurontario Street at Ceremonial Drive / Nahani Way

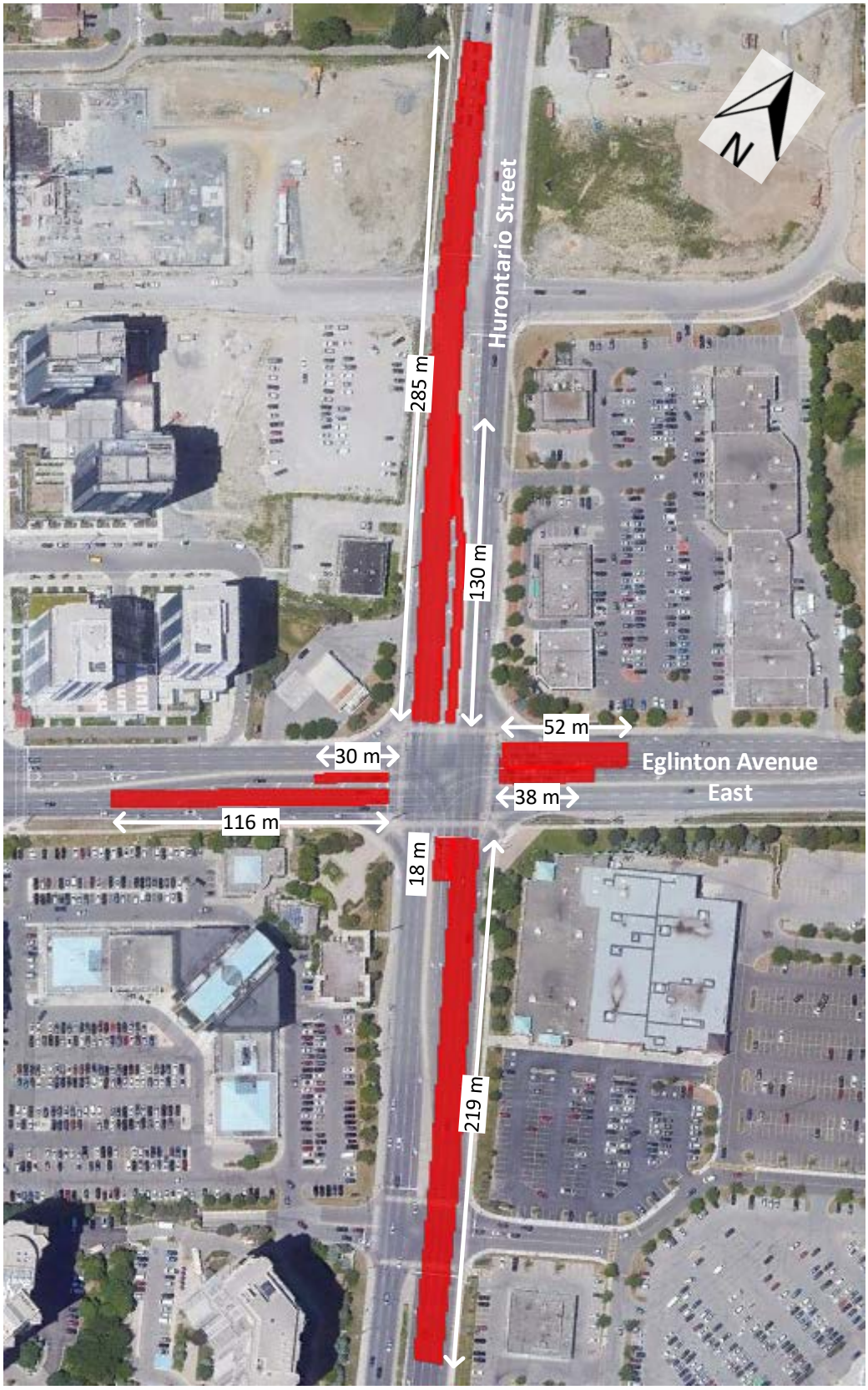


Future Total PM Peak Hour – Hurontario Street at Ceremonial Drive / Nahani Way

