

## **Traffic Control Signals and Traffic Regulations - Sherbourne Street North and Elm Avenue/Maple Avenue**

**Date:** May 20, 2025

**To:** Toronto and East York Community Council

**From:** Director, Traffic Management, Transportation Services

**Wards:** Ward 11, University-Rosedale

### **SUMMARY**

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As the Toronto Transit Commission (TTC) operates a transit service on Sherbourne Street North, Elm Avenue and Maple Avenue, City Council approval of this report is required.

Transportation Services is requesting approval to install traffic control signals at the intersection of Sherbourne Street North and Elm Avenue/Maple Avenue. The traffic control signals will provide enhanced safety for all road users and is justified based on the assessment undertaken. Due to the complex geometry of this intersection, for the traffic control signal to operate safely, it will also be necessary to:

- Prohibit northbound right turns on red at all times from Sherbourne Street North to Elm Avenue; and
- Designate Maple Avenue, between Sherbourne Street North and Glen Road (west intersection) one-way for eastbound traffic only.

### **RECOMMENDATIONS**

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The Director, Traffic Management, Transportation Services recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Sherbourne Street North and Elm Avenue/Maple Avenue.
2. Subject to approval of Recommendation 1 above and in conjunction with the installation of traffic control signals at Sherbourne Street North and Elm Avenue/Maple Avenue:

- a. City Council rescind the existing all-way compulsory stop control at the intersection of Sherbourne Street North and Elm Avenue/Maple Avenue.
- b. City Council prohibit northbound right turns on a red signal at all times, on Sherbourne Street North at Elm Avenue.
- c. City Council designate Maple Avenue, between Sherbourne Street North and Glen Road (west intersection), as one-way for eastbound traffic only.

## **FINANCIAL IMPACT**

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The estimated cost for installing traffic control signals at the intersection of Sherbourne Street North and Elm Avenue/Maple Avenue is \$300,000.00. Funding would be subject to availability and competing priorities within the Transportation Services 2025 Capital Budget.

## **DECISION HISTORY**

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This report addresses a new initiative.

## **COMMENTS**

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Transportation Services was requested by the Ward Councillor and local residents to investigate the feasibility of installing traffic control signals at the intersection of Sherbourne Street North and Elm Avenue/Maple Avenue.

### **Existing Conditions**

Sherbourne Street North is characterized by the following conditions:

- It is a two-lane, north-south, collector roadway
- It operates two-way traffic on a pavement width of approximately 14.5 metres south of Elm Avenue, and 12.5 metres north of Elm Avenue
- The daily two-way traffic volume is approximately 6,400 vehicles
- The speed limit is 30 km/h
- Heavy trucks are prohibited at all times
- There is TTC service provided by the 75 Sherbourne bus
- There are sidewalks located on both sides of the street
- There is a bike lane in each direction, south of Elm Avenue

Elm Avenue is characterized by the following conditions:

- It is a two-lane, east-west, collector roadway
- It operates two-way traffic on a pavement width of approximately 7.3 metres west of Sherbourne Street North, and 8 metres east of Sherbourne Street North
- The daily two-way traffic volume is approximately 4,200 vehicles
- The speed limit is 30 km/h
- Heavy trucks are prohibited at all times
- There is TTC service provided by the 75 Sherbourne bus
- There are sidewalks located on both sides of the street
- It is a designated Community Safety Zone

Maple Avenue is characterized by the following conditions:

- It is a two-lane, east-west, local roadway
- It operates two-way traffic on a pavement width of approximately 7.3 metres
- The daily two-way traffic volume is approximately 3,600 vehicles
- The speed limit is 30 km/h
- Heavy trucks are prohibited at all times
- There is TTC service provided by the 75 Sherbourne bus
- There are sidewalks located on both sides of the street

Sherbourne Street North and Elm Avenue/Maple Avenue form a five-leg intersection that is all-way stop controlled. Pedestrian crossings are provided on all intersection legs except on the south side. The adjacent land use in this area is generally residential. Branksome Hall school is located on the north side of Elm Avenue, west of Sherbourne Street North.

The closest adjacent traffic controls are located as follows:

- approximately 300 metres to the south at Bloor Street East in the form of traffic control signals
- approximately 180 metres to the north at South Drive in the form of all-way stop control
- approximately 190 metres to the west at Mount Pleasant Road in the form of traffic control signals
- approximately 240 metres on Elm Avenue to Glen Road in the form of all-way stop control
- approximately 340 metres on Maple Avenue to Powell Avenue in the form of all-way stop control

A map of the area is included in Attachment 1.

