



# Traffic Impact Study

Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough

Base-Land Development Inc.

December 5, 2025

➔ The Power of Commitment



**GHD**

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Our ref: 12680152



December 5, 2025

Jeff Peters  
Base-Land Development Inc.

sent via email

Subject: **Traffic Impact Study  
Proposed Residential Development in Bridgenorth  
Township of Selwyn, County of Peterborough**

Dear Jeff:

GHD is pleased to submit the enclosed Traffic Impact Study for the proposed residential development located in Bridgenorth southeast of Bridge Road and Ward Street.

The purpose of this report is to determine the traffic-related impacts on the roadway system from the proposed residential development.

The development consists of 38 residential lots (38 homes) and two streets A and B to East Communication Road and Gore Street, respectively.

We trust the enclosed is sufficient for your needs, but please do not hesitate to contact the undersigned should you require any additional assistance.

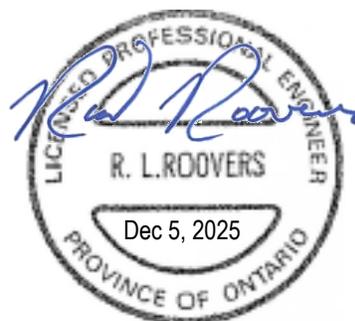
Sincerely,  
GHD

A handwritten signature in black ink, appearing to read "Sary Hafez", with a stylized flourish at the end.

**Sary Hafez, M.Eng.**  
Transportation Planner  
sary.hafez@ghd.com

SH/RR

Encl.



**Roland Roovers, P.Eng.**  
Senior Manager, Transportation Planning  
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# Executive summary

- 1) The proposed development is located in the community of Bridgenorth, north of Peterborough and generally southeast of the intersection of Bridge Road and Ward Street in the Township of Selwyn, County of Peterborough.
- 2) The purpose of this report is to determine the traffic-related impacts on the roadway system from the proposed residential development.
- 3) Based on the current site plan, the development consists of 38 lots (38 homes) and access is provided via Streets A and B to East Communication Road / 7<sup>th</sup> Line and Gore Street, respectively. There is also an internal street, Street C.
- 4) As confirmed by the County and Township, the study intersections for capacity analysis are:
  - Ward Street (CR 18) / East Communication Road (existing STOP intersection),
  - Ward Street / Bridge Road (CR 14) (existing traffic signals),
  - Ward Street / Gore Street (existing STOP intersection),
  - Ward Street / Willcox Street (existing traffic signals),
  - Centre Line Smith (CR 24) / 7<sup>th</sup> Line,
  - Proposed Street A / East Communication Road / 7<sup>th</sup> Line, and
  - Proposed Street B / Gore Street.
- 5) The available weekday turning movement counts were received from the County for some of the study intersections. The remaining existing study intersections turning movement counts were conducted by Ontario Traffic Inc (OTI) in November 2024 and October 2025.
- 6) Due to the size and nature of the proposed development, 2028 is the expected year of full build-out. Therefore, the study horizons will be 2028 and 2033 (full build-out and 5 beyond full build-out).
- 7) Subject site vehicular trips were estimated based on the trip rates of Residential (LUC #210) provided by Trip Generation, 12<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE).

Based on the current site plan, the site is expected have 31 two-way vehicle trips during the weekday AM peak hour and 40 two-way vehicle trips during the weekday PM peak hour. The directional distribution of traffic entering and exiting the subject development was determined based on similar patterns as existing traffic.

- 8) Existing traffic volumes can be accommodated by existing road network except at the intersection of Ward Street / Gore Street. This is due the combination of the number of vehicles exiting Gore Street and the number of vehicles on Ward Street. With the existing traffic signals both north and south of this intersection at Bridge Road and at Willcox Street, there are sufficient gaps in Ward Street volumes to accommodate the vehicles from Gore Street. The volumes from Gore Street are too small to warrant traffic signals at this time nor in the near future, including 2033 estimated traffic.

- 9) The Ward Street EA recommends increasing the Ward Street capacity through two additional lanes along Ward Street (one in each direction). This would improve the operational performance of the Ward Street and Gore Street intersection. However, this report does not rely on this recommendation.
- 10) Background and total traffic for 2028 and 2033 can be accommodated by the existing road infrastructure, including at Ward Street / Gore Street for the same reason that the existing signals at Bridge Road and at Willcox Street will provide sufficient gaps in the Ward Street traffic to accommodate the low volumes turning from Gore Street. Therefore, the proposed development can be accommodated by the existing road infrastructure.

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# 1. Introduction

## 1.1 Retainer and objective

GHD was retained by Base-Land Development Inc. to prepare a Transportation Impact Study to determine the transportation related impacts on the roadway system from the proposed residential development.

The proposed development is located in the community of Bridgenorth, north of Peterborough and generally southeast of the intersection of Bridge Road and Ward St in the Township of Selwyn, County of Peterborough. The site location is shown in **Figure 1**.



**Figure 1** Proposed Site Location

## 1.2 Study background

To support the proposed site plan and access configurations, this Transportation Impact Study uses the weekday turning movement counts received from the County, and conducted by OTI, identifies future near-by background developments, and determines the traffic-related impacts on the roadway system due to the proposed development traffic.

The Terms of Reference correspondence has been provided in **Appendix A**.

Our findings, conclusions and recommendations are contained herein.

## 1.3 Study team

The project team members involved in the preparation of this study are:

- Mr. Roland Roovers, P.Eng., Senior Manager, Transportation Planning
- Mr. Sary Hafez, M.Eng., Transportation Planner.

## 2. Site characteristics

### 2.1 Site environs

The subject site is currently used for agriculture. The property is generally bounded by residential to the north, vacant to the south, Gore Street to the west, East Communication Road to the east in the County of Peterborough, Township of Selwyn, as shown in **Figure 1**.

### 2.2 Study area

As confirmed by the County and Township, the study intersections for capacity analysis are:

- Ward Street (CR 18) / East Communication Road (existing STOP intersection),
- Ward Street / Bridge Road (CR 14) (existing traffic signals),
- Ward Street / Gore Street (existing STOP intersection),
- Ward Street / Willcox Street (existing traffic signals),
- Centre Line Smith (CR 24) / 7<sup>th</sup> Line,
- Proposed Street A / East Communication Road / 7<sup>th</sup> Line, and
- Proposed Street B / Gore Street.

### 2.3 Site plan

Based on the current site plan, the proposed development consists of 10.51 ha of residential development resulting in 38 residential lots (38 homes).

Vehicular access will be provided via two roads, Streets A and B, connected to East Communication Road / 7<sup>th</sup> Line and to Gore Road, respectively. The 38 residential units are accessible via three internal roads, Streets A, B, and C. **Figure 2** shows the site plan of the proposed development. The site plan is also provided in **Appendix B**.

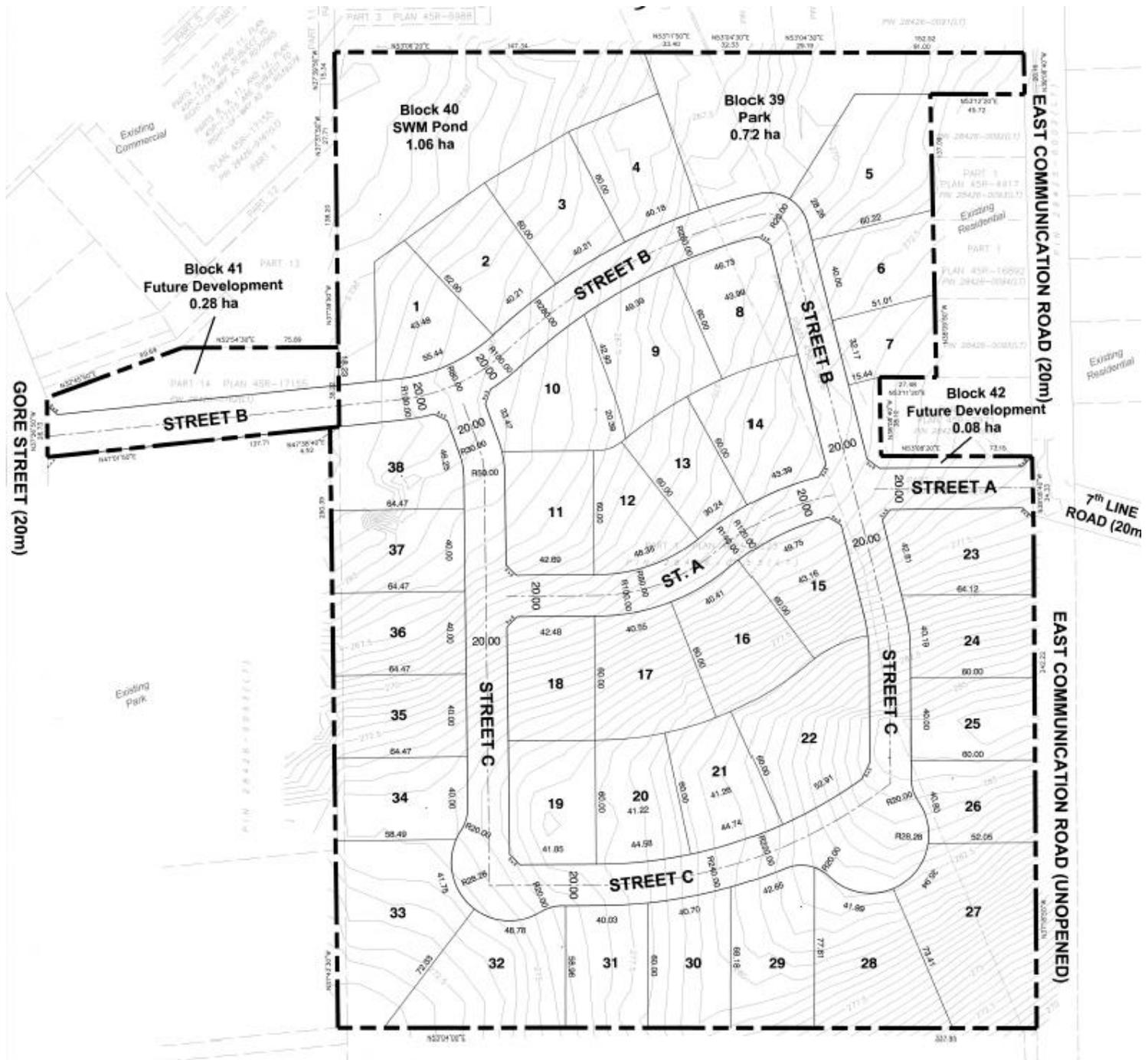


Figure 2 Site Plan

## 3. Existing traffic conditions

### 3.1 Existing road network

The following describes the existing road infrastructure in the study area. **Figure 3** shows the existing lane configurations and traffic controls of the study intersections (see **Study Figures** at end of report).

#### ***Ward Street (CR 18)***

Ward Street is a two-lane County Road under the jurisdiction of the County of Peterborough through the Study Area running north-south. The posted speed on Ward Street is 50 km/h through the Study Area. There are sidewalks along both the east and west sides of the road, with multiple driveways and commercial access points.

#### ***Centre Line Smith (CR 24)***

Centre Line Smith is a two-lane County Road that is under the jurisdiction of the County of Peterborough at the study area intersection running north-south. The roadway features unpaved shoulders on both sides and is bordered by multiple residential driveways.

#### ***Bridge Road (CR 14)***

Bridge Road is two-lane County Road that is under the jurisdiction of the County of Peterborough at the study area intersection. The posted speed on Bridge Road is 50 km/h through the Study Area. The roadway features unpaved sidewalks on both sides of the road.

#### ***East Communication Road***

East Communication Road is a two-lane local road running east-west that is under the jurisdiction of the Township of Selwyn with a posted speed limit of 50 km/h.

#### ***Gore Street***

Gore Street is a two-lane local road running east-west that is under the jurisdiction of the Township of Selwyn with a posted speed limit of 50 km/h.

#### ***7<sup>th</sup> Line***

7<sup>th</sup> Line is a two-lane local road running east-west that is under the jurisdiction of the Township of Selwyn with a posted speed limit of 50 km/h.

### 3.2 Existing traffic data

The available weekday turning movement counts for Wilcox Street and Ward Street were received from the Region and the remaining turning movement counts were conducted by OTI in November 2024 and June 2025 at the existing study intersections. A breakdown of the intersection turning movement count data is available in **Table 1**. The selected data source is highlighted in grey.

**Table 1 Turning Movement Counts – Available Data**

| Intersection                        | Available Data  |
|-------------------------------------|---|
| Ward St (CR18) & E Communication Rd | Source: Previous Consultant study (OTI) November 19, 2024 |
| Ward St (CR18) & Bridge Rd (CR14)   | Source: GHD (OTI) October 14, 2025                        |
|                                     | Source: County May 20, 2023 (not used)                    |
|                                     | Source: County July 13, 2021 (not used)                   |
| Ward St (CR18) & Gore St            | Source: Previous Consultant study (OTI) November 19, 2024 |
| Ward St (CR18) & Willcox St         | Source: County June 25, 2025                              |
| 7th Line & Centre Line (CR24)       | Source: GHD (OTI) Oct 14, 2025                            |

**Appendix C** shows the collected traffic volumes for weekday AM and PM peak hours at the study area intersections. The existing signal timings for the study intersections were obtained from the County and are also provided in **Appendix C**.

### 3.3 Baseline traffic volumes

The existing weekday traffic volumes were collected over different survey years (2024 and 2025). To create a baseline traffic model, the 2024 turning movement counts were grown using a 2% growth rate per annum.

### 3.4 Seasonal Factor

Although the development is located in an area with peak summer traffic, the Ward Street EA completed in January 2025 does not account for a seasonal factor despite having collected data in April 2023. The turning movement counts were collected in November 2024, June 2025, and October 2025 represent the traffic conditions observed throughout the year in Bridgenorth. No seasonal factor of was applied to the baseline existing traffic in this TIS.

### 3.5 Existing (2025) traffic conditions

The capacity analysis identifies how well the intersections and driveways are operating. The analyses are based on the methodology contained in the Highway Capacity Manual, which assigns an intersection Level of Service (LOS) based on the average control delay experienced by each vehicle passing through that intersection.

Synchro software was utilized to conduct the analysis using the existing signal timing plans. Peak hour factors for the study intersections were based on the received turning movement counts and Region’s Guidelines for the Synchro analysis.

The existing signal timings for the study intersections were obtained from the Region and provided in **Appendix C**.

According to the County of Peterborough traffic Impact Assessment Guidelines, critical' intersection movements are defined as traffic movements where:

- At signalized intersections, movements with a volume/capacity (v/c) ratio greater than 0.85 and operating at level of service "F" are considered to be "critical" in terms of operations. Critical movements shall be evaluated for possible operational improvements.
- At unsignalized intersections, in a suburban environment with a speed of 60 km/hr or less, movements with a volume/capacity (v/c) ratio greater than 0.85 and operate at level of service "F" are considered to be "critical" in terms of operations. Critical movements shall be evaluated for possible operational improvements.

A annual growth rate of 2% was considered based on the County of Peterborough's recommendations. This growth rate was applied to the traffic data collected in 2024 to create the baseline 2025 traffic volumes. **Figure 4** (see **Study Figures** at the end of the report) shows the baseline traffic volumes for weekday AM and PM peak hours at the study area intersections.

**Table 2** summarizes the results of the existing intersection capacity analyses (see **Study Tables** at the end of the report). **Appendix D** contains the detailed existing intersection capacity analysis reports.

As indicated in **Table 2**, the existing traffic conditions are as follows:

#### Existing traffic signal timings and lane configuration

Under future background 2033 traffic conditions with existing lane configurations and existing signal timings, the two signalized study intersections are expected to operate with acceptable operational characteristics, LOS 'D' or better in the AM and PM peak hours.

#### Unsignalized intersections with existing lane configuration

Under existing traffic conditions with existing lane configurations, the SYNCHRO analysis indicated that the eastbound approach at the Gore Street and Ward Street intersection is expected to operate at a level of service "F", in the PM peak hour. However, there are traffic signals to the north (at Bridge Road) and to the south (at Willcox Street) of the Gore Street intersection that will provide gaps in the Ward Street traffic to allow Gore Street traffic to turn. This is very much like the existing Tim Horton's south of Willcox Street which we would expect to generate more vehicle traffic turning onto/from Ward Street than at Gore Street.

The Ward Street Environmental Study Report, attached in **Appendix E**, recommends a corridor expansion along Ward Street to a total of four lanes (two-lanes per direction). A four laned Ward Street was tested at Gore Street and Ward Street intersection with the SYNCHRO analysis indicating an acceptable level of service. However, since this expansion is expected to occur in a future horizon, it was not considered as part of this TIS.

All the remaining unsignalized study intersections are expected to operate with acceptable operational characteristics during the AM and PM peak hours with no critical movements and queue issues identified

## 4. Background conditions

### 4.1 Study horizon

Due to the size of the proposed development, 2028 is the expected year of full build-out of the development. Therefore, the study horizons are 2028, and 2033 (5 years beyond full build-out).

### 4.2 Future traffic corridor growth

A background annual growth rate of 2% was considered based on the County of Peterborough's recommendations. This growth rate was applied to estimate the future 2028 and 2033 background traffic volumes.

### 4.3 Other background development traffic

There are no background developments that would generate traffic which would impact the study intersections.

### 4.4 Background (2028) traffic conditions

The estimated background 2028 traffic volumes, shown in **Figure 5** (see **Study Figures** at the end of the report), were derived by combining the baseline traffic and net growth traffic volumes.

The future background 2028 traffic volumes (**Figure 5**) were subjected to intersection capacity analyses based on the same methodologies utilized for the existing traffic conditions. Synchro software was utilized to conduct analysis. Peak hour factors for the study intersections were based on the Region's Guidelines for the Synchro analysis. The lane configurations shown in **Figure 3** (see **Study Figures** at the end of report) was maintained for the background 2028 traffic scenario.

**Table 3** (see **Study Tables** at the end of the report) summarizes the results of the intersection capacity analysis for the background 2028 traffic. **Appendix F** contains detailed future background (2028) intersection capacity analysis reports.

As indicated in **Table 3**, the background 2028 traffic conditions are as follows:

#### Existing traffic signal timings and lane configurations

Under future background 2028 traffic conditions with existing lane configurations and existing signal timings, the two signalized study intersections are expected to operate with acceptable operational characteristics, LOS 'D' or better in the AM and PM peak hours.

#### Unsignalized intersections with existing lane configuration

Under future background 2028 traffic conditions with existing lane configurations, the SYNCHRO analysis indicated that the eastbound and westbound approaches at the Gore Street and Ward Street intersection are expected to operate above capacity at levels of service "F" and "E", respectively in the PM peak hour. However, with traffic signals north and south of this intersection at Bridge Road and at Willcox Street, gaps in the traffic will accommodate the low volume turning from Gore Street.

All the remaining unsignalized intersections are expected to operate with acceptable operational characteristics during the AM and PM peak hours with no critical movements and queue issues identified

## 4.5 Background (2033) traffic conditions

The estimated background 2033 traffic volumes, shown in **Figure 6** (see **Study Figures** at the end of the report), were derived by combining the baseline traffic and net growth traffic volumes.

The future background 2033 traffic volumes (**Figure 6**) were subjected to intersection capacity analyses based on the same methodologies utilized for the existing traffic conditions. Synchro software was utilized to conduct analysis. Peak hour factors for the study intersections were based on the Region's Guidelines for the Synchro analysis. The lane configurations shown in **Figure 3** (see **Study Figures** at the end of report) was maintained for the background 2033 traffic scenario.

**Table 4** (see **Study Tables** at the end of the report) summarizes the results of the intersection capacity analysis for the background 2033 traffic. **Appendix G** contains detailed future background (2033) intersection capacity analysis reports.

As indicated in **Table 4**, the 2033 background traffic conditions are as follows:

### Existing traffic signal timings and lane configurations

Under future background 2033 traffic conditions with existing lane configurations and existing signal timings, the two signalized study intersections are expected to operate with acceptable operational characteristics, LOS 'D' or better in the AM and PM peak hours.

### Unsignalized intersections with existing lane configuration

Under future background 2033 traffic conditions with existing lane configurations, the SYNCHRO analysis indicated that the westbound approach at the Gore Street and Ward Street intersection is expected to operate at levels of service "E" in the AM peak hour. In the PM peak hour, the eastbound and westbound approaches at the Gore Street and Ward Street intersection are expected to operate at levels of service "F". However, with traffic signals north and south of this intersection at Bridge Road and at Willcox Street, gaps in the traffic will accommodate the low volume turning from Gore Street.

All the remaining unsignalized intersections are expected to operate with acceptable operational characteristics during the AM and PM peak hours with no critical movements and queue issues identified.

# 5. Proposed site development

## 5.1 Site traffic generation

Based on the current site plan, the proposed development consists of 10.51 ha (1,131,287 ft<sup>2</sup>) of residential development, resulting in 38 units.

Subject site vehicular trips were estimated based on the trip rates of Residential Single Family Detached Housing (LUC #210), provided by Trip Generation, 12<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE). Transit, active transportation modes, and pass-by trips trip reductions were not considered in this analysis.

The estimated site trips are summarized in **Table 5** below and the ITE Trip Generation details are provided in **Appendix H**. Based on the current site plan, the site trips are expected to be 31 two-way vehicle trips during the weekday AM peak hour and 40 two-way vehicle trips during the weekday PM peak hour.

## 5.2 Directional distribution and assignment

The directional distribution of traffic approaching and departing the subject development is determined based upon an analysis of the shortest path (i.e vehicles arriving from the south are more likely to use Street B (via Gore Street) than Street A (via East Communication Road) to access the development. Based on the travel patterns of existing traffic, the development site trips were distributed based on the ratios summarized in **Table 6. Figure 7** (see **Study Figures** at the end of the report) show new site (net) trips.

The subject site trips are assigned to the study road network via the two proposed site accesses.

**Table 5 Site trip generation – ITE Trip Generation, 12<sup>th</sup> Edition**

| Land Use                       | Independent Variable | Parameter          | AM Peak Hour |           |           | PM Peak Hour |           |           |
|--------------------------------|----------------------|--------------------|--------------|-----------|-----------|--------------|-----------|-----------|
|                                |                      |                    | In           | Out       | Total     | In           | Out       | Total     |
| Single Family Detached Housing | 38 Lots              | Average Rate       | 7            | 20        | 27        | 22           | 13        | 35        |
|                                |                      | Fitted Curve       | 8            | 23        | 31        | 24           | 16        | 40        |
|                                |                      | <b>Total Trips</b> | <b>8</b>     | <b>23</b> | <b>31</b> | <b>24</b>    | <b>16</b> | <b>40</b> |

**Table 6 Trip distribution**

| Direction    | Trip Orientation          | AM Peak Hour |             | PM Peak Hour |             |
|--------------|---------------------------|--------------|-------------|--------------|-------------|
|              |                           | In           | Out         | In           | Out         |
| North        | Ward Street (CR 18)       | 16%          | 12%         | 20%          | 22%         |
|              | Centre Line Smith (CR 24) | 7%           | 5%          | 5%           | 5%          |
| South        | Ward Street (CR 18)       | 28%          | 47%         | 49%          | 34%         |
|              | Centre Line Smith (CR 24) | 6%           | 9%          | 6%           | 7%          |
| West         | E Communication Rd        | 0%           | 0%          | 1%           | 1%          |
|              | Bridge Rd (CR 14)         | 33%          | 18%         | 13%          | 28%         |
|              | Gore St                   | 0%           | 1%          | 0%           | 1%          |
|              | Willcox St                | 1%           | 0%          | 1%           | 0%          |
| East         | 7th Line                  | 1%           | 1%          | 0%           | 1%          |
|              | Gore St                   | 2%           | 6%          | 2%           | 2%          |
|              | Willcox St                | 5%           | 1%          | 3%           | 0%          |
|              | Bridge Rd (CR 14)         | 1%           | 1%          | 1%           | 0%          |
| <b>Total</b> |                           | <b>100%</b>  | <b>100%</b> | <b>100%</b>  | <b>100%</b> |

## 6. Total conditions

### 6.1 Total (2028) traffic conditions

The estimated total 2028 traffic volumes, shown in **Figure 8** (see **Study Figures** at the end of the report), were derived by combining the background 2028 traffic volumes (**Figure 5**), and subject site total trips (**Figure 7**).

The future total 2028 traffic volumes (**Figure 8**) were subjected to intersection capacity analyses based on the same methodologies utilized for the existing traffic conditions. Synchro software was utilized to conduct analysis. Peak hour factors for the study intersections were based on the Region's Guidelines for the Synchro analysis. The lane configurations shown in **Figure 3** (see **Study Figures** at the end of report) was maintained for the total 2028 traffic scenario.

**Table 7** (see **Study Tables** at the end of the report) summarizes the results of the intersection capacity analysis for the total 2028 traffic. **Appendix I** contains detailed future total (2028) intersection capacity analysis reports.

As indicated in **Table 7**, the future total 2028 traffic conditions are as follows:

#### Existing traffic signal timings and lane configurations

Under future background 2028 traffic conditions with existing lane configurations and existing signal timings, the two signalized study intersections are expected to operate with acceptable operational characteristics, LOS 'D' or better in the AM and PM peak hours.

#### Unsignalized intersections with existing lane configuration

Under future total 2028 traffic conditions with existing lane configurations, the SYNCHRO analysis indicated that the westbound approach at the Gore Street and Ward Street intersection is expected to operate with a level of service "F", in the AM and PM peak hours. The eastbound approach is expected to operate with a level of service "F" in the PM peak hour. The site generated traffic is expected to have minimal impact on the expected operational capacity of the Gore Street and Ward Street intersection. Under the existing lane configuration, site traffic will increase the westbound delay by 18 seconds and the eastbound delay by 7 seconds in the PM peak hour. However, with traffic signals north and south of this intersection at Bridge Road and at Willcox Street, gaps in the traffic will accommodate the low volume turning from Gore Street. Moreover, residential trips familiar with the area may re-route to the Willcox Street and Ward Street signalized intersection, which is expected to operate below capacity.

All the remaining unsignalized intersections are expected to operate with acceptable operational characteristics during the AM and PM peak hours with no critical movements and queue issues identified.

### 6.2 Total (2033) traffic conditions

The estimated total 2033 traffic volumes, shown in **Figure 9** (see **Study Figures** at the end of the report), were derived by combining the background 2028 traffic volumes (**Figure 6**), and subject site total trips (**Figure 7**).

The future total 2033 traffic volumes (**Figure 9**) were subjected to intersection capacity analyses based on the same methodologies utilized for the existing traffic conditions. Synchro software was utilized to conduct analysis. Peak hour factors for the study intersections were based on the Region's Guidelines for the Synchro analysis. The lane configurations shown in **Figure 3** (see **Study Figures** at the end of report) was maintained for the total 2033 traffic scenario.

**Table 8** (see **Study Tables** at the end of the report) summarizes the results of the intersection capacity analysis for the total 2033 traffic. **Appendix I** contains detailed future total (2033) intersection capacity analysis reports.

As indicated in **Table 8**, the future total 2033 traffic conditions are as follows:

#### Existing traffic signal timings and lane configurations

Under future background 2033 traffic conditions with existing lane configurations and existing signal timings, the two signalized study intersections are expected to operate with acceptable operational characteristics, LOS 'D' or better in the AM and PM peak hours.

#### Unsignalized intersections with existing lane configuration

Under future total 2033 traffic conditions with existing lane configurations, the SYNCHRO analysis indicated that the westbound approach at the Gore Street and Ward Street intersection is expected to operate at levels of service "F" in the AM peak hour. In the PM peak hour, the eastbound and westbound approaches at the Gore Street and Ward Street intersection are expected to operate at levels of service "F". The site generated traffic is expected to be minimal at the Gore Street and Ward Street intersection. Under the existing lane configuration, site traffic will increase the westbound delay by 100 seconds and the eastbound delay by 25 seconds in the PM peak hour. However, with traffic signals north and south of this intersection at Bridge Road and at Willcox Street, gaps in the traffic will accommodate the low volume turning from Gore Street. Moreover, residential trips familiar with the area may re-route to the Willcox Street and Ward Street signalized intersection, which is expected to operate below capacity.

All the remaining unsignalized intersections are expected to operate with acceptable operational characteristics during the AM and PM peak hours with no critical movements and queue issues identified.

## **7. Proposed Road Design**

Streets A, B and C are internal roads, designed to serve the residents and visitors of the Bridgenorth residential development. Streets A and B connect to the external road network via their intersection with East Communication Road and Gore Street respectively.

Road design will include sidewalk on at least one side as required by the Township of Selwyn Sidewalk Policy.

The bulbs on Street C are feasible from a snow clearing perspective with multiple passes from a snowplow.

## 8. Findings, conclusions and recommendations

- 1) The proposed development is located in the community of Bridgenorth, north of Peterborough and generally southeast of the intersection of Bridge Road and Ward Street in the Township of Selwyn, County of Peterborough.
- 2) The purpose of this report is to determine the traffic-related impacts on the roadway system from the proposed residential development.
- 3) Based on the current site plan, the development consists of 38 lots (38 homes) and access is provided via Streets A and B to East Communication Road / 7<sup>th</sup> Line and Gore Street, respectively. There is also an internal street, Street C.
- 4) As confirmed by the County and Township, the study intersections for capacity analysis are:
  - Ward Street (CR 18) / East Communication Road (existing STOP intersection),
  - Ward Street / Bridge Road (CR 14) (existing traffic signals),
  - Ward Street / Gore Street (existing STOP intersection),
  - Ward Street / Willcox Street (existing traffic signals),
  - Centre Line Smith (CR 24) / 7<sup>th</sup> Line,
  - Proposed Street A / East Communication Road / 7<sup>th</sup> Line, and
  - Proposed Street B / Gore Street.
- 5) The available weekday turning movement counts were received from the County for some of the study intersections. The remaining existing study intersections turning movement counts were conducted by Ontario Traffic Inc (OTI) in November 2024 and October 2025.
- 6) Due to the size and nature of the proposed development, 2028 is the expected year of full build-out. Therefore, the study horizons will be 2028 and 2033 (full build-out and 5 beyond full build-out).
- 7) Subject site vehicular trips were estimated based on the trip rates of Residential (LUC #210) provided by Trip Generation, 12<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE).

Based on the current site plan, the site is expected have 31 two-way vehicle trips during the weekday AM peak hour and 40 two-way vehicle trips during the weekday PM peak hour. The directional distribution of traffic entering and exiting the subject development was determined based on similar patterns as existing traffic.

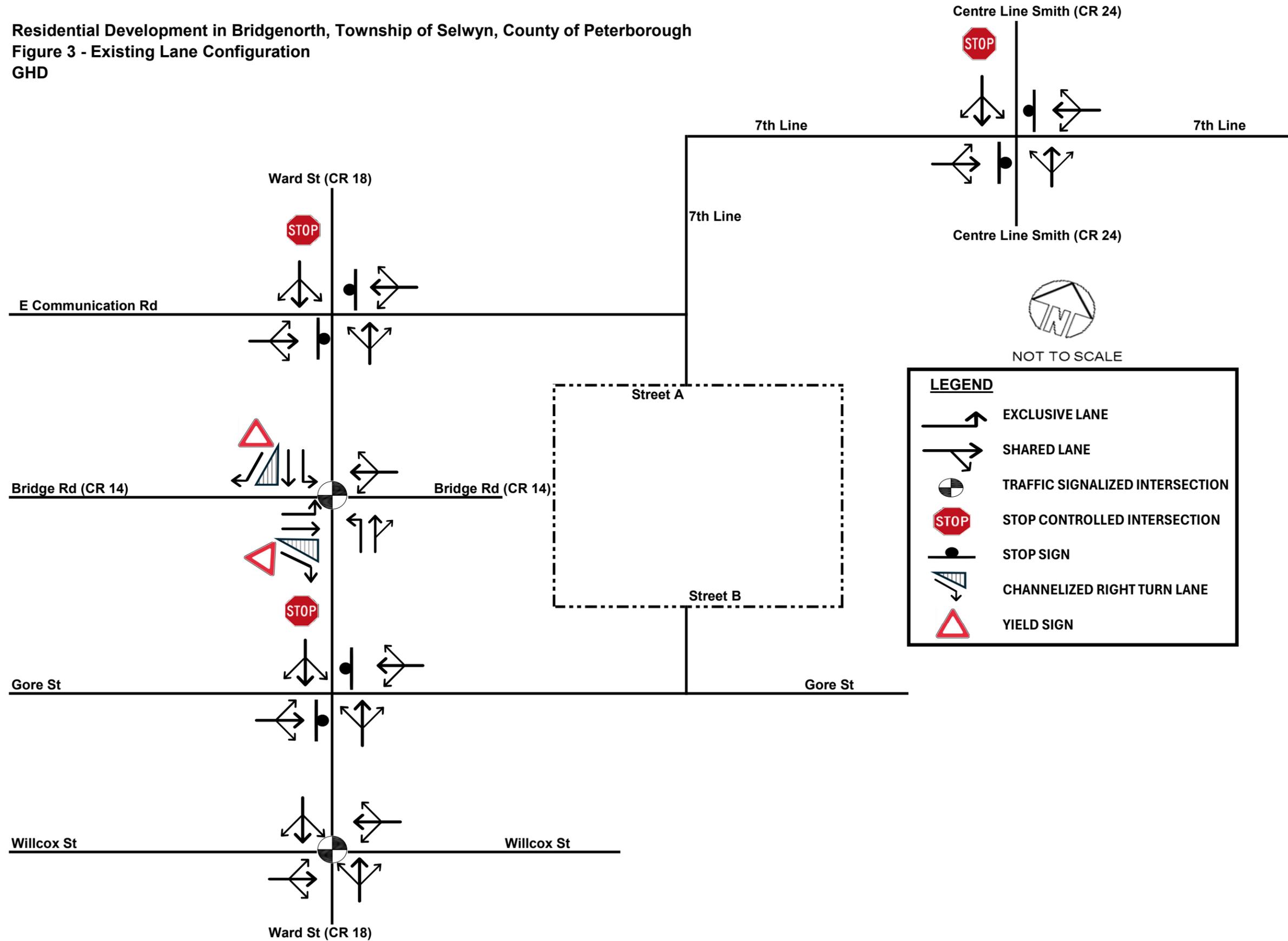
- 8) Existing traffic volumes can be accommodated by existing road network except at the intersection of Ward Street / Gore Street. This is due the combination of the number of vehicles exiting Gore Street and the number of vehicles on Ward Street. With the existing traffic signals both north and south of this intersection at Bridge Road and at Willcox Street, there are sufficient gaps in Ward Street volumes to accommodate the vehicles from Gore Street. The volumes from Gore Street are too small to warrant traffic signals at this time nor in the near future, including 2033 estimated traffic.

- 9) The Ward Street EA recommends increasing the Ward Street capacity through two additional lanes along Ward Street (one in each direction). This would improve the operational performance of the Ward Street and Gore Street intersection. However, this report does not rely on this recommendation.
- 11) Background and total traffic for 2028 and 2033 can be accommodated by the existing road infrastructure, including at Ward Street / Gore Street for the same reason that the existing signals at Bridge Road and at Willcox Street will provide sufficient gaps in the Ward Street traffic to accommodate the low volumes turning from Gore Street. Therefore, the proposed development can be accommodated by the existing road infrastructure.

# Figures

**Report Figures**

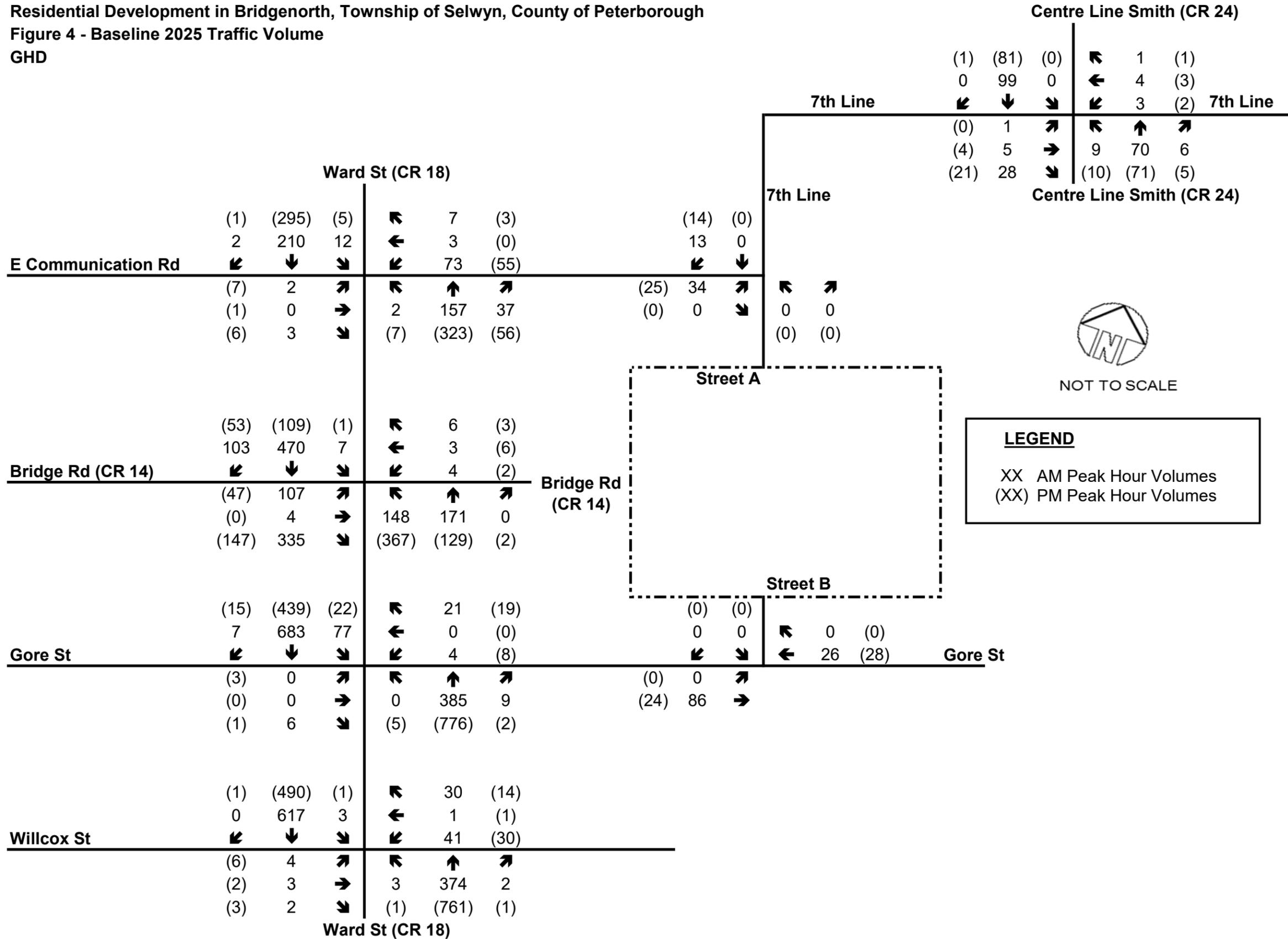
Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough  
 Figure 3 - Existing Lane Configuration  
 GHD



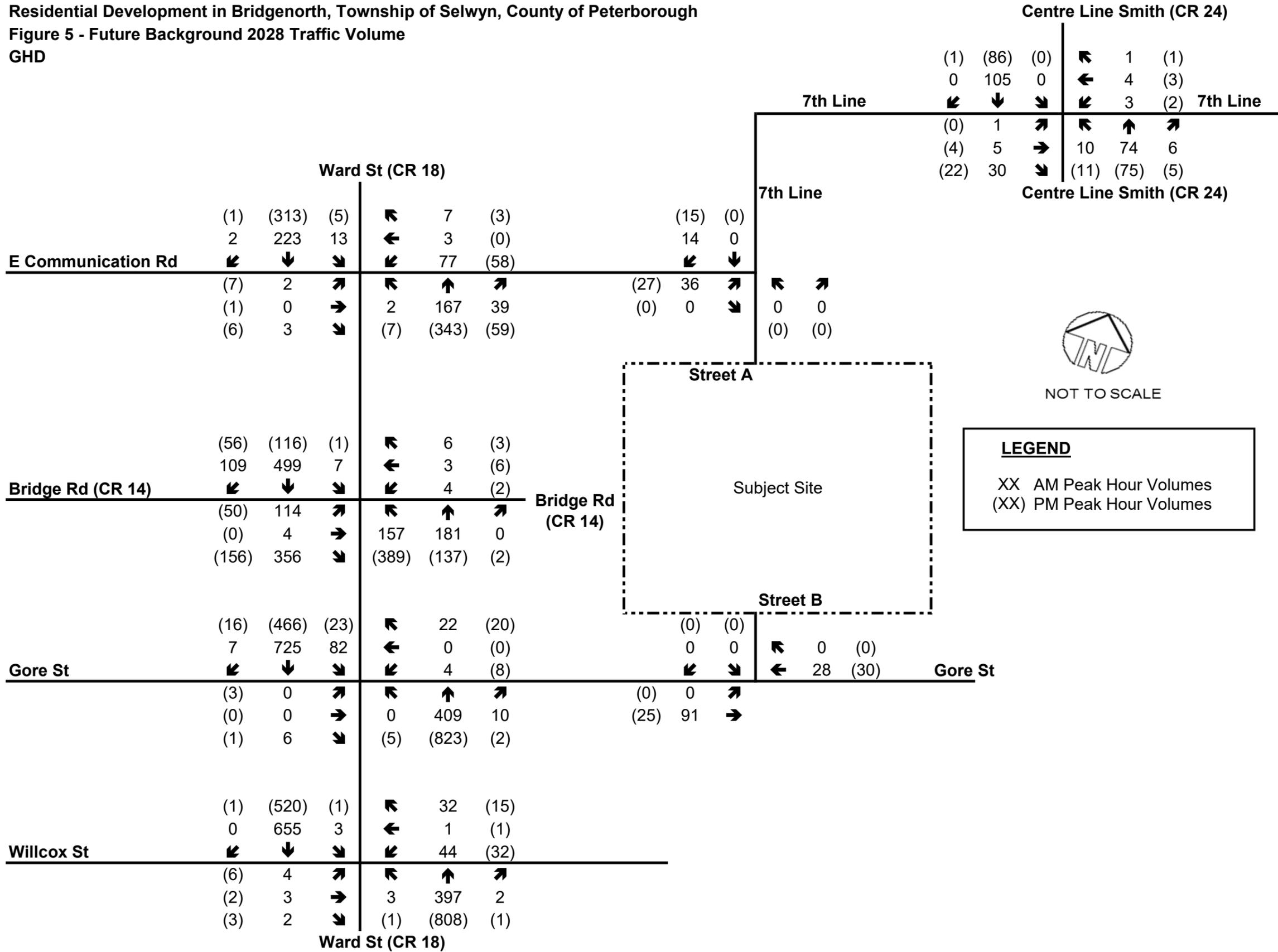
**LEGEND**

|  |                                 |
|--|---------------------------------|
|  | EXCLUSIVE LANE                  |
|  | SHARED LANE                     |
|  | TRAFFIC SIGNALIZED INTERSECTION |
|  | STOP CONTROLLED INTERSECTION    |
|  | STOP SIGN                       |
|  | CHANNELIZED RIGHT TURN LANE     |
|  | YIELD SIGN                      |

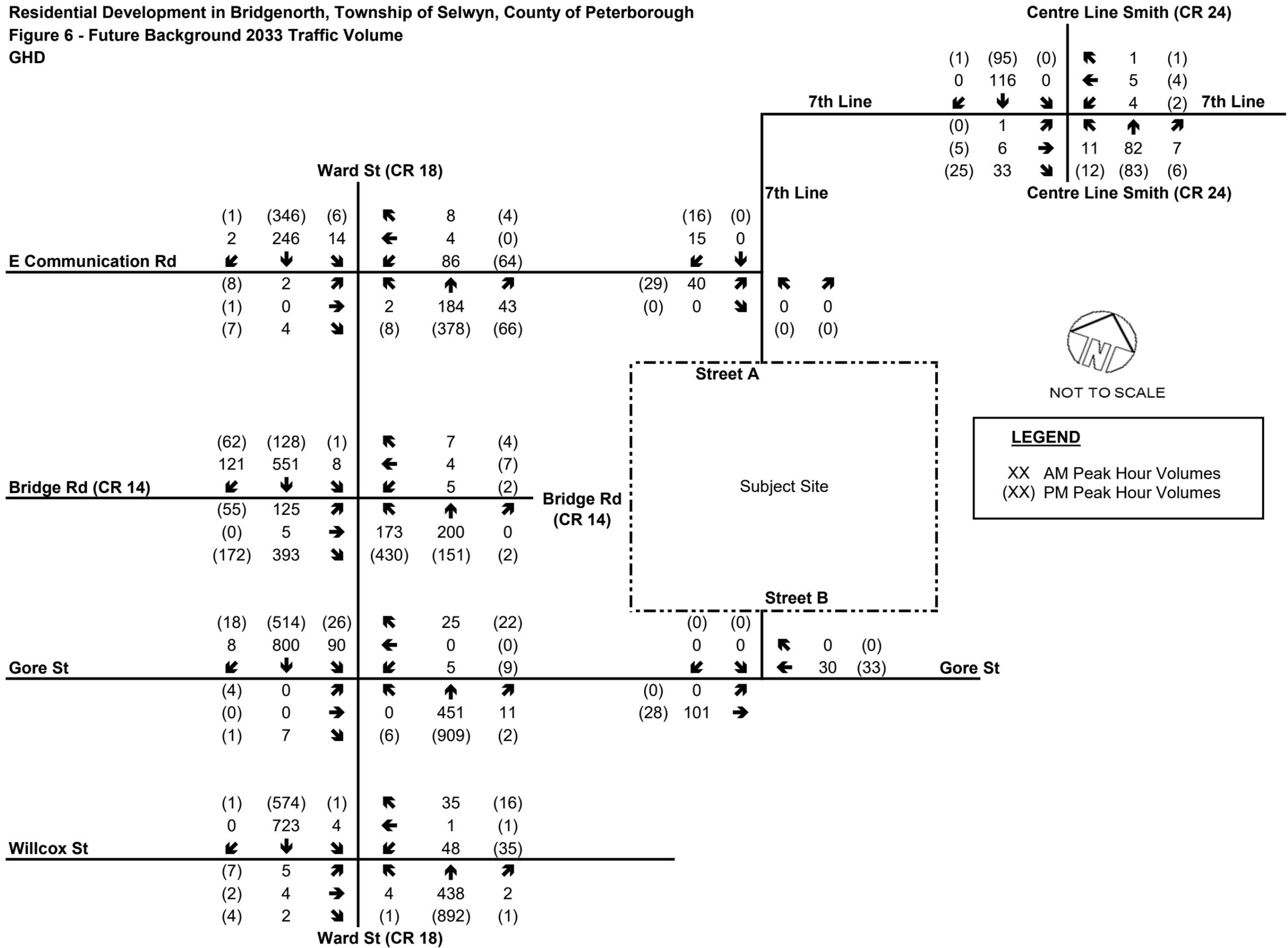
Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough  
 Figure 4 - Baseline 2025 Traffic Volume  
 GHD



Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough  
 Figure 5 - Future Background 2028 Traffic Volume  
 GHD



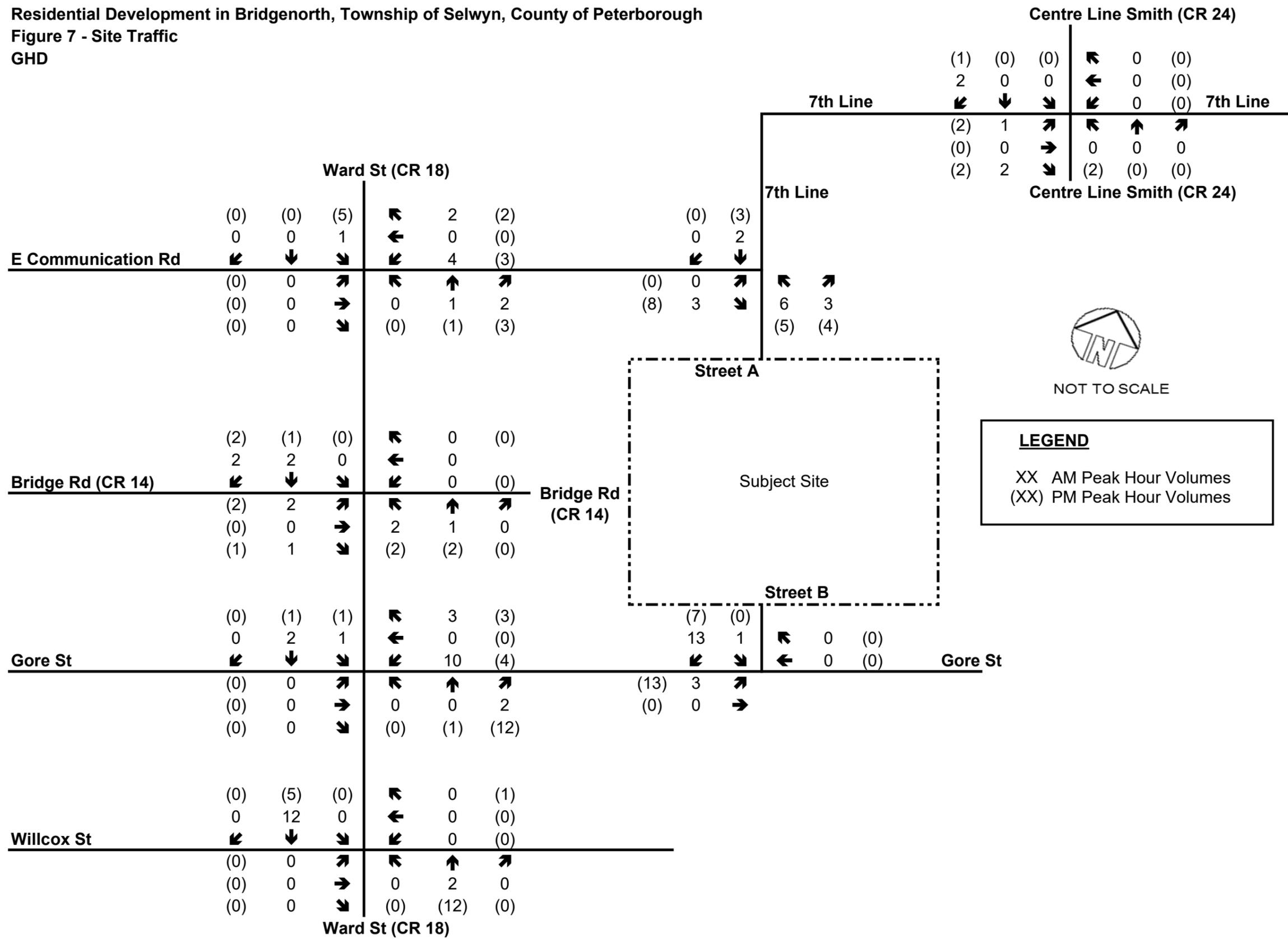
Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough  
 Figure 6 - Future Background 2033 Traffic Volume  
 GHD



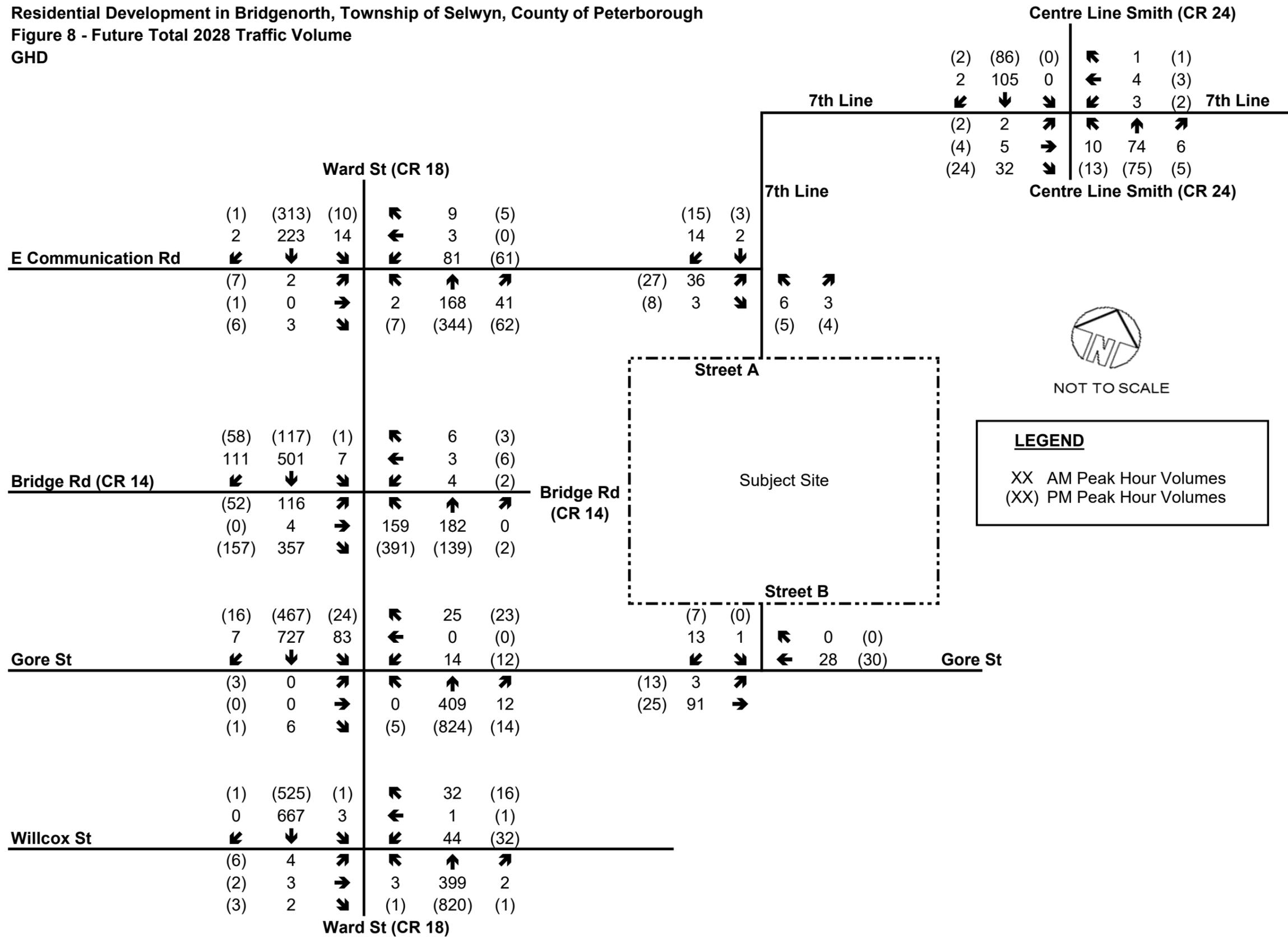
Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough

Figure 7 - Site Traffic

GHD



Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough  
 Figure 8 - Future Total 2028 Traffic Volume  
 GHD

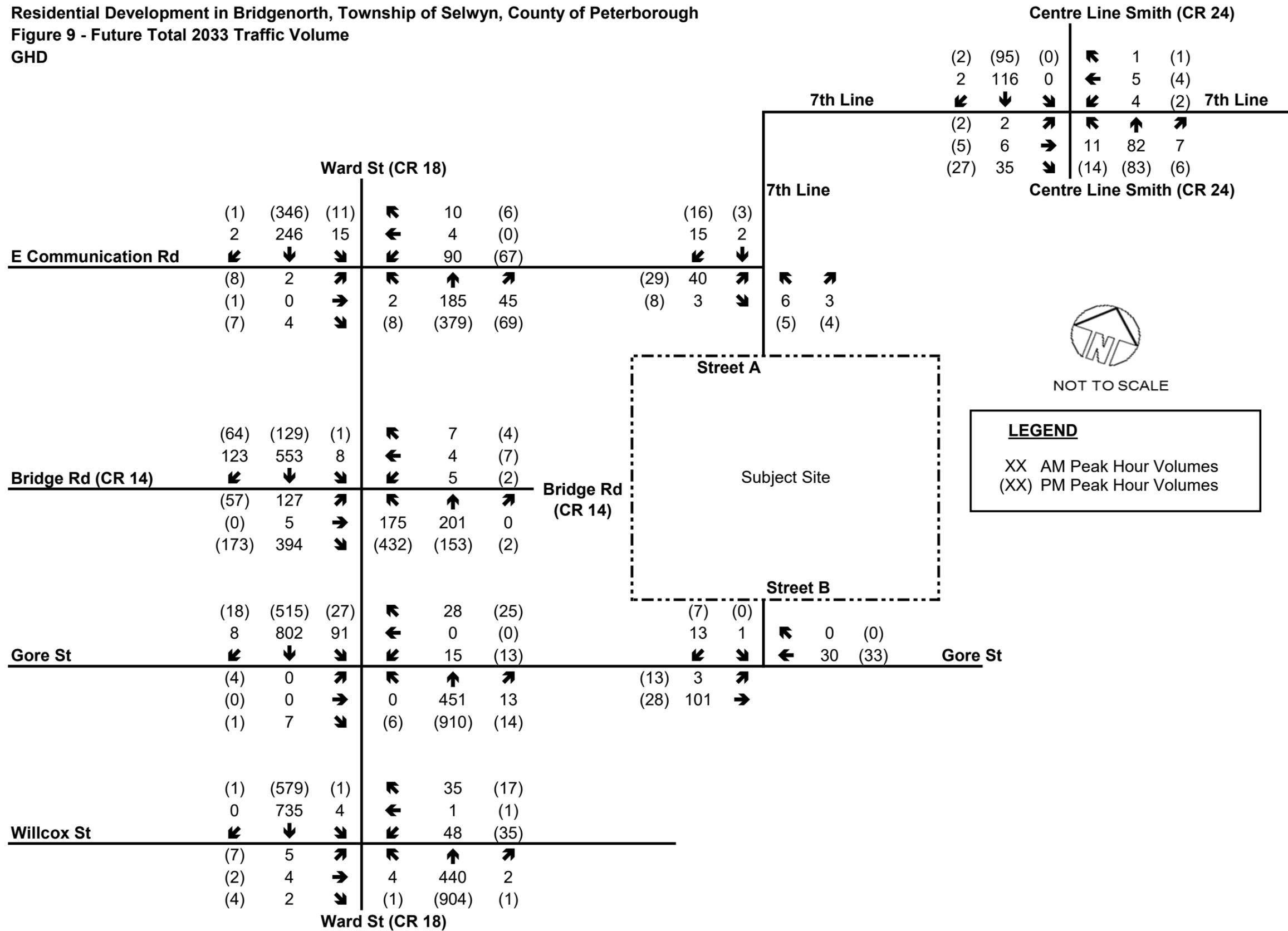


NOT TO SCALE

**LEGEND**

XX AM Peak Hour Volumes  
 (XX) PM Peak Hour Volumes

Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough  
 Figure 9 - Future Total 2033 Traffic Volume  
 GHD



# Tables

## **Report Tables**

GHD Synchro Output

Residential Development in Bridgenorth,

Township of Selwyn,  
County of Peterborough

| Table 2 - Baseline 2025                          |                   |   |   |   |   |
|--|-------------------|---|---|---|---|
| Intersection                                     | Intersection Type | AM Peak   |   | PM Peak   |   |
|  |                   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds   | 95th %ile<br>Queues (m)   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds   | 95th %ile<br>Queues (m)   |
| Bridge Road and Ward Street<br>(Existing STP)    | Signalized        | Overall: 0.55 (C) 26<br>EBL = 0.59 (D) 49<br>EBT = 0.02 (D) 40<br>EBR = 0.31 (D) 43<br>WBTLR = 0.08 (D) 41<br>NBL = 0.36 (A) 9<br>NBTR = 0.22 (A) 6<br>SBL = 0.04 (B) 14<br>SBT = 0.59 (C) 23<br>SBR = 0.1 (B) 15 | EBL = 45 m<br>EBT = 5 m<br>EBR = 0 m<br>WBTLR = 5 m<br>NBL = 15 m<br>NBTR = 20 m<br>SBL = 5 m<br>SBT = 110 m<br>SBR = 5 m | Overall: 0.47 (B) 16<br>EBL = 0.24 (D) 42<br>EBT = ( ) 0<br>EBR = 0.1 (D) 41<br>WBTLR = 0.05 (D) 41<br>NBL = 0.51 (A) 7<br>NBTR = 0.13 (A) 6<br>SBL = 0.01 (B) 14<br>SBT = 0.17 (B) 16<br>SBR = 0.04 (B) 15 | EBL = 25 m<br>EBT = 0 m<br>EBR = 0 m<br>WBTLR = 10 m<br>NBL = 45 m<br>NBTR = 15 m<br>SBL = 5 m<br>SBT = 25 m<br>SBR = 5 m |
| Willcox Street and Ward Street<br>(Existing STP) | Signalized        | Overall: 0.53 (B) 13<br>EBTLR = 0.05 (C) 24<br>WBTLR = 0.34 (C) 28<br>NBTLR = 0.37 (A) 9<br>SBTLR = 0.6 (B) 12  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 45 m<br>SBTLR = 90 m  | Overall: 0.57 (B) 14<br>EBTLR = 0.05 (C) 24<br>WBTLR = 0.15 (C) 25<br>NBTLR = 0.73 (B) 15<br>SBTLR = 0.53 (B) 11  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 125 m<br>SBTLR = 65 m   |
| East Communication Road and Ward<br>Street       | Unsignalized      | EBTLR = 0.03 (B) 12<br>WBTLR = 0.25 (B) 15<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.01 ( ) 1  | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   | EBTLR = 0.09 (C) 15<br>WBTLR = 0.22 (C) 20<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.01 ( ) 0  | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   |
| Gore Street and Ward Street                      | Unsignalized      | EBTLR = 0.03 (C) 17<br>WBTLR = 0.13 (C) 22<br>NBTLR = 0 ( ) 0<br>SBTLR = 0.1 ( ) 3  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 0 m<br>SBTLR = 5 m  | <b>EBTLR = 0.05 (F) 53</b><br>WBTLR = 0.19 (D) 33<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.04 ( ) 1   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 5 m  |
| Street A and East Communication Road             | Unsignalized      | WBLR = (A) 6<br>NBTR = (A) 7<br>SBTL = (A) 8  | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  | WBLR = (A) 6<br>NBTR = (A) 7<br>SBTL = (A) 7  | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  |
| Center Line and 7th Line                         | Unsignalized      | EBTLR = 0.06 (A) 10<br>WBTLR = 0.02 (B) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  | EBTLR = 0.04 (A) 9<br>WBTLR = 0.01 (A) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  |
| Gore Street and Street B                         | Unsignalized      | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0 (A) 0   | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 0 m  | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0 (A) 0   | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 0 m  |