As-Of-Right PM Peak Hour – Hurontario Street at Ceremonial Drive / Nahani Way



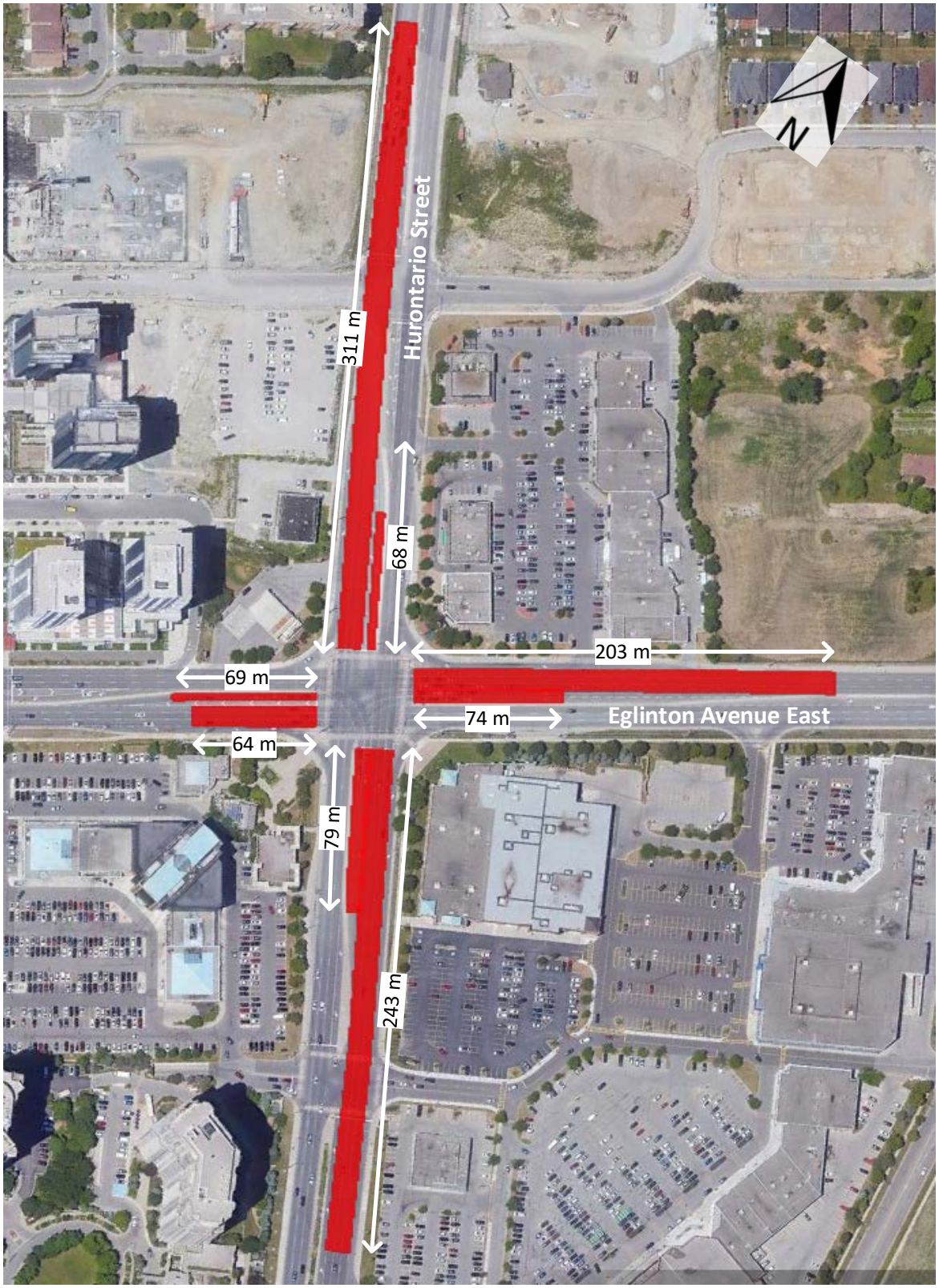
Future Total AM Peak Hour – Hurontario Street at Eglinton Avenue



