

# **Transportation Study Access Review**

## **PROPOSED RESIDENTIAL DEVELOPMENT**

50-60 Harborn Road  
City of Mississauga

May 12, 2026  
Project No: NT-25-057

Prepared for: W.E. Oughtred and Associates Inc.

May 12, 2026

W.E. Oughtred and Associates Inc.  
2140 Winston Park Drive, Suite 26  
Oakville, ON L6H 5V5

**Attention: Arlene Beaumont**

**Re: Transportation Study Access Review  
Proposed Residential Development  
50-60 Harborn Road, City of Mississauga  
Our Project No. NT-25-057**

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Nextrans Consulting Engineers (a Division of NextEng Consulting Group Inc.) is pleased to present the enclosed Transportation Study Access Review of an Official Plan Amendment Application for the above noted property.

The subject property is located at the southwest corner of the intersection of Grange Drive and Harborn Road, addressed as 50-60 Harborn Road, in the City of Mississauga (the "City"). The subject lands are currently occupied by two (2) existing single family detached dwellings. The development proposal is to demolish the existing single family detached dwellings and repurpose the lands into 12 townhouse units. A parking supply of 28 spaces (24 residential spaces and four (4) visitor spaces) is proposed. Vehicular access to the site is provided through Harborn Road.

We trust the enclosed sufficiently addresses your needs. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

**NEXTRANS CONSULTING ENGINEERS**

Prepared by:



Marc Dimayuga  
Transportation Analyst

Reviewed and Approved by:



Richard Pernicky, MITE  
Principal

## EXECUTIVE SUMMARY

Nextrans Consulting Engineers (A Division of NextEng Consulting Group Inc.) was retained through W.E. Oughtred and Associates Inc. (the 'Client') to undertake a Transportation Study Access Review in support of an Official Plan Amendment Application for the above noted property.

### Development Proposal

The development proposal is to demolish the existing single family detached dwellings and repurpose the lands into 12 townhouse units. A parking supply of 28 spaces (24 residential spaces and four (4) visitor spaces) is proposed. Vehicular access to the site is provided through Harborn Road.

### Capacity Analysis

The proposed development is anticipated to generate a total of six (6) two-way automobile trips (one (1) inbound and five (5) outbound) during the AM peak hour and six (6) two-way vehicle trips (three (3) inbound and three (3) outbound) during the PM peak hour.

Based on the results of the capacity analysis under existing traffic conditions, all study area intersections currently operate with residual capacity (i.e., volume to capacity ratio or  $V/C < 1.00$ ), with acceptable levels of service and 95<sup>th</sup> percentile queue lengths during both AM and PM peak hours.

Based on the results of the capacity analysis under future total traffic conditions, the study area intersections will operate with residual capacity (i.e., volume to capacity ratio or  $V/C < 1.00$ ), with acceptable levels of service and 95<sup>th</sup> percentile queue lengths during both AM and PM peak hours. **Therefore, the proposed development will have a negligible impact on the study area intersections.**

### Access / Parking Review

Based on the City's Zoning By-law 0225-2007 parking requirements, a minimum of 27 spaces (24 resident spaces and three (3) visitor spaces) is required for the proposed townhouse development. In comparing the By-law requirements with the proposed supply of 28 spaces (24 resident spaces and four (4) visitor spaces), the subject site meets the City's By-law requirement.

The AutoTURN analysis demonstrates that a P TAC-2017 vehicle, MSU TAC-2017 vehicle, and a Peel Region Garbage Truck can access the site and maneuver internally without conflict.

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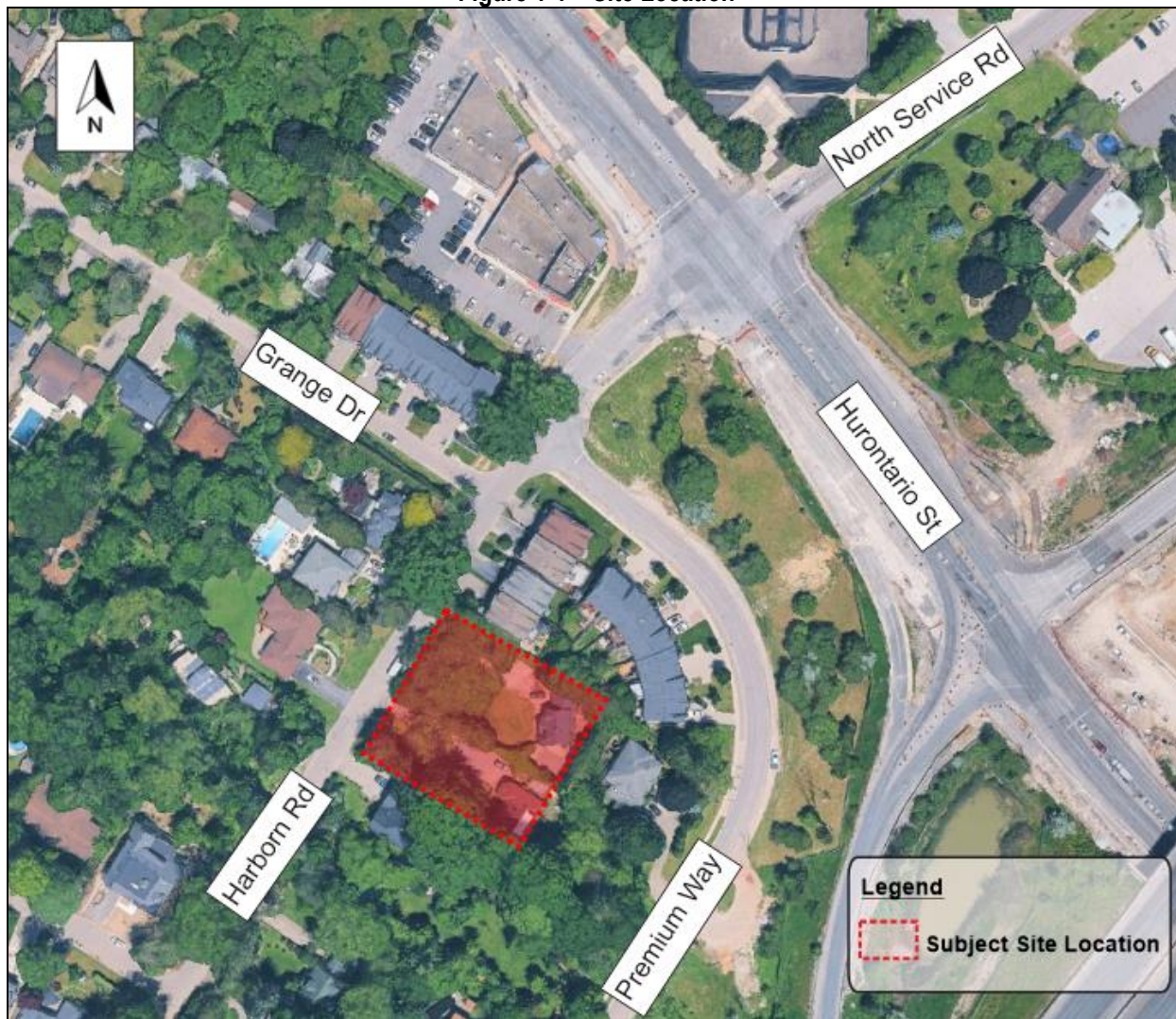
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## 1.0 INTRODUCTION

Nextrans Consulting Engineers (A Division of NextEng Consulting Group Inc.) was retained through W.E. Oughtred and Associates Inc. (the 'Client') to undertake a Transportation Study Access Review in support of an Official Plan Amendment Application at the property of 50-60 Harborn Road, in the City of Mississauga.

The location of the proposed development is illustrated in **Figure 1-1**.

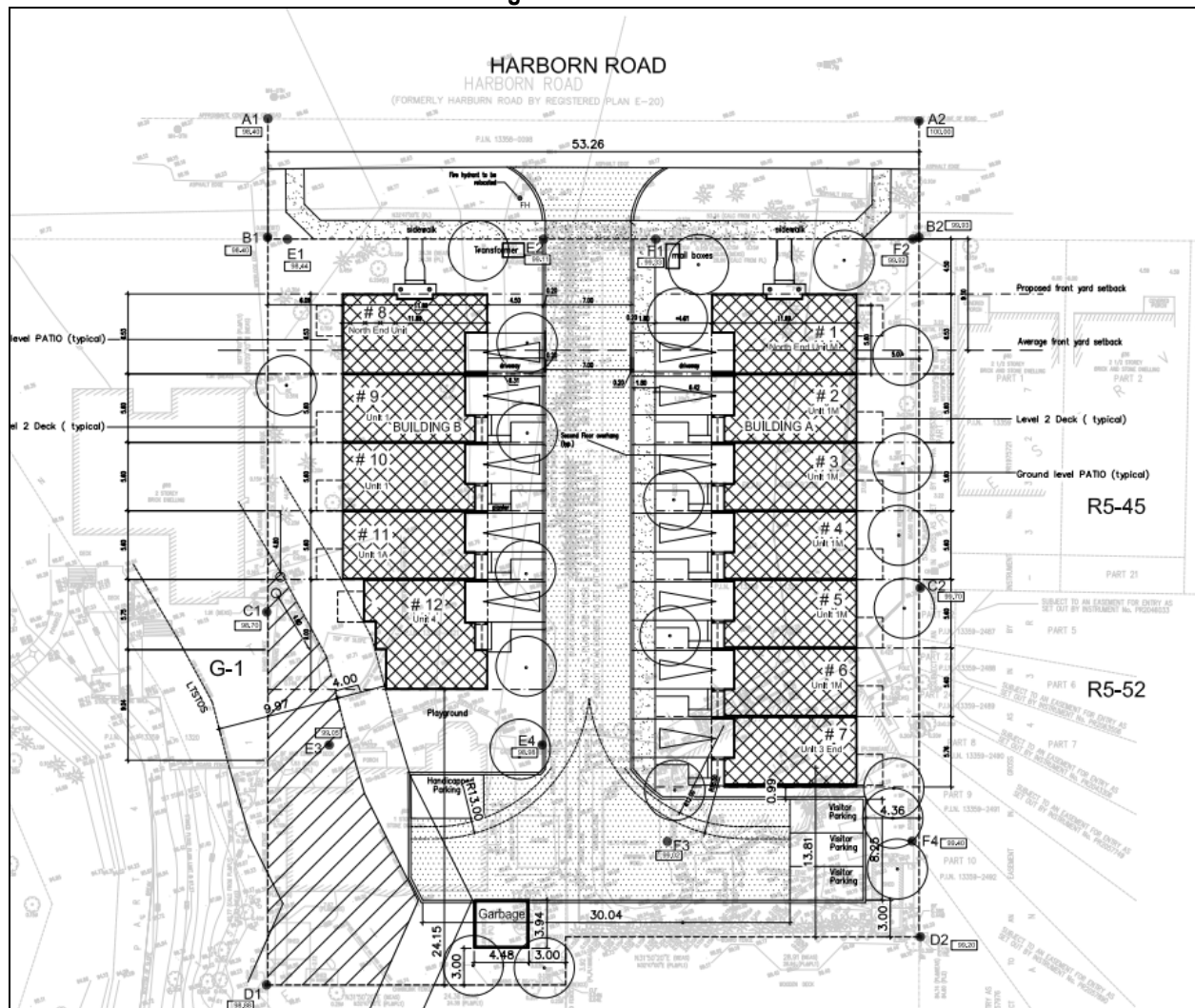
**Figure 1-1 – Site Location**



The subject lands are currently occupied by two (2) existing single family detached dwellings. The development proposal is to demolish the existing single family detached dwellings and repurpose the lands into 12 townhouse units. A parking supply of 28 spaces (24 residential spaces and four (4) visitor spaces) is proposed. Vehicular access to the site is provided through Harborn Road.

The proposed site plan is shown in **Figure 1-2** and provided in full detail in **Appendix A**.

**Figure 1-2 – Site Plan**



Source: Del Dom Design & Construction (December 29, 2025)

## 1.1. STUDY AREA

Note the study intersections for this Access Review are:

- Harborn Road / Grange Drive (unsignalized);
- Harborn Road / Premium Way (unsignalized);
- Harborn Road / Site Access (unsignalized); and,
- Harborn Road & North Service Road / Hurontario Street (signalized).

Terms of Reference for confirmation of the Access Review is enclosed in **Appendix B**.

## 2.0 EXISTING TRANSPORTATION CONDITIONS

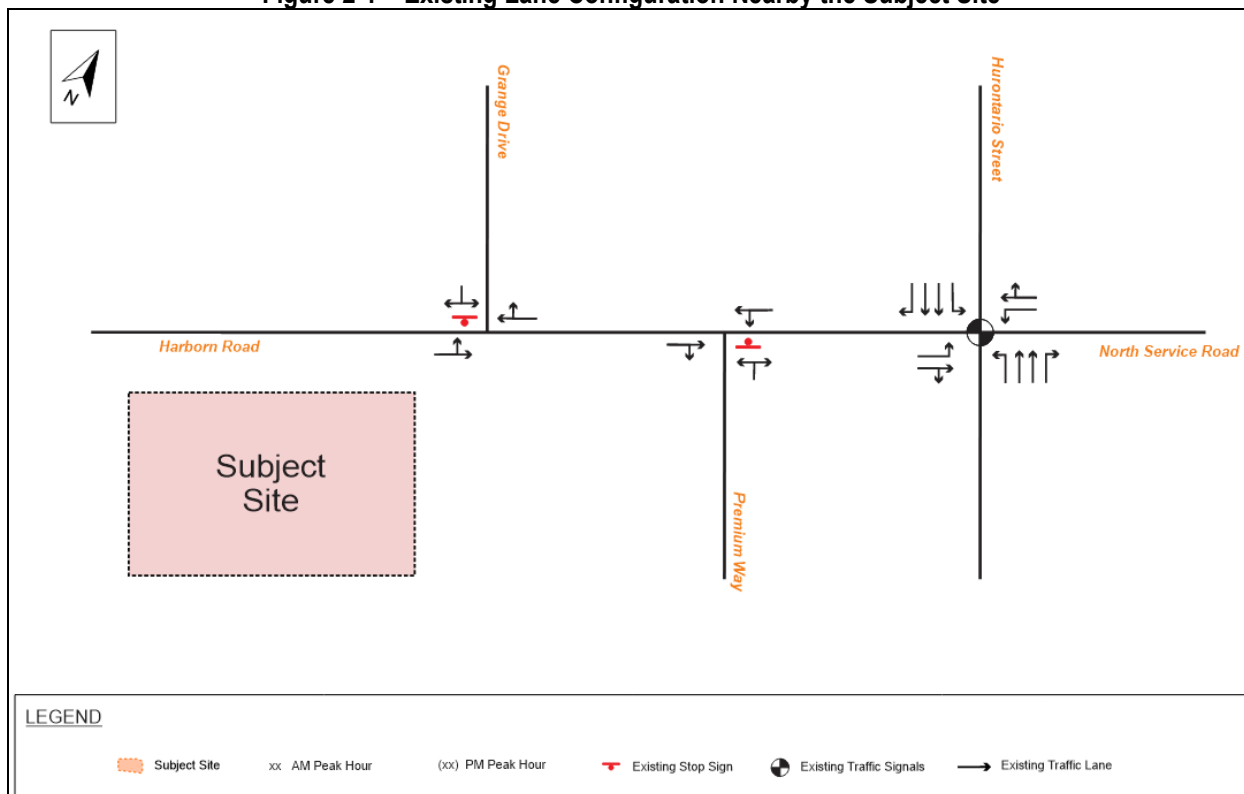
### 2.1. EXISTING ROAD NETWORK

As previously indicated, the proposed development is located at the southeast corner of Kingsway Drive and Derrycrest Drive in the City of Mississauga. The existing road network, lane configuration and existing traffic control located nearby the subject site are detailed below and illustrated in **Figure 2-1**:

- **Harborn Road**: is an east-west local road under the jurisdiction of the City of Mississauga. Harborn Road has an existing two (2) lane cross section (one (1) travel lane per direction) and maintains a posted speed limit of 40 km/h near the subject site.
- **Premium Way** is an east-west minor collector road under the jurisdiction of the City of Mississauga. Premium Way has an existing two (2) lane cross section (one (1) travel lane per direction) and maintains a posted speed limit of 40 km/h near the subject site.
- **Grange Drive** is a north-south local road under the jurisdiction of the City of Mississauga. Grange Drive has an existing two (2) lane cross section (one (1) travel lane per direction) and maintains a posted speed limit of 40 km/h near the subject site.
- **Hurontario Street** is a north-south arterial road under the jurisdiction of the City of Mississauga. Hurontario Street has an existing six (6) lane cross section (three (3) travel lanes per direction) and maintains a posted speed limit of 50 km/h near the subject site.
- **North Service Road**: is an east-west major collector road under the jurisdiction of the City of Mississauga. North Service Road has an existing two (2) lane cross section (one (1) travel lane per direction) and maintains a posted speed limit of 60 km/h near the subject site.

Existing road network lane configurations are illustrated in **Figure 2-1**.

**Figure 2-1 – Existing Lane Configuration Nearby the Subject Site**



## 2.2. EXISTING ACTIVE TRANSPORTATION NETWORK

### Sidewalks

Currently, pedestrian facilities are available as follows:

- On both sides of Hurontario Street;
- On the north side of North Service Road;
- On the south side of Harborn Road between Premium Way and Hurontario Street; and,
- On the north side of Premium Way.

In addition, sidewalks are adequately maintained, and no improvements are required at this time. It is noted that there are planned multi-use paths on the north / west side of Premium Way and along Harborn Road east of Premium Way. These improvements are expected to be completed in 2026.

## 2.3. TRANSIT MODE ASSESSMENT

Based on the study prepared by the Ministry of Transportation Ontario (MTO) entitled: 'Transit Supportive Guidelines', dated January 2012, transit users are generally willing to walk 400 m to a local stop or 800 m to a transit station. The subject site is situated in a transit supportive area with one (1) bus route located within 400 m to the subject site, which is within comfortable walking distance. The route services in the immediate area are described below:

- **MiWay 2 Hurontario** – The 2 Hurontario bus route operates between City Centre Transit Terminal and Port Credit GO Station, generally in a north-south direction. This route operates with headways of approximately 10 minutes or better during weekday AM and PM peak periods. The closest bus stop is located at the intersection of Hurontario Street and Harborn Road / North Service Road and is a two (2)-minute walk (approximately 180 m) from the subject site.

## 2.4. EXISTING TRAFFIC VOLUMES

Turning movements counts (TMC) were undertaken by Spectrum Traffic for the weekday AM and PM peak periods of 7:00 AM to 10:00 AM and 4:00 PM to 7:00 PM, respectively. A stamped and approved City of Mississauga Terms of Reference is enclosed in **Appendix B**. Turning movement counts are enclosed in **Appendix C**. A summary of the traffic data collection is provided in **Table 2.1**.

**Table 2.1 – Traffic Data Collection Summary**

| Intersection                     | Source                | Survey Date  |
|----------------------------------|-----------------------|--------------|
| Harborn Road & Grange Drive      | Spectrum Traffic Inc. | May 28, 2025 |
| Harborn Road & Premium Way       | Spectrum Traffic Inc. | May 28, 2025 |
| Harborn Road & Hurontario Street | Spectrum Traffic Inc. | May 28, 2025 |

## 2.5. EXISTING TRAFFIC ASSESSMENT

The existing traffic volumes are illustrated in **Figure 2-2** and were analyzed using Synchro 10 in accordance with the methodology outlined in the Highway Capacity Manual (HCM 2000) published by the Transportation Research Board. The detailed results are provided in **Appendix D** and summarized in **Table 2.2**.

**Table 2.2 – Existing Traffic Assessment**

| Intersection                                          | Movement | Weekday AM Peak Hour |           |     |                  |                  | Weekday PM Peak Hour |           |     |                  |                  |
|-------------------------------------------------------|----------|----------------------|-----------|-----|------------------|------------------|----------------------|-----------|-----|------------------|------------------|
|                                                       |          | v/c                  | Delay (s) | LOS | Queue            |                  | v/c                  | Delay (s) | LOS | Queue            |                  |
|                                                       |          |                      |           |     | 50 <sup>th</sup> | 95 <sup>th</sup> |                      |           |     | 50 <sup>th</sup> | 95 <sup>th</sup> |
| Signalized Intersections                              |          |                      |           |     |                  |                  |                      |           |     |                  |                  |
| Hurontario Street & Harborn Road / North Service Road | Overall  | 0.65                 | 24.5      | C   | -                | -                | 0.49                 | 13.0      | B   | -                | -                |
|                                                       | EBL      | 0.24                 | 44.7      | D   | 13.7             | 26.2             | 0.42                 | 55.3      | E   | 11.1             | 24.0             |
|                                                       | EBTR     | 0.80                 | 64.7      | E   | 54.3             | 93.4             | 0.14                 | 52.0      | D   | 0.0              | 20.1             |
|                                                       | WBL      | 0.12                 | 44.2      | D   | 1.3              | 5.3              | 0.03                 | 51.2      | D   | 0.4              | 3.0              |
|                                                       | WBTR     | -                    | -         | -   | -                | -                | 0.01                 | 50.9      | D   | 0.2              | 2.1              |
|                                                       | NBL      | 0.61                 | 15.0      | B   | 15.2             | 34.8             | 0.50                 | 6.5       | A   | 7.2              | 14.4             |
|                                                       | NBT      | 0.48                 | 17.9      | B   | 74.3             | 119.0            | 0.32                 | 8.2       | A   | 35.6             | 53.5             |
|                                                       | NBR      | 0.23                 | 15.1      | B   | 1.9              | 18.7             | 0.17                 | 7.4       | A   | 0.0              | 8.7              |
|                                                       | SBT      | 0.55                 | 19.1      | B   | 93.5             | 147.4            | 0.48                 | 9.8       | A   | 64.0             | 92.8             |
|                                                       | SBR      | 0.02                 | 12.6      | B   | 0.0              | 0.4              | 0.02                 | 6.3       | A   | 0.0              | 1.2              |
| Unsignalized Intersections                            |          |                      |           |     |                  |                  |                      |           |     |                  |                  |
| Harborn Road & Grange Drive                           | EBLT     | 0.00                 | 0.0       | A   | -                | 0.0              | 0.00                 | 0.2       | A   | -                | 0.0              |
|                                                       | SBLR     | 0.01                 | 10.6      | B   | -                | 0.3              | 0.01                 | 9.2       | A   | -                | 0.3              |
| Premium Way & Harborn Road                            | WBLT     | 0.11                 | 5.8       | A   | -                | 2.7              | 0.13                 | 6.2       | A   | -                | 3.3              |
|                                                       | NBLR     | 0.37                 | 12.5      | B   | -                | 12.8             | 0.18                 | 9.6       | A   | -                | 5.3              |

Based on the results of the capacity analysis under existing traffic conditions, all study area intersections currently operate with residual capacity (i.e., volume to capacity ratio or V/C < 1.00), with acceptable levels of service and 95<sup>th</sup> percentile queue lengths during both AM and PM peak hours.

### 3.0 FUTURE TRANSIT IMPROVEMENTS

#### 3.1. ROAD INFRASTRUCTURE IMPROVEMENTS

##### Hurontario LRT

Hurontario Street is undergoing extensive roadway infrastructure improvements as a result of the construction of the Hurontario LRT, which is projected to contribute significantly to the improvement of transit connectivity within the City and specifically within the proximity of the subject site. The closest LRT stop to the subject site will be located at the intersection of North Service Road / Harborn Road and Hurontario Street, which is less than a 200 m walk from the subject site.

### 4.0 SITE TRAFFIC

The following section discusses the calculation of trips generated by the site.

#### 4.1. SITE TRIP GENERATION

The auto site trip generation was derived from the Institute of Transportation Engineers (ITE) Trip Generation Manual 12<sup>th</sup> Edition using land use code (LUC) 215 Single-Family Attached Housing for the proposed development.

The trip generation summary is shown in **Table 4.1**.

**Table 4.1 – Site Traffic Trip Generation**

| ITE Land Use                               | Parameter   | Morning Peak Hour |     |       | Afternoon Peak Hour |     |       |
|--------------------------------------------|-------------|-------------------|-----|-------|---------------------|-----|-------|
|                                            |             | In                | Out | Total | In                  | Out | Total |
| Single Family Attached Housing<br>12 units | Gross Trips | 1                 | 5   | 6     | 3                   | 3   | 6     |
| Total                                      |             | 1                 | 5   | 6     | 3                   | 3   | 6     |

Based on trip generation calculations, the proposed development is projected to generate a total of:

- Six (6) two-way gross trips (one (1) inbound and five (5) outbound) during AM peak hour; and,
- Six (6) two-way gross trips (three (3) inbound and three (3) outbound) during PM peak hour.

The number of site trips is expected to have an acceptable impact on the road network surrounding the subject site.

**It should be noted that the proposed addition is expected to generate less than 100 two-way trips both in the AM and PM peak hours. Hence, a full transportation impact study is not required, as per the City's Transportation Impact Study Guidelines.**

## 4.2. TRIP DISTRIBUTION

The trip distribution for the proposed hotel development is based on the inbound and outbound directional splits of existing turning movement counts obtained from the study area intersection.

Trip distribution is summarized in **Table 4.2** and trip assignment is illustrated in **Figure 4-1**.

**Table 4.2 – Site Traffic Trip Distribution**

| Corridor           | Direction | AM          |             | PM          |             |
|--------------------|-----------|-------------|-------------|-------------|-------------|
|                    |           | Inbound     | Outbound    | Inbound     | Outbound    |
| Hurontario Street  | N         | 16%         | 67%         | 51%         | 9%          |
|                    | S         | 67%         | 33%         | 42%         | 62%         |
| North Service Road | E         | 0%          | 0%          | 0%          | 12%         |
| Premium Way        | W         | 16%         | 0%          | 8%          | 17%         |
| <b>Total</b>       |           | <b>100%</b> | <b>100%</b> | <b>100%</b> | <b>100%</b> |

## 5.0 FUTURE TOTAL ANALYSIS

### 5.1. FUTURE TOTAL INTERSECTION CAPACITY ANALYSIS

The forecasted future total traffic volumes are defined as the sum of the distributed site-generated traffic and existing traffic volumes. The future total traffic volumes are illustrated in **Figure 5-1**. Capacity analysis is summarized in **Table 5.1** and detailed reports are provided in **Appendix E**.

**Table 5.1 – Future Total Traffic Assessment**

| Intersection                                           | Movement | Weekday AM Peak Hour |           |     |                  |                  | Weekday PM Peak Hour |           |     |                  |                  |
|--------------------------------------------------------|----------|----------------------|-----------|-----|------------------|------------------|----------------------|-----------|-----|------------------|------------------|
|                                                        |          | v/c                  | Delay (s) | LOS | Queue            |                  | v/c                  | Delay (s) | LOS | Queue            |                  |
|                                                        |          |                      |           |     | 50 <sup>th</sup> | 95 <sup>th</sup> |                      |           |     | 50 <sup>th</sup> | 95 <sup>th</sup> |
| Signalized Intersections                               |          |                      |           |     |                  |                  |                      |           |     |                  |                  |
| Hurontario Street & Harbourn Road / North Service Road | Overall  | 0.65                 | 24.6      | C   | -                | -                | 0.49                 | 13.1      | B   | -                | -                |
|                                                        | EBL      | 0.25                 | 44.7      | D   | 14.4             | 27.2             | 0.42                 | 55.5      | E   | 11.1             | 24.1             |
|                                                        | EBTR     | 0.80                 | 64.5      | E   | 54.6             | 93.9             | 0.14                 | 52.1      | D   | 0.0              | 20.5             |
|                                                        | WBL      | 0.12                 | 44.2      | D   | 1.3              | 5.4              | 0.03                 | 51.4      | D   | 0.4              | 3.1              |
|                                                        | WBTR     | -                    | -         | -   | -                | -                | 0.01                 | 51.0      | D   | 0.2              | 2.1              |
|                                                        | NBL      | 0.61                 | 15.2      | B   | 15.3             | 34.9             | 0.50                 | 6.5       | A   | 7.2              | 14.4             |
|                                                        | NBT      | 0.48                 | 18.0      | B   | 74.4             | 119.3            | 0.32                 | 8.3       | A   | 35.7             | 55.6             |
|                                                        | NBR      | 0.23                 | 15.1      | B   | 1.9              | 18.8             | 0.17                 | 7.5       | A   | 0.0              | 9.1              |
|                                                        | SBT      | 0.55                 | 19.2      | B   | 93.8             | 147.8            | 0.48                 | 10.0      | A   | 64.1             | 96.7             |
| SBR                                                    | 0.02     | 12.7                 | B         | 0.0 | 0.5              | 0.02             | 6.4                  | A         | 0.0 | 1.4              |                  |
| Unsignalized Intersections                             |          |                      |           |     |                  |                  |                      |           |     |                  |                  |
| Harbourn Road & Grange Drive                           | EBLT     | 0.00                 | 0.0       | A   | -                | 0.0              | 0.00                 | 0.2       | A   | -                | 0.0              |
|                                                        | SBLR     | 0.01                 | 10.6      | B   | -                | 0.3              | 0.01                 | 9.2       | A   | -                | 0.3              |
| Harbourn Road & Site Access                            | WBLT     | 0.00                 | 7.2       | A   | -                | 0.1              | 0.01                 | 7.2       | A   | -                | 0.2              |
|                                                        | NBLR     | 0.02                 | 8.4       | A   | -                | 0.4              | 0.01                 | 8.3       | A   | -                | 0.3              |
| Premium Way & Harbourn Road                            | WBLT     | 0.11                 | 5.8       | A   | -                | 2.7              | 0.13                 | 6.2       | A   | -                | 3.3              |
|                                                        | NBLR     | 0.37                 | 12.5      | B   | -                | 12.9             | 0.18                 | 9.6       | A   | -                | 5.1              |

Based on the results of the capacity analysis under future total traffic conditions, the study area intersections will operate with residual capacity (i.e., volume to capacity ratio or  $V/C < 1.00$ ), with acceptable levels of service and 95<sup>th</sup> percentile queue lengths during both AM and PM peak hours. **Therefore, the proposed development will have a negligible impact on the study area intersections.**

## 6.0 SITE PLAN REVIEW

### 6.1. VEHICULAR SITE CIRCULATION

AutoTURN software was used to generate a vehicular turning template to confirm and demonstrate the accessibility of the proposed study area. The AutoTURN analysis demonstrates that a P TAC-2017 vehicle, MSU TAC-2017 vehicle, and a Peel Region Garbage Truck can access the site and maneuver internally without conflict. AutoTurn analysis is shown in full detail in **Figure 6-1**, **Figure 6-2**, and **Figure 6-3**.

### 6.2. GEOMETRIC REVIEW

Vehicular access to the site will be provided via one (1) full movement access onto Harborn Road. The Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads 2017 was reviewed to determine if the proposed site access is compliant with design standards.

#### Corner Clearance

The proposed vehicle access to the site is closest to the intersection of Harborn Road and Grange Drive. *Figure 8.8.2: Suggested Minimum Corner Clearances to Accesses or Public Lanes at Major Intersections* from Chapter 8 of the TAC Geometric Design Guide for Canadian Roads was used to determine the appropriate corner clearance required for the driveway closest to the intersection. Based on the corner clearance requirements for stop control at the cross road, it is noted that a minimum clearance of 15 m is required for a driveway onto a local road. The measured distance between the nearside of the proposed access and the curb line of Grange Drive is approximately 60 m. On this basis, the proposed access provides an adequate corner clearance from the intersection of Harborn Road and Grange Drive.

#### Alignment with Adjacent Driveways

Based on *Figure 8.9.3: Spacing Considerations for Opposing Driveways* from Chapter 8 of the TAC Design Guideline, the preferred arrangement is to have two (2) opposing driveways align with one another, unless cross traffic is expected to be high, and signals are not warranted or feasible. Therefore, due to the low number of expected trips going through the intersection of Harborn Road & Proposed Site Access the alignment will adequately and safely provide access to the proposed and existing driveways.

### 6.3. SIGHT DISTANCE

The sight distance requirements for the proposed site access were assessed in accordance with the Geometric Design Guide for Canadian Roads to determine if the site access location and configuration provides adequate sight distances for stopping and departure.

#### Stopping Sight Distance

For the distance assessment, a design speed of 50 km/hr (10km/hr over the posted speed limit) was utilized. Sight distance requirements were considered for passenger vehicles approaching the proposed access on Harborn Road. The criterion applied for vehicles approaching the intersection is stopping sight distance. Under the stopping sight distance assessment, the target height applied is 0.38 m for vehicle taillights, and for intersection movements a top of car height of 1.3 m is applied. A driver eye height of 1.05 m is applied for all scenarios.

In accordance with the Geometric Design Guide for Canadian Roads by the Transportation Association of Canada (TAC 2017) section 2.5.3, the required stopping sight distance (SSD), adjusted for effect of grade, is determined using the following equation:

$$\text{Stopping Sight Distance} = 0.278tV + d_b$$

Where:

t = perception / reaction time = 2.5 s (TAC 2017, Section 2.5)

V = design speed (km/h);

d<sub>b</sub> = Braking distance (m);

The braking distance, modified by the effect of road grade, is determined using the following equation:

$$d_b = V^2 / 254[(a/9.81) \pm G]$$

Where:

V = design speed (km/h);

a = Deceleration rate (m/s<sup>2</sup>) (Assumed as 3.4 m/s<sup>2</sup>, as per TAC 2017 Section 2.5.2.2)

G = the percent grade divided by 100

The SSD requirement for the east and west approach was determined under the condition of a level roadway. The SSD requirement for the east approach was determined considering the effect of a -1.67% grade and the west approach was determined considering the effect of a -1.05% grade.

$$\begin{aligned} \text{Minimum sight distance for east approach} &= 0.278 \times 2.5 \times 50 + 50^2 / 254 ((3.4/9.81) - 0.0167) \\ &= 64.58 \text{ m say } \mathbf{65 \text{ m}} \end{aligned}$$

$$\begin{aligned} \text{Minimum sight distance for west approach} &= 0.278 \times 2.5 \times 50 + 50^2 / 254 ((3.4/9.81) - 0.0105) \\ &= 64.03 \text{ m say } \mathbf{65 \text{ m}} \end{aligned}$$

Sight distances approaching the proposed site access have been determined through an on-site visit. The stopping sight distances at the existing site access are summarized in **Table 6.1**.

**Table 6.1 – Stopping Sight Distance Assessment for the Proposed Driveway**

| Harborn Road and Site Access | Required | Observed | Difference |
|------------------------------|----------|----------|------------|
| East Approach                | 65 m     | 120 m    | +55 m      |
| West Approach                | 65 m     | 190 m    | +125 m     |

As summarized in **Table 7.1**, the required stopping sight distances for the east and west approaches are 65 m. The observed sight distances for the east and west approaches were 120 m and 190 m, respectively. Thus, there is sufficient stopping sight distance provided for both approaches towards the proposed driveway.

### Departure Sight Distance

To assess scenarios where vehicles are departing from the location of the proposed driveway, the departure sight distance was assessed under Case B1 – Left Turn from the Minor Road, in accordance with Section 9.9.2.3 of the *Geometric Design Guide for Canadian Roads (TAC 2017)*. The departure sight distance was assumed to be under stop-controlled conditions.

As stipulated in of the Geometric Design Guide for Canadian Roads, the intersection sight distance along the major road is determined using the following equation:

$$ISD = 0.278 V_{\text{major}} t_g$$

Where:

ISD = Intersection sight distance (length of the leg of sight triangle along the major road) (m);

$V_{\text{major}}$  = design speed of the major road (km/h); and,

$T_g$  = time gap for minor road vehicle to enter the major road (s)

Case B1 – Minimum intersection sight distance for vehicles turning left from the proposed driveway onto Harborn Road:

$$\begin{aligned} ISD &= 0.278 \times 50 \times 7.5 \\ &= 105 \text{ m} \end{aligned}$$

As previously mentioned, actual departure sight distances at the proposed site access have been determined through an on-site visit. The departure sight distances at the proposed site access are summarized in **Table 6.2**.