GHD Synchro Output

Residential Development in Bridgenorth,

Township of Selwyn,  
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| Table 3 - Future Background 2028        |   |   |   |   |
|---|---|---|---|---|
| Intersection                            | AM Peak   |   | PM Peak   |   |
|   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds   | 95th %ile<br>Queues (m)   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds   | 95th %ile<br>Queues (m)   |
| Bridge Road and Ward Street             | Overall: 0.59 (C) 26<br>EBL = 0.63 (D) 50<br>EBT = 0.02 (D) 40<br>EBR = 0.33 (D) 43<br>WBTLR = 0.08 (D) 41<br>NBL = 0.4 (B) 10<br>NBTR = 0.24 (A) 6<br>SBL = 0.04 (B) 14<br>SBT = 0.63 (C) 24<br>SBR = 0.1 (B) 15 | EBL = 45 m<br>EBT = 5 m<br>EBR = 0 m<br>WBTLR = 5 m<br>NBL = 20 m<br>NBTR = 20 m<br>SBL = 5 m<br>SBT = 120 m<br>SBR = 5 m | Overall: 0.5 (B) 16<br>EBL = 0.25 (D) 42<br>EBT = ( ) 0<br>EBR = 0.11 (D) 41<br>WBTLR = 0.05 (D) 41<br>NBL = 0.54 (A) 8<br>NBTR = 0.14 (A) 6<br>SBL = 0.01 (B) 15<br>SBT = 0.19 (B) 16<br>SBR = 0.05 (B) 15 | EBL = 25 m<br>EBT = 0 m<br>EBR = 0 m<br>WBTLR = 10 m<br>NBL = 45 m<br>NBTR = 20 m<br>SBL = 5 m<br>SBT = 30 m<br>SBR = 5 m |
| Willcox Street and Ward Street          | Overall: 0.56 (B) 14<br>EBTLR = 0.05 (C) 24<br>WBTLR = 0.37 (C) 29<br>NBTLR = 0.39 (A) 9<br>SBTLR = 0.63 (B) 12   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 50 m<br>SBTLR = 100 m   | Overall: 0.6 (B) 15<br>EBTLR = 0.05 (C) 24<br>WBTLR = 0.16 (C) 25<br>NBTLR = 0.77 (B) 16<br>SBTLR = 0.57 (B) 11   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 140 m<br>SBTLR = 70 m   |
| East Communication Road and Ward Street | EBTLR = 0.03 (B) 12<br>WBTLR = 0.28 (C) 16<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.01 ( ) 1  | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   | EBTLR = 0.1 (C) 16<br>WBTLR = 0.25 (C) 22<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.01 ( ) 0   | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   |
| Gore Street and Ward Street             | EBTLR = 0.03 (C) 18<br>WBTLR = 0.15 (C) 24<br>NBTLR = 0 ( ) 0<br>SBTLR = 0.11 ( ) 3   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 0 m<br>SBTLR = 5 m  | EBTLR = 0.07 (F) 75<br>WBTLR = 0.25 (E) 43<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.04 ( ) 1  | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   |
| Street A and East Communication Road    | WBLR = (A) 6<br>NBTR = (A) 7<br>SBTL = (A) 7  | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  | WBLR = (A) 6<br>NBTR = (A) 7<br>SBTL = (A) 7  | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  |
| Center Line and 7th Line                | EBTLR = 0.06 (A) 10<br>WBTLR = 0.02 (B) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  | EBTLR = 0.05 (A) 9<br>WBTLR = 0.02 (B) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  |
| Gore Street and Street B                | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0 (A) 0   | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 0 m  | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0 (A) 0   | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 0 m  |

GHD Synchro Output

Residential Development in Bridgenorth,

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| Table 4 - Future Background 2033        |   |   |  |   |
|---|---|---|--|---|
| Intersection                            | AM Peak   |   | PM Peak  |   |
|   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds   | 95th %ile<br>Queues (m)   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds  | 95th %ile<br>Queues (m)   |
| Bridge Road and Ward Street             | Overall: 0.66 (C) 28<br>EBL = 0.69 (D) 54<br>EBT = 0.03 (D) 40<br>EBR = 0.37 (D) 44<br>WBTLR = 0.1 (D) 42<br>NBL = 0.48 (B) 13<br>NBTR = 0.26 (A) 6<br>SBL = 0.04 (B) 15<br>SBT = 0.7 (C) 26<br>SBR = 0.12 (B) 15 | EBL = 50 m<br>EBT = 5 m<br>EBR = 0 m<br>WBTLR = 5 m<br>NBL = 20 m<br>NBTR = 25 m<br>SBL = 5 m<br>SBT = 145 m<br>SBR = 5 m | Overall: 0.56 (B) 17<br>EBL = 0.28 (D) 43<br>EBT = ( ) 0<br>EBR = 0.12 (D) 41<br>WBTLR = 0.05 (D) 41<br>NBL = 0.61 (A) 8<br>NBTR = 0.15 (A) 6<br>SBL = 0.01 (B) 15<br>SBT = 0.21 (B) 17<br>SBR = 0.05 (B) 16 | EBL = 25 m<br>EBT = 0 m<br>EBR = 0 m<br>WBTLR = 10 m<br>NBL = 50 m<br>NBTR = 20 m<br>SBL = 5 m<br>SBT = 30 m<br>SBR = 5 m |
| Willcox Street and Ward Street          | Overall: 0.62 (B) 15<br>EBTLR = 0.06 (C) 24<br>WBTLR = 0.42 (C) 30<br>NBTLR = 0.43 (A) 9<br>SBTLR = 0.7 (B) 14  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 55 m<br>SBTLR = 115 m   | Overall: 0.66 (B) 18<br>EBTLR = 0.06 (C) 24<br>WBTLR = 0.18 (C) 25<br>NBTLR = 0.85 (C) 20<br>SBTLR = 0.62 (B) 12   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 200 m<br>SBTLR = 80 m   |
| East Communication Road and Ward Street | EBTLR = 0.04 (B) 12<br>WBTLR = 0.34 (C) 18<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.02 ( ) 1  | EBTLR = 5 m<br>WBTLR = 15 m<br>NBTLR = 5 m<br>SBTLR = 5 m   | EBTLR = 0.13 (C) 18<br>WBTLR = 0.32 (D) 26<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.01 ( ) 0   | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   |
| Gore Street and Ward Street             | EBTLR = 0.04 (C) 20<br>WBTLR = 0.27 (E) 39<br>NBTLR = 0 ( ) 0<br>SBTLR = 0.13 ( ) 4   | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 0 m<br>SBTLR = 5 m   | EBTLR = 0.3 (F) 251<br>WBTLR = 0.59 (F) 131<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.06 ( ) 2  | EBTLR = 10 m<br>WBTLR = 20 m<br>NBTLR = 5 m<br>SBTLR = 5 m  |
| Street A and East Communication Road    | WBLR = (A) 6<br>NBTR = (A) 7<br>SBTL = (A) 7  | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  | WBLR = (A) 6<br>NBTR = (A) 7<br>SBTL = (A) 7   | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  |
| Center Line and 7th Line                | EBTLR = 0.07 (A) 10<br>WBTLR = 0.03 (B) 11<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  | EBTLR = 0.05 (A) 10<br>WBTLR = 0.02 (B) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  |
| Gore Street and Street B                | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0.01 (A) 0  | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 0 m  | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0.01 (A) 0   | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 0 m  |

GHD Synchro Output

Residential Development in Bridgenorth,

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| Table 7 - Future Total 2028             |   |   |   |   |
|---|---|---|---|---|
| Intersection                            | AM Peak   |   | PM Peak   |   |
|   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds   | 95th %ile<br>Queues (m)   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds   | 95th %ile<br>Queues (m)   |
| Bridge Road and Ward Street             | Overall: 0.59 (C) 27<br>EBL = 0.64 (D) 51<br>EBT = 0.02 (D) 40<br>EBR = 0.34 (D) 43<br>WBTLR = 0.08 (D) 41<br>NBL = 0.41 (B) 10<br>NBTR = 0.24 (A) 6<br>SBL = 0.04 (B) 14<br>SBT = 0.63 (C) 24<br>SBR = 0.11 (B) 15 | EBL = 45 m<br>EBT = 5 m<br>EBR = 0 m<br>WBTLR = 5 m<br>NBL = 20 m<br>NBTR = 20 m<br>SBL = 5 m<br>SBT = 120 m<br>SBR = 5 m | Overall: 0.5 (B) 16<br>EBL = 0.26 (D) 43<br>EBT = ( ) 0<br>EBR = 0.11 (D) 41<br>WBTLR = 0.05 (D) 41<br>NBL = 0.55 (A) 8<br>NBTR = 0.14 (A) 6<br>SBL = 0.01 (B) 15<br>SBT = 0.19 (B) 16<br>SBR = 0.05 (B) 15 | EBL = 25 m<br>EBT = 0 m<br>EBR = 0 m<br>WBTLR = 10 m<br>NBL = 45 m<br>NBTR = 20 m<br>SBL = 5 m<br>SBT = 30 m<br>SBR = 5 m |
| Willcox Street and Ward Street          | Overall: 0.57 (B) 14<br>EBTLR = 0.05 (C) 24<br>WBTLR = 0.37 (C) 29<br>NBTLR = 0.39 (A) 9<br>SBTLR = 0.65 (B) 13   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 50 m<br>SBTLR = 100 m   | Overall: 0.61 (B) 15<br>EBTLR = 0.05 (C) 24<br>WBTLR = 0.16 (C) 25<br>NBTLR = 0.78 (B) 17<br>SBTLR = 0.57 (B) 11  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 145 m<br>SBTLR = 70 m   |
| East Communication Road and Ward Street | EBTLR = 0.03 (B) 12<br>WBTLR = 0.3 (C) 16<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.02 ( ) 1   | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   | EBTLR = 0.11 (C) 17<br>WBTLR = 0.29 (C) 23<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.02 ( ) 1  | EBTLR = 5 m<br>WBTLR = 10 m<br>NBTLR = 5 m<br>SBTLR = 5 m   |
| Gore Street and Ward Street             | EBTLR = 0.03 (C) 18<br>WBTLR = 0.44 (F) 58<br>NBTLR = 0 ( ) 0<br>SBTLR = 0.12 ( ) 3   | EBTLR = 5 m<br>WBTLR = 15 m<br>NBTLR = 0 m<br>SBTLR = 5 m   | EBTLR = 0.08 (F) 82<br>WBTLR = 0.39 (F) 61<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.05 ( ) 1  | EBTLR = 5 m<br>WBTLR = 15 m<br>NBTLR = 5 m<br>SBTLR = 5 m   |
| Street A and East Communication Road    | WBLR = (A) 7<br>NBTR = (A) 7<br>SBTL = (A) 7  | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  | WBLR = (A) 7<br>NBTR = (A) 7<br>SBTL = (A) 7  | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  |
| Center Line and 7th Line                | EBTLR = 0.07 (A) 10<br>WBTLR = 0.02 (B) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  | EBTLR = 0.06 (A) 10<br>WBTLR = 0.02 (B) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  |
| Gore Street and Street B                | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0.01 (A) 8  | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 5 m  | EBTL = 0.01 ( ) 2<br>WBTR = 0.02 ( ) 0<br>SBLR = 0.01 (A) 8   | EBTL = 5 m<br>WBTR = 0 m<br>SBLR = 5 m  |

GHD Synchro Output

Residential Development in Bridgenorth,

Township of Selwyn,  
County of Peterborough

| Table 8 - Future Total 2033             |  |   |  |   |
|---|--|---|--|---|
| Intersection                            | AM Peak  |   | PM Peak  |   |
|   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds  | 95th %ile<br>Queues (m)   | Critical/<br>Key Movements<br>v/c(LOS) Delay in Seconds  | 95th %ile<br>Queues (m)   |
| Bridge Road and Ward Street             | Overall: 0.65 (C) 27<br>EBL = 0.7 (D) 55<br>EBT = 0.03 (D) 40<br>EBR = 0.37 (D) 44<br>WBTLR = 0.1 (D) 42<br>NBL = 0.5 (B) 12<br>NBTR = 0.26 (A) 6<br>SBL = 0.04 (B) 13<br>SBT = 0.67 (C) 24<br>SBR = 0.12 (B) 14 | EBL = 50 m<br>EBT = 5 m<br>EBR = 0 m<br>WBTLR = 5 m<br>NBL = 20 m<br>NBTR = 25 m<br>SBL = 5 m<br>SBT = 145 m<br>SBR = 5 m | Overall: 0.56 (B) 17<br>EBL = 0.29 (D) 43<br>EBT = ( ) 0<br>EBR = 0.12 (D) 41<br>WBTLR = 0.05 (D) 41<br>NBL = 0.61 (A) 8<br>NBTR = 0.16 (A) 6<br>SBL = 0.01 (B) 15<br>SBT = 0.21 (B) 17<br>SBR = 0.05 (B) 16 | EBL = 25 m<br>EBT = 0 m<br>EBR = 0 m<br>WBTLR = 10 m<br>NBL = 50 m<br>NBTR = 20 m<br>SBL = 5 m<br>SBT = 30 m<br>SBR = 5 m |
| Willcox Street and Ward Street          | Overall: 0.63 (B) 15<br>EBTLR = 0.06 (C) 24<br>WBTLR = 0.42 (C) 30<br>NBTLR = 0.43 (A) 9<br>SBTLR = 0.72 (B) 14  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 55 m<br>SBTLR = 120 m   | Overall: 0.67 (B) 18<br>EBTLR = 0.06 (C) 24<br>WBTLR = 0.18 (C) 25<br>NBTLR = 0.86 (C) 21<br>SBTLR = 0.63 (B) 12   | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 205 m<br>SBTLR = 80 m   |
| East Communication Road and Ward Street | EBTLR = 0.04 (B) 12<br>WBTLR = 0.36 (C) 18<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.02 ( ) 1   | EBTLR = 5 m<br>WBTLR = 15 m<br>NBTLR = 5 m<br>SBTLR = 5 m   | EBTLR = 0.13 (C) 19<br>WBTLR = 0.36 (D) 28<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.02 ( ) 1   | EBTLR = 5 m<br>WBTLR = 15 m<br>NBTLR = 5 m<br>SBTLR = 5 m   |
| Gore Street and Ward Street             | EBTLR = 0.04 (C) 20<br>WBTLR = 0.67 (F) 109<br>NBTLR = 0 ( ) 0<br>SBTLR = 0.13 ( ) 4   | EBTLR = 5 m<br>WBTLR = 25 m<br>NBTLR = 0 m<br>SBTLR = 5 m   | EBTLR = 0.33 (F) 276<br>WBTLR = 0.89 (F) 231<br>NBTLR = 0.01 ( ) 0<br>SBTLR = 0.07 ( ) 2   | EBTLR = 10 m<br>WBTLR = 30 m<br>NBTLR = 5 m<br>SBTLR = 5 m  |
| Street A and East Communication Road    | WBLR = (A) 7<br>NBTR = (A) 7<br>SBTL = (A) 7   | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  | WBLR = (A) 7<br>NBTR = (A) 7<br>SBTL = (A) 7   | WBLR = 0 m<br>NBTR = 0 m<br>SBTL = 0 m  |
| Center Line and 7th Line                | EBTLR = 0.07 (A) 10<br>WBTLR = 0.03 (B) 11<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  | EBTLR = 0.07 (A) 10<br>WBTLR = 0.02 (B) 10<br>NBTLR = 0.01 ( ) 1<br>SBTLR = 0 ( ) 0  | EBTLR = 5 m<br>WBTLR = 5 m<br>NBTLR = 5 m<br>SBTLR = 0 m  |
| Gore Street and Street B                | EBTL = 0 ( ) 0<br>WBTR = 0.02 ( ) 0<br>SBLR = 0.01 (A) 9   | EBTL = 0 m<br>WBTR = 0 m<br>SBLR = 5 m  | EBTL = 0.01 ( ) 2<br>WBTR = 0.02 ( ) 0<br>SBLR = 0.01 (A) 8  | EBTL = 5 m<br>WBTR = 0 m<br>SBLR = 5 m  |

# Appendix A

**Terms of Reference Correspondence**



Our ref: 12680152

September 17, 2025

sent via email

Doug Saccoccia  
Public Works  
County of Peterborough  
info@ptbocounty.ca

Per Lundberg  
Planner  
Township of Selwyn  
plundberg@selwyntownship.ca

Dear Doug and Per:

Subject: Terms of Reference for Traffic Impact Study  
Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough

GHD Limited (GHD) are pleased to present herewith our Terms of Reference to prepare a Traffic Impact Study for the residential development located in Bridgenorth, Township of Selwyn, County of Peterborough. The development is located east of Ward Street between Gore Street and East Communication Road.

In the current site plan, the development proposal consists of 38 residential lots and street network including Street A connecting to Gore Street and East Communication Road.

The current site plan and Record of Pre-consultation comments are provided in **Appendix A**.

The assignment is to provide a Traffic Impact Study acceptable to the County of Peterborough and to estimate site traffic and future total traffic.

Based on a review of the proposed concept plan and pre-consultation comments, GHD have prepared the following scope of work.

## 1. Scope of Work / Terms of Reference

### Task 1. Project Initiation

#### Project Initiation

This scope of work / Terms of Reference (ToR) will be submitted to the reviewing/approving agencies to confirm project requirements.

GHD will confirm all site statistics (example: number of residential units) with the Project Team and obtain the latest digital version (in AutoCAD and PDF) of the Site / Concept Plan prior to commencing the traffic analysis.

### Task 2. Traffic Impact Study

#### Existing Traffic

GHD will collect existing traffic data assuming the study include the following intersections:

1. Ward Street / East Communication Road (existing STOP intersection),

2. Ward Street / Gore Street (existing STOP intersection),
3. Proposed Street A / East Communication Road, and
4. Proposed Street A / Gore Street.

The Pre-consultation meeting notes recommend Ward Street / The Causeway and Ward Street / 8<sup>th</sup> Line, however, 8<sup>th</sup> Line is very far from the development. This will be subject to the municipality's review of the Terms of Reference (ToR).

Since no traffic data is available, GHD will collect weekday AM and PM peak hour traffic counts at the existing two (2) study intersections. Traffic data will be recorded on a typical weekday from 7-9am and 4-6pm to determine the peak hours.

### **Future Background Traffic**

The subject development is expected to be completed and occupied in 2028 (to be confirmed by the Project Team), therefore the future horizon is 2033 (5 years after occupancy-opening day) for the traffic analyses.

GHD will contact the Township of Selwyn and the County to obtain traffic volumes of nearby developments, if available, that will influence the future traffic on study intersections.

Annual traffic growth will be estimated, typically in the 1-2% range per year.

Combining the other development traffic and annual traffic growth, GHD will estimate the future background traffic (no traffic from the subject development) for the future year, 2033.

### **Development Site Traffic**

GHD will estimate the subject development traffic on a typical weekday AM and PM peak hours based on the information contained in the ITE Trip Generation, 11<sup>th</sup> / 12<sup>th</sup> Edition.

GHD will assign the estimated development traffic to the study intersections.

### **Future Total Traffic**

GHD will sum the estimated future background traffic volumes and the development site traffic volumes to derive the future traffic of 2033.

### **Traffic Assessment**

GHD will assess the traffic volumes at the study intersections for the scenarios of existing, future background and future total traffic conditions using SYNCHRO software. Any unacceptable metrics (delay, level of service, volume/capacity ratio, queuing) will be subject to mitigation.

### **Task 3. Documentation**

GHD will prepare a draft report of the Traffic Impact Study incorporating the above tasks for your review. Once the Project Team have reviewed and approved, the final version of the report will be prepared and stamped by a Professional Engineer.

## 2. Acceptance / Approval

Should you find these Terms of Reference acceptable in its current form or with comments, please communicate as such in an email to the undersigned.

If you wish to discuss any aspect of the Terms of Reference, please feel free to contact the undersigned, Roland Roovers. We appreciate the opportunity to present this ToR / scope of work. We trust that the above noted information is suitable for your purposes at this time and look forward to your comments / acceptance of the Terms of Reference on this project.

Sincerely,

GHD



Roland Roovers, P.Eng.  
Senior Manager, Transportation Planning  
+1 905 752-4348  
roland.roovers@ghd.com

Attach. Appendix A

RR/hs

# Record of Pre-Consultation

Prepared by the Peterborough County  
Planning Department



**Name:** Base-Land Developments  
c/o Jeff Peters

**Agent:** Gary Bell, Skelton Brumwell &  
Associates

**Lot:** 12

**Concession:** E

**Municipality:** Smith Ward

Township of Selwyn

**Municipal Address:** East Communication Rd.

Roll No.(s) 1516-020-201-21500.

**Phone:** 705-726-1141

**Email:** gbell@  
skeltonbrumwell.ca

**Office Phone:** 705-722-  
1602

**Communication Sent To:**

**Owner:**

**Agent:**

**Meeting Date:** 2023-02-07

**Meeting Location:** Online via Teams

## Attendees:

Gary Bell, Scott Brumwell, Sam Sanderson - agent/consultants

Jeff Peters, Base-land Developments - applicant, owner

Per Lundberg, Rob Kelly, Adam Tobin, Gord Jopling - Selwyn Township

Caitlin Hill - Curve Lake First Nation

Matt Wilkinson - ORCA

Doug Saccoccia, Iain Mudd, Malini Menon - County Planning & Public Works

Regrets: Jeannette Thompson (KPRDSB), Sean Davison (Hiawatha FN), Kevin Hickey (PVNCCDSB)

A copy of the complete Record of Pre-Consultation will be sent to all attendees

| Existing Parcel Description |                         |
|-----------------------------|-------------------------|
| County O.P. Description     | Settlement Area         |
| Municipal O.P. Designation  | Residential, Commercial |
| Municipal Zoning            | Development (D)         |
| Area/Lot Dimensions         | 15 ha (37 ac)           |
| Existing Use/Buildings      | Farmland                |

## Pre-consultation completed for:

- Plan of Subdivision (*Application submitted to County*)
- Plan of Condominium (*Application submitted to County*)
- Official Plan Amendment for
  - County Official Plan (*Application submitted to County*)
  - Local Component of County Official Plan (*Application submitted to County*)

- Municipal Official Plan (*Application submitted to Township*)  
 Zoning By-law Amendment (*Application submitted to Township*)

**Proposal Summary/Description:** This is a preliminary pre-consultation meeting to discuss development of the subject lands with a 30 unit plan of subdivision, on individual well and septic services, including blocks for a park and stormwater management. Lands are bisected by the proposed Bridgenorth By-pass.

Applicant – noted that plans for development of this parcel have been on hold for years given the uncertain status of the proposed Bridgenorth By-pass which, if approved, would effectively prohibit its future development. They have understood there is some municipal change in the status of the by-pass project (removal from the Transportation Master Plan) and wanted to get clarification on this and how it affects their ability to develop the site.

**Comments:**

County Public Works (Doug S.) – the By-pass is in the current County OP as a proposed road. However, a formal resolution from County Council was made to remove it from the Transportation Master Plan in the County OP in March 2022. This removal is also reflected in the new County OP (yet to be provincially adopted).

A Traffic Impact study will be required, and it should look at the intersections of 1) Ward St and the Causeway and 2) Ward St and Eighth Line.

County Planning Department (Iain M.)– County adopted its new OP in June 2022, and has been submitted to the Province where it is ‘under review’. There is no timeline yet for its approval, but there is no indication that it will be approved in the near future.

In response to whether the department would support an amendment of the commercial designation to Residential, it was pointed out that the partly Commercial designation of the subject property is related to the history of the by-pass. At the time it was felt that lands west of the by-pass should be developed commercially and lands east developed residentially. There may be justification for a change. A rationale for change should be provided in their Planning Justification Report. The By-pass is not included or addressed in the new OP. Re approving an OP change through a Minister’s modification? Making a designation change through a Minister’s modification is not done nowadays once a municipality has adopted its Plan. So an applicant needs to go through the usual OPA process.

Township of Selwyn (Per L.) – Zoning in the area is R1, allowing 4,050 m<sup>2</sup> lots with 45m frontages. A zoning by-law amendment would be required as the lands are currently zoned Development (D). It was noted that Streets B and C open to Communication Road where no entrance presently exists. (Gary B.– anticipating a need for at least two entrances into the subdivision; also anticipating a special zone for the lots, eg. 30m frontages, but the latter will be dependent upon hydro-g analysis.)

At applicant’s request, the Township will provide any municipal guidelines/direction on stormwater design and parkland development. It was confirmed that the site would have no municipal water services so private wells would be necessary, in addition to private septic. Twp can provide urban/rural cross-sections for road/drainage design purposes.

RE fire route access, Township would want to see intersections designed with East Communication Road which would eliminate tight turning angles and allow for better turning movements of fire vehicles.

Conservation Authority (Matt W.) – inquired about the outlet for the storm water pond in the northwest corner of the site, whether being done by easement or drainage pipe to the road. Doug clarified that outletting to the county road allowance (further northeast) wouldn't be possible. Applicant anticipates based on land contours, an outlet at the northwest corner may be best. They will talk with ORCA further as the project moves ahead.

A large treed area in the centre of the site was noted and confirmed to be a wet area, though not designated as a 'wetland'. Applicant has had an ecologist to the site for a site visit to address this. ORCA would want to see a natural features delineation map and will want to review the SWM report. Though its role in the municipal review process at this time is uncertain (due to Bill 23), ideally ORCA suggested an NHE should be undertaken addressing this area as well as any impacts to the large provincially significant wetlands (PSW) located off site to the south and east. The presence of Species at Risk noted in our mapping should also be addressed in the NHE. County Planning staff support this suggestion.

Curve Lake First Nation (Caitlin H.) – Archaeological resources have been found in the general area. They would be looking for an archaeological study to first assess any potential for significant findings. Applicant can get a list of accepted consultants and will speak further with CLFN as this moves ahead.

Additional Comments – The Planning Justification report should also address the presence of aggregate sand and gravel resources on the lower half of the site and justify the proposed residential use in a designated settlement area.

The County OP references a Waste Management Assessment Area across the property attributable to its proximity to an old closed landfill site. An assessment report would be required to be undertaken to in accordance with Section 6.2.18 of the OP.

Applicant questioned whether a 30 unit proposal is in line with County/municipal housing targets. County's Growth Management study allocated a large share of growth to the serviced settlements in its lower tier municipalities. This proposal doesn't conflict in that regard.

Township – noted that a 'complete' zoning amendment application now requires completed peer reviews before the application can be considered 'complete. This may affect the ability of the County and Township to process the OPA and ZBA applications together. (ZBA and OPA require 1 public meeting. The subdivision application does not require a public meeting.)

A list of required studies to be submitted with the applications is attached.

---

**Recommended key agencies to contact:**

- Township                                       Trent Severn Waterway                                       MTO  
 Conservation Authority                                       Health Unit                                       Other: \_\_\_\_\_  
 Peterborough County Public Works Dept.                                       First Nation

***Please note that any technical study submitted to the County (e.g. EIS, traffic impact study, hydrogeological study etc.) will be peer reviewed at the County's request. Both the cost of the study and the peer review(s) will be at the applicant's expense.***

**Record Completed By: Malini Menon**

**Please Note:** *Personal information contained on this form is collected under the authority of Section 29(2) of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c.M.56 as amended and will be used to assist in the correct processing of the application. If you have any questions about the collection, use or disclosure of this information by the County of Peterborough, please contact the CAO or Clerk, County of Peterborough, 470 Water Street, Peterborough, Ontario K9H 3M3 (705-743-0380).*

**From:** [Hynes, Pete](#)  
**To:** [Hong Shen](#)  
**Cc:** [Adam Tobin](#)  
**Subject:** RE: Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough - TIS ToR review  
**Date:** Thursday, September 18, 2025 7:41:13 AM  
**Attachments:** [image006.png](#)  
[image007.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)  
[image012.png](#)  
[image013.png](#)  
[E&C Pre-con Comments - Bridgenorth Land Inc.pdf](#)

---

You don't often get email from phynes@ptbocounty.ca. [Learn why this is important](#)

Hong,

The County does not approve or sign off on TORs, but from the review of the TOR, it appears that the TOR generally follows the County's [TIA Guidelines](#). Ultimately, it is up to the writer of the Traffic Impact Assessment (TIA) to ensure that the TIA is in accordance with the TIA Guidelines and that it reflects any changes in the project details, background traffic, County Policies/By-Laws/Guidelines, etc. that may occur after these comments.

The following are the County's comments on the TOR

1. Future background traffic – please use 2% growth rate
2. Study intersections
  - a. The County requires the following intersections to be included in the TIA
    - i. Ward Street (CR 18) & Willcox Street
    - ii. Ward Street (CR 18) & Gore Street
    - iii. Ward Street (CR 18) & Bridge Street (CR 14)
    - iv. Ward Street (CR 18) & East Communication Road
    - v. Centre Line (CR 24) & 7th Line
  - b. The County acknowledges that some of these intersections are at greater distances from the proposed subdivision; however, based on the known details of the proposed subdivision, it is expected that there will be impacts at these intersections (to varying degrees), and therefore, the County will still require them to be a part of the TIA (to ensure that they will still function with an appropriate level of self, else mitigation will be required).
2. Documentation
  - a. As per the [TIA Guidelines](#), reports must be signed and stamped by a professional engineer.
    - i. As such, we would not accept a draft report for the peer review(s)
    - ii. Once a report is approved as part of the peer review process, it may not be modified
    - iii. Therefore, all submissions must be signed and stamped
4. To obtain County Traffic Data, please contact David Hoving directly ([dhovinga@ptbocounty.ca](mailto:dhovinga@ptbocounty.ca))

- a. Note, the availability data may or may not be suitable/sufficient for the TIA
  - b. it will ultimately be the writer of the TIA's responsibility to ensure that there is sufficient data and that the data represents appropriate conditions
5. The above commentary is on behalf of the County, only
- a. The Township of Selwyn may have additional requirements
    - i. It is recommended that you contact Adam Tobin (cc'd) for additional comments on behalf of the Township

Please note that the Record of Preconsultation included in the TOR does not represent the most recent preconsultation meeting for this property. The most recent preconsultation meeting was held last week (September 11, 2025). Please see the attached comments, which were provided by Engineering and Construction in advance of the most recent preconsultation meeting for this development.

If you have any questions, please contact me.

Regards,

**Pete Hynes, P.Eng. (he/him)**

Senior Project Coordinator, Transportation Planning  
Engineering and Construction, Peterborough County  
705-775-7076

[www.ptbocounty.ca](http://www.ptbocounty.ca)



---

**From:** Saccoccia, Doug <DSaccoccia@ptbocounty.ca>

**Sent:** Thursday, September 18, 2025 6:31 AM

**To:** Hynes, Pete <PHynes@ptbocounty.ca>

**Cc:** Darling, Kyle <KDarling@ptbocounty.ca>

**Subject:** Fw: Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough - TIS ToR review

Hi Pete,

Can you please respond to Hong and advise that it has been received?

Thanks!

**Doug Saccoccia, P.Eng.**

General Manager, Engineering & Construction  
Planning, Development and Public Works, Peterborough County

705-743-0380 ext. 3201

[www.ptbocounty.ca](http://www.ptbocounty.ca)



---

**From:** PTBO County Info <[info@ptbocounty.ca](mailto:info@ptbocounty.ca)>

**Sent:** Wednesday, September 17, 2025 4:24 PM

**To:** Saccoccia, Doug <[DSaccoccia@ptbocounty.ca](mailto:DSaccoccia@ptbocounty.ca)>

**Cc:** [Hong.Shen@ghd.com](mailto:Hong.Shen@ghd.com) <[Hong.Shen@ghd.com](mailto:Hong.Shen@ghd.com)>

**Subject:** Fw: Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough - TIS ToR review

Hi Doug,

Please see the email below intended for you.

Best,

**Shae for Peterborough County**

Address: 470 Water St., Peterborough, ON K9H 3M3

Phone: 705-743-0380

Email: [info@ptbocounty.ca](mailto:info@ptbocounty.ca)



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---

**From:** Hong Shen <[Hong.Shen@ghd.com](mailto:Hong.Shen@ghd.com)>

**Sent:** Wednesday, September 17, 2025 11:00 AM

**To:** PTBO County Info <[info@ptbocounty.ca](mailto:info@ptbocounty.ca)>; [plundberg@selwyntownship.ca](mailto:plundberg@selwyntownship.ca)

<[plundberg@selwyntownship.ca](mailto:plundberg@selwyntownship.ca)>

**Cc:** Roland Roovers <[Roland.Roovers@ghd.com](mailto:Roland.Roovers@ghd.com)>

**Subject:** Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough - TIS ToR review

Hi Doug and Per,

Please find attached our Terms of Reference (ToR) for a Traffic Impact Study for the Residential Development in Bridgenorth, Township of Selwyn, County of Peterborough.

Please review and provide approval/comment

NOTE ([info@ptbocounty.ca](mailto:info@ptbocounty.ca)): please FW to Doug Saccoccia

Thank you and regards,

**Hong Shen, M.Eng., P.Eng.**

**Senior Project Engineer, Transportation Planning**

**GHD Limited**

140 Allstate Parkway, Suite 210, Markham ON L3R 5Y8, Canada

T: +1 905 752 4347 | F: +1 905 248 3919 | E: [hong.shen@ghd.com](mailto:hong.shen@ghd.com)

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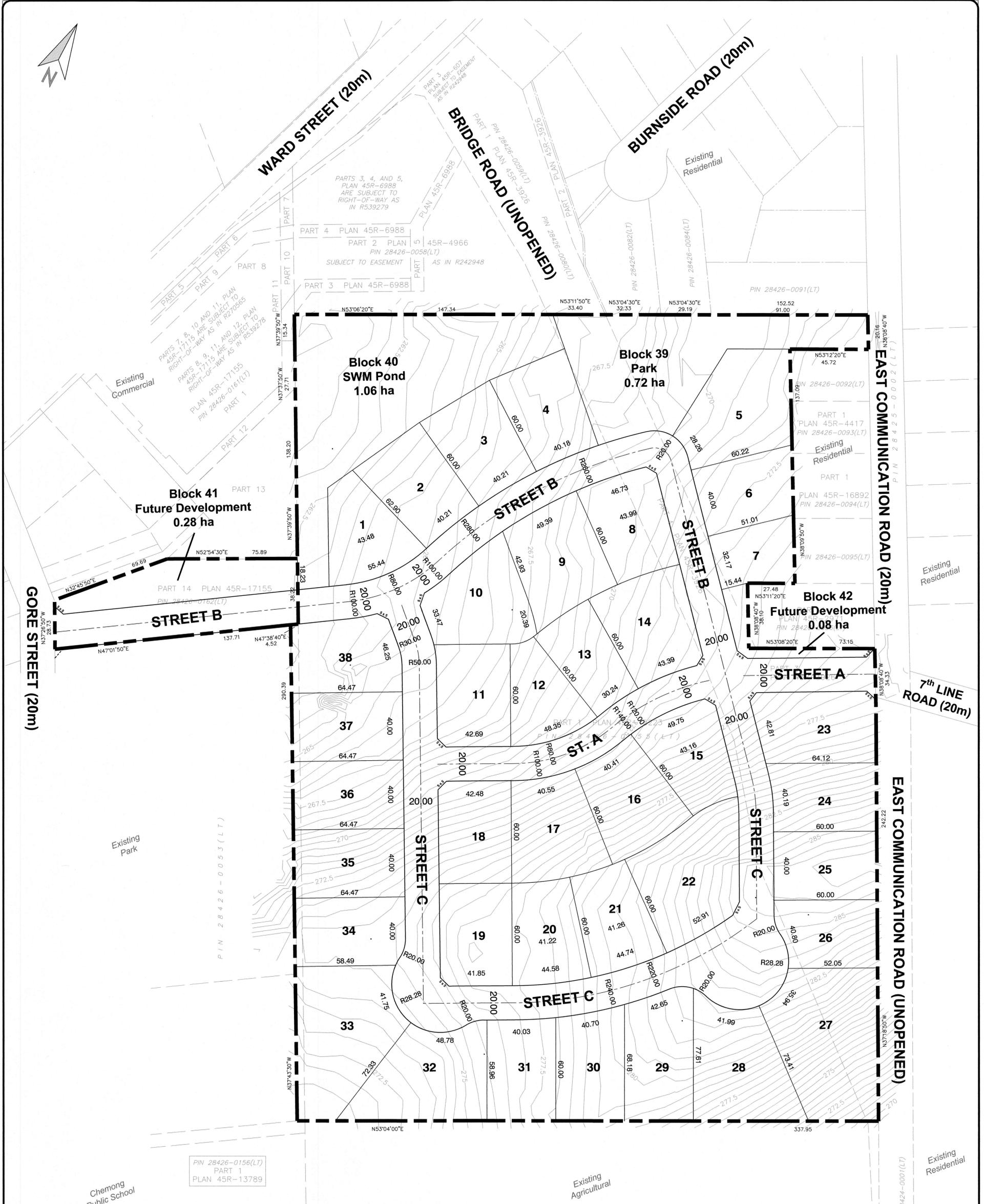
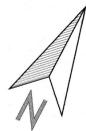


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# Appendix B

**Site Plan**

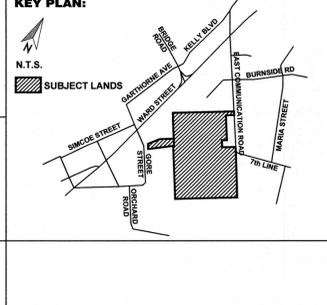


| Schedule of Land Use       |                 |                   |              |
|----------------------------|-----------------|-------------------|--------------|
| Description                | Lot / Block No. | Residential Units | Area (ha)    |
| Single Detached            | 1-38            | 38                | 10.51        |
| Total Single Detached      |                 | 38                | 10.51        |
| Park                       | 39              |                   | 0.72         |
| Stormwater Management Pond | 40              |                   | 1.06         |
| Future Development         | 41, 42          |                   | 0.36         |
| Right of Way               | Streets A-C     |                   | 2.91         |
| <b>Total Site Area</b>     |                 |                   | <b>15.56</b> |

**TITLE:**  
**DRAFT PLAN OF SUBDIVISION**

**LEGAL DESCRIPTION:**  
DRAFT PLAN OF SUBDIVISION  
PART OF LOT 12  
EAST OF COMMUNICATION ROAD  
GEOGRAPHIC TOWNSHIP OF SMITH  
TOWNSHIP OF SELWYN  
COUNTY OF PETERBOROUGH

**CHEMONG LAKEVIEW ESTATES**



**SURVEYOR'S CERTIFICATE:**  
I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATE AND CORRECTLY SHOWN IN ACCORDANCE WITH A PLAN OF SURVEY PREPARED BY ELLIOTT AND PARR

SHAWN M. O'CONNOR O.L.S.  
ELLIOTT AND PARR  
DATE: 11/27/25

**OWNER'S CERTIFICATE:**  
I HEREBY AUTHORIZE THE BIGLIERI GROUP LTD. TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE COUNTY OF PETERBOROUGH

JEFF PETERS  
LAND DEVELOPMENTS INC.  
BRIDGE NORTH LAND INC.  
DATE:

**REQUIRED INFORMATION:**  
AS REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT R.S.O. 1990.

(A) SEE PLAN (G) SEE PLAN  
(B) SEE PLAN (H) PRIVATE SERVICES AVAILABLE  
(C) SEE KEY MAP (I) SILTY SAND, SANDY SILT, SILTY SAND TILL  
(D) SEE SCHEDULE OF LAND USE (J) SEE PLAN  
(E) SEE PLAN (K) PRIVATE SERVICES AVAILABLE  
(F) SEE PLAN (L) SEE PLAN  
(1.1) N/A

NOTE: DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

**REVISIONS**

| No. | Description | Date | Int. |
|-----|-------------|------|------|
| 3   |             |      |      |
| 2   |             |      |      |
| 1   |             |      |      |

**APPROVAL STAMP:**

S.E. CORNER  
LOT 12  
EAST COMMUNICATION ROAD

PROJECT No.: 25315  
DATE: November 13, 2025  
SCALE: 1:1000  
DRAWN BY: EC CHECKED BY: MP  
DRAWING No.: **DP-01**

**Biglieri**  
2472 Kingston Road, Toronto  
21 King Street W, Suite 1502, Hamilton  
416-623-9155  
thebiglierigroup.com

# Appendix C

**Traffic Data**

**Turning Movement Counts and  
Traffic Signal Timings**



**Table 1: Minimum Pedestrian Interval Requirements**

|                              | Crosswalk Length (m) | Walk Speed (m / sec) | Minimum Walk (sec) | Minimum Don't Walk (sec)  | Minimum Green (sec) |
|------------------------------|----------------------|----------------------|--------------------|---------------------------|---------------------|
| Ward Street North Crosswalk  | 12.6                 | 1.04                 | 7                  | 12                        | 19                  |
| Ward Street South Crosswalk  | 8.25                 | 1.04                 | 7                  | 8                         | 15                  |
| Wilcox Street West Crosswalk | 10.6                 | 1.04                 | 7                  | 10                        | 17                  |
| Wilcox Street East Crosswalk | 11.7                 | 1.04                 | 7                  | 11                        | 18                  |
|                              |                      |                      |                    | Minimum East West Green   | 19                  |
|                              |                      |                      |                    | Minimum North South Green | 18                  |

As indicated the minimum east-west side street interval would require 19 seconds which is the time required for the minimum "Walk" interval and the time required to cross the street ("Minimum Don't Walk"). The pedestrian push button could be actuated extending the green time only when pushed by a pedestrian. However, it is presumed that gaps for pedestrians of 12 seconds (i.e. minimum pedestrian crossing time) or more would be desired upstream and downstream at other intersections and driveways meaning which has been used to determine the minimum green of 12 seconds for traffic during each signal cycle.

Synchro 7 was used to evaluate the operations of the signal for fixed time operation during the AM and PM peak hour. Data was not available from the Tranplan report for the percentage of heavy vehicle traffic so 5% was assumed on Ward Street and 2% was assumed for Willcox Street. The functional specification for the signal area as follows:

1. Two phase operation
2. Capable of operating both semi-actuated and fixed time with loops installed on Willcox Street.
3. Actuated pedestrian capability.
4. Capable of overriding fixed time operation to extend east-west green phase during high volume side street conditions if possible.

The following timing plan is proposed:

**Table 2: Timing Plan**

| Time Period             | Operation            | Ward Street |       |         | Willcox Street |       |         | Cycle Length |
|-------------------------|----------------------|-------------|-------|---------|----------------|-------|---------|--------------|
|                         |                      | Green       | Amber | All Red | Green          | Amber | All Red |              |
| 7pm<br>11 PM - 7 AM     | Semi-Actuated        | 36          | 4     | 2       | 12             | 4     | 2       | 60           |
|                         | Pedestrian Actuation | 29          | 4     | 2       | 19             | 4     | 2       | 60           |
| 7am<br>-7pm<br>7AM-3 PM | Fixed Time           | 49          | 4     | 2       | 19             | 4     | 2       | 80           |
|                         | Fixed Time           | 49          | 4     | 2       | 19             | 4     | 2       | 80           |
| 6 PM -11 PM             | Fixed Time           | 49          | 4     | 2       | 19             | 4     | 2       | 80           |

County Road 14 at Cr 18 Signal Timing June 2017

|           | Left Turn | South Bound | West Bound | North Bound | East/West Bound | Pedestrian |
|-----------|-----------|-------------|------------|-------------|-----------------|------------|
| Phase     | $\phi$ 1  | $\phi$ 2    | $\phi$ 4   | $\phi$ 5    | $\phi$ 6        | $\phi$ 8   |
| Min Green | 20        | 12          | 12         | 5           | 5               | N/A        |
| Max 1     | 20        | 20          | 20         | 25          | 25              | N/A        |
| Max 2     | 50        | 50          | 50         | 50          | 50              | N/A        |
| Walk      | 10        | 10          | 10         | Overlap     | 5               | 5          |
| Ped CLR   | 10        | 10          | 10         |             | 10              | 10         |



## Project #25-335 - GHD

### Intersection Count Report

**Intersection:** Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)

**Municipality:** Bridgenorth

**Count Date:** Tuesday, Oct 14, 2025

**Site Code:** 2533500001

**Count Categories:** Cars, Trucks, Bicycles, Pedestrians

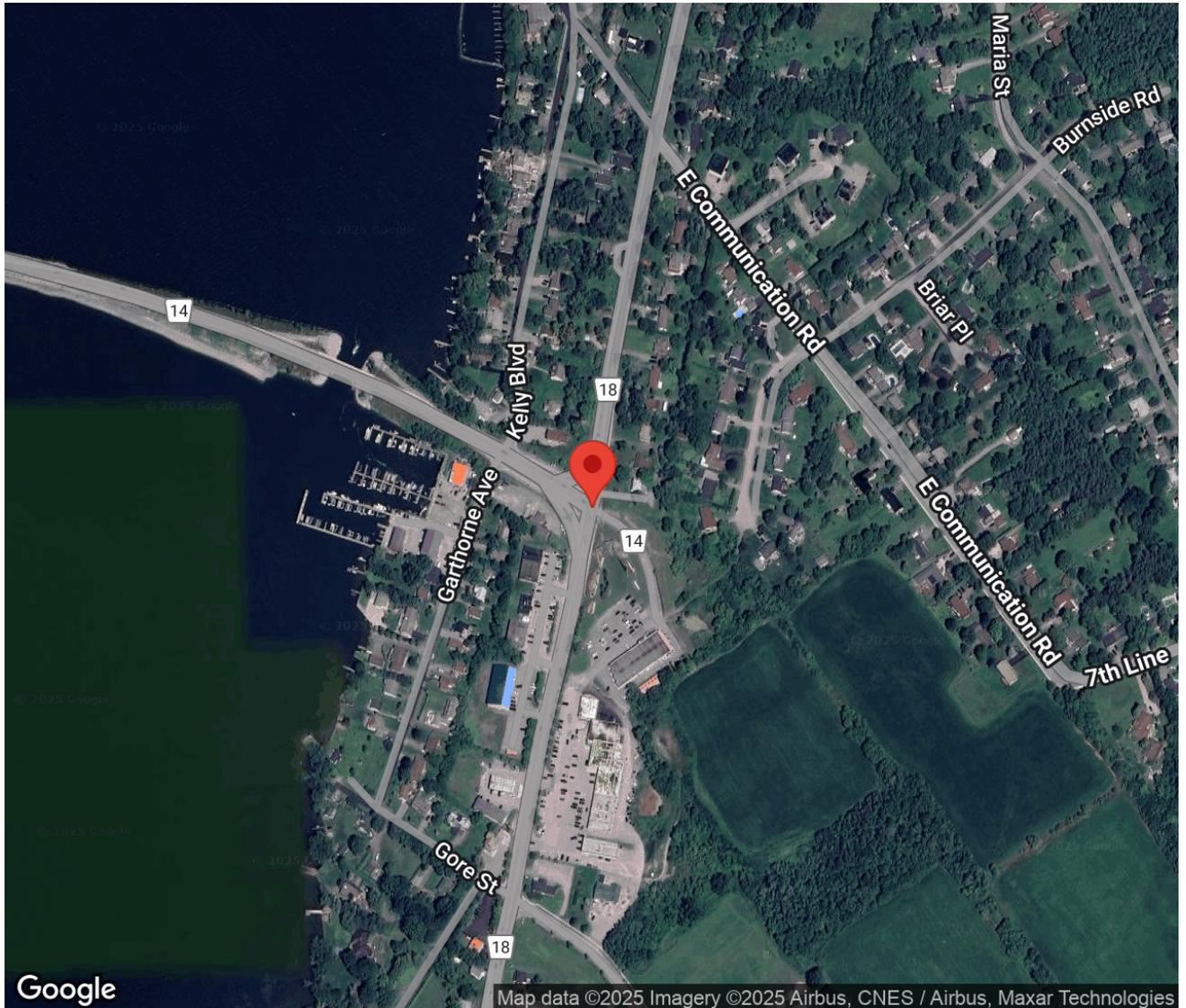
**Count Period:** 07:00-09:00, 16:00-18:00

**Weather:** Clear

**Comments:**

## Traffic Count Map

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
Site Code: 2533500001  
Municipality: Bridgenorth  
Count Date: Oct 14, 2025





## Traffic Count Summary

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### Ward St (CR 18) - Traffic Summary

| Hour                 | North Approach Totals           |             |            |          |             |          | South Approach Totals           |            |           |          |             |          | Total       |
|----------------------|---------------------------------|-------------|------------|----------|-------------|----------|---------------------------------|------------|-----------|----------|-------------|----------|-------------|
|                      | Includes Cars, Trucks, Bicycles |             |            |          |             |          | Includes Cars, Trucks, Bicycles |            |           |          |             |          |             |
|                      | Left                            | Thru        | Right      | U-Turn   | Total       | Peds     | Left                            | Thru       | Right     | U-Turn   | Total       | Peds     |             |
| <b>07:00 - 08:00</b> | 2                               | 338         | 70         | 0        | 410         | 0        | 96                              | 84         | 20        | 0        | 200         | 0        | 610         |
| <b>08:00 - 09:00</b> | 5                               | 486         | 87         | 0        | 578         | 0        | 178                             | 202        | 0         | 0        | 380         | 0        | 958         |
| BREAK                |                                 |             |            |          |             |          |                                 |            |           |          |             |          |             |
| <b>16:00 - 17:00</b> | 1                               | 109         | 53         | 0        | 163         | 0        | 367                             | 129        | 2         | 0        | 498         | 0        | 661         |
| <b>17:00 - 18:00</b> | 2                               | 77          | 56         | 0        | 135         | 0        | 281                             | 128        | 1         | 0        | 410         | 0        | 545         |
| <b>GRAND TOTAL</b>   | <b>10</b>                       | <b>1010</b> | <b>266</b> | <b>0</b> | <b>1286</b> | <b>0</b> | <b>922</b>                      | <b>543</b> | <b>23</b> | <b>0</b> | <b>1488</b> | <b>0</b> | <b>2774</b> |



## Traffic Count Summary

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### James A Gifford Causeway (Bridge St) (CR 14) - Traffic Summary

| Hour                 | East Approach Totals            |           |           |          |           |          | West Approach Totals            |           |            |          |             |          | Total       |
|----------------------|---------------------------------|-----------|-----------|----------|-----------|----------|---------------------------------|-----------|------------|----------|-------------|----------|-------------|
|                      | Includes Cars, Trucks, Bicycles |           |           |          |           |          | Includes Cars, Trucks, Bicycles |           |            |          |             |          |             |
|                      | Left                            | Thru      | Right     | U-Turn   | Total     | Peds     | Left                            | Thru      | Right      | U-Turn   | Total       | Peds     |             |
| <b>07:00 - 08:00</b> | 2                               | 3         | 1         | 0        | 6         | 0        | 77                              | 2         | 346        | 0        | 425         | 0        | 431         |
| <b>08:00 - 09:00</b> | 4                               | 5         | 5         | 0        | 14        | 0        | 98                              | 3         | 274        | 0        | 375         | 0        | 389         |
| BREAK                |                                 |           |           |          |           |          |                                 |           |            |          |             |          |             |
| <b>16:00 - 17:00</b> | 2                               | 6         | 3         | 0        | 11        | 0        | 47                              | 0         | 147        | 0        | 194         | 0        | 205         |
| <b>17:00 - 18:00</b> | 6                               | 3         | 5         | 0        | 14        | 0        | 51                              | 5         | 114        | 0        | 170         | 0        | 184         |
| <b>GRAND TOTAL</b>   | <b>14</b>                       | <b>17</b> | <b>14</b> | <b>0</b> | <b>45</b> | <b>0</b> | <b>273</b>                      | <b>10</b> | <b>881</b> | <b>0</b> | <b>1164</b> | <b>0</b> | <b>1209</b> |



## Traffic Count Data

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### North Approach - Ward St (CR 18)

| Start Time      | Cars |     |     |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|-----|-----|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑   | →   | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 0    | 86  | 6   | 0 | 92    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 0    | 80  | 5   | 0 | 85    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:30           | 0    | 80  | 20  | 0 | 100   | 0      | 2  | 1 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 2    | 82  | 37  | 0 | 121   | 0      | 2  | 1 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 0    | 106 | 32  | 0 | 138   | 0      | 5  | 3 | 0 | 8     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 3    | 134 | 10  | 0 | 147   | 1      | 7  | 2 | 0 | 10    | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 0    | 129 | 18  | 0 | 147   | 1      | 5  | 0 | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 0    | 98  | 21  | 0 | 119   | 0      | 2  | 1 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b> | 5    | 795 | 149 | 0 | 949   | 2      | 29 | 8 | 0 | 39    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### North Approach - Ward St (CR 18)

| Start Time         | Cars |     |     |   |       | Trucks |    |    |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|-----|-----|---|-------|--------|----|----|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑   | →   | ↻ | Total | ←      | ↑  | →  | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 16:00              | 0    | 39  | 10  | 0 | 49    | 0      | 1  | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 0    | 33  | 18  | 0 | 51    | 0      | 0  | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 0    | 20  | 11  | 0 | 31    | 0      | 4  | 0  | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 1    | 10  | 13  | 0 | 24    | 0      | 2  | 1  | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 0    | 21  | 9   | 0 | 30    | 0      | 3  | 1  | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 2    | 14  | 13  | 0 | 29    | 0      | 0  | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 0    | 15  | 17  | 0 | 32    | 0      | 4  | 1  | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 0    | 19  | 15  | 0 | 34    | 0      | 1  | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 3    | 171 | 106 | 0 | 280   | 0      | 15 | 3  | 0 | 18    | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>GRAND TOTAL</b> | 8    | 966 | 255 | 0 | 1229  | 2      | 44 | 11 | 0 | 57    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### South Approach - Ward St (CR 18)

| Start Time      | Cars |     |    |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|-----|----|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑   | →  | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 17   | 22  | 18 | 0 | 57    | 0      | 1  | 2 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 9    | 0   | 0  | 0 | 9     | 2      | 0  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:30           | 22   | 43  | 0  | 0 | 65    | 1      | 0  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 43   | 15  | 0  | 0 | 58    | 2      | 3  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 21   | 36  | 0  | 0 | 57    | 2      | 1  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 41   | 64  | 0  | 0 | 105   | 8      | 7  | 0 | 0 | 15    | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 25   | 42  | 0  | 0 | 67    | 6      | 3  | 0 | 0 | 9     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 73   | 46  | 0  | 0 | 119   | 2      | 3  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b> | 251  | 268 | 18 | 0 | 537   | 23     | 18 | 2 | 0 | 43    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### South Approach - Ward St (CR 18)

| Start Time         | Cars |     |    |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|-----|----|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑   | →  | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 16:00              | 82   | 35  | 2  | 0 | 119   | 4      | 4  | 0 | 0 | 8     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 82   | 29  | 0  | 0 | 111   | 5      | 6  | 0 | 0 | 11    | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 73   | 25  | 0  | 0 | 98    | 7      | 5  | 0 | 0 | 12    | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 108  | 24  | 0  | 0 | 132   | 6      | 1  | 0 | 0 | 7     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 76   | 25  | 0  | 0 | 101   | 1      | 3  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 68   | 34  | 0  | 0 | 102   | 6      | 3  | 0 | 0 | 9     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 62   | 27  | 0  | 0 | 89    | 3      | 3  | 0 | 0 | 6     | 0        | 1 | 0 | 0 | 1     | 0          |
| 17:45              | 64   | 30  | 1  | 0 | 95    | 1      | 2  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 615  | 229 | 3  | 0 | 847   | 33     | 27 | 0 | 0 | 60    | 0        | 1 | 0 | 0 | 1     | 0          |
| <b>GRAND TOTAL</b> | 866  | 497 | 21 | 0 | 1384  | 56     | 45 | 2 | 0 | 103   | 0        | 1 | 0 | 0 | 1     | 0          |



## Traffic Count Data

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 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### East Approach - James A Gifford Causeway (Bridge St) (CR 14)

| Start Time      | Cars |   |   |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|---|---|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑ | → | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 0    | 0 | 0 | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 0    | 0 | 0 | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 1 | 0 | 0 | 1     | 0          |
| 07:30           | 1    | 2 | 0 | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 1    | 0 | 1 | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 1    | 0 | 1 | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 1    | 1 | 0 | 0 | 2     | 1      | 0 | 1 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 0    | 1 | 2 | 0 | 3     | 0      | 1 | 1 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 0    | 2 | 0 | 0 | 2     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b> | 4    | 6 | 4 | 0 | 14    | 2      | 1 | 2 | 0 | 5     | 0        | 1 | 0 | 0 | 1     | 0          |



## Traffic Count Data

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### East Approach - James A Gifford Causeway (Bridge St) (CR 14)

| Start Time         | Cars |    |   |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|----|---|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑  | → | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 16:00              | 0    | 1  | 0 | 0 | 1     | 0      | 1 | 1 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 1    | 1  | 0 | 0 | 2     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 1    | 2  | 0 | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 0    | 1  | 1 | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 1    | 0  | 0 | 0 | 1     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 0    | 0  | 1 | 0 | 1     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 1    | 2  | 0 | 0 | 3     | 0      | 0 | 2 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 2    | 1  | 1 | 0 | 4     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 6    | 8  | 3 | 0 | 17    | 2      | 1 | 5 | 0 | 8     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>GRAND TOTAL</b> | 10   | 14 | 7 | 0 | 31    | 4      | 2 | 7 | 0 | 13    | 0        | 1 | 0 | 0 | 1     | 0          |



## Traffic Count Data

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### West Approach - James A Gifford Causeway (Bridge St) (CR 14)

| Start Time      | Cars |   |     |   |       | Trucks |   |    |   |       | Bicycles |   |   |   |       | Total Peds |   |
|-----------------|------|---|-----|---|-------|--------|---|----|---|-------|----------|---|---|---|-------|------------|---|
|                 | ←    | ↑ | →   | ↻ | Total | ←      | ↑ | →  | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |   |
| 07:00           | 8    | 0 | 25  | 0 | 33    | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:15           | 16   | 0 | 93  | 0 | 109   | 2      | 0 | 2  | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:30           | 28   | 1 | 100 | 0 | 129   | 0      | 0 | 2  | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:45           | 23   | 1 | 121 | 0 | 145   | 0      | 0 | 3  | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:00           | 28   | 0 | 84  | 0 | 112   | 2      | 0 | 5  | 0 | 7     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:15           | 33   | 2 | 42  | 0 | 77    | 3      | 0 | 3  | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:30           | 17   | 1 | 76  | 0 | 94    | 1      | 0 | 1  | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:45           | 14   | 0 | 62  | 0 | 76    | 0      | 0 | 1  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| <b>SUBTOTAL</b> | 167  | 5 | 603 | 0 | 775   | 8      | 0 | 17 | 0 | 25    | 0        | 0 | 0 | 0 | 0     | 0          | 0 |



## Peak Hour Diagram

### Specified Period

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

### One Hour Peak

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

**Intersection:** Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
**Site Code:** 2533500001  
**Count Date:** Oct 14, 2025

**Weather conditions:** Clear

**\*\* Signalized Intersection \*\***

**Major Road:** Ward St (CR 18) runs N/S

### North Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 553        | 262        | 815        |
|               | 27         | 22         | 49         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>580</b> | <b>284</b> | <b>864</b> |

### Ward St (CR 18)

|               |            |            |          |          |
|---------------|------------|------------|----------|----------|
|               | 0          | 0          | 0        | 0        |
|               | 6          | 19         | 2        | 0        |
|               | 97         | 451        | 5        | 0        |
| <b>Totals</b> | <b>103</b> | <b>470</b> | <b>7</b> | <b>0</b> |

### East Approach

|               | Out       | In        | Total     |
|---------------|-----------|-----------|-----------|
|               | 9         | 9         | 18        |
|               | 4         | 2         | 6         |
|               | 0         | 0         | 0         |
| <b>Totals</b> | <b>13</b> | <b>11</b> | <b>24</b> |

### James A Gifford Causeway (Bridge St) (CR 14)

|   |    |     | Totals |  |
|---|----|-----|--------|--|
| 0 | 0  | 0   | 0      |  |
| 0 | 6  | 101 | 107    |  |
| 0 | 0  | 4   | 4      |  |
| 0 | 12 | 323 | 335    |  |

Peds: 0

Peds: 0



Peds: 0

Peds: 0

### James A Gifford Causeway (Bridge St) (CR 14)

| Totals |   |   |   |
|--------|---|---|---|
| 0      | 0 | 0 | 0 |
| 6      | 4 | 2 | 0 |
| 3      | 2 | 1 | 0 |
| 4      | 3 | 1 | 0 |

### West Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 428        | 229        | 657        |
|               | 18         | 25         | 43         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>446</b> | <b>254</b> | <b>700</b> |

| Totals |     |     |   |   |
|--------|-----|-----|---|---|
| 148    | 171 | 0   | 0 |   |
|        | 130 | 157 | 0 | 0 |
|        | 18  | 14  | 0 | 0 |
|        | 0   | 0   | 0 | 0 |

Ward St (CR 18)

### South Approach

|               | Out        | In         | Total       |
|---------------|------------|------------|-------------|
|               | 287        | 777        | 1064        |
|               | 32         | 32         | 64          |
|               | 0          | 0          | 0           |
| <b>Totals</b> | <b>319</b> | <b>809</b> | <b>1128</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Count Date: Oct 14, 2025  
 Period: 07:00 - 09:00