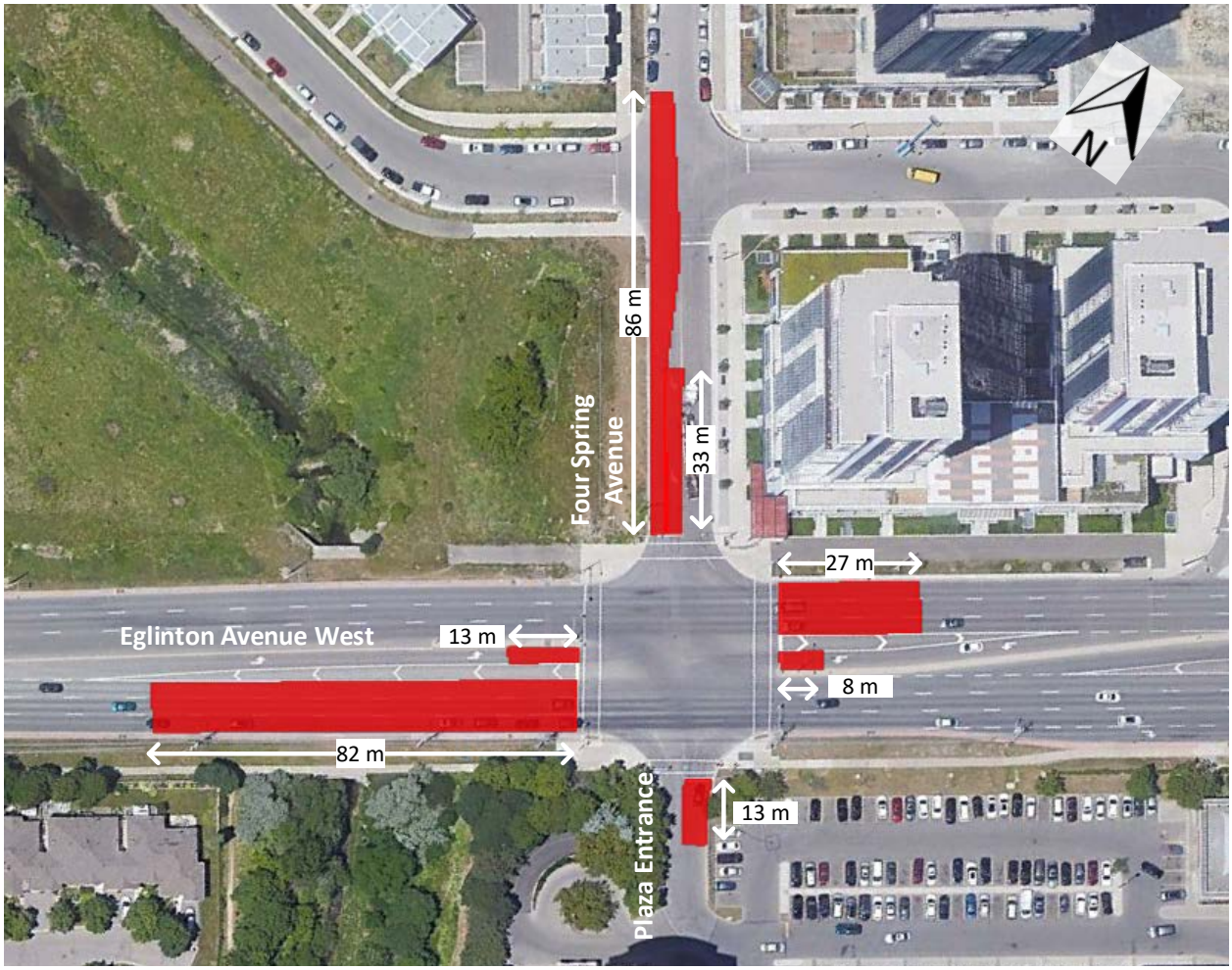
As-Of-Right AM Peak Hour – Hurontario Street at Eglinton Avenue