**Table 6.2 – Departure Sight Distance Assessment for Left Turning Vehicle from the Proposed Driveway**

| Harborn Road and Site Access | Departure Sight Distance |          |            |
|------------------------------|--------------------------|----------|------------|
|                              | Required                 | Observed | Difference |
| East Approach                | 105 m                    | 120 m    | +15 m      |
| West Approach                | 105 m                    | 190 m    | +85 m      |

As summarized in **Table 6.2**, the required departure sight distance for both the east and west approaches is 105 meters. The observed sight distances for the east and west approaches were 120 m and 190 m, respectively. Thus, there is sufficient departure sight distance provided for both approaches of the existing driveway.

## 7.0 PARKING ASSESSMENT

### 7.1. VEHICULAR PARKING REQUIREMENTS

The proposed development is subject to the parking requirements as provided in Table 3.1.2.2 of Zoning By-law 0225-2007. It is noted that the subject site is located in Precinct 4. The parking requirements in accordance with By-law 0225-2007 are summarized in **Table 7.1**.

**Table 7.1 – City of Mississauga Zoning By-law 0225-2007 Parking Requirements**

| Land Use                 | No. of Units | Parking Rate               | Parking Requirement | Parking Provided | Surplus / Deficit |
|--------------------------|--------------|----------------------------|---------------------|------------------|-------------------|
| Condominium<br>Townhouse | 12           | 2.0 resident spaces / unit | 24 spaces           | 24 spaces        | +1                |
|                          |              | 0.25 visitor spaces / unit | 3 spaces            | 4 spaces         |                   |
| Total                    |              | -                          | 27                  | 28               |                   |

Based on the City's Zoning By-law 0225-2007 parking requirements, a minimum of 27 spaces (24 resident spaces and three (3) visitor spaces) is required for the proposed townhouse development. In comparing the By-law requirements with the proposed supply of 28 spaces (24 resident spaces and four (4) visitor spaces), the subject site meets the City's By-law requirement.

### 7.2. ACCESSIBLE PARKING REQUIREMENTS

The proposed development is subject to the accessible parking requirements as provided in Table 3.1.3.1 of the City of Mississauga's Zoning By-law 0225-2007. The accessible parking requirements based on the provided visitor parking spaces are summarized in **Table 7.2**.

**Table 7.2 – City of Mississauga Zoning By-law 0225-2007 Accessible Parking Requirements**

| Total Number of Visitor<br>Parking Spaces | Minimum Number of<br>Accessible Parking<br>Spaces | Accessible Parking<br>Requirement | Accessible<br>Parking Provided |
|-------------------------------------------|---------------------------------------------------|-----------------------------------|--------------------------------|
| 4 spaces                                  | 1 space                                           | 1 space                           | 1 space                        |

Based on the City's Zoning By-law 0225-2007 parking requirements, a minimum of one (1) space (one (1) Type A space) is required for the proposed townhouse development. In comparing the requirement with the proposed supply of one (1) Type A accessible space, the subject site has an adequate number of accessible parking spaces.

### 7.3. BICYCLE PARKING REQUIREMENTS

Currently, the City of Mississauga's Zoning By-law 0225-2007 stipulates that there are no bicycle parking requirements for a condominium townhouse development.

### 7.4. LOADING SPACE REQUIREMENTS

Currently, the City of Mississauga's Zoning By-law 0225-2007 stipulates that there are no loading space requirements for a condominium townhouse development.

## 8.0 TRANSPORTATION DEMAND MANAGEMENT (TDM)

The primary objectives of this TDM plan are as follows:

- Provision of facilities / operations to promote behavioural change for reduced automobile uses and encourage the use of alternative sustainable transportation modes aside from single-occupancy vehicle (SOV).
- Maximize average auto occupancies, with the intent of a net minimization of site-related auto trips.
- Create and support opportunities for an inclusive transportation system to accommodate and facilitate all potential road users in a safe and efficient manner.

TDM refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicle trips, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system. In short, TDM works to change how, when, where, and why people travel.

TDM strategies have multiple benefits including the following:

- Reduced auto-related emissions to improve air quality.
- Decreased traffic congestion to reduce travel time.
- Increased travel options.
- Reduced personal transportation costs and energy consumption.
- Support Provincial smart growth objectives.

Based on our review, the following TDM measures are recommended for the proposed development:

#### **Transit:**

Public transit includes various services using shared vehicles to provide mobility to the public, these generally include:

- Heavy rail – relatively large, higher-speed trains, operating entirely on separate rights-of-way, with infrequent stops, providing service between communities;
- Light Rail Transit – moderate size, medium-speed trains, operating mainly on separate rights-of-way, with variable distances between stations, providing service between urban neighborhoods and commercial centers;

- Streetcars – relatively small, lower-speed trains, operating primarily on urban streets, with frequent stops which provide service along major urban corridors;
- Conventional bus transit - full-size buses on fixed routes and schedules;
- Bus Rapid Transit – premium quality bus service with features that typically include grade separation, frequent service, attractive stations, quick loading, and attractive vehicles; and,
- Express commuter bus – direct bus service from residential to employment areas.

The subject site is currently located in an area serviced by express commuter buses. Furthermore, the subject site is located approximately 200 m away from the nearest transit stop for the Hurontario LRT, which will greatly increase the transit availability within the area.

To encourage transit usage, it is recommended that the Owner consider the provision of transit information packages for employees, as well as one-time pre-loaded PRESTO cards.

### **Walkability:**

Walkability reflects overall walking conditions in an area. It considers the quality of pedestrian facilities, roadway conditions, land use patterns, community support, security and comfort for walking.

Generally, walkability can be evaluated at various scales:

- Site scale – affected by the quality of pathways, building accessways and related facilities;
- Street or neighborhood level – affected by the existence of sidewalks and crosswalks, and roadway conditions (road widths, traffic volumes and speeds); and,
- Community level – affected by land use accessibility, such as the relative location of common destinations and the quality of connections between them.

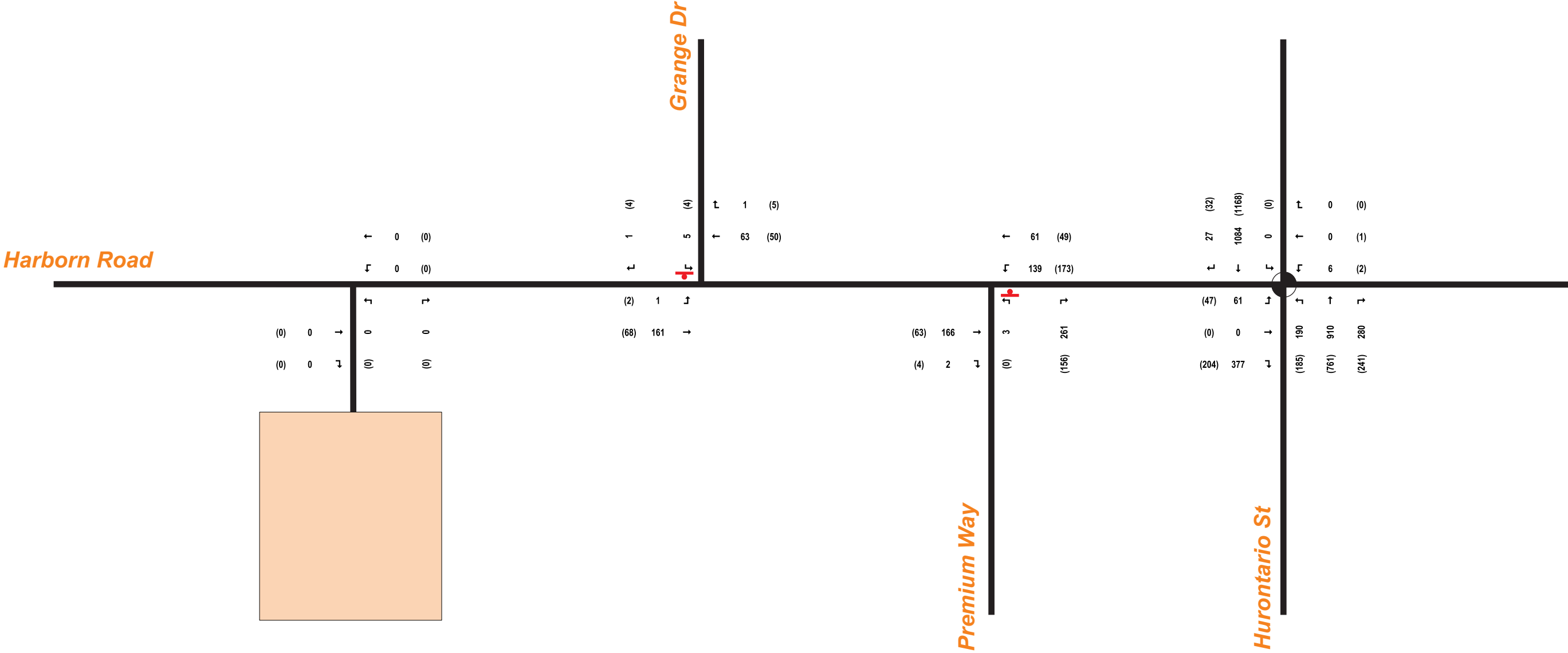
Pedestrian pathway is incorporated into the site design providing a safe and convenient connections to the adjacent future multi-use path along Harbon Road previously mentioned.

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

The findings and conclusions of the analysis are as follows:

- The development proposal is to demolish the existing single family detached dwellings and repurpose the lands into 12 townhouse units. A parking supply of 28 spaces (24 residential spaces and four (4) visitor spaces) is proposed. Vehicular access to the site is provided through Harborn Road.
- Based on the results of the capacity analysis under existing traffic conditions, all study area intersections currently operate with residual capacity (i.e., volume to capacity ratio or  $V/C < 1.00$ ), with acceptable levels of service and 95<sup>th</sup> percentile queue lengths during both AM and PM peak hours.
- The proposed development is anticipated to generate a total of six (6) two-way automobile trips (one (1) inbound and five (5) outbound) during the AM peak hour and six (6) two-way vehicle trips (three (3) inbound and three (3) outbound) during the PM peak hour.
- Based on the results of the capacity analysis under future total traffic conditions, the study area intersections will operate with residual capacity (i.e., volume to capacity ratio or  $V/C < 1.00$ ), with acceptable levels of service and 95<sup>th</sup> percentile queue lengths during both AM and PM peak hours. **Therefore, the proposed development will have a negligible impact on the study area intersections.**
- AutoTURN software was used to generate a vehicular turning template to confirm and demonstrate the accessibility of the proposed study area. The AutoTURN analysis demonstrates that a P TAC-2017 vehicle, MSU TAC-2017 vehicle, and a Peel Region Garbage Truck can access the site and maneuver internally without conflict. AutoTurn analysis is shown in full detail in **Figure 6-1**, **Figure 6-2**, and **Figure 6-3**.
- As summarized in **Table 7.1**, the required stopping sight distances for the east and west approaches are 65 m. The observed sight distances for the east and west approaches were 120 m and 190 m, respectively. Thus, there is sufficient stopping sight distance provided for both approaches towards the proposed driveway.
- As summarized in **Table 7.2**, the required departure sight distance for both the east and west approaches is 105 meters. The observed sight distances for the east and west approaches were 120 m and 190 m, respectively. Thus, there is sufficient departure sight distance provided for both approaches of the existing driveway.
- Based on the City's Zoning By-law 0225-2007 parking requirements, a minimum of 27 spaces (24 resident spaces and three (3) visitor spaces) is required for the proposed townhouse development. In comparing the By-law requirements with the proposed supply of 28 spaces (24 resident spaces and four (4) visitor spaces), the subject site meets the City's By-law requirement.
- Based on the City's Zoning By-law 0225-2007 parking requirements, a minimum of one (1) space (one (1) Type A space) is required for the proposed townhouse development. In comparing the requirement with the proposed supply of one (1) Type A accessible space, the subject site has an adequate number of accessible parking spaces.
- Currently, the City of Mississauga's Zoning By-law 0225-2007 stipulates that there are no bicycle parking requirements for a condominium townhouse development.
- Currently, the City of Mississauga's Zoning By-law 0225-2007 stipulates that there are no loading space requirements for a condominium townhouse development.
- TDM measures are recommended to encourage alternative modes of transportation and reduce the number of single occupant vehicle trips generated by the proposed development.

Figure 2-2: Existing Traffic Volumes



LEGEND

 Subject Site

xx

AM Peak Hour

(xx)

PM Peak Hour

 Existing Stop Sign

 Existing Traffic Signals

Figure 4-1: SiteTraffic Volumes

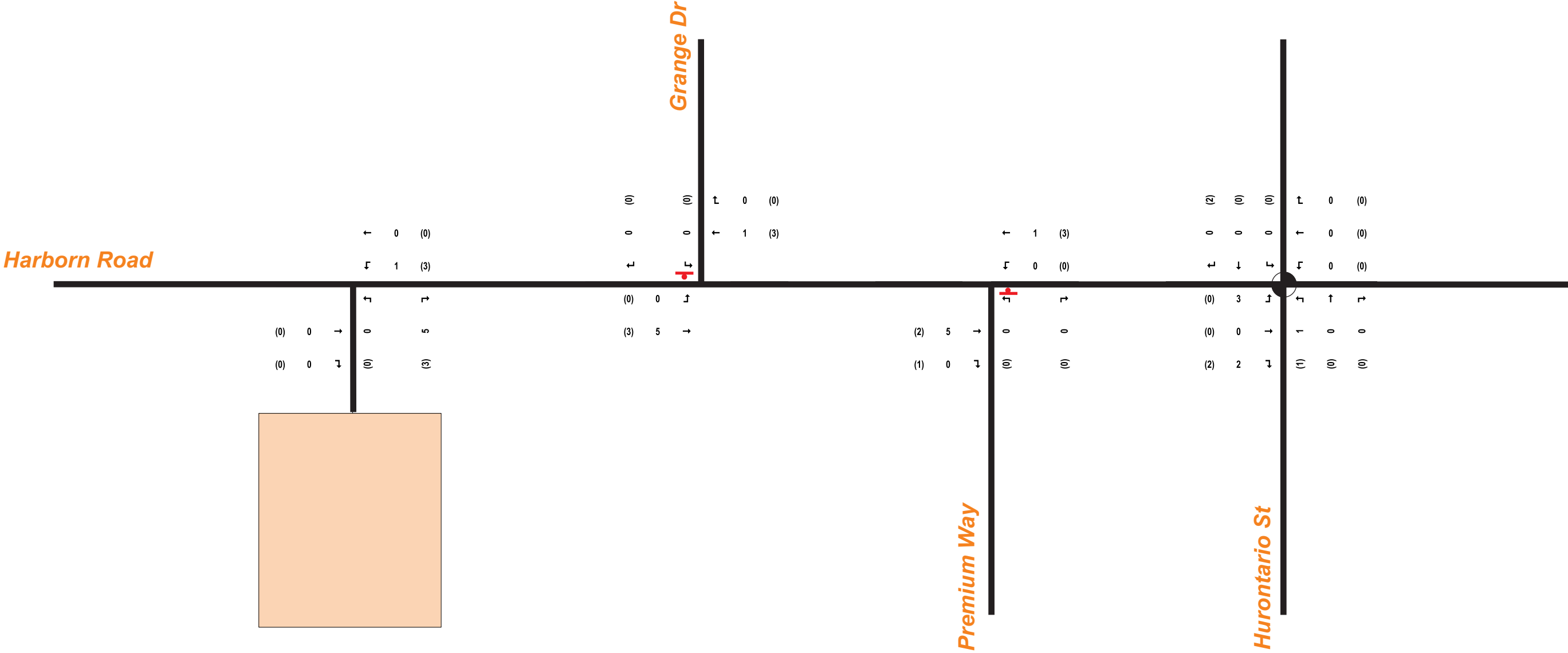
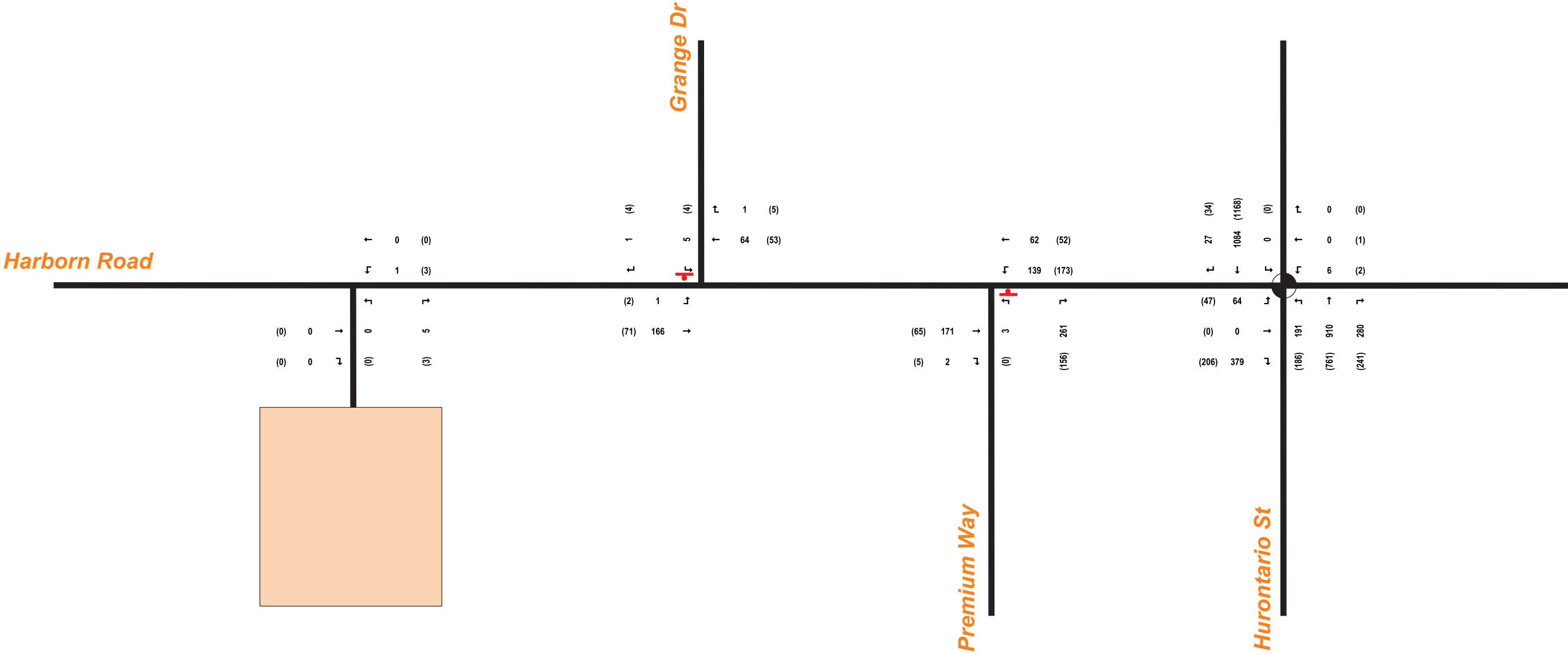


Figure 5-1: Future Total Traffic Volumes



LEGEND

 Subject Site

xx

AM Peak Hour

(xx)

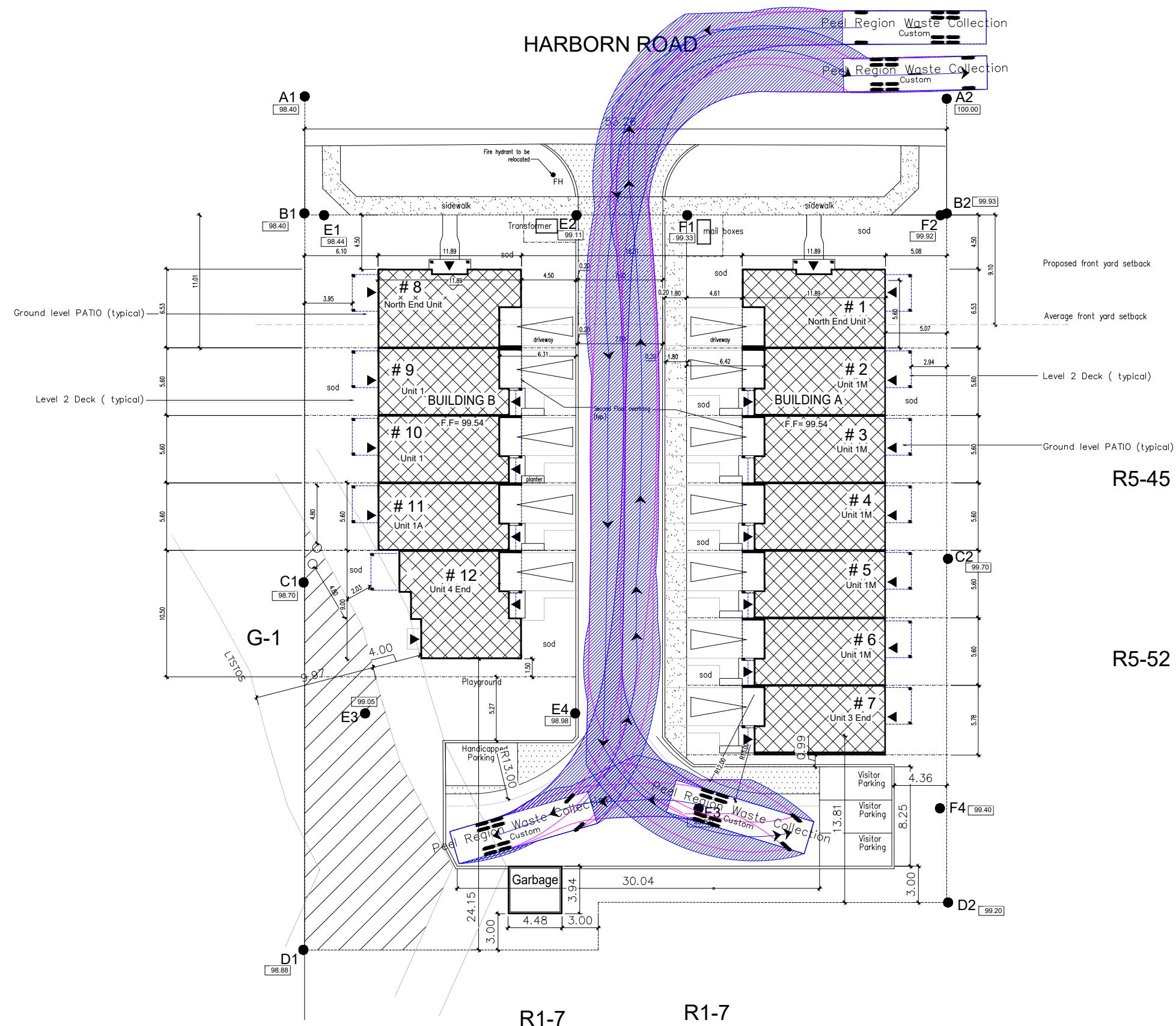
PM Peak Hour

 Existing Stop Sign

 Existing Traffic Signals



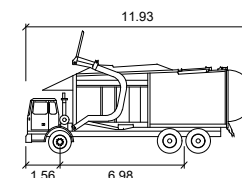




KEY PLAN



#### DESIGN VEHICLE



#### Peel Region Waste Collection

|                   | metres |
|-------------------|--------|
| Width             | : 2.77 |
| Track             | : 2.77 |
| Lock to Lock Time | : 6.0  |
| Steering Angle    | : 32.5 |

SCALE: NTS

#### REVISIONS

| NO | REVISION | DATE | BY |
|----|----------|------|----|
|    |          |      |    |
|    |          |      |    |
|    |          |      |    |
|    |          |      |    |
|    |          |      |    |

#### STAMP



**nextrans**  
CONSULTING ENGINEERS  
Suite 201, 520 Industrial Parkway South  
Aurora, ON L4G 6H8  
Tel: 905-503-2563  
Web: www.nextrans.ca

#### PROJECT NAME:

Residential Development  
50-60 Harbourn Road  
City of Mississauga

#### DRAWING TITLE:

AutoTURN Analysis  
Peel Region Garbage  
Truck

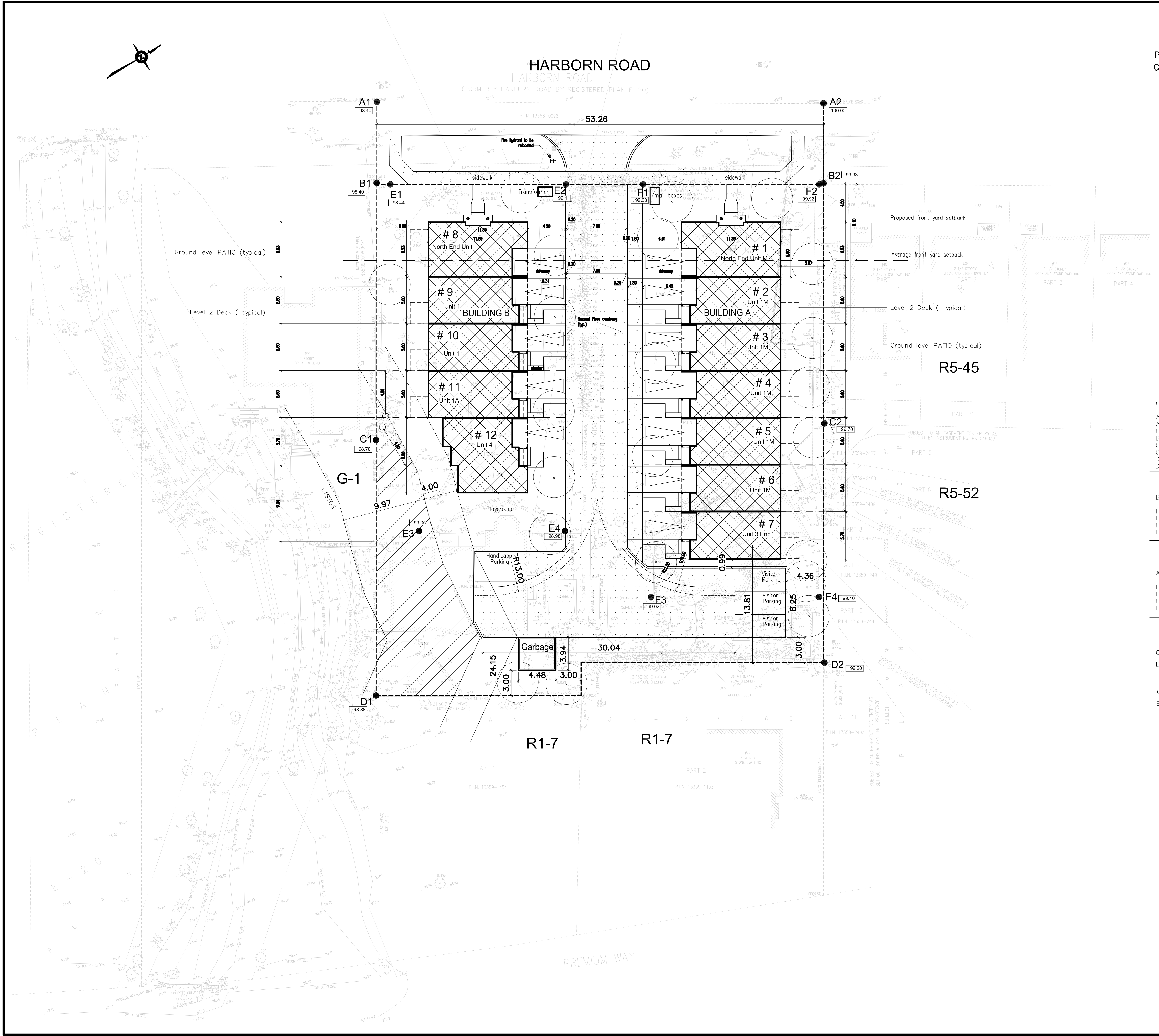
|                  |                   |
|------------------|-------------------|
| DESIGN BY: M.D.  | DATE: May 7, 2026 |
| CHECKED BY: R.P. | PROJECT NO.       |
| DRAWN BY: M.D.   | NT-25-057         |
| SCALE: NTS       | DRAWING NO.       |

Figure 6-3

## **Appendix A – Site Plan**

SITE PLAN

based on  
PLAN OF SURVEY OF PART OF LOT 1, RANGE 3  
CREDIT INDIAN RESERVE CITY OF MISSISSAUGA  
REGIONAL MUNICIPALITY OF PEEL  
Dated Oct.4, 2023  
Scale 1:200



CONTEXT GRADE CALCULATION

|    |        |
|----|--------|
| A1 | 98.40  |
| A2 | 100.00 |
| B1 | 98.40  |
| B2 | 99.93  |
| C1 | 98.70  |
| C2 | 99.70  |
| D1 | 98.88  |
| D2 | 99.20  |

793.21

Building A

|    |       |
|----|-------|
| F1 | 99.33 |
| F2 | 99.92 |
| F3 | 99.02 |
| F4 | 99.40 |

397.67

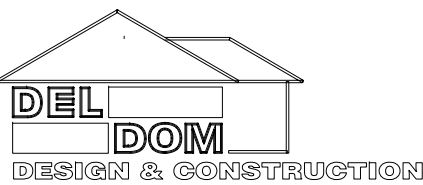
Average grade building B

|    |       |
|----|-------|
| E1 | 98.44 |
| E2 | 99.11 |
| E3 | 99.05 |
| E4 | 98.98 |

395.58

CONTEXT GRADE BUILDING A 99.24  
BUILDING HEIGHT 9.85 m - 10.0 m

CONTEXT GRADE BUILDING B 99.06  
BUILDING HEIGHT 9.85 m - 10.00 m



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e-mail: deldom@sympatico.ca  
8 Ravenscraf Dr., Toronto M9B 5M7

Project Title  
PROPOSED NEW FREEHOLD  
TOWNHOUSES  
50 & 60 HARBORN RD  
MISSISSAUGA

Drawing  
SITE PLAN

Date Dec.29, 2025  
Scale 1:200  
Job No 50/60-2023

A 001.1

## **Appendix B – Stamped and Approved Terms of Reference**

# Appendix A

## Certification Form

Individuals submitting reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Mississauga's Official Plan, Transportation Master Plan, and Transportation Impact Study Guidelines.