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

| Start Time         | North Approach<br>Ward St (CR 18) |             |             |          |          |             | South Approach<br>Ward St (CR 18) |            |          |          |          |             | East Approach<br>James A Gifford Causeway (Bridge St) (CR 14) |             |            |          |          |             | West Approach<br>James A Gifford Causeway (Bridge St) (CR 14) |            |             |          |          |            | Total<br>Vehicles |             |
|--------------------|-----------------------------------|-------------|-------------|----------|----------|-------------|-----------------------------------|------------|----------|----------|----------|-------------|---|-------------|------------|----------|----------|-------------|---|------------|-------------|----------|----------|------------|-------------------|-------------|
|                    | ←                                 | ↑           | →           | ↻        | Peds     | Total       | ←                                 | ↑          | →        | ↻        | Peds     | Total       | ←   | ↑           | →          | ↻        | Peds     | Total       | ←   | ↑          | →           | ↻        | Peds     | Total      |                   |             |
| 07:45              | 2                                 | 84          | 38          | 0        | 0        | 124         | 45                                | 18         | 0        | 0        | 0        | 63          | 1   | 0           | 1          | 0        | 0        | 2           | 23  | 1          | 124         | 0        | 0        | 148        | 337               |             |
| 08:00              | 0                                 | 111         | 35          | 0        | 0        | 146         | 23                                | 37         | 0        | 0        | 0        | 60          | 1   | 0           | 1          | 0        | 0        | 2           | 30  | 0          | 89          | 0        | 0        | 119        | 327               |             |
| 08:15              | 4                                 | 141         | 12          | 0        | 0        | 157         | 49                                | 71         | 0        | 0        | 0        | 120         | 2   | 1           | 1          | 0        | 0        | 4           | 36  | 2          | 45          | 0        | 0        | 83         | 364               |             |
| 08:30              | 1                                 | 134         | 18          | 0        | 0        | 153         | 31                                | 45         | 0        | 0        | 0        | 76          | 0   | 2           | 3          | 0        | 0        | 5           | 18  | 1          | 77          | 0        | 0        | 96         | 330               |             |
| <b>Grand Total</b> | <b>7</b>                          | <b>470</b>  | <b>103</b>  | <b>0</b> | <b>0</b> | <b>580</b>  | <b>148</b>                        | <b>171</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>319</b>  | <b>4</b>  | <b>3</b>    | <b>6</b>   | <b>0</b> | <b>0</b> | <b>13</b>   | <b>107</b>  | <b>4</b>   | <b>335</b>  | <b>0</b> | <b>0</b> | <b>446</b> | <b>1358</b>       |             |
| <b>Approach %</b>  | 1.2                               | 81          | 17.8        | 0        | -        | -           | 46.4                              | 53.6       | 0        | 0        | -        | -           | 30.8  | 23.1        | 46.2       | 0        | -        | -           | 24  | 0.9        | 75.1        | 0        | -        | -          | -                 |             |
| <b>Totals %</b>    | 0.5                               | 34.6        | 7.6         | 0        | -        | 42.7        | 10.9                              | 12.6       | 0        | 0        | -        | 23.5        | 0.3   | 0.2         | 0.4        | 0        | -        | 1           | 7.9   | 0.3        | 24.7        | 0        | -        | -          | 32.8              |             |
| <b>PHF</b>         | <b>0.44</b>                       | <b>0.83</b> | <b>0.68</b> | <b>0</b> | -        | <b>0.92</b> | <b>0.76</b>                       | <b>0.6</b> | <b>0</b> | <b>0</b> | -        | <b>0.66</b> | <b>0.5</b>  | <b>0.38</b> | <b>0.5</b> | <b>0</b> | -        | <b>0.65</b> | <b>0.74</b>   | <b>0.5</b> | <b>0.68</b> | <b>0</b> | -        | -          | <b>0.75</b>       | <b>0.93</b> |
| <b>Cars</b>        | 5                                 | 451         | 97          | 0        | 0        | 553         | 130                               | 157        | 0        | 0        | 0        | 287         | 3   | 2           | 4          | 0        | 0        | 9           | 101   | 4          | 323         | 0        | 0        | 428        | 1277              |             |
| <b>% Cars</b>      | 71.4                              | 96          | 94.2        | 0        | 0        | 95.3        | 87.8                              | 91.8       | 0        | 0        | 0        | 90          | 75  | 66.7        | 66.7       | 0        | 0        | 69.2        | 94.4  | 100        | 96.4        | 0        | 0        | 96         | 94                |             |
| <b>Trucks</b>      | 2                                 | 19          | 6           | 0        | 0        | 27          | 18                                | 14         | 0        | 0        | 0        | 32          | 1   | 1           | 2          | 0        | 0        | 4           | 6   | 0          | 12          | 0        | 0        | 18         | 81                |             |
| <b>% Trucks</b>    | 28.6                              | 4           | 5.8         | 0        | 0        | 4.7         | 12.2                              | 8.2        | 0        | 0        | 0        | 10          | 25  | 33.3        | 33.3       | 0        | 0        | 30.8        | 5.6   | 0          | 3.6         | 0        | 0        | 4          | 6                 |             |
| <b>Bicycles</b>    | 0                                 | 0           | 0           | 0        | 0        | 0           | 0                                 | 0          | 0        | 0        | 0        | 0           | 0   | 0           | 0          | 0        | 0        | 0           | 0   | 0          | 0           | 0        | 0        | 0          | 0                 |             |
| <b>% Bicycles</b>  | 0                                 | 0           | 0           | 0        | 0        | 0           | 0                                 | 0          | 0        | 0        | 0        | 0           | 0   | 0           | 0          | 0        | 0        | 0           | 0   | 0          | 0           | 0        | 0        | 0          | 0                 |             |
| <b>Peds</b>        |                                   |             |             |          | 0        | -           |                                   |            |          |          | 0        | -           |   |             |            |          | 0        | -           |   |            |             |          | 0        | -          | 0                 |             |
| <b>% Peds</b>      |                                   |             |             |          | 0        | -           |                                   |            |          |          | 0        | -           |   |             |            |          | 0        | -           |   |            |             |          | 0        | -          | 0                 |             |

## Peak Hour Diagram

### Specified Period

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

### One Hour Peak

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

**Intersection:** Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
**Site Code:** 2533500001  
**Count Date:** Oct 14, 2025

**Weather conditions:** Clear

**\*\* Signalized Intersection \*\***

**Major Road:** Ward St (CR 18) runs N/S

### North Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 155        | 159        | 314        |
|               | 8          | 20         | 28         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>163</b> | <b>179</b> | <b>342</b> |

### Ward St (CR 18)

|               |           |            |          |          |
|---------------|-----------|------------|----------|----------|
|               | 0         | 0          | 0        | 0        |
|               | 1         | 7          | 0        | 0        |
|               | 52        | 102        | 1        | 0        |
| <b>Totals</b> | <b>53</b> | <b>109</b> | <b>1</b> | <b>0</b> |

### East Approach

|               | Out       | In       | Total     |
|---------------|-----------|----------|-----------|
|               | 8         | 3        | 11        |
|               | 3         | 0        | 3         |
|               | 0         | 0        | 0         |
| <b>Totals</b> | <b>11</b> | <b>3</b> | <b>14</b> |

### James A Gifford Causeway (Bridge St) (CR 14)

|   |   |     | Totals     |
|---|---|-----|------------|
| 0 | 0 | 0   | <b>0</b>   |
| 0 | 2 | 45  | <b>47</b>  |
| 0 | 0 | 0   | <b>0</b>   |
| 0 | 9 | 138 | <b>147</b> |

Peds: 0

Peds: 0



Peds: 0

Peds: 0

### James A Gifford Causeway (Bridge St) (CR 14)

| Totals   |   |   |   |
|----------|---|---|---|
| <b>0</b> | 0 | 0 | 0 |
| <b>3</b> | 1 | 2 | 0 |
| <b>6</b> | 5 | 1 | 0 |
| <b>2</b> | 2 | 0 | 0 |

### West Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 183        | 402        | 585        |
|               | 11         | 24         | 35         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>194</b> | <b>426</b> | <b>620</b> |

| Totals     |            |          |          |   |
|------------|------------|----------|----------|---|
| <b>367</b> | <b>129</b> | <b>2</b> | <b>0</b> |   |
|            | 345        | 113      | 2        | 0 |
|            | 22         | 16       | 0        | 0 |
|            | 0          | 0        | 0        | 0 |

Ward St (CR 18)

### South Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 460        | 242        | 702        |
|               | 38         | 16         | 54         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>498</b> | <b>258</b> | <b>756</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: Ward St (CR 18) & James A Gifford Causeway (Bridge St) (CR 14)  
 Site Code: 2533500001  
 Count Date: Oct 14, 2025  
 Period: 16:00 - 18:00

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

| Start Time         | North Approach<br>Ward St (CR 18) |             |             |          |          |            | South Approach<br>Ward St (CR 18) |             |             |          |          |            | East Approach<br>James A Gifford Causeway (Bridge St) (CR 14) |             |             |          |          |             | West Approach<br>James A Gifford Causeway (Bridge St) (CR 14) |          |             |          |          |             | Total<br>Vehicles |
|--------------------|-----------------------------------|-------------|-------------|----------|----------|------------|-----------------------------------|-------------|-------------|----------|----------|------------|---|-------------|-------------|----------|----------|-------------|---|----------|-------------|----------|----------|-------------|-------------------|
|                    | ←                                 | ↑           | →           | ↻        | Peds     | Total      | ←                                 | ↑           | →           | ↻        | Peds     | Total      | ←   | ↑           | →           | ↻        | Peds     | Total       | ←   | ↑        | →           | ↻        | Peds     | Total       |                   |
| 16:00              | 0                                 | 40          | 10          | 0        | 0        | 50         | 86                                | 39          | 2           | 0        | 0        | 127        | 0   | 2           | 1           | 0        | 0        | 3           | 10  | 0        | 40          | 0        | 0        | 50          | 230               |
| 16:15              | 0                                 | 33          | 18          | 0        | 0        | 51         | 87                                | 35          | 0           | 0        | 0        | 122        | 1   | 1           | 1           | 0        | 0        | 3           | 13  | 0        | 38          | 0        | 0        | 51          | 227               |
| 16:30              | 0                                 | 24          | 11          | 0        | 0        | 35         | 80                                | 30          | 0           | 0        | 0        | 110        | 1   | 2           | 0           | 0        | 0        | 3           | 15  | 0        | 34          | 0        | 0        | 49          | 197               |
| 16:45              | 1                                 | 12          | 14          | 0        | 0        | 27         | 114                               | 25          | 0           | 0        | 0        | 139        | 0   | 1           | 1           | 0        | 0        | 2           | 9   | 0        | 35          | 0        | 0        | 44          | 212               |
| <b>Grand Total</b> | <b>1</b>                          | <b>109</b>  | <b>53</b>   | <b>0</b> | <b>0</b> | <b>163</b> | <b>367</b>                        | <b>129</b>  | <b>2</b>    | <b>0</b> | <b>0</b> | <b>498</b> | <b>2</b>  | <b>6</b>    | <b>3</b>    | <b>0</b> | <b>0</b> | <b>11</b>   | <b>47</b>   | <b>0</b> | <b>147</b>  | <b>0</b> | <b>0</b> | <b>194</b>  | <b>866</b>        |
| <b>Approach %</b>  | 0.6                               | 66.9        | 32.5        | 0        | -        | -          | 73.7                              | 25.9        | 0.4         | 0        | -        | -          | 18.2  | 54.5        | 27.3        | 0        | -        | -           | 24.2  | 0        | 75.8        | 0        | -        | -           | -                 |
| <b>Totals %</b>    | 0.1                               | 12.6        | 6.1         | 0        | -        | 18.8       | 42.4                              | 14.9        | 0.2         | 0        | -        | 57.5       | 0.2   | 0.7         | 0.3         | 0        | -        | 1.3         | 5.4   | 0        | 17          | 0        | -        | 22.4        | -                 |
| <b>PHF</b>         | <b>0.25</b>                       | <b>0.68</b> | <b>0.74</b> | <b>0</b> | <b>0</b> | <b>0.8</b> | <b>0.8</b>                        | <b>0.83</b> | <b>0.25</b> | <b>0</b> | <b>0</b> | <b>0.9</b> | <b>0.5</b>  | <b>0.75</b> | <b>0.75</b> | <b>0</b> | <b>0</b> | <b>0.92</b> | <b>0.78</b>   | <b>0</b> | <b>0.92</b> | <b>0</b> | <b>0</b> | <b>0.95</b> | <b>0.94</b>       |
| <b>Cars</b>        | 1                                 | 102         | 52          | 0        | -        | 155        | 345                               | 113         | 2           | 0        | -        | 460        | 2   | 5           | 1           | 0        | -        | 8           | 45  | 0        | 138         | 0        | -        | 183         | 806               |
| <b>% Cars</b>      | 100                               | 93.6        | 98.1        | 0        | -        | 95.1       | 94                                | 87.6        | 100         | 0        | -        | 92.4       | 100   | 83.3        | 33.3        | 0        | -        | 72.7        | 95.7  | 0        | 93.9        | 0        | -        | 94.3        | 93.1              |
| <b>Trucks</b>      | 0                                 | 7           | 1           | 0        | -        | 8          | 22                                | 16          | 0           | 0        | -        | 38         | 0   | 1           | 2           | 0        | -        | 3           | 2   | 0        | 9           | 0        | -        | 11          | 60                |
| <b>% Trucks</b>    | 0                                 | 6.4         | 1.9         | 0        | -        | 4.9        | 6                                 | 12.4        | 0           | 0        | -        | 7.6        | 0   | 16.7        | 66.7        | 0        | -        | 27.3        | 4.3   | 0        | 6.1         | 0        | -        | 5.7         | 6.9               |
| <b>Bicycles</b>    | 0                                 | 0           | 0           | 0        | -        | 0          | 0                                 | 0           | 0           | 0        | -        | 0          | 0   | 0           | 0           | 0        | -        | 0           | 0   | 0        | 0           | 0        | 0        | 0           | 0                 |
| <b>% Bicycles</b>  | 0                                 | 0           | 0           | 0        | -        | 0          | 0                                 | 0           | 0           | 0        | -        | 0          | 0   | 0           | 0           | 0        | -        | 0           | 0   | 0        | 0           | 0        | 0        | 0           | 0                 |
| <b>Peds</b>        |                                   |             |             |          | 0        | -          |                                   |             |             |          | 0        | -          |   |             |             |          | 0        | -           |   |          |             |          | 0        | -           | 0                 |
| <b>% Peds</b>      |                                   |             |             |          | 0        | -          |                                   |             |             |          | 0        | -          |   |             |             |          | 0        | -           |   |          |             |          | 0        | -           | 0                 |



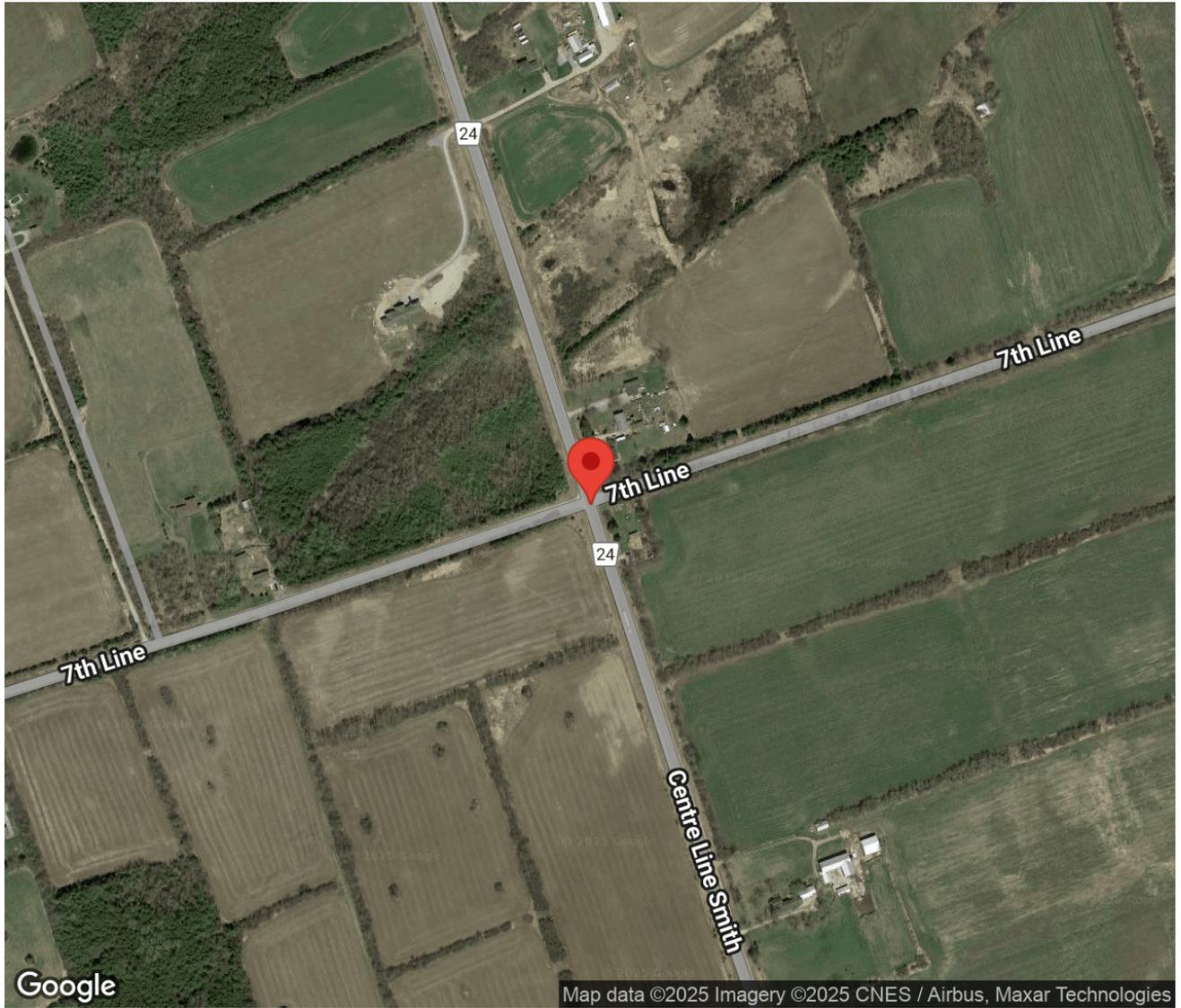
## Project #25-335 - GHD

### Intersection Count Report

**Intersection:** CR 24 & 7th Line  
**Municipality:** Bridgenorth  
**Count Date:** Tuesday, Oct 14, 2025  
**Site Code:** 2533500002  
**Count Categories:** Cars, Trucks, Bicycles, Pedestrians  
**Count Period:** 07:00-09:00, 16:00-18:00  
**Weather:** Clear  
**Comments:**

## Traffic Count Map

Intersection: CR 24 & 7th Line  
Site Code: 2533500002  
Municipality: Bridgenorth  
Count Date: Oct 14, 2025



## Traffic Count Summary

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### CR 24 - Traffic Summary

| Hour                 | North Approach Totals           |            |          |          |            |          | South Approach Totals           |            |           |          |            |          | Total      |
|----------------------|---------------------------------|------------|----------|----------|------------|----------|---------------------------------|------------|-----------|----------|------------|----------|------------|
|                      | Includes Cars, Trucks, Bicycles |            |          |          |            |          | Includes Cars, Trucks, Bicycles |            |           |          |            |          |            |
|                      | Left                            | Thru       | Right    | U-Turn   | Total      | Peds     | Left                            | Thru       | Right     | U-Turn   | Total      | Peds     |            |
| <b>07:00 - 08:00</b> | 0                               | 68         | 1        | 0        | 69         | 0        | 15                              | 53         | 0         | 0        | 68         | 0        | 137        |
| <b>08:00 - 09:00</b> | 0                               | 106        | 0        | 0        | 106        | 0        | 10                              | 79         | 6         | 0        | 95         | 0        | 201        |
| BREAK                |                                 |            |          |          |            |          |                                 |            |           |          |            |          |            |
| <b>16:00 - 17:00</b> | 0                               | 74         | 1        | 0        | 75         | 0        | 7                               | 67         | 3         | 0        | 77         | 0        | 152        |
| <b>17:00 - 18:00</b> | 0                               | 80         | 0        | 0        | 80         | 0        | 10                              | 66         | 3         | 0        | 79         | 0        | 159        |
| <b>GRAND TOTAL</b>   | <b>0</b>                        | <b>328</b> | <b>2</b> | <b>0</b> | <b>330</b> | <b>0</b> | <b>42</b>                       | <b>265</b> | <b>12</b> | <b>0</b> | <b>319</b> | <b>0</b> | <b>649</b> |



# Traffic Count Summary

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

## 7th Line - Traffic Summary

| Hour               | East Approach Totals            |          |          |          |           |          | West Approach Totals            |           |           |          |            |          | Total      |
|--------------------|---------------------------------|----------|----------|----------|-----------|----------|---------------------------------|-----------|-----------|----------|------------|----------|------------|
|                    | Includes Cars, Trucks, Bicycles |          |          |          |           |          | Includes Cars, Trucks, Bicycles |           |           |          |            |          |            |
|                    | Left                            | Thru     | Right    | U-Turn   | Total     | Peds     | Left                            | Thru      | Right     | U-Turn   | Total      | Peds     |            |
| 07:00 - 08:00      | 2                               | 0        | 0        | 0        | 2         | 0        | 1                               | 4         | 19        | 0        | 24         | 0        | 26         |
| 08:00 - 09:00      | 4                               | 4        | 1        | 0        | 9         | 0        | 2                               | 6         | 29        | 0        | 37         | 0        | 46         |
| BREAK              |                                 |          |          |          |           |          |                                 |           |           |          |            |          |            |
| 16:00 - 17:00      | 3                               | 1        | 0        | 0        | 4         | 0        | 2                               | 4         | 20        | 0        | 26         | 0        | 30         |
| 17:00 - 18:00      | 3                               | 3        | 1        | 0        | 7         | 0        | 2                               | 4         | 21        | 0        | 27         | 0        | 34         |
| <b>GRAND TOTAL</b> | <b>12</b>                       | <b>8</b> | <b>2</b> | <b>0</b> | <b>22</b> | <b>0</b> | <b>7</b>                        | <b>18</b> | <b>89</b> | <b>0</b> | <b>114</b> | <b>0</b> | <b>136</b> |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### North Approach - CR 24

| Start Time      | Cars |     |   |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|-----|---|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑   | → | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 0    | 17  | 0 | 0 | 17    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 0    | 8   | 0 | 0 | 8     | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:30           | 0    | 18  | 0 | 0 | 18    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 0    | 19  | 1 | 0 | 20    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 0    | 18  | 0 | 0 | 18    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 0    | 30  | 0 | 0 | 30    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 0    | 25  | 0 | 0 | 25    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 0    | 26  | 0 | 0 | 26    | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b> | 0    | 161 | 1 | 0 | 162   | 0      | 13 | 0 | 0 | 13    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### North Approach - CR 24

| Start Time         | Cars |     |   |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|-----|---|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑   | → | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 16:00              | 0    | 15  | 0 | 0 | 15    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 0    | 22  | 0 | 0 | 22    | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 0    | 16  | 1 | 0 | 17    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 0    | 18  | 0 | 0 | 18    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 0    | 25  | 0 | 0 | 25    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 0    | 22  | 0 | 0 | 22    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 0    | 15  | 0 | 0 | 15    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 0    | 11  | 0 | 0 | 11    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 0    | 144 | 1 | 0 | 145   | 0      | 10 | 0 | 0 | 10    | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>GRAND TOTAL</b> | 0    | 305 | 2 | 0 | 307   | 0      | 23 | 0 | 0 | 23    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### South Approach - CR 24

| Start Time      | Cars |     |   |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|-----|---|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑   | → | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 0    | 10  | 0 | 0 | 10    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 6    | 8   | 0 | 0 | 14    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:30           | 5    | 17  | 0 | 0 | 22    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 4    | 12  | 0 | 0 | 16    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 2    | 20  | 2 | 0 | 24    | 1      | 0  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 2    | 19  | 1 | 0 | 22    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 3    | 19  | 2 | 0 | 24    | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 2    | 12  | 1 | 0 | 15    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b> | 24   | 117 | 6 | 0 | 147   | 1      | 15 | 0 | 0 | 16    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### South Approach - CR 24

| Start Time         | Cars |     |    |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|-----|----|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑   | →  | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 16:00              | 0    | 15  | 0  | 0 | 15    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 2    | 11  | 0  | 0 | 13    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 3    | 16  | 1  | 0 | 20    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 1    | 18  | 2  | 0 | 21    | 1      | 3  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 4    | 22  | 2  | 0 | 28    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 2    | 15  | 0  | 0 | 17    | 1      | 2  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 2    | 13  | 1  | 0 | 16    | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 1    | 11  | 0  | 0 | 12    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 15   | 121 | 6  | 0 | 142   | 2      | 12 | 0 | 0 | 14    | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>GRAND TOTAL</b> | 39   | 238 | 12 | 0 | 289   | 3      | 27 | 0 | 0 | 30    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### East Approach - 7th Line

| Start Time      | Cars |   |   |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |   |
|-----------------|------|---|---|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|---|
|                 | ←    | ↑ | → | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |   |
| 07:00           | 1    | 0 | 0 | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:15           | 0    | 0 | 0 | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:30           | 1    | 0 | 0 | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:45           | 0    | 0 | 0 | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:00           | 1    | 1 | 1 | 0 | 3     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:15           | 1    | 1 | 0 | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:30           | 0    | 1 | 0 | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:45           | 1    | 1 | 0 | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| <b>SUBTOTAL</b> | 5    | 4 | 1 | 0 | 10    | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### East Approach - 7th Line

| Start Time         | Cars |   |   |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|---|---|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑ | → | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 16:00              | 0    | 0 | 0 | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 1    | 0 | 0 | 0 | 1     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 0    | 1 | 0 | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 0    | 0 | 0 | 0 | 0     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 1    | 1 | 0 | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 1    | 1 | 1 | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 0    | 1 | 0 | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 1    | 0 | 0 | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 4    | 4 | 1 | 0 | 9     | 2      | 0 | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>GRAND TOTAL</b> | 9    | 8 | 2 | 0 | 19    | 3      | 0 | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### West Approach - 7th Line

| Start Time      | Cars |   |    |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |   |
|-----------------|------|---|----|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|---|
|                 | ←    | ↑ | →  | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |   |
| 07:00           | 1    | 0 | 2  | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:15           | 0    | 2 | 4  | 0 | 6     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:30           | 0    | 1 | 8  | 0 | 9     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:45           | 0    | 1 | 4  | 0 | 5     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:00           | 0    | 2 | 5  | 0 | 7     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:15           | 0    | 2 | 10 | 0 | 12    | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:30           | 1    | 0 | 8  | 0 | 9     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:45           | 0    | 1 | 5  | 0 | 6     | 0      | 1 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| <b>SUBTOTAL</b> | 2    | 9 | 46 | 0 | 57    | 1      | 1 | 2 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |



## Traffic Count Data

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Municipality: Bridgenorth  
 Count Date: Oct 14, 2025

### West Approach - 7th Line

| Start Time         | Cars |    |    |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |   |
|--------------------|------|----|----|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|---|
|                    | ←    | ↑  | →  | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |   |
| 16:00              | 0    | 0  | 4  | 0 | 4     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 16:15              | 1    | 2  | 5  | 0 | 8     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 16:30              | 0    | 0  | 2  | 0 | 2     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 16:45              | 0    | 2  | 7  | 0 | 9     | 1      | 0 | 1 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 17:00              | 0    | 0  | 6  | 0 | 6     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 17:15              | 0    | 2  | 6  | 0 | 8     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 17:30              | 1    | 1  | 4  | 0 | 6     | 0      | 1 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 17:45              | 0    | 0  | 5  | 0 | 5     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| <b>SUBTOTAL</b>    | 2    | 7  | 39 | 0 | 48    | 2      | 1 | 2 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| <b>GRAND TOTAL</b> | 4    | 16 | 85 | 0 | 105   | 3      | 2 | 4 | 0 | 9     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |

## Peak Hour Diagram

### Specified Period

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

### One Hour Peak

From: 08:00:00  
To: 09:00:00

**Intersection:** CR 24 & 7th Line  
**Site Code:** 2533500002  
**Count Date:** Oct 14, 2025

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** CR 24 runs N/S

### North Approach

|               | Out        | In        | Total      |
|---------------|------------|-----------|------------|
|               | 99         | 72        | 171        |
|               | 7          | 10        | 17         |
|               | 0          | 0         | 0          |
| <b>Totals</b> | <b>106</b> | <b>82</b> | <b>188</b> |

### CR 24

|               |          |            |          |          |
|---------------|----------|------------|----------|----------|
|               | 0        | 0          | 0        | 0        |
|               | 0        | 7          | 0        | 0        |
|               | 0        | 99         | 0        | 0        |
| <b>Totals</b> | <b>0</b> | <b>106</b> | <b>0</b> | <b>0</b> |

### East Approach

|               | Out      | In        | Total     |
|---------------|----------|-----------|-----------|
|               | 8        | 11        | 19        |
|               | 1        | 1         | 2         |
|               | 0        | 0         | 0         |
| <b>Totals</b> | <b>9</b> | <b>12</b> | <b>21</b> |

### 7th Line

|  |   |   |    | Totals |
|--|---|---|----|--------|
|  | 0 | 0 | 0  | 0      |
|  | 0 | 1 | 1  | 2      |
|  | 0 | 1 | 5  | 6      |
|  | 0 | 1 | 28 | 29     |

Peds: 0

Peds: 0



Peds: 0

Peds: 0

### 7th Line

| Totals |   |   |   |
|--------|---|---|---|
| 0      | 0 | 0 | 0 |
| 1      | 1 | 0 | 0 |
| 4      | 4 | 0 | 0 |
| 4      | 3 | 1 | 0 |

### West Approach

|               | Out       | In        | Total     |
|---------------|-----------|-----------|-----------|
|               | 34        | 13        | 47        |
|               | 3         | 1         | 4         |
|               | 0         | 0         | 0         |
| <b>Totals</b> | <b>37</b> | <b>14</b> | <b>51</b> |

| Totals |    |    |   |   |
|--------|----|----|---|---|
|        | 10 | 79 | 6 | 0 |
|        | 9  | 70 | 6 | 0 |
|        | 1  | 9  | 0 | 0 |
|        | 0  | 0  | 0 | 0 |

CR 24

### South Approach

|               | Out       | In         | Total      |
|---------------|-----------|------------|------------|
|               | 85        | 130        | 215        |
|               | 10        | 9          | 19         |
|               | 0         | 0          | 0          |
| <b>Totals</b> | <b>95</b> | <b>139</b> | <b>234</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Count Date: Oct 14, 2025  
 Period: 07:00 - 09:00

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

| Start Time         | North Approach<br>CR 24 |             |          |          |             |             | South Approach<br>CR 24 |             |             |          |             |             | East Approach<br>7th Line |          |             |          |             |             | West Approach<br>7th Line |             |             |          |             |             | Total<br>Vehic<br>es |
|--------------------|-------------------------|-------------|----------|----------|-------------|-------------|-------------------------|-------------|-------------|----------|-------------|-------------|---------------------------|----------|-------------|----------|-------------|-------------|---------------------------|-------------|-------------|----------|-------------|-------------|----------------------|
|                    | ←                       | ↑           | →        | ↻        | Peds        | Total       | ←                       | ↑           | →           | ↻        | Peds        | Total       | ←                         | ↑        | →           | ↻        | Peds        | Total       | ←                         | ↑           | →           | ↻        | Peds        | Total       |                      |
| 08:00              | 0                       | 21          | 0        | 0        | 0           | 21          | 3                       | 20          | 2           | 0        | 0           | 25          | 2                         | 1        | 1           | 0        | 0           | 4           | 0                         | 2           | 6           | 0        | 0           | 8           | 58                   |
| 08:15              | 0                       | 32          | 0        | 0        | 0           | 32          | 2                       | 21          | 1           | 0        | 0           | 24          | 1                         | 1        | 0           | 0        | 0           | 2           | 1                         | 2           | 10          | 0        | 0           | 13          | 71                   |
| 08:30              | 0                       | 27          | 0        | 0        | 0           | 27          | 3                       | 24          | 2           | 0        | 0           | 29          | 0                         | 1        | 0           | 0        | 0           | 1           | 1                         | 0           | 8           | 0        | 0           | 9           | 66                   |
| 08:45              | 0                       | 26          | 0        | 0        | 0           | 26          | 2                       | 14          | 1           | 0        | 0           | 17          | 1                         | 1        | 0           | 0        | 0           | 2           | 0                         | 2           | 5           | 0        | 0           | 7           | 52                   |
| <b>Grand Total</b> | <b>0</b>                | <b>106</b>  | <b>0</b> | <b>0</b> | <b>0</b>    | <b>106</b>  | <b>10</b>               | <b>79</b>   | <b>6</b>    | <b>0</b> | <b>0</b>    | <b>95</b>   | <b>4</b>                  | <b>4</b> | <b>1</b>    | <b>0</b> | <b>0</b>    | <b>9</b>    | <b>2</b>                  | <b>6</b>    | <b>29</b>   | <b>0</b> | <b>0</b>    | <b>37</b>   | <b>247</b>           |
| Approach %         | 0                       | 100         | 0        | 0        | -           | -           | 10.5                    | 83.2        | 6.3         | 0        | -           | -           | 44.4                      | 44.4     | 11.1        | 0        | -           | -           | 5.4                       | 16.2        | 78.4        | 0        | -           | -           | -                    |
| Totals %           | 0                       | 42.9        | 0        | 0        | 42.9        | 42.9        | 4                       | 32          | 2.4         | 0        | 38.5        | 38.5        | 1.6                       | 1.6      | 0.4         | 0        | 3.6         | 3.6         | 0.8                       | 2.4         | 11.7        | 0        | 15          | 15          | 15                   |
| <b>PHF</b>         | <b>0</b>                | <b>0.83</b> | <b>0</b> | <b>0</b> | <b>0.83</b> | <b>0.83</b> | <b>0.83</b>             | <b>0.82</b> | <b>0.75</b> | <b>0</b> | <b>0.82</b> | <b>0.82</b> | <b>0.5</b>                | <b>1</b> | <b>0.25</b> | <b>0</b> | <b>0.56</b> | <b>0.56</b> | <b>0.5</b>                | <b>0.75</b> | <b>0.73</b> | <b>0</b> | <b>0.71</b> | <b>0.71</b> | <b>0.87</b>          |
| Cars               | 0                       | 99          | 0        | 0        | 99          | 99          | 9                       | 70          | 6           | 0        | 85          | 85          | 3                         | 4        | 1           | 0        | 8           | 8           | 1                         | 5           | 28          | 0        | 34          | 34          | 226                  |
| % Cars             | 0                       | 93.4        | 0        | 0        | 93.4        | 93.4        | 90                      | 88.6        | 100         | 0        | 89.5        | 89.5        | 75                        | 100      | 100         | 0        | 88.9        | 88.9        | 50                        | 83.3        | 96.6        | 0        | 91.9        | 91.9        | 91.5                 |
| Trucks             | 0                       | 7           | 0        | 0        | 7           | 7           | 1                       | 9           | 0           | 0        | 10          | 10          | 1                         | 0        | 0           | 0        | 1           | 1           | 1                         | 1           | 1           | 0        | 3           | 3           | 21                   |
| % Trucks           | 0                       | 6.6         | 0        | 0        | 6.6         | 6.6         | 10                      | 11.4        | 0           | 0        | 10.5        | 10.5        | 25                        | 0        | 0           | 0        | 11.1        | 11.1        | 50                        | 16.7        | 3.4         | 0        | 8.1         | 8.1         | 8.5                  |
| Bicycles           | 0                       | 0           | 0        | 0        | 0           | 0           | 0                       | 0           | 0           | 0        | 0           | 0           | 0                         | 0        | 0           | 0        | 0           | 0           | 0                         | 0           | 0           | 0        | 0           | 0           | 0                    |
| % Bicycles         | 0                       | 0           | 0        | 0        | 0           | 0           | 0                       | 0           | 0           | 0        | 0           | 0           | 0                         | 0        | 0           | 0        | 0           | 0           | 0                         | 0           | 0           | 0        | 0           | 0           | 0                    |
| Peds               |                         |             |          |          | 0           | -           |                         |             |             |          | 0           | -           |                           |          |             |          | 0           | -           |                           |             |             |          | 0           | -           | 0                    |
| % Peds             |                         |             |          |          | 0           | -           |                         |             |             |          | 0           | -           |                           |          |             |          | 0           | -           |                           |             |             |          | 0           | -           | 0                    |

## Peak Hour Diagram

### Specified Period

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

### One Hour Peak

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

**Intersection:** CR 24 & 7th Line  
**Site Code:** 2533500002  
**Count Date:** Oct 14, 2025

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** CR 24 runs N/S

### North Approach

|               | Out       | In        | Total      |
|---------------|-----------|-----------|------------|
|               | 82        | 72        | 154        |
|               | 7         | 10        | 17         |
|               | 0         | 0         | 0          |
| <b>Totals</b> | <b>89</b> | <b>82</b> | <b>171</b> |

### CR 24

|               |          |           |          |          |
|---------------|----------|-----------|----------|----------|
|               | 0        | 0         | 0        | 0        |
|               | 0        | 7         | 0        | 0        |
|               | 1        | 81        | 0        | 0        |
| <b>Totals</b> | <b>1</b> | <b>88</b> | <b>0</b> | <b>0</b> |

### East Approach

|               | Out      | In       | Total     |
|---------------|----------|----------|-----------|
|               | 6        | 9        | 15        |
|               | 1        | 0        | 1         |
|               | 0        | 0        | 0         |
| <b>Totals</b> | <b>7</b> | <b>9</b> | <b>16</b> |

### 7th Line

|  |   |   |    | Totals    |
|--|---|---|----|-----------|
|  | 0 | 0 | 0  | <b>0</b>  |
|  | 0 | 2 | 0  | <b>2</b>  |
|  | 0 | 0 | 4  | <b>4</b>  |
|  | 0 | 2 | 21 | <b>23</b> |

Peds: 0

Peds: 0



Peds: 0

Peds: 0

### 7th Line

| Totals   |   |   |   |
|----------|---|---|---|
| <b>0</b> | 0 | 0 | 0 |
| <b>1</b> | 1 | 0 | 0 |
| <b>3</b> | 3 | 0 | 0 |
| <b>3</b> | 2 | 1 | 0 |

### West Approach

|               | Out       | In        | Total     |
|---------------|-----------|-----------|-----------|
|               | 25        | 14        | 39        |
|               | 4         | 2         | 6         |
|               | 0         | 0         | 0         |
| <b>Totals</b> | <b>29</b> | <b>16</b> | <b>45</b> |

| Totals    |    |    |   |
|-----------|----|----|---|
| <b>12</b> | 10 | 71 | 5 |
| <b>79</b> | 2  | 8  | 0 |
| <b>5</b>  | 0  | 0  | 0 |
| <b>0</b>  | 0  | 0  | 0 |

CR 24

### South Approach

| Out       | In         | Total      |
|-----------|------------|------------|
| 86        | 104        | 190        |
| 10        | 10         | 20         |
| 0         | 0          | 0          |
| <b>96</b> | <b>114</b> | <b>210</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: CR 24 & 7th Line  
 Site Code: 2533500002  
 Count Date: Oct 14, 2025  
 Period: 16:00 - 18:00

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

| Start Time         | North Approach<br>CR 24 |             |             |          |             |            | South Approach<br>CR 24 |             |             |          |            |             | East Approach<br>7th Line |             |          |             |            |            | West Approach<br>7th Line |          |             |             |          |           | Total<br>Vehic<br>es |
|--------------------|-------------------------|-------------|-------------|----------|-------------|------------|-------------------------|-------------|-------------|----------|------------|-------------|---------------------------|-------------|----------|-------------|------------|------------|---------------------------|----------|-------------|-------------|----------|-----------|----------------------|
|                    | ←                       | ↑           | →           | ↻        | Peds        | Total      | ←                       | ↑           | →           | ↻        | Peds       | Total       | ←                         | ↑           | →        | ↻           | Peds       | Total      | ←                         | ↑        | →           | ↻           | Peds     | Total     |                      |
| 16:30              | 0                       | 17          | 1           | 0        | 0           | 18         | 3                       | 17          | 1           | 0        | 0          | 21          | 0                         | 1           | 0        | 0           | 0          | 1          | 0                         | 0        | 3           | 0           | 0        | 3         | 43                   |
| 16:45              | 0                       | 19          | 0           | 0        | 0           | 19         | 2                       | 21          | 2           | 0        | 0          | 25          | 1                         | 0           | 0        | 0           | 0          | 1          | 1                         | 2        | 8           | 0           | 0        | 11        | 56                   |
| 17:00              | 0                       | 27          | 0           | 0        | 0           | 27         | 4                       | 24          | 2           | 0        | 0          | 30          | 1                         | 1           | 0        | 0           | 0          | 2          | 0                         | 0        | 6           | 0           | 0        | 6         | 65                   |
| 17:15              | 0                       | 25          | 0           | 0        | 0           | 25         | 3                       | 17          | 0           | 0        | 0          | 20          | 1                         | 1           | 1        | 0           | 0          | 3          | 1                         | 2        | 6           | 0           | 0        | 9         | 57                   |
| <b>Grand Total</b> | <b>0</b>                | <b>88</b>   | <b>1</b>    | <b>0</b> | <b>0</b>    | <b>89</b>  | <b>12</b>               | <b>79</b>   | <b>5</b>    | <b>0</b> | <b>0</b>   | <b>96</b>   | <b>3</b>                  | <b>3</b>    | <b>1</b> | <b>0</b>    | <b>0</b>   | <b>7</b>   | <b>2</b>                  | <b>4</b> | <b>23</b>   | <b>0</b>    | <b>0</b> | <b>29</b> | <b>221</b>           |
| Approach %         | 0                       | 98.9        | 1.1         | 0        | -           | -          | 12.5                    | 82.3        | 5.2         | 0        | -          | -           | 42.9                      | 42.9        | 14.3     | 0           | -          | 6.9        | 13.8                      | 79.3     | 0           | -           | -        |           |                      |
| Totals %           | 0                       | 39.8        | 0.5         | 0        | 40.3        | 43.4       | 5.4                     | 35.7        | 2.3         | 0        | 43.4       | 1.4         | 1.4                       | 0.5         | 0        | 3.2         | 0.9        | 1.8        | 10.4                      | 0        | 13.1        |             |          |           |                      |
| <b>PHF</b>         | <b>0</b>                | <b>0.81</b> | <b>0.25</b> | <b>0</b> | <b>0.82</b> | <b>0.8</b> | <b>0.75</b>             | <b>0.82</b> | <b>0.63</b> | <b>0</b> | <b>0.8</b> | <b>0.75</b> | <b>0.75</b>               | <b>0.25</b> | <b>0</b> | <b>0.58</b> | <b>0.5</b> | <b>0.5</b> | <b>0.72</b>               | <b>0</b> | <b>0.66</b> | <b>0.85</b> |          |           |                      |
| Cars               | 0                       | 81          | 1           | 0        | 82          | 86         | 10                      | 71          | 5           | 0        | 86         | 2           | 3                         | 1           | 0        | 6           | 0          | 4          | 21                        | 0        | 25          | 199         |          |           |                      |
| % Cars             | 0                       | 92          | 100         | 0        | 92.1        | 89.6       | 83.3                    | 89.9        | 100         | 0        | 89.6       | 66.7        | 100                       | 100         | 0        | 85.7        | 0          | 100        | 91.3                      | 0        | 86.2        | 90          |          |           |                      |
| Trucks             | 0                       | 7           | 0           | 0        | 7           | 10         | 2                       | 8           | 0           | 0        | 10         | 1           | 0                         | 0           | 0        | 1           | 2          | 0          | 2                         | 0        | 4           | 22          |          |           |                      |
| % Trucks           | 0                       | 8           | 0           | 0        | 7.9         | 10.4       | 16.7                    | 10.1        | 0           | 0        | 10.4       | 33.3        | 0                         | 0           | 0        | 14.3        | 100        | 0          | 8.7                       | 0        | 13.8        | 10          |          |           |                      |
| Bicycles           | 0                       | 0           | 0           | 0        | 0           | 0          | 0                       | 0           | 0           | 0        | 0          | 0           | 0                         | 0           | 0        | 0           | 0          | 0          | 0                         | 0        | 0           | 0           |          |           |                      |
| % Bicycles         | 0                       | 0           | 0           | 0        | 0           | 0          | 0                       | 0           | 0           | 0        | 0          | 0           | 0                         | 0           | 0        | 0           | 0          | 0          | 0                         | 0        | 0           | 0           |          |           |                      |
| Peds               |                         |             |             |          | 0           | -          |                         |             |             |          | 0          | -           |                           |             |          |             | 0          | -          |                           |          |             |             | 0        | -         |                      |
| % Peds             |                         |             |             |          | 0           | -          |                         |             |             |          | 0          | -           |                           |             |          |             | 0          | -          |                           |          |             |             | 0        | -         |                      |



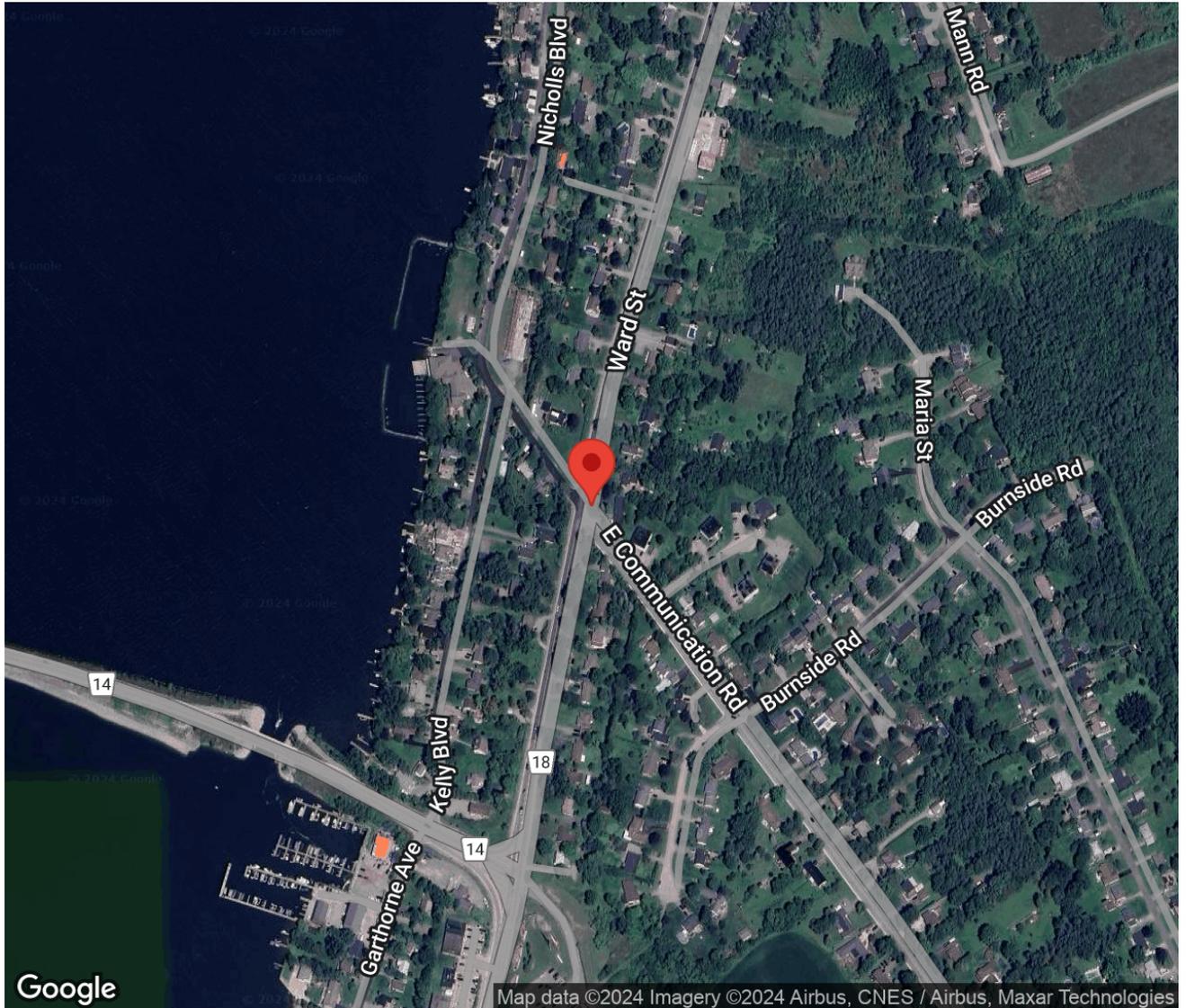
## Project #24-484 - Skelton, Brumwell & Associates

### Intersection Count Report

**Intersection:** East Communication Rd & Ward St (CR 18)  
**Municipality:** Bridgenorth  
**Count Date:** Tuesday, Nov 19, 2024  
**Site Code:** 2448400001  
**Count Categories:** Cars, Trucks, Bicycles, Pedestrians  
**Count Period:** 07:00-10:00, 14:00-18:00  
**Weather:** Clear  
**Comments:**

## Traffic Count Map

Intersection: East Communication Rd & Ward St (CR 18)  
Site Code: 2448400001  
Municipality: Bridgenorth  
Count Date: Nov 19, 2024





## Traffic Count Summary

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### Ward St (CR 18) - Traffic Summary

| Hour                 | North Approach Totals           |             |          |          |             |          | South Approach Totals           |             |            |          |             |           | Total       |
|----------------------|---------------------------------|-------------|----------|----------|-------------|----------|---------------------------------|-------------|------------|----------|-------------|-----------|-------------|
|                      | Includes Cars, Trucks, Bicycles |             |          |          |             |          | Includes Cars, Trucks, Bicycles |             |            |          |             |           |             |
|                      | Left                            | Thru        | Right    | U-Turn   | Total       | Peds     | Left                            | Thru        | Right      | U-Turn   | Total       | Peds      |             |
| <b>07:00 - 08:00</b> | 4                               | 163         | 0        | 0        | 167         | 0        | 2                               | 129         | 24         | 0        | 155         | 4         | 322         |
| <b>08:00 - 09:00</b> | 12                              | 206         | 2        | 0        | 220         | 0        | 2                               | 154         | 36         | 0        | 192         | 1         | 412         |
| <b>09:00 - 10:00</b> | 10                              | 168         | 0        | 0        | 178         | 0        | 2                               | 124         | 19         | 0        | 145         | 4         | 323         |
| BREAK                |                                 |             |          |          |             |          |                                 |             |            |          |             |           |             |
| <b>14:00 - 15:00</b> | 8                               | 161         | 0        | 0        | 169         | 0        | 4                               | 159         | 38         | 0        | 201         | 2         | 370         |
| <b>15:00 - 16:00</b> | 11                              | 183         | 2        | 0        | 196         | 0        | 5                               | 227         | 55         | 0        | 287         | 3         | 483         |
| <b>16:00 - 17:00</b> | 5                               | 274         | 2        | 0        | 281         | 0        | 5                               | 283         | 73         | 0        | 361         | 3         | 642         |
| <b>17:00 - 18:00</b> | 5                               | 255         | 1        | 0        | 261         | 0        | 6                               | 282         | 52         | 0        | 340         | 0         | 601         |
| <b>GRAND TOTAL</b>   | <b>55</b>                       | <b>1410</b> | <b>7</b> | <b>0</b> | <b>1472</b> | <b>0</b> | <b>26</b>                       | <b>1358</b> | <b>297</b> | <b>0</b> | <b>1681</b> | <b>17</b> | <b>3153</b> |

## Traffic Count Summary

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### East Communication Rd - Traffic Summary

| Hour                 | East Approach Totals            |          |           |          |            |           | West Approach Totals            |          |           |          |           |          | Total      |
|----------------------|---------------------------------|----------|-----------|----------|------------|-----------|---------------------------------|----------|-----------|----------|-----------|----------|------------|
|                      | Includes Cars, Trucks, Bicycles |          |           |          |            |           | Includes Cars, Trucks, Bicycles |          |           |          |           |          |            |
|                      | Left                            | Thru     | Right     | U-Turn   | Total      | Peds      | Left                            | Thru     | Right     | U-Turn   | Total     | Peds     |            |
| <b>07:00 - 08:00</b> | 32                              | 0        | 11        | 0        | 43         | 0         | 2                               | 1        | 7         | 0        | 10        | 1        | 53         |
| <b>08:00 - 09:00</b> | 72                              | 4        | 7         | 0        | 83         | 3         | 2                               | 0        | 3         | 0        | 5         | 1        | 88         |
| <b>09:00 - 10:00</b> | 25                              | 0        | 3         | 0        | 28         | 4         | 0                               | 2        | 3         | 0        | 5         | 1        | 33         |
| BREAK                |                                 |          |           |          |            |           |                                 |          |           |          |           |          |            |
| <b>14:00 - 15:00</b> | 41                              | 0        | 12        | 0        | 53         | 4         | 1                               | 0        | 6         | 0        | 7         | 0        | 60         |
| <b>15:00 - 16:00</b> | 59                              | 2        | 17        | 0        | 78         | 4         | 5                               | 1        | 7         | 0        | 13        | 0        | 91         |
| <b>16:00 - 17:00</b> | 54                              | 1        | 12        | 0        | 67         | 5         | 3                               | 0        | 3         | 0        | 6         | 0        | 73         |
| <b>17:00 - 18:00</b> | 50                              | 0        | 2         | 0        | 52         | 2         | 8                               | 1        | 8         | 0        | 17        | 0        | 69         |
| <b>GRAND TOTAL</b>   | <b>333</b>                      | <b>7</b> | <b>64</b> | <b>0</b> | <b>404</b> | <b>22</b> | <b>21</b>                       | <b>5</b> | <b>37</b> | <b>0</b> | <b>63</b> | <b>3</b> | <b>467</b> |



## Traffic Count Data

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### North Approach - Ward St (CR 18)

| Start Time      | Cars |     |   |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|-----|---|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑   | → | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 0    | 34  | 0 | 0 | 34    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 2    | 43  | 0 | 0 | 45    | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:30           | 2    | 40  | 0 | 0 | 42    | 0      | 6  | 0 | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 0    | 31  | 0 | 0 | 31    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 4    | 49  | 0 | 0 | 53    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 0    | 55  | 0 | 0 | 55    | 2      | 2  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 2    | 37  | 0 | 0 | 39    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 4    | 60  | 2 | 0 | 66    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:00           | 1    | 41  | 0 | 0 | 42    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:15           | 4    | 42  | 0 | 0 | 46    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:30           | 3    | 41  | 0 | 0 | 44    | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:45           | 2    | 39  | 0 | 0 | 41    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b> | 24   | 512 | 2 | 0 | 538   | 2      | 25 | 0 | 0 | 27    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### North Approach - Ward St (CR 18)

| Start Time         | Cars |      |   |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|------|---|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑    | → | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 14:00              | 1    | 36   | 0 | 0 | 37    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:15              | 4    | 33   | 0 | 0 | 37    | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:30              | 2    | 41   | 0 | 0 | 43    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:45              | 1    | 37   | 0 | 0 | 38    | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:00              | 2    | 42   | 0 | 0 | 44    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:15              | 1    | 56   | 1 | 0 | 58    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:30              | 1    | 43   | 0 | 0 | 44    | 0      | 2  | 1 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:45              | 7    | 36   | 0 | 0 | 43    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:00              | 1    | 76   | 0 | 0 | 77    | 1      | 0  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 1    | 52   | 1 | 0 | 54    | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 1    | 56   | 0 | 0 | 57    | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 1    | 76   | 1 | 0 | 78    | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 1    | 67   | 0 | 0 | 68    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 0    | 72   | 0 | 0 | 72    | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 3    | 67   | 0 | 0 | 70    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 1    | 45   | 1 | 0 | 47    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 28   | 835  | 4 | 0 | 867   | 1      | 38 | 1 | 0 | 40    | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>GRAND TOTAL</b> | 52   | 1347 | 6 | 0 | 1405  | 3      | 63 | 1 | 0 | 67    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### South Approach - Ward St (CR 18)

| Start Time      | Cars |     |    |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|-----|----|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑   | →  | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 0    | 19  | 7  | 0 | 26    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 2    | 36  | 7  | 0 | 45    | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 4          |
| 07:30           | 0    | 39  | 2  | 0 | 41    | 0      | 3  | 2 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 0    | 25  | 4  | 0 | 29    | 0      | 2  | 2 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 2    | 31  | 11 | 0 | 44    | 0      | 0  | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 0    | 35  | 10 | 0 | 45    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 0    | 37  | 8  | 0 | 45    | 0      | 3  | 1 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 1          |
| 08:45           | 0    | 44  | 5  | 0 | 49    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:00           | 0    | 33  | 5  | 0 | 38    | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 2          |
| 09:15           | 1    | 36  | 3  | 0 | 40    | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:30           | 0    | 29  | 4  | 0 | 33    | 0      | 2  | 1 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 1          |
| 09:45           | 1    | 23  | 6  | 0 | 30    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 1          |
| <b>SUBTOTAL</b> | 6    | 387 | 72 | 0 | 465   | 0      | 20 | 7 | 0 | 27    | 0        | 0 | 0 | 0 | 0     | 9          |



## Traffic Count Data

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### South Approach - Ward St (CR 18)

| Start Time         | Cars |      |     |   |       | Trucks |    |    |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|------|-----|---|-------|--------|----|----|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑    | →   | ↻ | Total | ←      | ↑  | →  | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 14:00              | 3    | 38   | 6   | 0 | 47    | 0      | 1  | 1  | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:15              | 0    | 31   | 13  | 0 | 44    | 0      | 0  | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 14:30              | 0    | 43   | 15  | 0 | 58    | 0      | 0  | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:45              | 1    | 44   | 3   | 0 | 48    | 0      | 2  | 0  | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 1          |
| 15:00              | 1    | 50   | 12  | 0 | 63    | 0      | 2  | 0  | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:15              | 1    | 65   | 17  | 0 | 83    | 0      | 3  | 2  | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 1          |
| 15:30              | 2    | 43   | 12  | 0 | 57    | 0      | 1  | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 2          |
| 15:45              | 1    | 60   | 12  | 0 | 73    | 0      | 3  | 0  | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:00              | 1    | 77   | 18  | 0 | 96    | 0      | 7  | 1  | 0 | 8     | 0        | 0 | 0 | 0 | 0     | 3          |
| 16:15              | 1    | 53   | 21  | 0 | 75    | 0      | 2  | 1  | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 2    | 58   | 13  | 0 | 73    | 0      | 2  | 0  | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 1    | 83   | 19  | 0 | 103   | 0      | 1  | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 2    | 77   | 12  | 0 | 91    | 0      | 1  | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 3    | 85   | 14  | 0 | 102   | 0      | 1  | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 1    | 69   | 10  | 0 | 80    | 0      | 0  | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 0    | 48   | 16  | 0 | 64    | 0      | 1  | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 20   | 924  | 213 | 0 | 1157  | 0      | 27 | 5  | 0 | 32    | 0        | 0 | 0 | 0 | 0     | 8          |
| <b>GRAND TOTAL</b> | 26   | 1311 | 285 | 0 | 1622  | 0      | 47 | 12 | 0 | 59    | 0        | 0 | 0 | 0 | 0     | 17         |



## Traffic Count Data

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### East Approach - East Communication Rd

| Start Time      | Cars |   |    |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |   |
|-----------------|------|---|----|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|---|
|                 | ←    | ↑ | →  | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |   |
| 07:00           | 5    | 0 | 2  | 0 | 7     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:15           | 8    | 0 | 3  | 0 | 11    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:30           | 9    | 0 | 2  | 0 | 11    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:45           | 10   | 0 | 2  | 0 | 12    | 0      | 0 | 2 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:00           | 24   | 2 | 1  | 0 | 27    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:15           | 16   | 0 | 5  | 0 | 21    | 2      | 0 | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:30           | 17   | 0 | 0  | 0 | 17    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:45           | 12   | 1 | 1  | 0 | 14    | 1      | 0 | 0 | 0 | 1     | 0        | 1 | 0 | 0 | 1     | 0          | 3 |
| 09:00           | 6    | 0 | 1  | 0 | 7     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 09:15           | 2    | 0 | 0  | 0 | 2     | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 09:30           | 7    | 0 | 1  | 0 | 8     | 2      | 0 | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          | 4 |
| 09:45           | 7    | 0 | 1  | 0 | 8     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| <b>SUBTOTAL</b> | 123  | 3 | 19 | 0 | 145   | 6      | 0 | 2 | 0 | 8     | 0        | 1 | 0 | 0 | 1     | 0          | 7 |

## Traffic Count Data

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### East Approach - East Communication Rd

| Start Time         | Cars |   |    |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|---|----|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑ | →  | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 14:00              | 12   | 0 | 3  | 0 | 15    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 14:15              | 6    | 0 | 3  | 0 | 9     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:30              | 12   | 0 | 3  | 0 | 15    | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 1          |
| 14:45              | 10   | 0 | 2  | 0 | 12    | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 2          |
| 15:00              | 18   | 1 | 5  | 0 | 24    | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:15              | 14   | 0 | 2  | 0 | 16    | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 4 | 0 | 4     | 3          |
| 15:30              | 7    | 1 | 2  | 0 | 10    | 3      | 0 | 2 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 1          |
| 15:45              | 15   | 0 | 2  | 0 | 17    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:00              | 10   | 0 | 5  | 0 | 15    | 1      | 0 | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 2          |
| 16:15              | 25   | 1 | 4  | 0 | 30    | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 5    | 0 | 1  | 0 | 6     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 3          |
| 16:45              | 13   | 0 | 1  | 0 | 14    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 12   | 0 | 1  | 0 | 13    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 16   | 0 | 1  | 0 | 17    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 13   | 0 | 0  | 0 | 13    | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 9    | 0 | 0  | 0 | 9     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 2          |
| <b>SUBTOTAL</b>    | 197  | 3 | 35 | 0 | 235   | 7      | 0 | 4 | 0 | 11    | 0        | 0 | 4 | 0 | 4     | 15         |
| <b>GRAND TOTAL</b> | 320  | 6 | 54 | 0 | 380   | 13     | 0 | 6 | 0 | 19    | 0        | 1 | 4 | 0 | 5     | 22         |





## Peak Hour Diagram

### Specified Period

From: 07:00:00  
To: 10:00:00

### One Hour Peak

From: 08:00:00  
To: 09:00:00

**Intersection:** East Communication Rd & Ward St (CR 18)  
**Site Code:** 2448400001  
**Count Date:** Nov 19, 2024

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** Ward St (CR 18) runs N/S

### North Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 213        | 156        | 369        |
|               | 7          | 7          | 14         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>220</b> | <b>163</b> | <b>383</b> |

### Ward St (CR 18)

|               |          |            |           |          |
|---------------|----------|------------|-----------|----------|
|               | 0        | 0          | 0         | 0        |
|               | 0        | 5          | 2         | 0        |
|               | 2        | 201        | 10        | 0        |
| <b>Totals</b> | <b>2</b> | <b>206</b> | <b>12</b> | <b>0</b> |

### East Approach

|               | Out       | In        | Total      |
|---------------|-----------|-----------|------------|
|               | 79        | 44        | 123        |
|               | 3         | 4         | 7          |
|               | 1         | 0         | 1          |
| <b>Totals</b> | <b>83</b> | <b>48</b> | <b>131</b> |

### East Communication Rd

|  |   |   |   | Totals |
|--|---|---|---|--------|
|  | 0 | 0 | 0 | 0      |
|  | 0 | 0 | 2 | 2      |
|  | 0 | 0 | 0 | 0      |
|  | 0 | 0 | 3 | 3      |

Peds: 0

Peds: 1



Peds: 3

Peds: 1

### East Communication Rd

| Totals |    |    |   |
|--------|----|----|---|
|        | 0  | 0  | 0 |
|        | 7  | 7  | 0 |
|        | 4  | 3  | 0 |
|        | 72 | 69 | 3 |

### West Approach

|               | Out      | In       | Total     |
|---------------|----------|----------|-----------|
|               | 5        | 7        | 12        |
|               | 0        | 0        | 0         |
|               | 0        | 1        | 1         |
| <b>Totals</b> | <b>5</b> | <b>8</b> | <b>13</b> |

| Totals |   |     |    |   |
|--------|---|-----|----|---|
|        | 2 | 147 | 34 | 0 |
|        | 0 | 7   | 2  | 0 |
|        | 0 | 0   | 0  | 0 |

Ward St (CR 18)

### South Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 183        | 273        | 456        |
|               | 9          | 8          | 17         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>192</b> | <b>281</b> | <b>473</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Count Date: Nov 19, 2024  
 Period: 07:00 - 10:00