Future Total PM Peak Hour – Hurontario Street at Eglinton Avenue

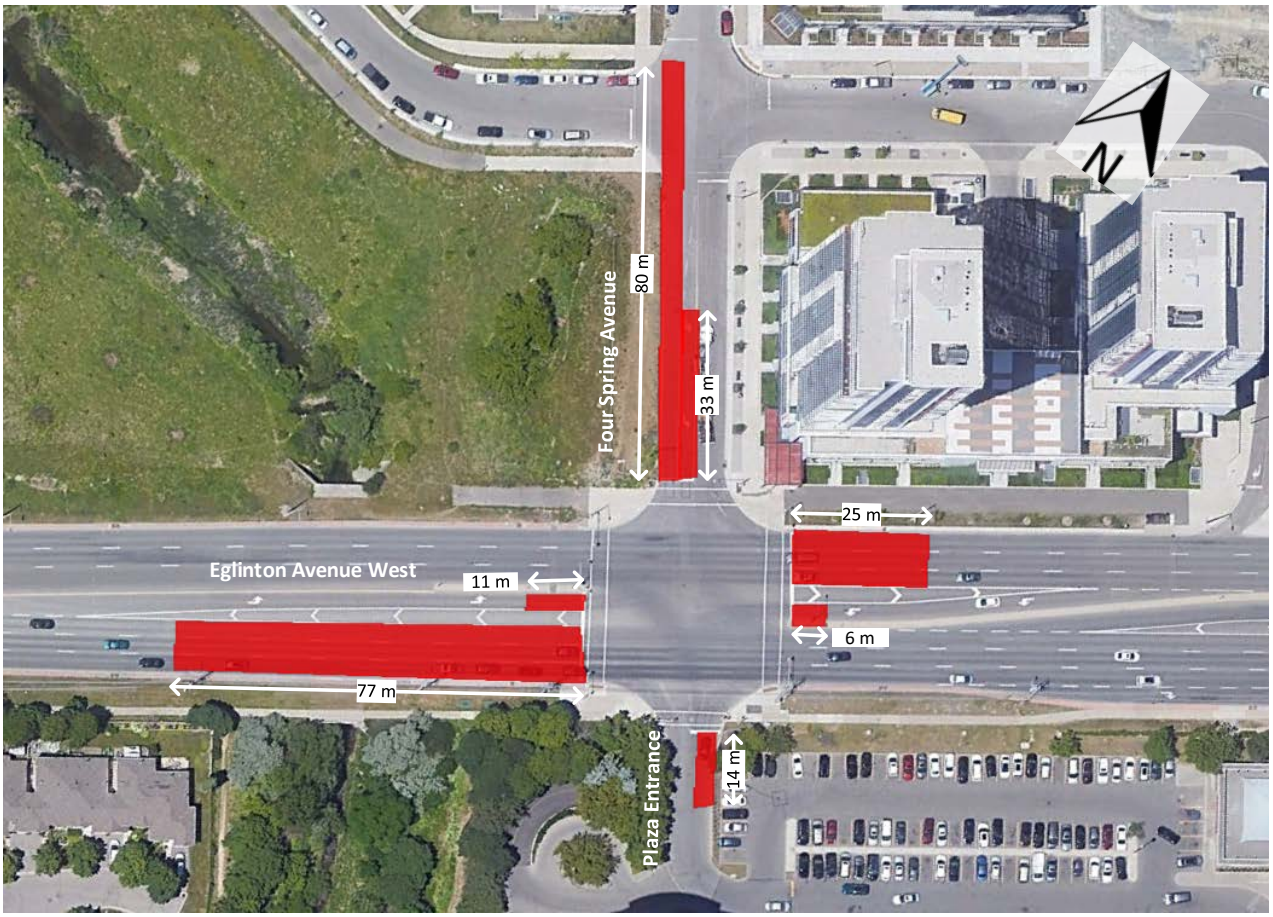
As-Of-Right PM Peak Hour – Hurontario Street at Eglinton Avenue



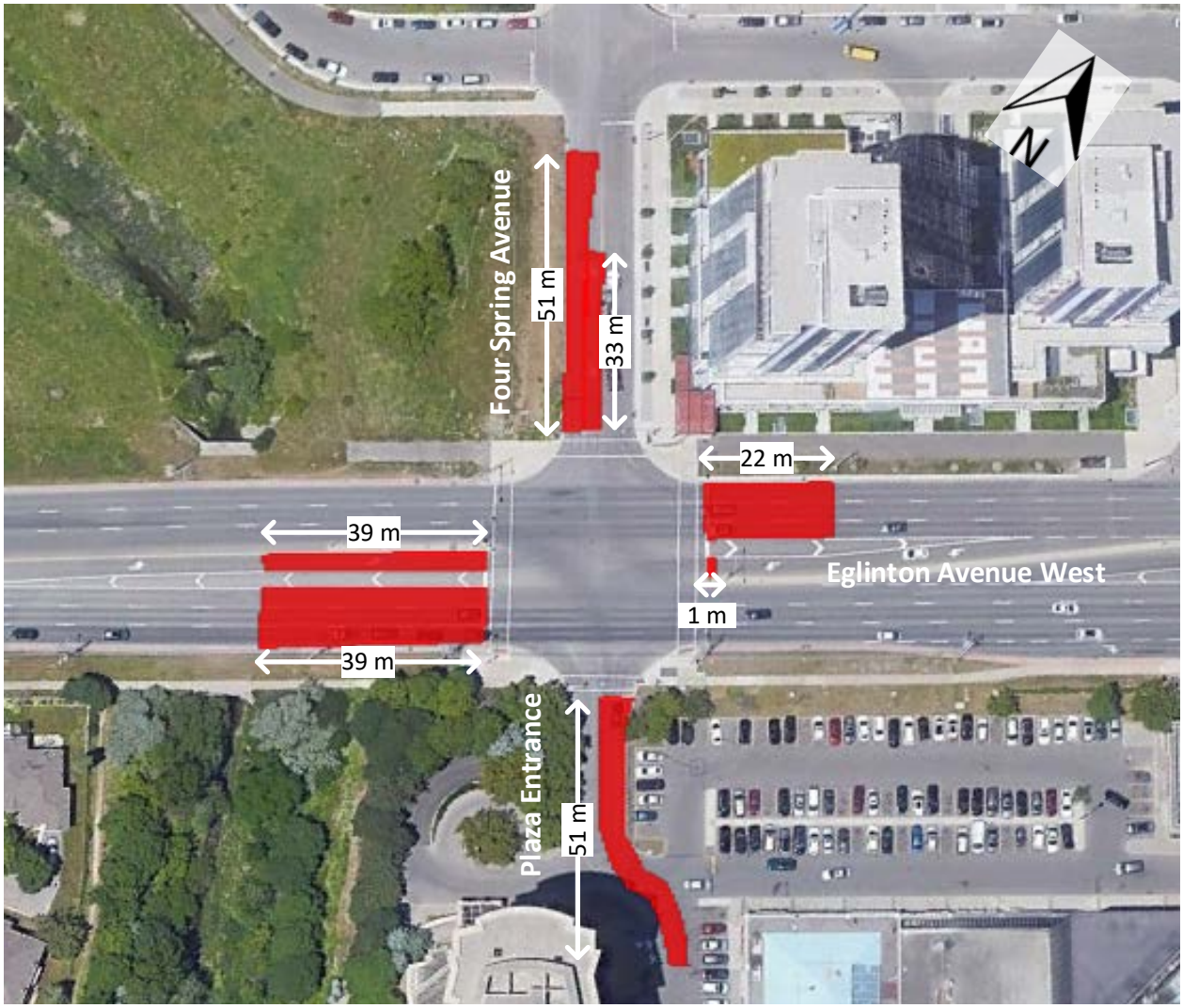
Future Total AM Peak Hour – Eglinton Avenue West at Four Spring Avenue / Plaza Entrance