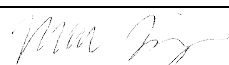
By submitting the attached report (and any associated documents) and signing this document, I acknowledge that:

- I have reviewed and have a sound understanding of the objectives, needs, and requirements of the City of Mississauga's Official Plan, Transportation Master Plan, and the Transportation Impact Study Guidelines as they apply to this submission;
- I have sound knowledge of industry standard practices pertaining to the preparation of development-related transportation study reports;
- I have substantial experience (more than five years) in completing development-related transportation studies and strong background knowledge of the transportation planning and engineering principles underpinning these studies; and
- I am registered as a Professional Engineer (P.Eng.), Licensed Engineering Technologist (LET), Certified Engineering Technologist (C.E.T.), or Registered Professional Planner (RPP) in good standing in the Province of Ontario with specific training in transportation planning and engineering.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
(City) (Day) (Month) (Year)

Name: \_\_\_\_\_

Professional Title: \_\_\_\_\_

Signature:  \_\_\_\_\_

### Office Contact Information (Please Print)

Address: \_\_\_\_\_

City/Postal Code: \_\_\_\_\_

Telephone/Extension: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

# Appendix B

**APPROVED**

*By James Emerson at 11:24 am, May 21, 2025*

## Pre-Study Consultation Checklist

| Description                                                                   | Information                                                                                                                                                                                                                                                    | Section Reference |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Development Information</b>                                                |                                                                                                                                                                                                                                                                |                   |
| Development Description (land use, size, and number of phases of development) | <p>Phase 1:</p> <ul style="list-style-type: none"><li>- Residential development with 15 townhouse dwelling units</li></ul> <p>Phase 2:</p> <ul style="list-style-type: none"><li>-</li></ul> <p>Phase 3:</p> <ul style="list-style-type: none"><li>-</li></ul> | 2.3.6             |

| Description                                                                                                                                                                    | Information                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Section Reference |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Transportation Impact Assessment</b>                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |
| <b>Step 1 – Screening</b>                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |
| Type of Application<br>(attach a drawing)                                                                                                                                      | <input checked="" type="checkbox"/> Official Plan Amendment<br><input checked="" type="checkbox"/> Zoning Amendment<br><input type="checkbox"/> Site Plan Control Application<br><input checked="" type="checkbox"/> Plan of Subdivision<br><input type="checkbox"/> Other _____                                                                                                                                                                                      | 2.3.5             |
| Screening Criteria                                                                                                                                                             | <input type="checkbox"/> Trip Generation Trigger Satisfied<br><input checked="" type="checkbox"/> Location Trigger Satisfied<br><input checked="" type="checkbox"/> Operational/Safety Trigger Satisfied                                                                                                                                                                                                                                                              | 2.2.1             |
| Type of Study                                                                                                                                                                  | <input type="checkbox"/> Transportation Impact Study<br><input checked="" type="checkbox"/> Access Review<br><input type="checkbox"/> No Additional Study Required                                                                                                                                                                                                                                                                                                    | 2.2.1             |
| <b>Step 2 – Scoping</b>                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |
| Study Area<br>(intersections to be analyzed)<br><br>Note: The Transportation Consultant is responsible to identify any further intersections impacted as the study progresses. | - Harborn Road / Grange Drive<br>- Harborn Road / Premium Way<br>- Site Access / Harborn Road<br>- Harborn Road / Hurontario                                                                                                                                                                                                                                                                                                                                          | 2.3.8             |
| Horizon Years                                                                                                                                                                  | <input type="checkbox"/> 5 years from date of TIS<br><input type="checkbox"/> Interim years _____<br><input type="checkbox"/> Other _____                                                                                                                                                                                                                                                                                                                             | 2.3.9             |
| Analysis Periods                                                                                                                                                               | <input checked="" type="checkbox"/> AM weekday peak hour of adjacent roadway<br><input checked="" type="checkbox"/> PM weekday peak hour of adjacent roadway<br><input type="checkbox"/> Saturday peak hour of adjacent roadway<br><input type="checkbox"/> AM weekday peak hour of development<br><input type="checkbox"/> PM weekday peak hour of development<br><input type="checkbox"/> Saturday peak hour of development<br><input type="checkbox"/> Other _____ | 2.3.10            |
| Input Parameters and Assumptions<br>(potential deviations)                                                                                                                     | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2.3.13            |
| Existing Transportation Conditions                                                                                                                                             | <input checked="" type="checkbox"/> City data sources<br><input checked="" type="checkbox"/> New data collection _____<br><input type="checkbox"/> Other _____                                                                                                                                                                                                                                                                                                        | 2.3.14            |

| Description                                                      | Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Section Reference |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Planned Network Improvements (with timing)                       | <ul style="list-style-type: none"> <li>- Multi-use path on the north/west side Premium Way (2026)</li> <li>- Multi-use path on Harbourn Road from east of Premium Way (2026)</li> <li>- Hurontario Light Rail Transit System Project. Anticipated to be completed within 5-year horizon</li> </ul>                                                                                                                                                                                       | 2.3.16            |
| Other Planned Developments (per <a href="#">City's Website</a> ) | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.3.17            |
| Identification of Mitigation Improvement Measures                | <input checked="" type="checkbox"/> Neighbourhood Traffic Management Plan<br><input type="checkbox"/> Other: _____                                                                                                                                                                                                                                                                                                                                                                       | 2.3.23            |
| Safety Analysis (any special issues)                             | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.3.25            |
| Site Access and Circulation (design vehicles)                    | <input checked="" type="checkbox"/> Passenger Car (P)<br><input type="checkbox"/> Light Single Unit Truck (LSU)<br><input checked="" type="checkbox"/> Medium Single Unit Truck (MSU)<br><input type="checkbox"/> Heavy Single Unit Truck (HSU)<br><input checked="" type="checkbox"/> Pumper Fire Truck<br><input type="checkbox"/> WB-20 Tractor Semi-Trailer Truck<br><input checked="" type="checkbox"/> Peel Region Waste Collection Truck<br><input type="checkbox"/> Other: _____ | 2.3.26            |
| Impacts During Construction (any special issues)                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.3.27            |
| <b>Step 3 – Forecasting</b>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |
| Growth Rate                                                      | <input type="checkbox"/> Obtained from City<br><input type="checkbox"/> Historical Traffic Counts<br><input type="checkbox"/> Travel Demand Forecasts<br><input type="checkbox"/> Proposed Growth Rate: _____                                                                                                                                                                                                                                                                            | 2.3.15            |
| Site Trip Generation                                             | <input checked="" type="checkbox"/> ITE Trip Generation Manual<br><input type="checkbox"/> "First Principles"<br><input type="checkbox"/> Observed Rates from Similar Developments in Area<br><input type="checkbox"/> Observed Rates from Subject Site<br><input type="checkbox"/> Other: _____                                                                                                                                                                                         | 2.3.19            |

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Information                                                                                                                                                                                                                                                                                                         | Section Reference |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Trip Reductions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> Internal Capture Reductions for Mixed Use Development<br><input type="checkbox"/> Non-Auto Mode Split<br><input type="checkbox"/> Pass-by Reductions<br><input type="checkbox"/> Other _____                                                                                               | 2.3.19            |
| Trip Distribution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input checked="" type="checkbox"/> Local Traffic Patterns<br><input type="checkbox"/> TTS<br><input type="checkbox"/> Travel Demand Model<br><input type="checkbox"/> Population and Employment Distribution<br><input type="checkbox"/> Market Analysis of Catchment Area<br><input type="checkbox"/> Other _____ | 2.3.20            |
| Trip Assignment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> Local Traffic Patterns<br><input type="checkbox"/> Shortest distance<br><input type="checkbox"/> Site Layout, Access Design and Logical Routing<br><input type="checkbox"/> Existing Turning Movements<br><input type="checkbox"/> Other _____                                  | 2.3.21            |
| <b>Transportation Demand Management Plan</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                     |                   |
| Format                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input checked="" type="checkbox"/> Within a TIA Report<br><input type="checkbox"/> Standalone                                                                                                                                                                                                                      | 3.2.1             |
| Type of Transportation Demand Management Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input checked="" type="checkbox"/> TDM Statement<br><input type="checkbox"/> TDM Scheme                                                                                                                                                                                                                            | 3.2.2             |
| <b>Pedestrian Circulation Plan</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                     |                   |
| Format                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input checked="" type="checkbox"/> Within a TIA Report<br><input type="checkbox"/> Standalone                                                                                                                                                                                                                      | 4.2.1             |
| <b>Additional Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                     |                   |
| <p>- Community Impacts: Any transportation-related impacts on the existing community and comments from the public through the planning approvals process shall be addressed in the report. Resident concerns from the May 6th, 2025 Community Meeting shall be discussed: sight lines, parked vehicles (Harborn Road, Premium Way, Grange Drive), speeding along Premium Way (along with any mitigation measures), queuing spillback on Harborn Road, etc</p> <p>- Queuing Analysis: Due to concerns from the community and observed traffic in the area, a queuing analysis of the noted study intersections is to be completed. Assess the capacity of the study intersections and address any notable queuing concerns that would effect the site traffic (i.e. wait times, blocked site access, etc.)</p> <p>- Access Review: Ensure that the proposed site accesses conform to all TAC standards (e.g. corner clearances, clear throat lengths, veh &amp; ped sight line distances for ingress/egress, proximity/alignment to other driveways/roads, etc.); Provide confirmation and technical justification of whether the site access locations and designs are safe for all roadway users and why.</p> <p>- Recommendations: Detailed Recommendations regarding on-site/off-site roadway improvements, site access, site circulation, and TDM measures shall be made.</p> |                                                                                                                                                                                                                                                                                                                     |                   |

## **Appendix C – Existing Turning Movement Counts**

| CITY OF MISSISSAUGA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                             |                        |                           |        |                |                |                                                     |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------------|---------------------------|--------|----------------|----------------|-----------------------------------------------------|----------------|---------------|----------------|-----|--|------------|--|------|--|---------------------|--|---------------|--|---------------|--|--------------------|-----|--|--|--|--|--|--|--|--|
| Traffic Signal Timing Parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                             |                        |                           |        |                |                |                                                     |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| Database Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                             |                        |                           |        | Prepared Date: |                | Tuesday, July 11, 2023                              |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| Database Rev                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                             |                        | iNet                      |        | Completed By:  |                | Mobilinx                                            |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| Timing Card / Field rev                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                             |                        | iNet                      |        | Checked By:    |                | Mobilinx                                            |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| Location: Hurontario Street @ Harborn Road / North Service Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        |                           |        |                |                | TIME PERIOD (sec.)                                  |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| Phase #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Direction                                   | Vehicle Minimum (sec.) | Pedestrian Minimum (sec.) |        | Amber (sec.)   | All Red (sec.) | *Peak Split= (Green+Amber+All Red)<br>**Max = Green |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        | WALK                      | FDWALK |                |                | AM Peak Split                                       | OFF Peak Split | PM Peak Split |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Hurontario Street - NB P.P. LT              | 5.0                    | -                         | -      | 3.0            | 0.0            | 15.0                                                | 20.0           | 20.0          |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Hurontario Street - NB / SB                 | 8.0                    | 8.0                       | 14.0   | 4.0            | 4.0            | 82.0                                                | 92.0           | 91.0          |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NIU                                         | -                      | -                         | -      | -              | -              | -                                                   | -              | -             |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Harborn Road / North Service Road - EB / WB | 8.0                    | 9.0                       | 22.0   | 4.0            | 5.0            | 63.0                                                | 48.0           | 49.0          |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NIU                                         | -                      | -                         | -      | -              | -              | -                                                   | -              | -             |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NIU                                         | -                      | -                         | -      | -              | -              | -                                                   | -              | -             |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NIU                                         | -                      | -                         | -      | -              | -              | -                                                   | -              | -             |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NIU                                         | -                      | -                         | -      | -              | -              | -                                                   | -              | -             |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="4" style="width: 30%; text-align: center;">System Control</td> <td style="width: 10%; text-align: center;">Yes</td> <td rowspan="4" style="width: 10%;"></td> <td rowspan="4" style="width: 10%; text-align: center;">TIME (M-F)</td> <td rowspan="4" style="width: 10%;"></td> <td rowspan="4" style="width: 10%; text-align: center;">PEAK</td> <td rowspan="4" style="width: 10%;"></td> <td rowspan="4" style="width: 10%; text-align: center;">CYCLE LENGTH (sec.)</td> <td rowspan="4" style="width: 10%;"></td> <td rowspan="4" style="width: 10%; text-align: center;">OFFSET (sec.)</td> </tr> <tr><td></td></tr> <tr><td style="text-align: center;">Local Control</td></tr> <tr><td></td></tr> <tr> <td style="text-align: center;">Semi-Actuated Mode</td> <td style="text-align: center;">Yes</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> |                                             |                        |                           |        |                |                |                                                     |                |               | System Control | Yes |  | TIME (M-F) |  | PEAK |  | CYCLE LENGTH (sec.) |  | OFFSET (sec.) |  | Local Control |  | Semi-Actuated Mode | Yes |  |  |  |  |  |  |  |  |
| System Control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                                         |                        | TIME (M-F)                |        | PEAK           |                | CYCLE LENGTH (sec.)                                 |                | OFFSET (sec.) |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        |                           |        |                |                |                                                     |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Local Control                               |                        |                           |        |                |                |                                                     |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        |                           |        |                |                |                                                     |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
| Semi-Actuated Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                         |                        |                           |        |                |                |                                                     |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        |                           |        | 06:00 - 09:30  |                | AM                                                  | 160            | 66            |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        |                           |        | 09:30 - 15:00  |                | OFF                                                 | 160            | 110           |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        |                           |        | 19:30 - 00:00  |                |                                                     |                |               |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                        |                           |        | 15:00 - 19:30  |                | PM                                                  | 160            | 108           |                |     |  |            |  |      |  |                     |  |               |  |               |  |                    |     |  |  |  |  |  |  |  |  |



Turning Movement Count (3 . HARBORN RD & HURONTARIO ST)

| Start Time          | Southbound<br>HURONTARIO ST |             |             |              |            |                | Westbound<br>NORTH SERVICE RD |             |             |              |            |                | Northbound<br>HURONTARIO ST |             |             |              |            |                | Eastbound<br>HARBORN RD |             |             |              |            |                | Int. Total<br>(15 min) | Int. Total<br>(1 hr) |
|---------------------|-----------------------------|-------------|-------------|--------------|------------|----------------|-------------------------------|-------------|-------------|--------------|------------|----------------|-----------------------------|-------------|-------------|--------------|------------|----------------|-------------------------|-------------|-------------|--------------|------------|----------------|------------------------|----------------------|
|                     | Right<br>N-W                | Thru<br>N-S | Left<br>N-E | UTurn<br>N-N | Peds<br>N: | Approach Total | Right<br>E-N                  | Thru<br>E-W | Left<br>E-S | UTurn<br>E-E | Peds<br>E: | Approach Total | Right<br>S-E                | Thru<br>S-N | Left<br>S-W | UTurn<br>S-S | Peds<br>S: | Approach Total | Right<br>W-S            | Thru<br>W-E | Left<br>W-N | UTurn<br>W-W | Peds<br>W: | Approach Total |                        |                      |
| 2025-05-28 07:00:00 | 1                           | 200         | 0           | 0            | 6          | 201            | 0                             | 1           | 0           | 0            | 0          | 1              | 28                          | 151         | 14          | 0            | 1          | 193            | 35                      | 0           | 10          | 0            | 2          | 45             | 440                    |                      |
| 2025-05-28 07:15:00 | 3                           | 222         | 0           | 0            | 9          | 225            | 0                             | 1           | 0           | 0            | 0          | 1              | 30                          | 158         | 14          | 0            | 2          | 202            | 38                      | 0           | 3           | 0            | 1          | 41             | 469                    |                      |
| 2025-05-28 07:30:00 | 2                           | 237         | 0           | 0            | 9          | 239            | 0                             | 0           | 0           | 0            | 0          | 0              | 40                          | 153         | 15          | 0            | 0          | 208            | 42                      | 0           | 10          | 0            | 0          | 52             | 499                    |                      |
| 2025-05-28 07:45:00 | 3                           | 294         | 0           | 0            | 9          | 297            | 0                             | 0           | 2           | 0            | 1          | 2              | 58                          | 181         | 26          | 1            | 2          | 266            | 66                      | 0           | 6           | 0            | 3          | 72             | 637                    | 2045                 |
| 2025-05-28 08:00:00 | 7                           | 257         | 0           | 0            | 23         | 264            | 0                             | 0           | 0           | 0            | 1          | 0              | 50                          | 184         | 47          | 0            | 0          | 281            | 104                     | 0           | 15          | 0            | 0          | 119            | 664                    | 2269                 |
| 2025-05-28 08:15:00 | 6                           | 303         | 0           | 0            | 19         | 309            | 0                             | 0           | 3           | 0            | 1          | 3              | 71                          | 223         | 44          | 0            | 1          | 338            | 126                     | 0           | 10          | 0            | 1          | 136            | 786                    | 2586                 |
| 2025-05-28 08:30:00 | 7                           | 294         | 0           | 0            | 13         | 301            | 0                             | 0           | 1           | 0            | 0          | 1              | 86                          | 251         | 45          | 0            | 1          | 382            | 80                      | 0           | 14          | 0            | 1          | 94             | 778                    | 2865                 |
| 2025-05-28 08:45:00 | 7                           | 230         | 0           | 0            | 10         | 237            | 0                             | 0           | 2           | 0            | 1          | 2              | 73                          | 252         | 54          | 0            | 0          | 379            | 67                      | 0           | 22          | 0            | 1          | 89             | 707                    | 2935                 |
| 2025-05-28 09:00:00 | 6                           | 243         | 0           | 0            | 3          | 249            | 0                             | 0           | 0           | 0            | 0          | 0              | 69                          | 210         | 38          | 0            | 0          | 317            | 45                      | 0           | 9           | 0            | 0          | 54             | 620                    | 2891                 |
| 2025-05-28 09:15:00 | 4                           | 242         | 0           | 0            | 9          | 246            | 0                             | 0           | 0           | 0            | 0          | 0              | 61                          | 221         | 40          | 0            | 0          | 322            | 44                      | 0           | 5           | 0            | 0          | 49             | 617                    | 2722                 |
| 2025-05-28 09:30:00 | 5                           | 224         | 0           | 0            | 7          | 229            | 0                             | 0           | 0           | 0            | 0          | 0              | 38                          | 234         | 30          | 0            | 1          | 302            | 40                      | 0           | 7           | 0            | 1          | 47             | 578                    | 2522                 |
| 2025-05-28 09:45:00 | 9                           | 190         | 0           | 0            | 16         | 199            | 0                             | 0           | 1           | 0            | 0          | 1              | 37                          | 273         | 33          | 0            | 1          | 343            | 49                      | 0           | 8           | 0            | 1          | 57             | 600                    | 2415                 |
| ***BREAK***         |                             |             |             |              |            |                |                               |             |             |              |            |                |                             |             |             |              |            |                |                         |             |             |              |            |                |                        |                      |
| 2025-05-28 16:00:00 | 8                           | 277         | 0           | 1            | 9          | 286            | 0                             | 0           | 0           | 1            | 0          | 1              | 40                          | 198         | 54          | 0            | 0          | 292            | 45                      | 0           | 16          | 0            | 0          | 61             | 640                    |                      |
| 2025-05-28 16:15:00 | 12                          | 280         | 0           | 0            | 3          | 292            | 0                             | 0           | 0           | 0            | 0          | 0              | 60                          | 180         | 35          | 0            | 0          | 275            | 58                      | 0           | 10          | 0            | 0          | 68             | 635                    |                      |
| 2025-05-28 16:30:00 | 6                           | 294         | 0           | 0            | 16         | 300            | 0                             | 0           | 0           | 0            | 0          | 0              | 60                          | 156         | 38          | 1            | 0          | 255            | 57                      | 0           | 14          | 0            | 3          | 71             | 626                    |                      |
| 2025-05-28 16:45:00 | 9                           | 295         | 0           | 0            | 6          | 304            | 0                             | 0           | 1           | 0            | 0          | 1              | 54                          | 185         | 52          | 0            | 0          | 291            | 35                      | 0           | 10          | 0            | 0          | 45             | 641                    | 2542                 |
| 2025-05-28 17:00:00 | 9                           | 274         | 0           | 0            | 9          | 283            | 0                             | 0           | 0           | 0            | 0          | 0              | 63                          | 217         | 45          | 0            | 0          | 325            | 49                      | 0           | 12          | 0            | 0          | 61             | 669                    | 2571                 |
| 2025-05-28 17:15:00 | 8                           | 305         | 0           | 0            | 9          | 313            | 0                             | 1           | 1           | 0            | 0          | 2              | 64                          | 203         | 50          | 0            | 0          | 317            | 63                      | 0           | 11          | 0            | 0          | 74             | 706                    | 2642                 |
| 2025-05-28 17:30:00 | 12                          | 269         | 0           | 0            | 9          | 281            | 0                             | 0           | 0           | 0            | 0          | 0              | 46                          | 158         | 57          | 0            | 0          | 261            | 50                      | 0           | 12          | 0            | 0          | 62             | 604                    | 2620                 |
| 2025-05-28 17:45:00 | 7                           | 278         | 0           | 0            | 9          | 285            | 0                             | 0           | 1           | 0            | 0          | 1              | 45                          | 205         | 41          | 1            | 0          | 292            | 47                      | 0           | 10          | 0            | 0          | 57             | 635                    | 2614                 |
| 2025-05-28 18:00:00 | 4                           | 255         | 0           | 0            | 6          | 259            | 0                             | 0           | 0           | 0            | 0          | 0              | 46                          | 156         | 32          | 0            | 0          | 234            | 46                      | 0           | 12          | 0            | 0          | 58             | 551                    | 2496                 |
| 2025-05-28 18:15:00 | 4                           | 250         | 0           | 0            | 6          | 254            | 0                             | 0           | 0           | 0            | 0          | 0              | 55                          | 201         | 44          | 1            | 0          | 301            | 33                      | 0           | 12          | 0            | 0          | 45             | 600                    | 2390                 |
| 2025-05-28 18:30:00 | 7                           | 251         | 0           | 0            | 3          | 258            | 0                             | 0           | 0           | 0            | 0          | 0              | 36                          | 191         | 38          | 0            | 0          | 265            | 21                      | 0           | 10          | 0            | 0          | 31             | 554                    | 2340                 |
| 2025-05-28 18:45:00 | 9                           | 177         | 0           | 0            | 4          | 186            | 0                             | 0           | 0           | 0            | 0          | 0              | 45                          | 217         | 40          | 1            | 0          | 303            | 30                      | 0           | 7           | 0            | 0          | 37             | 526                    | 2231                 |
| Grand Total         | 155                         | 6141        | 0           | 1            | 222        | 6297           | 0                             | 3           | 12          | 1            | 4          | 16             | 1255                        | 4758        | 926         | 5            | 9          | 6944           | 1270                    | 0           | 255         | 0            | 14         | 1525           | 14782                  | -                    |
| Approach%           | 2.5%                        | 97.5%       | 0%          | 0%           |            | -              | 0%                            | 18.8%       | 75%         | 6.3%         |            | -              | 18.1%                       | 68.5%       | 13.3%       | 0.1%         |            | -              | 83.3%                   | 0%          | 16.7%       | 0%           |            | -              | -                      | -                    |
| Totals %            | 1%                          | 41.5%       | 0%          | 0%           |            | 42.6%          | 0%                            | 0%          | 0.1%        | 0%           |            | 0.1%           | 8.5%                        | 32.2%       | 6.3%        | 0%           |            | 47%            | 8.6%                    | 0%          | 1.7%        | 0%           |            | 10.3%          | -                      | -                    |
| Heavy               | 3                           | 167         | 0           | 0            |            | -              | 0                             | 0           | 0           | 0            |            | -              | 35                          | 168         | 34          | 0            |            | -              | 39                      | 0           | 8           | 0            |            | -              | -                      | -                    |
| Heavy %             | 1.9%                        | 2.7%        | 0%          | 0%           |            | -              | 0%                            | 0%          | 0%          | 0%           |            | -              | 2.8%                        | 3.5%        | 3.7%        | 0%           |            | -              | 3.1%                    | 0%          | 3.1%        | 0%           |            | -              | -                      | -                    |
| Bicycles            | -                           | -           | -           | -            |            | -              | -                             | -           | -           | -            |            | -              | -                           | -           | -           | -            |            | -              | -                       | -           | -           | -            |            | -              | -                      | -                    |
| Bicycle %           | -                           | -           | -           | -            |            | -              | -                             | -           | -           | -            |            | -              | -                           | -           | -           | -            |            | -              | -                       | -           | -           | -            |            | -              | -                      | -                    |



Peak Hour: 08:00 AM - 09:00 AM Weather: Scattered Clouds (12 °C)

| Start Time             | Southbound<br>HURONTARIO ST |       |      |       |      |                | Westbound<br>NORTH SERVICE RD |      |      |       |      |                | Northbound<br>HURONTARIO ST |       |       |       |      |                | Eastbound<br>HARBORN RD |      |       |       |      |                | Int. Total<br>(15 min) |
|------------------------|-----------------------------|-------|------|-------|------|----------------|-------------------------------|------|------|-------|------|----------------|-----------------------------|-------|-------|-------|------|----------------|-------------------------|------|-------|-------|------|----------------|------------------------|
|                        | Right                       | Thru  | Left | UTurn | Peds | Approach Total | Right                         | Thru | Left | UTurn | Peds | Approach Total | Right                       | Thru  | Left  | UTurn | Peds | Approach Total | Right                   | Thru | Left  | UTurn | Peds | Approach Total |                        |
| 2025-05-28 08:00:00    | 7                           | 257   | 0    | 0     | 23   | 264            | 0                             | 0    | 0    | 0     | 1    | 0              | 50                          | 184   | 47    | 0     | 0    | 281            | 104                     | 0    | 15    | 0     | 0    | 119            | 664                    |
| 2025-05-28 08:15:00    | 6                           | 303   | 0    | 0     | 19   | 309            | 0                             | 0    | 3    | 0     | 1    | 3              | 71                          | 223   | 44    | 0     | 1    | 338            | 126                     | 0    | 10    | 0     | 1    | 136            | 786                    |
| 2025-05-28 08:30:00    | 7                           | 294   | 0    | 0     | 13   | 301            | 0                             | 0    | 1    | 0     | 0    | 1              | 86                          | 251   | 45    | 0     | 1    | 382            | 80                      | 0    | 14    | 0     | 1    | 94             | 778                    |
| 2025-05-28 08:45:00    | 7                           | 230   | 0    | 0     | 10   | 237            | 0                             | 0    | 2    | 0     | 1    | 2              | 73                          | 252   | 54    | 0     | 0    | 379            | 67                      | 0    | 22    | 0     | 1    | 89             | 707                    |
| Grand Total            | 27                          | 1084  | 0    | 0     | 65   | 1111           | 0                             | 0    | 6    | 0     | 3    | 6              | 280                         | 910   | 190   | 0     | 2    | 1380           | 377                     | 0    | 61    | 0     | 3    | 438            | 2935                   |
| Approach%              | 2.4%                        | 97.6% | 0%   | 0%    |      | -              | 0%                            | 0%   | 100% | 0%    |      | -              | 20.3%                       | 65.9% | 13.8% | 0%    |      | -              | 86.1%                   | 0%   | 13.9% | 0%    |      | -              | -                      |
| Totals %               | 0.9%                        | 36.9% | 0%   | 0%    |      | 37.9%          | 0%                            | 0%   | 0.2% | 0%    |      | 0.2%           | 9.5%                        | 31%   | 6.5%  | 0%    |      | 47%            | 12.8%                   | 0%   | 2.1%  | 0%    |      | 14.9%          | -                      |
| PHF                    | 0.96                        | 0.89  | 0    | 0     |      | 0.9            | 0                             | 0    | 0.5  | 0     |      | 0.5            | 0.81                        | 0.9   | 0.88  | 0     |      | 0.9            | 0.75                    | 0    | 0.69  | 0     |      | 0.81           | 0.93                   |
| Heavy                  | 2                           | 49    | 0    | 0     |      | 51             | 0                             | 0    | 0    | 0     |      | 0              | 9                           | 41    | 15    | 0     |      | 65             | 8                       | 0    | 4     | 0     |      | 12             | 128                    |
| Heavy %                | 7.4%                        | 4.5%  | 0%   | 0%    |      | 4.6%           | 0%                            | 0%   | 0%   | 0%    |      | 0%             | 3.2%                        | 4.5%  | 7.9%  | 0%    |      | 4.7%           | 2.1%                    | 0%   | 6.6%  | 0%    |      | 2.7%           | 4.4%                   |
| Lights                 | 25                          | 1033  | 0    | 0     |      | 1058           | 0                             | 0    | 0    | 0     |      | 0              | 270                         | 868   | 175   | 0     |      | 1313           | 366                     | 0    | 57    | 0     |      | 423            | 2794                   |
| Lights %               | 92.6%                       | 95.3% | 0%   | 0%    |      | 95.2%          | 0%                            | 0%   | 0%   | 0%    |      | 0%             | 96.4%                       | 95.4% | 92.1% | 0%    |      | 95.1%          | 97.1%                   | 0%   | 93.4% | 0%    |      | 96.6%          | 95.2%                  |
| Single-Unit Trucks     | 0                           | 19    | 0    | 0     |      | 19             | 0                             | 0    | 0    | 0     |      | 0              | 3                           | 10    | 7     | 0     |      | 20             | 4                       | 0    | 3     | 0     |      | 7              | 46                     |
| Single-Unit Trucks %   | 0%                          | 1.8%  | 0%   | 0%    |      | 1.7%           | 0%                            | 0%   | 0%   | 0%    |      | 0%             | 1.1%                        | 1.1%  | 3.7%  | 0%    |      | 1.4%           | 1.1%                    | 0%   | 4.9%  | 0%    |      | 1.6%           | 1.6%                   |
| Buses                  | 2                           | 29    | 0    | 0     |      | 31             | 0                             | 0    | 0    | 0     |      | 0              | 6                           | 29    | 8     | 0     |      | 43             | 4                       | 0    | 1     | 0     |      | 5              | 79                     |
| Buses %                | 7.4%                        | 2.7%  | 0%   | 0%    |      | 2.8%           | 0%                            | 0%   | 0%   | 0%    |      | 0%             | 2.1%                        | 3.2%  | 4.2%  | 0%    |      | 3.1%           | 1.1%                    | 0%   | 1.6%  | 0%    |      | 1.1%           | 2.7%                   |
| Articulated Trucks     | 0                           | 1     | 0    | 0     |      | 1              | 0                             | 0    | 0    | 0     |      | 0              | 0                           | 2     | 0     | 0     |      | 2              | 0                       | 0    | 0     | 0     |      | 0              | 3                      |
| Articulated Trucks %   | 0%                          | 0.1%  | 0%   | 0%    |      | 0.1%           | 0%                            | 0%   | 0%   | 0%    |      | 0%             | 0%                          | 0.2%  | 0%    | 0%    |      | 0.1%           | 0%                      | 0%   | 0%    | 0%    |      | 0%             | 0.1%                   |
| Bicycles on Road       | 0                           | 2     | 0    | 0     |      | 2              | 0                             | 0    | 6    | 0     |      | 6              | 1                           | 1     | 0     | 0     |      | 2              | 3                       | 0    | 0     | 0     |      | 3              | 13                     |
| Bicycles on Road %     | 0%                          | 0.2%  | 0%   | 0%    |      | 0.2%           | 0%                            | 0%   | 100% | 0%    |      | 100%           | 0.4%                        | 0.1%  | 0%    | 0%    |      | 0.1%           | 0.8%                    | 0%   | 0%    | 0%    |      | 0.7%           | 0.4%                   |
| Pedestrians            | -                           | -     | -    | -     | 65   | -              | -                             | -    | -    | 2     | -    | -              | -                           | -     | -     | -     | 1    | -              | -                       | -    | -     | 2     | -    | -              | -                      |
| Pedestrians%           | -                           | -     | -    | -     | 89%  | -              | -                             | -    | -    | 2.7%  | -    | -              | -                           | -     | -     | -     | 1.4% | -              | -                       | -    | -     | 2.7%  | -    | -              | -                      |
| Bicycles on Crosswalk  | -                           | -     | -    | -     | 0    | -              | -                             | -    | -    | 1     | -    | -              | -                           | -     | -     | -     | 1    | -              | -                       | -    | -     | 1     | -    | -              | -                      |
| Bicycles on Crosswalk% | -                           | -     | -    | -     | 0%   | -              | -                             | -    | -    | 1.4%  | -    | -              | -                           | -     | -     | -     | 1.4% | -              | -                       | -    | -     | 1.4%  | -    | -              | -                      |

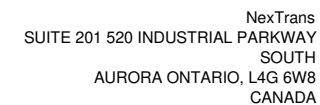


Peak Hour: 04:30 PM - 05:30 PM    Weather: Overcast Clouds (11 °C)

| Start Time             | Southbound<br>HURONTARIO ST |       |      |       |       |                | Westbound<br>NORTH SERVICE RD |       |       |       |      |                | Northbound<br>HURONTARIO ST |       |       |       |      |                | Eastbound<br>HARBORN RD |      |       |       |      |                | Int. Total<br>(15 min) |
|------------------------|-----------------------------|-------|------|-------|-------|----------------|-------------------------------|-------|-------|-------|------|----------------|-----------------------------|-------|-------|-------|------|----------------|-------------------------|------|-------|-------|------|----------------|------------------------|
|                        | Right                       | Thru  | Left | UTurn | Peds  | Approach Total | Right                         | Thru  | Left  | UTurn | Peds | Approach Total | Right                       | Thru  | Left  | UTurn | Peds | Approach Total | Right                   | Thru | Left  | UTurn | Peds | Approach Total |                        |
| 2025-05-28 16:30:00    | 6                           | 294   | 0    | 0     | 16    | 300            | 0                             | 0     | 0     | 0     | 0    | 0              | 60                          | 156   | 38    | 1     | 0    | 255            | 57                      | 0    | 14    | 0     | 3    | 71             | 626                    |
| 2025-05-28 16:45:00    | 9                           | 295   | 0    | 0     | 6     | 304            | 0                             | 0     | 1     | 0     | 0    | 1              | 54                          | 185   | 52    | 0     | 0    | 291            | 35                      | 0    | 10    | 0     | 0    | 45             | 641                    |
| 2025-05-28 17:00:00    | 9                           | 274   | 0    | 0     | 9     | 283            | 0                             | 0     | 0     | 0     | 0    | 0              | 63                          | 217   | 45    | 0     | 0    | 325            | 49                      | 0    | 12    | 0     | 0    | 61             | 669                    |
| 2025-05-28 17:15:00    | 8                           | 305   | 0    | 0     | 9     | 313            | 0                             | 1     | 1     | 0     | 0    | 2              | 64                          | 203   | 50    | 0     | 0    | 317            | 63                      | 0    | 11    | 0     | 0    | 74             | 706                    |
| Grand Total            | 32                          | 1168  | 0    | 0     | 40    | 1200           | 0                             | 1     | 2     | 0     | 0    | 3              | 241                         | 761   | 185   | 1     | 0    | 1188           | 204                     | 0    | 47    | 0     | 3    | 251            | 2642                   |
| Approach%              | 2.7%                        | 97.3% | 0%   | 0%    |       | -              | 0%                            | 33.3% | 66.7% | 0%    |      | -              | 20.3%                       | 64.1% | 15.6% | 0.1%  |      | -              | 81.3%                   | 0%   | 18.7% | 0%    |      | -              | -                      |
| Totals %               | 1.2%                        | 44.2% | 0%   | 0%    |       | 45.4%          | 0%                            | 0%    | 0.1%  | 0%    |      | 0.1%           | 9.1%                        | 28.8% | 7%    | 0%    |      | 45%            | 7.7%                    | 0%   | 1.8%  | 0%    |      | 9.5%           | -                      |
| PHF                    | 0.89                        | 0.96  | 0    | 0     |       | 0.96           | 0                             | 0.25  | 0.5   | 0     |      | 0.38           | 0.94                        | 0.88  | 0.89  | 0.25  |      | 0.91           | 0.81                    | 0    | 0.84  | 0     |      | 0.85           | 0.94                   |
| Heavy                  | 0                           | 22    | 0    | 0     |       | 22             | 0                             | 0     | 0     | 0     |      | 0              | 4                           | 17    | 1     | 0     |      | 22             | 3                       | 0    | 0     | 0     |      | 3              | 47                     |
| Heavy %                | 0%                          | 1.9%  | 0%   | 0%    |       | 1.8%           | 0%                            | 0%    | 0%    | 0%    |      | 0%             | 1.7%                        | 2.2%  | 0.5%  | 0%    |      | 1.9%           | 1.5%                    | 0%   | 0%    | 0%    |      | 1.2%           | 1.8%                   |
| Lights                 | 32                          | 1144  | 0    | 0     |       | 1176           | 0                             | 0     | 0     | 0     |      | 0              | 236                         | 744   | 184   | 1     |      | 1165           | 201                     | 0    | 47    | 0     |      | 248            | 2589                   |
| Lights %               | 100%                        | 97.9% | 0%   | 0%    |       | 98%            | 0%                            | 0%    | 0%    | 0%    |      | 0%             | 97.9%                       | 97.8% | 99.5% | 100%  |      | 98.1%          | 98.5%                   | 0%   | 100%  | 0%    |      | 98.8%          | 98%                    |
| Single-Unit Trucks     | 0                           | 11    | 0    | 0     |       | 11             | 0                             | 0     | 0     | 0     |      | 0              | 3                           | 5     | 0     | 0     |      | 8              | 2                       | 0    | 0     | 0     |      | 2              | 21                     |
| Single-Unit Trucks %   | 0%                          | 0.9%  | 0%   | 0%    |       | 0.9%           | 0%                            | 0%    | 0%    | 0%    |      | 0%             | 1.2%                        | 0.7%  | 0%    | 0%    |      | 0.7%           | 1%                      | 0%   | 0%    | 0%    |      | 0.8%           | 0.8%                   |
| Buses                  | 0                           | 9     | 0    | 0     |       | 9              | 0                             | 0     | 0     | 0     |      | 0              | 1                           | 10    | 1     | 0     |      | 12             | 1                       | 0    | 0     | 0     |      | 1              | 22                     |
| Buses %                | 0%                          | 0.8%  | 0%   | 0%    |       | 0.8%           | 0%                            | 0%    | 0%    | 0%    |      | 0%             | 0.4%                        | 1.3%  | 0.5%  | 0%    |      | 1%             | 0.5%                    | 0%   | 0%    | 0%    |      | 0.4%           | 0.8%                   |
| Articulated Trucks     | 0                           | 2     | 0    | 0     |       | 2              | 0                             | 0     | 0     | 0     |      | 0              | 0                           | 2     | 0     | 0     |      | 2              | 0                       | 0    | 0     | 0     |      | 0              | 4                      |
| Articulated Trucks %   | 0%                          | 0.2%  | 0%   | 0%    |       | 0.2%           | 0%                            | 0%    | 0%    | 0%    |      | 0%             | 0%                          | 0.3%  | 0%    | 0%    |      | 0.2%           | 0%                      | 0%   | 0%    | 0%    |      | 0%             | 0.2%                   |
| Bicycles on Road       | 0                           | 2     | 0    | 0     |       | 2              | 0                             | 1     | 2     | 0     |      | 3              | 1                           | 0     | 0     | 0     |      | 1              | 0                       | 0    | 0     | 0     |      | 0              | 6                      |
| Bicycles on Road %     | 0%                          | 0.2%  | 0%   | 0%    |       | 0.2%           | 0%                            | 100%  | 100%  | 0%    |      | 100%           | 0.4%                        | 0%    | 0%    | 0%    |      | 0.1%           | 0%                      | 0%   | 0%    | 0%    |      | 0%             | 0.2%                   |
| Pedestrians            | -                           | -     | -    | -     | 35    | -              | -                             | -     | -     | 0     |      | -              | -                           | -     | -     | 0     |      | -              | -                       | -    | -     | 3     |      | -              | -                      |
| Pedestrians%           | -                           | -     | -    | -     | 81.4% | -              | -                             | -     | -     | 0%    |      | -              | -                           | -     | -     | 0%    |      | -              | -                       | -    | -     | 7%    |      | -              | -                      |
| Bicycles on Crosswalk  | -                           | -     | -    | -     | 5     | -              | -                             | -     | -     | 0     |      | -              | -                           | -     | -     | 0     |      | -              | -                       | -    | -     | 0     |      | -              | -                      |
| Bicycles on Crosswalk% | -                           | -     | -    | -     | 11.6% | -              | -                             | -     | -     | 0%    |      | -              | -                           | -     | -     | 0%    |      | -              | -                       | -    | -     | 0%    |      | -              | -                      |

Peak Hour: 08:00 AM - 09:00 AM Weather: Scattered Clouds (12 °C)