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

| Start Time         | North Approach<br>Ward St (CR 18) |             |             |          |             |             | South Approach<br>Ward St (CR 18) |             |             |          |             |             | East Approach<br>East Communication Rd |             |          |             |             |           | West Approach<br>East Communication Rd |          |             |             |          |          | Total<br>Vehicles |
|--------------------|-----------------------------------|-------------|-------------|----------|-------------|-------------|-----------------------------------|-------------|-------------|----------|-------------|-------------|--|-------------|----------|-------------|-------------|-----------|--|----------|-------------|-------------|----------|----------|-------------------|
|                    | ←                                 | ↑           | →           | ↻        | Peds        | Total       | ←                                 | ↑           | →           | ↻        | Peds        | Total       | ←                                      | ↑           | →        | ↻           | Peds        | Total     | ←                                      | ↑        | →           | ↻           | Peds     | Total    |                   |
| 08:00              | 4                                 | 50          | 0           | 0        | 0           | 54          | 2                                 | 31          | 12          | 0        | 0           | 45          | 24                                     | 2           | 1        | 0           | 0           | 27        | 2                                      | 0        | 2           | 0           | 0        | 4        | 130               |
| 08:15              | 2                                 | 57          | 0           | 0        | 0           | 59          | 0                                 | 38          | 10          | 0        | 0           | 48          | 18                                     | 0           | 5        | 0           | 0           | 23        | 0                                      | 0        | 1           | 0           | 0        | 1        | 131               |
| 08:30              | 2                                 | 38          | 0           | 0        | 0           | 40          | 0                                 | 40          | 9           | 0        | 1           | 49          | 17                                     | 0           | 0        | 0           | 0           | 17        | 0                                      | 0        | 0           | 0           | 0        | 0        | 106               |
| 08:45              | 4                                 | 61          | 2           | 0        | 0           | 67          | 0                                 | 45          | 5           | 0        | 0           | 50          | 13                                     | 2           | 1        | 0           | 3           | 16        | 0                                      | 0        | 0           | 0           | 1        | 0        | 133               |
| <b>Grand Total</b> | <b>12</b>                         | <b>206</b>  | <b>2</b>    | <b>0</b> | <b>0</b>    | <b>220</b>  | <b>2</b>                          | <b>154</b>  | <b>36</b>   | <b>0</b> | <b>1</b>    | <b>192</b>  | <b>72</b>                              | <b>4</b>    | <b>7</b> | <b>0</b>    | <b>3</b>    | <b>83</b> | <b>2</b>                               | <b>0</b> | <b>3</b>    | <b>0</b>    | <b>1</b> | <b>5</b> | <b>500</b>        |
| Approach %         | 5.5                               | 93.6        | 0.9         | 0        | -           | -           | 1                                 | 80.2        | 18.8        | 0        | -           | -           | 86.7                                   | 4.8         | 8.4      | 0           | -           | -         | 40                                     | 0        | 60          | 0           | -        | -        |                   |
| Totals %           | 2.4                               | 41.2        | 0.4         | 0        | 44          | 38.4        | 0.4                               | 30.8        | 7.2         | 0        | 38.4        | 14.4        | 0.8                                    | 1.4         | 0        | 16.6        | 0.4         | 0         | 0.6                                    | 0        | 1           |             |          |          |                   |
| <b>PHF</b>         | <b>0.75</b>                       | <b>0.84</b> | <b>0.25</b> | <b>0</b> | <b>0.82</b> | <b>0.96</b> | <b>0.25</b>                       | <b>0.86</b> | <b>0.75</b> | <b>0</b> | <b>0.96</b> | <b>0.75</b> | <b>0.5</b>                             | <b>0.35</b> | <b>0</b> | <b>0.77</b> | <b>0.25</b> | <b>0</b>  | <b>0.38</b>                            | <b>0</b> | <b>0.31</b> | <b>0.94</b> |          |          |                   |
| Cars               | 10                                | 201         | 2           | 0        | 0           | 213         | 2                                 | 147         | 34          | 0        | 183         | 69          | 3                                      | 7           | 0        | 79          | 2           | 0         | 3                                      | 0        | 0           | 5           | 480      |          |                   |
| % Cars             | 83.3                              | 97.6        | 100         | 0        | 96.8        | 95.3        | 100                               | 95.5        | 94.4        | 0        | 95.3        | 95.8        | 75                                     | 100         | 0        | 95.2        | 100         | 0         | 100                                    | 0        | 0           | 100         | 96       |          |                   |
| Trucks             | 2                                 | 5           | 0           | 0        | 0           | 7           | 0                                 | 7           | 2           | 0        | 9           | 3           | 0                                      | 0           | 0        | 3           | 0           | 0         | 0                                      | 0        | 0           | 0           | 19       |          |                   |
| % Trucks           | 16.7                              | 2.4         | 0           | 0        | 3.2         | 4.7         | 0                                 | 4.5         | 5.6         | 0        | 4.7         | 4.2         | 0                                      | 0           | 0        | 3.6         | 0           | 0         | 0                                      | 0        | 0           | 0           | 3.8      |          |                   |
| Bicycles           | 0                                 | 0           | 0           | 0        | 0           | 0           | 0                                 | 0           | 0           | 0        | 0           | 0           | 1                                      | 0           | 0        | 1           | 0           | 0         | 0                                      | 0        | 0           | 0           | 1        |          |                   |
| % Bicycles         | 0                                 | 0           | 0           | 0        | 0           | 0           | 0                                 | 0           | 0           | 0        | 0           | 0           | 25                                     | 0           | 0        | 1.2         | 0           | 0         | 0                                      | 0        | 0           | 0           | 0.2      |          |                   |
| Peds               |                                   |             |             |          | 0           | -           |                                   |             |             |          | 1           | -           |  |             |          |             | 3           | -         |  |          |             |             | 1        | -        | 5                 |
| % Peds             |                                   |             |             |          | 0           | -           |                                   |             |             |          | 20          | -           |  |             |          |             | 60          | -         |  |          |             |             | 20       | -        |                   |

## Peak Hour Diagram

### Specified Period

From: 14:00:00  
To: 18:00:00

### One Hour Peak

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

**Intersection:** East Communication Rd & Ward St (CR 18)  
**Site Code:** 2448400001  
**Count Date:** Nov 19, 2024

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** Ward St (CR 18) runs N/S

### North Approach

|               | Out        | In         | Total      |
|---------------|------------|------------|------------|
|               | 288        | 324        | 612        |
|               | 7          | 3          | 10         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>295</b> | <b>327</b> | <b>622</b> |

### Ward St (CR 18)

|               |          |            |          |          |
|---------------|----------|------------|----------|----------|
|               | 0        | 0          | 0        | 0        |
|               | 0        | 7          | 0        | 0        |
|               | 1        | 282        | 5        | 0        |
| <b>Totals</b> | <b>1</b> | <b>289</b> | <b>5</b> | <b>0</b> |



Peds: 0

### East Approach

|               | Out       | In        | Total      |
|---------------|-----------|-----------|------------|
|               | 57        | 61        | 118        |
|               | 0         | 0         | 0          |
|               | 0         | 0         | 0          |
| <b>Totals</b> | <b>57</b> | <b>61</b> | <b>118</b> |

### East Communication Rd

|  |   |   |   |          |
|--|---|---|---|----------|
|  | 0 | 0 | 0 | <b>0</b> |
|  | 0 | 0 | 7 | <b>7</b> |
|  | 0 | 0 | 1 | <b>1</b> |
|  | 0 | 0 | 6 | <b>6</b> |

Peds: 0



Peds: 0

Peds: 0

### East Communication Rd

| Totals    |    |   |   |
|-----------|----|---|---|
| <b>0</b>  | 0  | 0 | 0 |
| <b>3</b>  | 3  | 0 | 0 |
| <b>0</b>  | 0  | 0 | 0 |
| <b>54</b> | 54 | 0 | 0 |

### West Approach

|               | Out       | In       | Total     |
|---------------|-----------|----------|-----------|
|               | 14        | 8        | 22        |
|               | 0         | 0        | 0         |
|               | 0         | 0        | 0         |
| <b>Totals</b> | <b>14</b> | <b>8</b> | <b>22</b> |

|               |          |            |           |          |
|---------------|----------|------------|-----------|----------|
| <b>Totals</b> | <b>7</b> | <b>317</b> | <b>55</b> | <b>0</b> |
|               | 7        | 314        | 55        | 0        |
|               | 0        | 3          | 0         | 0        |
|               | 0        | 0          | 0         | 0        |

Ward St (CR 18)

### South Approach

| Out           | In         | Total      |            |
|---------------|------------|------------|------------|
|               | 376        | 342        | 718        |
|               | 3          | 7          | 10         |
|               | 0          | 0          | 0          |
| <b>Totals</b> | <b>379</b> | <b>349</b> | <b>728</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: East Communication Rd & Ward St (CR 18)  
 Site Code: 2448400001  
 Count Date: Nov 19, 2024  
 Period: 14:00 - 18:00

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

| Start Time         | North Approach<br>Ward St (CR 18) |             |             |          |             |             | South Approach<br>Ward St (CR 18) |             |           |             |             |            | East Approach<br>East Communication Rd |          |             |             |             |            | West Approach<br>East Communication Rd |             |             |          |          |           | Total<br>Vehicles |
|--------------------|-----------------------------------|-------------|-------------|----------|-------------|-------------|-----------------------------------|-------------|-----------|-------------|-------------|------------|--|----------|-------------|-------------|-------------|------------|--|-------------|-------------|----------|----------|-----------|-------------------|
|                    | ←                                 | ↑           | →           | ↻        | Peds        | Total       | ←                                 | ↑           | →         | ↻           | Peds        | Total      | ←                                      | ↑        | →           | ↻           | Peds        | Total      | ←                                      | ↑           | →           | ↻        | Peds     | Total     |                   |
| 16:45              | 1                                 | 81          | 1           | 0        | 0           | 83          | 1                                 | 84          | 19        | 0           | 0           | 104        | 13                                     | 0        | 1           | 0           | 0           | 14         | 0                                      | 0           | 1           | 0        | 0        | 1         | 202               |
| 17:00              | 1                                 | 68          | 0           | 0        | 0           | 69          | 2                                 | 78          | 12        | 0           | 0           | 92         | 12                                     | 0        | 1           | 0           | 0           | 13         | 5                                      | 0           | 3           | 0        | 0        | 8         | 182               |
| 17:15              | 0                                 | 72          | 0           | 0        | 0           | 72          | 3                                 | 86          | 14        | 0           | 0           | 103        | 16                                     | 0        | 1           | 0           | 0           | 17         | 2                                      | 0           | 0           | 0        | 0        | 2         | 194               |
| 17:30              | 3                                 | 68          | 0           | 0        | 0           | 71          | 1                                 | 69          | 10        | 0           | 0           | 80         | 13                                     | 0        | 0           | 0           | 0           | 13         | 0                                      | 1           | 2           | 0        | 0        | 3         | 167               |
| <b>Grand Total</b> | <b>5</b>                          | <b>289</b>  | <b>1</b>    | <b>0</b> | <b>0</b>    | <b>295</b>  | <b>7</b>                          | <b>317</b>  | <b>55</b> | <b>0</b>    | <b>0</b>    | <b>379</b> | <b>54</b>                              | <b>0</b> | <b>3</b>    | <b>0</b>    | <b>0</b>    | <b>57</b>  | <b>7</b>                               | <b>1</b>    | <b>6</b>    | <b>0</b> | <b>0</b> | <b>14</b> | <b>745</b>        |
| <b>Approach %</b>  | 1.7                               | 98          | 0.3         | 0        | -           | -           | 1.8                               | 83.6        | 14.5      | 0           | -           | -          | 94.7                                   | 0        | 5.3         | 0           | -           | -          | 50                                     | 7.1         | 42.9        | 0        | -        | -         | -                 |
| <b>Totals %</b>    | 0.7                               | 38.8        | 0.1         | 0        | 39.6        | 0.9         | 42.6                              | 7.4         | 0         | 50.9        | 7.2         | 0          | 0.4                                    | 0        | 7.7         | 0.9         | 0.1         | 0.8        | 0                                      | 1.9         |             |          |          |           |                   |
| <b>PHF</b>         | <b>0.42</b>                       | <b>0.89</b> | <b>0.25</b> | <b>0</b> | <b>0.89</b> | <b>0.58</b> | <b>0.92</b>                       | <b>0.72</b> | <b>0</b>  | <b>0.91</b> | <b>0.84</b> | <b>0</b>   | <b>0.75</b>                            | <b>0</b> | <b>0.84</b> | <b>0.35</b> | <b>0.25</b> | <b>0.5</b> | <b>0</b>                               | <b>0.44</b> | <b>0.92</b> |          |          |           |                   |
| <b>Cars</b>        | 5                                 | 282         | 1           | 0        | 0           | 288         | 7                                 | 314         | 55        | 0           | 0           | 376        | 54                                     | 0        | 3           | 0           | 0           | 57         | 7                                      | 1           | 6           | 0        | 0        | 14        | 735               |
| <b>% Cars</b>      | 100                               | 97.6        | 100         | 0        | 0           | 97.6        | 100                               | 99.1        | 100       | 0           | 0           | 99.2       | 100                                    | 0        | 100         | 0           | 0           | 100        | 100                                    | 100         | 100         | 0        | 0        | 100       | 98.7              |
| <b>Trucks</b>      | 0                                 | 7           | 0           | 0        | 0           | 7           | 0                                 | 3           | 0         | 0           | 0           | 3          | 0                                      | 0        | 0           | 0           | 0           | 0          | 0                                      | 0           | 0           | 0        | 0        | 0         | 10                |
| <b>% Trucks</b>    | 0                                 | 2.4         | 0           | 0        | 0           | 2.4         | 0                                 | 0.9         | 0         | 0           | 0           | 0.8        | 0                                      | 0        | 0           | 0           | 0           | 0          | 0                                      | 0           | 0           | 0        | 0        | 0         | 1.3               |
| <b>Bicycles</b>    | 0                                 | 0           | 0           | 0        | 0           | 0           | 0                                 | 0           | 0         | 0           | 0           | 0          | 0                                      | 0        | 0           | 0           | 0           | 0          | 0                                      | 0           | 0           | 0        | 0        | 0         | 0                 |
| <b>% Bicycles</b>  | 0                                 | 0           | 0           | 0        | 0           | 0           | 0                                 | 0           | 0         | 0           | 0           | 0          | 0                                      | 0        | 0           | 0           | 0           | 0          | 0                                      | 0           | 0           | 0        | 0        | 0         | 0                 |
| <b>Peds</b>        |                                   |             |             |          | 0           | -           |                                   |             |           | 0           | -           |            |  |          |             | 0           | -           |            |  |             |             | 0        | -        |           | 0                 |
| <b>% Peds</b>      |                                   |             |             |          | 0           | -           |                                   |             |           | 0           | -           |            |  |          |             | 0           | -           |            |  |             |             | 0        | -        |           | 0                 |



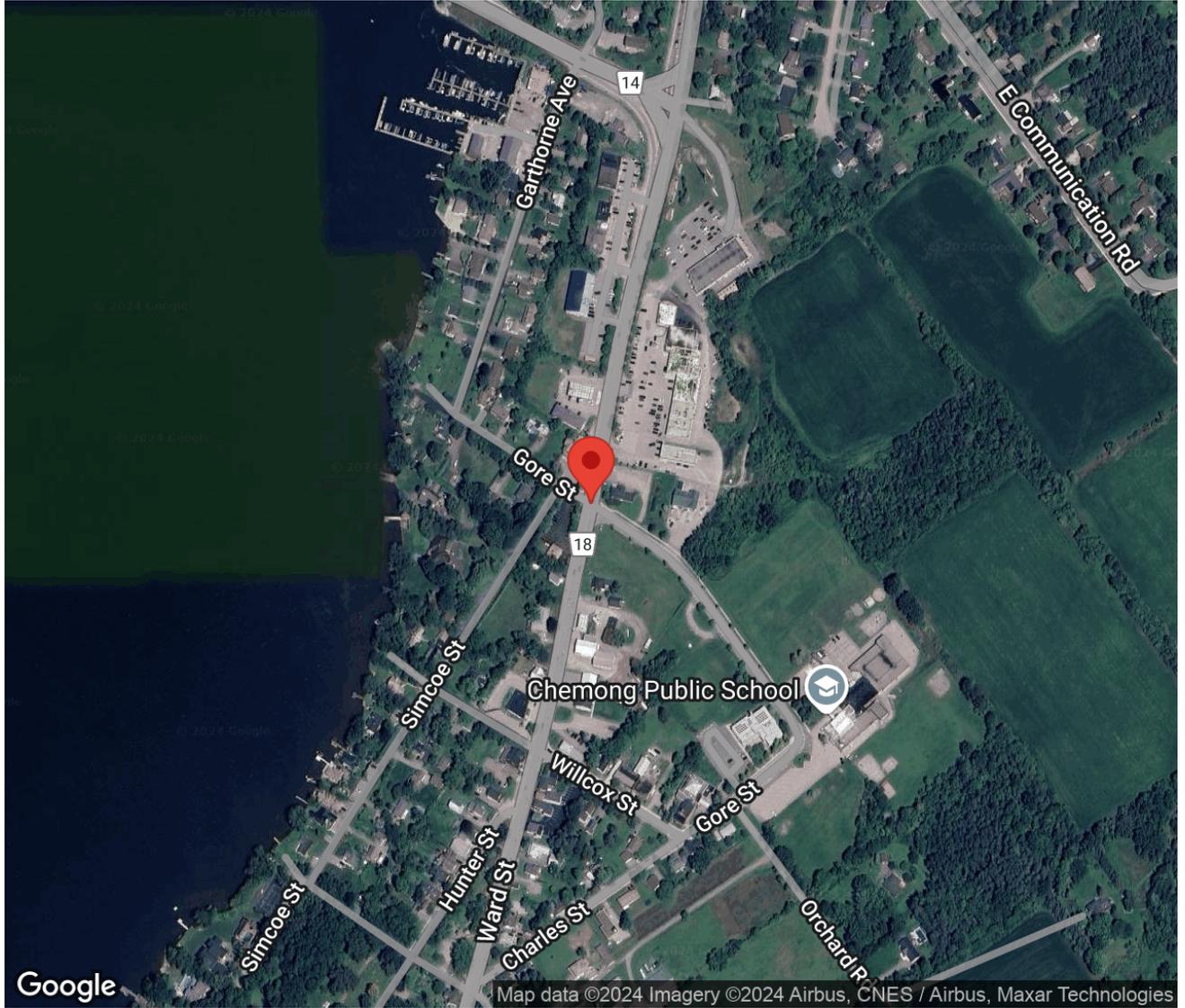
## Project #24-484 - Skelton, Brumwell & Associates

### Intersection Count Report

**Intersection:** Gore St & Ward St (CR 18)  
**Municipality:** Bridgenorth  
**Count Date:** Tuesday, Nov 19, 2024  
**Site Code:** 2448400002  
**Count Categories:** Cars, Trucks, Bicycles, Pedestrians  
**Count Period:** 07:00-10:00, 14:00-18:00  
**Weather:** Clear  
**Comments:**

## Traffic Count Map

Intersection: Gore St & Ward St (CR 18)  
Site Code: 2448400002  
Municipality: Bridgenorth  
Count Date: Nov 19, 2024



## Traffic Count Summary

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### Ward St (CR 18) - Traffic Summary

| Hour                 | North Approach Totals           |             |           |          |             |          | South Approach Totals           |             |           |          |             |          | Total       |
|----------------------|---------------------------------|-------------|-----------|----------|-------------|----------|---------------------------------|-------------|-----------|----------|-------------|----------|-------------|
|                      | Includes Cars, Trucks, Bicycles |             |           |          |             |          | Includes Cars, Trucks, Bicycles |             |           |          |             |          |             |
|                      | Left                            | Thru        | Right     | U-Turn   | Total       | Peds     | Left                            | Thru        | Right     | U-Turn   | Total       | Peds     |             |
| <b>07:00 - 08:00</b> | 28                              | 554         | 1         | 0        | 583         | 0        | 1                               | 248         | 2         | 0        | 251         | 0        | 834         |
| <b>08:00 - 09:00</b> | 75                              | 670         | 7         | 0        | 752         | 0        | 0                               | 377         | 9         | 0        | 386         | 0        | 1138        |
| <b>09:00 - 10:00</b> | 10                              | 402         | 2         | 0        | 414         | 2        | 2                               | 290         | 3         | 0        | 295         | 0        | 709         |
| BREAK                |                                 |             |           |          |             |          |                                 |             |           |          |             |          |             |
| <b>14:00 - 15:00</b> | 24                              | 389         | 6         | 0        | 419         | 0        | 3                               | 504         | 5         | 0        | 512         | 0        | 931         |
| <b>15:00 - 16:00</b> | 10                              | 380         | 12        | 0        | 402         | 2        | 2                               | 646         | 2         | 0        | 650         | 0        | 1052        |
| <b>16:00 - 17:00</b> | 21                              | 424         | 12        | 0        | 457         | 0        | 5                               | 764         | 2         | 0        | 771         | 0        | 1228        |
| <b>17:00 - 18:00</b> | 12                              | 333         | 14        | 0        | 359         | 0        | 3                               | 613         | 5         | 0        | 621         | 0        | 980         |
| <b>GRAND TOTAL</b>   | <b>180</b>                      | <b>3152</b> | <b>54</b> | <b>0</b> | <b>3386</b> | <b>4</b> | <b>16</b>                       | <b>3442</b> | <b>28</b> | <b>0</b> | <b>3486</b> | <b>0</b> | <b>6872</b> |



## Traffic Count Summary

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### Gore St - Traffic Summary

| Hour               | East Approach Totals            |          |            |          |            |           | West Approach Totals            |          |           |          |           |           | Total      |
|--------------------|---------------------------------|----------|------------|----------|------------|-----------|---------------------------------|----------|-----------|----------|-----------|-----------|------------|
|                    | Includes Cars, Trucks, Bicycles |          |            |          |            |           | Includes Cars, Trucks, Bicycles |          |           |          |           |           |            |
|                    | Left                            | Thru     | Right      | U-Turn   | Total      | Peds      | Left                            | Thru     | Right     | U-Turn   | Total     | Peds      |            |
| 07:00 - 08:00      | 1                               | 0        | 2          | 0        | 3          | 0         | 2                               | 0        | 4         | 0        | 6         | 0         | 9          |
| 08:00 - 09:00      | 4                               | 0        | 21         | 0        | 25         | 2         | 0                               | 0        | 6         | 0        | 6         | 0         | 31         |
| 09:00 - 10:00      | 4                               | 0        | 9          | 0        | 13         | 1         | 1                               | 0        | 7         | 0        | 8         | 10        | 21         |
| BREAK              |                                 |          |            |          |            |           |                                 |          |           |          |           |           |            |
| 14:00 - 15:00      | 5                               | 0        | 11         | 0        | 16         | 0         | 0                               | 0        | 5         | 0        | 5         | 0         | 21         |
| 15:00 - 16:00      | 16                              | 1        | 38         | 0        | 55         | 4         | 4                               | 0        | 5         | 0        | 9         | 6         | 64         |
| 16:00 - 17:00      | 7                               | 0        | 17         | 0        | 24         | 3         | 4                               | 0        | 4         | 0        | 8         | 2         | 32         |
| 17:00 - 18:00      | 1                               | 0        | 18         | 0        | 19         | 0         | 13                              | 0        | 5         | 0        | 18        | 5         | 37         |
| <b>GRAND TOTAL</b> | <b>38</b>                       | <b>1</b> | <b>116</b> | <b>0</b> | <b>155</b> | <b>10</b> | <b>24</b>                       | <b>0</b> | <b>36</b> | <b>0</b> | <b>60</b> | <b>23</b> | <b>215</b> |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### North Approach - Ward St (CR 18)

| Start Time      | Cars |      |   |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|------|---|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑    | → | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 5    | 97   | 0 | 0 | 102   | 1      | 3  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 7    | 121  | 0 | 0 | 128   | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:30           | 7    | 176  | 0 | 0 | 183   | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 8    | 142  | 1 | 0 | 151   | 0      | 6  | 0 | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 18   | 165  | 1 | 0 | 184   | 0      | 6  | 0 | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 18   | 144  | 1 | 0 | 163   | 1      | 3  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 27   | 193  | 1 | 0 | 221   | 6      | 3  | 0 | 0 | 9     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 5    | 153  | 3 | 0 | 161   | 0      | 3  | 1 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:00           | 5    | 114  | 0 | 0 | 119   | 1      | 3  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:15           | 2    | 95   | 0 | 0 | 97    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:30           | 0    | 95   | 0 | 0 | 95    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:45           | 2    | 87   | 2 | 0 | 91    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 2          |
| <b>SUBTOTAL</b> | 104  | 1582 | 9 | 0 | 1695  | 9      | 44 | 1 | 0 | 54    | 0        | 0 | 0 | 0 | 0     | 2          |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### North Approach - Ward St (CR 18)

| Start Time         | Cars |      |    |   |       | Trucks |     |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|------|----|---|-------|--------|-----|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑    | →  | ↻ | Total | ←      | ↑   | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 14:00              | 4    | 81   | 4  | 0 | 89    | 0      | 4   | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:15              | 3    | 93   | 2  | 0 | 98    | 1      | 7   | 0 | 0 | 8     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:30              | 4    | 89   | 0  | 0 | 93    | 0      | 3   | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:45              | 12   | 103  | 0  | 0 | 115   | 0      | 9   | 0 | 0 | 9     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:00              | 4    | 82   | 1  | 0 | 87    | 0      | 3   | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:15              | 0    | 93   | 4  | 0 | 97    | 0      | 4   | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:30              | 2    | 91   | 2  | 0 | 95    | 0      | 3   | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 1          |
| 15:45              | 4    | 101  | 5  | 0 | 110   | 0      | 3   | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 1          |
| 16:00              | 7    | 81   | 3  | 0 | 91    | 0      | 5   | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 5    | 115  | 1  | 0 | 121   | 0      | 1   | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 5    | 117  | 6  | 0 | 128   | 1      | 7   | 0 | 0 | 8     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 3    | 96   | 2  | 0 | 101   | 0      | 2   | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 3    | 101  | 3  | 0 | 107   | 1      | 5   | 0 | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 3    | 80   | 6  | 0 | 89    | 0      | 0   | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 3    | 73   | 2  | 0 | 78    | 0      | 3   | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 2    | 71   | 3  | 0 | 76    | 0      | 0   | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 64   | 1467 | 44 | 0 | 1575  | 3      | 59  | 0 | 0 | 62    | 0        | 0 | 0 | 0 | 0     | 2          |
| <b>GRAND TOTAL</b> | 168  | 3049 | 53 | 0 | 3270  | 12     | 103 | 1 | 0 | 116   | 0        | 0 | 0 | 0 | 0     | 4          |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### South Approach - Ward St (CR 18)

| Start Time      | Cars |     |    |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|-----------------|------|-----|----|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                 | ←    | ↑   | →  | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 07:00           | 0    | 52  | 0  | 0 | 52    | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:15           | 0    | 44  | 1  | 0 | 45    | 0      | 6  | 0 | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:30           | 0    | 50  | 0  | 0 | 50    | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 07:45           | 1    | 84  | 1  | 0 | 86    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:00           | 0    | 55  | 0  | 0 | 55    | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:15           | 0    | 72  | 4  | 0 | 76    | 0      | 6  | 1 | 0 | 7     | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:30           | 0    | 131 | 2  | 0 | 133   | 0      | 10 | 1 | 0 | 11    | 0        | 0 | 0 | 0 | 0     | 0          |
| 08:45           | 0    | 94  | 1  | 0 | 95    | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:00           | 0    | 84  | 0  | 0 | 84    | 0      | 3  | 1 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:15           | 0    | 87  | 1  | 0 | 88    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:30           | 1    | 53  | 0  | 0 | 54    | 1      | 6  | 0 | 0 | 7     | 0        | 0 | 0 | 0 | 0     | 0          |
| 09:45           | 0    | 51  | 1  | 0 | 52    | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b> | 2    | 857 | 11 | 0 | 870   | 1      | 58 | 3 | 0 | 62    | 0        | 0 | 0 | 0 | 0     | 0          |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### South Approach - Ward St (CR 18)

| Start Time         | Cars |      |    |   |       | Trucks |    |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|------|----|---|-------|--------|----|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑    | →  | ↻ | Total | ←      | ↑  | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 14:00              | 1    | 81   | 1  | 0 | 83    | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:15              | 1    | 126  | 1  | 0 | 128   | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:30              | 1    | 136  | 1  | 0 | 138   | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:45              | 0    | 151  | 2  | 0 | 153   | 0      | 4  | 0 | 0 | 4     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:00              | 1    | 157  | 2  | 0 | 160   | 0      | 2  | 0 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:15              | 0    | 152  | 0  | 0 | 152   | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:30              | 0    | 144  | 0  | 0 | 144   | 0      | 5  | 0 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:45              | 1    | 180  | 0  | 0 | 181   | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:00              | 3    | 191  | 1  | 0 | 195   | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 1    | 171  | 0  | 0 | 172   | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:30              | 0    | 211  | 1  | 0 | 212   | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 1    | 179  | 0  | 0 | 180   | 0      | 4  | 0 | 0 | 4     | 0        | 1 | 0 | 0 | 1     | 0          |
| 17:00              | 2    | 173  | 1  | 0 | 176   | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 0    | 199  | 1  | 0 | 200   | 0      | 3  | 0 | 0 | 3     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 0    | 139  | 3  | 0 | 142   | 0      | 0  | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 1    | 97   | 0  | 0 | 98    | 0      | 1  | 0 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 13   | 2487 | 14 | 0 | 2514  | 0      | 39 | 0 | 0 | 39    | 0        | 1 | 0 | 0 | 1     | 0          |
| <b>GRAND TOTAL</b> | 15   | 3344 | 25 | 0 | 3384  | 1      | 97 | 3 | 0 | 101   | 0        | 1 | 0 | 0 | 1     | 0          |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### East Approach - Gore St

| Start Time      | Cars |   |    |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |   |
|-----------------|------|---|----|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|---|
|                 | ←    | ↑ | →  | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |   |
| 07:00           | 0    | 0 | 2  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:15           | 0    | 0 | 0  | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:30           | 0    | 0 | 0  | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 07:45           | 1    | 0 | 0  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:00           | 1    | 0 | 3  | 0 | 4     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:15           | 0    | 0 | 1  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:30           | 1    | 0 | 8  | 0 | 9     | 0      | 0 | 5 | 0 | 5     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 08:45           | 2    | 0 | 4  | 0 | 6     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 2 |
| 09:00           | 1    | 0 | 2  | 0 | 3     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 09:15           | 1    | 0 | 2  | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 09:30           | 0    | 0 | 2  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0 |
| 09:45           | 2    | 0 | 2  | 0 | 4     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 1 |
| <b>SUBTOTAL</b> | 9    | 0 | 26 | 0 | 35    | 0      | 0 | 6 | 0 | 6     | 0        | 0 | 0 | 0 | 0     | 0          | 3 |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### East Approach - Gore St

| Start Time         | Cars |   |     |   |       | Trucks |   |    |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|---|-----|---|-------|--------|---|----|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑ | →   | ↻ | Total | ←      | ↑ | →  | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 14:00              | 2    | 0 | 2   | 0 | 4     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:15              | 0    | 0 | 2   | 0 | 2     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:30              | 2    | 0 | 3   | 0 | 5     | 1      | 0 | 0  | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:45              | 0    | 0 | 4   | 0 | 4     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:00              | 6    | 1 | 14  | 0 | 21    | 0      | 0 | 7  | 0 | 7     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:15              | 6    | 0 | 10  | 0 | 16    | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 15:30              | 2    | 0 | 4   | 0 | 6     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 2          |
| 15:45              | 2    | 0 | 3   | 0 | 5     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 16:00              | 2    | 0 | 6   | 0 | 8     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 2          |
| 16:15              | 0    | 0 | 5   | 0 | 5     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 16:30              | 4    | 0 | 5   | 0 | 9     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 1    | 0 | 1   | 0 | 2     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:00              | 0    | 0 | 5   | 0 | 5     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:15              | 0    | 0 | 3   | 0 | 3     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 1    | 0 | 6   | 0 | 7     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:45              | 0    | 0 | 4   | 0 | 4     | 0      | 0 | 0  | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| <b>SUBTOTAL</b>    | 28   | 1 | 77  | 0 | 106   | 1      | 0 | 7  | 0 | 8     | 0        | 0 | 0 | 0 | 0     | 7          |
| <b>GRAND TOTAL</b> | 37   | 1 | 103 | 0 | 141   | 1      | 0 | 13 | 0 | 14    | 0        | 0 | 0 | 0 | 0     | 10         |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### West Approach - Gore St

| Start Time      | Cars |   |    |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |    |
|-----------------|------|---|----|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|----|
|                 | ←    | ↑ | →  | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |    |
| 07:00           | 0    | 0 | 1  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 07:15           | 1    | 0 | 1  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 07:30           | 0    | 0 | 2  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 07:45           | 1    | 0 | 0  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 08:00           | 0    | 0 | 0  | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 08:15           | 0    | 0 | 3  | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 08:30           | 0    | 0 | 0  | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 08:45           | 0    | 0 | 2  | 0 | 2     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 0  |
| 09:00           | 0    | 0 | 1  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 2  |
| 09:15           | 0    | 0 | 2  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 4  |
| 09:30           | 0    | 0 | 3  | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 2  |
| 09:45           | 1    | 0 | 1  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          | 2  |
| <b>SUBTOTAL</b> | 3    | 0 | 16 | 0 | 19    | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          | 10 |



## Traffic Count Data

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Municipality: Bridgenorth  
 Count Date: Nov 19, 2024

### West Approach - Gore St

| Start Time         | Cars |   |    |   |       | Trucks |   |   |   |       | Bicycles |   |   |   |       | Total Peds |
|--------------------|------|---|----|---|-------|--------|---|---|---|-------|----------|---|---|---|-------|------------|
|                    | ←    | ↑ | →  | ↻ | Total | ←      | ↑ | → | ↻ | Total | ←        | ↑ | → | ↻ | Total |            |
| 14:00              | 0    | 0 | 0  | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:15              | 0    | 0 | 1  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:30              | 0    | 0 | 2  | 0 | 2     | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 0          |
| 14:45              | 0    | 0 | 1  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:00              | 0    | 0 | 2  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 15:15              | 1    | 0 | 1  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 4          |
| 15:30              | 2    | 0 | 2  | 0 | 4     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 2          |
| 15:45              | 1    | 0 | 0  | 0 | 1     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:00              | 0    | 0 | 0  | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:15              | 2    | 0 | 1  | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 16:30              | 0    | 0 | 0  | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 16:45              | 2    | 0 | 3  | 0 | 5     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 17:00              | 3    | 0 | 1  | 0 | 4     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 1          |
| 17:15              | 2    | 0 | 1  | 0 | 3     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 0          |
| 17:30              | 2    | 0 | 0  | 0 | 2     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 2          |
| 17:45              | 6    | 0 | 3  | 0 | 9     | 0      | 0 | 0 | 0 | 0     | 0        | 0 | 0 | 0 | 0     | 2          |
| <b>SUBTOTAL</b>    | 21   | 0 | 18 | 0 | 39    | 0      | 0 | 1 | 0 | 1     | 0        | 0 | 0 | 0 | 0     | 13         |
| <b>GRAND TOTAL</b> | 24   | 0 | 34 | 0 | 58    | 0      | 0 | 2 | 0 | 2     | 0        | 0 | 0 | 0 | 0     | 23         |

## Peak Hour Diagram

### Specified Period

From: 07:00:00  
To: 10:00:00

### One Hour Peak

From: 08:00:00  
To: 09:00:00

**Intersection:** Gore St & Ward St (CR 18)  
**Site Code:** 2448400002  
**Count Date:** Nov 19, 2024

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** Ward St (CR 18) runs N/S

### North Approach

|               | Out        | In         | Total       |
|---------------|------------|------------|-------------|
|               | 729        | 368        | 1097        |
|               | 23         | 30         | 53          |
|               | 0          | 0          | 0           |
| <b>Totals</b> | <b>752</b> | <b>398</b> | <b>1150</b> |

### Ward St (CR 18)

|               |          |            |           |          |
|---------------|----------|------------|-----------|----------|
|               | 0        | 0          | 0         | 0        |
|               | 1        | 15         | 7         | 0        |
|               | 6        | 655        | 68        | 0        |
| <b>Totals</b> | <b>7</b> | <b>670</b> | <b>75</b> | <b>0</b> |

### East Approach

|               | Out       | In        | Total      |
|---------------|-----------|-----------|------------|
|               | 20        | 75        | 95         |
|               | 5         | 9         | 14         |
|               | 0         | 0         | 0          |
| <b>Totals</b> | <b>25</b> | <b>84</b> | <b>109</b> |

### Gore St

|  |   |   |   | Totals |
|--|---|---|---|--------|
|  | 0 | 0 | 0 | 0      |
|  | 0 | 0 | 0 | 0      |
|  | 0 | 0 | 0 | 0      |
|  | 0 | 1 | 5 | 6      |

Peds: 0

Peds: 0



Peds: 2

Peds: 0

### Gore St

| Totals |    |   |   |
|--------|----|---|---|
| 0      | 0  | 0 | 0 |
| 21     | 16 | 5 | 0 |
| 0      | 0  | 0 | 0 |
| 4      | 4  | 0 | 0 |

### West Approach

|               | Out      | In       | Total     |
|---------------|----------|----------|-----------|
|               | 5        | 6        | 11        |
|               | 1        | 1        | 2         |
|               | 0        | 0        | 0         |
| <b>Totals</b> | <b>6</b> | <b>7</b> | <b>13</b> |

| Totals |     |     |   |   |
|--------|-----|-----|---|---|
| 0      | 377 | 9   | 0 |   |
|        | 0   | 352 | 7 | 0 |
|        | 0   | 25  | 2 | 0 |
|        | 0   | 0   | 0 | 0 |

Ward St (CR 18)

### South Approach

|               | Out        | In         | Total       |
|---------------|------------|------------|-------------|
|               | 359        | 664        | 1023        |
|               | 27         | 16         | 43          |
|               | 0          | 0          | 0           |
| <b>Totals</b> | <b>386</b> | <b>680</b> | <b>1066</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Count Date: Nov 19, 2024  
 Period: 07:00 - 10:00

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

| Start Time         | North Approach<br>Ward St (CR 18) |             |             |          |          |             | South Approach<br>Ward St (CR 18) |             |             |          |          |             | East Approach<br>Gore St |          |            |          |          |             | West Approach<br>Gore St |          |            |          |          |            | Total<br>Vehic<br>es |
|--------------------|-----------------------------------|-------------|-------------|----------|----------|-------------|-----------------------------------|-------------|-------------|----------|----------|-------------|--------------------------|----------|------------|----------|----------|-------------|--------------------------|----------|------------|----------|----------|------------|----------------------|
|                    | ←                                 | ↑           | →           | ↻        | Peds     | Total       | ←                                 | ↑           | →           | ↻        | Peds     | Total       | ←                        | ↑        | →          | ↻        | Peds     | Total       | ←                        | ↑        | →          | ↻        | Peds     | Total      |                      |
| 08:00              | 18                                | 171         | 1           | 0        | 0        | 190         | 0                                 | 59          | 0           | 0        | 0        | 59          | 1                        | 0        | 3          | 0        | 0        | 4           | 0                        | 0        | 0          | 0        | 0        | 0          | 253                  |
| 08:15              | 19                                | 147         | 1           | 0        | 0        | 167         | 0                                 | 78          | 5           | 0        | 0        | 83          | 0                        | 0        | 1          | 0        | 0        | 1           | 0                        | 0        | 3          | 0        | 0        | 3          | 254                  |
| 08:30              | 33                                | 196         | 1           | 0        | 0        | 230         | 0                                 | 141         | 3           | 0        | 0        | 144         | 1                        | 0        | 13         | 0        | 0        | 14          | 0                        | 0        | 0          | 0        | 0        | 0          | 388                  |
| 08:45              | 5                                 | 156         | 4           | 0        | 0        | 165         | 0                                 | 99          | 1           | 0        | 0        | 100         | 2                        | 0        | 4          | 0        | 2        | 6           | 0                        | 0        | 3          | 0        | 0        | 3          | 274                  |
| <b>Grand Total</b> | <b>75</b>                         | <b>670</b>  | <b>7</b>    | <b>0</b> | <b>0</b> | <b>752</b>  | <b>0</b>                          | <b>377</b>  | <b>9</b>    | <b>0</b> | <b>0</b> | <b>386</b>  | <b>4</b>                 | <b>0</b> | <b>21</b>  | <b>0</b> | <b>2</b> | <b>25</b>   | <b>0</b>                 | <b>0</b> | <b>6</b>   | <b>0</b> | <b>0</b> | <b>6</b>   | <b>1169</b>          |
| Approach %         | 10                                | 89.1        | 0.9         | 0        | -        | -           | 0                                 | 97.7        | 2.3         | 0        | -        | -           | 16                       | 0        | 84         | 0        | -        | -           | 0                        | 0        | 100        | 0        | -        | -          | -                    |
| Totals %           | 6.4                               | 57.3        | 0.6         | 0        | -        | 64.3        | 0                                 | 32.2        | 0.8         | 0        | -        | 33          | 0.3                      | 0        | 1.8        | 0        | -        | 2.1         | 0                        | 0        | 0.5        | 0        | -        | 0.5        | -                    |
| <b>PHF</b>         | <b>0.57</b>                       | <b>0.85</b> | <b>0.44</b> | <b>0</b> | <b>0</b> | <b>0.82</b> | <b>0</b>                          | <b>0.67</b> | <b>0.45</b> | <b>0</b> | <b>0</b> | <b>0.67</b> | <b>0.5</b>               | <b>0</b> | <b>0.4</b> | <b>0</b> | <b>0</b> | <b>0.45</b> | <b>0</b>                 | <b>0</b> | <b>0.5</b> | <b>0</b> | <b>0</b> | <b>0.5</b> | <b>0.75</b>          |
| Cars               | 68                                | 655         | 6           | 0        | -        | 729         | 0                                 | 352         | 7           | 0        | -        | 359         | 4                        | 0        | 16         | 0        | -        | 20          | 0                        | 0        | 5          | 0        | -        | 5          | 1113                 |
| % Cars             | 90.7                              | 97.8        | 85.7        | 0        | -        | 96.9        | 0                                 | 93.4        | 77.8        | 0        | -        | 93          | 100                      | 0        | 76.2       | 0        | -        | 80          | 0                        | 0        | 83.3       | 0        | -        | 83.3       | 95.2                 |
| Trucks             | 7                                 | 15          | 1           | 0        | -        | 23          | 0                                 | 25          | 2           | 0        | -        | 27          | 0                        | 0        | 5          | 0        | -        | 5           | 0                        | 0        | 1          | 0        | -        | 1          | 56                   |
| % Trucks           | 9.3                               | 2.2         | 14.3        | 0        | -        | 3.1         | 0                                 | 6.6         | 22.2        | 0        | -        | 7           | 0                        | 0        | 23.8       | 0        | -        | 20          | 0                        | 0        | 16.7       | 0        | -        | 16.7       | 4.8                  |
| Bicycles           | 0                                 | 0           | 0           | 0        | -        | 0           | 0                                 | 0           | 0           | 0        | -        | 0           | 0                        | 0        | 0          | 0        | -        | 0           | 0                        | 0        | 0          | 0        | -        | 0          | 0                    |
| % Bicycles         | 0                                 | 0           | 0           | 0        | -        | 0           | 0                                 | 0           | 0           | 0        | -        | 0           | 0                        | 0        | 0          | 0        | -        | 0           | 0                        | 0        | 0          | 0        | -        | 0          | 0                    |
| Peds               | -                                 | -           | -           | -        | 0        | -           | -                                 | -           | -           | 0        | -        | -           | -                        | -        | -          | -        | 2        | -           | -                        | -        | -          | 0        | -        | -          | 2                    |
| % Peds             | -                                 | -           | -           | -        | 0        | -           | -                                 | -           | -           | 0        | -        | -           | -                        | -        | -          | -        | 100      | -           | -                        | -        | 0          | -        | -        | -          | -                    |

## Peak Hour Diagram

### Specified Period

From: 14:00:00  
To: 18:00:00

### One Hour Peak

From: 15:45:00  
To: 16:45:00

**Intersection:** Gore St & Ward St (CR 18)  
**Site Code:** 2448400002  
**Count Date:** Nov 19, 2024

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** Ward St (CR 18) runs N/S

### North Approach

|               | Out        | In         | Total       |
|---------------|------------|------------|-------------|
|               | 450        | 775        | 1225        |
|               | 17         | 8          | 25          |
|               | 0          | 0          | 0           |
| <b>Totals</b> | <b>467</b> | <b>783</b> | <b>1250</b> |

### Ward St (CR 18)

|               |           |            |           |          |
|---------------|-----------|------------|-----------|----------|
|               | 0         | 0          | 0         | 0        |
|               | 0         | 16         | 1         | 0        |
|               | 15        | 414        | 21        | 0        |
| <b>Totals</b> | <b>15</b> | <b>430</b> | <b>22</b> | <b>0</b> |

### East Approach

|               | Out       | In        | Total     |
|---------------|-----------|-----------|-----------|
|               | 27        | 23        | 50        |
|               | 0         | 1         | 1         |
|               | 0         | 0         | 0         |
| <b>Totals</b> | <b>27</b> | <b>24</b> | <b>51</b> |

### Gore St

|  |   |   |   | Totals |
|--|---|---|---|--------|
|  | 0 | 0 | 0 | 0      |
|  | 0 | 0 | 3 | 3      |
|  | 0 | 0 | 0 | 0      |
|  | 0 | 0 | 1 | 1      |

Peds: 1

Peds: 1



Peds: 4

Peds: 0

### Gore St

| Totals |    |   |   |
|--------|----|---|---|
| 0      | 0  | 0 | 0 |
| 19     | 19 | 0 | 0 |
| 0      | 0  | 0 | 0 |
| 8      | 8  | 0 | 0 |

### West Approach

|               | Out      | In        | Total     |
|---------------|----------|-----------|-----------|
|               | 4        | 20        | 24        |
|               | 0        | 0         | 0         |
|               | 0        | 0         | 0         |
| <b>Totals</b> | <b>4</b> | <b>20</b> | <b>24</b> |

| Totals |     |     |   |   |
|--------|-----|-----|---|---|
| 5      | 761 | 2   | 0 |   |
|        | 5   | 753 | 2 | 0 |
|        | 0   | 8   | 0 | 0 |
|        | 0   | 0   | 0 | 0 |

Ward St (CR 18)

### South Approach

| Out        | In         | Total       |
|------------|------------|-------------|
| 760        | 423        | 1183        |
| 8          | 16         | 24          |
| 0          | 0          | 0           |
| <b>768</b> | <b>439</b> | <b>1207</b> |

- Cars

- Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: Gore St & Ward St (CR 18)  
 Site Code: 2448400002  
 Count Date: Nov 19, 2024  
 Period: 14:00 - 18:00

### Peak Hour Data (15:45 - 16:45)

| Start Time         | North Approach<br>Ward St (CR 18) |             |             |          |             |             | South Approach<br>Ward St (CR 18) |             |            |          |             |             | East Approach<br>Gore St |          |             |          |             |             | West Approach<br>Gore St |          |             |          |             |             | Total<br>Vehicles |      |
|--------------------|-----------------------------------|-------------|-------------|----------|-------------|-------------|-----------------------------------|-------------|------------|----------|-------------|-------------|--------------------------|----------|-------------|----------|-------------|-------------|--------------------------|----------|-------------|----------|-------------|-------------|-------------------|------|
|                    | ←                                 | ↑           | →           | ↻        | Peds        | Total       | ←                                 | ↑           | →          | ↻        | Peds        | Total       | ←                        | ↑        | →           | ↻        | Peds        | Total       | ←                        | ↑        | →           | ↻        | Peds        | Total       |                   |      |
| 15:45              | 4                                 | 104         | 5           | 0        | 1           | 113         | 1                                 | 181         | 0          | 0        | 0           | 182         | 2                        | 0        | 3           | 0        | 1           | 5           | 1                        | 0        | 0           | 0        | 0           | 1           | 301               |      |
| 16:00              | 7                                 | 86          | 3           | 0        | 0           | 96          | 3                                 | 194         | 1          | 0        | 0           | 198         | 2                        | 0        | 6           | 0        | 2           | 8           | 0                        | 0        | 0           | 0        | 0           | 0           | 302               |      |
| 16:15              | 5                                 | 116         | 1           | 0        | 0           | 122         | 1                                 | 172         | 0          | 0        | 0           | 173         | 0                        | 0        | 5           | 0        | 1           | 5           | 2                        | 0        | 1           | 0        | 1           | 3           | 303               |      |
| 16:30              | 6                                 | 124         | 6           | 0        | 0           | 136         | 0                                 | 214         | 1          | 0        | 0           | 215         | 4                        | 0        | 5           | 0        | 0           | 9           | 0                        | 0        | 0           | 0        | 0           | 0           | 360               |      |
| <b>Grand Total</b> | <b>22</b>                         | <b>430</b>  | <b>15</b>   | <b>0</b> | <b>1</b>    | <b>467</b>  | <b>5</b>                          | <b>761</b>  | <b>2</b>   | <b>0</b> | <b>0</b>    | <b>768</b>  | <b>8</b>                 | <b>0</b> | <b>19</b>   | <b>0</b> | <b>4</b>    | <b>27</b>   | <b>3</b>                 | <b>0</b> | <b>1</b>    | <b>0</b> | <b>1</b>    | <b>4</b>    | <b>1266</b>       |      |
| Approach %         | 4.7                               | 92.1        | 3.2         | 0        | -           | -           | 0.7                               | 99.1        | 0.3        | 0        | -           | -           | 29.6                     | 0        | 70.4        | 0        | -           | -           | 75                       | 0        | 25          | 0        | -           | -           | -                 |      |
| Totals %           | 1.7                               | 34          | 1.2         | 0        | -           | 36.9        | 0.4                               | 60.1        | 0.2        | 0        | -           | 60.7        | 0.6                      | 0        | 1.5         | 0        | -           | 2.1         | 0.2                      | 0        | 0.1         | 0        | -           | -           | 0.3               |      |
| <b>PHF</b>         | <b>0.79</b>                       | <b>0.87</b> | <b>0.63</b> | <b>0</b> | <b>0.86</b> | <b>0.86</b> | <b>0.42</b>                       | <b>0.89</b> | <b>0.5</b> | <b>0</b> | <b>0.89</b> | <b>0.89</b> | <b>0.5</b>               | <b>0</b> | <b>0.79</b> | <b>0</b> | <b>0.75</b> | <b>0.75</b> | <b>0.38</b>              | <b>0</b> | <b>0.25</b> | <b>0</b> | <b>0.33</b> | <b>0.33</b> | <b>0.88</b>       |      |
| <b>Cars</b>        | 21                                | 414         | 15          | 0        | -           | 450         | 5                                 | 753         | 2          | 0        | -           | 760         | 8                        | 0        | 19          | 0        | -           | 27          | 3                        | 0        | 1           | 0        | -           | -           | 4                 | 1241 |
| <b>% Cars</b>      | 95.5                              | 96.3        | 100         | 0        | -           | 96.4        | 100                               | 98.9        | 100        | 0        | -           | 99          | 100                      | 0        | 100         | 0        | -           | 100         | 100                      | 0        | 100         | 0        | -           | -           | 100               | 98   |
| <b>Trucks</b>      | 1                                 | 16          | 0           | 0        | -           | 17          | 0                                 | 8           | 0          | 0        | -           | 8           | 0                        | 0        | 0           | 0        | -           | 0           | 0                        | 0        | 0           | 0        | -           | -           | 0                 | 25   |
| <b>% Trucks</b>    | 4.5                               | 3.7         | 0           | 0        | -           | 3.6         | 0                                 | 1.1         | 0          | 0        | -           | 1           | 0                        | 0        | 0           | 0        | -           | 0           | 0                        | 0        | 0           | 0        | -           | -           | 0                 | 2    |
| <b>Bicycles</b>    | 0                                 | 0           | 0           | 0        | -           | 0           | 0                                 | 0           | 0          | 0        | -           | 0           | 0                        | 0        | 0           | 0        | -           | 0           | 0                        | 0        | 0           | 0        | -           | -           | 0                 | 0    |
| <b>% Bicycles</b>  | 0                                 | 0           | 0           | 0        | -           | 0           | 0                                 | 0           | 0          | 0        | -           | 0           | 0                        | 0        | 0           | 0        | -           | 0           | 0                        | 0        | 0           | 0        | -           | -           | 0                 | 0    |
| <b>Peds</b>        | -                                 | -           | -           | -        | 1           | -           | -                                 | -           | -          | -        | 0           | -           | -                        | -        | -           | -        | 4           | -           | -                        | -        | -           | -        | 1           | -           | -                 | 6    |
| <b>% Peds</b>      | -                                 | -           | -           | -        | 16.7        | -           | -                                 | -           | -          | -        | 0           | -           | -                        | -        | -           | -        | 66.7        | -           | -                        | -        | -           | -        | 16.7        | -           | -                 | -    |

File Name: CR18 @ Wilcox St

Start Date: 6/25/2025

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Default Comments

Comment 2: Change These in The Preferences Window

Comment 3: Select File/Preference in the Main Scree

Comment 4: Then Click the Comments Tab

| Start Time | CR 18<br>From North |      |      |      | WILCOX ST<br>From East |      |      |      | CR 18<br>From South |      |      |      | WILCOX ST<br>From West |      |      |      |     |      |
|------------|---------------------|------|------|------|------------------------|------|------|------|---------------------|------|------|------|------------------------|------|------|------|-----|------|
|            | Right               | Thru | Left | Peds | Right                  | Thru | Left | Peds | Right               | Thru | Left | Peds | Right                  | Thru | Left | Peds |     |      |
| 07:00 AM   | 0                   | 97   | 0    | 0    | 1                      | 0    | 2    | 0    | 0                   | 61   | 0    | 1    | 1                      | 0    | 0    | 0    | 162 | 823  |
| 07:15 AM   | 0                   | 120  | 0    | 0    | 3                      | 0    | 4    | 0    | 0                   | 62   | 0    | 1    | 0                      | 0    | 0    | 0    | 189 | 914  |
| 07:30 AM   | 0                   | 149  | 0    | 0    | 1                      | 0    | 8    | 0    | 1                   | 77   | 0    | 0    | 0                      | 0    | 0    | 0    | 236 | 985  |
| 07:45 AM   | 0                   | 137  | 1    | 0    | 3                      | 0    | 6    | 1    | 1                   | 85   | 0    | 1    | 0                      | 0    | 3    | 0    | 236 | 1056 |
| 08:00 AM   | 0                   | 152  | 0    | 0    | 1                      | 0    | 8    | 0    | 1                   | 88   | 1    | 0    | 1                      | 0    | 1    | 0    | 253 | 1077 |
| 08:15 AM   | 0                   | 152  | 0    | 0    | 2                      | 1    | 3    | 0    | 0                   | 98   | 1    | 0    | 0                      | 2    | 1    | 0    | 260 | 1080 |
| 08:30 AM   | 0                   | 170  | 2    | 0    | 19                     | 0    | 20   | 0    | 0                   | 91   | 0    | 0    | 2                      | 1    | 2    | 0    | 307 | 1078 |
| 08:45 AM   | 0                   | 150  | 1    | 0    | 7                      | 0    | 15   | 0    | 0                   | 82   | 1    | 2    | 0                      | 0    | 1    | 0    | 257 | 1006 |
| 09:00 AM   | 0                   | 145  | 0    | 1    | 2                      | 0    | 3    | 1    | 2                   | 103  | 1    | 0    | 0                      | 0    | 0    | 0    | 256 | 1013 |
| 09:15 AM   | 2                   | 143  | 0    | 1    | 1                      | 0    | 2    | 0    | 0                   | 107  | 1    | 1    | 0                      | 1    | 1    | 0    | 258 | 978  |
| 09:30 AM   | 0                   | 139  | 0    | 0    | 1                      | 0    | 4    | 0    | 0                   | 84   | 1    | 0    | 4                      | 0    | 2    | 0    | 235 | 966  |
| 09:45 AM   | 0                   | 133  | 1    | 0    | 2                      | 0    | 1    | 3    | 0                   | 125  | 1    | 0    | 0                      | 0    | 1    | 0    | 264 | 978  |
| 10:00 AM   | 0                   | 134  | 0    | 0    | 0                      | 0    | 3    | 0    | 0                   | 84   | 0    | 0    | 0                      | 0    | 0    | 0    | 221 | 958  |
| 10:15 AM   | 0                   | 131  | 0    | 0    | 1                      | 0    | 4    | 1    | 1                   | 106  | 1    | 0    | 1                      | 0    | 1    | 1    | 246 | 953  |
| 10:30 AM   | 0                   | 116  | 1    | 0    | 2                      | 0    | 7    | 0    | 0                   | 116  | 1    | 2    | 0                      | 0    | 4    | 0    | 247 | 959  |
| 10:45 AM   | 1                   | 120  | 0    | 1    | 1                      | 1    | 5    | 0    | 1                   | 114  | 1    | 0    | 0                      | 0    | 0    | 0    | 244 | 989  |
| 11:00 AM   | 1                   | 106  | 0    | 1    | 0                      | 1    | 1    | 0    | 0                   | 104  | 0    | 0    | 1                      | 0    | 2    | 0    | 216 | 980  |
| 11:15 AM   | 2                   | 124  | 0    | 0    | 0                      | 0    | 1    | 0    | 0                   | 122  | 1    | 0    | 0                      | 1    | 1    | 0    | 252 | 1020 |
| 11:30 AM   | 0                   | 120  | 0    | 0    | 3                      | 0    | 4    | 0    | 0                   | 146  | 0    | 1    | 0                      | 0    | 4    | 0    | 277 | 1022 |
| 11:45 AM   | 0                   | 116  | 0    | 0    | 0                      | 0    | 4    | 0    | 0                   | 112  | 1    | 0    | 0                      | 0    | 2    | 0    | 235 | 967  |
| 12:00 PM   | 1                   | 114  | 0    | 0    | 1                      | 0    | 1    | 0    | 0                   | 136  | 0    | 0    | 0                      | 0    | 3    | 0    | 256 | 1017 |
| 12:15 PM   | 1                   | 115  | 0    | 0    | 1                      | 0    | 10   | 0    | 1                   | 120  | 2    | 0    | 2                      | 0    | 2    | 0    | 254 | 1036 |
| 12:30 PM   | 0                   | 102  | 0    | 0    | 2                      | 0    | 0    | 0    | 0                   | 114  | 0    | 0    | 1                      | 0    | 3    | 0    | 222 | 1030 |
| 12:45 PM   | 0                   | 133  | 0    | 0    | 1                      | 1    | 5    | 0    | 0                   | 141  | 0    | 0    | 3                      | 0    | 1    | 0    | 285 | 1093 |
| 01:00 PM   | 0                   | 125  | 1    | 0    | 1                      | 1    | 2    | 2    | 1                   | 140  | 0    | 1    | 4                      | 0    | 0    | 0    | 275 | 1071 |
| 01:15 PM   | 0                   | 110  | 0    | 0    | 3                      | 0    | 2    | 0    | 1                   | 125  | 1    | 0    | 4                      | 1    | 1    | 0    | 248 | 1055 |
| 01:30 PM   | 0                   | 126  | 1    | 0    | 2                      | 0    | 1    | 0    | 0                   | 147  | 2    | 0    | 0                      | 0    | 6    | 0    | 285 | 1086 |
| 01:45 PM   | 0                   | 123  | 1    | 0    | 1                      | 0    | 3    | 0    | 0                   | 129  | 1    | 0    | 1                      | 1    | 3    | 0    | 263 | 1086 |
| 02:00 PM   | 0                   | 99   | 0    | 0    | 1                      | 1    | 7    | 0    | 0                   | 146  | 1    | 0    | 0                      | 0    | 4    | 0    | 259 | 1110 |
| 02:15 PM   | 0                   | 111  | 1    | 0    | 2                      | 0    | 5    | 0    | 0                   | 159  | 0    | 1    | 0                      | 0    | 1    | 0    | 279 | 1153 |
| 02:30 PM   | 0                   | 122  | 1    | 0    | 1                      | 0    | 4    | 0    | 0                   | 150  | 0    | 0    | 2                      | 2    | 3    | 0    | 285 | 1171 |
| 02:45 PM   | 2                   | 110  | 5    | 0    | 2                      | 0    | 4    | 0    | 1                   | 160  | 0    | 0    | 0                      | 3    | 0    | 0    | 287 | 1169 |
| 03:00 PM   | 1                   | 110  | 4    | 0    | 15                     | 1    | 19   | 0    | 0                   | 149  | 0    | 0    | 1                      | 1    | 1    | 0    | 302 | 1146 |
| 03:15 PM   | 0                   | 113  | 1    | 0    | 5                      | 0    | 14   | 0    | 1                   | 159  | 0    | 0    | 0                      | 0    | 4    | 0    | 297 | 1133 |
| 03:30 PM   | 1                   | 135  | 1    | 0    | 2                      | 0    | 5    | 0    | 0                   | 138  | 0    | 0    | 0                      | 0    | 1    | 0    | 283 | 1154 |
| 03:45 PM   | 2                   | 105  | 0    | 0    | 2                      | 0    | 4    | 0    | 0                   | 147  | 1    | 1    | 1                      | 1    | 1    | 0    | 264 | 1241 |
| 04:00 PM   | 0                   | 115  | 0    | 0    | 1                      | 0    | 4    | 1    | 0                   | 167  | 0    | 0    | 1                      | 0    | 1    | 0    | 289 | 1306 |
| 04:15 PM   | 0                   | 116  | 0    | 1    | 5                      | 0    | 4    | 0    | 0                   | 189  | 1    | 4    | 1                      | 0    | 2    | 0    | 318 | 1305 |
| 04:30 PM   | 0                   | 151  | 0    | 0    | 6                      | 0    | 11   | 0    | 0                   | 199  | 1    | 0    | 2                      | 0    | 0    | 0    | 370 | 1311 |
| 04:45 PM   | 0                   | 127  | 0    | 0    | 4                      | 0    | 9    | 0    | 0                   | 185  | 0    | 0    | 1                      | 1    | 2    | 0    | 329 | 1223 |
| 05:00 PM   | 0                   | 103  | 0    | 1    | 2                      | 1    | 7    | 0    | 1                   | 170  | 0    | 0    | 0                      | 1    | 3    | 0    | 288 | 1112 |
| 05:15 PM   | 1                   | 109  | 1    | 0    | 2                      | 0    | 3    | 0    | 0                   | 207  | 0    | 0    | 0                      | 0    | 1    | 0    | 324 | 1073 |
| 05:30 PM   | 0                   | 104  | 0    | 0    | 5                      | 0    | 11   | 0    | 0                   | 160  | 0    | 0    | 0                      | 0    | 2    | 0    | 282 | 960  |
| 05:45 PM   | 0                   | 94   | 0    | 0    | 1                      | 0    | 1    | 0    | 0                   | 120  | 0    | 0    | 1                      | 0    | 1    | 3    | 218 | 885  |
| 06:00 PM   | 0                   | 95   | 0    | 0    | 0                      | 0    | 0    | 0    | 0                   | 151  | 1    | 0    | 1                      | 0    | 1    | 0    | 249 | 830  |
| 06:15 PM   | 0                   | 79   | 1    | 0    | 1                      | 0    | 0    | 0    | 0                   | 127  | 0    | 0    | 2                      | 0    | 1    | 0    | 211 | 581  |
| 06:30 PM   | 0                   | 93   | 0    | 0    | 1                      | 0    | 2    | 0    | 1                   | 110  | 0    | 0    | 0                      | 0    | 0    | 0    | 207 | 370  |
| 06:45 PM   | 1                   | 68   | 0    | 0    | 2                      | 0    | 1    | 0    | 0                   | 90   | 1    | 2    | 0                      | 0    | 0    | 0    | 163 | 163  |