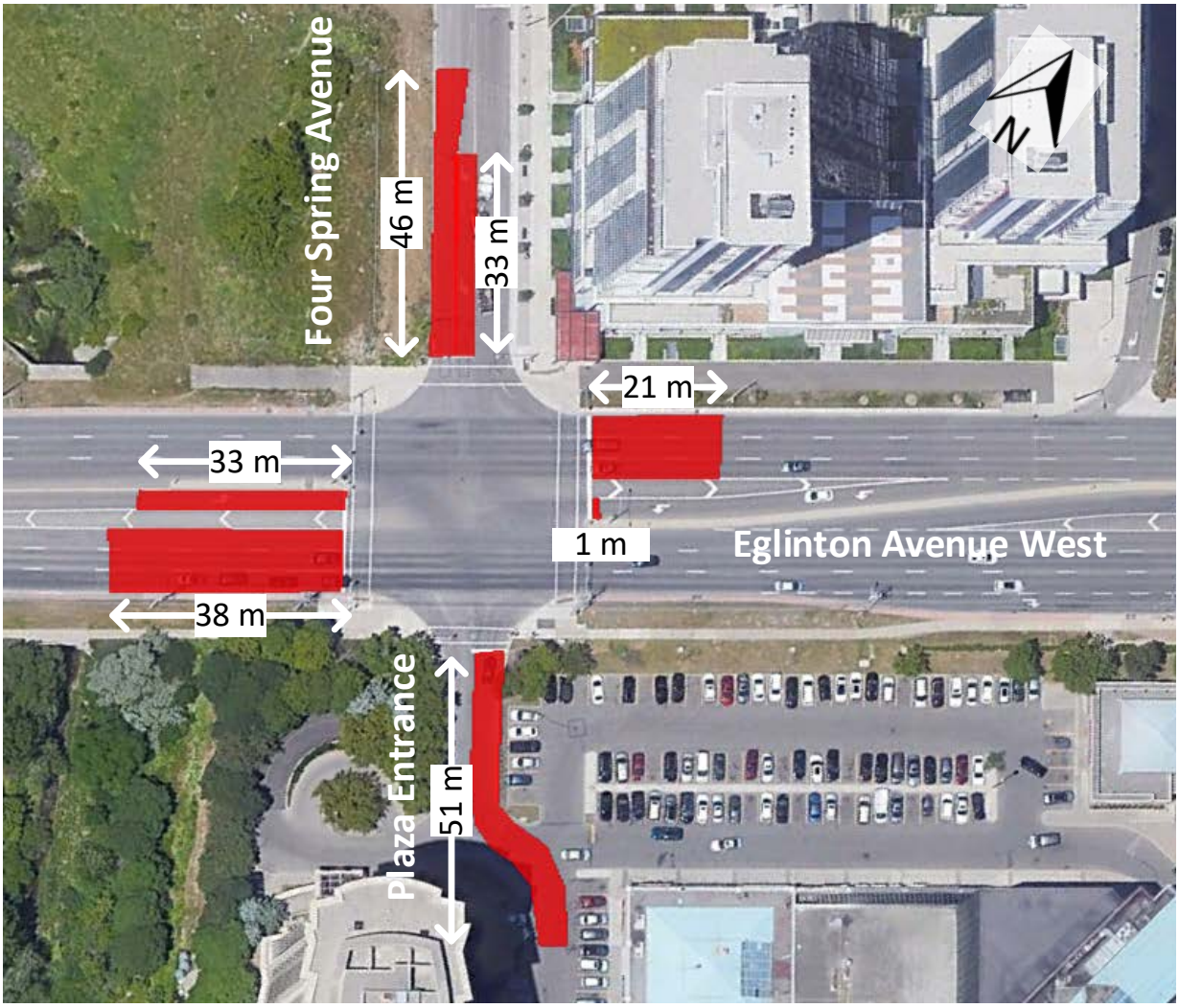
As-Of-Right AM Peak Hour – Eglinton Avenue West at Four Spring Avenue / Plaza Entrance