Turning Movement Count (2 . HARBORN RD & PREMIUM WAY)

| Start Time          | Westbound<br>HARBORN RD |             |              |            |                | Northbound<br>PREMIUM WAY |             |              |            |                | Eastbound<br>HARBORN RD |             |              |            |                | Int. Total<br>(15 min) | Int. Total<br>(1 hr) |
|---------------------|-------------------------|-------------|--------------|------------|----------------|---------------------------|-------------|--------------|------------|----------------|-------------------------|-------------|--------------|------------|----------------|------------------------|----------------------|
|                     | Thru<br>E:W             | Left<br>E:S | UTurn<br>E:E | Peds<br>E: | Approach Total | Right<br>S:E              | Left<br>S:W | UTurn<br>S:S | Peds<br>S: | Approach Total | Right<br>W:S            | Thru<br>W:E | UTurn<br>W:W | Peds<br>W: | Approach Total |                        |                      |
| 2025-05-28 07:00:00 | 1                       | 12          | 1            | 0          | 14             | 30                        | 0           | 0            | 0          | 30             | 0                       | 13          | 0            | 1          | 13             | 57                     |                      |
| 2025-05-28 07:15:00 | 5                       | 14          | 0            | 2          | 19             | 23                        | 0           | 0            | 0          | 23             | 0                       | 17          | 0            | 0          | 17             | 59                     |                      |
| 2025-05-28 07:30:00 | 3                       | 12          | 1            | 0          | 16             | 45                        | 0           | 0            | 1          | 45             | 0                       | 8           | 0            | 3          | 8              | 69                     |                      |
| 2025-05-28 07:45:00 | 8                       | 17          | 2            | 0          | 27             | 52                        | 0           | 0            | 0          | 52             | 1                       | 18          | 0            | 0          | 19             | 98                     | 283                  |
| 2025-05-28 08:00:00 | 11                      | 38          | 0            | 0          | 49             | 79                        | 1           | 0            | 0          | 80             | 0                       | 40          | 0            | 0          | 40             | 169                    | 395                  |
| 2025-05-28 08:15:00 | 9                       | 40          | 1            | 0          | 50             | 72                        | 0           | 0            | 0          | 72             | 1                       | 62          | 0            | 1          | 63             | 185                    | 521                  |
| 2025-05-28 08:30:00 | 18                      | 26          | 2            | 0          | 46             | 59                        | 2           | 0            | 0          | 61             | 0                       | 36          | 0            | 0          | 36             | 143                    | 595                  |
| 2025-05-28 08:45:00 | 23                      | 35          | 0            | 0          | 58             | 51                        | 0           | 0            | 0          | 51             | 1                       | 28          | 0            | 0          | 29             | 138                    | 635                  |
| 2025-05-28 09:00:00 | 13                      | 30          | 1            | 0          | 44             | 37                        | 0           | 0            | 0          | 37             | 2                       | 14          | 0            | 1          | 16             | 97                     | 563                  |
| 2025-05-28 09:15:00 | 16                      | 25          | 1            | 0          | 42             | 29                        | 1           | 0            | 0          | 30             | 1                       | 17          | 0            | 0          | 18             | 90                     | 468                  |
| 2025-05-28 09:30:00 | 7                       | 24          | 1            | 0          | 32             | 24                        | 2           | 0            | 1          | 26             | 1                       | 20          | 0            | 3          | 21             | 79                     | 404                  |
| 2025-05-28 09:45:00 | 11                      | 20          | 0            | 3          | 31             | 45                        | 0           | 0            | 0          | 45             | 1                       | 10          | 0            | 3          | 11             | 87                     | 353                  |
| ***BREAK***         |                         |             |              |            |                |                           |             |              |            |                |                         |             |              |            |                |                        |                      |
| 2025-05-28 16:00:00 | 18                      | 39          | 3            | 1          | 60             | 37                        | 0           | 0            | 0          | 37             | 1                       | 12          | 0            | 0          | 13             | 110                    |                      |
| 2025-05-28 16:15:00 | 9                       | 30          | 3            | 0          | 42             | 49                        | 0           | 0            | 0          | 49             | 1                       | 17          | 0            | 0          | 18             | 109                    |                      |
| 2025-05-28 16:30:00 | 16                      | 32          | 3            | 0          | 51             | 34                        | 1           | 0            | 0          | 35             | 0                       | 23          | 0            | 2          | 23             | 109                    |                      |
| 2025-05-28 16:45:00 | 17                      | 37          | 1            | 0          | 55             | 30                        | 0           | 0            | 0          | 30             | 1                       | 13          | 0            | 1          | 14             | 99                     | 427                  |
| 2025-05-28 17:00:00 | 12                      | 36          | 0            | 0          | 48             | 35                        | 0           | 0            | 0          | 35             | 1                       | 16          | 0            | 1          | 17             | 100                    | 417                  |
| 2025-05-28 17:15:00 | 9                       | 50          | 1            | 0          | 60             | 50                        | 0           | 0            | 0          | 50             | 2                       | 14          | 0            | 2          | 16             | 126                    | 434                  |
| 2025-05-28 17:30:00 | 17                      | 46          | 3            | 0          | 66             | 38                        | 0           | 0            | 0          | 38             | 1                       | 18          | 0            | 1          | 19             | 123                    | 448                  |
| 2025-05-28 17:45:00 | 11                      | 41          | 1            | 0          | 53             | 33                        | 0           | 0            | 1          | 33             | 0                       | 15          | 0            | 0          | 15             | 101                    | 450                  |
| 2025-05-28 18:00:00 | 9                       | 26          | 1            | 0          | 36             | 30                        | 0           | 0            | 2          | 30             | 1                       | 15          | 0            | 0          | 16             | 82                     | 432                  |
| 2025-05-28 18:15:00 | 11                      | 31          | 1            | 0          | 43             | 27                        | 0           | 0            | 1          | 27             | 1                       | 9           | 0            | 1          | 10             | 80                     | 386                  |
| 2025-05-28 18:30:00 | 13                      | 31          | 0            | 0          | 44             | 21                        | 0           | 0            | 0          | 21             | 0                       | 4           | 0            | 0          | 4              | 69                     | 332                  |
| 2025-05-28 18:45:00 | 9                       | 38          | 1            | 1          | 48             | 24                        | 0           | 0            | 1          | 24             | 0                       | 8           | 0            | 3          | 8              | 80                     | 311                  |
| Grand Total         | 276                     | 730         | 28           | 7          | 1034           | 954                       | 7           | 0            | 7          | 961            | 17                      | 447         | 0            | 23         | 464            | 2459                   | -                    |
| Approach%           | 26.7%                   | 70.6%       | 2.7%         |            | -              | 99.3%                     | 0.7%        | 0%           |            | -              | 3.7%                    | 96.3%       | 0%           |            | -              | -                      | -                    |
| Totals %            | 11.2%                   | 29.7%       | 1.1%         |            | 42%            | 38.8%                     | 0.3%        | 0%           |            | 39.1%          | 0.7%                    | 18.2%       | 0%           |            | 18.9%          | -                      | -                    |
| Heavy               | 5                       | 31          | 2            |            | -              | 36                        | 0           | 0            |            | -              | 1                       | 5           | 0            |            | -              | -                      | -                    |
| Heavy %             | 1.8%                    | 4.2%        | 7.1%         |            | -              | 3.8%                      | 0%          | 0%           |            | -              | 5.9%                    | 1.1%        | 0%           |            | -              | -                      | -                    |
| Bicycles            | -                       | -           | -            |            | -              | -                         | -           | -            |            | -              | -                       | -           | -            |            | -              | -                      | -                    |
| Bicycle %           | -                       | -           | -            |            | -              | -                         | -           | -            |            | -              | -                       | -           | -            |            | -              | -                      | -                    |



Peak Hour: 08:00 AM - 09:00 AM Weather: Scattered Clouds (12 °C)

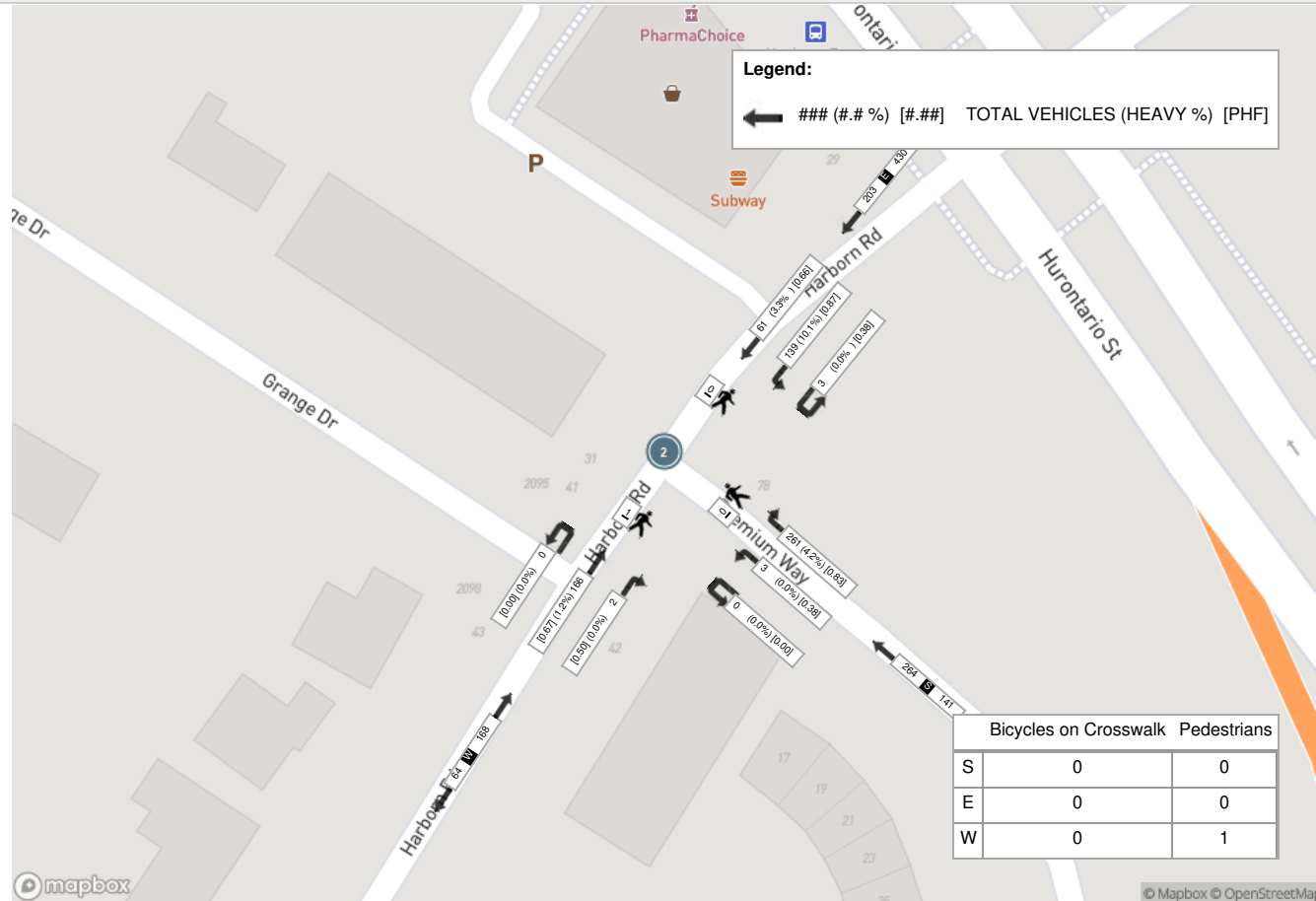
| Start Time             | Westbound<br>HARBORN RD |       |       |      |                | Northbound<br>PREMIUM WAY |      |       |      |                | Eastbound<br>HARBORN RD |       |       |      |                | Int. Total<br>(15 min) |
|------------------------|-------------------------|-------|-------|------|----------------|---------------------------|------|-------|------|----------------|-------------------------|-------|-------|------|----------------|------------------------|
|                        | Thru                    | Left  | UTurn | Peds | Approach Total | Right                     | Left | UTurn | Peds | Approach Total | Right                   | Thru  | UTurn | Peds | Approach Total |                        |
| 2025-05-28 08:00:00    | 11                      | 38    | 0     | 0    | 49             | 79                        | 1    | 0     | 0    | 80             | 0                       | 40    | 0     | 0    | 40             | 169                    |
| 2025-05-28 08:15:00    | 9                       | 40    | 1     | 0    | 50             | 72                        | 0    | 0     | 0    | 72             | 1                       | 62    | 0     | 1    | 63             | 185                    |
| 2025-05-28 08:30:00    | 18                      | 26    | 2     | 0    | 46             | 59                        | 2    | 0     | 0    | 61             | 0                       | 36    | 0     | 0    | 36             | 143                    |
| 2025-05-28 08:45:00    | 23                      | 35    | 0     | 0    | 58             | 51                        | 0    | 0     | 0    | 51             | 1                       | 28    | 0     | 0    | 29             | 138                    |
| Grand Total            | 61                      | 139   | 3     | 0    | 203            | 261                       | 3    | 0     | 0    | 264            | 2                       | 166   | 0     | 1    | 168            | 635                    |
| Approach%              | 30%                     | 68.5% | 1.5%  |      | -              | 98.9%                     | 1.1% | 0%    |      | -              | 1.2%                    | 98.8% | 0%    |      | -              | -                      |
| Totals %               | 9.6%                    | 21.9% | 0.5%  |      | 32%            | 41.1%                     | 0.5% | 0%    |      | 41.6%          | 0.3%                    | 26.1% | 0%    |      | 26.5%          | -                      |
| PHF                    | 0.66                    | 0.87  | 0.38  |      | 0.88           | 0.83                      | 0.38 | 0     |      | 0.83           | 0.5                     | 0.67  | 0     |      | 0.67           | 0.86                   |
| Heavy                  | 2                       | 14    | 0     |      | 16             | 11                        | 0    | 0     |      | 11             | 0                       | 2     | 0     |      | 2              | 29                     |
| Heavy %                | 3.3%                    | 10.1% | 0%    |      | 7.9%           | 4.2%                      | 0%   | 0%    |      | 4.2%           | 0%                      | 1.2%  | 0%    |      | 1.2%           | 4.6%                   |
| Lights                 | 59                      | 125   | 3     |      | 187            | 249                       | 3    | 0     |      | 252            | 2                       | 160   | 0     |      | 162            | 601                    |
| Lights %               | 96.7%                   | 89.9% | 100%  |      | 92.1%          | 95.4%                     | 100% | 0%    |      | 95.5%          | 100%                    | 96.4% | 0%    |      | 96.4%          | 94.6%                  |
| Single-Unit Trucks     | 0                       | 6     | 0     |      | 6              | 7                         | 0    | 0     |      | 7              | 0                       | 1     | 0     |      | 1              | 14                     |
| Single-Unit Trucks %   | 0%                      | 4.3%  | 0%    |      | 3%             | 2.7%                      | 0%   | 0%    |      | 2.7%           | 0%                      | 0.6%  | 0%    |      | 0.6%           | 2.2%                   |
| Buses                  | 2                       | 8     | 0     |      | 10             | 4                         | 0    | 0     |      | 4              | 0                       | 1     | 0     |      | 1              | 15                     |
| Buses %                | 3.3%                    | 5.8%  | 0%    |      | 4.9%           | 1.5%                      | 0%   | 0%    |      | 1.5%           | 0%                      | 0.6%  | 0%    |      | 0.6%           | 2.4%                   |
| Articulated Trucks     | 0                       | 0     | 0     |      | 0              | 0                         | 0    | 0     |      | 0              | 0                       | 0     | 0     |      | 0              | 0                      |
| Articulated Trucks %   | 0%                      | 0%    | 0%    |      | 0%             | 0%                        | 0%   | 0%    |      | 0%             | 0%                      | 0%    | 0%    |      | 0%             | 0%                     |
| Bicycles on Road       | 0                       | 0     | 0     |      | 0              | 1                         | 0    | 0     |      | 1              | 0                       | 4     | 0     |      | 4              | 5                      |
| Bicycles on Road %     | 0%                      | 0%    | 0%    |      | 0%             | 0.4%                      | 0%   | 0%    |      | 0.4%           | 0%                      | 2.4%  | 0%    |      | 2.4%           | 0.8%                   |
| Pedestrians            | -                       | -     | -     | 0    | -              | -                         | -    | -     | 0    | -              | -                       | -     | -     | 1    | -              | -                      |
| Pedestrians%           | -                       | -     | -     | 0%   | -              | -                         | -    | -     | 0%   | -              | -                       | -     | -     | 100% | -              | -                      |
| Bicycles on Crosswalk  | -                       | -     | -     | 0    | -              | -                         | -    | -     | 0    | -              | -                       | -     | -     | 0    | -              | -                      |
| Bicycles on Crosswalk% | -                       | -     | -     | 0%   | -              | -                         | -    | -     | 0%   | -              | -                       | -     | -     | 0%   | -              | -                      |



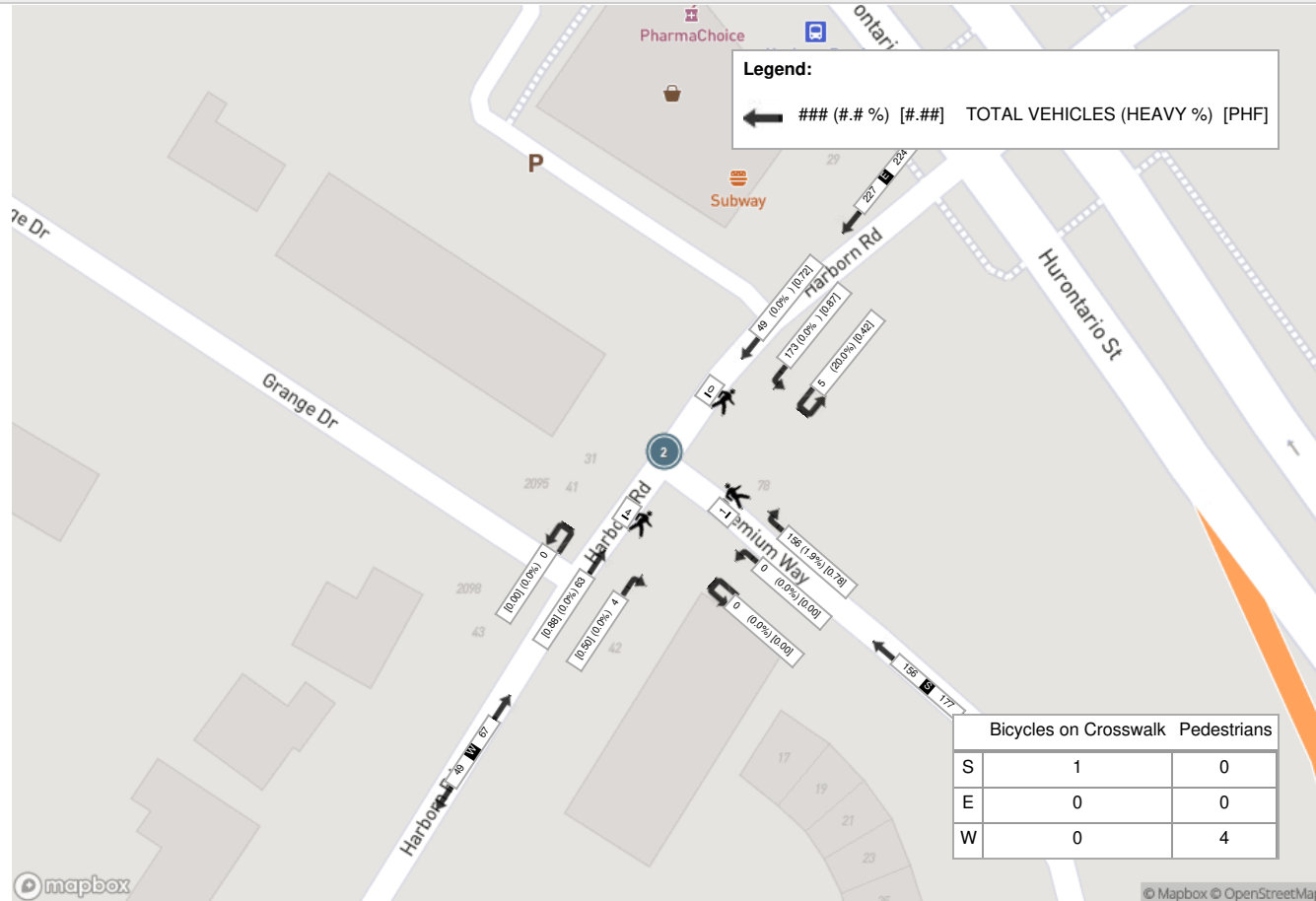
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (11 °C)

| Start Time             | Westbound<br>HARBORN RD |       |       |      |                | Northbound<br>PREMIUM WAY |      |       |      |                | Eastbound<br>HARBORN RD |      |       |      |                | Int. Total<br>(15 min) |
|------------------------|-------------------------|-------|-------|------|----------------|---------------------------|------|-------|------|----------------|-------------------------|------|-------|------|----------------|------------------------|
|                        | Thru                    | Left  | UTurn | Peds | Approach Total | Right                     | Left | UTurn | Peds | Approach Total | Right                   | Thru | UTurn | Peds | Approach Total |                        |
| 2025-05-28 17:00:00    | 12                      | 36    | 0     | 0    | 48             | 35                        | 0    | 0     | 0    | 35             | 1                       | 16   | 0     | 1    | 17             | 100                    |
| 2025-05-28 17:15:00    | 9                       | 50    | 1     | 0    | 60             | 50                        | 0    | 0     | 0    | 50             | 2                       | 14   | 0     | 2    | 16             | 126                    |
| 2025-05-28 17:30:00    | 17                      | 46    | 3     | 0    | 66             | 38                        | 0    | 0     | 0    | 38             | 1                       | 18   | 0     | 1    | 19             | 123                    |
| 2025-05-28 17:45:00    | 11                      | 41    | 1     | 0    | 53             | 33                        | 0    | 0     | 1    | 33             | 0                       | 15   | 0     | 0    | 15             | 101                    |
| Grand Total            | 49                      | 173   | 5     | 0    | 227            | 156                       | 0    | 0     | 1    | 156            | 4                       | 63   | 0     | 4    | 67             | 450                    |
| Approach%              | 21.6%                   | 76.2% | 2.2%  |      | -              | 100%                      | 0%   | 0%    |      | -              | 6%                      | 94%  | 0%    |      | -              | -                      |
| Totals %               | 10.9%                   | 38.4% | 1.1%  |      | 50.4%          | 34.7%                     | 0%   | 0%    |      | 34.7%          | 0.9%                    | 14%  | 0%    |      | 14.9%          | -                      |
| PHF                    | 0.72                    | 0.87  | 0.42  |      | 0.86           | 0.78                      | 0    | 0     |      | 0.78           | 0.5                     | 0.88 | 0     |      | 0.88           | 0.89                   |
| Heavy                  | 0                       | 0     | 1     |      | 1              | 3                         | 0    | 0     |      | 3              | 0                       | 0    | 0     |      | 0              | 4                      |
| Heavy %                | 0%                      | 0%    | 20%   |      | 0.4%           | 1.9%                      | 0%   | 0%    |      | 1.9%           | 0%                      | 0%   | 0%    |      | 0%             | 0.9%                   |
| Lights                 | 48                      | 173   | 4     |      | 225            | 152                       | 0    | 0     |      | 152            | 4                       | 63   | 0     |      | 67             | 444                    |
| Lights %               | 98%                     | 100%  | 80%   |      | 99.1%          | 97.4%                     | 0%   | 0%    |      | 97.4%          | 100%                    | 100% | 0%    |      | 100%           | 98.7%                  |
| Single-Unit Trucks     | 0                       | 0     | 0     |      | 0              | 2                         | 0    | 0     |      | 2              | 0                       | 0    | 0     |      | 0              | 2                      |
| Single-Unit Trucks %   | 0%                      | 0%    | 0%    |      | 0%             | 1.3%                      | 0%   | 0%    |      | 1.3%           | 0%                      | 0%   | 0%    |      | 0%             | 0.4%                   |
| Buses                  | 0                       | 0     | 1     |      | 1              | 1                         | 0    | 0     |      | 1              | 0                       | 0    | 0     |      | 0              | 2                      |
| Buses %                | 0%                      | 0%    | 20%   |      | 0.4%           | 0.6%                      | 0%   | 0%    |      | 0.6%           | 0%                      | 0%   | 0%    |      | 0%             | 0.4%                   |
| Articulated Trucks     | 0                       | 0     | 0     |      | 0              | 0                         | 0    | 0     |      | 0              | 0                       | 0    | 0     |      | 0              | 0                      |
| Articulated Trucks %   | 0%                      | 0%    | 0%    |      | 0%             | 0%                        | 0%   | 0%    |      | 0%             | 0%                      | 0%   | 0%    |      | 0%             | 0%                     |
| Bicycles on Road       | 1                       | 0     | 0     |      | 1              | 1                         | 0    | 0     |      | 1              | 0                       | 0    | 0     |      | 0              | 2                      |
| Bicycles on Road %     | 2%                      | 0%    | 0%    |      | 0.4%           | 0.6%                      | 0%   | 0%    |      | 0.6%           | 0%                      | 0%   | 0%    |      | 0%             | 0.4%                   |
| Pedestrians            | -                       | -     | -     | 0    | -              | -                         | -    | -     | 0    | -              | -                       | -    | -     | 4    | -              | -                      |
| Pedestrians%           | -                       | -     | -     | 0%   | -              | -                         | -    | -     | 0%   | -              | -                       | -    | -     | 80%  | -              | -                      |
| Bicycles on Crosswalk  | -                       | -     | -     | 0    | -              | -                         | -    | -     | 1    | -              | -                       | -    | -     | 0    | -              | -                      |
| Bicycles on Crosswalk% | -                       | -     | -     | 0%   | -              | -                         | -    | -     | 20%  | -              | -                       | -    | -     | 0%   | -              | -                      |

**Peak Hour: 08:00 AM - 09:00 AM    Weather: Scattered Clouds (12 °C)**



**Peak Hour: 05:00 PM - 06:00 PM    Weather: Overcast Clouds (11 °C)**





Turning Movement Count (1 . HARBORN ROAD & GRANGE DRIVE)

| Start Time          | Southbound<br>GRANGE DR |             |              |            |                | Westbound<br>HARBORN RD |             |              |            |                | Eastbound<br>HARBORN RD |             |              |            |                | Int. Total<br>(15 min) | Int. Total<br>(1 hr) |
|---------------------|-------------------------|-------------|--------------|------------|----------------|-------------------------|-------------|--------------|------------|----------------|-------------------------|-------------|--------------|------------|----------------|------------------------|----------------------|
|                     | Right<br>N:W            | Left<br>N:E | UTurn<br>N:N | Peds<br>N: | Approach Total | Right<br>E:N            | Thru<br>E:W | UTurn<br>E:E | Peds<br>E: | Approach Total | Thru<br>W:E             | Left<br>W:N | UTurn<br>W:W | Peds<br>W: | Approach Total |                        |                      |
| 2025-05-28 07:00:00 | 0                       | 1           | 0            | 1          | 1              | 0                       | 1           | 0            | 0          | 1              | 11                      | 0           | 0            | 0          | 11             | 13                     |                      |
| 2025-05-28 07:15:00 | 0                       | 1           | 0            | 0          | 1              | 0                       | 5           | 0            | 0          | 5              | 15                      | 0           | 0            | 0          | 15             | 21                     |                      |
| 2025-05-28 07:30:00 | 0                       | 0           | 0            | 4          | 0              | 0                       | 3           | 0            | 3          | 3              | 11                      | 0           | 0            | 0          | 11             | 14                     |                      |
| 2025-05-28 07:45:00 | 0                       | 0           | 0            | 4          | 0              | 2                       | 7           | 0            | 0          | 9              | 18                      | 0           | 0            | 0          | 18             | 27                     | 75                   |
| 2025-05-28 08:00:00 | 0                       | 2           | 0            | 0          | 2              | 0                       | 12          | 0            | 0          | 12             | 38                      | 0           | 0            | 2          | 38             | 52                     | 114                  |
| 2025-05-28 08:15:00 | 1                       | 1           | 0            | 1          | 2              | 0                       | 9           | 0            | 1          | 9              | 61                      | 0           | 0            | 1          | 61             | 72                     | 165                  |
| 2025-05-28 08:30:00 | 0                       | 0           | 0            | 3          | 0              | 1                       | 20          | 0            | 0          | 21             | 35                      | 0           | 0            | 1          | 35             | 56                     | 207                  |
| 2025-05-28 08:45:00 | 0                       | 2           | 0            | 8          | 2              | 0                       | 22          | 0            | 0          | 22             | 27                      | 1           | 0            | 0          | 28             | 52                     | 232                  |
| 2025-05-28 09:00:00 | 0                       | 3           | 0            | 1          | 3              | 2                       | 11          | 0            | 1          | 13             | 14                      | 0           | 0            | 0          | 14             | 30                     | 210                  |
| 2025-05-28 09:15:00 | 0                       | 2           | 0            | 2          | 2              | 2                       | 15          | 1            | 0          | 18             | 14                      | 0           | 0            | 0          | 14             | 34                     | 172                  |
| 2025-05-28 09:30:00 | 1                       | 2           | 0            | 2          | 3              | 0                       | 8           | 0            | 1          | 8              | 20                      | 0           | 0            | 0          | 20             | 31                     | 147                  |
| 2025-05-28 09:45:00 | 0                       | 1           | 0            | 2          | 1              | 0                       | 11          | 0            | 0          | 11             | 9                       | 0           | 0            | 0          | 9              | 21                     | 116                  |
| ***BREAK***         |                         |             |              |            |                |                         |             |              |            |                |                         |             |              |            |                |                        |                      |
| 2025-05-28 16:00:00 | 0                       | 2           | 0            | 2          | 2              | 4                       | 13          | 0            | 0          | 17             | 11                      | 0           | 0            | 0          | 11             | 30                     |                      |
| 2025-05-28 16:15:00 | 0                       | 2           | 0            | 0          | 2              | 0                       | 11          | 0            | 1          | 11             | 15                      | 0           | 0            | 0          | 15             | 28                     |                      |
| 2025-05-28 16:30:00 | 2                       | 1           | 0            | 6          | 3              | 4                       | 12          | 0            | 1          | 16             | 22                      | 2           | 0            | 2          | 24             | 43                     |                      |
| 2025-05-28 16:45:00 | 0                       | 1           | 0            | 0          | 1              | 1                       | 15          | 0            | 0          | 16             | 13                      | 0           | 0            | 0          | 13             | 30                     | 131                  |
| 2025-05-28 17:00:00 | 2                       | 0           | 0            | 5          | 2              | 0                       | 12          | 0            | 0          | 12             | 18                      | 0           | 0            | 4          | 18             | 32                     | 133                  |
| 2025-05-28 17:15:00 | 1                       | 2           | 0            | 3          | 3              | 0                       | 9           | 0            | 0          | 9              | 14                      | 0           | 0            | 1          | 14             | 26                     | 131                  |
| 2025-05-28 17:30:00 | 0                       | 2           | 0            | 0          | 2              | 3                       | 14          | 0            | 1          | 17             | 16                      | 2           | 0            | 0          | 18             | 37                     | 125                  |
| 2025-05-28 17:45:00 | 0                       | 2           | 0            | 5          | 2              | 0                       | 11          | 0            | 0          | 11             | 13                      | 0           | 0            | 3          | 13             | 26                     | 121                  |
| 2025-05-28 18:00:00 | 0                       | 1           | 0            | 4          | 1              | 1                       | 8           | 0            | 1          | 9              | 17                      | 0           | 0            | 0          | 17             | 27                     | 116                  |
| 2025-05-28 18:15:00 | 0                       | 1           | 0            | 1          | 1              | 2                       | 9           | 0            | 0          | 11             | 8                       | 0           | 0            | 0          | 8              | 20                     | 110                  |
| 2025-05-28 18:30:00 | 0                       | 0           | 0            | 0          | 0              | 5                       | 8           | 0            | 0          | 13             | 5                       | 0           | 0            | 0          | 5              | 18                     | 91                   |
| 2025-05-28 18:45:00 | 0                       | 1           | 0            | 4          | 1              | 2                       | 8           | 0            | 0          | 10             | 6                       | 0           | 0            | 3          | 6              | 17                     | 82                   |
| Grand Total         | 7                       | 30          | 0            | 58         | 37             | 29                      | 254         | 1            | 10         | 284            | 431                     | 5           | 0            | 17         | 436            | 757                    | -                    |
| Approach%           | 18.9%                   | 81.1%       | 0%           | -          | -              | 10.2%                   | 89.4%       | 0.4%         | -          | -              | 98.9%                   | 1.1%        | 0%           | -          | -              | -                      | -                    |
| Totals %            | 0.9%                    | 4%          | 0%           | -          | 4.9%           | 3.8%                    | 33.6%       | 0.1%         | -          | 37.5%          | 56.9%                   | 0.7%        | 0%           | -          | 57.6%          | -                      | -                    |
| Heavy               | 0                       | 0           | 0            | -          | -              | 0                       | 5           | 0            | -          | -              | 5                       | 0           | 0            | -          | -              | -                      | -                    |
| Heavy %             | 0%                      | 0%          | 0%           | -          | -              | 0%                      | 2%          | 0%           | -          | -              | 1.2%                    | 0%          | 0%           | -          | -              | -                      | -                    |
| Bicycles            | -                       | -           | -            | -          | -              | -                       | -           | -            | -          | -              | -                       | -           | -            | -          | -              | -                      | -                    |
| Bicycle %           | -                       | -           | -            | -          | -              | -                       | -           | -            | -          | -              | -                       | -           | -            | -          | -              | -                      | -                    |



Peak Hour: 08:00 AM - 09:00 AM Weather: Scattered Clouds (12 °C)