# Appendix D

**Existing 2025 Traffic Conditions –  
Synchro Outputs**

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 0   | 3   | 73  | 3   | 7   | 2  | 157   | 37  | 12  | 210   | 2   |
| Future Volume (Veh/h)             | 2   | 0   | 3   | 73  | 3   | 7   | 2  | 157   | 37  | 12  | 210   | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.25  | 0.25  | 0.38  | 0.75  | 0.50  | 0.35  | 0.25   | 0.86  | 0.75  | 0.75  | 0.84  | 0.25  |
| Hourly flow rate (vph)            | 8   | 0   | 8   | 97  | 6   | 20  | 8  | 183   | 49  | 16  | 250   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 532   | 534   | 254   | 518   | 514   | 208   | 258  |   |   | 232   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 532   | 534   | 254   | 518   | 514   | 208   | 258  |   |   | 232   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.3   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.4   |   |   |
| p0 queue free %                   | 98  | 100   | 99  | 79  | 99  | 98  | 99   |   |   | 99  |   |   |
| cM capacity (veh/h)               | 439   | 446   | 790   | 454   | 459   | 838   | 1318   |   |   | 1252  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 16  | 123   | 240   | 274   |   |   |  |   |   |   |   |   |
| Volume Left                       | 8   | 97  | 8   | 16  |   |   |  |   |   |   |   |   |
| Volume Right                      | 8   | 20  | 49  | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 564   | 491   | 1318  | 1252  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.03  | 0.25  | 0.01  | 0.01  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.7   | 7.5   | 0.1   | 0.3   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 11.6  | 14.8  | 0.3   | 0.6   |   |   |  |   |   |   |   |   |
| Lane LOS                          | B   | B   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 11.6  | 14.8  | 0.3   | 0.6   |   |   |  |   |   |   |   |   |
| Approach LOS                      | B   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.4   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 34.6%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 2: Ward St & Bridge Rd

12/01/2025



| Movement               | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR   |
|------------------------|-------|------|------|------|------|------|-------|------|------|------|------|-------|
| Lane Configurations    |       |      |      |      |      |      |       |      |      |      |      |       |
| Traffic Volume (vph)   | 107   | 4    | 335  | 4    | 3    | 6    | 148   | 171  | 0    | 7    | 470  | 103   |
| Future Volume (vph)    | 107   | 4    | 335  | 4    | 3    | 6    | 148   | 171  | 0    | 7    | 470  | 103   |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  |
| Total Lost time (s)    | 6.0   | 6.0  | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Lane Util. Factor      | 1.00  | 1.00 | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Frt                    | 1.00  | 1.00 | 0.85 |      | 0.94 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 0.85  |
| Flt Protected          | 0.95  | 1.00 | 1.00 |      | 0.99 |      | 0.95  | 1.00 |      | 0.95 | 1.00 | 1.00  |
| Satd. Flow (prot)      | 1722  | 1921 | 1570 |      | 1365 |      | 1630  | 1779 |      | 1415 | 1847 | 1541  |
| Flt Permitted          | 0.74  | 1.00 | 1.00 |      | 0.94 |      | 0.28  | 1.00 |      | 0.59 | 1.00 | 1.00  |
| Satd. Flow (perm)      | 1339  | 1921 | 1570 |      | 1304 |      | 486   | 1779 |      | 871  | 1847 | 1541  |
| Peak-hour factor, PHF  | 0.74  | 0.50 | 0.68 | 0.50 | 0.38 | 0.50 | 0.76  | 0.60 | 0.25 | 0.44 | 0.83 | 0.68  |
| Adj. Flow (vph)        | 145   | 8    | 493  | 8    | 8    | 12   | 195   | 285  | 0    | 16   | 566  | 151   |
| RTOR Reduction (vph)   | 0     | 0    | 403  | 0    | 10   | 0    | 0     | 0    | 0    | 0    | 0    | 73    |
| Lane Group Flow (vph)  | 145   | 8    | 90   | 0    | 18   | 0    | 195   | 285  | 0    | 16   | 566  | 78    |
| Heavy Vehicles (%)     | 6%    | 0%   | 4%   | 25%  | 33%  | 33%  | 12%   | 8%   | 0%   | 29%  | 4%   | 6%    |
| Turn Type              | Perm  | NA   | Perm | Perm | NA   |      | pm+pt | NA   |      | Perm | NA   | Perm  |
| Protected Phases       |       | 8    |      |      | 4    |      | 1     | 6    |      |      |      | 2     |
| Permitted Phases       | 8     |      | 8    | 4    |      |      | 6     |      |      | 2    |      | 2     |
| Actuated Green, G (s)  | 22.0  | 22.0 | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 62.0 | 62.0 | 62.0  |
| Effective Green, g (s) | 22.0  | 22.0 | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 62.0 | 62.0 | 62.0  |
| Actuated g/C Ratio     | 0.18  | 0.18 | 0.18 |      | 0.18 |      | 0.72  | 0.72 |      | 0.52 | 0.52 | 0.52  |
| Clearance Time (s)     | 6.0   | 6.0  | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Vehicle Extension (s)  | 3.0   | 3.0  | 3.0  |      | 3.0  |      | 3.0   | 3.0  |      | 3.0  | 3.0  | 3.0   |
| Lane Grp Cap (vph)     | 245   | 352  | 287  |      | 239  |      | 538   | 1274 |      | 450  | 954  | 796   |
| v/s Ratio Prot         |       | 0.00 |      |      |      |      | c0.06 | 0.16 |      |      |      | c0.31 |
| v/s Ratio Perm         | c0.11 |      | 0.06 |      | 0.01 |      | 0.20  |      |      | 0.02 |      | 0.05  |
| v/c Ratio              | 0.59  | 0.02 | 0.31 |      | 0.08 |      | 0.36  | 0.22 |      | 0.04 | 0.59 | 0.10  |
| Uniform Delay, d1      | 44.9  | 40.2 | 42.5 |      | 40.6 |      | 8.8   | 5.7  |      | 14.3 | 20.2 | 14.8  |
| Progression Factor     | 1.00  | 1.00 | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Incremental Delay, d2  | 3.8   | 0.0  | 0.6  |      | 0.6  |      | 0.4   | 0.4  |      | 0.1  | 2.7  | 0.2   |
| Delay (s)              | 48.7  | 40.2 | 43.1 |      | 41.2 |      | 9.3   | 6.1  |      | 14.4 | 22.9 | 15.0  |
| Level of Service       | D     | D    | D    |      | D    |      | A     | A    |      | B    | C    | B     |
| Approach Delay (s)     |       | 44.3 |      |      | 41.2 |      |       | 7.4  |      |      | 21.1 |       |
| Approach LOS           |       | D    |      |      | D    |      |       | A    |      |      | C    |       |

| Intersection Summary              |       |                             |
|-----------------------------------|-------|-----------------------------|
| HCM 2000 Control Delay            | 25.9  | HCM 2000 Level of Service C |
| HCM 2000 Volume to Capacity ratio | 0.55  |                             |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s) 16.0   |
| Intersection Capacity Utilization | 70.5% | ICU Level of Service C      |
| Analysis Period (min)             | 15    |                             |
| c Critical Lane Group             |       |                             |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 0   | 6   | 4   | 0   | 21  | 0  | 385   | 9   | 77  | 683   | 7   |
| Future Volume (Veh/h)             | 0   | 0   | 6   | 4   | 0   | 21  | 0  | 385   | 9   | 77  | 683   | 7   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75   | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  |
| Hourly flow rate (vph)            | 0   | 0   | 8   | 5   | 0   | 28  | 0  | 513   | 12  | 103   | 911   | 9   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.90  | 0.90  |   | 0.90  | 0.90  | 0.90  |  |   |   | 0.90  |   |   |
| vC, conflicting volume            | 1668  | 1646  | 916   | 1648  | 1645  | 519   | 920  |   |   | 525   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 1687  | 1662  | 916   | 1664  | 1661  | 414   | 920  |   |   | 420   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.4   | 7.1   | 6.5   | 6.4   | 4.1  |   |   | 4.2   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.5   | 3.5   | 4.0   | 3.5   | 2.2  |   |   | 2.3   |   |   |
| p0 queue free %                   | 100   | 100   | 97  | 92  | 100   | 95  | 100  |   |   | 90  |   |   |
| cM capacity (veh/h)               | 59  | 79  | 310   | 63  | 80  | 536   | 750  |   |   | 995   |   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 8   | 33  | 525   | 1023  |   |   |  |   |   |   |   |   |
| Volume Left                       | 0   | 5   | 0   | 103   |   |   |  |   |   |   |   |   |
| Volume Right                      | 8   | 28  | 12  | 9   |   |   |  |   |   |   |   |   |
| cSH                               | 310   | 251   | 750   | 995   |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.03  | 0.13  | 0.00  | 0.10  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.6   | 3.4   | 0.0   | 2.6   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 16.9  | 21.5  | 0.0   | 2.7   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | C   |   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 16.9  | 21.5  | 0.0   | 2.7   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.3   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 76.6%   |   | ICU Level of Service  |   |  |   |   | D   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/01/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 4    | 3    | 2    | 41   | 1    | 30   | 3    | 374  | 2    | 3    | 617  | 0    |
| Future Volume (vph)    | 4    | 3    | 2    | 41   | 1    | 30   | 3    | 374  | 2    | 3    | 617  | 0    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.94 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.98 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1769 |      |      | 1719 |      |      | 1878 |      |      | 1882 |      |
| Flt Permitted          |      | 0.90 |      |      | 0.83 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1622 |      |      | 1464 |      |      | 1870 |      |      | 1874 |      |
| Peak-hour factor, PHF  | 0.50 | 0.38 | 0.25 | 0.52 | 0.25 | 0.39 | 0.75 | 0.91 | 0.25 | 0.38 | 0.91 | 0.92 |
| Adj. Flow (vph)        | 8    | 8    | 8    | 79   | 4    | 77   | 4    | 411  | 8    | 8    | 678  | 0    |
| RTOR Reduction (vph)   | 0    | 6    | 0    | 0    | 42   | 0    | 0    | 1    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 18   | 0    | 0    | 118  | 0    | 0    | 422  | 0    | 0    | 686  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 385  |      |      | 347  |      |      | 1145 |      |      | 1147 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.08 |      |      | 0.23 |      |      | 0.37 |      |
| v/c Ratio              |      | 0.05 |      |      | 0.34 |      |      | 0.37 |      |      | 0.60 |      |
| Uniform Delay, d1      |      | 23.5 |      |      | 25.3 |      |      | 7.8  |      |      | 9.5  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.2  |      |      | 2.7  |      |      | 0.9  |      |      | 2.3  |      |
| Delay (s)              |      | 23.7 |      |      | 28.0 |      |      | 8.7  |      |      | 11.8 |      |
| Level of Service       |      | C    |      |      | C    |      |      | A    |      |      | B    |      |
| Approach Delay (s)     |      | 23.7 |      |      | 28.0 |      |      | 8.7  |      |      | 11.8 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | A    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 13.0  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.53  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 50.3% | ICU Level of Service      | A    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 5: Street A/E Communication Rd & 7th Line

12/01/2025



| Movement                          | WBL   | WBR  | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|------|-------|----------------------|------|------|
| Lane Configurations               |       |      |       |                      |      |      |
| Sign Control                      | Stop  |      | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 0     | 13   | 0     | 0                    | 34   | 0    |
| Future Volume (vph)               | 0     | 13   | 0     | 0                    | 34   | 0    |
| Peak Hour Factor                  | 0.92  | 0.92 | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0     | 14   | 0     | 0                    | 37   | 0    |
| Direction, Lane #                 | WB 1  | NB 1 | SB 1  |                      |      |      |
| Volume Total (vph)                | 14    | 0    | 37    |                      |      |      |
| Volume Left (vph)                 | 0     | 0    | 37    |                      |      |      |
| Volume Right (vph)                | 14    | 0    | 0     |                      |      |      |
| Hadj (s)                          | -0.57 | 0.00 | 0.34  |                      |      |      |
| Departure Headway (s)             | 3.4   | 4.0  | 4.3   |                      |      |      |
| Degree Utilization, x             | 0.01  | 0.00 | 0.04  |                      |      |      |
| Capacity (veh/h)                  | 1034  | 900  | 837   |                      |      |      |
| Control Delay (s)                 | 6.5   | 7.0  | 7.5   |                      |      |      |
| Approach Delay (s)                | 6.5   | 0.0  | 7.5   |                      |      |      |
| Approach LOS                      | A     | A    | A     |                      |      |      |
| Intersection Summary              |       |      |       |                      |      |      |
| Delay                             |       |      | 7.2   |                      |      |      |
| Level of Service                  |       |      | A     |                      |      |      |
| Intersection Capacity Utilization |       |      | 13.3% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |      | 15    |                      |      |      |

HCM Unsignalized Intersection Capacity Analysis  
6: Center Line & 7th Line/E Communication Rd

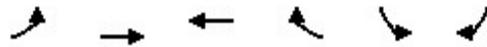
12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 1   | 5   | 28  | 3   | 4   | 1   | 9  | 70  | 6   | 0   | 99  | 0   |
| Future Volume (Veh/h)             | 1   | 5   | 28  | 3   | 4   | 1   | 9  | 70  | 6   | 0   | 99  | 0   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.75  | 0.73  | 0.50  | 1.00  | 0.25  | 0.83   | 0.82  | 0.75  | 0.25  | 0.83  | 0.25  |
| Hourly flow rate (vph)            | 2   | 7   | 38  | 6   | 4   | 4   | 11   | 85  | 8   | 0   | 119   | 0   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 236   | 234   | 119   | 272   | 230   | 89  | 119  |   |   | 93  |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 236   | 234   | 119   | 272   | 230   | 89  | 119  |   |   | 93  |   |   |
| tC, single (s)                    | 7.6   | 6.7   | 6.2   | 7.3   | 6.5   | 6.2   | 4.2  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.0   | 4.2   | 3.3   | 3.7   | 4.0   | 3.3   | 2.3  |   |   | 2.2   |   |   |
| p0 queue free %                   | 100   | 99  | 96  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 619   | 636   | 930   | 602   | 668   | 975   | 1421   |   |   | 1514  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 47  | 14  | 104   | 119   |   |   |  |   |   |   |   |   |
| Volume Left                       | 2   | 6   | 11  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 38  | 4   | 8   | 0   |   |   |  |   |   |   |   |   |
| cSH                               | 853   | 698   | 1421  | 1514  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.06  | 0.02  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.3   | 0.5   | 0.2   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.5   | 10.3  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.5   | 10.3  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.4   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 21.2%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/01/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             | ↔           | ↔           |                      | ↔    |      |
| Traffic Volume (veh/h)            | 0           | 86          | 26          | 0                    | 0    | 0    |
| Future Volume (Veh/h)             | 0           | 86          | 26          | 0                    | 0    | 0    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0           | 93          | 28          | 0                    | 0    | 0    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 28          |             |             |                      | 121  | 28   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 28          |             |             |                      | 121  | 28   |
| tC, single (s)                    | 4.1         |             |             |                      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |             |             |             |                      |      |      |
| tF (s)                            | 2.2         |             |             |                      | 3.5  | 3.3  |
| p0 queue free %                   | 100         |             |             |                      | 100  | 100  |
| cM capacity (veh/h)               | 1585        |             |             |                      | 874  | 1047 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 93          | 28          | 0           |                      |      |      |
| Volume Left                       | 0           | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 0           |                      |      |      |
| cSH                               | 1585        | 1700        | 1700        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.00        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.0         |                      |      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 0.0         |                      |      |      |
| Lane LOS                          |             |             | A           |                      |      |      |
| Approach Delay (s)                | 0.0         | 0.0         | 0.0         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 0.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 7.9%        | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 7   | 1   | 6   | 55  | 0   | 3   | 7  | 323   | 56  | 5   | 295   | 1   |
| Future Volume (Veh/h)             | 7   | 1   | 6   | 55  | 0   | 3   | 7  | 323   | 56  | 5   | 295   | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.35  | 0.25  | 0.50  | 0.84  | 0.25  | 0.75  | 0.58   | 0.92  | 0.72  | 0.42  | 0.89  | 0.25  |
| Hourly flow rate (vph)            | 20  | 4   | 12  | 65  | 0   | 4   | 12   | 351   | 78  | 12  | 331   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 276   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 775   | 810   | 333   | 785   | 773   | 390   | 335  |   |   | 429   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 775   | 810   | 333   | 785   | 773   | 390   | 335  |   |   | 429   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.2   |   |   |
| p0 queue free %                   | 94  | 99  | 98  | 78  | 100   | 99  | 99   |   |   | 99  |   |   |
| cM capacity (veh/h)               | 311   | 310   | 713   | 300   | 325   | 663   | 1236   |   |   | 1141  |   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 36  | 69  | 441   | 347   |   |   |  |   |   |   |   |   |
| Volume Left                       | 20  | 65  | 12  | 12  |   |   |  |   |   |   |   |   |
| Volume Right                      | 12  | 4   | 78  | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 383   | 310   | 1236  | 1141  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.09  | 0.22  | 0.01  | 0.01  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 2.4   | 6.4   | 0.2   | 0.2   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 15.4  | 19.9  | 0.3   | 0.4   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | C   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 15.4  | 19.9  | 0.3   | 0.4   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 36.4%   | ICU Level of Service  |   | A   |  |   |   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 2: Ward St & Bridge Rd

12/01/2025



| Movement               | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|-------|------|------|------|------|------|-------|------|------|------|------|------|
| Lane Configurations    |       |      |      |      |      |      |       |      |      |      |      |      |
| Traffic Volume (vph)   | 47    | 0    | 147  | 2    | 6    | 3    | 367   | 129  | 2    | 1    | 109  | 53   |
| Future Volume (vph)    | 47    | 0    | 147  | 2    | 6    | 3    | 367   | 129  | 2    | 1    | 109  | 53   |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    | 6.0   |      | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Lane Util. Factor      | 1.00  |      | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Frt                    | 1.00  |      | 0.85 |      | 0.97 |      | 1.00  | 0.99 |      | 1.00 | 1.00 | 0.85 |
| Flt Protected          | 0.95  |      | 1.00 |      | 0.99 |      | 0.95  | 1.00 |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot)      | 1755  |      | 1541 |      | 1464 |      | 1722  | 1712 |      | 1825 | 1812 | 1601 |
| Flt Permitted          | 0.75  |      | 1.00 |      | 0.96 |      | 0.62  | 1.00 |      | 0.65 | 1.00 | 1.00 |
| Satd. Flow (perm)      | 1380  |      | 1541 |      | 1420 |      | 1116  | 1712 |      | 1256 | 1812 | 1601 |
| Peak-hour factor, PHF  | 0.78  | 0.25 | 0.92 | 0.45 | 0.75 | 0.75 | 0.80  | 0.83 | 0.25 | 0.25 | 0.68 | 0.74 |
| Adj. Flow (vph)        | 60    | 0    | 160  | 4    | 8    | 4    | 459   | 155  | 8    | 4    | 160  | 72   |
| RTOR Reduction (vph)   | 0     | 0    | 131  | 0    | 3    | 0    | 0     | 1    | 0    | 0    | 0    | 35   |
| Lane Group Flow (vph)  | 60    | 0    | 29   | 0    | 13   | 0    | 459   | 162  | 0    | 4    | 160  | 37   |
| Heavy Vehicles (%)     | 4%    | 0%   | 6%   | 0%   | 17%  | 67%  | 6%    | 12%  | 0%   | 0%   | 6%   | 2%   |
| Turn Type              | Perm  |      | Perm | Perm | NA   |      | pm+pt | NA   |      | Perm | NA   | Perm |
| Protected Phases       |       | 8    |      |      | 4    |      | 1     | 6    |      |      | 2    |      |
| Permitted Phases       | 8     |      | 8    | 4    |      |      | 6     |      |      | 2    |      | 2    |
| Actuated Green, G (s)  | 22.0  |      | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 61.4 | 61.4 | 61.4 |
| Effective Green, g (s) | 22.0  |      | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 61.4 | 61.4 | 61.4 |
| Actuated g/C Ratio     | 0.18  |      | 0.18 |      | 0.18 |      | 0.72  | 0.72 |      | 0.51 | 0.51 | 0.51 |
| Clearance Time (s)     | 6.0   |      | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Vehicle Extension (s)  | 3.0   |      | 3.0  |      | 3.0  |      | 3.0   | 3.0  |      | 3.0  | 3.0  | 3.0  |
| Lane Grp Cap (vph)     | 253   |      | 282  |      | 260  |      | 903   | 1226 |      | 642  | 927  | 819  |
| v/s Ratio Prot         |       |      |      |      |      |      | c0.09 | 0.09 |      |      | 0.09 |      |
| v/s Ratio Perm         | c0.04 |      | 0.02 |      | 0.01 |      | c0.28 |      |      | 0.00 |      | 0.02 |
| v/c Ratio              | 0.24  |      | 0.10 |      | 0.05 |      | 0.51  | 0.13 |      | 0.01 | 0.17 | 0.04 |
| Uniform Delay, d1      | 41.8  |      | 40.8 |      | 40.4 |      | 6.7   | 5.3  |      | 14.4 | 15.7 | 14.6 |
| Progression Factor     | 1.00  |      | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2  | 0.5   |      | 0.2  |      | 0.4  |      | 0.5   | 0.2  |      | 0.0  | 0.4  | 0.1  |
| Delay (s)              | 42.3  |      | 41.0 |      | 40.7 |      | 7.1   | 5.5  |      | 14.4 | 16.1 | 14.7 |
| Level of Service       | D     |      | D    |      | D    |      | A     | A    |      | B    | B    | B    |
| Approach Delay (s)     |       | 41.3 |      |      | 40.7 |      |       | 6.7  |      |      | 15.7 |      |
| Approach LOS           |       | D    |      |      | D    |      |       | A    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 16.1  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.47  |                           |      |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 53.7% | ICU Level of Service      | A    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 3   | 0   | 1   | 8   | 0   | 19  | 5  | 776   | 2   | 22  | 439   | 15  |
| Future Volume (Veh/h)             | 3   | 0   | 1   | 8   | 0   | 19  | 5  | 776   | 2   | 22  | 439   | 15  |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88   | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  |
| Hourly flow rate (vph)            | 3   | 0   | 1   | 9   | 0   | 22  | 6  | 882   | 2   | 25  | 499   | 17  |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.62  | 0.62  |   | 0.62  | 0.62  | 0.62  |  |   |   |   | 0.62  |   |
| vC, conflicting volume            | 1474  | 1454  | 508   | 1454  | 1461  | 883   | 516  |   |   |   | 884   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 1459  | 1425  | 508   | 1425  | 1437  | 505   | 516  |   |   |   | 507   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   |   | 4.1   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   |   | 2.2   |   |
| p0 queue free %                   | 95  | 100   | 100   | 87  | 100   | 94  | 99   |   |   |   | 96  |   |
| cM capacity (veh/h)               | 61  | 81  | 569   | 68  | 80  | 354   | 1060   |   |   |   | 647   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 4   | 31  | 890   | 541   |   |   |  |   |   |   |   |   |
| Volume Left                       | 3   | 9   | 6   | 25  |   |   |  |   |   |   |   |   |
| Volume Right                      | 1   | 22  | 2   | 17  |   |   |  |   |   |   |   |   |
| cSH                               | 78  | 160   | 1060  | 647   |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.05  | 0.19  | 0.01  | 0.04  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.2   | 5.3   | 0.1   | 0.9   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 53.4  | 32.8  | 0.2   | 1.1   |   |   |  |   |   |   |   |   |
| Lane LOS                          | F   | D   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 53.4  | 32.8  | 0.2   | 1.1   |   |   |  |   |   |   |   |   |
| Approach LOS                      | F   | D   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 1.3   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 52.6%   |   | ICU Level of Service  |   |  |   |   | A   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/01/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 6    | 2    | 3    | 30   | 1    | 14   | 1    | 761  | 1    | 1    | 490  | 1    |
| Future Volume (vph)    | 6    | 2    | 3    | 30   | 1    | 14   | 1    | 761  | 1    | 1    | 490  | 1    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.95 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.97 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1755 |      |      | 1745 |      |      | 1882 |      |      | 1881 |      |
| Flt Permitted          |      | 0.88 |      |      | 0.82 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1578 |      |      | 1478 |      |      | 1878 |      |      | 1874 |      |
| Peak-hour factor, PHF  | 0.50 | 0.50 | 0.38 | 0.68 | 0.25 | 0.58 | 0.25 | 0.92 | 0.25 | 0.25 | 0.81 | 0.25 |
| Adj. Flow (vph)        | 12   | 4    | 8    | 44   | 4    | 24   | 4    | 827  | 4    | 4    | 605  | 4    |
| RTOR Reduction (vph)   | 0    | 6    | 0    | 0    | 18   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 18   | 0    | 0    | 54   | 0    | 0    | 835  | 0    | 0    | 613  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 374  |      |      | 351  |      |      | 1150 |      |      | 1147 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.04 |      |      | 0.44 |      |      | 0.33 |      |
| v/c Ratio              |      | 0.05 |      |      | 0.15 |      |      | 0.73 |      |      | 0.53 |      |
| Uniform Delay, d1      |      | 23.5 |      |      | 24.1 |      |      | 10.8 |      |      | 8.9  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.2  |      |      | 0.9  |      |      | 4.0  |      |      | 1.8  |      |
| Delay (s)              |      | 23.8 |      |      | 25.1 |      |      | 14.8 |      |      | 10.7 |      |
| Level of Service       |      | C    |      |      | C    |      |      | B    |      |      | B    |      |
| Approach Delay (s)     |      | 23.8 |      |      | 25.1 |      |      | 14.8 |      |      | 10.7 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | B    |      |      | B    |      |

| Intersection Summary              |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 13.8  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.57  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 55.0% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 5: Street A/E Communication Rd & 7th Line

12/01/2025



| Movement                          | WBL   | WBR  | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|------|-------|----------------------|------|------|
| Lane Configurations               |       |      |       |                      |      |      |
| Sign Control                      | Stop  |      | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 0     | 14   | 0     | 0                    | 25   | 0    |
| Future Volume (vph)               | 0     | 14   | 0     | 0                    | 25   | 0    |
| Peak Hour Factor                  | 0.92  | 0.92 | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0     | 15   | 0     | 0                    | 27   | 0    |
| Direction, Lane #                 | WB 1  | NB 1 | SB 1  |                      |      |      |
| Volume Total (vph)                | 15    | 0    | 27    |                      |      |      |
| Volume Left (vph)                 | 0     | 0    | 27    |                      |      |      |
| Volume Right (vph)                | 15    | 0    | 0     |                      |      |      |
| Hadj (s)                          | -0.57 | 0.00 | 0.23  |                      |      |      |
| Departure Headway (s)             | 3.4   | 4.0  | 4.2   |                      |      |      |
| Degree Utilization, x             | 0.01  | 0.00 | 0.03  |                      |      |      |
| Capacity (veh/h)                  | 1044  | 900  | 857   |                      |      |      |
| Control Delay (s)                 | 6.4   | 7.0  | 7.3   |                      |      |      |
| Approach Delay (s)                | 6.4   | 0.0  | 7.3   |                      |      |      |
| Approach LOS                      | A     | A    | A     |                      |      |      |
| Intersection Summary              |       |      |       |                      |      |      |
| Delay                             |       |      | 7.0   |                      |      |      |
| Level of Service                  |       |      | A     |                      |      |      |
| Intersection Capacity Utilization |       |      | 13.3% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |      | 15    |                      |      |      |

HCM Unsignalized Intersection Capacity Analysis  
6: Center Line & 7th Line/E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 4   | 21  | 2   | 3   | 1   | 10   | 71  | 5   | 0   | 81  | 1   |
| Future Volume (Veh/h)             | 0   | 4   | 21  | 2   | 3   | 1   | 10   | 71  | 5   | 0   | 81  | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.50  | 0.72  | 0.75  | 0.75  | 0.25  | 0.75   | 0.82  | 0.63  | 0.25  | 0.81  | 0.25  |
| Hourly flow rate (vph)            | 0   | 8   | 29  | 3   | 4   | 4   | 13   | 87  | 8   | 0   | 100   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 225   | 223   | 102   | 252   | 221   | 91  | 104  |   |   | 95  |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 225   | 223   | 102   | 252   | 221   | 91  | 104  |   |   | 95  |   |   |
| tC, single (s)                    | 8.1   | 6.5   | 6.3   | 7.4   | 6.5   | 6.2   | 4.3  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.4   | 4.0   | 3.4   | 3.8   | 4.0   | 3.3   | 2.4  |   |   | 2.2   |   |   |
| p0 queue free %                   | 100   | 99  | 97  | 100   | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 555   | 673   | 934   | 612   | 675   | 972   | 1399   |   |   | 1512  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 37  | 11  | 108   | 104   |   |   |  |   |   |   |   |   |
| Volume Left                       | 0   | 3   | 13  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 29  | 4   | 8   | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 862   | 736   | 1399  | 1512  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.04  | 0.01  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.0   | 0.3   | 0.2   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.4   | 10.0  | 1.0   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | A   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.4   | 10.0  | 1.0   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | A   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.2   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 21.3%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/01/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             |             |             |                      |      |      |
| Traffic Volume (veh/h)            | 0           | 24          | 28          | 0                    | 0    | 0    |
| Future Volume (Veh/h)             | 0           | 24          | 28          | 0                    | 0    | 0    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0           | 26          | 30          | 0                    | 0    | 0    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 30          |             |             |                      | 56   | 30   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 30          |             |             |                      | 56   | 30   |
| tC, single (s)                    | 4.1         |             |             |                      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |             |             |             |                      |      |      |
| tF (s)                            | 2.2         |             |             |                      | 3.5  | 3.3  |
| p0 queue free %                   | 100         |             |             |                      | 100  | 100  |
| cM capacity (veh/h)               | 1583        |             |             |                      | 952  | 1044 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 26          | 30          | 0           |                      |      |      |
| Volume Left                       | 0           | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 0           |                      |      |      |
| cSH                               | 1583        | 1700        | 1700        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.00        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.0         |                      |      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 0.0         |                      |      |      |
| Lane LOS                          |             |             | A           |                      |      |      |
| Approach Delay (s)                | 0.0         | 0.0         | 0.0         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 0.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 6.7%        | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# Appendix E

**Excerpts from the Ward Street  
Environmental Assessment**



# Environmental Study Report

Ward Street, Bridgenorth, Ontario

County of Peterborough

Engage Project Number 22129

Engage Engineering Ltd.

Issued for Approval

January 23, 2025



expansion of traffic volumes through the Ward Street corridor. In summary, the study found that the Ward Street corridor experienced steady decline of average daily traffic from 2017 and the sharp peaking of AM and PM has been replaced with a peak period that expand over two to three hours.

## **2.2 Current Traffic Operations in the Ward Street Corridor**

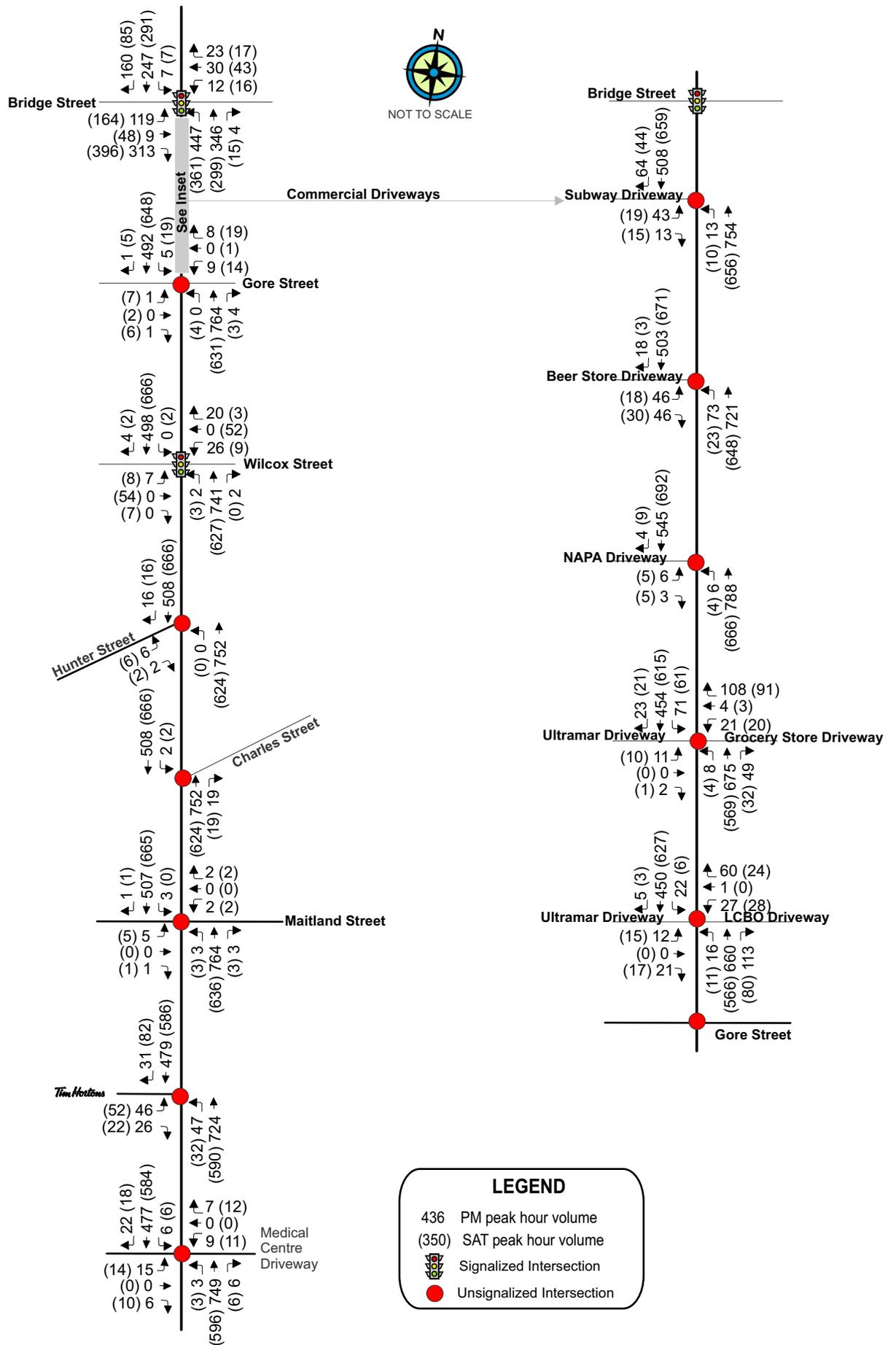
The baseline 2023 weekday/weekend peak hour traffic volumes were assigned to the intersections in the study corridor road network. The baseline 2023 weekday/weekend peak hour volumes were adjusted to produce “balanced” volumes between the study intersections. It was determined that intersection capacity analyses will be carried out for the study intersections using adjusted weekday PM peak hour and Saturday mid-day peak hour to represent the ward Street corridor peak hour conditions. The resulting 2023 design hour volumes (DHV) are illustrated in *Exhibit 2.2*. These volumes formed the basis for the calculation of the 2031 and 2041 forecast peak hour volumes.

Level of Service<sup>1</sup> calculations were carried out for 2023 peak hour conditions to assess the current traffic operations in the study corridor. The calculations were completed using the *Trafficware Traffic Signal Timing software -Synchro Version 11.0*. The results of these analyses are summarized in *Table 2.1, Intersection Capacity Analyses Summary – 2023 Existing Conditions*. Detailed reports from the capacity analyses are contained in the *Technical Appendix "B": Intersection Capacity Analyses*.

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<sup>1</sup> Level of Service (LOS) is commonly used in traffic engineering to describe the level of congestion along a roadway or at an intersection. Levels from "A" to "F" denote increasing amounts of congestion with "F" representing a complete breakdown in traffic flow. Level of Service "C" and "D" are commonly used as design standards. However, many individual turning movements at TWSC intersections and commercial entrances along urban arterial corridor operate at LOS "F" during peak periods. The Highway Capacity Manual software for signalized and unsignalized intersections was used to calculate the Levels of Service. See Technical Appendix for Definition of Level of Service for unsignalized and signalized Intersections.

# Exhibit 2.2: 2023 Design Hour Traffic Volumes



**Table 2.1, Intersection Capacity Analyses Summary – 2023 Existing Conditions**

|  |        | 2023 Existing Conditions |       |      |                    |                       |       |      |                    |
|--|--------|--------------------------|-------|------|--------------------|-----------------------|-------|------|--------------------|
|  |        | PM Peak Hour             |       |      |                    | SAT Mid-Day Peak Hour |       |      |                    |
|  |        | LoS                      | Delay | V/C  | 95 <sup>th</sup> Q | LoS                   | Delay | V/C  | 95 <sup>th</sup> Q |
| Bridge Road & Ward St (Signalized)             | EB LT  | E                        | 70.7  | 0.73 | 51.3               | F                     | 90.8  | 0.93 | #99.6              |
|  | EB R   | B                        | 11.2  | 0.66 | 25.3               | A                     | 9.9   | 0.67 | 28.9               |
|  | WB LTR | D                        | 35.5  | 0.29 | 23.4               | D                     | 40.7  | 0.31 | 29.7               |
|  | NB L   | A                        | 7.1   | 0.55 | 51.8               | A                     | 7.8   | 0.50 | 39.5               |
|  | NB TR  | A                        | 5.3   | 0.27 | 40.2               | A                     | 6.2   | 0.25 | 35.2               |
|  | SB LT  | B                        | 14.4  | 0.25 | 57.4               | B                     | 15.4  | 0.31 | 62.7               |
|  | SB R   | A                        | 2.8   | 0.17 | 11.3               | A                     | 3.0   | 0.10 | 7.6                |
|  | Avg    | B                        | 14.0  |      |                    | C                     | 20.6  |      |                    |
| Subway Driveway & Ward St                      | EB     | E                        | 36.4  | 0.35 | 1.5                | D                     | 27.7  | 0.19 | 0.7                |
|  | NB L   | A                        | 8.8   | 0.02 | 0.0                | A                     | 9.3   | 0.01 | 0.0                |
|  | NB T   | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| Beer Store Driveway & Ward St                  | EB     | C                        | 19.6  | 0.29 | 1.2                | C                     | 17.1  | 0.15 | 0.5                |
|  | NB L   | A                        | 8.9   | 0.08 | 0.3                | A                     | 9.2   | 0.03 | 0.1                |
|  | NB T   | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| NAPA Driveway & Ward St                        | EB     | C                        | 16.4  | 0.03 | 0.1                | C                     | 16.3  | 0.03 | 0.1                |
|  | NB L   | A                        | 8.7   | 0.01 | 0.0                | A                     | 9.3   | 0.01 | 0.0                |
|  | NB T   | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| Ultramar Driveway & Ward St & Grocery Driveway | EB     | F                        | 64.8  | 0.19 | 0.7                | F                     | 59.3  | 0.15 | 0.5                |
|  | WB     | D                        | 34.2  | 0.55 | 3.0                | D                     | 28.1  | 0.45 | 2.2                |
|  | NB L   | A                        | 8.5   | 0.01 | 0.0                | A                     | 9.0   | 0.01 | 0.0                |
|  | NB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB L   | A                        | 9.8   | 0.09 | 0.3                | A                     | 9.1   | 0.07 | 0.2                |
|  | SB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| Ultramar Driveway & Ward St & LCBO Driveway    | EB     | D                        | 25.9  | 0.17 | 0.6                | D                     | 28.9  | 0.19 | 0.7                |
|  | WB     | D                        | 31.9  | 0.42 | 1.9                | E                     | 35.3  | 0.33 | 1.3                |
|  | NB L   | A                        | 8.4   | 0.02 | 0.1                | A                     | 9.0   | 0.01 | 0.0                |
|  | NB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB L   | A                        | 9.7   | 0.03 | 0.1                | A                     | 9.1   | 0.01 | 0.0                |
|  | SB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| Ward St & Gore St                              | EB     | C                        | 23.8  | 0.01 | 0.0                | D                     | 31.7  | 0.11 | 0.4                |
|  | WB     | D                        | 27.7  | 0.10 | 0.3                | D                     | 29.4  | 0.20 | 0.7                |
|  | NB L   | A                        | 0.0   | -    | 0.0                | A                     | 9.1   | 0.01 | 0.0                |
|  | SB L   | A                        | 9.5   | 0.01 | 0.0                | A                     | 9.1   | 0.02 | 0.1                |
|  | SB TR  | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| Ward St & Wilcox St (Signalized)               | EB     | C                        | 24.4  | 0.03 | 4.2                | B                     | 18.6  | 0.24 | 15.3               |
|  | WB     | B                        | 13.4  | 0.19 | 9.2                | B                     | 19.1  | 0.23 | 14.7               |
|  | NB     | A                        | 5.9   | 0.53 | 73.5               | A                     | 7.0   | 0.49 | 63.5               |
|  | SB     | A                        | 4.2   | 0.36 | 39.1               | A                     | 7.3   | 0.52 | 69.7               |
|  | Avg    | A                        | 5.6   |      |                    | A                     | 8.2   |      |                    |
| Ward St & Hunter St                            | EB     | C                        | 24.4  | 0.05 | 0.1                | D                     | 25.9  | 0.05 | 0.1                |
|  | NB L   | A                        | 0.0   | -    | 0.0                | A                     | 0.0   | -    | 0.0                |
|  | SB     | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| Ward St & Charles St                           | WB     | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | NB     | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB L   | A                        | 9.5   | 0.00 | 0.0                | A                     | 9.0   | 0.00 | 0.0                |
| Ward St & Maitland St                          | EB     | D                        | 32.6  | 0.05 | 0.1                | D                     | 34.6  | 0.05 | 0.2                |
|  | WB     | D                        | 25.5  | 0.02 | 0.1                | D                     | 25.5  | 0.02 | 0.1                |
|  | NB L   | A                        | 8.5   | 0.00 | 0.0                | A                     | 9.1   | 0.00 | 0.0                |
|  | SB L   | A                        | 0.0   | -    | 0.0                | A                     | 0.0   | -    | 0.0                |
| Ward St & Tims Ent                             | EB L   | E                        | 43.5  | 0.35 | 1.4                | E                     | 42.8  | 0.38 | 1.6                |
|  | EB R   | B                        | 12.0  | 0.05 | 0.2                | B                     | 13.4  | 0.05 | 0.2                |
|  | NB L   | A                        | 8.7   | 0.05 | 0.2                | A                     | 9.3   | 0.04 | 0.1                |
|  | NB T   | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB     | -                        | -     | -    | -                  | -                     | -     | -    | -                  |
| Ward St & Champlain Rd/Med Ctr Ent             | EB     | D                        | 32.6  | 0.15 | 0.5                | D                     | 27.8  | 0.14 | 0.5                |
|  | WB     | D                        | 28.4  | 0.10 | 0.3                | C                     | 24.9  | 0.12 | 0.4                |
|  | NB L   | A                        | 8.5   | 0.00 | 0.0                | A                     | 8.9   | 0.00 | 0.0                |
|  | SB TR  | A                        | -     | -    | -                  | A                     | -     | -    | -                  |
|  | SB L   | A                        | 9.5   | 0.01 | 0.0                | A                     | 8.9   | 0.01 | 0.0                |

Notes: Delay in seconds; 95<sup>th</sup> percentile queue length in metres as provided in Synchro worksheets (see Appendix B)

The results of the capacity analyses and the assessments suggest that:

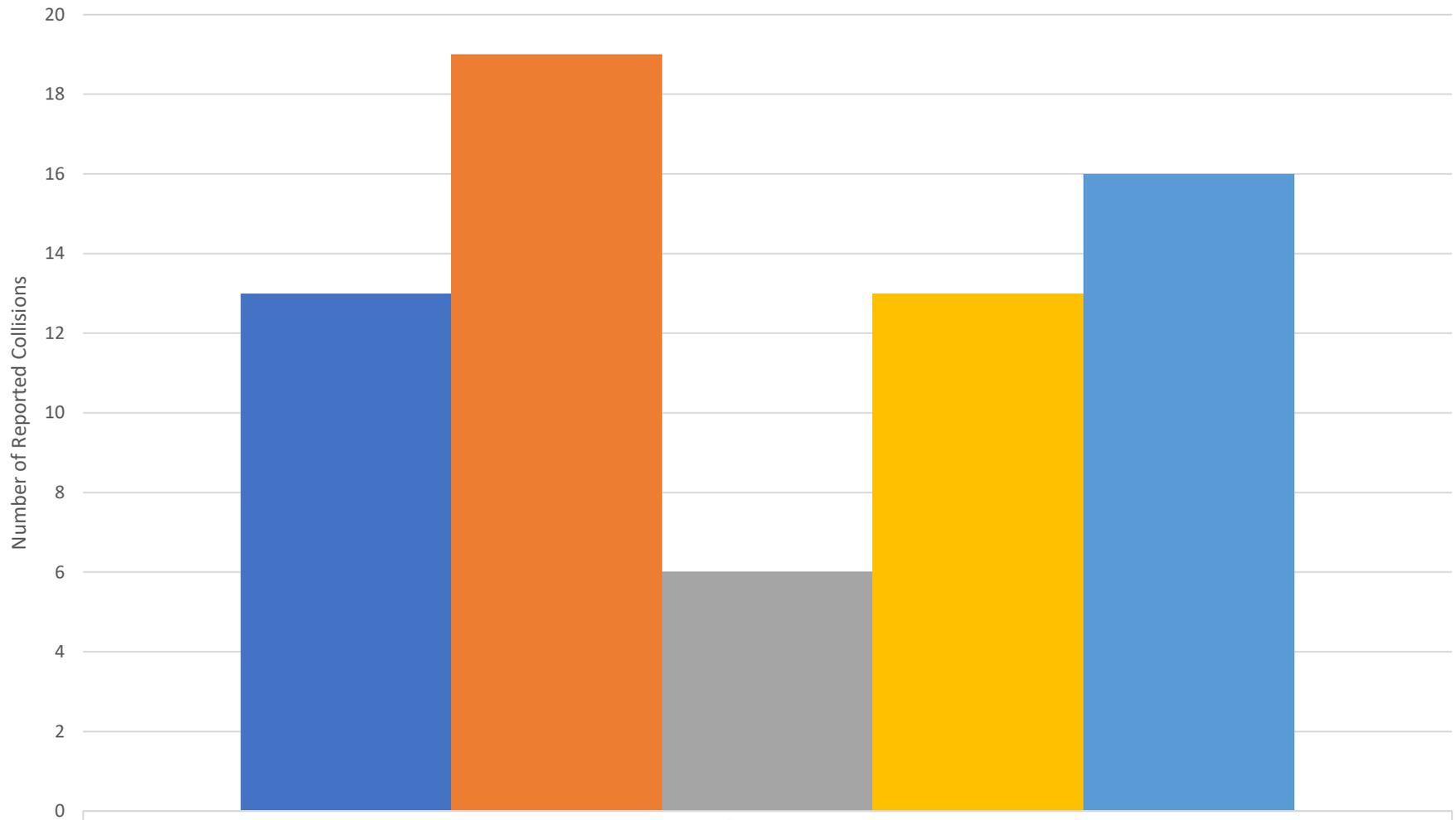
- The through traffic on Ward Street are experiencing good level of service at all study intersections operating at with LOS "A".
- The side street movements wanting to join the Ward Street traffic stream at a STOP controlled intersections are experiencing acceptable delays.
- Some commercial driveways' movements wanting to join the Ward Street traffic stream are experiencing significant delays, LOS between "C" and "F" during both peak hour periods.
- Ward Street, in general, has residual capacity at the study intersections. There are enough gaps in the Ward Street traffic stream that provides opportunities for local traffic and pedestrians to access/cross this corridor with the exception of some commercial driveways.

### **2.3 Ward Street Corridor Collision History**

The collision data for the period between 2018 and 2022 (inclusive) for the section of Ward Street between Bridge Road and Champlain Road (approximately 1.1 km) was provided by County staff. A review of the collision data (*see Exhibit 2.2A through 2.2D*) indicates that there was a total of 67 collisions reported over the five-year reporting period. There were no fatalities reported during the study period. The largest number of the reported collisions (33%) occurred at the signalized intersection of Bridge Road and Ward Street. The majority of the collisions were either Turning (21%) or Rear End (39%) collisions.

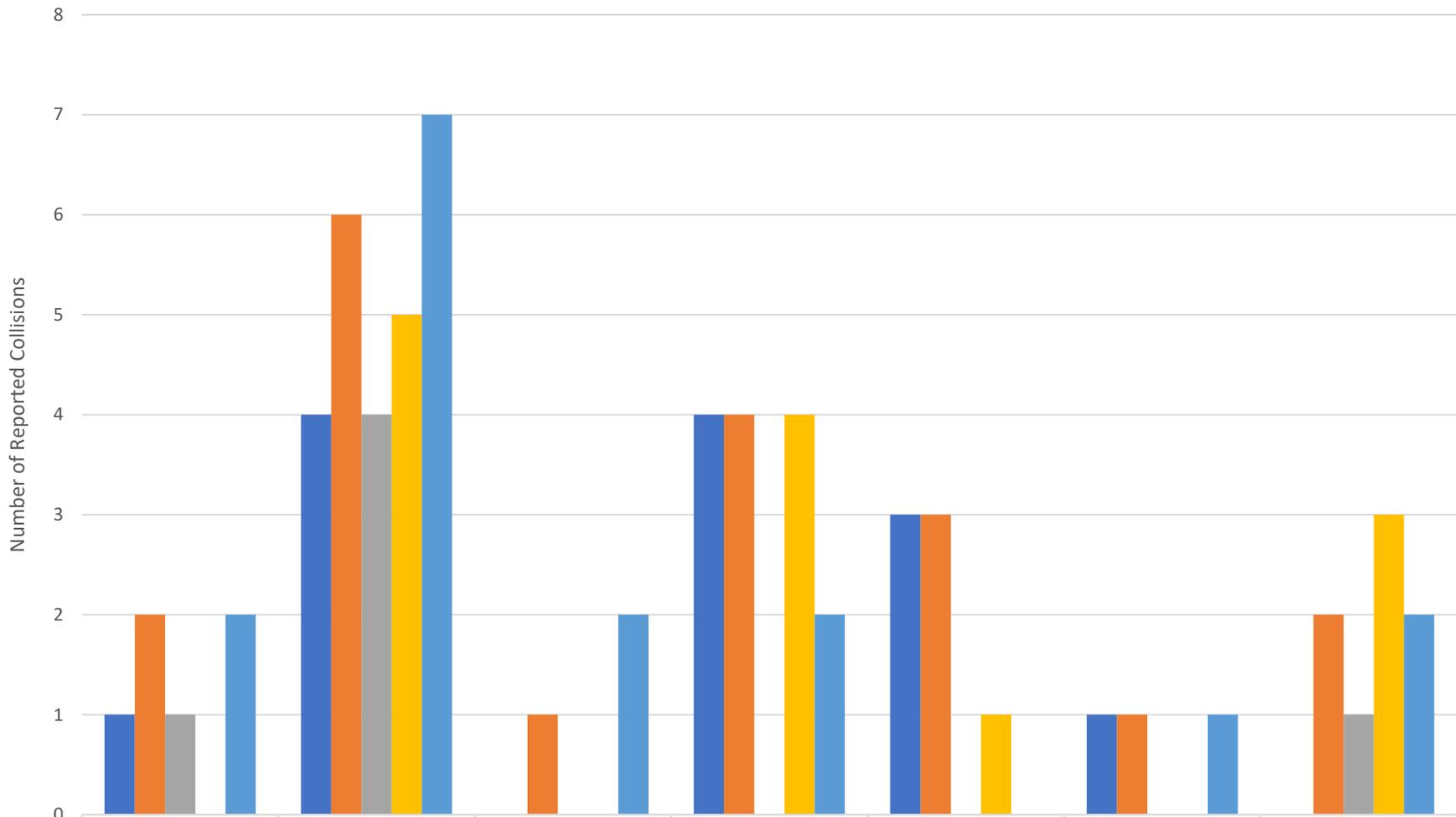
The collision data were also reviewed against the road geometrics at the study intersections to identify any possible deficiencies in road geometry/traffic control/information (signage) that might be contributing to the potential for collisions. The collision type and the collision occurrence locations suggest that there could be geometric deficiencies present in the Ward Street corridor section between Gore Street and Champlain Road. The reviewed identified the following deficiencies as possibly contributing to the higher collision rate in the south end of the corridor:

### Exhibit 2.2A: Summary of Collision History 2018-2022 by Year



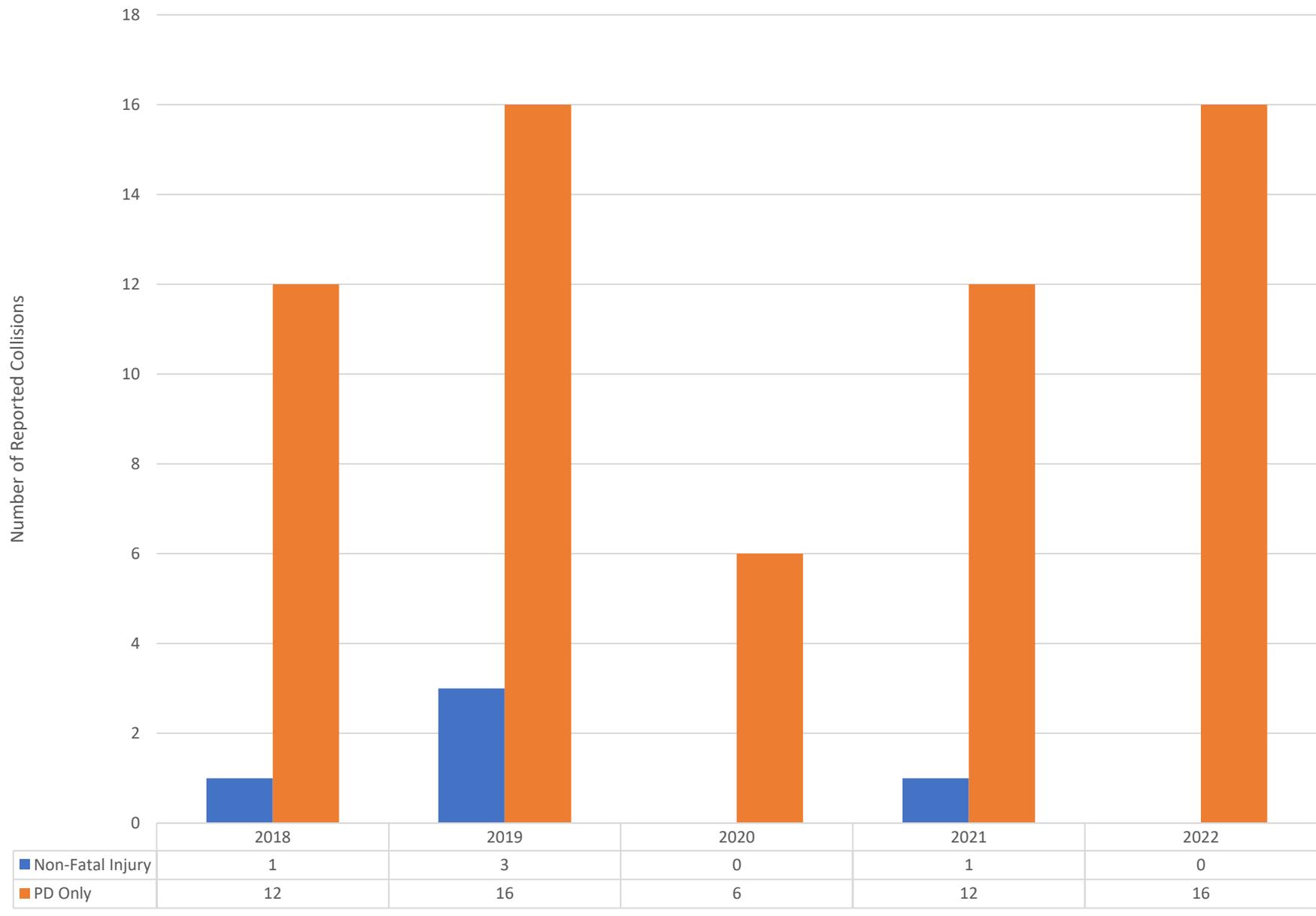
|        | Frequency |
|--------|-----------|
| ■ 2018 | 13        |
| ■ 2019 | 19        |
| ■ 2020 | 6         |
| ■ 2021 | 13        |
| ■ 2022 | 16        |

### Exhibit 2.2B: Summary of Collisions by Year by Collision Impact Type

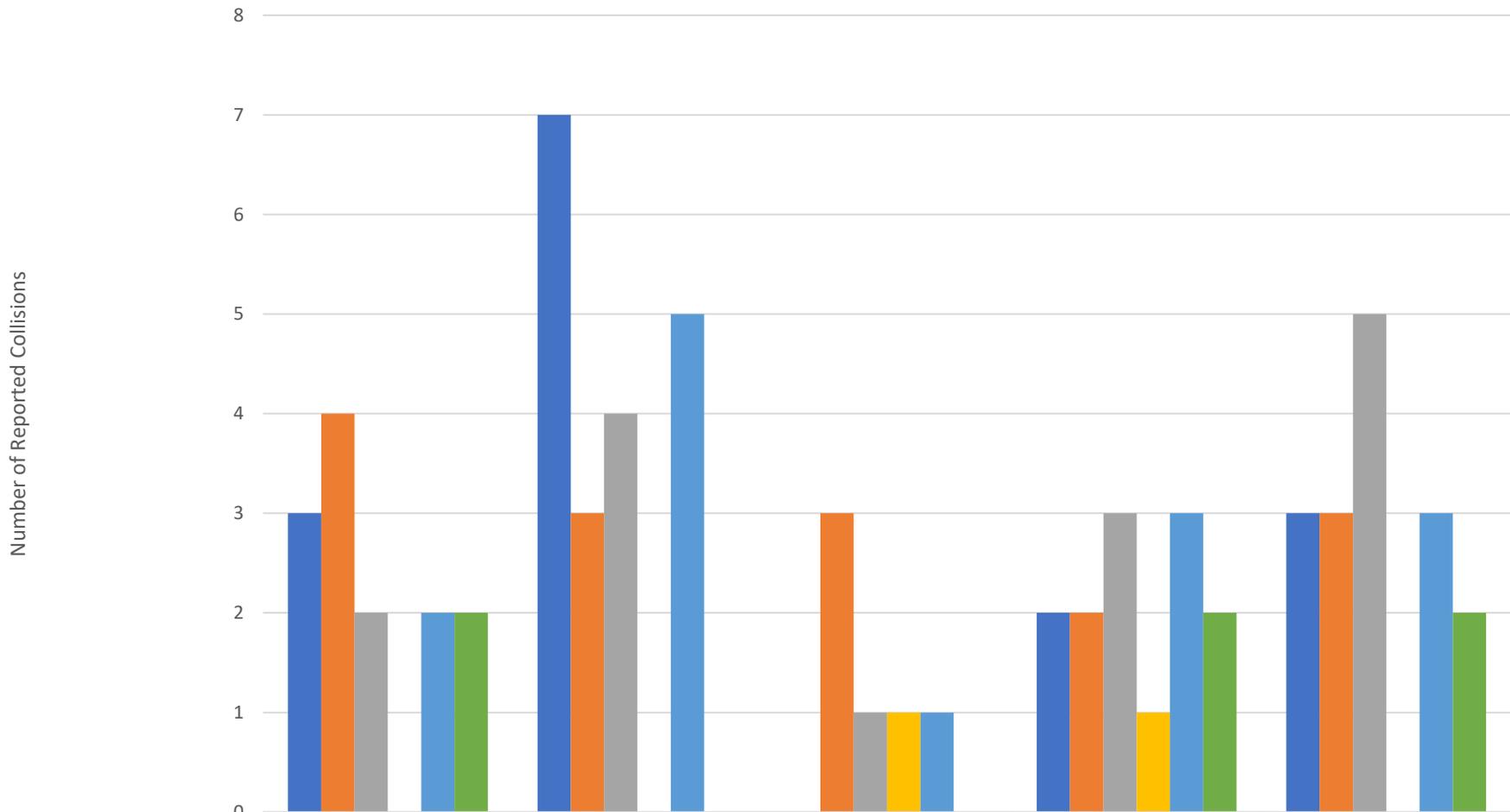


|        | Angle | Rear-end | Side-swipe | Turning Movement | SMV Unattended | SMV Other | private property |
|--------|-------|----------|------------|------------------|----------------|-----------|------------------|
| ■ 2018 | 1     | 4        | 0          | 4                | 3              | 1         | 0                |
| ■ 2019 | 2     | 6        | 1          | 4                | 3              | 1         | 2                |
| ■ 2020 | 1     | 4        | 0          | 0                | 0              | 0         | 1                |
| ■ 2021 | 0     | 5        | 0          | 4                | 1              | 0         | 3                |
| ■ 2022 | 2     | 7        | 2          | 2                | 0              | 1         | 2                |

### Exhibit 2.2C: Summary of Collisions by Year by Injury Type



### Exhibit 2.2D: Summary of Collisions by Year and Location



|                            | 2018 | 2019 | 2020 | 2021 | 2022 |
|----------------------------|------|------|------|------|------|
| ■ Within Intersection      | 3    | 7    | 0    | 2    | 3    |
| ■ Thru Lane                | 4    | 3    | 3    | 2    | 3    |
| ■ Left Turn Lane           | 2    | 4    | 1    | 3    | 5    |
| ■ Right Turn Lane          | 0    | 0    | 1    | 1    | 0    |
| ■ Not On Roadway-Left Side | 2    | 5    | 1    | 3    | 3    |
| ■ Private Property         | 2    | 0    | 0    | 2    | 2    |

- No turning lanes on Ward Street at any of the intersections.
- No turning lanes on Ward Street at any of the driveways serving the retail/commercial establishments.
- Unconventional intersection geometry at Ward Street/Charles Street/Maitland Street intersection.
- Poor sight lines at Hunter/Ward Street intersection and at the Charles St/Ward Street intersection.

### **3.5 Ward Street Parking Inventory**

A parking inventory survey was carried out to determine the number of available on-street parking spaces on Ward Street between Gore Street and Maitland Street. Since the parking spaces/stalls were not marked, the number of available spaces was determined by the field observation of parking demand and estimated parallel parking spaces. This was done using the high-resolution air photo supplied by the County. It was determined that approximately 20 to 25 vehicles could be parked along the west side of Ward Street. This on-street parking was not observed to be used extensively during the traffic count program either during the summer or none summer months. A shortfall in on-street parking was not identified as an issue during the community meetings. Given the volume of traffic in the Ward Street corridor the use of on street parking can create potential traffic operational and safety issues.