Future Total PM Peak Hour – Eglinton Avenue West at Four Spring Avenue / Plaza Entrance



As-Of-Right PM Peak Hour – Eglinton Avenue West at Four Spring Avenue / Plaza Entrance

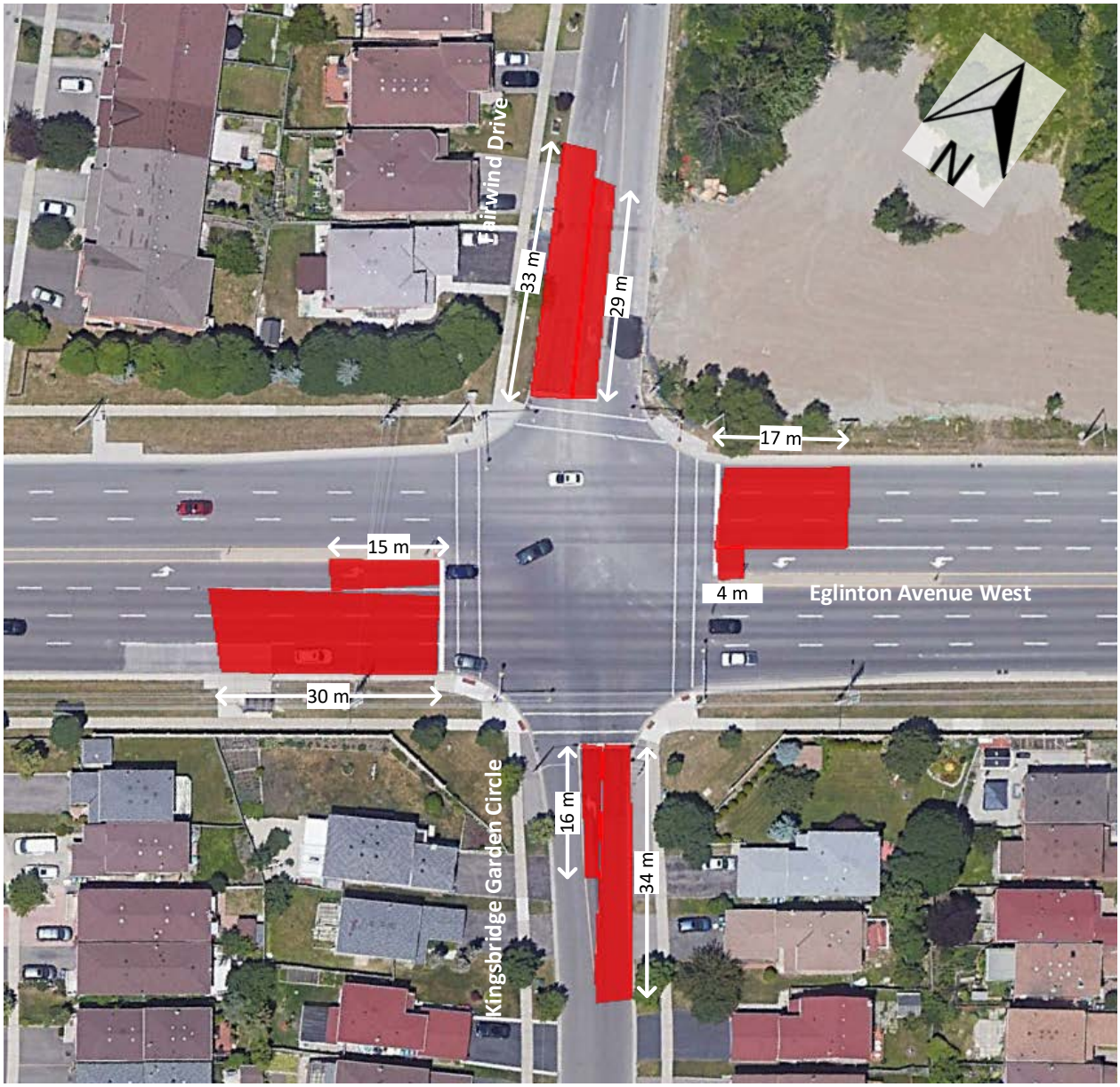


Future Total AM Peak Hour – Eglinton Avenue West at Fairwind Drive / Kingsbridge Garden Circle

As-Of-Right AM Peak Hour – Eglinton Avenue West at Fairwind Drive / Kingsbridge Garden Circle

Future Total PM Peak Hour – Eglinton Avenue West at Fairwind Drive / Kingsbridge Garden Circle

As-Of-Right PM Peak Hour – Eglinton Avenue West at Fairwind Drive / Kingsbridge Garden Circle



Appendix J – City of Mississauga Comments (October 17, 2018)

TRANSPORTATION AND WORKS

TRAFFIC REVIEW (PPP)

Contact: Linda Wu Tel. (905) 615-3200 x3597

No	Milestone	Condition
1	RECOMMENDATION REPORT	Having reviewed the Traffic Impact Study dated June 1, 2018 prepared by IBI Group, staff provides the following preliminary comments: 1. Land use description The report shall provide a table outlining the existing, approved and proposed dwelling units as well as retail/office area for the all phases/parts within OP designated lands-Uptown Node/Residential High Density-Special Site 6. The table shall also present a comparison between the permitted uses under current OP designation and the proposed uses. 2. Future Scenario HuLRT services shall be assumed in Year 2022 scenario (i.e. sensibility scenario in the report), as such, the future total scenario (without LRT) shall be removed from the report. 3. Trip Generation for Site Traffic and background developments a) The study is to clarify the source of trip generation rates. The applied trip generation rates are NOT in accordance with the ITE 9th Edition as stated by the report. Additionally, it is noticed the trip rates applied for site traffic and background developments are different. b) Trip reduction shall be applied to account for higher transit mode share in the future. c) Trip generation table and diagram for "as-of-right" land use scenario shall be included in the report. d) The pass-by trips pertaining to retail uses shall be accounted for. 4. Background Traffic The growth/reduction rates along Hurontario St shall be obtained from the City's Travel Demand Model. 