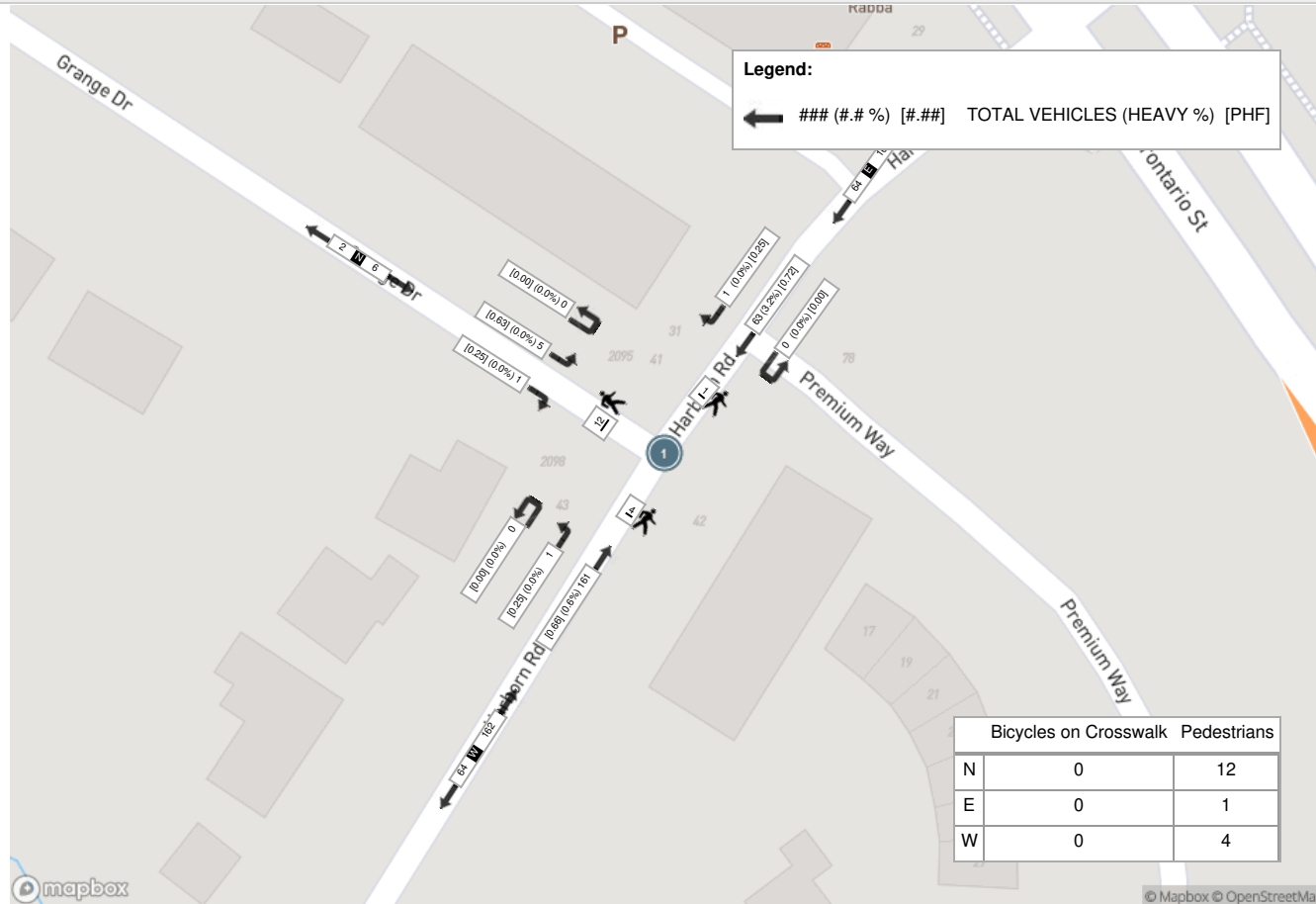
| Start Time             | Southbound<br>GRANGE DR |       |       |       |                | Westbound<br>HARBORN RD |       |       |      |                | Eastbound<br>HARBORN RD |      |       |       |                | Int. Total<br>(15 min) |
|------------------------|-------------------------|-------|-------|-------|----------------|-------------------------|-------|-------|------|----------------|-------------------------|------|-------|-------|----------------|------------------------|
|                        | Right                   | Left  | UTurn | Peds  | Approach Total | Right                   | Thru  | UTurn | Peds | Approach Total | Thru                    | Left | UTurn | Peds  | Approach Total |                        |
| 2025-05-28 08:00:00    | 0                       | 2     | 0     | 0     | 2              | 0                       | 12    | 0     | 0    | 12             | 38                      | 0    | 0     | 2     | 38             | 52                     |
| 2025-05-28 08:15:00    | 1                       | 1     | 0     | 1     | 2              | 0                       | 9     | 0     | 1    | 9              | 61                      | 0    | 0     | 1     | 61             | 72                     |
| 2025-05-28 08:30:00    | 0                       | 0     | 0     | 3     | 0              | 1                       | 20    | 0     | 0    | 21             | 35                      | 0    | 0     | 1     | 35             | 56                     |
| 2025-05-28 08:45:00    | 0                       | 2     | 0     | 8     | 2              | 0                       | 22    | 0     | 0    | 22             | 27                      | 1    | 0     | 0     | 28             | 52                     |
| Grand Total            | 1                       | 5     | 0     | 12    | 6              | 1                       | 63    | 0     | 1    | 64             | 161                     | 1    | 0     | 4     | 162            | 232                    |
| Approach%              | 16.7%                   | 83.3% | 0%    |       | -              | 1.6%                    | 98.4% | 0%    |      | -              | 99.4%                   | 0.6% | 0%    |       | -              | -                      |
| Totals %               | 0.4%                    | 2.2%  | 0%    |       | 2.6%           | 0.4%                    | 27.2% | 0%    |      | 27.6%          | 69.4%                   | 0.4% | 0%    |       | 69.8%          | -                      |
| PHF                    | 0.25                    | 0.63  | 0     |       | 0.75           | 0.25                    | 0.72  | 0     |      | 0.73           | 0.66                    | 0.25 | 0     |       | 0.66           | 0.81                   |
| Heavy                  | 0                       | 0     | 0     |       | 0              | 0                       | 2     | 0     |      | 2              | 1                       | 0    | 0     |       | 1              | 3                      |
| Heavy %                | 0%                      | 0%    | 0%    |       | 0%             | 0%                      | 3.2%  | 0%    |      | 3.1%           | 0.6%                    | 0%   | 0%    |       | 0.6%           | 1.3%                   |
| Lights                 | 1                       | 5     | 0     |       | 6              | 1                       | 60    | 0     |      | 61             | 156                     | 1    | 0     |       | 157            | 224                    |
| Lights %               | 100%                    | 100%  | 0%    |       | 100%           | 100%                    | 95.2% | 0%    |      | 95.3%          | 96.9%                   | 100% | 0%    |       | 96.9%          | 96.6%                  |
| Single-Unit Trucks     | 0                       | 0     | 0     |       | 0              | 0                       | 0     | 0     |      | 0              | 0                       | 0    | 0     |       | 0              | 0                      |
| Single-Unit Trucks %   | 0%                      | 0%    | 0%    |       | 0%             | 0%                      | 0%    | 0%    |      | 0%             | 0%                      | 0%   | 0%    |       | 0%             | 0%                     |
| Buses                  | 0                       | 0     | 0     |       | 0              | 0                       | 2     | 0     |      | 2              | 1                       | 0    | 0     |       | 1              | 3                      |
| Buses %                | 0%                      | 0%    | 0%    |       | 0%             | 0%                      | 3.2%  | 0%    |      | 3.1%           | 0.6%                    | 0%   | 0%    |       | 0.6%           | 1.3%                   |
| Bicycles on Road       | 0                       | 0     | 0     |       | 0              | 0                       | 1     | 0     |      | 1              | 4                       | 0    | 0     |       | 4              | 5                      |
| Bicycles on Road %     | 0%                      | 0%    | 0%    |       | 0%             | 0%                      | 1.6%  | 0%    |      | 1.6%           | 2.5%                    | 0%   | 0%    |       | 2.5%           | 2.2%                   |
| Pedestrians            | -                       | -     | -     | 12    | -              | -                       | -     | -     | 1    | -              | -                       | -    | -     | 4     | -              | -                      |
| Pedestrians%           | -                       | -     | -     | 70.6% | -              | -                       | -     | -     | 5.9% | -              | -                       | -    | -     | 23.5% | -              | -                      |
| Bicycles on Crosswalk  | -                       | -     | -     | 0     | -              | -                       | -     | -     | 0    | -              | -                       | -    | -     | 0     | -              | -                      |
| Bicycles on Crosswalk% | -                       | -     | -     | 0%    | -              | -                       | -     | -     | 0%   | -              | -                       | -    | -     | 0%    | -              | -                      |



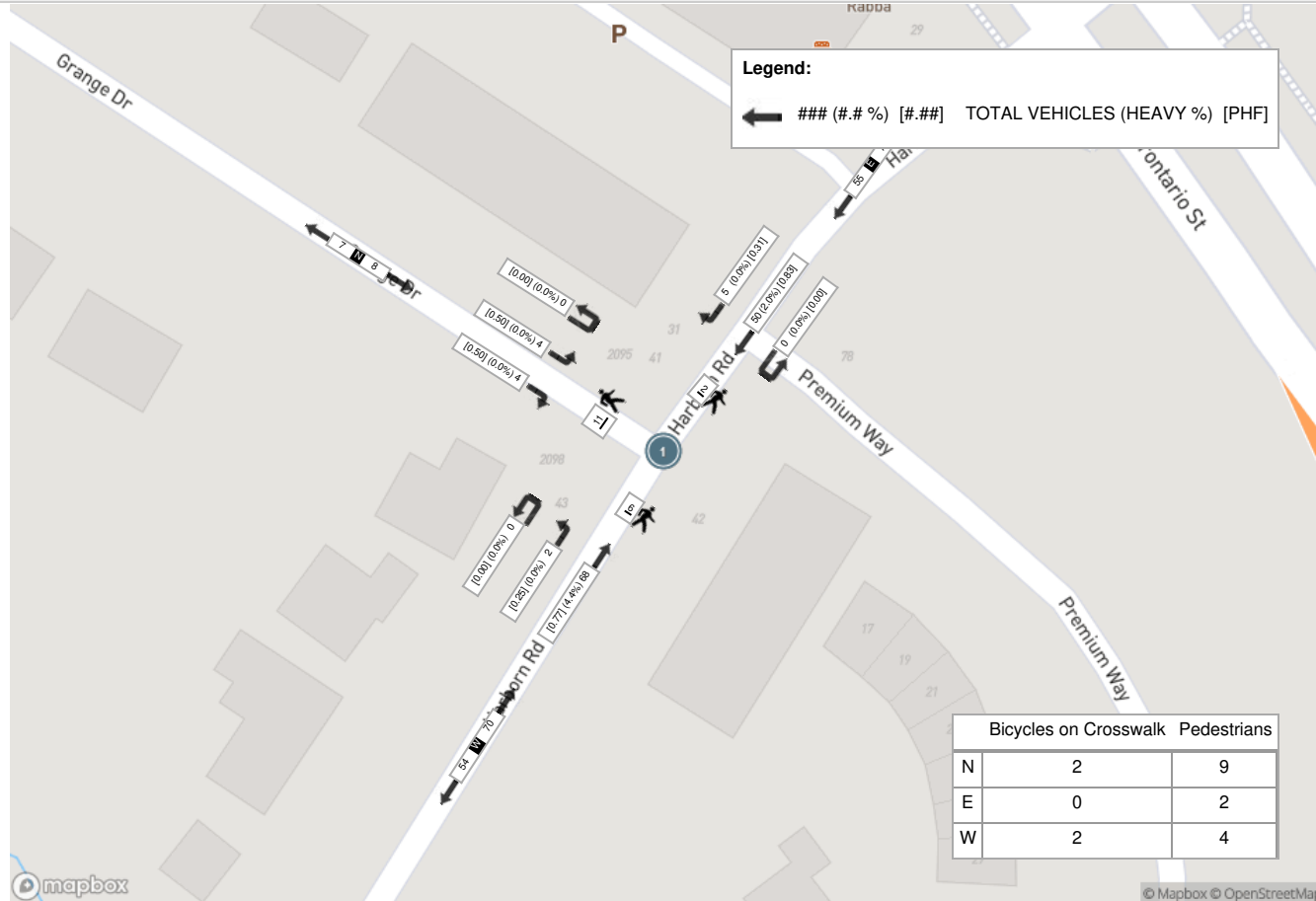
Peak Hour: 04:15 PM - 05:15 PM Weather: Overcast Clouds (11 °C)

| Start Time             | Southbound<br>GRANGE DR |      |       |       |                | Westbound<br>HARBORN RD |       |       |       |                | Eastbound<br>HARBORN RD |      |       |       |                | Int. Total<br>(15 min) |
|------------------------|-------------------------|------|-------|-------|----------------|-------------------------|-------|-------|-------|----------------|-------------------------|------|-------|-------|----------------|------------------------|
|                        | Right                   | Left | UTurn | Peds  | Approach Total | Right                   | Thru  | UTurn | Peds  | Approach Total | Thru                    | Left | UTurn | Peds  | Approach Total |                        |
| 2025-05-28 16:15:00    | 0                       | 2    | 0     | 0     | 2              | 0                       | 11    | 0     | 1     | 11             | 15                      | 0    | 0     | 0     | 15             | 28                     |
| 2025-05-28 16:30:00    | 2                       | 1    | 0     | 6     | 3              | 4                       | 12    | 0     | 1     | 16             | 22                      | 2    | 0     | 2     | 24             | 43                     |
| 2025-05-28 16:45:00    | 0                       | 1    | 0     | 0     | 1              | 1                       | 15    | 0     | 0     | 16             | 13                      | 0    | 0     | 0     | 13             | 30                     |
| 2025-05-28 17:00:00    | 2                       | 0    | 0     | 5     | 2              | 0                       | 12    | 0     | 0     | 12             | 18                      | 0    | 0     | 4     | 18             | 32                     |
| Grand Total            | 4                       | 4    | 0     | 11    | 8              | 5                       | 50    | 0     | 2     | 55             | 68                      | 2    | 0     | 6     | 70             | 133                    |
| Approach%              | 50%                     | 50%  | 0%    |       | -              | 9.1%                    | 90.9% | 0%    |       | -              | 97.1%                   | 2.9% | 0%    |       | -              | -                      |
| Totals %               | 3%                      | 3%   | 0%    |       | 6%             | 3.8%                    | 37.6% | 0%    |       | 41.4%          | 51.1%                   | 1.5% | 0%    |       | 52.6%          | -                      |
| PHF                    | 0.5                     | 0.5  | 0     |       | 0.67           | 0.31                    | 0.83  | 0     |       | 0.86           | 0.77                    | 0.25 | 0     |       | 0.73           | 0.77                   |
| Heavy                  | 0                       | 0    | 0     |       | 0              | 0                       | 1     | 0     |       | 1              | 3                       | 0    | 0     |       | 3              | 4                      |
| Heavy %                | 0%                      | 0%   | 0%    |       | 0%             | 0%                      | 2%    | 0%    |       | 1.8%           | 4.4%                    | 0%   | 0%    |       | 4.3%           | 3%                     |
| Lights                 | 2                       | 4    | 0     |       | 6              | 3                       | 49    | 0     |       | 52             | 64                      | 2    | 0     |       | 66             | 124                    |
| Lights %               | 50%                     | 100% | 0%    |       | 75%            | 60%                     | 98%   | 0%    |       | 94.5%          | 94.1%                   | 100% | 0%    |       | 94.3%          | 93.2%                  |
| Single-Unit Trucks     | 0                       | 0    | 0     |       | 0              | 0                       | 0     | 0     |       | 0              | 2                       | 0    | 0     |       | 2              | 2                      |
| Single-Unit Trucks %   | 0%                      | 0%   | 0%    |       | 0%             | 0%                      | 0%    | 0%    |       | 0%             | 2.9%                    | 0%   | 0%    |       | 2.9%           | 1.5%                   |
| Buses                  | 0                       | 0    | 0     |       | 0              | 0                       | 1     | 0     |       | 1              | 1                       | 0    | 0     |       | 1              | 2                      |
| Buses %                | 0%                      | 0%   | 0%    |       | 0%             | 0%                      | 2%    | 0%    |       | 1.8%           | 1.5%                    | 0%   | 0%    |       | 1.4%           | 1.5%                   |
| Bicycles on Road       | 2                       | 0    | 0     |       | 2              | 2                       | 0     | 0     |       | 2              | 1                       | 0    | 0     |       | 1              | 5                      |
| Bicycles on Road %     | 50%                     | 0%   | 0%    |       | 25%            | 40%                     | 0%    | 0%    |       | 3.6%           | 1.5%                    | 0%   | 0%    |       | 1.4%           | 3.8%                   |
| Pedestrians            | -                       | -    | -     | 9     | -              | -                       | -     | -     | 2     | -              | -                       | -    | -     | 4     | -              | -                      |
| Pedestrians%           | -                       | -    | -     | 47.4% |                | -                       | -     | -     | 10.5% |                | -                       | -    | -     | 21.1% |                | -                      |
| Bicycles on Crosswalk  | -                       | -    | -     | 2     | -              | -                       | -     | -     | 0     | -              | -                       | -    | -     | 2     | -              | -                      |
| Bicycles on Crosswalk% | -                       | -    | -     | 10.5% |                | -                       | -     | -     | 0%    |                | -                       | -    | -     | 10.5% |                | -                      |

**Peak Hour: 08:00 AM - 09:00 AM    Weather: Scattered Clouds (12 °C)**



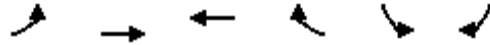
**Peak Hour: 04:15 PM - 05:15 PM    Weather: Overcast Clouds (11 °C)**



## **Appendix D – Existing Traffic Analysis – Capacity Analysis Results**

Lanes, Volumes, Timings  
1: Harborn Road & Grange Drive

Existing AM  
05/07/2026

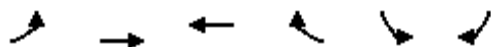


| Lane Group                        | EBL          | EBT                                                                               | WBT                                                                               | WBR                    | SBL                                                                               | SBR   |
|-----------------------------------|--------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|-------|
| Lane Configurations               |              |  |  |                        |  |       |
| Traffic Volume (vph)              | 1            | 161                                                                               | 63                                                                                | 1                      | 5                                                                                 | 1     |
| Future Volume (vph)               | 1            | 161                                                                               | 63                                                                                | 1                      | 5                                                                                 | 1     |
| Ideal Flow (vphpl)                | 1900         | 1900                                                                              | 1900                                                                              | 1900                   | 1900                                                                              | 1900  |
| Lane Util. Factor                 | 1.00         | 1.00                                                                              | 1.00                                                                              | 1.00                   | 1.00                                                                              | 1.00  |
| Ped Bike Factor                   |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Frt                               |              |                                                                                   | 0.998                                                                             |                        | 0.983                                                                             |       |
| Flt Protected                     |              |                                                                                   |                                                                                   |                        | 0.958                                                                             |       |
| Satd. Flow (prot)                 | 0            | 1921                                                                              | 1917                                                                              | 0                      | 1540                                                                              | 0     |
| Flt Permitted                     |              |                                                                                   |                                                                                   |                        | 0.958                                                                             |       |
| Satd. Flow (perm)                 | 0            | 1921                                                                              | 1917                                                                              | 0                      | 1540                                                                              | 0     |
| Link Speed (k/h)                  |              | 40                                                                                | 40                                                                                |                        | 40                                                                                |       |
| Link Distance (m)                 |              | 45.7                                                                              | 28.9                                                                              |                        | 198.4                                                                             |       |
| Travel Time (s)                   |              | 4.1                                                                               | 2.6                                                                               |                        | 17.9                                                                              |       |
| Confl. Peds. (#/hr)               | 3            |                                                                                   |                                                                                   | 3                      | 5                                                                                 | 34    |
| Peak Hour Factor                  | 0.72         | 0.72                                                                              | 0.72                                                                              | 0.72                   | 0.72                                                                              | 0.72  |
| Heavy Vehicles (%)                | 0%           | 0%                                                                                | 0%                                                                                | 0%                     | 20%                                                                               | 0%    |
| Adj. Flow (vph)                   | 1            | 224                                                                               | 88                                                                                | 1                      | 7                                                                                 | 1     |
| Shared Lane Traffic (%)           |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Lane Group Flow (vph)             | 0            | 225                                                                               | 89                                                                                | 0                      | 8                                                                                 | 0     |
| Enter Blocked Intersection        | No           | No                                                                                | No                                                                                | No                     | No                                                                                | No    |
| Lane Alignment                    | Left         | Left                                                                              | Left                                                                              | Right                  | Left                                                                              | Right |
| Median Width(m)                   |              | 0.0                                                                               | 0.0                                                                               |                        | 3.7                                                                               |       |
| Link Offset(m)                    |              | 0.0                                                                               | 0.0                                                                               |                        | 0.0                                                                               |       |
| Crosswalk Width(m)                |              | 1.6                                                                               | 1.6                                                                               |                        | 1.6                                                                               |       |
| Two way Left Turn Lane            |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Headway Factor                    | 0.99         | 0.99                                                                              | 0.99                                                                              | 0.99                   | 0.99                                                                              | 0.99  |
| Turning Speed (k/h)               | 24           |                                                                                   |                                                                                   | 14                     | 24                                                                                | 14    |
| Sign Control                      |              | Free                                                                              | Free                                                                              |                        | Stop                                                                              |       |
| Intersection Summary              |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Area Type:                        | Other        |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Control Type:                     | Unsignalized |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Intersection Capacity Utilization | 26.0%        |                                                                                   |                                                                                   | ICU Level of Service A |                                                                                   |       |
| Analysis Period (min)             | 15           |                                                                                   |                                                                                   |                        |                                                                                   |       |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Harborn Road & Grange Drive

Existing AM  
05/07/2026



| Movement                          | EBL  | EBT                                                                               | WBT                                                                               | WBR                  | SBL                                                                               | SBR  |
|-----------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------|------|
| Lane Configurations               |      |  |  |                      |  |      |
| Traffic Volume (veh/h)            | 1    | 161                                                                               | 63                                                                                | 1                    | 5                                                                                 | 1    |
| Future Volume (Veh/h)             | 1    | 161                                                                               | 63                                                                                | 1                    | 5                                                                                 | 1    |
| Sign Control                      |      | Free                                                                              | Free                                                                              |                      | Stop                                                                              |      |
| Grade                             |      | 0%                                                                                | 0%                                                                                |                      | 0%                                                                                |      |
| Peak Hour Factor                  | 0.72 | 0.72                                                                              | 0.72                                                                              | 0.72                 | 0.72                                                                              | 0.72 |
| Hourly flow rate (vph)            | 1    | 224                                                                               | 88                                                                                | 1                    | 7                                                                                 | 1    |
| Pedestrians                       |      | 34                                                                                | 5                                                                                 |                      | 3                                                                                 |      |
| Lane Width (m)                    |      | 3.7                                                                               | 3.7                                                                               |                      | 3.7                                                                               |      |
| Walking Speed (m/s)               |      | 1.1                                                                               | 1.1                                                                               |                      | 1.1                                                                               |      |
| Percent Blockage                  |      | 3                                                                                 | 0                                                                                 |                      | 0                                                                                 |      |
| Right turn flare (veh)            |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Median type                       |      | None                                                                              | None                                                                              |                      |                                                                                   |      |
| Median storage veh                |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Upstream signal (m)               |      |                                                                                   | 98                                                                                |                      |                                                                                   |      |
| pX, platoon unblocked             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC, conflicting volume            | 92   |                                                                                   |                                                                                   |                      | 322                                                                               | 126  |
| vC1, stage 1 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC2, stage 2 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vCu, unblocked vol                | 92   |                                                                                   |                                                                                   |                      | 322                                                                               | 126  |
| tC, single (s)                    | 4.1  |                                                                                   |                                                                                   |                      | 6.6                                                                               | 6.2  |
| tC, 2 stage (s)                   |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| tF (s)                            | 2.2  |                                                                                   |                                                                                   |                      | 3.7                                                                               | 3.3  |
| p0 queue free %                   | 100  |                                                                                   |                                                                                   |                      | 99                                                                                | 100  |
| cM capacity (veh/h)               | 1511 |                                                                                   |                                                                                   |                      | 630                                                                               | 897  |
| Direction, Lane #                 | EB 1 | WB 1                                                                              | SB 1                                                                              |                      |                                                                                   |      |
| Volume Total                      | 225  | 89                                                                                | 8                                                                                 |                      |                                                                                   |      |
| Volume Left                       | 1    | 0                                                                                 | 7                                                                                 |                      |                                                                                   |      |
| Volume Right                      | 0    | 1                                                                                 | 1                                                                                 |                      |                                                                                   |      |
| cSH                               | 1511 | 1700                                                                              | 655                                                                               |                      |                                                                                   |      |
| Volume to Capacity                | 0.00 | 0.05                                                                              | 0.01                                                                              |                      |                                                                                   |      |
| Queue Length 95th (m)             | 0.0  | 0.0                                                                               | 0.3                                                                               |                      |                                                                                   |      |
| Control Delay (s)                 | 0.0  | 0.0                                                                               | 10.6                                                                              |                      |                                                                                   |      |
| Lane LOS                          | A    |                                                                                   | B                                                                                 |                      |                                                                                   |      |
| Approach Delay (s)                | 0.0  | 0.0                                                                               | 10.6                                                                              |                      |                                                                                   |      |
| Approach LOS                      |      |                                                                                   | B                                                                                 |                      |                                                                                   |      |
| Intersection Summary              |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Average Delay                     |      |                                                                                   | 0.3                                                                               |                      |                                                                                   |      |
| Intersection Capacity Utilization |      |                                                                                   | 26.0%                                                                             | ICU Level of Service |                                                                                   | A    |
| Analysis Period (min)             |      |                                                                                   | 15                                                                                |                      |                                                                                   |      |

Lanes, Volumes, Timings  
3: Premium Way & Harborn Road

Existing AM  
05/07/2026

|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBR                                                                               |
| Lane Configurations               |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)              | 166                                                                               | 2                                                                                 | 139                                                                               | 61                                                                                | 3                                                                                 | 261                                                                               |
| Future Volume (vph)               | 166                                                                               | 2                                                                                 | 139                                                                               | 61                                                                                | 3                                                                                 | 261                                                                               |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Frt                               | 0.998                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.866                                                                             |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             | 0.999                                                                             |                                                                                   |
| Satd. Flow (prot)                 | 1916                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                              | 1365                                                                              | 0                                                                                 |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             | 0.999                                                                             |                                                                                   |
| Satd. Flow (perm)                 | 1916                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                              | 1365                                                                              | 0                                                                                 |
| Link Speed (k/h)                  | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   |
| Link Distance (m)                 | 28.9                                                                              |                                                                                   |                                                                                   | 68.7                                                                              | 218.6                                                                             |                                                                                   |
| Travel Time (s)                   | 2.6                                                                               |                                                                                   |                                                                                   | 6.2                                                                               | 19.7                                                                              |                                                                                   |
| Confl. Peds. (#/hr)               |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 21                                                                                | 29                                                                                |
| Peak Hour Factor                  | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Heavy Vehicles (%)                | 0%                                                                                | 6%                                                                                | 6%                                                                                | 0%                                                                                | 0%                                                                                | 22%                                                                               |
| Adj. Flow (vph)                   | 175                                                                               | 2                                                                                 | 146                                                                               | 64                                                                                | 3                                                                                 | 275                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 177                                                                               | 0                                                                                 | 0                                                                                 | 210                                                                               | 278                                                                               | 0                                                                                 |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Left                                                                              | Right                                                                             |
| Median Width(m)                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               | 3.7                                                                               |                                                                                   |
| Link Offset(m)                    | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   |
| Crosswalk Width(m)                | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               | 1.6                                                                               |                                                                                   |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                    | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              |
| Turning Speed (k/h)               |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 24                                                                                | 14                                                                                |
| Sign Control                      | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              | Stop                                                                              |                                                                                   |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 48.7%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Premium Way & Harborn Road

Existing AM  
05/07/2026

|                                   |      |       |                      |      |      |      |
|-----------------------------------|------|-------|----------------------|------|------|------|
|                                   | →    | ↘     | ↙                    | ←    | ↖    | ↗    |
| Movement                          | EBT  | EBR   | WBL                  | WBT  | NBL  | NBR  |
| Lane Configurations               | ↱    |       |                      | ↰    | ↘↙   |      |
| Traffic Volume (veh/h)            | 166  | 2     | 139                  | 61   | 3    | 261  |
| Future Volume (Veh/h)             | 166  | 2     | 139                  | 61   | 3    | 261  |
| Sign Control                      | Free |       |                      | Free | Stop |      |
| Grade                             | 0%   |       |                      | 0%   | 0%   |      |
| Peak Hour Factor                  | 0.95 | 0.95  | 0.95                 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph)            | 175  | 2     | 146                  | 64   | 3    | 275  |
| Pedestrians                       | 21   |       |                      | 29   |      |      |
| Lane Width (m)                    | 3.7  |       |                      | 3.7  |      |      |
| Walking Speed (m/s)               | 1.1  |       |                      | 1.1  |      |      |
| Percent Blockage                  | 2    |       |                      | 3    |      |      |
| Right turn flare (veh)            |      |       |                      |      |      |      |
| Median type                       | None |       |                      | None |      |      |
| Median storage veh                |      |       |                      |      |      |      |
| Upstream signal (m)               |      |       |                      | 69   |      |      |
| pX, platoon unblocked             |      |       |                      |      | 0.95 |      |
| vC, conflicting volume            |      |       | 177                  |      | 553  | 205  |
| vC1, stage 1 conf vol             |      |       |                      |      |      |      |
| vC2, stage 2 conf vol             |      |       |                      |      |      |      |
| vCu, unblocked vol                |      |       | 177                  |      | 504  | 205  |
| tC, single (s)                    |      |       | 4.2                  |      | 6.4  | 6.4  |
| tC, 2 stage (s)                   |      |       |                      |      |      |      |
| tF (s)                            |      |       | 2.3                  |      | 3.5  | 3.5  |
| p0 queue free %                   |      |       | 89                   |      | 99   | 64   |
| cM capacity (veh/h)               |      |       | 1375                 |      | 442  | 765  |
| Direction, Lane #                 | EB 1 | WB 1  | NB 1                 |      |      |      |
| Volume Total                      | 177  | 210   | 278                  |      |      |      |
| Volume Left                       | 0    | 146   | 3                    |      |      |      |
| Volume Right                      | 2    | 0     | 275                  |      |      |      |
| cSH                               | 1700 | 1375  | 759                  |      |      |      |
| Volume to Capacity                | 0.10 | 0.11  | 0.37                 |      |      |      |
| Queue Length 95th (m)             | 0.0  | 2.7   | 12.8                 |      |      |      |
| Control Delay (s)                 | 0.0  | 5.8   | 12.5                 |      |      |      |
| Lane LOS                          |      | A     | B                    |      |      |      |
| Approach Delay (s)                | 0.0  | 5.8   | 12.5                 |      |      |      |
| Approach LOS                      |      |       | B                    |      |      |      |
| Intersection Summary              |      |       |                      |      |      |      |
| Average Delay                     |      | 7.0   |                      |      |      |      |
| Intersection Capacity Utilization |      | 48.7% | ICU Level of Service | A    |      |      |
| Analysis Period (min)             |      | 15    |                      |      |      |      |

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 61                                                                                | 0                                                                                 | 377                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Future Volume (vph)        | 61                                                                                | 0                                                                                 | 377                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Storage Length (m)         | 16.5                                                                              |                                                                                   | 0.0                                                                               | 56.0                                                                              |                                                                                   | 0.0                                                                               | 62.0                                                                                |                                                                                     | 0.0                                                                                 | 43.5                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 21.5                                                                              |                                                                                   |                                                                                   | 63.0                                                                              |                                                                                   |                                                                                   | 28.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.93                                                                              | 0.92                                                                              |                                                                                   | 0.97                                                                              |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.83                                                                                |                                                                                     |                                                                                     | 0.88                                                                                |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1706                                                                              | 1458                                                                              | 0                                                                                 | 1615                                                                              | 1883                                                                              | 0                                                                                 | 1644                                                                                | 3411                                                                                | 1498                                                                                | 1883                                                                                | 3544                                                                                | 1585                                                                                |
| Flt Permitted              | 0.757                                                                             |                                                                                   |                                                                                   | 0.151                                                                             |                                                                                   |                                                                                   | 0.191                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1271                                                                              | 1458                                                                              | 0                                                                                 | 250                                                                               | 1883                                                                              | 0                                                                                 | 331                                                                                 | 3411                                                                                | 1239                                                                                | 1883                                                                                | 3544                                                                                | 1390                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 184                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 269                                                                                 |                                                                                     |                                                                                     | 61                                                                                  |
| Link Speed (k/h)           |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 50                                                                                  |                                                                                     |                                                                                     | 50                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 136.9                                                                             |                                                                                   |                                                                                     | 172.4                                                                               |                                                                                     |                                                                                     | 113.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 8.2                                                                               |                                                                                   |                                                                                     | 12.4                                                                                |                                                                                     |                                                                                     | 8.1                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 42                                                                                |                                                                                   | 45                                                                                | 45                                                                                |                                                                                   | 42                                                                                | 29                                                                                  |                                                                                     | 43                                                                                  | 43                                                                                  |                                                                                     | 29                                                                                  |
| Peak Hour Factor           | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Heavy Vehicles (%)         | 7%                                                                                | 3%                                                                                | 3%                                                                                | 13%                                                                               | 2%                                                                                | 3%                                                                                | 11%                                                                                 | 7%                                                                                  | 9%                                                                                  | 2%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 62                                                                                | 0                                                                                 | 385                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 286                                                                                 | 0                                                                                   | 1106                                                                                | 28                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 62                                                                                | 385                                                                               | 0                                                                                 | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 286                                                                                 | 0                                                                                   | 1106                                                                                | 28                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

# Lanes, Volumes, Timings

Existing AM

## 4: Hurontario Street & Harbourn Road/North Service Road

05/07/2026

|                         |  |       |     |       |       |     |       |       |       |       |       |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Turn Type               | Perm                                                                               | NA    |     | Perm  |       |     | pm+pt | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |                                                                                    | 4     |     |       | 4     |     | 1     | 2     |       |       | 2     |       |
| Permitted Phases        | 4                                                                                  |       |     | 4     |       |     | 2     |       | 2     | 2     |       | 2     |
| Detector Phase          | 4                                                                                  | 4     |     | 4     | 4     |     | 1     | 2     | 2     | 2     | 2     | 2     |
| Switch Phase            |                                                                                    |       |     |       |       |     |       |       |       |       |       |       |
| Minimum Initial (s)     | 8.0                                                                                | 8.0   |     | 8.0   | 8.0   |     | 5.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 40.0                                                                               | 40.0  |     | 40.0  | 40.0  |     | 9.5   | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Total Split (s)         | 63.0                                                                               | 63.0  |     | 63.0  | 63.0  |     | 15.0  | 82.0  | 82.0  | 82.0  | 82.0  | 82.0  |
| Total Split (%)         | 39.4%                                                                              | 39.4% |     | 39.4% | 39.4% |     | 9.4%  | 51.3% | 51.3% | 51.3% | 51.3% | 51.3% |
| Maximum Green (s)       | 54.0                                                                               | 54.0  |     | 54.0  | 54.0  |     | 12.0  | 74.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| Yellow Time (s)         | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 5.0                                                                                | 5.0   |     | 5.0   | 5.0   |     | 0.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 9.0                                                                                | 9.0   |     | 9.0   | 9.0   |     | 3.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Lead/Lag                |                                                                                    |       |     |       |       |     | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | None  | Max   | Max   | Max   | Max   | Max   |
| Walk Time (s)           | 9.0                                                                                | 9.0   |     | 9.0   | 9.0   |     |       | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Flash Dont Walk (s)     | 22.0                                                                               | 22.0  |     | 22.0  | 22.0  |     |       | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  |
| Pedestrian Calls (#/hr) | 0                                                                                  | 0     |     | 0     | 0     |     |       | 0     | 0     | 0     | 0     | 0     |
| Act Effect Green (s)    | 26.5                                                                               | 26.5  |     | 26.5  |       |     | 90.3  | 74.6  | 74.6  |       | 74.6  | 74.6  |
| Actuated g/C Ratio      | 0.20                                                                               | 0.20  |     | 0.20  |       |     | 0.68  | 0.57  | 0.57  |       | 0.57  | 0.57  |
| v/c Ratio               | 0.24                                                                               | 0.88  |     | 0.12  |       |     | 0.58  | 0.48  | 0.35  |       | 0.55  | 0.03  |
| Control Delay           | 45.2                                                                               | 46.8  |     | 46.7  |       |     | 15.5  | 19.9  | 4.0   |       | 21.2  | 0.1   |
| Queue Delay             | 0.0                                                                                | 0.0   |     | 0.0   |       |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay             | 45.2                                                                               | 46.8  |     | 46.7  |       |     | 15.5  | 19.9  | 4.0   |       | 21.2  | 0.1   |
| LOS                     | D                                                                                  | D     |     | D     |       |     | B     | B     | A     |       | C     | A     |
| Approach Delay          |                                                                                    | 46.6  |     |       | 46.7  |     |       | 16.1  |       |       | 20.7  |       |
| Approach LOS            |                                                                                    | D     |     |       | D     |     |       | B     |       |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 132