## **3.0 FUTURE TRAFFIC CONDITIONS**

### **3.1 Forecast Future Peak Hour Traffic Volumes**

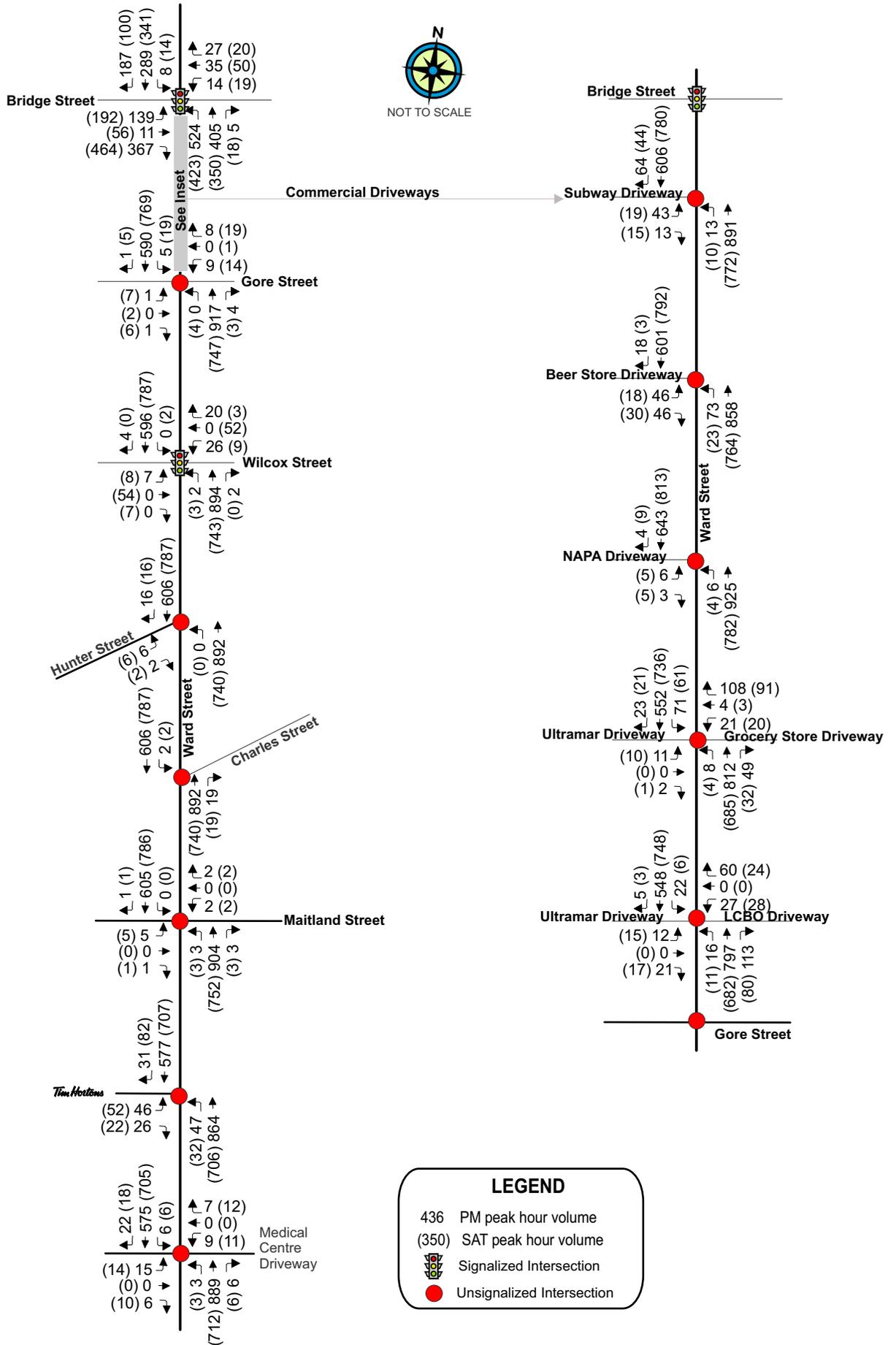
Historically overall growth on the County Road network has been in the order of about 1.5% per year. While growth in the County Road 18 corridor (Ward Street) has been higher, the 2020 and 2023 counts indicate a significant reduction in daily total traffic volumes through the Ward Street corridor. For the purposes of the study analyses, Ward Street traffic is assumed to grow at rate of 2% per year over to a short term eight-year planning horizon from 2023 to 2031 and to medium 18-year planning horizon to 2041. The resulting forecast 2031 and 2041 peak hour traffic volumes in the Ward Street corridor assigned to existing corridor geometry are illustrated in *Exhibit 3.1 and Exhibit 3.2*, respectively.

### **3.2 Future Ward Street Traffic Operations**

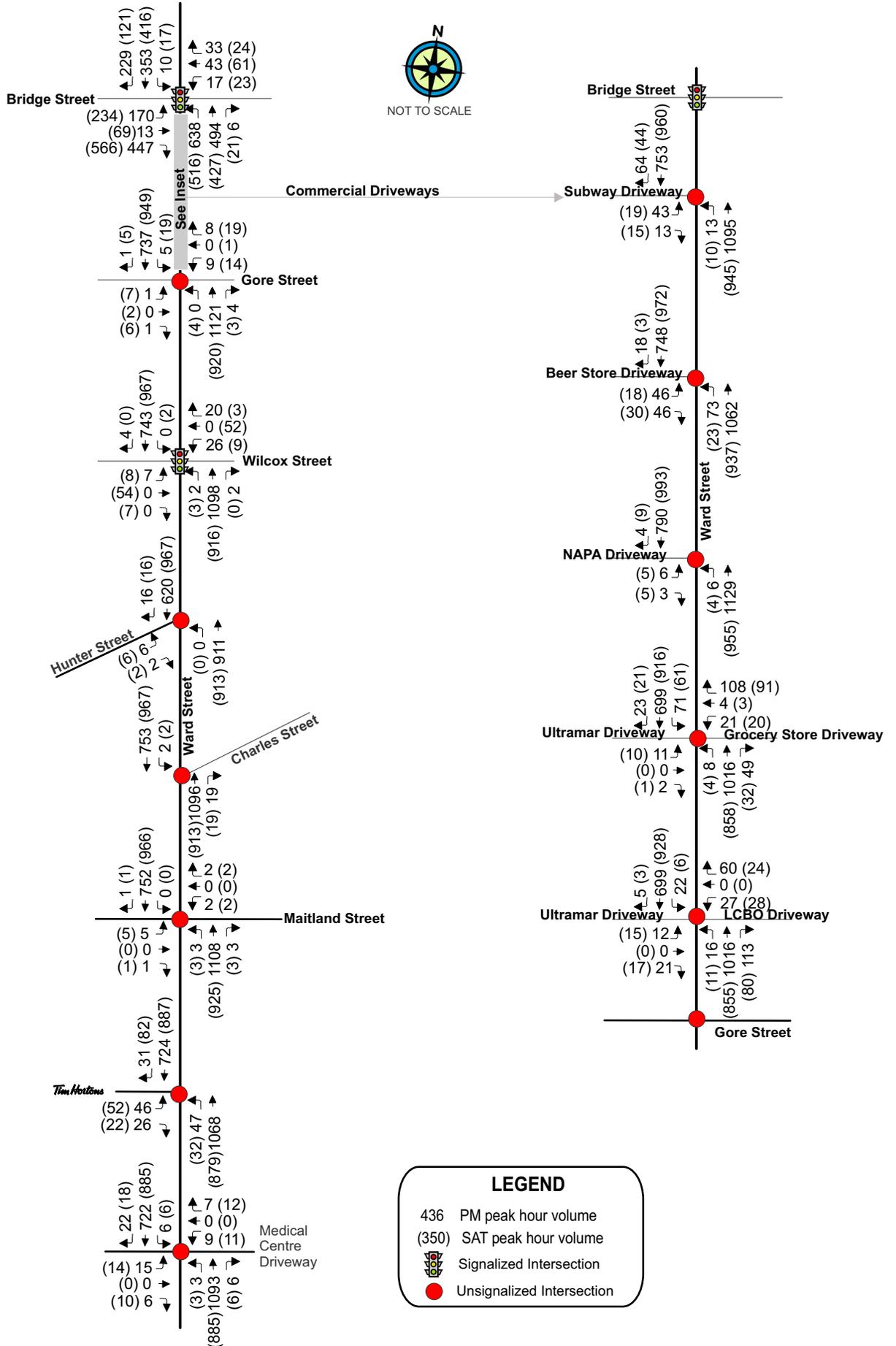
Detailed PM and Saturday mid-day peak hour intersection capacity analyses were carried out for the forecast Ward Street 2031 and 2041 volumes. The analyses were based on the existing road geometry and intersection controls to establish a base “Do-Nothing” condition. The analyses were carried out using *Synchro Version 11.0*. The capacity analyses were then substantiated using the real time simulation option *SimTraffic* available in *Synchro 11*. This provided a visual confirmation of the individual intersection’s operations.

The results of these analyses are summarized in *Table 3.1: Intersection Capacity Analyses Summary: 2031 and 2041 Future “Do Nothing” Scenario*. Detailed reports from the capacity analyses are contained in the *Technical Appendix “B”: Intersection Capacity Analyses*.

# Exhibit 3.1: 2031 Traffic Volumes



# Exhibit 3.2: 2041 Traffic Volumes



**Table 3.1: Intersection Capacity Analyses Summary – 2031 and 2041 "Do Nothing" Scenario**

|  |        | 2031 Planning Horizon 2% Per Annum Growth from 2023 |       |      |                    |                       |       |      |                    | 2041 Planning Horizon 2% Per Annum Growth from 2023 |       |      |                    |                       |       |      |                    |
|--|--------|---|-------|------|--------------------|-----------------------|-------|------|--------------------|---|-------|------|--------------------|-----------------------|-------|------|--------------------|
|  |        | PM Peak Hour  |       |      |                    | SAT Mid-Day Peak Hour |       |      |                    | PM Peak Hour  |       |      |                    | SAT Mid-Day Peak Hour |       |      |                    |
|  |        | LoS   | Delay | V/C  | 95 <sup>th</sup> Q | LoS                   | Delay | V/C  | 95 <sup>th</sup> Q | LoS   | Delay | V/C  | 95 <sup>th</sup> Q | LoS                   | Delay | V/C  | 95 <sup>th</sup> Q |
| Bridge Road & Ward St (Signalized)             | EB LT  | E   | 76.4  | 0.80 | #64.0              | F                     | 137.7 | 1.12 | #125.0             | F   | 93.5  | 0.93 | #88.9              | F                     | 264.0 | 1.46 | #161.5             |
|  | EB R   | B   | 10.6  | 0.68 | 27.6               | B                     | 10.1  | 0.71 | 31.6               | B   | 10.3  | 0.71 | 31.5               | B                     | 11.0  | 0.77 | 36.3               |
|  | WB LTR | D   | 35.6  | 0.30 | 27.0               | D                     | 45.3  | 0.43 | 35.1               | D   | 37.8  | 0.34 | 33.1               | E                     | 77.1  | 0.79 | #56.2              |
|  | NB L   | A   | 9.8   | 0.67 | 64.3               | A                     | 9.6   | 0.61 | 48.1               | C   | 21.9  | 0.84 | 124.1              | B                     | 18.1  | 0.75 | 91.9               |
|  | NB TR  | A   | 6.2   | 0.32 | 48.5               | A                     | 6.7   | 0.30 | 42.3               | A   | 7.6   | 0.40 | 62.8               | A                     | 7.3   | 0.36 | 54.0               |
|  | SB LT  | C   | 20.5  | 0.33 | 82.8               | C                     | 21.0  | 0.41 | 94.7               | D   | 37.5  | 0.58 | 121.3              | D                     | 38.4  | 0.67 | #166.4             |
|  | SB R   | A   | 3.7   | 0.22 | 14.6               | A                     | 4.0   | 0.12 | 10.5               | A   | 5.3   | 0.33 | 18.6               | A                     | 6.3   | 0.19 | 14.8               |
|  | Avg    | B   | 16.2  |      |                    | C                     | 28.0  |      |                    | C   | 23.6  |      |                    | D                     | 49.9  |      |                    |
| Subway Driveway & Ward St                      | EB     | F   | 60.0  | 0.50 | 2.3                | E                     | 39.4  | 0.26 | 1.0                | F   | 162.5 | 0.85 | 4.1                | F                     | 76.6  | 0.44 | 1.8                |
|  | NB L   | A   | 9.2   | 0.02 | 0.0                | A                     | 9.8   | 0.01 | 0.0                | A   | 9.8   | 0.02 | 0.1                | B                     | 10.7  | 0.02 | 0.1                |
|  | NB T   | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB TR  | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
| Beer Store Driveway & Ward St                  | EB     | C   | 23.8  | 0.35 | 1.5                | C                     | 20.0  | 0.18 | 0.6                | D   | 33.2  | 0.44 | 2.1                | D                     | 25.9  | 0.23 | 0.9                |
|  | NB L   | A   | 9.3   | 0.09 | 0.3                | A                     | 9.8   | 0.03 | 0.1                | A   | 10.0  | 0.10 | 0.3                | B                     | 10.7  | 0.04 | 0.1                |
|  | NB T   | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB TR  | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
| NAPA Driveway & Ward St                        | EB     | C   | 18.8  | 0.04 | 0.1                | C                     | 18.7  | 0.04 | 0.1                | C   | 23.0  | 0.05 | 0.1                | C                     | 23.0  | 0.05 | 0.2                |
|  | NB L   | A   | 9.1   | 0.01 | 0.0                | A                     | 9.8   | 0.01 | 0.0                | A   | 9.7   | 0.01 | 0.0                | B                     | 10.7  | 0.01 | 0.0                |
|  | NB T   | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB TR  | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
| Ultramar Driveway & Ward St & Grocery Driveway | EB     | F   | 121.6 | 0.32 | 1.1                | F                     | 100.7 | 0.24 | 0.8                | F   | 395.1 | 0.74 | 2.0                | F                     | 273.2 | 0.52 | 1.5                |
|  | WB     | F   | 65.3  | 0.75 | 5.0                | E                     | 47.6  | 0.61 | 3.5                | F   | 225.4 | 1.23 | 9.2                | F                     | 151.1 | 1.01 | 6.9                |
|  | NB L   | A   | 8.8   | 0.01 | 0.0                | A                     | 9.5   | 0.01 | 0.0                | A   | 9.4   | 0.01 | 0.0                | B                     | 10.3  | 0.01 | 0.0                |
|  | NB TR  | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB L   | B   | 10.5  | 0.11 | 0.4                | A                     | 9.7   | 0.08 | 0.3                | B   | 11.8  | 0.13 | 0.4                | B                     | 10.6  | 0.09 | 0.3                |
| SB TR  | -      | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    |                    |
| Ultramar Driveway & Ward St & LCBO Driveway    | EB     | E   | 40.0  | 0.26 | 1.0                | E                     | 44.1  | 0.28 | 1.0                | F   | 99.0  | 0.51 | 2.1                | F                     | 97.0  | 0.49 | 2.0                |
|  | WB     | F   | 55.1  | 0.59 | 3.1                | F                     | 60.8  | 0.48 | 2.2                | F   | 185.1 | 1.03 | 6.1                | F                     | 181.1 | 0.87 | 4.1                |
|  | NB L   | A   | 8.8   | 0.02 | 0.1                | A                     | 9.5   | 0.02 | 0.0                | A   | 9.3   | 0.02 | 0.1                | B                     | 10.3  | 0.02 | 0.1                |
|  | NB TR  | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB L   | B   | 10.3  | 0.03 | 0.1                | A                     | 9.5   | 0.01 | 0.0                | B   | 11.6  | 0.04 | 0.1                | B                     | 10.3  | 0.01 | 0.0                |
| SB TR  | -      | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    |                    |
| Ward St & Gore St                              | EB     | D   | 33.2  | 0.02 | 0.1                | E                     | 46.9  | 0.16 | 0.5                | F   | 56.6  | 0.03 | 0.1                | F                     | 93.8  | 0.29 | 1.0                |
|  | WB     | E   | 40.7  | 0.16 | 0.5                | E                     | 44.6  | 0.29 | 1.1                | F   | 76.6  | 0.27 | 1.0                | F                     | 103.5 | 0.53 | 2.2                |
|  | NB L   | A   | 0.0   | -    | 0.0                | A                     | 9.6   | 0.01 | 0.0                | A   | 0.0   | -    | 0.0                | B                     | 10.4  | 0.01 | 0.0                |
|  | SB L   | B   | 10.2  | 0.01 | 0.0                | A                     | 9.5   | 0.03 | 0.1                | B   | 11.4  | 0.01 | 0.0                | B                     | 10.4  | 0.03 | 0.1                |
|  | SB TR  | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
| Ward St & Wilcox St (Signalized)               | EB     | C   | 30.0  | 0.03 | 4.8                | C                     | 23.4  | 0.27 | 18.3               | C   | 33.0  | 0.05 | 4.8                | C                     | 29.9  | 0.33 | 19.3               |
|  | WB     | B   | 16.2  | 0.22 | 10.3               | C                     | 24.0  | 0.26 | 17.7               | B   | 19.1  | 0.30 | 10.4               | C                     | 30.7  | 0.31 | 18.7               |
|  | NB     | A   | 6.5   | 0.62 | 103.7              | A                     | 8.6   | 0.61 | 83.3               | A   | 9.7   | 0.74 | #227.4             | A                     | 9.9   | 0.70 | 127.9              |
|  | SB     | A   | 4.1   | 0.41 | 48.5               | A                     | 9.3   | 0.64 | 92.3               | A   | 4.5   | 0.50 | 70.3               | B                     | 11.2  | 0.73 | #148.9             |
|  | Avg    | A   | 6.0   |      |                    | B                     | 10.2  |      |                    | A   | 8.0   |      |                    | B                     | 11.9  |      |                    |
| Ward St & Hunter St                            | EB     | D   | 33.1  | 0.06 | 0.2                | D                     | 34.9  | 0.07 | 0.2                | D   | 34.7  | 0.07 | 0.1                | F                     | 58.4  | 0.11 | 0.4                |
|  | NB L   | A   | 0.0   | -    | 0.0                | A                     | 0.0   | -    | 0.0                | A   | 0.0   | -    | 0.0                | A                     | 0.0   | -    | 0.0                |
|  | SB     | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
| Ward St & Charles St                           | WB     | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | NB     | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB L   | B   | 10.2  | 0.00 | 0.0                | A                     | 9.5   | 0.00 | 0.0                | B   | 11.3  | 0.00 | 0.0                | B                     | 10.3  | 0.00 | 0.0                |
| Ward St & Maitland St                          | EB     | E   | 47.6  | 0.07 | 0.2                | F                     | 50.8  | 0.08 | 0.2                | F   | 91.5  | 0.14 | 0.4                | F                     | 95.8  | 0.14 | 0.5                |
|  | WB     | E   | 35.1  | 0.04 | 0.1                | E                     | 35.1  | 0.04 | 0.1                | F   | 59.0  | 0.06 | 0.2                | F                     | 59.8  | 0.06 | 0.2                |
|  | NB L   | A   | 8.9   | 0.00 | 0.0                | A                     | 9.6   | 0.00 | 0.0                | A   | 9.5   | 0.00 | 0.0                | B                     | 10.5  | 0.01 | 0.0                |
|  | SB L   | A   | 0.0   | -    | 0.0                | A                     | 0.0   | -    | 0.0                | A   | 0.0   | -    | 0.0                | A                     | 0.0   | -    | 0.0                |
| Ward St & Tims Ent                             | EB L   | F   | 76.3  | 0.52 | 2.3                | F                     | 74.8  | 0.54 | 2.5                | F   | 207.7 | 0.89 | 4.0                | F                     | 212.0 | 0.94 | 4.4                |
|  | EB R   | B   | 13.1  | 0.06 | 0.2                | C                     | 15.2  | 0.06 | 0.2                | C   | 15.1  | 0.07 | 0.2                | C                     | 18.4  | 0.08 | 0.3                |
|  | NB L   | A   | 9.1   | 0.06 | 0.2                | A                     | 9.8   | 0.04 | 0.1                | A   | 9.8   | 0.06 | 0.2                | B                     | 10.7  | 0.05 | 0.2                |
|  | NB T   | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
|  | SB     | -   | -     | -    | -                  | -                     | -     | -    | -                  | -   | -     | -    | -                  | -                     | -     | -    | -                  |
| Ward St & Champlain Rd/Med Ctr Ent             | EB     | F   | 50.2  | 0.22 | 0.8                | E                     | 41.2  | 0.21 | 0.7                | F   | 107.9 | 0.41 | 1.5                | F                     | 87.7  | 0.38 | 1.5                |
|  | WB     | E   | 41.1  | 0.15 | 0.5                | E                     | 35.4  | 0.18 | 0.6                | F   | 79.5  | 0.27 | 0.9                | F                     | 69.3  | 0.31 | 1.2                |
|  | NB L   | A   | 8.9   | 0.00 | 0.0                | A                     | 9.3   | 0.00 | 0.0                | A   | 9.4   | 0.00 | 0.0                | B                     | 10.1  | 0.01 | 0.0                |
|  | SB TR  | A   | -     | -    | -                  | A                     | -     | -    | -                  | A   | -     | -    | -                  | A                     | -     | -    | -                  |
|  | SB L   | B   | 10.1  | 0.01 | 0.0                | A                     | 9.3   | 0.01 | 0.0                | B   | 11.2  | 0.01 | 0.0                | B                     | 10.1  | 0.01 | 0.0                |

Notes: Delay in seconds; 95<sup>th</sup> percentile queue length in metres as provided in Synchro worksheets (see Appendix B)

The following is a summary of the *2031 and 2041 Future "Do Nothing" Scenario* corridor capacity analyses:

- The "through traffic" on Ward Street is forecast to operate at an acceptable LoS during the peak periods of travel demand. Ward Street is projected to maintain some "through" residual capacity in 2041 as a two-lane road between Gore Street and Champlain Road. However, it is anticipated that there will be some capacity shortfalls during peak periods of travel demand beyond 2041 planning horizon at the forecast traffic growth.
- All side streets movements accessing the Ward Street corridor are forecast to operate at level of service "E" or worse. Many of the traffic movements from the side streets are forecast to operate at LOS "F" during both peak hour periods.

During periods of peak "through" traffic, few gaps will exist in the Ward Street traffic stream. This will reduce opportunities for local traffic and pedestrians to access/cross this corridor to a minimum.

- Added capacity and/or intersection control improvements to the existing Ward Street corridor between Gore Street and Champlain Road will be required beyond 2041 planning horizon to accommodate anticipated traffic demands.

## **4.0 CORRIDOR IMPROVEMENT OPTIONS**

### **4.1 Development of Corridor Improvement Options**

A set of criteria, based on a general assessment framework taken from the most recent County Transportation Study, were established to allow a comparative assessment of the improvement options. The framework was modified to suit the specific requirements of the Ward Street study.

The criteria were as follows:

- Increase Ward Street through capacity
- Improve safety and reduce potential collisions by providing safer crossing and turning facilities along the corridor for both vehicular and pedestrian
- Improve access for public transportation to the corridor
- Improve overall access for non-vehicular modes to pedestrians or cycling movement in the corridor

The assessment resulted in the five alternative planning solutions which were carried forward for consideration for the Ward Street Environmental Assessment.

Alternative 1: Do Nothing: Maintain the current Ward Street corridor in its current configuration and condition. Does not implement any improvements or address any need for future traffic, active transportation or Community improvements.

Alternative 2: Corridor Expansion – Additional Through Lanes: Expand the Ward Street corridor through the construction of additional lanes of traffic. Improve traffic flow through the Ward Street corridor to meet current and future traffic demands of the community.

Alternative 3: Transportation Demand Management: Includes the review of alternative methods of travel outside of personal vehicle use. Alternative

methods could include providing enhanced pedestrian and or cycling facilities or improving the public transit opportunities from the community.

Alternative 4: Transportation System Management: Includes the review of operational strategies and technology to increase the safety and efficiency of the Ward Street corridor. Strategies could include the review of intersection controls, property entrance configurations and additional signage.

Alternative 5: Alternative Alignment: Review the opportunity to provide an alternative roadway alignment to direct traffic away from the Ward Street corridor and reduce the traffic volumes to the corridor. However, the study was informed that the Alternative Alignment option is an unviable alternative due to the County of Peterborough Council Resolution No. 81-2022, which resolved to remove the Bridgenorth by-pass from the Transportation Master Plan.

## **4.2 Assessing the Improvement Options**

A detailed review of the initial 2031 and 2041 “Do Nothing” analyses tested as described in *Section 3.2*, provided a base level of measure to evaluate the full impact of any specific improvement option. In summary, Alternative 1: Do Nothing and Alternative 2: Corridor Expansion – Additional Through Lanes performed poorly against the evaluation criteria compared to the other alternatives. Alternative 3: Transportation Demand Management which involved enhancing pedestrian and cycling infrastructure or improving public transit options for the community; and Alternative 4: Transportation Systems Management, with operational strategies and technology to improve safety and efficiency along the Ward Street corridor, were determined to best meet the study goals and objectives. The following *Table 4.1: Traffic and Transportation Evaluation of Alternatives* provides a summary of the evaluations.

**Table 4.1: Traffic and Transportation Evaluation of Alternatives**

| CRITERIA              | DESCRIPTION  | ALTERNATIVE 1:<br>Do Nothing   | ALTERNATIVE 2:<br>Corridor Expansion  | ALTERNATIVE 3:<br>Transportation<br>Demand<br>Management  | ALTERNATIVE 4:<br>Transportation Systems<br>Management   |
|-----------------------|--|--|---|---|--|
| Corridor Capacity     | Effectiveness at reducing congestion and improving traffic flow in the corridor      | Over the medium to long term horizon, traffic flow and associated congestion will increase   | Ward Street currently operates at around 80% capacity. Additional 2-lanes (one in each direction) will add corridor capacity but the additional capacity is not needed in the short and medium term horizon | Successful public transportation program can convert upwards of 2-5% of vehicular traffic. Successful active transportation facilities would convert up to 1% of vehicular traffic. | Signal timing coordination, intersection improvements and additional signage would increase capacity. Centre turn lane can increase corridor capacity 10-15%. Improving/consolidating entrance locations within the corridor would increase capacity |
| Corridor Safety       | Factors that contribute to user safety including motorists, cyclists and pedestrians | Over the medium to long term horizon, traffic flow will increase and corridor safety will erode due to corridor unequipped to handle increased use | Increased pedestrian/cyclist exposure without crossing enhancements. Additional lanes will likely increase travelling speed through the corridor.   | Adding enhancements to the corridor through an additional travel path for pedestrians or cyclists   | Provide designated crossings at intersections improve corridor signage for both motorized and non-motorized users.   |
| Public Transportation | Factors that provide improvements to public transportation movement in the corridor  | Does not provide additional public transportation infrastructure to enhance ridership  | Potential for shared Bus Lane and/or ride sharing   | Bus shelters to improve ridership. Strategically placed bus stops (with shelters equipped with real time bus schedule)  | Bus shelters to improve ridership. Strategically placed bus stops (with shelters equipped with real time bus schedule)   |
| Active Transportation | Factors that provide improvements to pedestrian or cycling movement in the corridor  | Does not provide active transportation infrastructure  | Does not provide active transportation infrastructure. Increased pedestrian/cyclist exposure without crossing enhancements.   | Adding enhancements to the corridor through an additional travel path for pedestrians and/or cyclists   | Provide designated crossings at intersections. Provide additional signage for non-motorized users.   |

## 5.0 CORRIDOR MODIFICATION OPTIONS

### 5.1 Development of Corridor Modification Options

Following the selection of the two carried forward alternatives, the following Ward Street corridor modification options were developed:

- Existing Conditions – Road Rehabilitation with Localized Improvements:  
The baseline results with a road rehabilitation to address pavement structural issues throughout the corridor.
- Option 1a Roundabout – Ward Street and Causeway (Bridge Street) Intersection: Review the impact of adding a roundabout to the traffic model. Review property impacts of adding a roundabout.
- Option 1b Intersection/Signal Modification - Ward St. and Causeway Intersection: Review options to modify this intersection to improve Level of Service and pedestrian safety. Priority should be placed on maintaining through traffic capacity over Level of Service for turning movements.
- Option 2a Centre Turn Lane - Gore to Tim Hortons: Review the impact to the traffic model and turning movements at Maitland and Hunter of adding a centre turn lane from Tim Hortons to Charles/Gore Street. Priority should be placed on maintaining through traffic capacity over Level of Service for turning movements.
- Option 2b Signal - Tim Hortons and Medical Centre: Review the impact to the traffic model of realigning the Tim Hortons and Medical Centre entrance and adding a signal. Review the corridor and site impacts of the reconfiguration. Priority should be placed on maintaining through traffic capacity over LOS for turning movements.
- Option 3 Closing Champlain Road - Ward St. and Champlain Rd.: Close the Champlain Road connection and review the impact to the traffic model. If the impact is positive review the corridor impacts of the reconfiguration.
- Option 4 Left Turn Lane & Pedestrian Crossing - Ward St. and Charles/Gore St.: To increase intersection safety for both bus turning movements and pedestrians, review adding a left turn lane onto Charles Street and adding a controlled pedestrian crosswalk.

- Option 5 Ward St. and Ultramar Entrance: Review the impact to the traffic model of modifying the south Ultramar entrance to a right in/right out configuration. If the impact is positive review the truck turning movement for the site with the new configuration.
- Option 6 Ward St. and LCBO Entrance: Review the impact to the traffic model of modifying the LCBO entrance to a right in/right out configuration. If the impact is positive review the site impact to the reconfiguration.
- Option 7 Ward St. and Subway Entrance: Review the impact to the traffic model of modifying the Subway entrance to a right in/right out configuration. If the impact is positive review the truck turning movement for the site with the new configuration.
- Option 8 Shift Signalization from Wilcox to Gore: Review the impact to the traffic model of shifting the existing traffic signals at the Ward and Wilcox intersection to the intersection of Ward and Gore streets.

## 5.1 Assessing the Corridor Modification Options

Traffic modeling developed for 2041 planning horizon for the study peak hours. All options were completed using *Synchro Version 11.0* (Option 1A was also completed using SIDRA software), to determine the impact of the modification options on the traffic throughput and levels of service. The capacity analyses were then substantiated using the real time simulation option *SimTraffic* available in *Synchro 11*, (see Appendix C for detailed Synchro worksheets). This provided a visual confirmation of the individual intersection's operations. The following *Table 5.1: Summary of Corridor Modification Options Assessment* provides a summary of the evaluations.

## 5.2 Traffic Modelling of Corridor Modification Design Alternatives

Traffic modeling developed to assess the Corridor Modification Options provided in *Table 5.1* was used to develop road design alternatives and a summary of modeling results are provided in *Table 5.2: Summary of Traffic Modification Design Alternatives Assessment*.

**Table 5.1: Summary of Corridor Modification Options Assessment**

| Options  | Description  | Results   |
|--|--|---|
| Existing Conditions - Do nothing   | Baseline results with no corridor improvements   |   |
| Option 1a<br>Roundabout - Ward St. and Causeway Intersection                       | Review the impact of adding a roundabout to the traffic model. Review property impacts of adding a roundabout.   | Intersection to operate at LOS A - worst movements (all left turns operate at LOS B); Requires significant changes to the existing geometry of the intersection and requires more room to accommodate the roundabout with two entry lanes at all approaches (currently tested as a single lane on the commercial driveway approach); The driveways in the commercial corridor north of Gore Street face additional delay - not reflected in Synchro but clearly impacted when tested using SimTraffic |
| Option 1b<br>Intersection/Signal Modification - Ward St. and Causeway Intersection | Review options to modify this intersection to improve LOS and pedestrian safety. Priority should be placed on maintaining through traffic capacity over LOS for turning movements.   | Improved Intersection SAT LOS from D to C. Critical EB LT movement from LOS F to D (PM) and E (Sat) along with significant improvements in v/c and queue; Consequently, NB L is projected to be impacted - LOS from C to D (PM) and B to E (Sat) along with associated increase in v/c ratio and queue length.  |
| Option 2a<br>Centre Turn Lane - Gore to Tim Hortons                                | Review the impact to the traffic model and turning movements at Maitland and Hunter of adding a centre turn lane from Tim Hortons to Charles/Gore Street. Priority should be placed on maintaining through traffic capacity over LOS for turning movements.                          | Results vary depending on HCM capacity standards used - HCM 2000 shows significant impact for the side streets, HCM2010 and beyond to HCS 6 shows no impact on side street movements  |
| Option 2b<br>Signal - Tim Hortons and Medical Centre                               | Review the impact to the traffic model of realigning the Tim Hortons and Medical Centre entrance and adding a signal. Review the corridor and site impacts of the reconfiguration. Priority should be placed on maintaining through traffic capacity over LOS for turning movements. | Improves Tim's driveway LOS. Deterioration of LOS for through traffic. The traffic lights force moving traffic to stop which causes additional delay. Not showing up on the model is the gap created by the traffic signals will help side streets between Tim's and Wilcox to access Ward Street. However, upstream/downstream intersections will be impacted by extensive queue (more than 120 m during PM peak) from vehicles stopped on Ward Street. Complete intersection design required.       |
| Option 3<br>Closing Champlain Road - Ward St. and Champlain Rd.                    | Close the Champlain Road connection and review the impact to the traffic model. If the impact is positive review the corridor impacts of the reconfiguration.  | No measurable benefit to closing Champlain Road and re-assigning traffic elsewhere.   |
| Option 4<br>Left Turn Lane & Pedestrian Crossing - Ward St. and Charles/Gore St.   | To increase intersection safety for both bus turning movements and pedestrians, review adding a left turn lane onto Charles Street and adding a controlled pedestrian crosswalk.   | Currently operates as if there is a northbound left turn lane - wide enough and offset allows the NB vehicles to slip around left turning vehicle. Modelled as such and no improvement on LOS. Ped crossing will reduce capacity for the through traffic.   |
| Option 5<br>Ward St. and Ultramar Entrance   | Review the impact to the traffic model of modifying the south Ultramar entrance to a right in/right out configuration. If the impact is positive review the truck turning movement for the site with the new configuration.  | Improve only the right-in right-out driveway. Left-out/left-in traffic will be re-assigned to another driveway, which will make left-turns (in and out) worse LOS for the (new) accommodating intersection/driveway.  |
| Option 6<br>Ward St. and LCBO Entrance   | Review the impact to the traffic model of modifying the LCBO entrance to a right in/right out configuration. If the impact is positive review the site impact to the reconfiguration.  | Improve only the right-in right-out driveway. Left-out/left-in traffic will be re-assigned to another driveway, which will make left-turns (in and out) worse LOS for the (new) accommodating intersection/driveway.  |
| Option 7<br>Ward St. and Subway Entrance   | Review the impact to the traffic model of modifying the Subway entrance to a right in/right out configuration. If the impact is positive review the truck turning movement for the site with the new configuration.  | Improve only the right-in right-out driveway. Left-out/left-in traffic will be re-assigned to another driveway, which will make left-turns (in and out) worse LOS for the (new) accommodating intersection/driveway.  |
| Option 8<br>Shift Signalization from Wilcox to Gore                                | Review the impact to the traffic model of shifting the existing traffic signals at the Ward and Wilcox intersection to the intersection of Ward and Gore streets.  | No meaningful improvement for Ward St/Gore ST intersection. Significantly reduces LOS for the Wilcox intersection.  |

**Table 5.2: Summary of Traffic Modeling of Design Alternatives Assessment**

| Options   | Description  | Traffic Model Results                |  |   | Results Summary  |
|---|--|--------------------------------------|--|---|--|
|   |  | Is 2041 through capacity maintained? | Number of road turning movements with LOS of F in 2041 | Number of commercial entrance turning movements with LOS of F in 2041 |  |
| Alternative 1 - Road Rehabilitation with Localized Improvements   | Baseline results with no corridor improvements   | Yes                                  | 8  | 6   |  |
| Alternative 2 - Option 1A Roundabout at Ward/Causeway Intersection  | Results with addition of a roundabout at Ward/Bridge   | Yes                                  | >8   | >6  | Improves LOS for all movements at Ward/Bridge intersection; additional throughput causes delays and reduces LOS at all commercial entrances between Bridge and Gore. Reduces gaps in traffic for side streets and commercial areas to access corridor.   |
| Alternative 3 - Option 1A + 2A Roundabout at Ward/Causeway and Centre Turn Lane from Gore to Tim Hortons                    | Results with addition of a roundabout and centre turn lane extension from Gore to south limits | Yes                                  | >8   | >6  | Improves LOS for all movements at Ward/Bridge intersection; additional throughput causes delays and reduces LOS at all commercial entrances between Bridge and Gore. Centre turn lane will help traffic from side streets and improve capacity of the through lane. Side street traffic through this area is very low and additional through capacity is not required.                                 |
| Alternative 4 - Option 1A + 2B Roundabout at Ward/Causeway & Signals at Tim Hortons   | Results with addition of a roundabout and signal at Tim's/Medical Centre                       | No                                   | >8   | >6  | Improves LOS for all movements at Ward/Bridge intersection; additional throughput causes delays and reduces LOS at all commercial entrances between Bridge and Gore. Signals improve LOS at Tim's entrance but reduce LOS for through traffic on Ward and cause extensive (120m) queuing on Ward, affecting adjacent intersections. Through capacity is not maintained to 2041 planning horizon.       |
| Alternative 5 - Option 1B Optimize Signal Timing at Ward/Causeway Intersection  | Results with signal/intersection timing optimization at Ward & Causeway                        | Yes                                  | >8   | >6  | Improves EB LT turn LOS but NB LT LOS is reduced at Ward/Bridge intersection. Other movements currently have priority over EB LT movement. No impact beyond Gore Street from optimization.   |
| Alternative 6 - Option 1B + 2A Optimize Signal Timing at Ward/Causeway Intersection and Extend CTL from Gore to Tim Hortons | Results with signal timing optimization at Ward & Causeway and centre turn lane extension      | Yes                                  | 8  | 6   | Improves EB LT turn LOS but NB LT LOS is reduced at Ward/Bridge intersection. Other movements currently have priority over the EB LT movement. No impact beyond Gore Street from optimization. Centre turn lane will help traffic from side streets and improve capacity of the through lane. Side street traffic through this area is very low and additional through capacity is not required.       |
| Alternative 7 - Option 1B + 2B Optimize Signal Timing at Ward/Causeway Intersection and Signalize Tim Hortons               | Results with signal timing optimization at Ward & Causeway and signal at Tim's/Medical Centre  | No                                   | >8   | >6  | Improves EB LT turn LOS but NB LT LOS is reduced at Ward/Bridge intersection. Other movements currently have priority over the EB LT movement. No impact beyond Gore Street from optimization. Signals improve LOS for Tim's entrance but reduce LOS for Ward Street and result in extensive queuing (120m) on Ward, affecting adjacent intersections. Through capacity is not maintained out to 2041. |
| Alternative 8 - Option 8 Shift Traffic Signal from Ward and Wilcox intersection to Ward and Gore                            | Results with shifting signals from Ward and Wilcox to Ward and Gore                            | Yes                                  | >8   | >6  | Significantly reduces LOS at the Wilcox intersection and causes additional delays throughout the corridor.   |

Based on traffic modeling assessment of each alternative, it was found that Alternative 1: The road rehabilitation with localized improvements and Alternative 6: Optimize Signal Timing at Ward/Bridge Street intersection and Extend Centre Turn Lane from Gore to Tim Hortons were determined to be the only designs that improved or maintained the corridors transportation level of service.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the technical analyses completed for this study supported with field observations, traffic counts and input from the Bridgenorth community. The following are the study conclusions and recommendations:

1.  A review of historical Ward Street historical traffic data found that the Ward Street corridor experienced a steady decline of average daily traffic from 2017 to present (2023) and the sharp peaking of AM and PM peak hour has been replaced with a peak period that expands over two to three hours.
  
2.  The results of the existing (2023) capacity analyses and the assessments indicate that:
  - Ward Street, in general, has residual capacity at the study intersections. The through traffic on Ward Street are experiencing good level of service at all study intersections operating at with LOS "A". The side street movements wanting to join the Ward Street traffic stream at a STOP controlled intersections are experiencing acceptable delays.
  - Some commercial driveways' movements wanting to join the Ward Street traffic stream are experiencing significant delays, LOS between "C" and "F" during both peak hour periods.
  
3.  Ward Street traffic was projected grow at rate of 2% per year over to a short term eight-year planning horizon from 2023 to 2031 and to medium 18-year planning horizon to 2041. The results of the future (2031 and 2041) "*Do Nothing Scenario*" capacity analyses and the assessments indicate that:
  - The "through traffic" on Ward Street is forecast to operate at an acceptable LoS during the peak periods of travel demand. Ward Street is projected to maintain some "through" residual capacity in 2041 as a

two-lane road between Gore Street and Champlain Road. However, it is anticipated that there will be some capacity shortfalls during peak periods of travel demand beyond 2041 planning horizon at the forecast traffic growth.

- All side streets movements accessing the Ward Street corridor are forecast to operate at level of service “E” or worse. Many of the traffic movements from the side streets are forecast to operate at LOS “F” during both peak hour periods.

During periods of peak “through” traffic, few gaps will exist in the Ward Street traffic stream. This will reduce opportunities for local traffic and pedestrians to access/cross this corridor to a minimum.

4.□Based on a detailed review of the initial 2031 and 2041 “Do Nothing” analyses provided development of planning solution alternatives to evaluate the full impact of any specific improvement option. The evaluation of each alternative found that:

- Alternative 1: Do Nothing and Alternative 2: Corridor Expansion – Additional Through Lanes performed poorly against the evaluation criteria compared to the other alternatives.
- Alternative 3: Transportation Demand Management which involved enhancing pedestrian and cycling infrastructure or improving public transit options for the community; and Alternative 4: Transportation Systems Management, with operational strategies and technology to improve safety and efficiency along the Ward Street corridor, were determined to best meet the study goals and objectives.

5□ Eleven Ward Street corridor modification options were developed and evaluated. It resulted in eight design alternatives. Traffic model was created to test each alternative. Based on traffic modeling assessment of each alternative, it was found that Alternative 1: The road rehabilitation with localized improvements and Alternative 6: Optimize Signal Timing at

Ward/Bridge Street intersection and Extend Centre Turn Lane from Gore to Tim Hortons were determined to be the only designs that improved or maintained the corridors transportation level of service.

- 6 □ This traffic assessment in support of Ward Street Environmental Assessment has addressed the operational issues facing the corridor in short (2031) and medium (2041) planning horizons. It will provide some additional capacity for growing corridor volumes with improved access for pedestrians and local traffic. In addition, it is a step in developing a community road network, including access to Ward Street corridor by non-vehicular modes, particularly the pedestrians and cyclists.

# Appendix F

**Background 2028 Traffic Conditions –  
Synchro Outputs**

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 0   | 3   | 77  | 3   | 7   | 2  | 167   | 39  | 13  | 223   | 2   |
| Future Volume (Veh/h)             | 2   | 0   | 3   | 77  | 3   | 7   | 2  | 167   | 39  | 13  | 223   | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.25  | 0.25  | 0.38  | 0.75  | 0.50  | 0.35  | 0.25   | 0.86  | 0.75  | 0.75  | 0.84  | 0.25  |
| Hourly flow rate (vph)            | 8   | 0   | 8   | 103   | 6   | 20  | 8  | 194   | 52  | 17  | 265   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage (veh)              |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  | 276   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 562   | 565   | 269   | 547   | 543   | 220   | 273  |   |   | 246   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 562   | 565   | 269   | 547   | 543   | 220   | 273  |   |   | 246   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.3   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.4   |   |   |
| p0 queue free %                   | 98  | 100   | 99  | 76  | 99  | 98  | 99   |   |   | 99  |   |   |
| cM capacity (veh/h)               | 419   | 428   | 775   | 433   | 441   | 825   | 1302   |   |   | 1237  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 16  | 129   | 254   | 290   |   |   |  |   |   |   |   |   |
| Volume Left                       | 8   | 103   | 8   | 17  |   |   |  |   |   |   |   |   |
| Volume Right                      | 8   | 20  | 52  | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 544   | 468   | 1302  | 1237  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.03  | 0.28  | 0.01  | 0.01  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.7   | 8.4   | 0.1   | 0.3   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 11.8  | 15.6  | 0.3   | 0.6   |   |   |  |   |   |   |   |   |
| Lane LOS                          | B   | C   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 11.8  | 15.6  | 0.3   | 0.6   |   |   |  |   |   |   |   |   |
| Approach LOS                      | B   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.6   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 36.5%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 2: Ward St & Bridge Rd

12/01/2025



| Movement               | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR   |
|------------------------|-------|------|------|------|------|------|-------|------|------|------|------|-------|
| Lane Configurations    |       |      |      |      |      |      |       |      |      |      |      |       |
| Traffic Volume (vph)   | 114   | 4    | 356  | 4    | 3    | 6    | 157   | 181  | 0    | 7    | 499  | 109   |
| Future Volume (vph)    | 114   | 4    | 356  | 4    | 3    | 6    | 157   | 181  | 0    | 7    | 499  | 109   |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  |
| Total Lost time (s)    | 6.0   | 6.0  | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Lane Util. Factor      | 1.00  | 1.00 | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Frt                    | 1.00  | 1.00 | 0.85 |      | 0.94 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 0.85  |
| Flt Protected          | 0.95  | 1.00 | 1.00 |      | 0.99 |      | 0.95  | 1.00 |      | 0.95 | 1.00 | 1.00  |
| Satd. Flow (prot)      | 1722  | 1921 | 1570 |      | 1365 |      | 1630  | 1779 |      | 1415 | 1847 | 1541  |
| Flt Permitted          | 0.74  | 1.00 | 1.00 |      | 0.94 |      | 0.26  | 1.00 |      | 0.58 | 1.00 | 1.00  |
| Satd. Flow (perm)      | 1339  | 1921 | 1570 |      | 1304 |      | 442   | 1779 |      | 858  | 1847 | 1541  |
| Peak-hour factor, PHF  | 0.74  | 0.50 | 0.68 | 0.50 | 0.38 | 0.50 | 0.76  | 0.60 | 0.25 | 0.44 | 0.83 | 0.68  |
| Adj. Flow (vph)        | 154   | 8    | 524  | 8    | 8    | 12   | 207   | 302  | 0    | 16   | 601  | 160   |
| RTOR Reduction (vph)   | 0     | 0    | 428  | 0    | 10   | 0    | 0     | 0    | 0    | 0    | 0    | 77    |
| Lane Group Flow (vph)  | 154   | 8    | 96   | 0    | 18   | 0    | 207   | 302  | 0    | 16   | 601  | 83    |
| Heavy Vehicles (%)     | 6%    | 0%   | 4%   | 25%  | 33%  | 33%  | 12%   | 8%   | 0%   | 29%  | 4%   | 6%    |
| Turn Type              | Perm  | NA   | Perm | Perm | NA   |      | pm+pt | NA   |      | Perm | NA   | Perm  |
| Protected Phases       |       | 8    |      |      | 4    |      | 1     | 6    |      |      |      | 2     |
| Permitted Phases       | 8     |      | 8    | 4    |      |      | 6     |      |      | 2    |      | 2     |
| Actuated Green, G (s)  | 22.0  | 22.0 | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 62.0 | 62.0 | 62.0  |
| Effective Green, g (s) | 22.0  | 22.0 | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 62.0 | 62.0 | 62.0  |
| Actuated g/C Ratio     | 0.18  | 0.18 | 0.18 |      | 0.18 |      | 0.72  | 0.72 |      | 0.52 | 0.52 | 0.52  |
| Clearance Time (s)     | 6.0   | 6.0  | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Vehicle Extension (s)  | 3.0   | 3.0  | 3.0  |      | 3.0  |      | 3.0   | 3.0  |      | 3.0  | 3.0  | 3.0   |
| Lane Grp Cap (vph)     | 245   | 352  | 287  |      | 239  |      | 514   | 1274 |      | 443  | 954  | 796   |
| v/s Ratio Prot         |       | 0.00 |      |      |      |      | c0.07 | 0.17 |      |      |      | c0.33 |
| v/s Ratio Perm         | c0.11 |      | 0.06 |      | 0.01 |      | 0.22  |      |      | 0.02 |      | 0.05  |
| v/c Ratio              | 0.63  | 0.02 | 0.33 |      | 0.08 |      | 0.40  | 0.24 |      | 0.04 | 0.63 | 0.10  |
| Uniform Delay, d1      | 45.2  | 40.2 | 42.6 |      | 40.6 |      | 9.7   | 5.8  |      | 14.3 | 20.8 | 14.8  |
| Progression Factor     | 1.00  | 1.00 | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Incremental Delay, d2  | 5.0   | 0.0  | 0.7  |      | 0.6  |      | 0.5   | 0.4  |      | 0.2  | 3.2  | 0.3   |
| Delay (s)              | 50.2  | 40.2 | 43.3 |      | 41.2 |      | 10.3  | 6.2  |      | 14.4 | 23.9 | 15.1  |
| Level of Service       | D     | D    | D    |      | D    |      | B     | A    |      | B    | C    | B     |
| Approach Delay (s)     |       | 44.8 |      |      | 41.2 |      |       | 7.9  |      |      | 21.9 |       |
| Approach LOS           |       | D    |      |      | D    |      |       | A    |      |      | C    |       |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 26.5  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.59  |                           |      |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 73.3% | ICU Level of Service      | D    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 0   | 6   | 4   | 0   | 22  | 0  | 409   | 10  | 82  | 725   | 7   |
| Future Volume (Veh/h)             | 0   | 0   | 6   | 4   | 0   | 22  | 0  | 409   | 10  | 82  | 725   | 7   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75   | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  |
| Hourly flow rate (vph)            | 0   | 0   | 8   | 5   | 0   | 29  | 0  | 545   | 13  | 109   | 967   | 9   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.89  | 0.89  |   | 0.89  | 0.89  | 0.89  |  |   |   |   | 0.89  |   |
| vC, conflicting volume            | 1770  | 1748  | 972   | 1749  | 1746  | 552   | 976  |   |   |   | 558   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 1803  | 1778  | 972   | 1780  | 1776  | 434   | 976  |   |   |   | 441   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.4   | 7.1   | 6.5   | 6.4   | 4.1  |   |   |   | 4.2   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.5   | 3.5   | 4.0   | 3.5   | 2.2  |   |   |   | 2.3   |   |
| p0 queue free %                   | 100   | 100   | 97  | 90  | 100   | 94  | 100  |   |   |   | 89  |   |
| cM capacity (veh/h)               | 48  | 66  | 287   | 51  | 66  | 514   | 715  |   |   |   | 963   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 8   | 34  | 558   | 1085  |   |   |  |   |   |   |   |   |
| Volume Left                       | 0   | 5   | 0   | 109   |   |   |  |   |   |   |   |   |
| Volume Right                      | 8   | 29  | 13  | 9   |   |   |  |   |   |   |   |   |
| cSH                               | 287   | 220   | 715   | 963   |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.03  | 0.15  | 0.00  | 0.11  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.7   | 4.1   | 0.0   | 2.9   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 17.9  | 24.3  | 0.0   | 3.1   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | C   |   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 17.9  | 24.3  | 0.0   | 3.1   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.6   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 80.5%   |   | ICU Level of Service  |   |  |   |   | D   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/01/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 4    | 3    | 2    | 44   | 1    | 32   | 3    | 397  | 2    | 3    | 655  | 0    |
| Future Volume (vph)    | 4    | 3    | 2    | 44   | 1    | 32   | 3    | 397  | 2    | 3    | 655  | 0    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.94 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.98 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1769 |      |      | 1719 |      |      | 1878 |      |      | 1882 |      |
| Flt Permitted          |      | 0.90 |      |      | 0.83 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1617 |      |      | 1463 |      |      | 1870 |      |      | 1874 |      |
| Peak-hour factor, PHF  | 0.50 | 0.38 | 0.25 | 0.52 | 0.25 | 0.39 | 0.75 | 0.91 | 0.25 | 0.38 | 0.91 | 0.92 |
| Adj. Flow (vph)        | 8    | 8    | 8    | 85   | 4    | 82   | 4    | 436  | 8    | 8    | 720  | 0    |
| RTOR Reduction (vph)   | 0    | 6    | 0    | 0    | 41   | 0    | 0    | 1    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 18   | 0    | 0    | 130  | 0    | 0    | 447  | 0    | 0    | 728  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 384  |      |      | 347  |      |      | 1145 |      |      | 1147 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.09 |      |      | 0.24 |      |      | 0.39 |      |
| v/c Ratio              |      | 0.05 |      |      | 0.37 |      |      | 0.39 |      |      | 0.63 |      |
| Uniform Delay, d1      |      | 23.5 |      |      | 25.5 |      |      | 7.9  |      |      | 9.8  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.2  |      |      | 3.1  |      |      | 1.0  |      |      | 2.7  |      |
| Delay (s)              |      | 23.7 |      |      | 28.6 |      |      | 8.9  |      |      | 12.5 |      |
| Level of Service       |      | C    |      |      | C    |      |      | A    |      |      | B    |      |
| Approach Delay (s)     |      | 23.7 |      |      | 28.6 |      |      | 8.9  |      |      | 12.5 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | A    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 13.5  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.56  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 52.7% | ICU Level of Service      | A    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 5: Street A/E Communication Rd & 7th Line

12/01/2025



| Movement                          | WBL   | WBR  | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|------|-------|----------------------|------|------|
| Lane Configurations               |       |      |       |                      |      |      |
| Sign Control                      | Stop  |      | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 0     | 14   | 0     | 0                    | 36   | 0    |
| Future Volume (vph)               | 0     | 14   | 0     | 0                    | 36   | 0    |
| Peak Hour Factor                  | 0.92  | 0.92 | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0     | 15   | 0     | 0                    | 39   | 0    |
| Direction, Lane #                 | WB 1  | NB 1 | SB 1  |                      |      |      |
| Volume Total (vph)                | 15    | 0    | 39    |                      |      |      |
| Volume Left (vph)                 | 0     | 0    | 39    |                      |      |      |
| Volume Right (vph)                | 15    | 0    | 0     |                      |      |      |
| Hadj (s)                          | -0.57 | 0.00 | 0.23  |                      |      |      |
| Departure Headway (s)             | 3.4   | 4.0  | 4.2   |                      |      |      |
| Degree Utilization, x             | 0.01  | 0.00 | 0.05  |                      |      |      |
| Capacity (veh/h)                  | 1033  | 900  | 857   |                      |      |      |
| Control Delay (s)                 | 6.5   | 7.0  | 7.4   |                      |      |      |
| Approach Delay (s)                | 6.5   | 0.0  | 7.4   |                      |      |      |
| Approach LOS                      | A     | A    | A     |                      |      |      |
| Intersection Summary              |       |      |       |                      |      |      |
| Delay                             |       |      | 7.1   |                      |      |      |
| Level of Service                  |       |      | A     |                      |      |      |
| Intersection Capacity Utilization |       |      | 13.3% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |      | 15    |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 6: Center Line & 7th Line/E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 1   | 5   | 30  | 3   | 4   | 1   | 10   | 74  | 6   | 0   | 105   | 0   |
| Future Volume (Veh/h)             | 1   | 5   | 30  | 3   | 4   | 1   | 10   | 74  | 6   | 0   | 105   | 0   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.75  | 0.73  | 0.50  | 1.00  | 0.25  | 0.83   | 0.82  | 0.75  | 0.25  | 0.83  | 0.25  |
| Hourly flow rate (vph)            | 2   | 7   | 41  | 6   | 4   | 4   | 12   | 90  | 8   | 0   | 127   | 0   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 251   | 249   | 127   | 290   | 245   | 94  | 127  |   |   | 98  |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 251   | 249   | 127   | 290   | 245   | 94  | 127  |   |   | 98  |   |   |
| tC, single (s)                    | 7.6   | 6.7   | 6.2   | 7.3   | 6.5   | 6.2   | 4.2  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.0   | 4.2   | 3.3   | 3.7   | 4.0   | 3.3   | 2.3  |   |   | 2.2   |   |   |
| p0 queue free %                   | 100   | 99  | 96  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 604   | 623   | 921   | 583   | 655   | 968   | 1411   |   |   | 1508  |   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 50  | 14  | 110   | 127   |   |   |  |   |   |   |   |   |
| Volume Left                       | 2   | 6   | 12  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 41  | 4   | 8   | 0   |   |   |  |   |   |   |   |   |
| cSH                               | 846   | 682   | 1411  | 1508  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.06  | 0.02  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.4   | 0.5   | 0.2   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.5   | 10.4  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.5   | 10.4  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.4   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 21.5%   | ICU Level of Service  |   | A   |  |   |   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/01/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             |             |             |                      |      |      |
| Traffic Volume (veh/h)            | 0           | 91          | 28          | 0                    | 0    | 0    |
| Future Volume (Veh/h)             | 0           | 91          | 28          | 0                    | 0    | 0    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0           | 99          | 30          | 0                    | 0    | 0    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 30          |             |             | 129                  | 30   |      |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 30          |             |             | 129                  | 30   |      |
| tC, single (s)                    | 4.1         |             |             | 6.4                  | 6.2  |      |
| tC, 2 stage (s)                   |             |             |             |                      |      |      |
| tF (s)                            | 2.2         |             |             | 3.5                  | 3.3  |      |
| p0 queue free %                   | 100         |             |             | 100                  | 100  |      |
| cM capacity (veh/h)               | 1583        |             |             | 865                  | 1044 |      |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 99          | 30          | 0           |                      |      |      |
| Volume Left                       | 0           | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 0           |                      |      |      |
| cSH                               | 1583        | 1700        | 1700        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.00        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.0         |                      |      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 0.0         |                      |      |      |
| Lane LOS                          |             |             | A           |                      |      |      |
| Approach Delay (s)                | 0.0         | 0.0         | 0.0         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 0.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 8.1%        | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 7   | 1   | 6   | 58  | 0   | 3   | 7  | 343   | 59  | 5   | 313   | 1   |
| Future Volume (Veh/h)             | 7   | 1   | 6   | 58  | 0   | 3   | 7  | 343   | 59  | 5   | 313   | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.35  | 0.25  | 0.50  | 0.84  | 0.25  | 0.75  | 0.58   | 0.92  | 0.72  | 0.42  | 0.89  | 0.25  |
| Hourly flow rate (vph)            | 20  | 4   | 12  | 69  | 0   | 4   | 12   | 373   | 82  | 12  | 352   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 820   | 857   | 354   | 830   | 818   | 414   | 356  |   |   | 455   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 820   | 857   | 354   | 830   | 818   | 414   | 356  |   |   | 455   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.2   |   |   |
| p0 queue free %                   | 93  | 99  | 98  | 75  | 100   | 99  | 99   |   |   | 99  |   |   |
| cM capacity (veh/h)               | 290   | 291   | 694   | 279   | 306   | 643   | 1214   |   |   | 1116  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 36  | 73  | 467   | 368   |   |   |  |   |   |   |   |   |
| Volume Left                       | 20  | 69  | 12  | 12  |   |   |  |   |   |   |   |   |
| Volume Right                      | 12  | 4   | 82  | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 360   | 288   | 1214  | 1116  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.10  | 0.25  | 0.01  | 0.01  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 2.5   | 7.5   | 0.2   | 0.2   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 16.1  | 21.7  | 0.3   | 0.4   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | C   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 16.1  | 21.7  | 0.3   | 0.4   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.6   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 38.0%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 2: Ward St & Bridge Rd