5. Road Network/Signal Timing Plans a) Lane configuration figures for the future scenario shall be provided. b) The signal for the intersection of Watergarden Drive/Armdale Road @ Hurontario Street will be maintained after LRT installation; the study assumes stop control for this intersection and shall be revised accordingly. c) The "as-of-right" shall assume LRT services along Hurontario Street. The provided traffic analysis for "as-of-right" is based on existing lane configuration and cannot be used for comparison. d) The study area shall include the intersections of Little Creek Road@Four Spring Avenue and Watergarden@Four Spring Avenue, based on received public concerns. e) It is noticed that lane reduction due to HuLRT services has NOT been consistently applied to all the Hurontario Street intersections in the future LRT scenario (e.g. PM Hurontario/Eglinton). f) Signal timing plans with LRT operations shall be utilized for future scenario

TRANSPORTATION AND WORKS

TRAFFIC REVIEW (PPP)

Contact: Linda Wu Tel. (905) 615-3200 x3597

No	Milestone	Condition
1	RECOMMENDATION REPORT	analysis. 6. Queuing analysis Queue length summary shall be provided for critical movements. 7. Conclusion The capacity analysis shows significant increases of V/C ratios and delay times as a result of the proposal, especially for the intersection of Plaza entrance@Eglinton Ave. The conclusion does not provide viable justification for the additional 1,140 units over the current OP designation. Note: Detailed review will be conducted once receipt of a revised TIS report. Metrolinx/MTO may require additional traffic analysis or TIS circulation. For LRT related inquiries, please contact the staff from the City's LRT office: Matthew Williams (EXT.5834) Email: Matthew.Williams@mississauga.ca **Created :** 2018-08-16 02:54:09 **Last Modified :** 2018-08-29 10:15:17
2	RECOMMENDATION REPORT	Clearance from Fire and Peel regarding the Fire route and waste collection route is required. Note: Fire/Waste collection route/loading areas are not shown on the site plan drawing. Additionally, drawings for underground parking shall be submitted for the revew of site circulation. **Created :** 2018-08-16 02:55:03 **Last Modified :** 2018-08-29 10:15:17