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 22.5

Intersection LOS: C

Intersection Capacity Utilization 85.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Hurontario Street & Harbourn Road/North Service Road





| Lane Group             | EBL  | EBT  | WBL  | NBL  | NBT   | NBR  | SBT   | SBR  |
|------------------------|------|------|------|------|-------|------|-------|------|
| Lane Group Flow (vph)  | 62   | 385  | 6    | 194  | 929   | 286  | 1106  | 28   |
| v/c Ratio              | 0.24 | 0.88 | 0.12 | 0.58 | 0.48  | 0.35 | 0.55  | 0.03 |
| Control Delay          | 45.2 | 46.8 | 46.7 | 15.5 | 19.9  | 4.0  | 21.2  | 0.1  |
| Queue Delay            | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| Total Delay            | 45.2 | 46.8 | 46.7 | 15.5 | 19.9  | 4.0  | 21.2  | 0.1  |
| Queue Length 50th (m)  | 13.7 | 54.3 | 1.3  | 15.2 | 74.3  | 1.9  | 93.5  | 0.0  |
| Queue Length 95th (m)  | 26.2 | 93.4 | 5.3  | 34.8 | 119.0 | 18.7 | 147.4 | 0.4  |
| Internal Link Dist (m) |      | 0.1  |      |      | 148.4 |      | 89.1  |      |
| Turn Bay Length (m)    | 16.5 |      | 56.0 | 62.0 |       |      |       |      |
| Base Capacity (vph)    | 524  | 709  | 103  | 350  | 1928  | 817  | 2003  | 812  |
| Starvation Cap Reductn | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Spillback Cap Reductn  | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Storage Cap Reductn    | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Reduced v/c Ratio      | 0.12 | 0.54 | 0.06 | 0.55 | 0.48  | 0.35 | 0.55  | 0.03 |
| Intersection Summary   |      |      |      |      |       |      |       |      |

# HCM Signalized Intersection Capacity Analysis

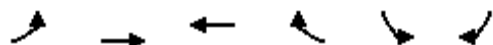
## 4: Hurontario Street & Harbourn Road/North Service Road

Existing AM  
05/07/2026

|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)              | 61                                                                                | 0                                                                                 | 377                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Future Volume (vph)               | 61                                                                                | 0                                                                                 | 377                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Total Lost time (s)               | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   | 3.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |
| Frpb, ped/bikes                   | 1.00                                                                              | 0.93                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.85                                                                                |                                                                                     | 1.00                                                                                | 0.89                                                                                |
| Flpb, ped/bikes                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.98                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Frt                               | 1.00                                                                              | 0.85                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.85                                                                                |                                                                                     | 1.00                                                                                | 0.85                                                                                |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              |                                                                                   |                                                                                   | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (prot)                 | 1614                                                                              | 1477                                                                              |                                                                                   | 1578                                                                              |                                                                                   |                                                                                   | 1642                                                                                | 3411                                                                                | 1279                                                                                |                                                                                     | 3544                                                                                | 1419                                                                                |
| Flt Permitted                     | 0.76                                                                              | 1.00                                                                              |                                                                                   | 0.15                                                                              |                                                                                   |                                                                                   | 0.19                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (perm)                 | 1287                                                                              | 1477                                                                              |                                                                                   | 251                                                                               |                                                                                   |                                                                                   | 330                                                                                 | 3411                                                                                | 1279                                                                                |                                                                                     | 3544                                                                                | 1419                                                                                |
| Peak-hour factor, PHF             | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Adj. Flow (vph)                   | 62                                                                                | 0                                                                                 | 385                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 286                                                                                 | 0                                                                                   | 1106                                                                                | 28                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 147                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 117                                                                                 | 0                                                                                   | 0                                                                                   | 12                                                                                  |
| Lane Group Flow (vph)             | 62                                                                                | 238                                                                               | 0                                                                                 | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 169                                                                                 | 0                                                                                   | 1106                                                                                | 16                                                                                  |
| Confl. Peds. (#/hr)               | 42                                                                                |                                                                                   | 45                                                                                | 45                                                                                |                                                                                   | 42                                                                                | 29                                                                                  |                                                                                     | 43                                                                                  | 43                                                                                  |                                                                                     | 29                                                                                  |
| Heavy Vehicles (%)                | 7%                                                                                | 3%                                                                                | 3%                                                                                | 13%                                                                               | 2%                                                                                | 3%                                                                                | 11%                                                                                 | 7%                                                                                  | 9%                                                                                  | 2%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              |                                                                                   |                                                                                   | pm+pt                                                                               | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases                  |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   |
| Actuated Green, G (s)             | 26.5                                                                              | 26.5                                                                              |                                                                                   | 26.5                                                                              |                                                                                   |                                                                                   | 85.3                                                                                | 74.6                                                                                | 74.6                                                                                |                                                                                     | 74.6                                                                                | 74.6                                                                                |
| Effective Green, g (s)            | 26.5                                                                              | 26.5                                                                              |                                                                                   | 26.5                                                                              |                                                                                   |                                                                                   | 85.3                                                                                | 74.6                                                                                | 74.6                                                                                |                                                                                     | 74.6                                                                                | 74.6                                                                                |
| Actuated g/C Ratio                | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.20                                                                              |                                                                                   |                                                                                   | 0.65                                                                                | 0.57                                                                                | 0.57                                                                                |                                                                                     | 0.57                                                                                | 0.57                                                                                |
| Clearance Time (s)                | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   | 3.0                                                                                 | 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)                | 258                                                                               | 296                                                                               |                                                                                   | 50                                                                                |                                                                                   |                                                                                   | 320                                                                                 | 1930                                                                                | 723                                                                                 |                                                                                     | 2005                                                                                | 803                                                                                 |
| v/s Ratio Prot                    |                                                                                   | c0.16                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | c0.05                                                                               | 0.27                                                                                |                                                                                     |                                                                                     | 0.31                                                                                |                                                                                     |
| v/s Ratio Perm                    | 0.05                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   |                                                                                   | c0.34                                                                               |                                                                                     | 0.13                                                                                |                                                                                     |                                                                                     | 0.01                                                                                |
| v/c Ratio                         | 0.24                                                                              | 0.80                                                                              |                                                                                   | 0.12                                                                              |                                                                                   |                                                                                   | 0.61                                                                                | 0.48                                                                                | 0.23                                                                                |                                                                                     | 0.55                                                                                | 0.02                                                                                |
| Uniform Delay, d1                 | 44.2                                                                              | 50.2                                                                              |                                                                                   | 43.1                                                                              |                                                                                   |                                                                                   | 11.8                                                                                | 17.1                                                                                | 14.3                                                                                |                                                                                     | 18.0                                                                                | 12.6                                                                                |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Incremental Delay, d2             | 0.5                                                                               | 14.6                                                                              |                                                                                   | 1.1                                                                               |                                                                                   |                                                                                   | 3.2                                                                                 | 0.9                                                                                 | 0.8                                                                                 |                                                                                     | 1.1                                                                                 | 0.0                                                                                 |
| Delay (s)                         | 44.7                                                                              | 64.7                                                                              |                                                                                   | 44.2                                                                              |                                                                                   |                                                                                   | 15.0                                                                                | 17.9                                                                                | 15.1                                                                                |                                                                                     | 19.1                                                                                | 12.6                                                                                |
| Level of Service                  | D                                                                                 | E                                                                                 |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                   | B                                                                                   | B                                                                                   |                                                                                     | B                                                                                   | B                                                                                   |
| Approach Delay (s)                |                                                                                   | 62.0                                                                              |                                                                                   |                                                                                   | 44.2                                                                              |                                                                                   |                                                                                     | 16.9                                                                                |                                                                                     |                                                                                     | 19.0                                                                                |                                                                                     |
| Approach LOS                      |                                                                                   | E                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 24.5                                                                              |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.65                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 131.8                                                                             |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     | 20.0                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 85.0%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     | E                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
1: Harborn Road & Grange Drive

Existing PM  
05/11/2026

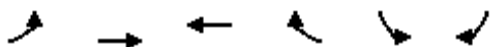


| Lane Group                        | EBL          | EBT                                                                               | WBT                                                                               | WBR                    | SBL                                                                               | SBR   |
|-----------------------------------|--------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|-------|
| Lane Configurations               |              |  |  |                        |  |       |
| Traffic Volume (vph)              | 2            | 68                                                                                | 50                                                                                | 5                      | 4                                                                                 | 4     |
| Future Volume (vph)               | 2            | 68                                                                                | 50                                                                                | 5                      | 4                                                                                 | 4     |
| Ideal Flow (vphpl)                | 1900         | 1900                                                                              | 1900                                                                              | 1900                   | 1900                                                                              | 1900  |
| Lane Util. Factor                 | 1.00         | 1.00                                                                              | 1.00                                                                              | 1.00                   | 1.00                                                                              | 1.00  |
| Ped Bike Factor                   |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Frt                               |              |                                                                                   | 0.988                                                                             |                        | 0.932                                                                             |       |
| Flt Protected                     |              | 0.999                                                                             |                                                                                   |                        | 0.976                                                                             |       |
| Satd. Flow (prot)                 | 0            | 1919                                                                              | 1898                                                                              | 0                      | 1611                                                                              | 0     |
| Flt Permitted                     |              | 0.999                                                                             |                                                                                   |                        | 0.976                                                                             |       |
| Satd. Flow (perm)                 | 0            | 1919                                                                              | 1898                                                                              | 0                      | 1611                                                                              | 0     |
| Link Speed (k/h)                  |              | 40                                                                                | 40                                                                                |                        | 40                                                                                |       |
| Link Distance (m)                 |              | 45.7                                                                              | 28.9                                                                              |                        | 198.4                                                                             |       |
| Travel Time (s)                   |              | 4.1                                                                               | 2.6                                                                               |                        | 17.9                                                                              |       |
| Confl. Peds. (#/hr)               | 2            |                                                                                   |                                                                                   | 2                      | 4                                                                                 | 23    |
| Peak Hour Factor                  | 0.81         | 0.81                                                                              | 0.81                                                                              | 0.81                   | 0.81                                                                              | 0.81  |
| Heavy Vehicles (%)                | 0%           | 0%                                                                                | 0%                                                                                | 0%                     | 17%                                                                               | 0%    |
| Adj. Flow (vph)                   | 2            | 84                                                                                | 62                                                                                | 6                      | 5                                                                                 | 5     |
| Shared Lane Traffic (%)           |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Lane Group Flow (vph)             | 0            | 86                                                                                | 68                                                                                | 0                      | 10                                                                                | 0     |
| Enter Blocked Intersection        | No           | No                                                                                | No                                                                                | No                     | No                                                                                | No    |
| Lane Alignment                    | Left         | Left                                                                              | Left                                                                              | Right                  | Left                                                                              | Right |
| Median Width(m)                   |              | 0.0                                                                               | 0.0                                                                               |                        | 3.7                                                                               |       |
| Link Offset(m)                    |              | 0.0                                                                               | 0.0                                                                               |                        | 0.0                                                                               |       |
| Crosswalk Width(m)                |              | 1.6                                                                               | 1.6                                                                               |                        | 1.6                                                                               |       |
| Two way Left Turn Lane            |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Headway Factor                    | 0.99         | 0.99                                                                              | 0.99                                                                              | 0.99                   | 0.99                                                                              | 0.99  |
| Turning Speed (k/h)               | 24           |                                                                                   |                                                                                   | 14                     | 24                                                                                | 14    |
| Sign Control                      |              | Free                                                                              | Free                                                                              |                        | Stop                                                                              |       |
| Intersection Summary              |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Area Type:                        | Other        |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Control Type:                     | Unsignalized |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Intersection Capacity Utilization | 20.5%        |                                                                                   |                                                                                   | ICU Level of Service A |                                                                                   |       |
| Analysis Period (min)             | 15           |                                                                                   |                                                                                   |                        |                                                                                   |       |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Harborn Road & Grange Drive

Existing PM  
05/11/2026



| Movement                          | EBL  | EBT                                                                               | WBT                                                                               | WBR                  | SBL                                                                               | SBR  |
|-----------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------|------|
| Lane Configurations               |      |  |  |                      |  |      |
| Traffic Volume (veh/h)            | 2    | 68                                                                                | 50                                                                                | 5                    | 4                                                                                 | 4    |
| Future Volume (Veh/h)             | 2    | 68                                                                                | 50                                                                                | 5                    | 4                                                                                 | 4    |
| Sign Control                      |      | Free                                                                              | Free                                                                              |                      | Stop                                                                              |      |
| Grade                             |      | 0%                                                                                | 0%                                                                                |                      | 0%                                                                                |      |
| Peak Hour Factor                  | 0.81 | 0.81                                                                              | 0.81                                                                              | 0.81                 | 0.81                                                                              | 0.81 |
| Hourly flow rate (vph)            | 2    | 84                                                                                | 62                                                                                | 6                    | 5                                                                                 | 5    |
| Pedestrians                       |      | 23                                                                                | 4                                                                                 |                      | 2                                                                                 |      |
| Lane Width (m)                    |      | 3.7                                                                               | 3.7                                                                               |                      | 3.7                                                                               |      |
| Walking Speed (m/s)               |      | 1.1                                                                               | 1.1                                                                               |                      | 1.1                                                                               |      |
| Percent Blockage                  |      | 2                                                                                 | 0                                                                                 |                      | 0                                                                                 |      |
| Right turn flare (veh)            |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Median type                       |      | None                                                                              | None                                                                              |                      |                                                                                   |      |
| Median storage veh)               |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Upstream signal (m)               |      |                                                                                   | 98                                                                                |                      |                                                                                   |      |
| pX, platoon unblocked             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC, conflicting volume            | 70   |                                                                                   |                                                                                   |                      | 159                                                                               | 90   |
| vC1, stage 1 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC2, stage 2 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vCu, unblocked vol                | 70   |                                                                                   |                                                                                   |                      | 159                                                                               | 90   |
| tC, single (s)                    | 4.1  |                                                                                   |                                                                                   |                      | 6.6                                                                               | 6.2  |
| tC, 2 stage (s)                   |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| tF (s)                            | 2.2  |                                                                                   |                                                                                   |                      | 3.7                                                                               | 3.3  |
| p0 queue free %                   | 100  |                                                                                   |                                                                                   |                      | 99                                                                                | 99   |
| cM capacity (veh/h)               | 1541 |                                                                                   |                                                                                   |                      | 793                                                                               | 950  |
| Direction, Lane #                 | EB 1 | WB 1                                                                              | SB 1                                                                              |                      |                                                                                   |      |
| Volume Total                      | 86   | 68                                                                                | 10                                                                                |                      |                                                                                   |      |
| Volume Left                       | 2    | 0                                                                                 | 5                                                                                 |                      |                                                                                   |      |
| Volume Right                      | 0    | 6                                                                                 | 5                                                                                 |                      |                                                                                   |      |
| cSH                               | 1541 | 1700                                                                              | 864                                                                               |                      |                                                                                   |      |
| Volume to Capacity                | 0.00 | 0.04                                                                              | 0.01                                                                              |                      |                                                                                   |      |
| Queue Length 95th (m)             | 0.0  | 0.0                                                                               | 0.3                                                                               |                      |                                                                                   |      |
| Control Delay (s)                 | 0.2  | 0.0                                                                               | 9.2                                                                               |                      |                                                                                   |      |
| Lane LOS                          | A    |                                                                                   | A                                                                                 |                      |                                                                                   |      |
| Approach Delay (s)                | 0.2  | 0.0                                                                               | 9.2                                                                               |                      |                                                                                   |      |
| Approach LOS                      |      |                                                                                   | A                                                                                 |                      |                                                                                   |      |
| Intersection Summary              |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Average Delay                     |      |                                                                                   | 0.7                                                                               |                      |                                                                                   |      |
| Intersection Capacity Utilization |      |                                                                                   | 20.5%                                                                             | ICU Level of Service | A                                                                                 |      |
| Analysis Period (min)             |      |                                                                                   | 15                                                                                |                      |                                                                                   |      |

Lanes, Volumes, Timings  
3: Premium Way & Harborn Road

Existing PM  
05/11/2026

|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBR                                                                               |
| Lane Configurations               |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)              | 63                                                                                | 4                                                                                 | 173                                                                               | 49                                                                                | 0                                                                                 | 156                                                                               |
| Future Volume (vph)               | 63                                                                                | 4                                                                                 | 173                                                                               | 49                                                                                | 0                                                                                 | 156                                                                               |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Frt                               | 0.993                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.865                                                                             |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   | 0.962                                                                             |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 1908                                                                              | 0                                                                                 | 0                                                                                 | 1848                                                                              | 1662                                                                              | 0                                                                                 |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   | 0.962                                                                             |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 1908                                                                              | 0                                                                                 | 0                                                                                 | 1848                                                                              | 1662                                                                              | 0                                                                                 |
| Link Speed (k/h)                  | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   |
| Link Distance (m)                 | 28.9                                                                              |                                                                                   |                                                                                   | 68.7                                                                              | 218.6                                                                             |                                                                                   |
| Travel Time (s)                   | 2.6                                                                               |                                                                                   |                                                                                   | 6.2                                                                               | 19.7                                                                              |                                                                                   |
| Confl. Peds. (#/hr)               |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 17                                                                                | 19                                                                                |
| Peak Hour Factor                  | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                |
| Adj. Flow (vph)                   | 70                                                                                | 4                                                                                 | 192                                                                               | 54                                                                                | 0                                                                                 | 173                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 74                                                                                | 0                                                                                 | 0                                                                                 | 246                                                                               | 173                                                                               | 0                                                                                 |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Left                                                                              | Right                                                                             |
| Median Width(m)                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               | 3.7                                                                               |                                                                                   |
| Link Offset(m)                    | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   |
| Crosswalk Width(m)                | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               | 1.6                                                                               |                                                                                   |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                    | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              |
| Turning Speed (k/h)               |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 24                                                                                | 14                                                                                |
| Sign Control                      | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              | Stop                                                                              |                                                                                   |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 37.9%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Premium Way & Harborn Road

Existing PM  
05/11/2026

|                                   |      |       |                      |      |      |      |
|-----------------------------------|------|-------|----------------------|------|------|------|
|                                   | →    | ↘     | ↙                    | ←    | ↖    | ↗    |
| Movement                          | EBT  | EBR   | WBL                  | WBT  | NBL  | NBR  |
| Lane Configurations               | ↱    |       |                      | ↰    | ↘↙   |      |
| Traffic Volume (veh/h)            | 63   | 4     | 173                  | 49   | 0    | 156  |
| Future Volume (Veh/h)             | 63   | 4     | 173                  | 49   | 0    | 156  |
| Sign Control                      | Free |       |                      | Free | Stop |      |
| Grade                             | 0%   |       |                      | 0%   | 0%   |      |
| Peak Hour Factor                  | 0.90 | 0.90  | 0.90                 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph)            | 70   | 4     | 192                  | 54   | 0    | 173  |
| Pedestrians                       | 17   |       |                      | 19   | 2    |      |
| 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)               |      |       |                      | 69   |      |      |
| pX, platoon unblocked             |      |       |                      |      | 0.97 |      |
| vC, conflicting volume            |      |       | 76                   |      | 529  | 93   |
| vC1, stage 1 conf vol             |      |       |                      |      |      |      |
| vC2, stage 2 conf vol             |      |       |                      |      |      |      |
| vCu, unblocked vol                |      |       | 76                   |      | 496  | 93   |
| tC, single (s)                    |      |       | 4.1                  |      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |      |       |                      |      |      |      |
| tF (s)                            |      |       | 2.2                  |      | 3.5  | 3.3  |
| p0 queue free %                   |      |       | 87                   |      | 100  | 82   |
| cM capacity (veh/h)               |      |       | 1533                 |      | 446  | 950  |
| Direction, Lane #                 | EB 1 | WB 1  | NB 1                 |      |      |      |
| Volume Total                      | 74   | 246   | 173                  |      |      |      |
| Volume Left                       | 0    | 192   | 0                    |      |      |      |
| Volume Right                      | 4    | 0     | 173                  |      |      |      |
| cSH                               | 1700 | 1533  | 950                  |      |      |      |
| Volume to Capacity                | 0.04 | 0.13  | 0.18                 |      |      |      |
| Queue Length 95th (m)             | 0.0  | 3.3   | 5.0                  |      |      |      |
| Control Delay (s)                 | 0.0  | 6.2   | 9.6                  |      |      |      |
| Lane LOS                          |      | A     | A                    |      |      |      |
| Approach Delay (s)                | 0.0  | 6.2   | 9.6                  |      |      |      |
| Approach LOS                      |      |       | A                    |      |      |      |
| Intersection Summary              |      |       |                      |      |      |      |
| Average Delay                     |      | 6.5   |                      |      |      |      |
| Intersection Capacity Utilization |      | 37.9% | ICU Level of Service | A    |      |      |
| Analysis Period (min)             |      | 15    |                      |      |      |      |

Lanes, Volumes, Timings  
4: Hurontario Street & Harbourn Road/North Service Road

Existing PM

05/11/2026

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 47                                                                                | 0                                                                                 | 204                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 185                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 32                                                                                  |
| Future Volume (vph)        | 47                                                                                | 0                                                                                 | 204                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 185                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 32                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Storage Length (m)         | 16.5                                                                              |                                                                                   | 0.0                                                                               | 56.0                                                                              |                                                                                   | 0.0                                                                               | 62.0                                                                                |                                                                                     | 0.0                                                                                 | 43.5                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 21.5                                                                              |                                                                                   |                                                                                   | 63.0                                                                              |                                                                                   |                                                                                   | 28.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.90                                                                              | 0.94                                                                              |                                                                                   | 0.97                                                                              |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.84                                                                                |                                                                                     |                                                                                     | 0.89                                                                                |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1789                                                                              | 1494                                                                              | 0                                                                                 | 1825                                                                              | 1902                                                                              | 0                                                                                 | 1825                                                                                | 3650                                                                                | 1633                                                                                | 1921                                                                                | 3650                                                                                | 1585                                                                                |
| Flt Permitted              | 0.757                                                                             |                                                                                   |                                                                                   | 0.381                                                                             |                                                                                   |                                                                                   | 0.197                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1282                                                                              | 1494                                                                              | 0                                                                                 | 709                                                                               | 1902                                                                              | 0                                                                                 | 378                                                                                 | 3650                                                                                | 1373                                                                                | 1921                                                                                | 3650                                                                                | 1407                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 220                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 248                                                                                 |                                                                                     |                                                                                     | 61                                                                                  |
| Link Speed (k/h)           |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 50                                                                                  |                                                                                     |                                                                                     | 50                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 136.9                                                                             |                                                                                   |                                                                                     | 172.4                                                                               |                                                                                     |                                                                                     | 113.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 8.2                                                                               |                                                                                   |                                                                                     | 12.4                                                                                |                                                                                     |                                                                                     | 8.1                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 65                                                                                |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 65                                                                                | 26                                                                                  |                                                                                     | 39                                                                                  | 39                                                                                  |                                                                                     | 26                                                                                  |
| Peak Hour Factor           | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 1%                                                                                | 3%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 48                                                                                | 0                                                                                 | 210                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 191                                                                                 | 785                                                                                 | 248                                                                                 | 0                                                                                   | 1204                                                                                | 33                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 48                                                                                | 210                                                                               | 0                                                                                 | 2                                                                                 | 1                                                                                 | 0                                                                                 | 191                                                                                 | 785                                                                                 | 248                                                                                 | 0                                                                                   | 1204                                                                                | 33                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

Lanes, Volumes, Timings  
4: Hurontario Street & Harbourn Road/North Service Road

Existing PM  
05/11/2026

|                         |  |       |     |       |       |     |       |       |       |       |       |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Turn Type               | Perm                                                                               | NA    |     | Perm  | NA    |     | pm+pt | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |                                                                                    | 4     |     |       | 4     |     | 1     | 2     |       |       | 2     |       |
| Permitted Phases        | 4                                                                                  |       |     | 4     |       |     | 2     |       | 2     | 2     |       | 2     |
| Detector Phase          | 4                                                                                  | 4     |     | 4     | 4     |     | 1     | 2     | 2     | 2     | 2     | 2     |
| Switch Phase            |                                                                                    |       |     |       |       |     |       |       |       |       |       |       |
| Minimum Initial (s)     | 8.0                                                                                | 8.0   |     | 8.0   | 8.0   |     | 5.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 40.0                                                                               | 40.0  |     | 40.0  | 40.0  |     | 9.5   | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Total Split (s)         | 49.0                                                                               | 49.0  |     | 49.0  | 49.0  |     | 20.0  | 91.0  | 91.0  | 91.0  | 91.0  | 91.0  |
| Total Split (%)         | 30.6%                                                                              | 30.6% |     | 30.6% | 30.6% |     | 12.5% | 56.9% | 56.9% | 56.9% | 56.9% | 56.9% |
| Maximum Green (s)       | 40.0                                                                               | 40.0  |     | 40.0  | 40.0  |     | 17.0  | 83.0  | 83.0  | 83.0  | 83.0  | 83.0  |
| Yellow Time (s)         | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 5.0                                                                                | 5.0   |     | 5.0   | 5.0   |     | 0.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 9.0                                                                                | 9.0   |     | 9.0   | 9.0   |     | 3.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Lead/Lag                |                                                                                    |       |     |       |       |     | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | None  | Max   | Max   | Max   | Max   | Max   |
| Walk Time (s)           | 9.0                                                                                | 9.0   |     | 9.0   | 9.0   |     |       | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Flash Dont Walk (s)     | 22.0                                                                               | 22.0  |     | 22.0  | 22.0  |     |       | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  |
| Pedestrian Calls (#/hr) | 0                                                                                  | 0     |     | 0     | 0     |     |       | 0     | 0     | 0     | 0     | 0     |
| Act Effect Green (s)    | 10.5                                                                               | 10.5  |     | 10.5  | 10.5  |     | 96.2  | 83.0  | 83.0  |       | 83.0  | 83.0  |
| Actuated g/C Ratio      | 0.09                                                                               | 0.09  |     | 0.09  | 0.09  |     | 0.79  | 0.68  | 0.68  |       | 0.68  | 0.68  |
| v/c Ratio               | 0.44                                                                               | 0.64  |     | 0.03  | 0.01  |     | 0.48  | 0.32  | 0.24  |       | 0.48  | 0.03  |
| Control Delay           | 65.7                                                                               | 15.3  |     | 52.0  | 51.0  |     | 6.8   | 8.5   | 1.6   |       | 10.3  | 0.6   |
| Queue Delay             | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay             | 65.7                                                                               | 15.3  |     | 52.0  | 51.0  |     | 6.8   | 8.5   | 1.6   |       | 10.3  | 0.6   |
| LOS                     | E                                                                                  | B     |     | D     | D     |     | A     | A     | A     |       | B     | A     |
| Approach Delay          |                                                                                    | 24.6  |     |       | 51.7  |     |       | 6.9   |       |       | 10.1  |       |
| Approach LOS            |                                                                                    | C     |     |       | D     |     |       | A     |       |       | B     |       |

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 121.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 10.0

Intersection LOS: B

Intersection Capacity Utilization 83.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Hurontario Street & Harbourn Road/North Service Road



## Queues

Existing PM

## 4: Hurontario Street &amp; Harbourn Road/North Service Road

05/11/2026



| Lane Group             | EBL  | EBT  | WBL  | WBT   | NBL  | NBT   | NBR  | SBT  | SBR  |
|------------------------|------|------|------|-------|------|-------|------|------|------|
| Lane Group Flow (vph)  | 48   | 210  | 2    | 1     | 191  | 785   | 248  | 1204 | 33   |
| v/c Ratio              | 0.44 | 0.64 | 0.03 | 0.01  | 0.48 | 0.32  | 0.24 | 0.48 | 0.03 |
| Control Delay          | 65.7 | 15.3 | 52.0 | 51.0  | 6.8  | 8.5   | 1.6  | 10.3 | 0.6  |
| Queue Delay            | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| Total Delay            | 65.7 | 15.3 | 52.0 | 51.0  | 6.8  | 8.5   | 1.6  | 10.3 | 0.6  |
| Queue Length 50th (m)  | 11.1 | 0.0  | 0.4  | 0.2   | 7.2  | 35.6  | 0.0  | 64.0 | 0.0  |
| Queue Length 95th (m)  | 24.0 | 20.1 | 3.0  | 2.1   | 14.4 | 53.5  | 8.7  | 92.8 | 1.2  |
| Internal Link Dist (m) |      | 0.1  |      | 112.9 |      | 148.4 |      | 89.1 |      |
| Turn Bay Length (m)    | 16.5 |      | 56.0 |       | 62.0 |       |      |      |      |
| Base Capacity (vph)    | 421  | 639  | 233  | 625   | 510  | 2490  | 1015 | 2490 | 979  |
| Starvation Cap Reductn | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Spillback Cap Reductn  | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Storage Cap Reductn    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Reduced v/c Ratio      | 0.11 | 0.33 | 0.01 | 0.00  | 0.37 | 0.32  | 0.24 | 0.48 | 0.03 |
| Intersection Summary   |      |      |      |       |      |       |      |      |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Hurontario Street & Harbourn Road/North Service Road

Existing PM

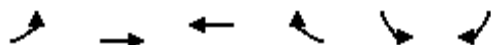
05/11/2026

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)              | 47                                                                                | 0                                                                                 | 204                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 185                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 32                                                                                  |
| Future Volume (vph)               | 47                                                                                | 0                                                                                 | 204                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 185                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 32                                                                                  |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Total Lost time (s)               | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 3.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |
| Frpb, ped/bikes                   | 1.00                                                                              | 0.95                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.87                                                                                |                                                                                     | 1.00                                                                                | 0.91                                                                                |
| Flpb, ped/bikes                   | 0.92                                                                              | 1.00                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Frt                               | 1.00                                                                              | 0.85                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.85                                                                                |                                                                                     | 1.00                                                                                | 0.85                                                                                |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (prot)                 | 1652                                                                              | 1511                                                                              |                                                                                   | 1781                                                                              | 1902                                                                              |                                                                                   | 1822                                                                                | 3650                                                                                | 1428                                                                                |                                                                                     | 3650                                                                                | 1442                                                                                |
| Flt Permitted                     | 0.76                                                                              | 1.00                                                                              |                                                                                   | 0.38                                                                              | 1.00                                                                              |                                                                                   | 0.20                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (perm)                 | 1317                                                                              | 1511                                                                              |                                                                                   | 714                                                                               | 1902                                                                              |                                                                                   | 378                                                                                 | 3650                                                                                | 1428                                                                                |                                                                                     | 3650                                                                                | 1442                                                                                |
| Peak-hour factor, PHF             | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Adj. Flow (vph)                   | 48                                                                                | 0                                                                                 | 210                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 191                                                                                 | 785                                                                                 | 248                                                                                 | 0                                                                                   | 1204                                                                                | 33                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 192                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 79                                                                                  | 0                                                                                   | 0                                                                                   | 10                                                                                  |
| Lane Group Flow (vph)             | 48                                                                                | 18                                                                                | 0                                                                                 | 2                                                                                 | 1                                                                                 | 0                                                                                 | 191                                                                                 | 785                                                                                 | 169                                                                                 | 0                                                                                   | 1204                                                                                | 23                                                                                  |
| Confl. Peds. (#/hr)               | 65                                                                                |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 65                                                                                | 26                                                                                  |                                                                                     | 39                                                                                  | 39                                                                                  |                                                                                     | 26                                                                                  |
| Heavy Vehicles (%)                | 2%                                                                                | 1%                                                                                | 3%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 3%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases                  |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   |
| Actuated Green, G (s)             | 10.5                                                                              | 10.5                                                                              |                                                                                   | 10.5                                                                              | 10.5                                                                              |                                                                                   | 91.3                                                                                | 83.1                                                                                | 83.1                                                                                |                                                                                     | 83.1                                                                                | 83.1                                                                                |
| Effective Green, g (s)            | 10.5                                                                              | 10.5                                                                              |                                                                                   | 10.5                                                                              | 10.5                                                                              |                                                                                   | 91.3                                                                                | 83.1                                                                                | 83.1                                                                                |                                                                                     | 83.1                                                                                | 83.1                                                                                |
| Actuated g/C Ratio                | 0.09                                                                              | 0.09                                                                              |                                                                                   | 0.09                                                                              | 0.09                                                                              |                                                                                   | 0.75                                                                                | 0.68                                                                                | 0.68                                                                                |                                                                                     | 0.68                                                                                | 0.68                                                                                |
| Clearance Time (s)                | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 3.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |
| Vehicle Extension (s)             | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |
| Lane Grp Cap (vph)                | 113                                                                               | 130                                                                               |                                                                                   | 61                                                                                | 163                                                                               |                                                                                   | 380                                                                                 | 2490                                                                                | 974                                                                                 |                                                                                     | 2490                                                                                | 983                                                                                 |
| v/s Ratio Prot                    |                                                                                   | 0.01                                                                              |                                                                                   |                                                                                   | 0.00                                                                              |                                                                                   | c0.03                                                                               | 0.22                                                                                |                                                                                     |                                                                                     | 0.33                                                                                |                                                                                     |
| v/s Ratio Perm                    | c0.04                                                                             |                                                                                   |                                                                                   | 0.00                                                                              |                                                                                   |                                                                                   | c0.34                                                                               |                                                                                     | 0.12                                                                                |                                                                                     |                                                                                     | 0.02                                                                                |
| v/c Ratio                         | 0.42                                                                              | 0.14                                                                              |                                                                                   | 0.03                                                                              | 0.01                                                                              |                                                                                   | 0.50                                                                                | 0.32                                                                                | 0.17                                                                                |                                                                                     | 0.48                                                                                | 0.02                                                                                |
| Uniform Delay, d1                 | 52.8                                                                              | 51.5                                                                              |                                                                                   | 51.0                                                                              | 50.9                                                                              |                                                                                   | 5.5                                                                                 | 7.8                                                                                 | 7.0                                                                                 |                                                                                     | 9.2                                                                                 | 6.2                                                                                 |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Incremental Delay, d2             | 2.6                                                                               | 0.5                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               |                                                                                   | 1.0                                                                                 | 0.3                                                                                 | 0.4                                                                                 |                                                                                     | 0.7                                                                                 | 0.0                                                                                 |
| Delay (s)                         | 55.3                                                                              | 52.0                                                                              |                                                                                   | 51.2                                                                              | 50.9                                                                              |                                                                                   | 6.5                                                                                 | 8.2                                                                                 | 7.4                                                                                 |                                                                                     | 9.8                                                                                 | 6.3                                                                                 |
| Level of Service                  | E                                                                                 | D                                                                                 |                                                                                   | D                                                                                 | D                                                                                 |                                                                                   | A                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |
| Approach Delay (s)                |                                                                                   | 52.6                                                                              |                                                                                   |                                                                                   | 51.1                                                                              |                                                                                   |                                                                                     | 7.7                                                                                 |                                                                                     |                                                                                     | 9.8                                                                                 |                                                                                     |
| Approach LOS                      |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 13.0                                                                              |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.49                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 121.8                                                                             |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     |                                                                                     | 20.0                                                                                |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 83.7%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     |                                                                                     | E                                                                                   |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## **Appendix E – Future Total Traffic Analysis – Capacity Analysis Results**