12/01/2025



| Movement                          | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL                       | NBT  | NBR  | SBL  | SBT  | SBR  |
|-----------------------------------|-------|------|-------|------|------|------|---------------------------|------|------|------|------|------|
| Lane Configurations               |       |      |       |      |      |      |                           |      |      |      |      |      |
| Traffic Volume (vph)              | 50    | 0    | 156   | 2    | 6    | 3    | 389                       | 137  | 2    | 1    | 116  | 56   |
| Future Volume (vph)               | 50    | 0    | 156   | 2    | 6    | 3    | 389                       | 137  | 2    | 1    | 116  | 56   |
| Ideal Flow (vphpl)                | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900                      | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)               | 6.0   |      | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Lane Util. Factor                 | 1.00  |      | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Frt                               | 1.00  |      | 0.85  |      | 0.97 |      | 1.00                      | 0.99 |      | 1.00 | 1.00 | 0.85 |
| Flt Protected                     | 0.95  |      | 1.00  |      | 0.99 |      | 0.95                      | 1.00 |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot)                 | 1755  |      | 1541  |      | 1464 |      | 1722                      | 1712 |      | 1825 | 1812 | 1601 |
| Flt Permitted                     | 0.75  |      | 1.00  |      | 0.96 |      | 0.61                      | 1.00 |      | 0.65 | 1.00 | 1.00 |
| Satd. Flow (perm)                 | 1380  |      | 1541  |      | 1420 |      | 1101                      | 1712 |      | 1245 | 1812 | 1601 |
| Peak-hour factor, PHF             | 0.78  | 0.25 | 0.92  | 0.45 | 0.75 | 0.75 | 0.80                      | 0.83 | 0.25 | 0.25 | 0.68 | 0.74 |
| Adj. Flow (vph)                   | 64    | 0    | 170   | 4    | 8    | 4    | 486                       | 165  | 8    | 4    | 171  | 76   |
| RTOR Reduction (vph)              | 0     | 0    | 139   | 0    | 3    | 0    | 0                         | 1    | 0    | 0    | 0    | 37   |
| Lane Group Flow (vph)             | 64    | 0    | 31    | 0    | 13   | 0    | 486                       | 172  | 0    | 4    | 171  | 39   |
| Heavy Vehicles (%)                | 4%    | 0%   | 6%    | 0%   | 17%  | 67%  | 6%                        | 12%  | 0%   | 0%   | 6%   | 2%   |
| Turn Type                         | Perm  |      | Perm  | Perm | NA   |      | pm+pt                     | NA   |      | Perm | NA   | Perm |
| Protected Phases                  |       | 8    |       |      | 4    |      | 1                         | 6    |      |      | 2    |      |
| Permitted Phases                  | 8     |      | 8     | 4    |      |      | 6                         |      |      | 2    |      | 2    |
| Actuated Green, G (s)             | 22.0  |      | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 61.0 | 61.0 | 61.0 |
| Effective Green, g (s)            | 22.0  |      | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 61.0 | 61.0 | 61.0 |
| Actuated g/C Ratio                | 0.18  |      | 0.18  |      | 0.18 |      | 0.72                      | 0.72 |      | 0.51 | 0.51 | 0.51 |
| Clearance Time (s)                | 6.0   |      | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Vehicle Extension (s)             | 3.0   |      | 3.0   |      | 3.0  |      | 3.0                       | 3.0  |      | 3.0  | 3.0  | 3.0  |
| Lane Grp Cap (vph)                | 253   |      | 282   |      | 260  |      | 897                       | 1226 |      | 632  | 921  | 813  |
| v/s Ratio Prot                    |       |      |       |      |      |      | c0.09                     | 0.10 |      |      | 0.09 |      |
| v/s Ratio Perm                    | c0.05 |      | 0.02  |      | 0.01 |      | c0.29                     |      |      | 0.00 |      | 0.02 |
| v/c Ratio                         | 0.25  |      | 0.11  |      | 0.05 |      | 0.54                      | 0.14 |      | 0.01 | 0.19 | 0.05 |
| Uniform Delay, d1                 | 42.0  |      | 40.8  |      | 40.4 |      | 6.8                       | 5.4  |      | 14.6 | 16.0 | 14.9 |
| Progression Factor                | 1.00  |      | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2             | 0.5   |      | 0.2   |      | 0.4  |      | 0.7                       | 0.2  |      | 0.0  | 0.4  | 0.1  |
| Delay (s)                         | 42.5  |      | 41.0  |      | 40.7 |      | 7.5                       | 5.6  |      | 14.6 | 16.5 | 15.0 |
| Level of Service                  | D     |      | D     |      | D    |      | A                         | A    |      | B    | B    | B    |
| Approach Delay (s)                |       | 41.4 |       |      | 40.7 |      |                           | 7.0  |      |      | 16.0 |      |
| Approach LOS                      |       | D    |       |      | D    |      |                           | A    |      |      | B    |      |
| <b>Intersection Summary</b>       |       |      |       |      |      |      |                           |      |      |      |      |      |
| HCM 2000 Control Delay            |       |      | 16.4  |      |      |      | HCM 2000 Level of Service |      |      |      | B    |      |
| HCM 2000 Volume to Capacity ratio |       |      | 0.50  |      |      |      |                           |      |      |      |      |      |
| Actuated Cycle Length (s)         |       |      | 120.0 |      |      |      | Sum of lost time (s)      |      |      | 16.0 |      |      |
| Intersection Capacity Utilization |       |      | 54.9% |      |      |      | ICU Level of Service      |      |      | A    |      |      |
| Analysis Period (min)             |       |      | 15    |      |      |      |                           |      |      |      |      |      |
| c Critical Lane Group             |       |      |       |      |      |      |                           |      |      |      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/01/2025



| Movement                          | EBL  | EBT  | EBR   | WBL                  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-----------------------------------|------|------|-------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations               |      | ↕    |       |                      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (veh/h)            | 3    | 0    | 1     | 8                    | 0    | 20   | 5    | 823  | 2    | 23   | 466  | 16   |
| Future Volume (Veh/h)             | 3    | 0    | 1     | 8                    | 0    | 20   | 5    | 823  | 2    | 23   | 466  | 16   |
| Sign Control                      |      | Stop |       |                      | Stop |      |      | Free |      |      | Free |      |
| Grade                             |      | 0%   |       |                      | 0%   |      |      | 0%   |      |      | 0%   |      |
| Peak Hour Factor                  | 0.88 | 0.88 | 0.88  | 0.88                 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph)            | 3    | 0    | 1     | 9                    | 0    | 23   | 6    | 935  | 2    | 26   | 530  | 18   |
| Pedestrians                       |      |      |       |                      |      |      |      |      |      |      |      |      |
| Lane Width (m)                    |      |      |       |                      |      |      |      |      |      |      |      |      |
| Walking Speed (m/s)               |      |      |       |                      |      |      |      |      |      |      |      |      |
| Percent Blockage                  |      |      |       |                      |      |      |      |      |      |      |      |      |
| Right turn flare (veh)            |      |      |       |                      |      |      |      |      |      |      |      |      |
| Median type                       |      |      |       |                      |      |      |      |      |      |      |      |      |
|                                   |      |      |       |                      |      |      |      | None |      |      | None |      |
| Median storage veh                |      |      |       |                      |      |      |      |      |      |      |      |      |
| Upstream signal (m)               |      |      |       |                      |      |      |      |      |      |      |      |      |
|                                   |      |      |       |                      |      |      |      | 241  |      |      |      |      |
| pX, platoon unblocked             | 0.56 | 0.56 |       | 0.56                 | 0.56 | 0.56 |      |      |      |      | 0.56 |      |
| vC, conflicting volume            | 1562 | 1540 | 539   | 1540                 | 1548 | 936  | 548  |      |      |      | 937  |      |
| vC1, stage 1 conf vol             |      |      |       |                      |      |      |      |      |      |      |      |      |
| vC2, stage 2 conf vol             |      |      |       |                      |      |      |      |      |      |      |      |      |
| vCu, unblocked vol                | 1610 | 1571 | 539   | 1571                 | 1585 | 498  | 548  |      |      |      | 500  |      |
| tC, single (s)                    | 7.1  | 6.5  | 6.2   | 7.1                  | 6.5  | 6.2  | 4.1  |      |      |      | 4.1  |      |
| tC, 2 stage (s)                   |      |      |       |                      |      |      |      |      |      |      |      |      |
| tF (s)                            | 3.5  | 4.0  | 3.3   | 3.5                  | 4.0  | 3.3  | 2.2  |      |      |      | 2.2  |      |
| p0 queue free %                   | 93   | 100  | 100   | 82                   | 100  | 93   | 99   |      |      |      | 96   |      |
| cM capacity (veh/h)               | 43   | 60   | 546   | 49                   | 58   | 324  | 1032 |      |      |      | 590  |      |
| Direction, Lane #                 |      |      |       |                      |      |      |      |      |      |      |      |      |
|                                   | EB 1 | WB 1 | NB 1  | SB 1                 |      |      |      |      |      |      |      |      |
| Volume Total                      | 4    | 32   | 943   | 574                  |      |      |      |      |      |      |      |      |
| Volume Left                       | 3    | 9    | 6     | 26                   |      |      |      |      |      |      |      |      |
| Volume Right                      | 1    | 23   | 2     | 18                   |      |      |      |      |      |      |      |      |
| cSH                               | 56   | 126  | 1032  | 590                  |      |      |      |      |      |      |      |      |
| Volume to Capacity                | 0.07 | 0.25 | 0.01  | 0.04                 |      |      |      |      |      |      |      |      |
| Queue Length 95th (m)             | 1.7  | 7.2  | 0.1   | 1.0                  |      |      |      |      |      |      |      |      |
| Control Delay (s)                 | 74.7 | 43.2 | 0.2   | 1.2                  |      |      |      |      |      |      |      |      |
| Lane LOS                          | F    | E    | A     | A                    |      |      |      |      |      |      |      |      |
| Approach Delay (s)                | 74.7 | 43.2 | 0.2   | 1.2                  |      |      |      |      |      |      |      |      |
| Approach LOS                      | F    | E    |       |                      |      |      |      |      |      |      |      |      |
| Intersection Summary              |      |      |       |                      |      |      |      |      |      |      |      |      |
| Average Delay                     |      |      | 1.6   |                      |      |      |      |      |      |      |      |      |
| Intersection Capacity Utilization |      |      | 55.1% | ICU Level of Service |      |      |      |      |      |      | B    |      |
| Analysis Period (min)             |      |      | 15    |                      |      |      |      |      |      |      |      |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/01/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 6    | 2    | 3    | 32   | 1    | 15   | 1    | 808  | 1    | 1    | 520  | 1    |
| Future Volume (vph)    | 6    | 2    | 3    | 32   | 1    | 15   | 1    | 808  | 1    | 1    | 520  | 1    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.95 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.97 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1755 |      |      | 1744 |      |      | 1882 |      |      | 1881 |      |
| Flt Permitted          |      | 0.88 |      |      | 0.82 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1575 |      |      | 1472 |      |      | 1878 |      |      | 1874 |      |
| Peak-hour factor, PHF  | 0.50 | 0.50 | 0.38 | 0.68 | 0.25 | 0.58 | 0.25 | 0.92 | 0.25 | 0.25 | 0.81 | 0.25 |
| Adj. Flow (vph)        | 12   | 4    | 8    | 47   | 4    | 26   | 4    | 878  | 4    | 4    | 642  | 4    |
| RTOR Reduction (vph)   | 0    | 6    | 0    | 0    | 20   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 18   | 0    | 0    | 57   | 0    | 0    | 886  | 0    | 0    | 650  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 374  |      |      | 349  |      |      | 1150 |      |      | 1147 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.04 |      |      | 0.47 |      |      | 0.35 |      |
| v/c Ratio              |      | 0.05 |      |      | 0.16 |      |      | 0.77 |      |      | 0.57 |      |
| Uniform Delay, d1      |      | 23.5 |      |      | 24.2 |      |      | 11.4 |      |      | 9.2  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.2  |      |      | 1.0  |      |      | 5.0  |      |      | 2.0  |      |
| Delay (s)              |      | 23.8 |      |      | 25.2 |      |      | 16.4 |      |      | 11.2 |      |
| Level of Service       |      | C    |      |      | C    |      |      | B    |      |      | B    |      |
| Approach Delay (s)     |      | 23.8 |      |      | 25.2 |      |      | 16.4 |      |      | 11.2 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | B    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 14.9  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.60  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 57.5% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 5: Street A/E Communication Rd & 7th Line

12/01/2025



| Movement                          | WBL   | WBR  | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|------|-------|----------------------|------|------|
| Lane Configurations               |       |      |       |                      |      |      |
| Sign Control                      | Stop  |      | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 0     | 15   | 0     | 0                    | 27   | 0    |
| Future Volume (vph)               | 0     | 15   | 0     | 0                    | 27   | 0    |
| Peak Hour Factor                  | 0.92  | 0.92 | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0     | 16   | 0     | 0                    | 29   | 0    |
| Direction, Lane #                 | WB 1  | NB 1 | SB 1  |                      |      |      |
| Volume Total (vph)                | 16    | 0    | 29    |                      |      |      |
| Volume Left (vph)                 | 0     | 0    | 29    |                      |      |      |
| Volume Right (vph)                | 16    | 0    | 0     |                      |      |      |
| Hadj (s)                          | -0.57 | 0.00 | 0.23  |                      |      |      |
| Departure Headway (s)             | 3.4   | 4.0  | 4.2   |                      |      |      |
| Degree Utilization, x             | 0.02  | 0.00 | 0.03  |                      |      |      |
| Capacity (veh/h)                  | 1042  | 900  | 857   |                      |      |      |
| Control Delay (s)                 | 6.5   | 7.0  | 7.3   |                      |      |      |
| Approach Delay (s)                | 6.5   | 0.0  | 7.3   |                      |      |      |
| Approach LOS                      | A     | A    | A     |                      |      |      |
| Intersection Summary              |       |      |       |                      |      |      |
| Delay                             |       |      | 7.0   |                      |      |      |
| Level of Service                  |       |      | A     |                      |      |      |
| Intersection Capacity Utilization |       |      | 13.3% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |      | 15    |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 6: Center Line & 7th Line/E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 4   | 22  | 2   | 3   | 1   | 11   | 75  | 5   | 0   | 86  | 1   |
| Future Volume (Veh/h)             | 0   | 4   | 22  | 2   | 3   | 1   | 11   | 75  | 5   | 0   | 86  | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.50  | 0.72  | 0.75  | 0.75  | 0.25  | 0.75   | 0.82  | 0.63  | 0.25  | 0.81  | 0.25  |
| Hourly flow rate (vph)            | 0   | 8   | 31  | 3   | 4   | 4   | 15   | 91  | 8   | 0   | 106   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 239   | 237   | 108   | 268   | 235   | 95  | 110  |   |   | 99  |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 239   | 237   | 108   | 268   | 235   | 95  | 110  |   |   | 99  |   |   |
| tC, single (s)                    | 8.1   | 6.5   | 6.3   | 7.4   | 6.5   | 6.2   | 4.3  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.4   | 4.0   | 3.4   | 3.8   | 4.0   | 3.3   | 2.4  |   |   | 2.2   |   |   |
| p0 queue free %                   | 100   | 99  | 97  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 542   | 660   | 927   | 595   | 662   | 967   | 1392   |   |   | 1507  |   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 39  | 11  | 114   | 110   |   |   |  |   |   |   |   |   |
| Volume Left                       | 0   | 3   | 15  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 31  | 4   | 8   | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 856   | 722   | 1392  | 1507  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.05  | 0.02  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.1   | 0.4   | 0.2   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.4   | 10.1  | 1.1   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.4   | 10.1  | 1.1   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.2   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 21.5%   | ICU Level of Service  | A   |   |  |   |   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/01/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             |             |             |                      |      |      |
| Traffic Volume (veh/h)            | 0           | 25          | 30          | 0                    | 0    | 0    |
| Future Volume (Veh/h)             | 0           | 25          | 30          | 0                    | 0    | 0    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0           | 27          | 33          | 0                    | 0    | 0    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 33          |             |             |                      | 60   | 33   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 33          |             |             |                      | 60   | 33   |
| tC, single (s)                    | 4.1         |             |             |                      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |             |             |             |                      |      |      |
| tF (s)                            | 2.2         |             |             |                      | 3.5  | 3.3  |
| p0 queue free %                   | 100         |             |             |                      | 100  | 100  |
| cM capacity (veh/h)               | 1579        |             |             |                      | 947  | 1041 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 27          | 33          | 0           |                      |      |      |
| Volume Left                       | 0           | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 0           |                      |      |      |
| cSH                               | 1579        | 1700        | 1700        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.00        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.0         |                      |      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 0.0         |                      |      |      |
| Lane LOS                          |             |             | A           |                      |      |      |
| Approach Delay (s)                | 0.0         | 0.0         | 0.0         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 0.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 6.7%        | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# Appendix G

**Background 2033 Traffic Conditions –  
Synchro Outputs**

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 0   | 4   | 86  | 4   | 8   | 2  | 184   | 43  | 14  | 246   | 2   |
| Future Volume (Veh/h)             | 2   | 0   | 4   | 86  | 4   | 8   | 2  | 184   | 43  | 14  | 246   | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.25  | 0.25  | 0.38  | 0.75  | 0.50  | 0.35  | 0.25   | 0.86  | 0.75  | 0.75  | 0.84  | 0.25  |
| Hourly flow rate (vph)            | 8   | 0   | 11  | 115   | 8   | 23  | 8  | 214   | 57  | 19  | 293   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 620   | 622   | 297   | 604   | 598   | 242   | 301  |   |   | 271   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 620   | 622   | 297   | 604   | 598   | 242   | 301  |   |   | 271   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.3   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.4   |   |   |
| p0 queue free %                   | 98  | 100   | 99  | 71  | 98  | 97  | 99   |   |   | 98  |   |   |
| cM capacity (veh/h)               | 379   | 397   | 747   | 394   | 410   | 801   | 1272   |   |   | 1211  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 19  | 146   | 279   | 320   |   |   |  |   |   |   |   |   |
| Volume Left                       | 8   | 115   | 8   | 19  |   |   |  |   |   |   |   |   |
| Volume Right                      | 11  | 23  | 57  | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 530   | 430   | 1272  | 1211  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.04  | 0.34  | 0.01  | 0.02  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.8   | 11.3  | 0.1   | 0.4   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 12.0  | 17.6  | 0.3   | 0.6   |   |   |  |   |   |   |   |   |
| Lane LOS                          | B   | C   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 12.0  | 17.6  | 0.3   | 0.6   |   |   |  |   |   |   |   |   |
| Approach LOS                      | B   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 4.0   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 41.0%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

HCM Signalized Intersection Capacity Analysis  
2: Ward St & Bridge Rd

12/01/2025

| Movement                          | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL                       | NBT  | NBR  | SBL  | SBT  | SBR   |
|-----------------------------------|-------|------|-------|------|------|------|---------------------------|------|------|------|------|-------|
| Lane Configurations               |       |      |       |      |      |      |                           |      |      |      |      |       |
| Traffic Volume (vph)              | 125   | 5    | 393   | 5    | 4    | 7    | 173                       | 200  | 0    | 8    | 551  | 121   |
| Future Volume (vph)               | 125   | 5    | 393   | 5    | 4    | 7    | 173                       | 200  | 0    | 8    | 551  | 121   |
| Ideal Flow (vphpl)                | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900                      | 1900 | 1900 | 1900 | 1900 | 1900  |
| Total Lost time (s)               | 6.0   | 6.0  | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Lane Util. Factor                 | 1.00  | 1.00 | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Frt                               | 1.00  | 1.00 | 0.85  |      | 0.95 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 0.85  |
| Flt Protected                     | 0.95  | 1.00 | 1.00  |      | 0.99 |      | 0.95                      | 1.00 |      | 0.95 | 1.00 | 1.00  |
| Satd. Flow (prot)                 | 1722  | 1921 | 1570  |      | 1371 |      | 1630                      | 1779 |      | 1415 | 1847 | 1541  |
| Flt Permitted                     | 0.73  | 1.00 | 1.00  |      | 0.94 |      | 0.21                      | 1.00 |      | 0.56 | 1.00 | 1.00  |
| Satd. Flow (perm)                 | 1331  | 1921 | 1570  |      | 1304 |      | 361                       | 1779 |      | 834  | 1847 | 1541  |
| Peak-hour factor, PHF             | 0.74  | 0.50 | 0.68  | 0.50 | 0.38 | 0.50 | 0.76                      | 0.60 | 0.25 | 0.44 | 0.83 | 0.68  |
| Adj. Flow (vph)                   | 169   | 10   | 578   | 10   | 11   | 14   | 228                       | 333  | 0    | 18   | 664  | 178   |
| RTOR Reduction (vph)              | 0     | 0    | 472   | 0    | 11   | 0    | 0                         | 0    | 0    | 0    | 0    | 85    |
| Lane Group Flow (vph)             | 169   | 10   | 106   | 0    | 24   | 0    | 228                       | 333  | 0    | 18   | 664  | 93    |
| Heavy Vehicles (%)                | 6%    | 0%   | 4%    | 25%  | 33%  | 33%  | 12%                       | 8%   | 0%   | 29%  | 4%   | 6%    |
| Turn Type                         | Perm  | NA   | Perm  | Perm | NA   |      | pm+pt                     | NA   |      | Perm | NA   | Perm  |
| Protected Phases                  |       | 8    |       |      | 4    |      | 1                         | 6    |      |      |      | 2     |
| Permitted Phases                  | 8     |      | 8     | 4    |      |      | 6                         |      |      | 2    |      | 2     |
| Actuated Green, G (s)             | 22.0  | 22.0 | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 61.6 | 61.6 | 61.6  |
| Effective Green, g (s)            | 22.0  | 22.0 | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 61.6 | 61.6 | 61.6  |
| Actuated g/C Ratio                | 0.18  | 0.18 | 0.18  |      | 0.18 |      | 0.72                      | 0.72 |      | 0.51 | 0.51 | 0.51  |
| Clearance Time (s)                | 6.0   | 6.0  | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Vehicle Extension (s)             | 3.0   | 3.0  | 3.0   |      | 3.0  |      | 3.0                       | 3.0  |      | 3.0  | 3.0  | 3.0   |
| Lane Grp Cap (vph)                | 244   | 352  | 287   |      | 239  |      | 474                       | 1274 |      | 428  | 948  | 791   |
| v/s Ratio Prot                    |       | 0.01 |       |      |      |      | c0.08                     | 0.19 |      |      |      | c0.36 |
| v/s Ratio Perm                    | c0.13 |      | 0.07  |      | 0.02 |      | 0.26                      |      |      | 0.02 |      | 0.06  |
| v/c Ratio                         | 0.69  | 0.03 | 0.37  |      | 0.10 |      | 0.48                      | 0.26 |      | 0.04 | 0.70 | 0.12  |
| Uniform Delay, d1                 | 45.8  | 40.2 | 42.9  |      | 40.8 |      | 11.9                      | 5.9  |      | 14.5 | 22.2 | 15.1  |
| Progression Factor                | 1.00  | 1.00 | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Incremental Delay, d2             | 8.2   | 0.0  | 0.8   |      | 0.8  |      | 0.8                       | 0.5  |      | 0.2  | 4.3  | 0.3   |
| Delay (s)                         | 54.1  | 40.3 | 43.7  |      | 41.6 |      | 12.7                      | 6.4  |      | 14.7 | 26.5 | 15.4  |
| Level of Service                  | D     | D    | D     |      | D    |      | B                         | A    |      | B    | C    | B     |
| Approach Delay (s)                |       | 46.0 |       |      | 41.6 |      |                           | 9.0  |      |      | 24.0 |       |
| Approach LOS                      |       | D    |       |      | D    |      |                           | A    |      |      | C    |       |
| <b>Intersection Summary</b>       |       |      |       |      |      |      |                           |      |      |      |      |       |
| HCM 2000 Control Delay            |       |      | 28.0  |      |      |      | HCM 2000 Level of Service |      |      | C    |      |       |
| HCM 2000 Volume to Capacity ratio |       |      | 0.66  |      |      |      |                           |      |      |      |      |       |
| Actuated Cycle Length (s)         |       |      | 120.0 |      |      |      | Sum of lost time (s)      |      |      | 16.0 |      |       |
| Intersection Capacity Utilization |       |      | 78.3% |      |      |      | ICU Level of Service      |      |      | D    |      |       |
| Analysis Period (min)             |       |      | 15    |      |      |      |                           |      |      |      |      |       |
| c Critical Lane Group             |       |      |       |      |      |      |                           |      |      |      |      |       |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 0   | 7   | 5   | 0   | 25  | 0  | 451   | 11  | 90  | 800   | 8   |
| Future Volume (Veh/h)             | 0   | 0   | 7   | 5   | 0   | 25  | 0  | 451   | 11  | 90  | 800   | 8   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75   | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  |
| Hourly flow rate (vph)            | 0   | 0   | 9   | 7   | 0   | 33  | 0  | 601   | 15  | 120   | 1067  | 11  |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.87  | 0.87  |   | 0.87  | 0.87  | 0.87  |  |   |   |   | 0.87  |   |
| vC, conflicting volume            | 1954  | 1928  | 1072  | 1930  | 1926  | 608   | 1078   |   |   |   | 616   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 2025  | 1995  | 1072  | 1997  | 1993  | 470   | 1078   |   |   |   | 478   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.4   | 7.1   | 6.5   | 6.4   | 4.1  |   |   |   | 4.2   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.5   | 3.5   | 4.0   | 3.5   | 2.2  |   |   |   | 2.3   |   |
| p0 queue free %                   | 100   | 100   | 96  | 79  | 100   | 93  | 100  |   |   |   | 87  |   |
| cM capacity (veh/h)               | 31  | 46  | 250   | 34  | 46  | 477   | 655  |   |   |   | 907   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 9   | 40  | 616   | 1198  |   |   |  |   |   |   |   |   |
| Volume Left                       | 0   | 7   | 0   | 120   |   |   |  |   |   |   |   |   |
| Volume Right                      | 9   | 33  | 15  | 11  |   |   |  |   |   |   |   |   |
| cSH                               | 250   | 146   | 655   | 907   |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.04  | 0.27  | 0.00  | 0.13  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.8   | 8.0   | 0.0   | 3.5   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 19.9  | 38.9  | 0.0   | 4.1   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | E   |   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 19.9  | 38.9  | 0.0   | 4.1   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | E   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 88.4%   |   | ICU Level of Service  |   |  |   | E   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/01/2025



| Movement                          | EBL                 | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR                       |                      |   |
|-----------------------------------|---------------------|------|-------|------|------|------|------|------|------|------|------|---------------------------|----------------------|---|
| Lane Configurations               |                     | ↕    |       |      | ↕    |      |      | ↕    |      |      | ↕    |                           |                      |   |
| Traffic Volume (vph)              | 5                   | 4    | 2     | 48   | 1    | 35   | 4    | 438  | 2    | 4    | 723  | 0                         |                      |   |
| Future Volume (vph)               | 5                   | 4    | 2     | 48   | 1    | 35   | 4    | 438  | 2    | 4    | 723  | 0                         |                      |   |
| Ideal Flow (vphpl)                | 1900                | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900                      |                      |   |
| Total Lost time (s)               |                     | 6.0  |       |      | 6.0  |      |      | 6.0  |      |      | 6.0  |                           |                      |   |
| Lane Util. Factor                 |                     | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      | 1.00 |                           |                      |   |
| Frt                               |                     | 0.96 |       |      | 0.93 |      |      | 1.00 |      |      | 1.00 |                           |                      |   |
| Flt Protected                     |                     | 0.98 |       |      | 0.98 |      |      | 1.00 |      |      | 1.00 |                           |                      |   |
| Satd. Flow (prot)                 |                     | 1783 |       |      | 1718 |      |      | 1878 |      |      | 1882 |                           |                      |   |
| Flt Permitted                     |                     | 0.89 |       |      | 0.83 |      |      | 0.99 |      |      | 0.99 |                           |                      |   |
| Satd. Flow (perm)                 |                     | 1608 |       |      | 1458 |      |      | 1867 |      |      | 1870 |                           |                      |   |
| Peak-hour factor, PHF             | 0.50                | 0.38 | 0.25  | 0.52 | 0.25 | 0.39 | 0.75 | 0.91 | 0.25 | 0.38 | 0.91 | 0.92                      |                      |   |
| Adj. Flow (vph)                   | 10                  | 11   | 8     | 92   | 4    | 90   | 5    | 481  | 8    | 11   | 795  | 0                         |                      |   |
| RTOR Reduction (vph)              | 0                   | 6    | 0     | 0    | 42   | 0    | 0    | 1    | 0    | 0    | 0    | 0                         |                      |   |
| Lane Group Flow (vph)             | 0                   | 23   | 0     | 0    | 144  | 0    | 0    | 493  | 0    | 0    | 806  | 0                         |                      |   |
| Turn Type                         | Perm                | NA   |       | Perm | NA   |      | Perm | NA   |      | Perm | NA   |                           |                      |   |
| Protected Phases                  |                     | 4    |       |      | 8    |      |      | 2    |      |      | 6    |                           |                      |   |
| Permitted Phases                  | 4                   |      |       | 8    |      |      | 2    |      |      | 6    |      |                           |                      |   |
| Actuated Green, G (s)             |                     | 19.0 |       |      | 19.0 |      |      | 49.0 |      |      | 49.0 |                           |                      |   |
| Effective Green, g (s)            |                     | 19.0 |       |      | 19.0 |      |      | 49.0 |      |      | 49.0 |                           |                      |   |
| Actuated g/C Ratio                |                     | 0.24 |       |      | 0.24 |      |      | 0.61 |      |      | 0.61 |                           |                      |   |
| Clearance Time (s)                |                     | 6.0  |       |      | 6.0  |      |      | 6.0  |      |      | 6.0  |                           |                      |   |
| Lane Grp Cap (vph)                |                     | 381  |       |      | 346  |      |      | 1143 |      |      | 1145 |                           |                      |   |
| v/s Ratio Prot                    |                     |      |       |      |      |      |      |      |      |      |      |                           |                      |   |
| v/s Ratio Perm                    |                     | 0.01 |       |      | 0.10 |      |      | 0.26 |      |      | 0.43 |                           |                      |   |
| v/c Ratio                         |                     | 0.06 |       |      | 0.42 |      |      | 0.43 |      |      | 0.70 |                           |                      |   |
| Uniform Delay, d1                 |                     | 23.6 |       |      | 25.8 |      |      | 8.2  |      |      | 10.6 |                           |                      |   |
| Progression Factor                |                     | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      | 1.00 |                           |                      |   |
| Incremental Delay, d2             |                     | 0.3  |       |      | 3.7  |      |      | 1.2  |      |      | 3.6  |                           |                      |   |
| Delay (s)                         |                     | 23.9 |       |      | 29.5 |      |      | 9.4  |      |      | 14.2 |                           |                      |   |
| Level of Service                  |                     | C    |       |      | C    |      |      | A    |      |      | B    |                           |                      |   |
| Approach Delay (s)                |                     | 23.9 |       |      | 29.5 |      |      | 9.4  |      |      | 14.2 |                           |                      |   |
| Approach LOS                      |                     | C    |       |      | C    |      |      | A    |      |      | B    |                           |                      |   |
| <b>Intersection Summary</b>       |                     |      |       |      |      |      |      |      |      |      |      |                           |                      |   |
| HCM 2000 Control Delay            |                     |      | 14.7  |      |      |      |      |      |      |      |      | HCM 2000 Level of Service | B                    |   |
| HCM 2000 Volume to Capacity ratio |                     |      | 0.62  |      |      |      |      |      |      |      |      |                           |                      |   |
| Actuated Cycle Length (s)         |                     |      | 80.0  |      |      |      |      |      |      |      | 12.0 |                           |                      |   |
| Intersection Capacity Utilization |                     |      | 57.3% |      |      |      |      |      |      |      |      |                           | ICU Level of Service | B |
| Analysis Period (min)             |                     |      | 15    |      |      |      |      |      |      |      |      |                           |                      |   |
| c                                 | Critical Lane Group |      |       |      |      |      |      |      |      |      |      |                           |                      |   |

# HCM Unsignalized Intersection Capacity Analysis

## 5: Street A/E Communication Rd & 7th Line

12/01/2025



| Movement                          | WBL   | WBR  | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|------|-------|----------------------|------|------|
| Lane Configurations               |       |      |       |                      |      |      |
| Sign Control                      | Stop  |      | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 0     | 15   | 0     | 0                    | 40   | 0    |
| Future Volume (vph)               | 0     | 15   | 0     | 0                    | 40   | 0    |
| Peak Hour Factor                  | 0.92  | 0.92 | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0     | 16   | 0     | 0                    | 43   | 0    |
| Direction, Lane #                 | WB 1  | NB 1 | SB 1  |                      |      |      |
| Volume Total (vph)                | 16    | 0    | 43    |                      |      |      |
| Volume Left (vph)                 | 0     | 0    | 43    |                      |      |      |
| Volume Right (vph)                | 16    | 0    | 0     |                      |      |      |
| Hadj (s)                          | -0.57 | 0.00 | 0.23  |                      |      |      |
| Departure Headway (s)             | 3.4   | 4.0  | 4.2   |                      |      |      |
| Degree Utilization, x             | 0.02  | 0.00 | 0.05  |                      |      |      |
| Capacity (veh/h)                  | 1029  | 900  | 857   |                      |      |      |
| Control Delay (s)                 | 6.5   | 7.0  | 7.4   |                      |      |      |
| Approach Delay (s)                | 6.5   | 0.0  | 7.4   |                      |      |      |
| Approach LOS                      | A     | A    | A     |                      |      |      |
| Intersection Summary              |       |      |       |                      |      |      |
| Delay                             |       |      | 7.1   |                      |      |      |
| Level of Service                  |       |      | A     |                      |      |      |
| Intersection Capacity Utilization |       |      | 13.3% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |      | 15    |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 6: Center Line & 7th Line/E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 1   | 6   | 33  | 4   | 5   | 1   | 11   | 82  | 7   | 0   | 116   | 0   |
| Future Volume (Veh/h)             | 1   | 6   | 33  | 4   | 5   | 1   | 11   | 82  | 7   | 0   | 116   | 0   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.75  | 0.73  | 0.50  | 1.00  | 0.25  | 0.83   | 0.82  | 0.75  | 0.25  | 0.83  | 0.25  |
| Hourly flow rate (vph)            | 2   | 8   | 45  | 8   | 5   | 4   | 13   | 100   | 9   | 0   | 140   | 0   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 277   | 275   | 140   | 320   | 270   | 104   | 140  |   |   | 109   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 277   | 275   | 140   | 320   | 270   | 104   | 140  |   |   | 109   |   |   |
| tC, single (s)                    | 7.6   | 6.7   | 6.2   | 7.3   | 6.5   | 6.2   | 4.2  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.0   | 4.2   | 3.3   | 3.7   | 4.0   | 3.3   | 2.3  |   |   | 2.2   |   |   |
| p0 queue free %                   | 100   | 99  | 95  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 579   | 602   | 905   | 552   | 633   | 956   | 1395   |   |   | 1494  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 55  | 17  | 122   | 140   |   |   |  |   |   |   |   |   |
| Volume Left                       | 2   | 8   | 13  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 45  | 4   | 9   | 0   |   |   |  |   |   |   |   |   |
| cSH                               | 828   | 640   | 1395  | 1494  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.07  | 0.03  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.6   | 0.6   | 0.2   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.7   | 10.8  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.7   | 10.8  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 22.0%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/01/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             | ↔           | ↔           |                      | ↔    |      |
| Traffic Volume (veh/h)            | 0           | 101         | 30          | 0                    | 0    | 0    |
| Future Volume (Veh/h)             | 0           | 101         | 30          | 0                    | 0    | 0    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0           | 110         | 33          | 0                    | 0    | 0    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 33          |             |             |                      | 143  | 33   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 33          |             |             |                      | 143  | 33   |
| tC, single (s)                    | 4.1         |             |             |                      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |             |             |             |                      |      |      |
| tF (s)                            | 2.2         |             |             |                      | 3.5  | 3.3  |
| p0 queue free %                   | 100         |             |             |                      | 100  | 100  |
| cM capacity (veh/h)               | 1579        |             |             |                      | 850  | 1041 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 110         | 33          | 0           |                      |      |      |
| Volume Left                       | 0           | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 0           |                      |      |      |
| cSH                               | 1579        | 1700        | 1700        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.00        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.0         |                      |      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 0.0         |                      |      |      |
| Lane LOS                          |             |             | A           |                      |      |      |
| Approach Delay (s)                | 0.0         | 0.0         | 0.0         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 0.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 8.6%        | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 8   | 1   | 7   | 64  | 0   | 4   | 8  | 378   | 66  | 6   | 346   | 1   |
| Future Volume (Veh/h)             | 8   | 1   | 7   | 64  | 0   | 4   | 8  | 378   | 66  | 6   | 346   | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.35  | 0.25  | 0.50  | 0.84  | 0.25  | 0.75  | 0.58   | 0.92  | 0.72  | 0.42  | 0.89  | 0.25  |
| Hourly flow rate (vph)            | 23  | 4   | 14  | 76  | 0   | 5   | 14   | 411   | 92  | 14  | 389   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage (veh)              |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  | 276   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 909   | 950   | 391   | 920   | 906   | 457   | 393  |   |   | 503   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 909   | 950   | 391   | 920   | 906   | 457   | 393  |   |   | 503   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.2   |   |   |
| p0 queue free %                   | 91  | 98  | 98  | 68  | 100   | 99  | 99   |   |   | 99  |   |   |
| cM capacity (veh/h)               | 251   | 256   | 662   | 241   | 271   | 608   | 1177   |   |   | 1072  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 41  | 81  | 517   | 407   |   |   |  |   |   |   |   |   |
| Volume Left                       | 23  | 76  | 14  | 14  |   |   |  |   |   |   |   |   |
| Volume Right                      | 14  | 5   | 92  | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 319   | 250   | 1177  | 1072  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.13  | 0.32  | 0.01  | 0.01  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 3.3   | 10.3  | 0.3   | 0.3   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 17.9  | 26.2  | 0.4   | 0.4   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | D   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 17.9  | 26.2  | 0.4   | 0.4   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | D   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.1   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 41.4%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

HCM Signalized Intersection Capacity Analysis  
2: Ward St & Bridge Rd

12/01/2025

|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |  |  |  |   |  |   |  |  |   |  |  |  |
| Traffic Volume (vph)              | 55  | 0   | 172   | 2   | 7   | 4   | 430   | 151   | 2   | 1   | 128   | 62  |
| Future Volume (vph)               | 55  | 0   | 172   | 2   | 7   | 4   | 430   | 151   | 2   | 1   | 128   | 62  |
| Ideal Flow (vphpl)                | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Total Lost time (s)               | 6.0   |   | 6.0   |   | 6.0   |   | 4.0   | 6.0   |   | 6.0   | 6.0   | 6.0   |
| Lane Util. Factor                 | 1.00  |   | 1.00  |   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  | 1.00  |
| Frt                               | 1.00  |   | 0.85  |   | 0.96  |   | 1.00  | 0.99  |   | 1.00  | 1.00  | 0.85  |
| Flt Protected                     | 0.95  |   | 1.00  |   | 0.99  |   | 0.95  | 1.00  |   | 0.95  | 1.00  | 1.00  |
| Satd. Flow (prot)                 | 1755  |   | 1541  |   | 1439  |   | 1722  | 1712  |   | 1825  | 1812  | 1601  |
| Flt Permitted                     | 0.75  |   | 1.00  |   | 0.96  |   | 0.59  | 1.00  |   | 0.64  | 1.00  | 1.00  |
| Satd. Flow (perm)                 | 1377  |   | 1541  |   | 1400  |   | 1068  | 1712  |   | 1226  | 1812  | 1601  |
| Peak-hour factor, PHF             | 0.78  | 0.25  | 0.92  | 0.45  | 0.75  | 0.75  | 0.80  | 0.83  | 0.25  | 0.25  | 0.68  | 0.74  |
| Adj. Flow (vph)                   | 71  | 0   | 187   | 4   | 9   | 5   | 538   | 182   | 8   | 4   | 188   | 84  |
| RTOR Reduction (vph)              | 0   | 0   | 153   | 0   | 4   | 0   | 0   | 1   | 0   | 0   | 0   | 42  |
| Lane Group Flow (vph)             | 71  | 0   | 34  | 0   | 14  | 0   | 538   | 189   | 0   | 4   | 188   | 42  |
| Heavy Vehicles (%)                | 4%  | 0%  | 6%  | 0%  | 17%   | 67%   | 6%  | 12%   | 0%  | 0%  | 6%  | 2%  |
| Turn Type                         | Perm  |   | Perm  | Perm  | NA  |   | pm+pt   | NA  |   | Perm  | NA  | Perm  |
| Protected Phases                  |   | 8   |   |   | 4   |   | 1   | 6   |   |   | 2   |   |
| Permitted Phases                  | 8   |   | 8   | 4   |   |   | 6   |   |   | 2   |   | 2   |
| Actuated Green, G (s)             | 22.0  |   | 22.0  |   | 22.0  |   | 86.0  | 86.0  |   | 60.0  | 60.0  | 60.0  |
| Effective Green, g (s)            | 22.0  |   | 22.0  |   | 22.0  |   | 86.0  | 86.0  |   | 60.0  | 60.0  | 60.0  |
| Actuated g/C Ratio                | 0.18  |   | 0.18  |   | 0.18  |   | 0.72  | 0.72  |   | 0.50  | 0.50  | 0.50  |
| Clearance Time (s)                | 6.0   |   | 6.0   |   | 6.0   |   | 4.0   | 6.0   |   | 6.0   | 6.0   | 6.0   |
| Vehicle Extension (s)             | 3.0   |   | 3.0   |   | 3.0   |   | 3.0   | 3.0   |   | 3.0   | 3.0   | 3.0   |
| Lane Grp Cap (vph)                | 252   |   | 282   |   | 256   |   | 885   | 1226  |   | 613   | 906   | 800   |
| v/s Ratio Prot                    |   |   |   |   |   |   | c0.11   | 0.11  |   |   | 0.10  |   |
| v/s Ratio Perm                    | c0.05   |   | 0.02  |   | 0.01  |   | c0.32   |   |   | 0.00  |   | 0.03  |
| v/c Ratio                         | 0.28  |   | 0.12  |   | 0.05  |   | 0.61  | 0.15  |   | 0.01  | 0.21  | 0.05  |
| Uniform Delay, d1                 | 42.2  |   | 40.9  |   | 40.4  |   | 7.2   | 5.4   |   | 15.0  | 16.7  | 15.4  |
| Progression Factor                | 1.00  |   | 1.00  |   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  | 1.00  |
| Incremental Delay, d2             | 0.6   |   | 0.2   |   | 0.4   |   | 1.2   | 0.3   |   | 0.0   | 0.5   | 0.1   |
| Delay (s)                         | 42.8  |   | 41.1  |   | 40.8  |   | 8.4   | 5.7   |   | 15.1  | 17.3  | 15.5  |
| Level of Service                  | D   |   | D   |   | D   |   | A   | A   |   | B   | B   | B   |
| Approach Delay (s)                |   | 41.6  |   |   | 40.8  |   |   | 7.7   |   |   | 16.7  |   |
| Approach LOS                      |   | D   |   |   | D   |   |   | A   |   |   | B   |   |
| <b>Intersection Summary</b>       |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 2000 Control Delay            |   |   | 16.9  |   |   |   | HCM 2000 Level of Service   |   |   |   | B   |   |
| HCM 2000 Volume to Capacity ratio |   |   | 0.56  |   |   |   |   |   |   |   |   |   |
| Actuated Cycle Length (s)         |   |   | 120.0   |   |   |   | Sum of lost time (s)  |   |   | 16.0  |   |   |
| Intersection Capacity Utilization |   |   | 57.2%   |   |   |   | ICU Level of Service  |   |   | B   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |   |   |   |   |   |   |
| c Critical Lane Group             |   |   |   |   |   |   |   |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/01/2025



| Movement                          | EBL   | EBT   | EBR   | WBL  | WBT                  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-----------------------------------|-------|-------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations               |       | ↕     |       |      | ↕                    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (veh/h)            | 4     | 0     | 1     | 9    | 0                    | 22   | 6    | 909  | 2    | 26   | 514  | 18   |
| Future Volume (Veh/h)             | 4     | 0     | 1     | 9    | 0                    | 22   | 6    | 909  | 2    | 26   | 514  | 18   |
| Sign Control                      |       | Stop  |       |      | Stop                 |      |      | Free |      |      | Free |      |
| Grade                             |       | 0%    |       |      | 0%                   |      |      | 0%   |      |      | 0%   |      |
| Peak Hour Factor                  | 0.88  | 0.88  | 0.88  | 0.88 | 0.88                 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph)            | 5     | 0     | 1     | 10   | 0                    | 25   | 7    | 1033 | 2    | 30   | 584  | 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)               |       |       |       |      |                      |      |      |      |      |      |      |      |
|                                   |       |       |       |      |                      |      |      | 241  |      |      |      |      |
| pX, platoon unblocked             | 0.44  | 0.44  |       | 0.44 | 0.44                 | 0.44 |      |      |      | 0.44 |      |      |
| vC, conflicting volume            | 1727  | 1703  | 594   | 1703 | 1712                 | 1034 | 604  |      |      | 1035 |      |      |
| vC1, stage 1 conf vol             |       |       |       |      |                      |      |      |      |      |      |      |      |
| vC2, stage 2 conf vol             |       |       |       |      |                      |      |      |      |      |      |      |      |
| vCu, unblocked vol                | 2016  | 1962  | 594   | 1962 | 1982                 | 440  | 604  |      |      | 443  |      |      |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1  | 6.5                  | 6.2  | 4.1  |      |      | 4.1  |      |      |
| tC, 2 stage (s)                   |       |       |       |      |                      |      |      |      |      |      |      |      |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5  | 4.0                  | 3.3  | 2.2  |      |      | 2.2  |      |      |
| p0 queue free %                   | 70    | 100   | 100   | 50   | 100                  | 91   | 99   |      |      | 94   |      |      |
| cM capacity (veh/h)               | 17    | 26    | 509   | 20   | 25                   | 273  | 984  |      |      | 484  |      |      |
| Direction, Lane #                 |       |       |       |      |                      |      |      |      |      |      |      |      |
|                                   | EB 1  | WB 1  | NB 1  | SB 1 |                      |      |      |      |      |      |      |      |
| Volume Total                      | 6     | 35    | 1042  | 634  |                      |      |      |      |      |      |      |      |
| Volume Left                       | 5     | 10    | 7     | 30   |                      |      |      |      |      |      |      |      |
| Volume Right                      | 1     | 25    | 2     | 20   |                      |      |      |      |      |      |      |      |
| cSH                               | 20    | 59    | 984   | 484  |                      |      |      |      |      |      |      |      |
| Volume to Capacity                | 0.30  | 0.59  | 0.01  | 0.06 |                      |      |      |      |      |      |      |      |
| Queue Length 95th (m)             | 6.6   | 18.3  | 0.2   | 1.5  |                      |      |      |      |      |      |      |      |
| Control Delay (s)                 | 251.2 | 130.8 | 0.2   | 1.8  |                      |      |      |      |      |      |      |      |
| Lane LOS                          | F     | F     | A     | A    |                      |      |      |      |      |      |      |      |
| Approach Delay (s)                | 251.2 | 130.8 | 0.2   | 1.8  |                      |      |      |      |      |      |      |      |
| Approach LOS                      | F     | F     |       |      |                      |      |      |      |      |      |      |      |
| Intersection Summary              |       |       |       |      |                      |      |      |      |      |      |      |      |
| Average Delay                     |       |       | 4.3   |      |                      |      |      |      |      |      |      |      |
| Intersection Capacity Utilization |       |       | 60.0% |      | ICU Level of Service |      |      |      |      | B    |      |      |
| Analysis Period (min)             |       |       | 15    |      |                      |      |      |      |      |      |      |      |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/01/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 7    | 2    | 4    | 35   | 1    | 16   | 1    | 892  | 1    | 1    | 574  | 1    |
| Future Volume (vph)    | 7    | 2    | 4    | 35   | 1    | 16   | 1    | 892  | 1    | 1    | 574  | 1    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.95 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.97 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1745 |      |      | 1744 |      |      | 1882 |      |      | 1881 |      |
| Flt Permitted          |      | 0.87 |      |      | 0.81 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1559 |      |      | 1459 |      |      | 1878 |      |      | 1874 |      |
| Peak-hour factor, PHF  | 0.50 | 0.50 | 0.38 | 0.68 | 0.25 | 0.58 | 0.25 | 0.92 | 0.25 | 0.25 | 0.81 | 0.25 |
| Adj. Flow (vph)        | 14   | 4    | 11   | 51   | 4    | 28   | 4    | 970  | 4    | 4    | 709  | 4    |
| RTOR Reduction (vph)   | 0    | 8    | 0    | 0    | 21   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 21   | 0    | 0    | 62   | 0    | 0    | 978  | 0    | 0    | 717  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 370  |      |      | 346  |      |      | 1150 |      |      | 1147 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.04 |      |      | 0.52 |      |      | 0.38 |      |
| v/c Ratio              |      | 0.06 |      |      | 0.18 |      |      | 0.85 |      |      | 0.62 |      |
| Uniform Delay, d1      |      | 23.6 |      |      | 24.3 |      |      | 12.5 |      |      | 9.7  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.3  |      |      | 1.1  |      |      | 8.0  |      |      | 2.6  |      |
| Delay (s)              |      | 23.9 |      |      | 25.4 |      |      | 20.5 |      |      | 12.3 |      |
| Level of Service       |      | C    |      |      | C    |      |      | C    |      |      | B    |      |
| Approach Delay (s)     |      | 23.9 |      |      | 25.4 |      |      | 20.5 |      |      | 12.3 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | C    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 17.5  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.66  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 61.9% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 5: Street A/E Communication Rd & 7th Line

12/01/2025



| Movement                          | WBL   | WBR  | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|------|-------|----------------------|------|------|
| Lane Configurations               |       |      |       |                      |      |      |
| Sign Control                      | Stop  |      | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 0     | 16   | 0     | 0                    | 29   | 0    |
| Future Volume (vph)               | 0     | 16   | 0     | 0                    | 29   | 0    |
| Peak Hour Factor                  | 0.92  | 0.92 | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0     | 17   | 0     | 0                    | 32   | 0    |
| Direction, Lane #                 | WB 1  | NB 1 | SB 1  |                      |      |      |
| Volume Total (vph)                | 17    | 0    | 32    |                      |      |      |
| Volume Left (vph)                 | 0     | 0    | 32    |                      |      |      |
| Volume Right (vph)                | 17    | 0    | 0     |                      |      |      |
| Hadj (s)                          | -0.57 | 0.00 | 0.23  |                      |      |      |
| Departure Headway (s)             | 3.4   | 4.0  | 4.2   |                      |      |      |
| Degree Utilization, x             | 0.02  | 0.00 | 0.04  |                      |      |      |
| Capacity (veh/h)                  | 1039  | 900  | 856   |                      |      |      |
| Control Delay (s)                 | 6.5   | 7.0  | 7.3   |                      |      |      |
| Approach Delay (s)                | 6.5   | 0.0  | 7.3   |                      |      |      |
| Approach LOS                      | A     | A    | A     |                      |      |      |
| Intersection Summary              |       |      |       |                      |      |      |
| Delay                             |       |      | 7.0   |                      |      |      |
| Level of Service                  |       |      | A     |                      |      |      |
| Intersection Capacity Utilization |       |      | 13.3% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |      | 15    |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 6: Center Line & 7th Line/E Communication Rd

12/01/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 5   | 25  | 2   | 4   | 1   | 12   | 83  | 6   | 0   | 95  | 1   |
| Future Volume (Veh/h)             | 0   | 5   | 25  | 2   | 4   | 1   | 12   | 83  | 6   | 0   | 95  | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.50  | 0.72  | 0.75  | 0.75  | 0.25  | 0.75   | 0.82  | 0.63  | 0.25  | 0.81  | 0.25  |
| Hourly flow rate (vph)            | 0   | 10  | 35  | 3   | 5   | 4   | 16   | 101   | 10  | 0   | 117   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 264   | 262   | 119   | 297   | 259   | 106   | 121  |   |   | 111   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 264   | 262   | 119   | 297   | 259   | 106   | 121  |   |   | 111   |   |   |
| tC, single (s)                    | 8.1   | 6.5   | 6.3   | 7.4   | 6.5   | 6.2   | 4.3  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.4   | 4.0   | 3.4   | 3.8   | 4.0   | 3.3   | 2.4  |   |   | 2.2   |   |   |
| p0 queue free %                   | 100   | 98  | 96  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 519   | 639   | 914   | 563   | 641   | 954   | 1379   |   |   | 1492  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 45  | 12  | 127   | 121   |   |   |  |   |   |   |   |   |
| Volume Left                       | 0   | 3   | 16  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 35  | 4   | 10  | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 834   | 693   | 1379  | 1492  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.05  | 0.02  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.3   | 0.4   | 0.3   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.6   | 10.3  | 1.0   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.6   | 10.3  | 1.0   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.3   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 22.1%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/01/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             |             |             |                      |      |      |
| Traffic Volume (veh/h)            | 0           | 28          | 33          | 0                    | 0    | 0    |
| Future Volume (Veh/h)             | 0           | 28          | 33          | 0                    | 0    | 0    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 0           | 30          | 36          | 0                    | 0    | 0    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 36          |             |             |                      | 66   | 36   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 36          |             |             |                      | 66   | 36   |
| tC, single (s)                    | 4.1         |             |             |                      | 6.4  | 6.2  |
| tC, 2 stage (s)                   |             |             |             |                      |      |      |
| tF (s)                            | 2.2         |             |             |                      | 3.5  | 3.3  |
| p0 queue free %                   | 100         |             |             |                      | 100  | 100  |
| cM capacity (veh/h)               | 1575        |             |             |                      | 939  | 1037 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 30          | 36          | 0           |                      |      |      |
| Volume Left                       | 0           | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 0           |                      |      |      |
| cSH                               | 1575        | 1700        | 1700        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.01        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.0         |                      |      |      |
| Control Delay (s)                 | 0.0         | 0.0         | 0.0         |                      |      |      |
| Lane LOS                          |             |             | A           |                      |      |      |
| Approach Delay (s)                | 0.0         | 0.0         | 0.0         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 0.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 6.7%        | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# Appendix H

## **Trip Generation**

# Trip Generation 12680152, ITE (12<sup>th</sup> Ed) Single-Family Detached Housing (LUC 210): 38 Lots

## AM Peak Hour (Vehicles)

ITETripGen Web-based App

Help Roland Roovers

### Graph Look Up

**Query** Filter

DATA SOURCE:  
Trip Generation Manual, 12th Ed

SEARCH BY LAND USE CODE:  
210

LAND USE GROUP:  
(200-299) Residential

LAND USE:  
210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:  
All Sites

SETTING/LOCATION:  
General Urban/Suburban

INDEPENDENT VARIABLE (IV):  
Dwelling Units

TIME PERIOD:  
Weekday, Peak Hour of Adjacent Stre

TRIP TYPE:  
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:  
38 Calculate

**Data Plot and Equation**

Use the mouse wheel to Zoom Out or Zoom In.  
Hover the mouse pointer on data points to view X and T values.

**DATA STATISTICS**

Land Use:  
Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

Independent Variable:  
Dwelling Units

Time Period:  
Weekday  
Peak Hour of Adjacent Street Traffic  
One Hour Between 7 and 9 a.m.

Setting/Location:  
General Urban/Suburban

Trip Type:  
Vehicle

Number of Studies:  
153

Avg. Num. of Dwelling Units:  
239

Average Rate:  
0.70

Range of Rates:  
0.22 - 2.27

Standard Deviation:  
0.26

Fitted Curve Equation:  
 $T = 0.67(X) + 5.59$

R<sup>2</sup>:  
0.89

Directional Distribution:  
27% entering, 73% exiting

Calculated Trip Ends:  
Average Rate: 27 (Total), 7 (Entry), 20 (Exit)  
Fitted Curve: 31 (Total), 8 (Entry), 23 (Exit)

## PM Peak Hour (Vehicles)

ITETripGen Web-based App

Help Roland Roovers

### Graph Look Up

**Query** Filter

DATA SOURCE:  
Trip Generation Manual, 12th Ed

SEARCH BY LAND USE CODE:  
210

LAND USE GROUP:  
(200-299) Residential

LAND USE:  
210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:  
All Sites

SETTING/LOCATION:  
General Urban/Suburban

INDEPENDENT VARIABLE (IV):  
Dwelling Units

TIME PERIOD:  
Weekday, Peak Hour of Adjacent Stre

TRIP TYPE:  
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:  
38 Calculate

**Data Plot and Equation**

Use the mouse wheel to Zoom Out or Zoom In.  
Hover the mouse pointer on data points to view X and T values.

**DATA STATISTICS**

Land Use:  
Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

Independent Variable:  
Dwelling Units

Time Period:  
Weekday  
Peak Hour of Adjacent Street Traffic  
One Hour Between 4 and 6 p.m.

Setting/Location:  
General Urban/Suburban

Trip Type:  
Vehicle

Number of Studies:  
166

Avg. Num. of Dwelling Units:  
266

Average Rate:  
0.93

Range of Rates:  
0.35 - 2.98

Standard Deviation:  
0.33

Fitted Curve Equation:  
 $\ln(T) = 0.92 \ln(X) + 0.33$

R<sup>2</sup>:  
0.90

Directional Distribution:  
62% entering, 38% exiting

Calculated Trip Ends:  
Average Rate: 35 (Total), 22 (Entry), 13 (Exit)  
Fitted Curve: 40 (Total), 24 (Entry), 16 (Exit)

# Appendix I

**Total 2028 Traffic Conditions – Synchro  
Outputs**

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 0   | 3   | 81  | 3   | 9   | 2  | 168   | 41  | 14  | 223   | 2   |
| Future Volume (Veh/h)             | 2   | 0   | 3   | 81  | 3   | 9   | 2  | 168   | 41  | 14  | 223   | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.25  | 0.25  | 0.38  | 0.75  | 0.50  | 0.35  | 0.25   | 0.86  | 0.75  | 0.75  | 0.84  | 0.25  |
| Hourly flow rate (vph)            | 8   | 0   | 8   | 108   | 6   | 26  | 8  | 195   | 55  | 19  | 265   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 574   | 573   | 269   | 554   | 550   | 222   | 273  |   |   | 250   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 574   | 573   | 269   | 554   | 550   | 222   | 273  |   |   | 250   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.3   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.4   |   |   |
| p0 queue free %                   | 98  | 100   | 99  | 75  | 99  | 97  | 99   |   |   | 98  |   |   |
| cM capacity (veh/h)               | 407   | 423   | 775   | 429   | 436   | 822   | 1302   |   |   | 1233  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 16  | 140   | 258   | 292   |   |   |  |   |   |   |   |   |
| Volume Left                       | 8   | 108   | 8   | 19  |   |   |  |   |   |   |   |   |
| Volume Right                      | 8   | 26  | 55  | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 534   | 471   | 1302  | 1233  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.03  | 0.30  | 0.01  | 0.02  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.7   | 9.4   | 0.1   | 0.4   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 11.9  | 15.8  | 0.3   | 0.7   |   |   |  |   |   |   |   |   |
| Lane LOS                          | B   | C   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 11.9  | 15.8  | 0.3   | 0.7   |   |   |  |   |   |   |   |   |
| Approach LOS                      | B   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.8   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 37.7%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

HCM Signalized Intersection Capacity Analysis  
2: Ward St & Bridge Rd

12/02/2025

| Movement                          | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL                       | NBT  | NBR  | SBL  | SBT  | SBR   |
|-----------------------------------|-------|------|-------|------|------|------|---------------------------|------|------|------|------|-------|
| Lane Configurations               |       |      |       |      |      |      |                           |      |      |      |      |       |
| Traffic Volume (vph)              | 116   | 4    | 357   | 4    | 3    | 6    | 159                       | 182  | 0    | 7    | 501  | 111   |
| Future Volume (vph)               | 116   | 4    | 357   | 4    | 3    | 6    | 159                       | 182  | 0    | 7    | 501  | 111   |
| Ideal Flow (vphpl)                | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900                      | 1900 | 1900 | 1900 | 1900 | 1900  |
| Total Lost time (s)               | 6.0   | 6.0  | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Lane Util. Factor                 | 1.00  | 1.00 | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Frt                               | 1.00  | 1.00 | 0.85  |      | 0.94 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 0.85  |
| Flt Protected                     | 0.95  | 1.00 | 1.00  |      | 0.99 |      | 0.95                      | 1.00 |      | 0.95 | 1.00 | 1.00  |
| Satd. Flow (prot)                 | 1722  | 1921 | 1570  |      | 1365 |      | 1630                      | 1779 |      | 1415 | 1847 | 1541  |
| Flt Permitted                     | 0.74  | 1.00 | 1.00  |      | 0.94 |      | 0.26                      | 1.00 |      | 0.58 | 1.00 | 1.00  |
| Satd. Flow (perm)                 | 1339  | 1921 | 1570  |      | 1304 |      | 439                       | 1779 |      | 857  | 1847 | 1541  |
| Peak-hour factor, PHF             | 0.74  | 0.50 | 0.68  | 0.50 | 0.38 | 0.50 | 0.76                      | 0.60 | 0.25 | 0.44 | 0.83 | 0.68  |
| Adj. Flow (vph)                   | 157   | 8    | 525   | 8    | 8    | 12   | 209                       | 303  | 0    | 16   | 604  | 163   |
| RTOR Reduction (vph)              | 0     | 0    | 429   | 0    | 10   | 0    | 0                         | 0    | 0    | 0    | 0    | 79    |
| Lane Group Flow (vph)             | 157   | 8    | 96    | 0    | 18   | 0    | 209                       | 303  | 0    | 16   | 604  | 84    |
| Heavy Vehicles (%)                | 6%    | 0%   | 4%    | 25%  | 33%  | 33%  | 12%                       | 8%   | 0%   | 29%  | 4%   | 6%    |
| Turn Type                         | Perm  | NA   | Perm  | Perm | NA   |      | pm+pt                     | NA   |      | Perm | NA   | Perm  |
| Protected Phases                  |       | 8    |       |      | 4    |      | 1                         | 6    |      |      |      | 2     |
| Permitted Phases                  | 8     |      | 8     | 4    |      |      | 6                         |      |      | 2    |      | 2     |
| Actuated Green, G (s)             | 22.0  | 22.0 | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 62.0 | 62.0 | 62.0  |
| Effective Green, g (s)            | 22.0  | 22.0 | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 62.0 | 62.0 | 62.0  |
| Actuated g/C Ratio                | 0.18  | 0.18 | 0.18  |      | 0.18 |      | 0.72                      | 0.72 |      | 0.52 | 0.52 | 0.52  |
| Clearance Time (s)                | 6.0   | 6.0  | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Vehicle Extension (s)             | 3.0   | 3.0  | 3.0   |      | 3.0  |      | 3.0                       | 3.0  |      | 3.0  | 3.0  | 3.0   |
| Lane Grp Cap (vph)                | 245   | 352  | 287   |      | 239  |      | 513                       | 1274 |      | 442  | 954  | 796   |
| v/s Ratio Prot                    |       | 0.00 |       |      |      |      | c0.07                     | 0.17 |      |      |      | c0.33 |
| v/s Ratio Perm                    | c0.12 |      | 0.06  |      | 0.01 |      | 0.22                      |      |      | 0.02 |      | 0.05  |
| v/c Ratio                         | 0.64  | 0.02 | 0.34  |      | 0.08 |      | 0.41                      | 0.24 |      | 0.04 | 0.63 | 0.11  |
| Uniform Delay, d1                 | 45.3  | 40.2 | 42.6  |      | 40.6 |      | 9.8                       | 5.8  |      | 14.3 | 20.8 | 14.8  |
| Progression Factor                | 1.00  | 1.00 | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Incremental Delay, d2             | 5.6   | 0.0  | 0.7   |      | 0.6  |      | 0.5                       | 0.4  |      | 0.2  | 3.2  | 0.3   |
| Delay (s)                         | 51.0  | 40.2 | 43.3  |      | 41.2 |      | 10.4                      | 6.2  |      | 14.4 | 24.0 | 15.1  |
| Level of Service                  | D     | D    | D     |      | D    |      | B                         | A    |      | B    | C    | B     |
| Approach Delay (s)                |       | 45.0 |       |      | 41.2 |      |                           | 7.9  |      |      | 22.0 |       |
| Approach LOS                      |       | D    |       |      | D    |      |                           | A    |      |      | C    |       |
| <b>Intersection Summary</b>       |       |      |       |      |      |      |                           |      |      |      |      |       |
| HCM 2000 Control Delay            |       |      | 26.6  |      |      |      | HCM 2000 Level of Service |      |      | C    |      |       |
| HCM 2000 Volume to Capacity ratio |       |      | 0.59  |      |      |      |                           |      |      |      |      |       |
| Actuated Cycle Length (s)         |       |      | 120.0 |      |      |      | Sum of lost time (s)      |      |      | 16.0 |      |       |
| Intersection Capacity Utilization |       |      | 73.5% |      |      |      | ICU Level of Service      |      |      | D    |      |       |
| Analysis Period (min)             |       |      | 15    |      |      |      |                           |      |      |      |      |       |
| c Critical Lane Group             |       |      |       |      |      |      |                           |      |      |      |      |       |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 0   | 6   | 14  | 0   | 25  | 0  | 409   | 12  | 83  | 727   | 7   |
| Future Volume (Veh/h)             | 0   | 0   | 6   | 14  | 0   | 25  | 0  | 409   | 12  | 83  | 727   | 7   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75   | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  |
| Hourly flow rate (vph)            | 0   | 0   | 8   | 19  | 0   | 33  | 0  | 545   | 16  | 111   | 969   | 9   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.89  | 0.89  |   | 0.89  | 0.89  | 0.89  |  |   |   |   | 0.89  |   |
| vC, conflicting volume            | 1782  | 1756  | 974   | 1756  | 1753  | 553   | 978  |   |   |   | 561   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 1817  | 1789  | 974   | 1789  | 1785  | 434   | 978  |   |   |   | 443   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.4   | 7.1   | 6.5   | 6.4   | 4.1  |   |   |   | 4.2   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.5   | 3.5   | 4.0   | 3.5   | 2.2  |   |   |   | 2.3   |   |
| p0 queue free %                   | 100   | 100   | 97  | 62  | 100   | 94  | 100  |   |   |   | 88  |   |
| cM capacity (veh/h)               | 46  | 64  | 286   | 50  | 65  | 513   | 714  |   |   |   | 960   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 8   | 52  | 561   | 1089  |   |   |  |   |   |   |   |   |
| Volume Left                       | 0   | 19  | 0   | 111   |   |   |  |   |   |   |   |   |
| Volume Right                      | 8   | 33  | 16  | 9   |   |   |  |   |   |   |   |   |
| cSH                               | 286   | 117   | 714   | 960   |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.03  | 0.44  | 0.00  | 0.12  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.7   | 14.7  | 0.0   | 3.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 17.9  | 58.0  | 0.0   | 3.2   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | F   |   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 17.9  | 58.0  | 0.0   | 3.2   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | F   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.9   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 84.5%   |   | ICU Level of Service  |   |  |   |   | E   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/02/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 4    | 3    | 2    | 44   | 1    | 32   | 3    | 399  | 2    | 3    | 667  | 0    |
| Future Volume (vph)    | 4    | 3    | 2    | 44   | 1    | 32   | 3    | 399  | 2    | 3    | 667  | 0    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.94 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.98 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1769 |      |      | 1719 |      |      | 1878 |      |      | 1882 |      |
| Flt Permitted          |      | 0.90 |      |      | 0.83 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1617 |      |      | 1463 |      |      | 1870 |      |      | 1875 |      |
| Peak-hour factor, PHF  | 0.50 | 0.38 | 0.25 | 0.52 | 0.25 | 0.39 | 0.75 | 0.91 | 0.25 | 0.38 | 0.91 | 0.92 |
| Adj. Flow (vph)        | 8    | 8    | 8    | 85   | 4    | 82   | 4    | 438  | 8    | 8    | 733  | 0    |
| RTOR Reduction (vph)   | 0    | 6    | 0    | 0    | 41   | 0    | 0    | 1    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 18   | 0    | 0    | 130  | 0    | 0    | 449  | 0    | 0    | 741  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 384  |      |      | 347  |      |      | 1145 |      |      | 1148 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.09 |      |      | 0.24 |      |      | 0.40 |      |
| v/c Ratio              |      | 0.05 |      |      | 0.37 |      |      | 0.39 |      |      | 0.65 |      |
| Uniform Delay, d1      |      | 23.5 |      |      | 25.5 |      |      | 7.9  |      |      | 9.9  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.2  |      |      | 3.1  |      |      | 1.0  |      |      | 2.8  |      |
| Delay (s)              |      | 23.7 |      |      | 28.6 |      |      | 8.9  |      |      | 12.7 |      |
| Level of Service       |      | C    |      |      | C    |      |      | A    |      |      | B    |      |
| Approach Delay (s)     |      | 23.7 |      |      | 28.6 |      |      | 8.9  |      |      | 12.7 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | A    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 13.6  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.57  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 53.4% | ICU Level of Service      | A    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 5: Street A/E Communication Rd & 7th Line