## Traffic Control Signals

To determine the need for traffic control signals at the intersection of Sherbourne Street North and Elm Avenue/Maple Avenue, staff rely on the justification criteria as outlined in the Ontario Traffic Manual (OTM) Book 12. The OTM justification criteria includes factors such as volume of vehicles and pedestrians, delay to cross traffic, and collision history. In addition to these technical justifications, staff consider an environmental checklist which includes consideration of road width, posted speed limit, operating speeds, adjacent land uses, pedestrian desire lines and demographics, presence of a transit stop, sight lines, and distance between existing crossing opportunities.

As part of the investigation, staff conducted vehicle and pedestrian counts on September 11, 2024, at the subject intersection. The results of the counts and collision hazard are summarized in Table 1. The "Collision hazard" criterion is based on the number of collisions potentially preventable by the installation of traffic control signals. Collision history provided by the Toronto Police Service for the three-year period ending March 31, 2025, disclosed one collision at the subject intersection that was potentially preventable by the installation of traffic control signals.

Table 1: Warrant Compliance - Sherbourne Street North and Elm Avenue/Maple Avenue

Justification	Compliance level
Minimum vehicular volume	95%
Delay to cross traffic (pedestrians and vehicles)	56%
Collision hazard	7%

To meet the justification criteria for the installation of traffic control signals, one of the justifications must be 100 percent satisfied or both the minimum vehicular volume and delay to cross traffic justifications must be at least 80 percent satisfied. Based on the results in Table 1, the installation of traffic control signals is not justified.

Notwithstanding the numeric warrants not being met, in view of the multi-legged geometry, potentially conflicting movements and connectivity concerns, Transportation Services further considered the installation of traffic signals at Sherbourne Street North and Elm Avenue/Maple Avenue for the following reasons:

1. The pedestrian generators in the immediate area, including:
  - a school (Branksome Hall) on Elm Avenue
  - Kids and Company Daycare on South Drive
  - places of worship (Rosedale Presbyterian) on South Drive

2. TTC bus stops on the southeast corner of Sherbourne Street North at Maple Avenue and the northeast corner of Elm Avenue at Sherbourne Street North
3. Bike lanes on both sides of Sherbourne Street North

The installation of traffic control signals will benefit vulnerable road users crossing at this five-legged intersection, will help improve right-of-way confusion, and will improve connectivity and safety for all road users.

A detailed assessment was undertaken to determine how the potential traffic control signals could operate most safely and efficiently. It was determined that it is not possible to include all five of the existing intersection legs into the proposed traffic control signals as there is not sufficient separation between the east leg of Elm Avenue and Maple Avenue. The skew between these two intersection legs would result in westbound motorists on either street viewing both sets of signal heads simultaneously, creating a confusing and unsafe condition for motorists.

Accordingly, it was necessary to remove one of these side streets from the traffic signal control. The preferred means to do this was converting one of these streets to operate one-way eastbound, away from the proposed traffic control signals. Based on the existing volumes and surrounding road network, Maple Avenue was deemed to have lesser impacts.

Converting Maple Avenue to a one-way eastbound operation, between Sherbourne Street North and Glen Road (west intersection), reduces the potential number of conflict points at this intersection, simplifies traffic movements and enhances safety for all road users, particularly vulnerable road users. This change will inconvenience residents on this section of Maple Avenue, who will need to take a more circuitous route to travel westbound. It may also increase westbound traffic volumes on the adjacent section of Elm Avenue, east of Mount Pleasant Road.

Additionally, to prevent northbound motorists on Sherbourne Street North from making right turns to the east leg of Elm Avenue across Maple Avenue during the east-west green phase, it will be necessary to enact a right turn on red prohibition at all times for this movement.

In considering the above reasons, Transportation Services recommends the installation of traffic control signals at Sherbourne Street North and Elm Avenue/Maple Avenue, in conjunction with the recommended one-way operation and turn restriction, to provide enhanced safety for all road users.

The TTC has been consulted and concurs with these findings.

## Other Considerations

It should be noted that the installation of traffic control signals will have the following additional impacts:

- There will be an increase in delays for motorists on all approaches
- Increased delays may result in congestion along Elm Avenue in the vicinity of Branksome Hall during pick-up/drop-off times
- There is potential for an increase in delays to transit service on Sherbourne Street North, Maple Avenue and Elm Avenue (75 Sherbourne bus route)
- The proposed one-way eastbound operation on Maple Avenue, between Sherbourne Street North and Glen Road (west intersection), will inconvenience residents, trades and visitors as they will be required to take a more circuitous route to access this section of roadway
- The existing bike share station will need to be relocated from the northeast corner of the intersection

The Ward Councillor has been advised of the recommendations in this report.

## CONTACT

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## SIGNATURE

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for

Roger Browne, M.A.Sc., P. Eng.  
Director, Traffic Management, Transportation Services

## ATTACHMENTS

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Attachment 1: Map - Traffic Control Signals and Traffic Regulations - Sherbourne Street North and Elm Avenue/Maple Avenue

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