Lanes, Volumes, Timings  
1: Harborn Road & Grange Drive

Future Total AM  
05/11/2026



| Lane Group                        | EBL          | EBT                                                                               | WBT                                                                               | WBR                    | SBL                                                                               | SBR   |
|-----------------------------------|--------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|-------|
| Lane Configurations               |              |  |  |                        |  |       |
| Traffic Volume (vph)              | 1            | 166                                                                               | 64                                                                                | 1                      | 5                                                                                 | 1     |
| Future Volume (vph)               | 1            | 166                                                                               | 64                                                                                | 1                      | 5                                                                                 | 1     |
| Ideal Flow (vphpl)                | 1900         | 1900                                                                              | 1900                                                                              | 1900                   | 1900                                                                              | 1900  |
| Lane Util. Factor                 | 1.00         | 1.00                                                                              | 1.00                                                                              | 1.00                   | 1.00                                                                              | 1.00  |
| Ped Bike Factor                   |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Frt                               |              |                                                                                   | 0.998                                                                             |                        | 0.983                                                                             |       |
| Flt Protected                     |              |                                                                                   |                                                                                   |                        | 0.958                                                                             |       |
| Satd. Flow (prot)                 | 0            | 1921                                                                              | 1917                                                                              | 0                      | 1540                                                                              | 0     |
| Flt Permitted                     |              |                                                                                   |                                                                                   |                        | 0.958                                                                             |       |
| Satd. Flow (perm)                 | 0            | 1921                                                                              | 1917                                                                              | 0                      | 1540                                                                              | 0     |
| Link Speed (k/h)                  |              | 40                                                                                | 40                                                                                |                        | 40                                                                                |       |
| Link Distance (m)                 |              | 45.7                                                                              | 28.9                                                                              |                        | 198.4                                                                             |       |
| Travel Time (s)                   |              | 4.1                                                                               | 2.6                                                                               |                        | 17.9                                                                              |       |
| Confl. Peds. (#/hr)               | 3            |                                                                                   |                                                                                   | 3                      | 5                                                                                 | 34    |
| Peak Hour Factor                  | 0.72         | 0.72                                                                              | 0.72                                                                              | 0.72                   | 0.72                                                                              | 0.72  |
| Heavy Vehicles (%)                | 0%           | 0%                                                                                | 0%                                                                                | 0%                     | 20%                                                                               | 0%    |
| Adj. Flow (vph)                   | 1            | 231                                                                               | 89                                                                                | 1                      | 7                                                                                 | 1     |
| Shared Lane Traffic (%)           |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Lane Group Flow (vph)             | 0            | 232                                                                               | 90                                                                                | 0                      | 8                                                                                 | 0     |
| Enter Blocked Intersection        | No           | No                                                                                | No                                                                                | No                     | No                                                                                | No    |
| Lane Alignment                    | Left         | Left                                                                              | Left                                                                              | Right                  | Left                                                                              | Right |
| Median Width(m)                   |              | 0.0                                                                               | 0.0                                                                               |                        | 3.7                                                                               |       |
| Link Offset(m)                    |              | 0.0                                                                               | 0.0                                                                               |                        | 0.0                                                                               |       |
| Crosswalk Width(m)                |              | 1.6                                                                               | 1.6                                                                               |                        | 1.6                                                                               |       |
| Two way Left Turn Lane            |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Headway Factor                    | 0.99         | 0.99                                                                              | 0.99                                                                              | 0.99                   | 0.99                                                                              | 0.99  |
| Turning Speed (k/h)               | 24           |                                                                                   |                                                                                   | 14                     | 24                                                                                | 14    |
| Sign Control                      |              | Free                                                                              | Free                                                                              |                        | Stop                                                                              |       |
| Intersection Summary              |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Area Type:                        | Other        |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Control Type:                     | Unsignalized |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Intersection Capacity Utilization | 26.3%        |                                                                                   |                                                                                   | ICU Level of Service A |                                                                                   |       |
| Analysis Period (min)             | 15           |                                                                                   |                                                                                   |                        |                                                                                   |       |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Harborn Road & Grange Drive

Future Total AM  
05/11/2026



| Movement                          | EBL  | EBT                                                                               | WBT                                                                               | WBR                  | SBL                                                                               | SBR  |
|-----------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------|------|
| Lane Configurations               |      |  |  |                      |  |      |
| Traffic Volume (veh/h)            | 1    | 166                                                                               | 64                                                                                | 1                    | 5                                                                                 | 1    |
| Future Volume (Veh/h)             | 1    | 166                                                                               | 64                                                                                | 1                    | 5                                                                                 | 1    |
| Sign Control                      |      | Free                                                                              | Free                                                                              |                      | Stop                                                                              |      |
| Grade                             |      | 0%                                                                                | 0%                                                                                |                      | 0%                                                                                |      |
| Peak Hour Factor                  | 0.72 | 0.72                                                                              | 0.72                                                                              | 0.72                 | 0.72                                                                              | 0.72 |
| Hourly flow rate (vph)            | 1    | 231                                                                               | 89                                                                                | 1                    | 7                                                                                 | 1    |
| Pedestrians                       |      | 34                                                                                | 5                                                                                 |                      | 3                                                                                 |      |
| Lane Width (m)                    |      | 3.7                                                                               | 3.7                                                                               |                      | 3.7                                                                               |      |
| Walking Speed (m/s)               |      | 1.1                                                                               | 1.1                                                                               |                      | 1.1                                                                               |      |
| Percent Blockage                  |      | 3                                                                                 | 0                                                                                 |                      | 0                                                                                 |      |
| Right turn flare (veh)            |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Median type                       |      | None                                                                              | None                                                                              |                      |                                                                                   |      |
| Median storage (veh)              |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Upstream signal (m)               |      |                                                                                   | 98                                                                                |                      |                                                                                   |      |
| pX, platoon unblocked             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC, conflicting volume            | 93   |                                                                                   |                                                                                   |                      | 330                                                                               | 126  |
| vC1, stage 1 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC2, stage 2 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vCu, unblocked vol                | 93   |                                                                                   |                                                                                   |                      | 330                                                                               | 126  |
| tC, single (s)                    | 4.1  |                                                                                   |                                                                                   |                      | 6.6                                                                               | 6.2  |
| tC, 2 stage (s)                   |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| tF (s)                            | 2.2  |                                                                                   |                                                                                   |                      | 3.7                                                                               | 3.3  |
| p0 queue free %                   | 100  |                                                                                   |                                                                                   |                      | 99                                                                                | 100  |
| cM capacity (veh/h)               | 1510 |                                                                                   |                                                                                   |                      | 624                                                                               | 896  |
| Direction, Lane #                 | EB 1 | WB 1                                                                              | SB 1                                                                              |                      |                                                                                   |      |
| Volume Total                      | 232  | 90                                                                                | 8                                                                                 |                      |                                                                                   |      |
| Volume Left                       | 1    | 0                                                                                 | 7                                                                                 |                      |                                                                                   |      |
| Volume Right                      | 0    | 1                                                                                 | 1                                                                                 |                      |                                                                                   |      |
| cSH                               | 1510 | 1700                                                                              | 648                                                                               |                      |                                                                                   |      |
| Volume to Capacity                | 0.00 | 0.05                                                                              | 0.01                                                                              |                      |                                                                                   |      |
| Queue Length 95th (m)             | 0.0  | 0.0                                                                               | 0.3                                                                               |                      |                                                                                   |      |
| Control Delay (s)                 | 0.0  | 0.0                                                                               | 10.6                                                                              |                      |                                                                                   |      |
| Lane LOS                          | A    |                                                                                   | B                                                                                 |                      |                                                                                   |      |
| Approach Delay (s)                | 0.0  | 0.0                                                                               | 10.6                                                                              |                      |                                                                                   |      |
| Approach LOS                      |      |                                                                                   | B                                                                                 |                      |                                                                                   |      |
| Intersection Summary              |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Average Delay                     |      |                                                                                   | 0.3                                                                               |                      |                                                                                   |      |
| Intersection Capacity Utilization |      |                                                                                   | 26.3%                                                                             | ICU Level of Service |                                                                                   | A    |
| Analysis Period (min)             |      |                                                                                   | 15                                                                                |                      |                                                                                   |      |

Lanes, Volumes, Timings  
2: Site Access & Harborn Road

Future Total AM  
05/11/2026

|                                   |              |       |      |                        |      |       |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
|                                   | →            | ↘     | ↙    | ←                      | ↖    | ↗     |
| Lane Group                        | EBT          | EBR   | WBL  | WBT                    | NBL  | NBR   |
| Lane Configurations               | ↰            |       |      | ↱                      | ↘↙   |       |
| Traffic Volume (vph)              | 0            | 0     | 1    | 0                      | 0    | 5     |
| Future Volume (vph)               | 0            | 0     | 1    | 0                      | 0    | 5     |
| Ideal Flow (vphpl)                | 1900         | 1900  | 1900 | 1900                   | 1900 | 1900  |
| Lane Util. Factor                 | 1.00         | 1.00  | 1.00 | 1.00                   | 1.00 | 1.00  |
| Frt                               | 0.865        |       |      |                        |      |       |
| Flt Protected                     | 0.950        |       |      |                        |      |       |
| Satd. Flow (prot)                 | 1921         | 0     | 0    | 1825                   | 1662 | 0     |
| Flt Permitted                     | 0.950        |       |      |                        |      |       |
| Satd. Flow (perm)                 | 1921         | 0     | 0    | 1825                   | 1662 | 0     |
| Link Speed (k/h)                  | 40           |       |      | 40                     | 40   |       |
| Link Distance (m)                 | 137.2        |       |      | 45.7                   | 88.1 |       |
| Travel Time (s)                   | 12.3         |       |      | 4.1                    | 7.9  |       |
| Peak Hour Factor                  | 0.25         | 0.25  | 0.25 | 0.25                   | 0.25 | 0.25  |
| Heavy Vehicles (%)                | 0%           | 0%    | 0%   | 0%                     | 0%   | 0%    |
| Adj. Flow (vph)                   | 0            | 0     | 4    | 0                      | 0    | 20    |
| Shared Lane Traffic (%)           |              |       |      |                        |      |       |
| Lane Group Flow (vph)             | 0            | 0     | 0    | 4                      | 20   | 0     |
| Enter Blocked Intersection        | No           | No    | No   | No                     | No   | No    |
| Lane Alignment                    | Left         | Right | Left | Left                   | Left | Right |
| Median Width(m)                   | 0.0          |       |      | 0.0                    | 3.7  |       |
| Link Offset(m)                    | 0.0          |       |      | 0.0                    | 0.0  |       |
| Crosswalk Width(m)                | 1.6          |       |      | 1.6                    | 1.6  |       |
| Two way Left Turn Lane            |              |       |      |                        |      |       |
| Headway Factor                    | 0.99         | 0.99  | 0.99 | 0.99                   | 0.99 | 0.99  |
| Turning Speed (k/h)               |              | 14    | 24   |                        | 24   | 14    |
| Sign Control                      | Free         |       |      | Free                   | Stop |       |
| Intersection Summary              |              |       |      |                        |      |       |
| Area Type:                        | Other        |       |      |                        |      |       |
| Control Type:                     | Unsignalized |       |      |                        |      |       |
| Intersection Capacity Utilization | 13.3%        |       |      | ICU Level of Service A |      |       |
| Analysis Period (min)             | 15           |       |      |                        |      |       |

# HCM Unsignalized Intersection Capacity Analysis

## 2: Site Access & Harborn Road

Future Total AM  
05/11/2026

|                                   |      |      |       |                      |      |      |
|-----------------------------------|------|------|-------|----------------------|------|------|
|                                   | →    | ↘    | ↙     | ←                    | ↖    | ↗    |
| Movement                          | EBT  | EBR  | WBL   | WBT                  | NBL  | NBR  |
| Lane Configurations               | ↱    |      |       | ↱                    | ↘↙   |      |
| Traffic Volume (veh/h)            | 0    | 0    | 1     | 0                    | 0    | 5    |
| Future Volume (Veh/h)             | 0    | 0    | 1     | 0                    | 0    | 5    |
| Sign Control                      | Free |      |       | Free                 | Stop |      |
| Grade                             | 0%   |      |       | 0%                   | 0%   |      |
| Peak Hour Factor                  | 0.25 | 0.25 | 0.25  | 0.25                 | 0.25 | 0.25 |
| Hourly flow rate (vph)            | 0    | 0    | 4     | 0                    | 0    | 20   |
| Pedestrians                       |      |      |       |                      |      |      |
| Lane Width (m)                    |      |      |       |                      |      |      |
| Walking Speed (m/s)               |      |      |       |                      |      |      |
| Percent Blockage                  |      |      |       |                      |      |      |
| Right turn flare (veh)            |      |      |       |                      |      |      |
| Median type                       | None |      |       | None                 |      |      |
| Median storage veh                |      |      |       |                      |      |      |
| Upstream signal (m)               |      |      |       | 143                  |      |      |
| pX, platoon unblocked             |      |      |       |                      |      |      |
| vC, conflicting volume            |      |      | 0     |                      | 8    | 0    |
| vC1, stage 1 conf vol             |      |      |       |                      |      |      |
| vC2, stage 2 conf vol             |      |      |       |                      |      |      |
| vCu, unblocked vol                |      |      | 0     |                      | 8    | 0    |
| tC, single (s)                    |      |      | 4.1   |                      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |      |      |       |                      |      |      |
| tF (s)                            |      |      | 2.2   |                      | 3.5  | 3.3  |
| p0 queue free %                   |      |      | 100   |                      | 100  | 98   |
| cM capacity (veh/h)               |      |      | 1636  |                      | 1016 | 1091 |
| Direction, Lane #                 | EB 1 | WB 1 | NB 1  |                      |      |      |
| Volume Total                      | 0    | 4    | 20    |                      |      |      |
| Volume Left                       | 0    | 4    | 0     |                      |      |      |
| Volume Right                      | 0    | 0    | 20    |                      |      |      |
| cSH                               | 1700 | 1636 | 1091  |                      |      |      |
| Volume to Capacity                | 0.00 | 0.00 | 0.02  |                      |      |      |
| Queue Length 95th (m)             | 0.0  | 0.1  | 0.4   |                      |      |      |
| Control Delay (s)                 | 0.0  | 7.2  | 8.4   |                      |      |      |
| Lane LOS                          |      | A    | A     |                      |      |      |
| Approach Delay (s)                | 0.0  | 7.2  | 8.4   |                      |      |      |
| Approach LOS                      |      |      | A     |                      |      |      |
| Intersection Summary              |      |      |       |                      |      |      |
| Average Delay                     |      |      | 8.2   |                      |      |      |
| Intersection Capacity Utilization |      |      | 13.3% | ICU Level of Service |      | A    |
| Analysis Period (min)             |      |      | 15    |                      |      |      |

Lanes, Volumes, Timings  
3: Premium Way & Harborn Road

Future Total AM

05/11/2026

|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBR                                                                               |
| Lane Configurations               |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)              | 171                                                                               | 2                                                                                 | 139                                                                               | 61                                                                                | 3                                                                                 | 261                                                                               |
| Future Volume (vph)               | 171                                                                               | 2                                                                                 | 139                                                                               | 61                                                                                | 3                                                                                 | 261                                                                               |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Frt                               | 0.999                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.866                                                                             |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             | 0.999                                                                             |                                                                                   |
| Satd. Flow (prot)                 | 1918                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                              | 1365                                                                              | 0                                                                                 |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             | 0.999                                                                             |                                                                                   |
| Satd. Flow (perm)                 | 1918                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                              | 1365                                                                              | 0                                                                                 |
| Link Speed (k/h)                  | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   |
| Link Distance (m)                 | 28.9                                                                              |                                                                                   |                                                                                   | 68.7                                                                              | 218.6                                                                             |                                                                                   |
| Travel Time (s)                   | 2.6                                                                               |                                                                                   |                                                                                   | 6.2                                                                               | 19.7                                                                              |                                                                                   |
| Confl. Peds. (#/hr)               |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 21                                                                                | 29                                                                                |
| Peak Hour Factor                  | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Heavy Vehicles (%)                | 0%                                                                                | 6%                                                                                | 6%                                                                                | 0%                                                                                | 0%                                                                                | 22%                                                                               |
| Adj. Flow (vph)                   | 180                                                                               | 2                                                                                 | 146                                                                               | 64                                                                                | 3                                                                                 | 275                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 182                                                                               | 0                                                                                 | 0                                                                                 | 210                                                                               | 278                                                                               | 0                                                                                 |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Left                                                                              | Right                                                                             |
| Median Width(m)                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               | 3.7                                                                               |                                                                                   |
| Link Offset(m)                    | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   |
| Crosswalk Width(m)                | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               | 1.6                                                                               |                                                                                   |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                    | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              |
| Turning Speed (k/h)               |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 24                                                                                | 14                                                                                |
| Sign Control                      | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              | Stop                                                                              |                                                                                   |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 49.0%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Premium Way & Harborn Road

Future Total AM  
05/11/2026

|                                   |      |       |                      |      |      |      |
|-----------------------------------|------|-------|----------------------|------|------|------|
|                                   | →    | ↘     | ↙                    | ←    | ↖    | ↗    |
| Movement                          | EBT  | EBR   | WBL                  | WBT  | NBL  | NBR  |
| Lane Configurations               | ↰    |       |                      | ↱    | ↘↙   |      |
| Traffic Volume (veh/h)            | 171  | 2     | 139                  | 61   | 3    | 261  |
| Future Volume (Veh/h)             | 171  | 2     | 139                  | 61   | 3    | 261  |
| Sign Control                      | Free |       |                      | Free | Stop |      |
| Grade                             | 0%   |       |                      | 0%   | 0%   |      |
| Peak Hour Factor                  | 0.95 | 0.95  | 0.95                 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph)            | 180  | 2     | 146                  | 64   | 3    | 275  |
| Pedestrians                       | 21   |       |                      | 29   |      |      |
| Lane Width (m)                    | 3.7  |       |                      | 3.7  |      |      |
| Walking Speed (m/s)               | 1.1  |       |                      | 1.1  |      |      |
| Percent Blockage                  | 2    |       |                      | 3    |      |      |
| Right turn flare (veh)            |      |       |                      |      |      |      |
| Median type                       | None |       |                      | None |      |      |
| Median storage veh                |      |       |                      |      |      |      |
| Upstream signal (m)               |      |       |                      | 69   |      |      |
| pX, platoon unblocked             |      |       |                      |      | 0.95 |      |
| vC, conflicting volume            |      |       | 182                  |      | 558  | 210  |
| vC1, stage 1 conf vol             |      |       |                      |      |      |      |
| vC2, stage 2 conf vol             |      |       |                      |      |      |      |
| vCu, unblocked vol                |      |       | 182                  |      | 510  | 210  |
| tC, single (s)                    |      |       | 4.2                  |      | 6.4  | 6.4  |
| tC, 2 stage (s)                   |      |       |                      |      |      |      |
| tF (s)                            |      |       | 2.3                  |      | 3.5  | 3.5  |
| p0 queue free %                   |      |       | 89                   |      | 99   | 64   |
| cM capacity (veh/h)               |      |       | 1369                 |      | 439  | 760  |
| Direction, Lane #                 | EB 1 | WB 1  | NB 1                 |      |      |      |
| Volume Total                      | 182  | 210   | 278                  |      |      |      |
| Volume Left                       | 0    | 146   | 3                    |      |      |      |
| Volume Right                      | 2    | 0     | 275                  |      |      |      |
| cSH                               | 1700 | 1369  | 754                  |      |      |      |
| Volume to Capacity                | 0.11 | 0.11  | 0.37                 |      |      |      |
| Queue Length 95th (m)             | 0.0  | 2.7   | 12.9                 |      |      |      |
| Control Delay (s)                 | 0.0  | 5.8   | 12.5                 |      |      |      |
| Lane LOS                          |      | A     | B                    |      |      |      |
| Approach Delay (s)                | 0.0  | 5.8   | 12.5                 |      |      |      |
| Approach LOS                      |      |       | B                    |      |      |      |
| Intersection Summary              |      |       |                      |      |      |      |
| Average Delay                     |      | 7.0   |                      |      |      |      |
| Intersection Capacity Utilization |      | 49.0% | ICU Level of Service | A    |      |      |
| Analysis Period (min)             |      | 15    |                      |      |      |      |

## 4: Hurontario Street &amp; Harbourn Road/North Service Road

05/11/2026

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 64                                                                                | 0                                                                                 | 378                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Future Volume (vph)        | 64                                                                                | 0                                                                                 | 378                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Storage Length (m)         | 16.5                                                                              |                                                                                   | 0.0                                                                               | 56.0                                                                              |                                                                                   | 0.0                                                                               | 62.0                                                                                |                                                                                     | 0.0                                                                                 | 43.5                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 21.5                                                                              |                                                                                   |                                                                                   | 63.0                                                                              |                                                                                   |                                                                                   | 28.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.93                                                                              | 0.92                                                                              |                                                                                   | 0.97                                                                              |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.83                                                                                |                                                                                     |                                                                                     | 0.88                                                                                |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1706                                                                              | 1458                                                                              | 0                                                                                 | 1615                                                                              | 1883                                                                              | 0                                                                                 | 1644                                                                                | 3411                                                                                | 1498                                                                                | 1883                                                                                | 3544                                                                                | 1585                                                                                |
| Flt Permitted              | 0.757                                                                             |                                                                                   |                                                                                   | 0.150                                                                             |                                                                                   |                                                                                   | 0.191                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1271                                                                              | 1458                                                                              | 0                                                                                 | 248                                                                               | 1883                                                                              | 0                                                                                 | 331                                                                                 | 3411                                                                                | 1239                                                                                | 1883                                                                                | 3544                                                                                | 1390                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 184                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 269                                                                                 |                                                                                     |                                                                                     | 61                                                                                  |
| Link Speed (k/h)           |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 50                                                                                  |                                                                                     |                                                                                     | 50                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 136.9                                                                             |                                                                                   |                                                                                     | 172.4                                                                               |                                                                                     |                                                                                     | 113.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 8.2                                                                               |                                                                                   |                                                                                     | 12.4                                                                                |                                                                                     |                                                                                     | 8.1                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 42                                                                                |                                                                                   | 45                                                                                | 45                                                                                |                                                                                   | 42                                                                                | 29                                                                                  |                                                                                     | 43                                                                                  | 43                                                                                  |                                                                                     | 29                                                                                  |
| Peak Hour Factor           | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Heavy Vehicles (%)         | 7%                                                                                | 3%                                                                                | 3%                                                                                | 13%                                                                               | 2%                                                                                | 3%                                                                                | 11%                                                                                 | 7%                                                                                  | 9%                                                                                  | 2%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 65                                                                                | 0                                                                                 | 386                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 286                                                                                 | 0                                                                                   | 1106                                                                                | 28                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 65                                                                                | 386                                                                               | 0                                                                                 | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 286                                                                                 | 0                                                                                   | 1106                                                                                | 28                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

# Lanes, Volumes, Timings

Future Total AM

## 4: Hurontario Street & Harbourn Road/North Service Road

05/11/2026

|                         |  |       |     |       |       |     |       |       |       |       |       |       |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Turn Type               | Perm                                                                               | NA    |     | Perm  |       |     | pm+pt | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases        |                                                                                    | 4     |     |       | 4     |     | 1     | 2     |       |       | 2     |       |
| Permitted Phases        | 4                                                                                  |       |     | 4     |       |     | 2     |       | 2     | 2     |       | 2     |
| Detector Phase          | 4                                                                                  | 4     |     | 4     | 4     |     | 1     | 2     | 2     | 2     | 2     | 2     |
| Switch Phase            |                                                                                    |       |     |       |       |     |       |       |       |       |       |       |
| Minimum Initial (s)     | 8.0                                                                                | 8.0   |     | 8.0   | 8.0   |     | 5.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 40.0                                                                               | 40.0  |     | 40.0  | 40.0  |     | 9.5   | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Total Split (s)         | 63.0                                                                               | 63.0  |     | 63.0  | 63.0  |     | 15.0  | 82.0  | 82.0  | 82.0  | 82.0  | 82.0  |
| Total Split (%)         | 39.4%                                                                              | 39.4% |     | 39.4% | 39.4% |     | 9.4%  | 51.3% | 51.3% | 51.3% | 51.3% | 51.3% |
| Maximum Green (s)       | 54.0                                                                               | 54.0  |     | 54.0  | 54.0  |     | 12.0  | 74.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| Yellow Time (s)         | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 5.0                                                                                | 5.0   |     | 5.0   | 5.0   |     | 0.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 9.0                                                                                | 9.0   |     | 9.0   | 9.0   |     | 3.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Lead/Lag                |                                                                                    |       |     |       |       |     | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | None  | Max   | Max   | Max   | Max   | Max   |
| Walk Time (s)           | 9.0                                                                                | 9.0   |     | 9.0   | 9.0   |     |       | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Flash Dont Walk (s)     | 22.0                                                                               | 22.0  |     | 22.0  | 22.0  |     |       | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  |
| Pedestrian Calls (#/hr) | 0                                                                                  | 0     |     | 0     | 0     |     |       | 0     | 0     | 0     | 0     | 0     |
| Act Effect Green (s)    | 26.7                                                                               | 26.7  |     | 26.7  |       |     | 90.3  | 74.6  | 74.6  |       | 74.6  | 74.6  |
| Actuated g/C Ratio      | 0.20                                                                               | 0.20  |     | 0.20  |       |     | 0.68  | 0.56  | 0.56  |       | 0.56  | 0.56  |
| v/c Ratio               | 0.25                                                                               | 0.88  |     | 0.12  |       |     | 0.58  | 0.48  | 0.35  |       | 0.55  | 0.03  |
| Control Delay           | 45.4                                                                               | 46.8  |     | 46.7  |       |     | 15.6  | 20.0  | 4.0   |       | 21.3  | 0.1   |
| Queue Delay             | 0.0                                                                                | 0.0   |     | 0.0   |       |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay             | 45.4                                                                               | 46.8  |     | 46.7  |       |     | 15.6  | 20.0  | 4.0   |       | 21.3  | 0.1   |
| LOS                     | D                                                                                  | D     |     | D     |       |     | B     | C     | A     |       | C     | A     |
| Approach Delay          |                                                                                    | 46.6  |     |       | 46.7  |     |       | 16.1  |       |       | 20.8  |       |
| Approach LOS            |                                                                                    | D     |     |       | D     |     |       | B     |       |       | C     |       |

### Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 132.1

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 22.5

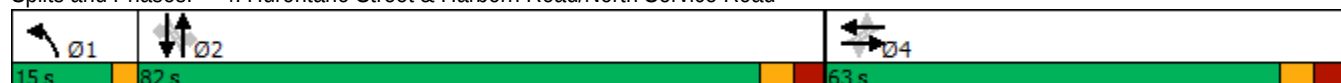
Intersection LOS: C

Intersection Capacity Utilization 85.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Hurontario Street & Harbourn Road/North Service Road



## Queues

Future Total AM

## 4: Hurontario Street &amp; Harbourn Road/North Service Road

05/11/2026



| Lane Group             | EBL  | EBT  | WBL  | NBL  | NBT   | NBR  | SBT   | SBR  |
|------------------------|------|------|------|------|-------|------|-------|------|
| Lane Group Flow (vph)  | 65   | 386  | 6    | 194  | 929   | 286  | 1106  | 28   |
| v/c Ratio              | 0.25 | 0.88 | 0.12 | 0.58 | 0.48  | 0.35 | 0.55  | 0.03 |
| Control Delay          | 45.4 | 46.8 | 46.7 | 15.6 | 20.0  | 4.0  | 21.3  | 0.1  |
| Queue Delay            | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| Total Delay            | 45.4 | 46.8 | 46.7 | 15.6 | 20.0  | 4.0  | 21.3  | 0.1  |
| Queue Length 50th (m)  | 14.4 | 54.6 | 1.3  | 15.3 | 74.4  | 1.9  | 93.8  | 0.0  |
| Queue Length 95th (m)  | 27.2 | 93.9 | 5.4  | 34.9 | 119.3 | 18.8 | 147.8 | 0.5  |
| Internal Link Dist (m) |      | 0.1  |      |      | 148.4 |      | 89.1  |      |
| Turn Bay Length (m)    | 16.5 |      | 56.0 | 62.0 |       |      |       |      |
| Base Capacity (vph)    | 523  | 709  | 102  | 349  | 1926  | 816  | 2001  | 811  |
| Starvation Cap Reductn | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Spillback Cap Reductn  | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Storage Cap Reductn    | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Reduced v/c Ratio      | 0.12 | 0.54 | 0.06 | 0.56 | 0.48  | 0.35 | 0.55  | 0.03 |
| Intersection Summary   |      |      |      |      |       |      |       |      |

# HCM Signalized Intersection Capacity Analysis

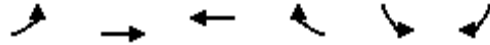
## 4: Hurontario Street & Harbourn Road/North Service Road

Future Total AM  
05/11/2026

|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)              | 64                                                                                | 0                                                                                 | 378                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Future Volume (vph)               | 64                                                                                | 0                                                                                 | 378                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 190                                                                                 | 910                                                                                 | 280                                                                                 | 0                                                                                   | 1084                                                                                | 27                                                                                  |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Total Lost time (s)               | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   | 3.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |
| Frpb, ped/bikes                   | 1.00                                                                              | 0.93                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.85                                                                                |                                                                                     | 1.00                                                                                | 0.89                                                                                |
| Flpb, ped/bikes                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.98                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Frt                               | 1.00                                                                              | 0.85                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.85                                                                                |                                                                                     | 1.00                                                                                | 0.85                                                                                |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              |                                                                                   |                                                                                   | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (prot)                 | 1614                                                                              | 1477                                                                              |                                                                                   | 1578                                                                              |                                                                                   |                                                                                   | 1642                                                                                | 3411                                                                                | 1279                                                                                |                                                                                     | 3544                                                                                | 1419                                                                                |
| Flt Permitted                     | 0.76                                                                              | 1.00                                                                              |                                                                                   | 0.15                                                                              |                                                                                   |                                                                                   | 0.19                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (perm)                 | 1287                                                                              | 1477                                                                              |                                                                                   | 249                                                                               |                                                                                   |                                                                                   | 330                                                                                 | 3411                                                                                | 1279                                                                                |                                                                                     | 3544                                                                                | 1419                                                                                |
| Peak-hour factor, PHF             | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Adj. Flow (vph)                   | 65                                                                                | 0                                                                                 | 386                                                                               | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 286                                                                                 | 0                                                                                   | 1106                                                                                | 28                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 147                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 117                                                                                 | 0                                                                                   | 0                                                                                   | 12                                                                                  |
| Lane Group Flow (vph)             | 65                                                                                | 239                                                                               | 0                                                                                 | 6                                                                                 | 0                                                                                 | 0                                                                                 | 194                                                                                 | 929                                                                                 | 169                                                                                 | 0                                                                                   | 1106                                                                                | 16                                                                                  |
| Confl. Peds. (#/hr)               | 42                                                                                |                                                                                   | 45                                                                                | 45                                                                                |                                                                                   | 42                                                                                | 29                                                                                  |                                                                                     | 43                                                                                  | 43                                                                                  |                                                                                     | 29                                                                                  |
| Heavy Vehicles (%)                | 7%                                                                                | 3%                                                                                | 3%                                                                                | 13%                                                                               | 2%                                                                                | 3%                                                                                | 11%                                                                                 | 7%                                                                                  | 9%                                                                                  | 2%                                                                                  | 3%                                                                                  | 3%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              |                                                                                   |                                                                                   | pm+pt                                                                               | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases                  |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   |
| Actuated Green, G (s)             | 26.7                                                                              | 26.7                                                                              |                                                                                   | 26.7                                                                              |                                                                                   |                                                                                   | 85.3                                                                                | 74.6                                                                                | 74.6                                                                                |                                                                                     | 74.6                                                                                | 74.6                                                                                |
| Effective Green, g (s)            | 26.7                                                                              | 26.7                                                                              |                                                                                   | 26.7                                                                              |                                                                                   |                                                                                   | 85.3                                                                                | 74.6                                                                                | 74.6                                                                                |                                                                                     | 74.6                                                                                | 74.6                                                                                |
| Actuated g/C Ratio                | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.20                                                                              |                                                                                   |                                                                                   | 0.65                                                                                | 0.57                                                                                | 0.57                                                                                |                                                                                     | 0.57                                                                                | 0.57                                                                                |
| Clearance Time (s)                | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   | 3.0                                                                                 | 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)                | 260                                                                               | 298                                                                               |                                                                                   | 50                                                                                |                                                                                   |                                                                                   | 319                                                                                 | 1927                                                                                | 722                                                                                 |                                                                                     | 2002                                                                                | 801                                                                                 |
| v/s Ratio Prot                    |                                                                                   | c0.16                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | c0.05                                                                               | 0.27                                                                                |                                                                                     |                                                                                     | 0.31                                                                                |                                                                                     |
| v/s Ratio Perm                    | 0.05                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   |                                                                                   | c0.34                                                                               |                                                                                     | 0.13                                                                                |                                                                                     |                                                                                     | 0.01                                                                                |
| v/c Ratio                         | 0.25                                                                              | 0.80                                                                              |                                                                                   | 0.12                                                                              |                                                                                   |                                                                                   | 0.61                                                                                | 0.48                                                                                | 0.23                                                                                |                                                                                     | 0.55                                                                                | 0.02                                                                                |
| Uniform Delay, d1                 | 44.2                                                                              | 50.1                                                                              |                                                                                   | 43.0                                                                              |                                                                                   |                                                                                   | 11.9                                                                                | 17.2                                                                                | 14.4                                                                                |                                                                                     | 18.1                                                                                | 12.6                                                                                |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Incremental Delay, d2             | 0.5                                                                               | 14.4                                                                              |                                                                                   | 1.1                                                                               |                                                                                   |                                                                                   | 3.3                                                                                 | 0.9                                                                                 | 0.8                                                                                 |                                                                                     | 1.1                                                                                 | 0.0                                                                                 |
| Delay (s)                         | 44.7                                                                              | 64.5                                                                              |                                                                                   | 44.1                                                                              |                                                                                   |                                                                                   | 15.2                                                                                | 18.0                                                                                | 15.1                                                                                |                                                                                     | 19.2                                                                                | 12.7                                                                                |
| Level of Service                  | D                                                                                 | E                                                                                 |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                   | B                                                                                   | B                                                                                   |                                                                                     | B                                                                                   | B                                                                                   |
| Approach Delay (s)                |                                                                                   | 61.7                                                                              |                                                                                   |                                                                                   | 44.1                                                                              |                                                                                   |                                                                                     | 17.0                                                                                |                                                                                     |                                                                                     | 19.1                                                                                |                                                                                     |
| Approach LOS                      |                                                                                   | E                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 24.6                                                                              |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.65                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 132.0                                                                             |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     | 20.0                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 85.1%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     | E                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
1: Harborn Road & Grange Drive