TRANSPORTATION AND WORKS

TRAFFIC REVIEW (PPP)

Contact: Linda Wu Tel. (905) 615-3200 x3597

No	Milestone	Condition
3	RECOMMENDATION REPORT	As an addendum to the Traffic Impact Study dated June 1, 2018 prepared by IBI Group, the following TDM measures shall be considered given the site's proximity to the Hurontario St transit corridor: -The owner agrees to provide the purchaser/ tenant of each condominium dwelling unit with one (1) PRESTO - transit smart card loaded with a minimum value of $25.00 (twenty-five dollars). -The owner agrees to provide accessible, secure, and weather protected long-term (indoor) bicycle parking spaces, as well as accessible short-term (outdoor) bicycle parking spaces located adjacent to the main entrances. Recommended bike parking rates are as follows: 1) Residential unit : 0.8 spaces per unit for in-door parking; minimum 6 spaces for visitors. 2) Business office: 0.5 per 500 sq meter (GFA) for indoor parking; 0.5 per 500 sq meter (GFA) for outdoor parking. 3) Retail: 0.5 per 500 sq meter (GFA) for indoor parking; 1.0 per 500 sq meter (GFA) for outdoor parking. -The owner agrees to provide transit and active transportation information at a prominent location within the main building entrance area." **Created :** 2018-08-16 02:54:42 **Last Modified :** 2018-08-29 10:15:17
4	NOTE:	Prior to site plan approval an access modification permit and fee payment is required for the driveway works proposed to the municipal sidewalk, splash pad, and road curb/culvert only (as applicable). **Created :** 2018-08-16 02:55:59 **Last Modified :** 2018-08-29 10:15:17
5	NOTE:	The design and construction of the Hurontario St access is deferred to Metrolinx. **Created :** 2018-08-16 02:55:59 **Last Modified :** 2018-08-29 10:15:17
6	NOTE:	Environmental assessment approvals for the Hurontario-Main Light Rail Transit system have been obtained and funding for this project is committed by the Provincial Government with an anticipated start of construction scheduled for 2018. This project will impact right-of-way requirements, property accesses, allowed turning movements and will result in the permanent removal of a general purpose traffic lane in each direction for many segments of the corridor. Further information is available at www.lrt-mississauga.brampton.ca. **Created :** 2018-08-16 02:56:13 **Last Modified :** 2018-08-29 10:15:17

File: OZ/OPA 18 11

Proposal: 5 condo apartment buildings consisting of 2095 residential units with retail and office located in the building podiums.

TRANSPORTATION AND WORKS

TRAFFIC REVIEW (PPP)

Contact: Linda Wu Tel. (905) 615-3200 x3597

No	Milestone	Condition
7	NOTE:	The cost for any/all road improvements required in support of this development application will be borne by the owner. The applicant shall make satisfactory arrangements with the Transportation and Works Department for the design, construction and payment of all costs associated with works necessary in support access to this site. **Created :** 2018-08-16 02:57:52 **Last Modified :** 2018-08-29 10:15:17

TRANSIT REVIEWER

Contact: Alana Tyers Tel. (905) 615-3200 x3812

No	Milestone	Condition
1	NOTE:	This site is currently serviced by MiWay Routes 19 & 103 on Hurontario Street. **Created :** 2018-07-16 11:57:12 **Last Modified :**
2	NOTE:	Please ensure that convenient and accessible pedestrian linkages are provided between the site, the existing sidewalk network, and MiWay service. **Created :** 2018-07-16 11:57:12 **Last Modified :**
3	NOTE:	Please be advised that Higher Order Transit has been planned for Hurontario Street in the form of Light Rail Transit (LRT) and will include a centre median LRT as well as a station at the intersection of Eglinton and Hurontario Street. **Created :** 2018-07-16 11:57:12 **Last Modified :**

COMMUNITY SERVICES

PLANNER - COMM SERVICES

Contact: Ibrahim Dia Tel. (905) 615-3200 x3108

No	Milestone	Condition