12/02/2025



| Movement                          | WBL   | WBR   | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|-------|-------|----------------------|------|------|
| Lane Configurations               |       |       |       |                      |      |      |
| Sign Control                      | Stop  |       | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 2     | 14    | 6     | 3                    | 36   | 3    |
| Future Volume (vph)               | 2     | 14    | 6     | 3                    | 36   | 3    |
| Peak Hour Factor                  | 0.92  | 0.92  | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 2     | 15    | 7     | 3                    | 39   | 3    |
| Direction, Lane #                 | WB 1  | NB 1  | SB 1  |                      |      |      |
| Volume Total (vph)                | 17    | 10    | 42    |                      |      |      |
| Volume Left (vph)                 | 2     | 0     | 39    |                      |      |      |
| Volume Right (vph)                | 15    | 3     | 0     |                      |      |      |
| Hadj (s)                          | -0.47 | -0.15 | 0.22  |                      |      |      |
| Departure Headway (s)             | 3.5   | 3.8   | 4.2   |                      |      |      |
| Degree Utilization, x             | 0.02  | 0.01  | 0.05  |                      |      |      |
| Capacity (veh/h)                  | 995   | 931   | 857   |                      |      |      |
| Control Delay (s)                 | 6.6   | 6.9   | 7.4   |                      |      |      |
| Approach Delay (s)                | 6.6   | 6.9   | 7.4   |                      |      |      |
| Approach LOS                      | A     | A     | A     |                      |      |      |
| Intersection Summary              |       |       |       |                      |      |      |
| Delay                             |       |       | 7.1   |                      |      |      |
| Level of Service                  |       |       | A     |                      |      |      |
| Intersection Capacity Utilization |       |       | 18.8% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |       | 15    |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 6: Center Line & 7th Line/E Communication Rd

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 5   | 32  | 3   | 4   | 1   | 10   | 74  | 6   | 0   | 105   | 2   |
| Future Volume (Veh/h)             | 2   | 5   | 32  | 3   | 4   | 1   | 10   | 74  | 6   | 0   | 105   | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.75  | 0.73  | 0.50  | 1.00  | 0.25  | 0.83   | 0.82  | 0.75  | 0.25  | 0.83  | 0.25  |
| Hourly flow rate (vph)            | 4   | 7   | 44  | 6   | 4   | 4   | 12   | 90  | 8   | 0   | 127   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 255   | 253   | 131   | 296   | 253   | 94  | 135  |   |   | 98  |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 255   | 253   | 131   | 296   | 253   | 94  | 135  |   |   | 98  |   |   |
| tC, single (s)                    | 7.6   | 6.7   | 6.2   | 7.3   | 6.5   | 6.2   | 4.2  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.0   | 4.2   | 3.3   | 3.7   | 4.0   | 3.3   | 2.3  |   |   | 2.2   |   |   |
| p0 queue free %                   | 99  | 99  | 95  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 601   | 620   | 916   | 574   | 648   | 968   | 1401   |   |   | 1508  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 55  | 14  | 110   | 135   |   |   |  |   |   |   |   |   |
| Volume Left                       | 4   | 6   | 12  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 44  | 4   | 8   | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 833   | 675   | 1401  | 1508  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.07  | 0.02  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.6   | 0.5   | 0.2   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.6   | 10.4  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.6   | 10.4  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 21.5%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/02/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             | ↶           | ↷           |                      | ↘    |      |
| Traffic Volume (veh/h)            | 3           | 91          | 28          | 0                    | 1    | 13   |
| Future Volume (Veh/h)             | 3           | 91          | 28          | 0                    | 1    | 13   |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 3           | 99          | 30          | 0                    | 1    | 14   |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 30          |             |             |                      | 135  | 30   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 30          |             |             |                      | 135  | 30   |
| 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  | 99   |
| cM capacity (veh/h)               | 1583        |             |             |                      | 857  | 1044 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 102         | 30          | 15          |                      |      |      |
| Volume Left                       | 3           | 0           | 1           |                      |      |      |
| Volume Right                      | 0           | 0           | 14          |                      |      |      |
| cSH                               | 1583        | 1700        | 1029        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.01        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.3         |                      |      |      |
| Control Delay (s)                 | 0.2         | 0.0         | 8.5         |                      |      |      |
| Lane LOS                          | A           |             | A           |                      |      |      |
| Approach Delay (s)                | 0.2         | 0.0         | 8.5         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 1.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 17.2%       | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 7   | 1   | 6   | 61  | 0   | 5   | 7  | 344   | 62  | 10  | 313   | 1   |
| Future Volume (Veh/h)             | 7   | 1   | 6   | 61  | 0   | 5   | 7  | 344   | 62  | 10  | 313   | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.35  | 0.25  | 0.50  | 0.84  | 0.25  | 0.75  | 0.58   | 0.92  | 0.72  | 0.42  | 0.89  | 0.25  |
| Hourly flow rate (vph)            | 20  | 4   | 12  | 73  | 0   | 7   | 12   | 374   | 86  | 24  | 352   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 850   | 886   | 354   | 857   | 845   | 417   | 356  |   |   | 460   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 850   | 886   | 354   | 857   | 845   | 417   | 356  |   |   | 460   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.2   |   |   |
| p0 queue free %                   | 93  | 99  | 98  | 72  | 100   | 99  | 99   |   |   | 98  |   |   |
| cM capacity (veh/h)               | 273   | 277   | 694   | 265   | 292   | 640   | 1214   |   |   | 1112  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 36  | 80  | 472   | 380   |   |   |  |   |   |   |   |   |
| Volume Left                       | 20  | 73  | 12  | 24  |   |   |  |   |   |   |   |   |
| Volume Right                      | 12  | 7   | 86  | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 343   | 280   | 1214  | 1112  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.11  | 0.29  | 0.01  | 0.02  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 2.7   | 8.7   | 0.2   | 0.5   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 16.7  | 23.0  | 0.3   | 0.7   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | C   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 16.7  | 23.0  | 0.3   | 0.7   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.0   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 37.7%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

HCM Signalized Intersection Capacity Analysis  
2: Ward St & Bridge Rd

12/02/2025

| Movement                          | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL                       | NBT  | NBR  | SBL  | SBT  | SBR  |
|-----------------------------------|-------|------|-------|------|------|------|---------------------------|------|------|------|------|------|
| Lane Configurations               |       |      |       |      |      |      |                           |      |      |      |      |      |
| Traffic Volume (vph)              | 52    | 0    | 157   | 2    | 6    | 3    | 391                       | 139  | 2    | 1    | 117  | 58   |
| Future Volume (vph)               | 52    | 0    | 157   | 2    | 6    | 3    | 391                       | 139  | 2    | 1    | 117  | 58   |
| Ideal Flow (vphpl)                | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900                      | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)               | 6.0   |      | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Lane Util. Factor                 | 1.00  |      | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Frt                               | 1.00  |      | 0.85  |      | 0.97 |      | 1.00                      | 0.99 |      | 1.00 | 1.00 | 0.85 |
| Flt Protected                     | 0.95  |      | 1.00  |      | 0.99 |      | 0.95                      | 1.00 |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot)                 | 1755  |      | 1541  |      | 1464 |      | 1722                      | 1712 |      | 1825 | 1812 | 1601 |
| Flt Permitted                     | 0.75  |      | 1.00  |      | 0.96 |      | 0.61                      | 1.00 |      | 0.65 | 1.00 | 1.00 |
| Satd. Flow (perm)                 | 1380  |      | 1541  |      | 1420 |      | 1099                      | 1712 |      | 1242 | 1812 | 1601 |
| Peak-hour factor, PHF             | 0.78  | 0.25 | 0.92  | 0.45 | 0.75 | 0.75 | 0.80                      | 0.83 | 0.25 | 0.25 | 0.68 | 0.74 |
| Adj. Flow (vph)                   | 67    | 0    | 171   | 4    | 8    | 4    | 489                       | 167  | 8    | 4    | 172  | 78   |
| RTOR Reduction (vph)              | 0     | 0    | 140   | 0    | 3    | 0    | 0                         | 1    | 0    | 0    | 0    | 38   |
| Lane Group Flow (vph)             | 67    | 0    | 31    | 0    | 13   | 0    | 489                       | 174  | 0    | 4    | 172  | 40   |
| Heavy Vehicles (%)                | 4%    | 0%   | 6%    | 0%   | 17%  | 67%  | 6%                        | 12%  | 0%   | 0%   | 6%   | 2%   |
| Turn Type                         | Perm  |      | Perm  | Perm | NA   |      | pm+pt                     | NA   |      | Perm | NA   | Perm |
| Protected Phases                  |       | 8    |       |      | 4    |      | 1                         | 6    |      |      |      | 2    |
| Permitted Phases                  | 8     |      | 8     | 4    |      |      | 6                         |      |      | 2    |      | 2    |
| Actuated Green, G (s)             | 22.0  |      | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 61.0 | 61.0 | 61.0 |
| Effective Green, g (s)            | 22.0  |      | 22.0  |      | 22.0 |      | 86.0                      | 86.0 |      | 61.0 | 61.0 | 61.0 |
| Actuated g/C Ratio                | 0.18  |      | 0.18  |      | 0.18 |      | 0.72                      | 0.72 |      | 0.51 | 0.51 | 0.51 |
| Clearance Time (s)                | 6.0   |      | 6.0   |      | 6.0  |      | 4.0                       | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Vehicle Extension (s)             | 3.0   |      | 3.0   |      | 3.0  |      | 3.0                       | 3.0  |      | 3.0  | 3.0  | 3.0  |
| Lane Grp Cap (vph)                | 253   |      | 282   |      | 260  |      | 896                       | 1226 |      | 631  | 921  | 813  |
| v/s Ratio Prot                    |       |      |       |      |      |      | c0.10                     | 0.10 |      |      |      | 0.09 |
| v/s Ratio Perm                    | c0.05 |      | 0.02  |      | 0.01 |      | c0.30                     |      |      | 0.00 |      | 0.02 |
| v/c Ratio                         | 0.26  |      | 0.11  |      | 0.05 |      | 0.55                      | 0.14 |      | 0.01 | 0.19 | 0.05 |
| Uniform Delay, d1                 | 42.1  |      | 40.8  |      | 40.4 |      | 6.9                       | 5.4  |      | 14.6 | 16.0 | 14.9 |
| Progression Factor                | 1.00  |      | 1.00  |      | 1.00 |      | 1.00                      | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2             | 0.6   |      | 0.2   |      | 0.4  |      | 0.7                       | 0.2  |      | 0.0  | 0.4  | 0.1  |
| Delay (s)                         | 42.6  |      | 41.0  |      | 40.7 |      | 7.5                       | 5.6  |      | 14.6 | 16.5 | 15.0 |
| Level of Service                  | D     |      | D     |      | D    |      | A                         | A    |      | B    | B    | B    |
| Approach Delay (s)                |       | 41.5 |       |      | 40.7 |      |                           | 7.0  |      |      | 16.0 |      |
| Approach LOS                      |       | D    |       |      | D    |      |                           | A    |      |      | B    |      |
| <b>Intersection Summary</b>       |       |      |       |      |      |      |                           |      |      |      |      |      |
| HCM 2000 Control Delay            |       |      | 16.4  |      |      |      | HCM 2000 Level of Service |      |      |      | B    |      |
| HCM 2000 Volume to Capacity ratio |       |      | 0.50  |      |      |      |                           |      |      |      |      |      |
| Actuated Cycle Length (s)         |       |      | 120.0 |      |      |      | Sum of lost time (s)      |      |      | 16.0 |      |      |
| Intersection Capacity Utilization |       |      | 55.0% |      |      |      | ICU Level of Service      |      |      | A    |      |      |
| Analysis Period (min)             |       |      | 15    |      |      |      |                           |      |      |      |      |      |
| c Critical Lane Group             |       |      |       |      |      |      |                           |      |      |      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

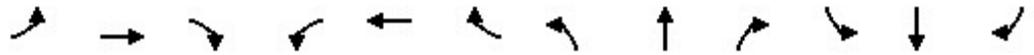
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|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 3   | 0   | 1   | 12  | 0   | 23  | 5  | 824   | 14  | 24  | 467   | 16  |
| Future Volume (Veh/h)             | 3   | 0   | 1   | 12  | 0   | 23  | 5  | 824   | 14  | 24  | 467   | 16  |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88   | 0.88  | 0.88  | 0.88  | 0.88  | 0.63  |
| Hourly flow rate (vph)            | 3   | 0   | 1   | 14  | 0   | 26  | 6  | 936   | 16  | 27  | 531   | 25  |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.55  | 0.55  |   | 0.55  | 0.55  | 0.55  |  |   |   |   | 0.55  |   |
| vC, conflicting volume            | 1580  | 1562  | 544   | 1554  | 1566  | 944   | 556  |   |   |   | 952   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 1646  | 1613  | 544   | 1600  | 1621  | 482   | 556  |   |   |   | 496   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   |   | 4.1   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   |   | 2.2   |   |
| p0 queue free %                   | 92  | 100   | 100   | 69  | 100   | 92  | 99   |   |   |   | 95  |   |
| cM capacity (veh/h)               | 39  | 54  | 543   | 45  | 54  | 321   | 1025   |   |   |   | 574   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 4   | 40  | 958   | 583   |   |   |  |   |   |   |   |   |
| Volume Left                       | 3   | 14  | 6   | 27  |   |   |  |   |   |   |   |   |
| Volume Right                      | 1   | 26  | 16  | 25  |   |   |  |   |   |   |   |   |
| cSH                               | 50  | 102   | 1025  | 574   |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.08  | 0.39  | 0.01  | 0.05  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.9   | 12.1  | 0.1   | 1.1   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 82.5  | 61.1  | 0.2   | 1.3   |   |   |  |   |   |   |   |   |
| Lane LOS                          | F   | F   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 82.5  | 61.1  | 0.2   | 1.3   |   |   |  |   |   |   |   |   |
| Approach LOS                      | F   | F   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.3   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 55.9%   |   | ICU Level of Service  |   |  |   |   | B   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/02/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 6    | 2    | 3    | 32   | 1    | 16   | 1    | 820  | 1    | 1    | 525  | 1    |
| Future Volume (vph)    | 6    | 2    | 3    | 32   | 1    | 16   | 1    | 820  | 1    | 1    | 525  | 1    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.95 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.97 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1755 |      |      | 1742 |      |      | 1882 |      |      | 1881 |      |
| Flt Permitted          |      | 0.88 |      |      | 0.82 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1574 |      |      | 1475 |      |      | 1878 |      |      | 1874 |      |
| Peak-hour factor, PHF  | 0.50 | 0.50 | 0.38 | 0.68 | 0.25 | 0.58 | 0.25 | 0.92 | 0.25 | 0.25 | 0.81 | 0.25 |
| Adj. Flow (vph)        | 12   | 4    | 8    | 47   | 4    | 28   | 4    | 891  | 4    | 4    | 648  | 4    |
| RTOR Reduction (vph)   | 0    | 6    | 0    | 0    | 21   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 18   | 0    | 0    | 58   | 0    | 0    | 899  | 0    | 0    | 656  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 373  |      |      | 350  |      |      | 1150 |      |      | 1147 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.04 |      |      | 0.48 |      |      | 0.35 |      |
| v/c Ratio              |      | 0.05 |      |      | 0.16 |      |      | 0.78 |      |      | 0.57 |      |
| Uniform Delay, d1      |      | 23.5 |      |      | 24.2 |      |      | 11.5 |      |      | 9.2  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.2  |      |      | 1.0  |      |      | 5.3  |      |      | 2.1  |      |
| Delay (s)              |      | 23.8 |      |      | 25.2 |      |      | 16.8 |      |      | 11.3 |      |
| Level of Service       |      | C    |      |      | C    |      |      | B    |      |      | B    |      |
| Approach Delay (s)     |      | 23.8 |      |      | 25.2 |      |      | 16.8 |      |      | 11.3 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | B    |      |      | B    |      |

| Intersection Summary              |       |                           |
|-----------------------------------|-------|---------------------------|
| HCM 2000 Control Delay            | 15.1  | HCM 2000 Level of Service |
| HCM 2000 Volume to Capacity ratio | 0.61  | B                         |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      |
| Intersection Capacity Utilization | 58.1% | 12.0                      |
| Analysis Period (min)             | 15    | ICU Level of Service      |
|                                   |       | B                         |
| c Critical Lane Group             |       |                           |

HCM Unsignalized Intersection Capacity Analysis  
 5: Street A/E Communication Rd & 7th Line

12/02/2025



| Movement                          | WBL   | WBR   | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|-------|-------|----------------------|------|------|
| Lane Configurations               |       |       |       |                      |      |      |
| Sign Control                      | Stop  |       | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 3     | 15    | 5     | 4                    | 27   | 8    |
| Future Volume (vph)               | 3     | 15    | 5     | 4                    | 27   | 8    |
| Peak Hour Factor                  | 0.92  | 0.92  | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 3     | 16    | 5     | 4                    | 29   | 9    |
| Direction, Lane #                 | WB 1  | NB 1  | SB 1  |                      |      |      |
| Volume Total (vph)                | 19    | 9     | 38    |                      |      |      |
| Volume Left (vph)                 | 3     | 0     | 29    |                      |      |      |
| Volume Right (vph)                | 16    | 4     | 0     |                      |      |      |
| Hadj (s)                          | -0.44 | -0.23 | 0.19  |                      |      |      |
| Departure Headway (s)             | 3.6   | 3.7   | 4.1   |                      |      |      |
| Degree Utilization, x             | 0.02  | 0.01  | 0.04  |                      |      |      |
| Capacity (veh/h)                  | 991   | 952   | 862   |                      |      |      |
| Control Delay (s)                 | 6.6   | 6.8   | 7.3   |                      |      |      |
| Approach Delay (s)                | 6.6   | 6.8   | 7.3   |                      |      |      |
| Approach LOS                      | A     | A     | A     |                      |      |      |
| Intersection Summary              |       |       |       |                      |      |      |
| Delay                             |       |       | 7.0   |                      |      |      |
| Level of Service                  |       |       | A     |                      |      |      |
| Intersection Capacity Utilization |       |       | 18.6% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |       | 15    |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 6: Center Line & 7th Line/E Communication Rd

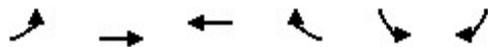
12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 4   | 24  | 2   | 3   | 1   | 13   | 75  | 5   | 0   | 86  | 2   |
| Future Volume (Veh/h)             | 2   | 4   | 24  | 2   | 3   | 1   | 13   | 75  | 5   | 0   | 86  | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.50  | 0.72  | 0.75  | 0.75  | 0.25  | 0.75   | 0.82  | 0.63  | 0.25  | 0.81  | 0.25  |
| Hourly flow rate (vph)            | 4   | 8   | 33  | 3   | 4   | 4   | 17   | 91  | 8   | 0   | 106   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 245   | 243   | 110   | 276   | 243   | 95  | 114  |   |   | 99  |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 245   | 243   | 110   | 276   | 243   | 95  | 114  |   |   | 99  |   |   |
| tC, single (s)                    | 8.1   | 6.5   | 6.3   | 7.4   | 6.5   | 6.2   | 4.3  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.4   | 4.0   | 3.4   | 3.8   | 4.0   | 3.3   | 2.4  |   |   | 2.2   |   |   |
| p0 queue free %                   | 99  | 99  | 96  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 536   | 654   | 925   | 585   | 654   | 967   | 1387   |   |   | 1507  |   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 45  | 11  | 116   | 114   |   |   |  |   |   |   |   |   |
| Volume Left                       | 4   | 3   | 17  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 33  | 4   | 8   | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 813   | 715   | 1387  | 1507  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.06  | 0.02  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.3   | 0.4   | 0.3   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.7   | 10.1  | 1.2   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.7   | 10.1  | 1.2   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.4   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 21.6%   | ICU Level of Service  |   | A   |  |   |   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/02/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             | ↶           | ↶           |                      | ↶    |      |
| Traffic Volume (veh/h)            | 13          | 25          | 30          | 0                    | 0    | 7    |
| Future Volume (Veh/h)             | 13          | 25          | 30          | 0                    | 0    | 7    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 14          | 27          | 33          | 0                    | 0    | 8    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 33          |             |             |                      | 88   | 33   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 33          |             |             |                      | 88   | 33   |
| 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)               | 1579        |             |             |                      | 905  | 1041 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 41          | 33          | 8           |                      |      |      |
| Volume Left                       | 14          | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 8           |                      |      |      |
| cSH                               | 1579        | 1700        | 1041        |                      |      |      |
| Volume to Capacity                | 0.01        | 0.02        | 0.01        |                      |      |      |
| Queue Length 95th (m)             | 0.2         | 0.0         | 0.2         |                      |      |      |
| Control Delay (s)                 | 2.5         | 0.0         | 8.5         |                      |      |      |
| Lane LOS                          | A           |             | A           |                      |      |      |
| Approach Delay (s)                | 2.5         | 0.0         | 8.5         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 2.1         |                      |      |      |
| Intersection Capacity Utilization |             |             | 18.7%       | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# Appendix J

**Total 2033 Traffic Conditions – Synchro  
Outputs**

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 0   | 4   | 90  | 4   | 10  | 2  | 185   | 45  | 15  | 246   | 2   |
| Future Volume (Veh/h)             | 2   | 0   | 4   | 90  | 4   | 10  | 2  | 185   | 45  | 15  | 246   | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.25  | 0.25  | 0.38  | 0.75  | 0.50  | 0.35  | 0.25   | 0.86  | 0.75  | 0.75  | 0.84  | 0.25  |
| Hourly flow rate (vph)            | 8   | 0   | 11  | 120   | 8   | 29  | 8  | 215   | 60  | 20  | 293   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 631   | 628   | 297   | 609   | 602   | 245   | 301  |   |   | 275   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 631   | 628   | 297   | 609   | 602   | 245   | 301  |   |   | 275   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.3   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.4   |   |   |
| p0 queue free %                   | 98  | 100   | 99  | 69  | 98  | 96  | 99   |   |   | 98  |   |   |
| cM capacity (veh/h)               | 370   | 393   | 747   | 391   | 407   | 799   | 1272   |   |   | 1206  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 19  | 157   | 283   | 321   |   |   |  |   |   |   |   |   |
| Volume Left                       | 8   | 120   | 8   | 20  |   |   |  |   |   |   |   |   |
| Volume Right                      | 11  | 29  | 60  | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 523   | 433   | 1272  | 1206  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.04  | 0.36  | 0.01  | 0.02  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 0.9   | 12.4  | 0.1   | 0.4   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 12.1  | 18.0  | 0.3   | 0.7   |   |   |  |   |   |   |   |   |
| Lane LOS                          | B   | C   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 12.1  | 18.0  | 0.3   | 0.7   |   |   |  |   |   |   |   |   |
| Approach LOS                      | B   | C   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 4.3   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 42.1%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 2: Ward St & Bridge Rd

12/02/2025



| Movement               | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR   |
|------------------------|-------|------|------|------|------|------|-------|------|------|------|------|-------|
| Lane Configurations    |       |      |      |      |      |      |       |      |      |      |      |       |
| Traffic Volume (vph)   | 127   | 5    | 394  | 5    | 4    | 7    | 175   | 201  | 0    | 8    | 553  | 123   |
| Future Volume (vph)    | 127   | 5    | 394  | 5    | 4    | 7    | 175   | 201  | 0    | 8    | 553  | 123   |
| Ideal Flow (vphp)      | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  |
| Total Lost time (s)    | 6.0   | 6.0  | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Lane Util. Factor      | 1.00  | 1.00 | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Frt                    | 1.00  | 1.00 | 0.85 |      | 0.95 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 0.85  |
| Flt Protected          | 0.95  | 1.00 | 1.00 |      | 0.99 |      | 0.95  | 1.00 |      | 0.95 | 1.00 | 1.00  |
| Satd. Flow (prot)      | 1722  | 1921 | 1570 |      | 1371 |      | 1630  | 1779 |      | 1415 | 1847 | 1541  |
| Flt Permitted          | 0.73  | 1.00 | 1.00 |      | 0.94 |      | 0.23  | 1.00 |      | 0.56 | 1.00 | 1.00  |
| Satd. Flow (perm)      | 1331  | 1921 | 1570 |      | 1304 |      | 391   | 1779 |      | 832  | 1847 | 1541  |
| Peak-hour factor, PHF  | 0.74  | 0.50 | 0.68 | 0.50 | 0.38 | 0.50 | 0.76  | 0.60 | 0.25 | 0.44 | 0.83 | 0.68  |
| Adj. Flow (vph)        | 172   | 10   | 579  | 10   | 11   | 14   | 230   | 335  | 0    | 18   | 666  | 181   |
| RTOR Reduction (vph)   | 0     | 0    | 473  | 0    | 11   | 0    | 0     | 0    | 0    | 0    | 0    | 81    |
| Lane Group Flow (vph)  | 172   | 10   | 106  | 0    | 24   | 0    | 230   | 335  | 0    | 18   | 666  | 100   |
| Heavy Vehicles (%)     | 6%    | 0%   | 4%   | 25%  | 33%  | 33%  | 12%   | 8%   | 0%   | 29%  | 4%   | 6%    |
| Turn Type              | Perm  | NA   | Perm | Perm | NA   |      | pm+pt | NA   |      | Perm | NA   | Perm  |
| Protected Phases       |       | 8    |      |      | 4    |      | 1     | 6    |      |      |      | 2     |
| Permitted Phases       | 8     |      | 8    | 4    |      |      | 6     |      |      | 2    |      | 2     |
| Actuated Green, G (s)  | 22.0  | 22.0 | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 64.5 | 64.5 | 64.5  |
| Effective Green, g (s) | 22.0  | 22.0 | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 64.5 | 64.5 | 64.5  |
| Actuated g/C Ratio     | 0.18  | 0.18 | 0.18 |      | 0.18 |      | 0.72  | 0.72 |      | 0.54 | 0.54 | 0.54  |
| Clearance Time (s)     | 6.0   | 6.0  | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0   |
| Vehicle Extension (s)  | 3.0   | 3.0  | 3.0  |      | 3.0  |      | 3.0   | 3.0  |      | 3.0  | 3.0  | 3.0   |
| Lane Grp Cap (vph)     | 244   | 352  | 287  |      | 239  |      | 460   | 1274 |      | 447  | 992  | 828   |
| v/s Ratio Prot         |       | 0.01 |      |      |      |      | c0.07 | 0.19 |      |      |      | c0.36 |
| v/s Ratio Perm         | c0.13 |      | 0.07 |      | 0.02 |      | 0.28  |      |      | 0.02 |      | 0.06  |
| v/c Ratio              | 0.70  | 0.03 | 0.37 |      | 0.10 |      | 0.50  | 0.26 |      | 0.04 | 0.67 | 0.12  |
| Uniform Delay, d1      | 46.0  | 40.2 | 42.9 |      | 40.8 |      | 11.4  | 5.9  |      | 13.1 | 20.1 | 13.7  |
| Progression Factor     | 1.00  | 1.00 | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00  |
| Incremental Delay, d2  | 8.9   | 0.0  | 0.8  |      | 0.8  |      | 0.9   | 0.5  |      | 0.2  | 3.6  | 0.3   |
| Delay (s)              | 54.9  | 40.3 | 43.7 |      | 41.6 |      | 12.2  | 6.4  |      | 13.3 | 23.7 | 14.0  |
| Level of Service       | D     | D    | D    |      | D    |      | B     | A    |      | B    | C    | B     |
| Approach Delay (s)     |       | 46.2 |      |      | 41.6 |      |       | 8.8  |      |      | 21.5 |       |
| Approach LOS           |       | D    |      |      | D    |      |       | A    |      |      | C    |       |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 27.0  | HCM 2000 Level of Service | C    |
| HCM 2000 Volume to Capacity ratio | 0.65  |                           |      |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 78.5% | ICU Level of Service      | D    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |   |  |   |   |  |   |
| Traffic Volume (veh/h)            | 0   | 0   | 7   | 15  | 0   | 28  | 0   | 451   | 13  | 91  | 802   | 8   |
| Future Volume (Veh/h)             | 0   | 0   | 7   | 15  | 0   | 28  | 0   | 451   | 13  | 91  | 802   | 8   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |   | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |   | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  | 0.75  |
| Hourly flow rate (vph)            | 0   | 0   | 9   | 20  | 0   | 37  | 0   | 601   | 17  | 121   | 1069  | 11  |
| Pedestrians                       |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |   |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |   |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |   |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |   |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   |   |   |   |   |   |   |   | None  |   |   | None  |   |
| Median storage veh                |   |   |   |   |   |   |   |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   |   |   |   |   |   |   |   | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.86  | 0.86  |   | 0.86  | 0.86  | 0.86  |   |   |   |   | 0.86  |   |
| vC, conflicting volume            | 1963  | 1934  | 1074  | 1935  | 1932  | 610   | 1080  |   |   |   | 618   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |   |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |   |   |   |   |   |   |
| vCu, unblocked vol                | 2036  | 2003  | 1074  | 2004  | 2000  | 469   | 1080  |   |   |   | 479   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.4   | 7.1   | 6.5   | 6.4   | 4.1   |   |   |   | 4.2   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |   |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.5   | 3.5   | 4.0   | 3.5   | 2.2   |   |   |   | 2.3   |   |
| p0 queue free %                   | 100   | 100   | 96  | 40  | 100   | 92  | 100   |   |   |   | 87  |   |
| cM capacity (veh/h)               | 30  | 45  | 250   | 34  | 45  | 476   | 653   |   |   |   | 905   |   |
| Direction, Lane #                 |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |   |   |   |   |   |   |
| Volume Total                      | 9   | 57  | 618   | 1201  |   |   |   |   |   |   |   |   |
| Volume Left                       | 0   | 20  | 0   | 121   |   |   |   |   |   |   |   |   |
| Volume Right                      | 9   | 37  | 17  | 11  |   |   |   |   |   |   |   |   |
| cSH                               | 250   | 85  | 653   | 905   |   |   |   |   |   |   |   |   |
| Volume to Capacity                | 0.04  | 0.67  | 0.00  | 0.13  |   |   |   |   |   |   |   |   |
| Queue Length 95th (m)             | 0.8   | 24.4  | 0.0   | 3.5   |   |   |   |   |   |   |   |   |
| Control Delay (s)                 | 20.0  | 109.4   | 0.0   | 4.1   |   |   |   |   |   |   |   |   |
| Lane LOS                          | C   | F   |   | A   |   |   |   |   |   |   |   |   |
| Approach Delay (s)                | 20.0  | 109.4   | 0.0   | 4.1   |   |   |   |   |   |   |   |   |
| Approach LOS                      | C   | F   |   |   |   |   |   |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |   |   |   |   |   |   |
| Average Delay                     |   |   | 6.0   |   |   |   |   |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 91.5%   |   | ICU Level of Service  |   |   |   | F   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |   |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/02/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Volume (vph)   | 5    | 4    | 2    | 48   | 1    | 35   | 4    | 440  | 2    | 4    | 735  | 0    |
| Future Volume (vph)    | 5    | 4    | 2    | 48   | 1    | 35   | 4    | 440  | 2    | 4    | 735  | 0    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Frt                    |      | 0.96 |      |      | 0.93 |      |      | 1.00 |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.98 |      |      | 1.00 |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1783 |      |      | 1718 |      |      | 1878 |      |      | 1882 |      |
| Flt Permitted          |      | 0.89 |      |      | 0.83 |      |      | 0.99 |      |      | 0.99 |      |
| Satd. Flow (perm)      |      | 1608 |      |      | 1458 |      |      | 1867 |      |      | 1870 |      |
| Peak-hour factor, PHF  | 0.50 | 0.38 | 0.25 | 0.52 | 0.25 | 0.39 | 0.75 | 0.91 | 0.25 | 0.38 | 0.91 | 0.92 |
| Adj. Flow (vph)        | 10   | 11   | 8    | 92   | 4    | 90   | 5    | 484  | 8    | 11   | 808  | 0    |
| RTOR Reduction (vph)   | 0    | 6    | 0    | 0    | 42   | 0    | 0    | 1    | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 23   | 0    | 0    | 144  | 0    | 0    | 496  | 0    | 0    | 819  | 0    |
| Turn Type              | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |      |      | 2    |      |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0 |      |      | 49.0 |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24 |      |      | 0.61 |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 381  |      |      | 346  |      |      | 1143 |      |      | 1145 |      |
| v/s Ratio Prot         |      |      |      |      |      |      |      |      |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | 0.10 |      |      | 0.27 |      |      | 0.44 |      |
| v/c Ratio              |      | 0.06 |      |      | 0.42 |      |      | 0.43 |      |      | 0.72 |      |
| Uniform Delay, d1      |      | 23.6 |      |      | 25.8 |      |      | 8.2  |      |      | 10.7 |      |
| Progression Factor     |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.3  |      |      | 3.7  |      |      | 1.2  |      |      | 3.8  |      |
| Delay (s)              |      | 23.9 |      |      | 29.5 |      |      | 9.4  |      |      | 14.5 |      |
| Level of Service       |      | C    |      |      | C    |      |      | A    |      |      | B    |      |
| Approach Delay (s)     |      | 23.9 |      |      | 29.5 |      |      | 9.4  |      |      | 14.5 |      |
| Approach LOS           |      | C    |      |      | C    |      |      | A    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 14.8  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.63  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 58.0% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

HCM Unsignalized Intersection Capacity Analysis  
 5: Street A/E Communication Rd & 7th Line

12/02/2025



| Movement                          | WBL   | WBR   | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|-------|-------|----------------------|------|------|
| Lane Configurations               |       |       |       |                      |      |      |
| Sign Control                      | Stop  |       | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 2     | 15    | 6     | 3                    | 40   | 3    |
| Future Volume (vph)               | 2     | 15    | 6     | 3                    | 40   | 3    |
| Peak Hour Factor                  | 0.92  | 0.92  | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 2     | 16    | 7     | 3                    | 43   | 3    |
| Direction, Lane #                 | WB 1  | NB 1  | SB 1  |                      |      |      |
| Volume Total (vph)                | 18    | 10    | 46    |                      |      |      |
| Volume Left (vph)                 | 2     | 0     | 43    |                      |      |      |
| Volume Right (vph)                | 16    | 3     | 0     |                      |      |      |
| Hadj (s)                          | -0.48 | -0.15 | 0.22  |                      |      |      |
| Departure Headway (s)             | 3.5   | 3.8   | 4.2   |                      |      |      |
| Degree Utilization, x             | 0.02  | 0.01  | 0.05  |                      |      |      |
| Capacity (veh/h)                  | 993   | 929   | 856   |                      |      |      |
| Control Delay (s)                 | 6.6   | 6.9   | 7.4   |                      |      |      |
| Approach Delay (s)                | 6.6   | 6.9   | 7.4   |                      |      |      |
| Approach LOS                      | A     | A     | A     |                      |      |      |
| Intersection Summary              |       |       |       |                      |      |      |
| Delay                             |       |       | 7.1   |                      |      |      |
| Level of Service                  |       |       | A     |                      |      |      |
| Intersection Capacity Utilization |       |       | 19.0% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |       | 15    |                      |      |      |

HCM Unsignalized Intersection Capacity Analysis  
 6: Center Line & 7th Line/E Communication Rd

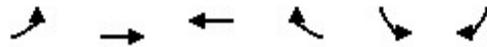
12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 6   | 35  | 4   | 5   | 1   | 11   | 82  | 7   | 0   | 116   | 2   |
| Future Volume (Veh/h)             | 2   | 6   | 35  | 4   | 5   | 1   | 11   | 82  | 7   | 0   | 116   | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.75  | 0.73  | 0.50  | 1.00  | 0.25  | 0.83   | 0.82  | 0.75  | 0.25  | 0.83  | 0.25  |
| Hourly flow rate (vph)            | 4   | 8   | 48  | 8   | 5   | 4   | 13   | 100   | 9   | 0   | 140   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage (veh)              |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 281   | 279   | 144   | 326   | 278   | 104   | 148  |   |   | 109   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 281   | 279   | 144   | 326   | 278   | 104   | 148  |   |   | 109   |   |   |
| tC, single (s)                    | 7.6   | 6.7   | 6.2   | 7.3   | 6.5   | 6.2   | 4.2  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.0   | 4.2   | 3.3   | 3.7   | 4.0   | 3.3   | 2.3  |   |   | 2.2   |   |   |
| p0 queue free %                   | 99  | 99  | 95  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 575   | 599   | 901   | 544   | 627   | 956   | 1386   |   |   | 1494  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 60  | 17  | 122   | 148   |   |   |  |   |   |   |   |   |
| Volume Left                       | 4   | 8   | 13  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 48  | 4   | 9   | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 815   | 633   | 1386  | 1494  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.07  | 0.03  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.8   | 0.6   | 0.2   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.8   | 10.8  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.8   | 10.8  | 0.9   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 22.0%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/02/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             |             |             |                      |      |      |
| Traffic Volume (veh/h)            | 3           | 101         | 30          | 0                    | 1    | 13   |
| Future Volume (Veh/h)             | 3           | 101         | 30          | 0                    | 1    | 13   |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 3           | 110         | 33          | 0                    | 1    | 14   |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 33          |             |             |                      | 149  | 33   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 33          |             |             |                      | 149  | 33   |
| 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  | 99   |
| cM capacity (veh/h)               | 1579        |             |             |                      | 841  | 1041 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 113         | 33          | 15          |                      |      |      |
| Volume Left                       | 3           | 0           | 1           |                      |      |      |
| Volume Right                      | 0           | 0           | 14          |                      |      |      |
| cSH                               | 1579        | 1700        | 1024        |                      |      |      |
| Volume to Capacity                | 0.00        | 0.02        | 0.01        |                      |      |      |
| Queue Length 95th (m)             | 0.0         | 0.0         | 0.3         |                      |      |      |
| Control Delay (s)                 | 0.2         | 0.0         | 8.6         |                      |      |      |
| Lane LOS                          | A           |             | A           |                      |      |      |
| Approach Delay (s)                | 0.2         | 0.0         | 8.6         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 0.9         |                      |      |      |
| Intersection Capacity Utilization |             |             | 17.7%       | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |

# HCM Unsignalized Intersection Capacity Analysis

## 1: Ward St & E Communication Rd

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 8   | 1   | 7   | 67  | 0   | 6   | 8  | 379   | 69  | 11  | 346   | 1   |
| Future Volume (Veh/h)             | 8   | 1   | 7   | 67  | 0   | 6   | 8  | 379   | 69  | 11  | 346   | 1   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.35  | 0.25  | 0.50  | 0.84  | 0.25  | 0.75  | 0.58   | 0.92  | 0.72  | 0.42  | 0.89  | 0.25  |
| Hourly flow rate (vph)            | 23  | 4   | 14  | 80  | 0   | 8   | 14   | 412   | 96  | 26  | 389   | 4   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Median storage veh                |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 939   | 979   | 391   | 947   | 933   | 460   | 393  |   |   | 508   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 939   | 979   | 391   | 947   | 933   | 460   | 393  |   |   | 508   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.2   |   |   |
| p0 queue free %                   | 90  | 98  | 98  | 65  | 100   | 99  | 99   |   |   | 98  |   |   |
| cM capacity (veh/h)               | 236   | 243   | 662   | 229   | 259   | 605   | 1177   |   |   | 1067  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 41  | 88  | 522   | 419   |   |   |  |   |   |   |   |   |
| Volume Left                       | 23  | 80  | 14  | 26  |   |   |  |   |   |   |   |   |
| Volume Right                      | 14  | 8   | 96  | 4   |   |   |  |   |   |   |   |   |
| cSH                               | 304   | 242   | 1177  | 1067  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.13  | 0.36  | 0.01  | 0.02  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 3.5   | 12.0  | 0.3   | 0.6   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 18.7  | 28.1  | 0.4   | 0.8   |   |   |  |   |   |   |   |   |
| Lane LOS                          | C   | D   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 18.7  | 28.1  | 0.4   | 0.8   |   |   |  |   |   |   |   |   |
| Approach LOS                      | C   | D   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 3.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 41.1%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 2: Ward St & Bridge Rd

12/02/2025



| Movement               | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------|-------|------|------|------|------|------|-------|------|------|------|------|------|
| Lane Configurations    |       |      |      |      |      |      |       |      |      |      |      |      |
| Traffic Volume (vph)   | 57    | 0    | 173  | 2    | 7    | 4    | 432   | 153  | 2    | 1    | 129  | 64   |
| Future Volume (vph)    | 57    | 0    | 173  | 2    | 7    | 4    | 432   | 153  | 2    | 1    | 129  | 64   |
| Ideal Flow (vphpl)     | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    | 6.0   |      | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Lane Util. Factor      | 1.00  |      | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Frt                    | 1.00  |      | 0.85 |      | 0.96 |      | 1.00  | 0.99 |      | 1.00 | 1.00 | 0.85 |
| Flt Protected          | 0.95  |      | 1.00 |      | 0.99 |      | 0.95  | 1.00 |      | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot)      | 1755  |      | 1541 |      | 1439 |      | 1722  | 1712 |      | 1825 | 1812 | 1601 |
| Flt Permitted          | 0.75  |      | 1.00 |      | 0.96 |      | 0.59  | 1.00 |      | 0.64 | 1.00 | 1.00 |
| Satd. Flow (perm)      | 1377  |      | 1541 |      | 1400 |      | 1064  | 1712 |      | 1223 | 1812 | 1601 |
| Peak-hour factor, PHF  | 0.78  | 0.25 | 0.92 | 0.45 | 0.75 | 0.75 | 0.80  | 0.83 | 0.25 | 0.25 | 0.68 | 0.74 |
| Adj. Flow (vph)        | 73    | 0    | 188  | 4    | 9    | 5    | 540   | 184  | 8    | 4    | 190  | 86   |
| RTOR Reduction (vph)   | 0     | 0    | 154  | 0    | 4    | 0    | 0     | 1    | 0    | 0    | 0    | 43   |
| Lane Group Flow (vph)  | 73    | 0    | 34   | 0    | 14   | 0    | 540   | 191  | 0    | 4    | 190  | 43   |
| Heavy Vehicles (%)     | 4%    | 0%   | 6%   | 0%   | 17%  | 67%  | 6%    | 12%  | 0%   | 0%   | 6%   | 2%   |
| Turn Type              | Perm  |      | Perm | Perm | NA   |      | pm+pt | NA   |      | Perm | NA   | Perm |
| Protected Phases       |       | 8    |      |      | 4    |      | 1     | 6    |      |      |      | 2    |
| Permitted Phases       | 8     |      | 8    | 4    |      |      | 6     |      |      | 2    |      | 2    |
| Actuated Green, G (s)  | 22.0  |      | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 59.9 | 59.9 | 59.9 |
| Effective Green, g (s) | 22.0  |      | 22.0 |      | 22.0 |      | 86.0  | 86.0 |      | 59.9 | 59.9 | 59.9 |
| Actuated g/C Ratio     | 0.18  |      | 0.18 |      | 0.18 |      | 0.72  | 0.72 |      | 0.50 | 0.50 | 0.50 |
| Clearance Time (s)     | 6.0   |      | 6.0  |      | 6.0  |      | 4.0   | 6.0  |      | 6.0  | 6.0  | 6.0  |
| Vehicle Extension (s)  | 3.0   |      | 3.0  |      | 3.0  |      | 3.0   | 3.0  |      | 3.0  | 3.0  | 3.0  |
| Lane Grp Cap (vph)     | 252   |      | 282  |      | 256  |      | 883   | 1226 |      | 610  | 904  | 799  |
| v/s Ratio Prot         |       |      |      |      |      |      | c0.11 | 0.11 |      |      |      | 0.10 |
| v/s Ratio Perm         | c0.05 |      | 0.02 |      | 0.01 |      | c0.33 |      |      | 0.00 |      | 0.03 |
| v/c Ratio              | 0.29  |      | 0.12 |      | 0.05 |      | 0.61  | 0.16 |      | 0.01 | 0.21 | 0.05 |
| Uniform Delay, d1      | 42.3  |      | 40.9 |      | 40.4 |      | 7.2   | 5.4  |      | 15.1 | 16.8 | 15.5 |
| Progression Factor     | 1.00  |      | 1.00 |      | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2  | 0.6   |      | 0.2  |      | 0.4  |      | 1.3   | 0.3  |      | 0.0  | 0.5  | 0.1  |
| Delay (s)              | 42.9  |      | 41.1 |      | 40.8 |      | 8.5   | 5.7  |      | 15.1 | 17.3 | 15.6 |
| Level of Service       | D     |      | D    |      | D    |      | A     | A    |      | B    | B    | B    |
| Approach Delay (s)     |       | 41.6 |      |      | 40.8 |      |       | 7.7  |      |      | 16.8 |      |
| Approach LOS           |       | D    |      |      | D    |      |       | A    |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 17.0  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.56  |                           |      |
| Actuated Cycle Length (s)         | 120.0 | Sum of lost time (s)      | 16.0 |
| Intersection Capacity Utilization | 57.3% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

# HCM Unsignalized Intersection Capacity Analysis

## 3: Ward St & Gore St

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 4   | 0   | 1   | 13  | 0   | 25  | 6  | 910   | 14  | 27  | 515   | 18  |
| Future Volume (Veh/h)             | 4   | 0   | 1   | 13  | 0   | 25  | 6  | 910   | 14  | 27  | 515   | 18  |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88   | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  |
| Hourly flow rate (vph)            | 5   | 0   | 1   | 15  | 0   | 28  | 7  | 1034  | 16  | 31  | 585   | 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)               |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   |   |   |   |   |   |   |  | 241   |   |   |   |   |
| pX, platoon unblocked             | 0.44  | 0.44  |   | 0.44  | 0.44  | 0.44  |  |   |   | 0.44  |   |   |
| vC, conflicting volume            | 1741  | 1721  | 595   | 1714  | 1723  | 1042  | 605  |   |   | 1050  |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 2050  | 2004  | 595   | 1988  | 2009  | 455   | 605  |   |   | 473   |   |   |
| tC, single (s)                    | 7.1   | 6.5   | 6.2   | 7.1   | 6.5   | 6.2   | 4.1  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 3.5   | 4.0   | 3.3   | 3.5   | 4.0   | 3.3   | 2.2  |   |   | 2.2   |   |   |
| p0 queue free %                   | 68  | 100   | 100   | 21  | 100   | 90  | 99   |   |   | 93  |   |   |
| cM capacity (veh/h)               | 15  | 24  | 508   | 19  | 24  | 267   | 983  |   |   | 470   |   |   |
| Direction, Lane #                 |   |   |   |   |   |   |  |   |   |   |   |   |
|                                   | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 6   | 43  | 1057  | 636   |   |   |  |   |   |   |   |   |
| Volume Left                       | 5   | 15  | 7   | 31  |   |   |  |   |   |   |   |   |
| Volume Right                      | 1   | 28  | 16  | 20  |   |   |  |   |   |   |   |   |
| cSH                               | 18  | 48  | 983   | 470   |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.33  | 0.89  | 0.01  | 0.07  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 6.9   | 28.2  | 0.2   | 1.6   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 276.3   | 230.7   | 0.2   | 1.9   |   |   |  |   |   |   |   |   |
| Lane LOS                          | F   | F   | A   | A   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 276.3   | 230.7   | 0.2   | 1.9   |   |   |  |   |   |   |   |   |
| Approach LOS                      | F   | F   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 7.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 60.7%   |   | ICU Level of Service  |   |  |   |   | B   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Signalized Intersection Capacity Analysis

## 4: Ward St & Wilcox St

12/02/2025



| Movement               | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|-------|------|------|-------|------|------|------|------|
| Lane Configurations    |      | ↕    |      |      | ↕     |      |      | ↕     |      |      | ↕    |      |
| Traffic Volume (vph)   | 7    | 2    | 4    | 35   | 1     | 17   | 1    | 904   | 1    | 1    | 579  | 1    |
| Future Volume (vph)    | 7    | 2    | 4    | 35   | 1     | 17   | 1    | 904   | 1    | 1    | 579  | 1    |
| Ideal Flow (vphpl)     | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s)    |      | 6.0  |      |      | 6.0   |      |      | 6.0   |      |      | 6.0  |      |
| Lane Util. Factor      |      | 1.00 |      |      | 1.00  |      |      | 1.00  |      |      | 1.00 |      |
| Frt                    |      | 0.95 |      |      | 0.95  |      |      | 1.00  |      |      | 1.00 |      |
| Flt Protected          |      | 0.98 |      |      | 0.97  |      |      | 1.00  |      |      | 1.00 |      |
| Satd. Flow (prot)      |      | 1745 |      |      | 1743  |      |      | 1882  |      |      | 1882 |      |
| Flt Permitted          |      | 0.87 |      |      | 0.81  |      |      | 1.00  |      |      | 1.00 |      |
| Satd. Flow (perm)      |      | 1558 |      |      | 1460  |      |      | 1878  |      |      | 1874 |      |
| Peak-hour factor, PHF  | 0.50 | 0.50 | 0.38 | 0.68 | 0.25  | 0.58 | 0.25 | 0.92  | 0.25 | 0.25 | 0.81 | 0.25 |
| Adj. Flow (vph)        | 14   | 4    | 11   | 51   | 4     | 29   | 4    | 983   | 4    | 4    | 715  | 4    |
| RTOR Reduction (vph)   | 0    | 8    | 0    | 0    | 22    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Lane Group Flow (vph)  | 0    | 21   | 0    | 0    | 62    | 0    | 0    | 991   | 0    | 0    | 723  | 0    |
| Turn Type              | Perm | NA   |      | Perm | NA    |      | Perm | NA    |      | Perm | NA   |      |
| Protected Phases       |      | 4    |      |      | 8     |      |      | 2     |      |      | 6    |      |
| Permitted Phases       | 4    |      |      | 8    |       |      | 2    |       |      | 6    |      |      |
| Actuated Green, G (s)  |      | 19.0 |      |      | 19.0  |      |      | 49.0  |      |      | 49.0 |      |
| Effective Green, g (s) |      | 19.0 |      |      | 19.0  |      |      | 49.0  |      |      | 49.0 |      |
| Actuated g/C Ratio     |      | 0.24 |      |      | 0.24  |      |      | 0.61  |      |      | 0.61 |      |
| Clearance Time (s)     |      | 6.0  |      |      | 6.0   |      |      | 6.0   |      |      | 6.0  |      |
| Lane Grp Cap (vph)     |      | 370  |      |      | 346   |      |      | 1150  |      |      | 1147 |      |
| v/s Ratio Prot         |      |      |      |      |       |      |      |       |      |      |      |      |
| v/s Ratio Perm         |      | 0.01 |      |      | c0.04 |      |      | c0.53 |      |      | 0.39 |      |
| v/c Ratio              |      | 0.06 |      |      | 0.18  |      |      | 0.86  |      |      | 0.63 |      |
| Uniform Delay, d1      |      | 23.6 |      |      | 24.3  |      |      | 12.7  |      |      | 9.8  |      |
| Progression Factor     |      | 1.00 |      |      | 1.00  |      |      | 1.00  |      |      | 1.00 |      |
| Incremental Delay, d2  |      | 0.3  |      |      | 1.1   |      |      | 8.6   |      |      | 2.6  |      |
| Delay (s)              |      | 23.9 |      |      | 25.4  |      |      | 21.3  |      |      | 12.4 |      |
| Level of Service       |      | C    |      |      | C     |      |      | C     |      |      | B    |      |
| Approach Delay (s)     |      | 23.9 |      |      | 25.4  |      |      | 21.3  |      |      | 12.4 |      |
| Approach LOS           |      | C    |      |      | C     |      |      | C     |      |      | B    |      |

### Intersection Summary

|                                   |       |                           |      |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay            | 18.0  | HCM 2000 Level of Service | B    |
| HCM 2000 Volume to Capacity ratio | 0.67  |                           |      |
| Actuated Cycle Length (s)         | 80.0  | Sum of lost time (s)      | 12.0 |
| Intersection Capacity Utilization | 62.6% | ICU Level of Service      | B    |
| Analysis Period (min)             | 15    |                           |      |
| c Critical Lane Group             |       |                           |      |

HCM Unsignalized Intersection Capacity Analysis  
 5: Street A/E Communication Rd & 7th Line

12/02/2025



| Movement                          | WBL   | WBR   | NBT   | NBR                  | SBL  | SBT  |
|-----------------------------------|-------|-------|-------|----------------------|------|------|
| Lane Configurations               |       |       |       |                      |      |      |
| Sign Control                      | Stop  |       | Stop  |                      |      | Stop |
| Traffic Volume (vph)              | 3     | 16    | 5     | 4                    | 29   | 8    |
| Future Volume (vph)               | 3     | 16    | 5     | 4                    | 29   | 8    |
| Peak Hour Factor                  | 0.92  | 0.92  | 0.92  | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 3     | 17    | 5     | 4                    | 32   | 9    |
| Direction, Lane #                 | WB 1  | NB 1  | SB 1  |                      |      |      |
| Volume Total (vph)                | 20    | 9     | 41    |                      |      |      |
| Volume Left (vph)                 | 3     | 0     | 32    |                      |      |      |
| Volume Right (vph)                | 17    | 4     | 0     |                      |      |      |
| Hadj (s)                          | -0.45 | -0.23 | 0.19  |                      |      |      |
| Departure Headway (s)             | 3.6   | 3.7   | 4.1   |                      |      |      |
| Degree Utilization, x             | 0.02  | 0.01  | 0.05  |                      |      |      |
| Capacity (veh/h)                  | 990   | 951   | 861   |                      |      |      |
| Control Delay (s)                 | 6.6   | 6.8   | 7.3   |                      |      |      |
| Approach Delay (s)                | 6.6   | 6.8   | 7.3   |                      |      |      |
| Approach LOS                      | A     | A     | A     |                      |      |      |
| Intersection Summary              |       |       |       |                      |      |      |
| Delay                             |       |       | 7.1   |                      |      |      |
| Level of Service                  |       |       | A     |                      |      |      |
| Intersection Capacity Utilization |       |       | 18.7% | ICU Level of Service | A    |      |
| Analysis Period (min)             |       |       | 15    |                      |      |      |

HCM Unsignalized Intersection Capacity Analysis  
6: Center Line & 7th Line/E Communication Rd

12/02/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                          | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (veh/h)            | 2   | 5   | 27  | 2   | 4   | 1   | 14   | 83  | 6   | 0   | 95  | 2   |
| Future Volume (Veh/h)             | 2   | 5   | 27  | 2   | 4   | 1   | 14   | 83  | 6   | 0   | 95  | 2   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| Grade                             |   | 0%  |   |   | 0%  |   |  | 0%  |   |   | 0%  |   |
| Peak Hour Factor                  | 0.50  | 0.50  | 0.72  | 0.75  | 0.75  | 0.25  | 0.75   | 0.82  | 0.63  | 0.25  | 0.81  | 0.25  |
| Hourly flow rate (vph)            | 4   | 10  | 38  | 3   | 5   | 4   | 19   | 101   | 10  | 0   | 117   | 8   |
| Pedestrians                       |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Width (m)                    |   |   |   |   |   |   |  |   |   |   |   |   |
| Walking Speed (m/s)               |   |   |   |   |   |   |  |   |   |   |   |   |
| Percent Blockage                  |   |   |   |   |   |   |  |   |   |   |   |   |
| Right turn flare (veh)            |   |   |   |   |   |   |  |   |   |   |   |   |
| Median type                       |   |   |   |   |   |   |  | None  |   |   | None  |   |
| Median storage (veh)              |   |   |   |   |   |   |  |   |   |   |   |   |
| Upstream signal (m)               |   |   |   |   |   |   |  |   |   |   |   |   |
| pX, platoon unblocked             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC, conflicting volume            | 272   | 270   | 121   | 308   | 269   | 106   | 125  |   |   | 111   |   |   |
| vC1, stage 1 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vC2, stage 2 conf vol             |   |   |   |   |   |   |  |   |   |   |   |   |
| vCu, unblocked vol                | 272   | 270   | 121   | 308   | 269   | 106   | 125  |   |   | 111   |   |   |
| tC, single (s)                    | 8.1   | 6.5   | 6.3   | 7.4   | 6.5   | 6.2   | 4.3  |   |   | 4.1   |   |   |
| tC, 2 stage (s)                   |   |   |   |   |   |   |  |   |   |   |   |   |
| tF (s)                            | 4.4   | 4.0   | 3.4   | 3.8   | 4.0   | 3.3   | 2.4  |   |   | 2.2   |   |   |
| p0 queue free %                   | 99  | 98  | 96  | 99  | 99  | 100   | 99   |   |   | 100   |   |   |
| cM capacity (veh/h)               | 511   | 631   | 912   | 551   | 632   | 954   | 1374   |   |   | 1492  |   |   |
| Direction, Lane #                 | EB 1  | WB 1  | NB 1  | SB 1  |   |   |  |   |   |   |   |   |
| Volume Total                      | 52  | 12  | 130   | 125   |   |   |  |   |   |   |   |   |
| Volume Left                       | 4   | 3   | 19  | 0   |   |   |  |   |   |   |   |   |
| Volume Right                      | 38  | 4   | 10  | 8   |   |   |  |   |   |   |   |   |
| cSH                               | 796   | 684   | 1374  | 1492  |   |   |  |   |   |   |   |   |
| Volume to Capacity                | 0.07  | 0.02  | 0.01  | 0.00  |   |   |  |   |   |   |   |   |
| Queue Length 95th (m)             | 1.6   | 0.4   | 0.3   | 0.0   |   |   |  |   |   |   |   |   |
| Control Delay (s)                 | 9.8   | 10.4  | 1.2   | 0.0   |   |   |  |   |   |   |   |   |
| Lane LOS                          | A   | B   | A   |   |   |   |  |   |   |   |   |   |
| Approach Delay (s)                | 9.8   | 10.4  | 1.2   | 0.0   |   |   |  |   |   |   |   |   |
| Approach LOS                      | A   | B   |   |   |   |   |  |   |   |   |   |   |
| Intersection Summary              |   |   |   |   |   |   |  |   |   |   |   |   |
| Average Delay                     |   |   | 2.5   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization |   |   | 22.2%   |   | ICU Level of Service  |   |  |   | A   |   |   |   |
| Analysis Period (min)             |   |   | 15  |   |   |   |  |   |   |   |   |   |

# HCM Unsignalized Intersection Capacity Analysis

## 7: Gore St & Street B

12/02/2025



| Movement                          | EBL         | EBT         | WBT         | WBR                  | SBL  | SBR  |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations               |             | ↔           | ↔           |                      | ↔    |      |
| Traffic Volume (veh/h)            | 13          | 28          | 33          | 0                    | 0    | 7    |
| Future Volume (Veh/h)             | 13          | 28          | 33          | 0                    | 0    | 7    |
| Sign Control                      |             | Free        | Free        |                      | Stop |      |
| Grade                             |             | 0%          | 0%          |                      | 0%   |      |
| Peak Hour Factor                  | 0.92        | 0.92        | 0.92        | 0.92                 | 0.92 | 0.92 |
| Hourly flow rate (vph)            | 14          | 30          | 36          | 0                    | 0    | 8    |
| <b>Pedestrians</b>                |             |             |             |                      |      |      |
| Lane Width (m)                    |             |             |             |                      |      |      |
| Walking Speed (m/s)               |             |             |             |                      |      |      |
| Percent Blockage                  |             |             |             |                      |      |      |
| Right turn flare (veh)            |             |             |             |                      |      |      |
| Median type                       |             | None        | None        |                      |      |      |
| Median storage (veh)              |             |             |             |                      |      |      |
| Upstream signal (m)               |             |             |             |                      |      |      |
| pX, platoon unblocked             |             |             |             |                      |      |      |
| vC, conflicting volume            | 36          |             |             |                      | 94   | 36   |
| vC1, stage 1 conf vol             |             |             |             |                      |      |      |
| vC2, stage 2 conf vol             |             |             |             |                      |      |      |
| vCu, unblocked vol                | 36          |             |             |                      | 94   | 36   |
| 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)               | 1575        |             |             |                      | 898  | 1037 |
| <b>Direction, Lane #</b>          | <b>EB 1</b> | <b>WB 1</b> | <b>SB 1</b> |                      |      |      |
| Volume Total                      | 44          | 36          | 8           |                      |      |      |
| Volume Left                       | 14          | 0           | 0           |                      |      |      |
| Volume Right                      | 0           | 0           | 8           |                      |      |      |
| cSH                               | 1575        | 1700        | 1037        |                      |      |      |
| Volume to Capacity                | 0.01        | 0.02        | 0.01        |                      |      |      |
| Queue Length 95th (m)             | 0.2         | 0.0         | 0.2         |                      |      |      |
| Control Delay (s)                 | 2.4         | 0.0         | 8.5         |                      |      |      |
| Lane LOS                          | A           |             | A           |                      |      |      |
| Approach Delay (s)                | 2.4         | 0.0         | 8.5         |                      |      |      |
| Approach LOS                      |             |             | A           |                      |      |      |
| <b>Intersection Summary</b>       |             |             |             |                      |      |      |
| Average Delay                     |             |             | 2.0         |                      |      |      |
| Intersection Capacity Utilization |             |             | 18.9%       | ICU Level of Service | A    |      |
| Analysis Period (min)             |             |             | 15          |                      |      |      |



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