Future Total PM  
05/11/2026

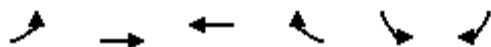


| Lane Group                        | EBL          | EBT                                                                               | WBT                                                                               | WBR                    | SBL                                                                               | SBR   |
|-----------------------------------|--------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|-------|
| Lane Configurations               |              |  |  |                        |  |       |
| Traffic Volume (vph)              | 2            | 71                                                                                | 53                                                                                | 5                      | 4                                                                                 | 4     |
| Future Volume (vph)               | 2            | 71                                                                                | 53                                                                                | 5                      | 4                                                                                 | 4     |
| Ideal Flow (vphpl)                | 1900         | 1900                                                                              | 1900                                                                              | 1900                   | 1900                                                                              | 1900  |
| Lane Util. Factor                 | 1.00         | 1.00                                                                              | 1.00                                                                              | 1.00                   | 1.00                                                                              | 1.00  |
| Ped Bike Factor                   |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Frt                               |              |                                                                                   | 0.989                                                                             |                        |                                                                                   | 0.932 |
| Flt Protected                     | 0.999        |                                                                                   |                                                                                   |                        | 0.976                                                                             |       |
| Satd. Flow (prot)                 | 0            | 1919                                                                              | 1900                                                                              | 0                      | 1611                                                                              | 0     |
| Flt Permitted                     | 0.999        |                                                                                   |                                                                                   |                        | 0.976                                                                             |       |
| Satd. Flow (perm)                 | 0            | 1919                                                                              | 1900                                                                              | 0                      | 1611                                                                              | 0     |
| Link Speed (k/h)                  | 40           |                                                                                   | 40                                                                                |                        |                                                                                   | 40    |
| Link Distance (m)                 | 45.7         |                                                                                   | 28.9                                                                              |                        |                                                                                   | 198.4 |
| Travel Time (s)                   | 4.1          |                                                                                   | 2.6                                                                               |                        |                                                                                   | 17.9  |
| Confl. Peds. (#/hr)               | 2            |                                                                                   |                                                                                   | 2                      | 4                                                                                 | 23    |
| Peak Hour Factor                  | 0.81         | 0.81                                                                              | 0.81                                                                              | 0.81                   | 0.81                                                                              | 0.81  |
| Heavy Vehicles (%)                | 0%           | 0%                                                                                | 0%                                                                                | 0%                     | 17%                                                                               | 0%    |
| Adj. Flow (vph)                   | 2            | 88                                                                                | 65                                                                                | 6                      | 5                                                                                 | 5     |
| Shared Lane Traffic (%)           |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Lane Group Flow (vph)             | 0            | 90                                                                                | 71                                                                                | 0                      | 10                                                                                | 0     |
| Enter Blocked Intersection        | No           | No                                                                                | No                                                                                | No                     | No                                                                                | No    |
| Lane Alignment                    | Left         | Left                                                                              | Left                                                                              | Right                  | Left                                                                              | Right |
| Median Width(m)                   | 0.0          |                                                                                   | 0.0                                                                               |                        |                                                                                   | 3.7   |
| Link Offset(m)                    | 0.0          |                                                                                   | 0.0                                                                               |                        |                                                                                   | 0.0   |
| Crosswalk Width(m)                | 1.6          |                                                                                   | 1.6                                                                               |                        |                                                                                   | 1.6   |
| Two way Left Turn Lane            |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Headway Factor                    | 0.99         | 0.99                                                                              | 0.99                                                                              | 0.99                   | 0.99                                                                              | 0.99  |
| Turning Speed (k/h)               | 24           |                                                                                   |                                                                                   | 14                     | 24                                                                                | 14    |
| Sign Control                      | Free         |                                                                                   | Free                                                                              |                        |                                                                                   | Stop  |
| Intersection Summary              |              |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Area Type:                        | Other        |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Control Type:                     | Unsignalized |                                                                                   |                                                                                   |                        |                                                                                   |       |
| Intersection Capacity Utilization | 20.7%        |                                                                                   |                                                                                   | ICU Level of Service A |                                                                                   |       |
| Analysis Period (min)             | 15           |                                                                                   |                                                                                   |                        |                                                                                   |       |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Harborn Road & Grange Drive

Future Total PM  
05/11/2026



| Movement                          | EBL  | EBT                                                                               | WBT                                                                               | WBR                  | SBL                                                                               | SBR  |
|-----------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------|------|
| Lane Configurations               |      |  |  |                      |  |      |
| Traffic Volume (veh/h)            | 2    | 71                                                                                | 53                                                                                | 5                    | 4                                                                                 | 4    |
| Future Volume (Veh/h)             | 2    | 71                                                                                | 53                                                                                | 5                    | 4                                                                                 | 4    |
| Sign Control                      |      | Free                                                                              | Free                                                                              |                      | Stop                                                                              |      |
| Grade                             |      | 0%                                                                                | 0%                                                                                |                      | 0%                                                                                |      |
| Peak Hour Factor                  | 0.81 | 0.81                                                                              | 0.81                                                                              | 0.81                 | 0.81                                                                              | 0.81 |
| Hourly flow rate (vph)            | 2    | 88                                                                                | 65                                                                                | 6                    | 5                                                                                 | 5    |
| Pedestrians                       |      | 23                                                                                | 4                                                                                 |                      | 2                                                                                 |      |
| Lane Width (m)                    |      | 3.7                                                                               | 3.7                                                                               |                      | 3.7                                                                               |      |
| Walking Speed (m/s)               |      | 1.1                                                                               | 1.1                                                                               |                      | 1.1                                                                               |      |
| Percent Blockage                  |      | 2                                                                                 | 0                                                                                 |                      | 0                                                                                 |      |
| Right turn flare (veh)            |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Median type                       |      | None                                                                              | None                                                                              |                      |                                                                                   |      |
| Median storage veh)               |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Upstream signal (m)               |      |                                                                                   | 98                                                                                |                      |                                                                                   |      |
| pX, platoon unblocked             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC, conflicting volume            | 73   |                                                                                   |                                                                                   |                      | 166                                                                               | 93   |
| vC1, stage 1 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vC2, stage 2 conf vol             |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| vCu, unblocked vol                | 73   |                                                                                   |                                                                                   |                      | 166                                                                               | 93   |
| tC, single (s)                    | 4.1  |                                                                                   |                                                                                   |                      | 6.6                                                                               | 6.2  |
| tC, 2 stage (s)                   |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| tF (s)                            | 2.2  |                                                                                   |                                                                                   |                      | 3.7                                                                               | 3.3  |
| p0 queue free %                   | 100  |                                                                                   |                                                                                   |                      | 99                                                                                | 99   |
| cM capacity (veh/h)               | 1537 |                                                                                   |                                                                                   |                      | 785                                                                               | 946  |
| Direction, Lane #                 | EB 1 | WB 1                                                                              | SB 1                                                                              |                      |                                                                                   |      |
| Volume Total                      | 90   | 71                                                                                | 10                                                                                |                      |                                                                                   |      |
| Volume Left                       | 2    | 0                                                                                 | 5                                                                                 |                      |                                                                                   |      |
| Volume Right                      | 0    | 6                                                                                 | 5                                                                                 |                      |                                                                                   |      |
| cSH                               | 1537 | 1700                                                                              | 858                                                                               |                      |                                                                                   |      |
| Volume to Capacity                | 0.00 | 0.04                                                                              | 0.01                                                                              |                      |                                                                                   |      |
| Queue Length 95th (m)             | 0.0  | 0.0                                                                               | 0.3                                                                               |                      |                                                                                   |      |
| Control Delay (s)                 | 0.2  | 0.0                                                                               | 9.2                                                                               |                      |                                                                                   |      |
| Lane LOS                          | A    |                                                                                   | A                                                                                 |                      |                                                                                   |      |
| Approach Delay (s)                | 0.2  | 0.0                                                                               | 9.2                                                                               |                      |                                                                                   |      |
| Approach LOS                      |      |                                                                                   | A                                                                                 |                      |                                                                                   |      |
| Intersection Summary              |      |                                                                                   |                                                                                   |                      |                                                                                   |      |
| Average Delay                     |      |                                                                                   | 0.6                                                                               |                      |                                                                                   |      |
| Intersection Capacity Utilization |      |                                                                                   | 20.7%                                                                             | ICU Level of Service |                                                                                   | A    |
| Analysis Period (min)             |      |                                                                                   | 15                                                                                |                      |                                                                                   |      |

Lanes, Volumes, Timings  
2: Site Access & Harborn Road

Future Total PM  
05/11/2026

|                                   |              |       |      |                        |      |       |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
|                                   | →            | ↘     | ↙    | ←                      | ↖    | ↗     |
| Lane Group                        | EBT          | EBR   | WBL  | WBT                    | NBL  | NBR   |
| Lane Configurations               | ↰            |       |      | ↱                      | ↗    | ↘     |
| Traffic Volume (vph)              | 0            | 0     | 3    | 0                      | 0    | 3     |
| Future Volume (vph)               | 0            | 0     | 3    | 0                      | 0    | 3     |
| Ideal Flow (vphpl)                | 1900         | 1900  | 1900 | 1900                   | 1900 | 1900  |
| Lane Util. Factor                 | 1.00         | 1.00  | 1.00 | 1.00                   | 1.00 | 1.00  |
| Frt                               | 0.865        |       |      |                        |      |       |
| Flt Protected                     | 0.950        |       |      |                        |      |       |
| Satd. Flow (prot)                 | 1921         | 0     | 0    | 1825                   | 1662 | 0     |
| Flt Permitted                     | 0.950        |       |      |                        |      |       |
| Satd. Flow (perm)                 | 1921         | 0     | 0    | 1825                   | 1662 | 0     |
| Link Speed (k/h)                  | 40           |       |      | 40                     | 40   |       |
| Link Distance (m)                 | 137.2        |       |      | 45.7                   | 88.1 |       |
| Travel Time (s)                   | 12.3         |       |      | 4.1                    | 7.9  |       |
| Peak Hour Factor                  | 0.25         | 0.25  | 0.25 | 0.25                   | 0.25 | 0.25  |
| Heavy Vehicles (%)                | 0%           | 0%    | 0%   | 0%                     | 0%   | 0%    |
| Adj. Flow (vph)                   | 0            | 0     | 12   | 0                      | 0    | 12    |
| Shared Lane Traffic (%)           |              |       |      |                        |      |       |
| Lane Group Flow (vph)             | 0            | 0     | 0    | 12                     | 12   | 0     |
| Enter Blocked Intersection        | No           | No    | No   | No                     | No   | No    |
| Lane Alignment                    | Left         | Right | Left | Left                   | Left | Right |
| Median Width(m)                   | 0.0          |       |      | 0.0                    | 3.7  |       |
| Link Offset(m)                    | 0.0          |       |      | 0.0                    | 0.0  |       |
| Crosswalk Width(m)                | 1.6          |       |      | 1.6                    | 1.6  |       |
| Two way Left Turn Lane            |              |       |      |                        |      |       |
| Headway Factor                    | 0.99         | 0.99  | 0.99 | 0.99                   | 0.99 | 0.99  |
| Turning Speed (k/h)               |              | 14    | 24   |                        | 24   | 14    |
| Sign Control                      | Free         |       |      | Free                   | Stop |       |
| Intersection Summary              |              |       |      |                        |      |       |
| Area Type:                        | Other        |       |      |                        |      |       |
| Control Type:                     | Unsignalized |       |      |                        |      |       |
| Intersection Capacity Utilization | 13.3%        |       |      | ICU Level of Service A |      |       |
| Analysis Period (min)             | 15           |       |      |                        |      |       |

# HCM Unsignalized Intersection Capacity Analysis

## 2: Site Access & Harborn Road

Future Total PM  
05/11/2026

|                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|                                   |  |  |  |  |  |  |
| Movement                          | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBR                                                                               |
| Lane Configurations               |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (veh/h)            | 0                                                                                 | 0                                                                                 | 3                                                                                 | 0                                                                                 | 0                                                                                 | 3                                                                                 |
| Future Volume (Veh/h)             | 0                                                                                 | 0                                                                                 | 3                                                                                 | 0                                                                                 | 0                                                                                 | 3                                                                                 |
| Sign Control                      | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              | Stop                                                                              |                                                                                   |
| Grade                             | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                | 0%                                                                                |                                                                                   |
| Peak Hour Factor                  | 0.25                                                                              | 0.25                                                                              | 0.25                                                                              | 0.25                                                                              | 0.25                                                                              | 0.25                                                                              |
| Hourly flow rate (vph)            | 0                                                                                 | 0                                                                                 | 12                                                                                | 0                                                                                 | 0                                                                                 | 12                                                                                |
| Pedestrians                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Width (m)                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Walking Speed (m/s)               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Percent Blockage                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Right turn flare (veh)            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Median type                       | None                                                                              |                                                                                   |                                                                                   | None                                                                              |                                                                                   |                                                                                   |
| Median storage veh                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Upstream signal (m)               |                                                                                   |                                                                                   |                                                                                   | 143                                                                               |                                                                                   |                                                                                   |
| pX, platoon unblocked             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vC, conflicting volume            |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 24                                                                                | 0                                                                                 |
| vC1, stage 1 conf vol             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vC2, stage 2 conf vol             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| vCu, unblocked vol                |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 24                                                                                | 0                                                                                 |
| tC, single (s)                    |                                                                                   |                                                                                   | 4.1                                                                               |                                                                                   | 6.4                                                                               | 6.2                                                                               |
| tC, 2 stage (s)                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| tF (s)                            |                                                                                   |                                                                                   | 2.2                                                                               |                                                                                   | 3.5                                                                               | 3.3                                                                               |
| p0 queue free %                   |                                                                                   |                                                                                   | 99                                                                                |                                                                                   | 100                                                                               | 99                                                                                |
| cM capacity (veh/h)               |                                                                                   |                                                                                   | 1636                                                                              |                                                                                   | 990                                                                               | 1091                                                                              |
| Direction, Lane #                 | EB 1                                                                              | WB 1                                                                              | NB 1                                                                              |                                                                                   |                                                                                   |                                                                                   |
| Volume Total                      | 0                                                                                 | 12                                                                                | 12                                                                                |                                                                                   |                                                                                   |                                                                                   |
| Volume Left                       | 0                                                                                 | 12                                                                                | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |
| Volume Right                      | 0                                                                                 | 0                                                                                 | 12                                                                                |                                                                                   |                                                                                   |                                                                                   |
| cSH                               | 1700                                                                              | 1636                                                                              | 1091                                                                              |                                                                                   |                                                                                   |                                                                                   |
| Volume to Capacity                | 0.00                                                                              | 0.01                                                                              | 0.01                                                                              |                                                                                   |                                                                                   |                                                                                   |
| Queue Length 95th (m)             | 0.0                                                                               | 0.2                                                                               | 0.3                                                                               |                                                                                   |                                                                                   |                                                                                   |
| Control Delay (s)                 | 0.0                                                                               | 7.2                                                                               | 8.3                                                                               |                                                                                   |                                                                                   |                                                                                   |
| Lane LOS                          |                                                                                   | A                                                                                 | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |
| Approach Delay (s)                | 0.0                                                                               | 7.2                                                                               | 8.3                                                                               |                                                                                   |                                                                                   |                                                                                   |
| Approach LOS                      |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                   |                                                                                   |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Average Delay                     |                                                                                   |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 13.3%                                                                             | ICU Level of Service                                                              |                                                                                   | A                                                                                 |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |

Lanes, Volumes, Timings  
3: Premium Way & Harborn Road

Future Total PM  
05/11/2026

|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBR                                                                               |
| Lane Configurations               |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)              | 65                                                                                | 4                                                                                 | 173                                                                               | 51                                                                                | 0                                                                                 | 156                                                                               |
| Future Volume (vph)               | 65                                                                                | 4                                                                                 | 173                                                                               | 51                                                                                | 0                                                                                 | 156                                                                               |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Frt                               | 0.993                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.865                                                                             |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   | 0.963                                                                             |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 1908                                                                              | 0                                                                                 | 0                                                                                 | 1850                                                                              | 1662                                                                              | 0                                                                                 |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   | 0.963                                                                             |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 1908                                                                              | 0                                                                                 | 0                                                                                 | 1850                                                                              | 1662                                                                              | 0                                                                                 |
| Link Speed (k/h)                  | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                | 40                                                                                |                                                                                   |
| Link Distance (m)                 | 28.9                                                                              |                                                                                   |                                                                                   | 68.7                                                                              | 218.6                                                                             |                                                                                   |
| Travel Time (s)                   | 2.6                                                                               |                                                                                   |                                                                                   | 6.2                                                                               | 19.7                                                                              |                                                                                   |
| Confl. Peds. (#/hr)               |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 17                                                                                | 19                                                                                |
| Peak Hour Factor                  | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                |
| Adj. Flow (vph)                   | 72                                                                                | 4                                                                                 | 192                                                                               | 57                                                                                | 0                                                                                 | 173                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 76                                                                                | 0                                                                                 | 0                                                                                 | 249                                                                               | 173                                                                               | 0                                                                                 |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Left                                                                              | Right                                                                             |
| Median Width(m)                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               | 3.7                                                                               |                                                                                   |
| Link Offset(m)                    | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   |
| Crosswalk Width(m)                | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               | 1.6                                                                               |                                                                                   |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor                    | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              |
| Turning Speed (k/h)               |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 24                                                                                | 14                                                                                |
| Sign Control                      | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              | Stop                                                                              |                                                                                   |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 38.0%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Premium Way & Harborn Road

Future Total PM  
05/11/2026

|                                   |      |       |      |                      |      |      |
|-----------------------------------|------|-------|------|----------------------|------|------|
|                                   | →    | ↘     | ↙    | ←                    | ↖    | ↗    |
| Movement                          | EBT  | EBR   | WBL  | WBT                  | NBL  | NBR  |
| Lane Configurations               | ↱    |       |      | ↰                    | ↘↙   |      |
| Traffic Volume (veh/h)            | 65   | 4     | 173  | 51                   | 0    | 156  |
| Future Volume (Veh/h)             | 65   | 4     | 173  | 51                   | 0    | 156  |
| Sign Control                      | Free |       |      | Free                 | Stop |      |
| Grade                             | 0%   |       |      | 0%                   | 0%   |      |
| Peak Hour Factor                  | 0.90 | 0.90  | 0.90 | 0.90                 | 0.90 | 0.90 |
| Hourly flow rate (vph)            | 72   | 4     | 192  | 57                   | 0    | 173  |
| Pedestrians                       | 17   |       |      | 19                   | 2    |      |
| 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)               |      |       |      | 69                   |      |      |
| pX, platoon unblocked             |      |       |      |                      | 0.97 |      |
| vC, conflicting volume            |      |       | 78   |                      | 534  | 95   |
| vC1, stage 1 conf vol             |      |       |      |                      |      |      |
| vC2, stage 2 conf vol             |      |       |      |                      |      |      |
| vCu, unblocked vol                |      |       | 78   |                      | 501  | 95   |
| tC, single (s)                    |      |       | 4.1  |                      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |      |       |      |                      |      |      |
| tF (s)                            |      |       | 2.2  |                      | 3.5  | 3.3  |
| p0 queue free %                   |      |       | 87   |                      | 100  | 82   |
| cM capacity (veh/h)               |      |       | 1530 |                      | 443  | 947  |
| Direction, Lane #                 | EB 1 | WB 1  | NB 1 |                      |      |      |
| Volume Total                      | 76   | 249   | 173  |                      |      |      |
| Volume Left                       | 0    | 192   | 0    |                      |      |      |
| Volume Right                      | 4    | 0     | 173  |                      |      |      |
| cSH                               | 1700 | 1530  | 947  |                      |      |      |
| Volume to Capacity                | 0.04 | 0.13  | 0.18 |                      |      |      |
| Queue Length 95th (m)             | 0.0  | 3.3   | 5.1  |                      |      |      |
| Control Delay (s)                 | 0.0  | 6.2   | 9.6  |                      |      |      |
| Lane LOS                          |      | A     | A    |                      |      |      |
| Approach Delay (s)                | 0.0  | 6.2   | 9.6  |                      |      |      |
| Approach LOS                      |      |       | A    |                      |      |      |
| Intersection Summary              |      |       |      |                      |      |      |
| Average Delay                     |      | 6.4   |      |                      |      |      |
| Intersection Capacity Utilization |      | 38.0% |      | ICU Level of Service |      | A    |
| Analysis Period (min)             |      | 15    |      |                      |      |      |

## 4: Hurontario Street &amp; Harbourn Road/North Service Road

05/11/2026

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 47                                                                                | 0                                                                                 | 205                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 186                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 33                                                                                  |
| Future Volume (vph)        | 47                                                                                | 0                                                                                 | 205                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 186                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 33                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Storage Length (m)         | 16.5                                                                              |                                                                                   | 0.0                                                                               | 56.0                                                                              |                                                                                   | 0.0                                                                               | 62.0                                                                                |                                                                                     | 0.0                                                                                 | 43.5                                                                                |                                                                                     | 0.0                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (m)           | 21.5                                                                              |                                                                                   |                                                                                   | 63.0                                                                              |                                                                                   |                                                                                   | 28.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 0.90                                                                              | 0.94                                                                              |                                                                                   | 0.97                                                                              |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.84                                                                                |                                                                                     |                                                                                     | 0.89                                                                                |
| Frt                        |                                                                                   | 0.850                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1789                                                                              | 1494                                                                              | 0                                                                                 | 1825                                                                              | 1902                                                                              | 0                                                                                 | 1825                                                                                | 3650                                                                                | 1633                                                                                | 1921                                                                                | 3650                                                                                | 1585                                                                                |
| Flt Permitted              | 0.757                                                                             |                                                                                   |                                                                                   | 0.381                                                                             |                                                                                   |                                                                                   | 0.197                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1282                                                                              | 1494                                                                              | 0                                                                                 | 709                                                                               | 1902                                                                              | 0                                                                                 | 378                                                                                 | 3650                                                                                | 1373                                                                                | 1921                                                                                | 3650                                                                                | 1407                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 220                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 248                                                                                 |                                                                                     |                                                                                     | 61                                                                                  |
| Link Speed (k/h)           |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 50                                                                                  |                                                                                     |                                                                                     | 50                                                                                  |                                                                                     |
| Link Distance (m)          |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 136.9                                                                             |                                                                                   |                                                                                     | 172.4                                                                               |                                                                                     |                                                                                     | 113.1                                                                               |                                                                                     |
| Travel Time (s)            |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 8.2                                                                               |                                                                                   |                                                                                     | 12.4                                                                                |                                                                                     |                                                                                     | 8.1                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)        | 65                                                                                |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 65                                                                                | 26                                                                                  |                                                                                     | 39                                                                                  | 39                                                                                  |                                                                                     | 26                                                                                  |
| Peak Hour Factor           | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 1%                                                                                | 3%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 3%                                                                                  |
| Adj. Flow (vph)            | 48                                                                                | 0                                                                                 | 211                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 192                                                                                 | 785                                                                                 | 248                                                                                 | 0                                                                                   | 1204                                                                                | 34                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 48                                                                                | 211                                                                               | 0                                                                                 | 2                                                                                 | 1                                                                                 | 0                                                                                 | 192                                                                                 | 785                                                                                 | 248                                                                                 | 0                                                                                   | 1204                                                                                | 34                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(m)            |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                   | 3.7                                                                               |                                                                                   |                                                                                     | 3.7                                                                                 |                                                                                     |                                                                                     | 3.7                                                                                 |                                                                                     |
| Link Offset(m)             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Crosswalk Width(m)         |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                   | 1.6                                                                               |                                                                                   |                                                                                     | 1.6                                                                                 |                                                                                     |                                                                                     | 1.6                                                                                 |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                |
| Turning Speed (k/h)        | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                |                                                                                   | 14                                                                                | 24                                                                                  |                                                                                     | 14                                                                                  | 24                                                                                  |                                                                                     | 14                                                                                  |
| Number of Detectors        | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   | 1                                                                                   | 2                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (m)       | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                               | 30.5                                                                              |                                                                                   | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 | 6.1                                                                                 | 30.5                                                                                | 6.1                                                                                 |
| Trailing Detector (m)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Position(m)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Size(m)         | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                               | 1.8                                                                               |                                                                                   | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 | 6.1                                                                                 | 1.8                                                                                 | 6.1                                                                                 |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 2 Position(m)     |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                   | 28.7                                                                              |                                                                                   |                                                                                     | 28.7                                                                                |                                                                                     |                                                                                     | 28.7                                                                                |                                                                                     |
| Detector 2 Size(m)         |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                   | 1.8                                                                               |                                                                                   |                                                                                     | 1.8                                                                                 |                                                                                     |                                                                                     | 1.8                                                                                 |                                                                                     |
| Detector 2 Type            |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                   | Cl+Ex                                                                             |                                                                                   |                                                                                     | Cl+Ex                                                                               |                                                                                     |                                                                                     | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |

## 4: Hurontario Street &amp; Harbourn Road/North Service Road

05/11/2026

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Turn Type               | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                              | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases        |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                  | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Permitted Phases        | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   |
| Detector Phase          | 4                                                                                 | 4                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                  | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 5.0                                                                                | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |
| Minimum Split (s)       | 40.0                                                                              | 40.0                                                                              |                                                                                   | 40.0                                                                              | 40.0                                                                              |                                                                                   | 9.5                                                                                | 30.0                                                                                | 30.0                                                                                | 30.0                                                                                | 30.0                                                                                | 30.0                                                                                |
| Total Split (s)         | 49.0                                                                              | 49.0                                                                              |                                                                                   | 49.0                                                                              | 49.0                                                                              |                                                                                   | 20.0                                                                               | 91.0                                                                                | 91.0                                                                                | 91.0                                                                                | 91.0                                                                                | 91.0                                                                                |
| Total Split (%)         | 30.6%                                                                             | 30.6%                                                                             |                                                                                   | 30.6%                                                                             | 30.6%                                                                             |                                                                                   | 12.5%                                                                              | 56.9%                                                                               | 56.9%                                                                               | 56.9%                                                                               | 56.9%                                                                               | 56.9%                                                                               |
| Maximum Green (s)       | 40.0                                                                              | 40.0                                                                              |                                                                                   | 40.0                                                                              | 40.0                                                                              |                                                                                   | 17.0                                                                               | 83.0                                                                                | 83.0                                                                                | 83.0                                                                                | 83.0                                                                                | 83.0                                                                                |
| Yellow Time (s)         | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 3.0                                                                                | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 |
| All-Red Time (s)        | 5.0                                                                               | 5.0                                                                               |                                                                                   | 5.0                                                                               | 5.0                                                                               |                                                                                   | 0.0                                                                                | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 3.0                                                                                | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                               | Max                                                                                 | Max                                                                                 | Max                                                                                 | Max                                                                                 | Max                                                                                 |
| Walk Time (s)           | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   |                                                                                    | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |
| Flash Dont Walk (s)     | 22.0                                                                              | 22.0                                                                              |                                                                                   | 22.0                                                                              | 22.0                                                                              |                                                                                   |                                                                                    | 14.0                                                                                | 14.0                                                                                | 14.0                                                                                | 14.0                                                                                | 14.0                                                                                |
| Pedestrian Calls (#/hr) | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Act Effect Green (s)    | 10.5                                                                              | 10.5                                                                              |                                                                                   | 10.5                                                                              | 10.5                                                                              |                                                                                   | 96.6                                                                               | 83.1                                                                                | 83.1                                                                                |                                                                                     | 83.1                                                                                | 83.1                                                                                |
| Actuated g/C Ratio      | 0.09                                                                              | 0.09                                                                              |                                                                                   | 0.09                                                                              | 0.09                                                                              |                                                                                   | 0.79                                                                               | 0.68                                                                                | 0.68                                                                                |                                                                                     | 0.68                                                                                | 0.68                                                                                |
| v/c Ratio               | 0.44                                                                              | 0.64                                                                              |                                                                                   | 0.03                                                                              | 0.01                                                                              |                                                                                   | 0.48                                                                               | 0.32                                                                                | 0.24                                                                                |                                                                                     | 0.48                                                                                | 0.03                                                                                |
| Control Delay           | 66.1                                                                              | 15.5                                                                              |                                                                                   | 52.5                                                                              | 51.0                                                                              |                                                                                   | 6.7                                                                                | 8.7                                                                                 | 1.6                                                                                 |                                                                                     | 10.5                                                                                | 0.6                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 66.1                                                                              | 15.5                                                                              |                                                                                   | 52.5                                                                              | 51.0                                                                              |                                                                                   | 6.7                                                                                | 8.7                                                                                 | 1.6                                                                                 |                                                                                     | 10.5                                                                                | 0.6                                                                                 |
| LOS                     | E                                                                                 | B                                                                                 |                                                                                   | D                                                                                 | D                                                                                 |                                                                                   | A                                                                                  | A                                                                                   | A                                                                                   |                                                                                     | B                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 24.9                                                                              |                                                                                   |                                                                                   | 52.0                                                                              |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 10.3                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 122.1

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 10.2

Intersection LOS: B

Intersection Capacity Utilization 83.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Hurontario Street &amp; Harbourn Road/North Service Road



## Queues

Future Total PM

## 4: Hurontario Street &amp; Harbourn Road/North Service Road

05/11/2026



| Lane Group             | EBL  | EBT  | WBL  | WBT   | NBL  | NBT   | NBR  | SBT  | SBR  |
|------------------------|------|------|------|-------|------|-------|------|------|------|
| Lane Group Flow (vph)  | 48   | 211  | 2    | 1     | 192  | 785   | 248  | 1204 | 34   |
| v/c Ratio              | 0.44 | 0.64 | 0.03 | 0.01  | 0.48 | 0.32  | 0.24 | 0.48 | 0.03 |
| Control Delay          | 66.1 | 15.5 | 52.5 | 51.0  | 6.7  | 8.7   | 1.6  | 10.5 | 0.6  |
| Queue Delay            | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| Total Delay            | 66.1 | 15.5 | 52.5 | 51.0  | 6.7  | 8.7   | 1.6  | 10.5 | 0.6  |
| Queue Length 50th (m)  | 11.1 | 0.0  | 0.4  | 0.2   | 7.2  | 35.7  | 0.0  | 64.1 | 0.0  |
| Queue Length 95th (m)  | 24.1 | 20.5 | 3.1  | 2.1   | 14.4 | 55.6  | 9.1  | 96.7 | 1.4  |
| Internal Link Dist (m) |      | 0.1  |      | 112.9 |      | 148.4 |      | 89.1 |      |
| Turn Bay Length (m)    | 16.5 |      | 56.0 |       | 62.0 |       |      |      |      |
| Base Capacity (vph)    | 420  | 637  | 232  | 623   | 510  | 2483  | 1013 | 2483 | 977  |
| Starvation Cap Reductn | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Spillback Cap Reductn  | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Storage Cap Reductn    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    |
| Reduced v/c Ratio      | 0.11 | 0.33 | 0.01 | 0.00  | 0.38 | 0.32  | 0.24 | 0.48 | 0.03 |
| Intersection Summary   |      |      |      |       |      |       |      |      |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Hurontario Street & Harbourn Road/North Service Road

Future Total PM  
05/11/2026

|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |  |  |  |  |
| Traffic Volume (vph)              | 47                                                                                | 0                                                                                 | 205                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 186                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 33                                                                                  |
| Future Volume (vph)               | 47                                                                                | 0                                                                                 | 205                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 186                                                                                 | 761                                                                                 | 241                                                                                 | 0                                                                                   | 1168                                                                                | 33                                                                                  |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Total Lost time (s)               | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 3.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |
| Frpb, ped/bikes                   | 1.00                                                                              | 0.95                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.87                                                                                |                                                                                     | 1.00                                                                                | 0.91                                                                                |
| Flpb, ped/bikes                   | 0.92                                                                              | 1.00                                                                              |                                                                                   | 0.98                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Frt                               | 1.00                                                                              | 0.85                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 0.85                                                                                |                                                                                     | 1.00                                                                                | 0.85                                                                                |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (prot)                 | 1652                                                                              | 1511                                                                              |                                                                                   | 1781                                                                              | 1902                                                                              |                                                                                   | 1822                                                                                | 3650                                                                                | 1427                                                                                |                                                                                     | 3650                                                                                | 1442                                                                                |
| Flt Permitted                     | 0.76                                                                              | 1.00                                                                              |                                                                                   | 0.38                                                                              | 1.00                                                                              |                                                                                   | 0.20                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Satd. Flow (perm)                 | 1317                                                                              | 1511                                                                              |                                                                                   | 714                                                                               | 1902                                                                              |                                                                                   | 377                                                                                 | 3650                                                                                | 1427                                                                                |                                                                                     | 3650                                                                                | 1442                                                                                |
| Peak-hour factor, PHF             | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Adj. Flow (vph)                   | 48                                                                                | 0                                                                                 | 211                                                                               | 2                                                                                 | 1                                                                                 | 0                                                                                 | 192                                                                                 | 785                                                                                 | 248                                                                                 | 0                                                                                   | 1204                                                                                | 34                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 193                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 79                                                                                  | 0                                                                                   | 0                                                                                   | 11                                                                                  |
| Lane Group Flow (vph)             | 48                                                                                | 18                                                                                | 0                                                                                 | 2                                                                                 | 1                                                                                 | 0                                                                                 | 192                                                                                 | 785                                                                                 | 169                                                                                 | 0                                                                                   | 1204                                                                                | 23                                                                                  |
| Confl. Peds. (#/hr)               | 65                                                                                |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   | 65                                                                                | 26                                                                                  |                                                                                     | 39                                                                                  | 39                                                                                  |                                                                                     | 26                                                                                  |
| Heavy Vehicles (%)                | 2%                                                                                | 1%                                                                                | 3%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  | 3%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  | Perm                                                                                | Perm                                                                                | NA                                                                                  | Perm                                                                                |
| Protected Phases                  |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 4                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   |
| Actuated Green, G (s)             | 10.5                                                                              | 10.5                                                                              |                                                                                   | 10.5                                                                              | 10.5                                                                              |                                                                                   | 91.6                                                                                | 83.1                                                                                | 83.1                                                                                |                                                                                     | 83.1                                                                                | 83.1                                                                                |
| Effective Green, g (s)            | 10.5                                                                              | 10.5                                                                              |                                                                                   | 10.5                                                                              | 10.5                                                                              |                                                                                   | 91.6                                                                                | 83.1                                                                                | 83.1                                                                                |                                                                                     | 83.1                                                                                | 83.1                                                                                |
| Actuated g/C Ratio                | 0.09                                                                              | 0.09                                                                              |                                                                                   | 0.09                                                                              | 0.09                                                                              |                                                                                   | 0.75                                                                                | 0.68                                                                                | 0.68                                                                                |                                                                                     | 0.68                                                                                | 0.68                                                                                |
| Clearance Time (s)                | 9.0                                                                               | 9.0                                                                               |                                                                                   | 9.0                                                                               | 9.0                                                                               |                                                                                   | 3.0                                                                                 | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |
| Vehicle Extension (s)             | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |
| Lane Grp Cap (vph)                | 113                                                                               | 129                                                                               |                                                                                   | 61                                                                                | 163                                                                               |                                                                                   | 383                                                                                 | 2484                                                                                | 971                                                                                 |                                                                                     | 2484                                                                                | 981                                                                                 |
| v/s Ratio Prot                    |                                                                                   | 0.01                                                                              |                                                                                   |                                                                                   | 0.00                                                                              |                                                                                   | c0.03                                                                               | 0.22                                                                                |                                                                                     |                                                                                     | 0.33                                                                                |                                                                                     |
| v/s Ratio Perm                    | c0.04                                                                             |                                                                                   |                                                                                   | 0.00                                                                              |                                                                                   |                                                                                   | c0.34                                                                               |                                                                                     | 0.12                                                                                |                                                                                     |                                                                                     | 0.02                                                                                |
| v/c Ratio                         | 0.42                                                                              | 0.14                                                                              |                                                                                   | 0.03                                                                              | 0.01                                                                              |                                                                                   | 0.50                                                                                | 0.32                                                                                | 0.17                                                                                |                                                                                     | 0.48                                                                                | 0.02                                                                                |
| Uniform Delay, d1                 | 52.9                                                                              | 51.6                                                                              |                                                                                   | 51.1                                                                              | 51.0                                                                              |                                                                                   | 5.5                                                                                 | 7.9                                                                                 | 7.1                                                                                 |                                                                                     | 9.3                                                                                 | 6.3                                                                                 |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |
| Incremental Delay, d2             | 2.6                                                                               | 0.5                                                                               |                                                                                   | 0.2                                                                               | 0.0                                                                               |                                                                                   | 1.0                                                                                 | 0.3                                                                                 | 0.4                                                                                 |                                                                                     | 0.7                                                                                 | 0.0                                                                                 |
| Delay (s)                         | 55.5                                                                              | 52.1                                                                              |                                                                                   | 51.4                                                                              | 51.0                                                                              |                                                                                   | 6.5                                                                                 | 8.3                                                                                 | 7.5                                                                                 |                                                                                     | 10.0                                                                                | 6.4                                                                                 |
| Level of Service                  | E                                                                                 | D                                                                                 |                                                                                   | D                                                                                 | D                                                                                 |                                                                                   | A                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |
| Approach Delay (s)                |                                                                                   | 52.8                                                                              |                                                                                   |                                                                                   | 51.3                                                                              |                                                                                   |                                                                                     | 7.8                                                                                 |                                                                                     |                                                                                     | 9.9                                                                                 |                                                                                     |
| Approach LOS                      |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            | 13.1                                                                              |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                         |                                                                                   |                                                                                   | B                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio | 0.49                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         | 122.1                                                                             |                                                                                   |                                                                                   | Sum of lost time (s)                                                              |                                                                                   |                                                                                   | 20.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 83.7%                                                                             |                                                                                   |                                                                                   | ICU Level of Service                                                              |                                                                                   |                                                                                   | E                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |