

## **Pedestrian Crossing Protection - The West Mall and Waulron Street**

**Date:** August 30, 2023

**To:** Etobicoke York Community Council

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

**Wards:** Ward 3 – Etobicoke-Lake Shore

### **SUMMARY**

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As the Toronto Transit Commission (TTC) operates a transit service on The West Mall, City Council approval of this report is required.

Transportation Services has reviewed the need for pedestrian crossing protection at the intersection of The West Mall and Waulron Street. Based on the assessment undertaken, Transportation Services is recommending the installation of traffic control signals at the intersection of The West Mall and Waulron Street. The traffic control signals will provide enhanced safety for vulnerable road users.

### **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 The West Mall and Waulron Street.

### **FINANCIAL IMPACT**

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The estimated cost for installing traffic control signals at the intersection of The West Mall and Waulron Street is \$250,000. Funding would be subject to availability and competing priorities within the Transportation Services 2024 Capital Budget.

### **DECISION HISTORY**

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This report addresses a new initiative.

## COMMENTS

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Transportation Services staff was requested by an area business to review the need for pedestrian crossing protection on The West Mall, near Waulron Street. This request is to address the long distance between protected pedestrian crossings on The West Mall, which is approximately 1.6 kilometres, and enhance safety for pedestrians and transit users using the mid-block TTC bus stops.

### Existing Conditions

The West Mall is characterized by the following conditions:

- It is a 4-lane, north-south, minor arterial roadway
- It operates two-way traffic on a pavement width of approximately 18 metres
- The daily two-way traffic volume is approximately 14,000 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is TTC service provided by the 123 Sherway bus
- There are sidewalks located on both sides of the street

Waulron Street 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 9.2 metres
- The daily two-way traffic volume is approximately 1500 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is no TTC service provided
- There are no sidewalks on either side of the street

The West Mall and Waulron Street form a T-type intersection. Waulron Street is stop-sign controlled while The West Mall is uncontrolled free-flow.

The adjacent land use in this area is commercial/industrial. There are northbound and southbound bus stops on The West Mall north of Waulron Street.

The closest adjacent traffic controls are located approximately 900 metres to the north at West Mall Crescent in the form of traffic control signals and approximately 700 metres to the south at The Queensway in the form of traffic control signals.

A map of the area is included in Attachment 2.

Transportation Services has reviewed the need for either a pedestrian crossover (PXO) or traffic control signals at this location to determine if either device should be recommended as an appropriate pedestrian crossing protection.

### Pedestrian Crossover (PXO)

To determine the need for a PXO at The West Mall and Waulron Street, staff rely on the justification criteria as outlined in the Ontario Traffic Manual (OTM) Book 12. The OTM justification criteria includes two main factors: the volume of vehicles and pedestrians;

and pedestrian delay to cross traffic. Based on the traffic volume on The West Mall, the warrants require a minimum of 270 pedestrians crossing over eight hours. Also, based on the pedestrian crossing volume, at least 130 pedestrians must be delayed more than 10 seconds. However, a minimum of 200 crossings are required to calculate the delay portion of the warrant.

An eight-hour study was conducted on April 21, 2022, which recorded the total volume pedestrians crossing The West Mall in the area of Waulron Street. The volume of pedestrians observed crossing was 28. The compliance level of the study results in relation to the warrant criteria is shown in Table 1 below.

Table 1: Pedestrian Crossover Warrant Criteria and Compliance at The West Mall and Waulron Street

<b>Justification</b>	<b>Compliance</b>
Pedestrian Volume	10 percent
Pedestrian Delay	0 percent

In order to meet the warrant criteria, 100 percent compliance is required in both categories. Based on the results of the study, a PXO is not technically justified as the compliance levels did not meet the minimum requirements.

In addition to the technical criteria, consideration of the surrounding area is given and in some cases engineering judgement may be applied to recommend a PXO even if the number of pedestrians do not meet the threshold of the technical warrants.

An environmental safety audit was completed to ensure that the installation of a PXO would be appropriate at this location. Details of the evaluation are included in Attachment 1. Based on the evaluation, a PXO would not be a suitable type of pedestrian crossing protection at this location due to the operating speed on The West Mall being greater than 60 km/h.

### **Traffic Control Signals**

To determine the need for traffic control signals at the intersection of The West Mall and Waulron Street, staff rely on the justification criteria as outlined in the 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.

Staff conducted vehicle and pedestrian counts on April 21, 2022, at the subject intersection. Collision history provided by the Toronto Police Service for the three-year period ending December 31, 2022 disclosed zero collision at the subject intersection that would be potentially preventable by the installation of traffic control signals. 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.

Table 2: Warrant Compliance - The West Mall and Waulron Street

<b>Justification</b>	<b>Compliance level</b>
Minimum vehicular volume	20%
Delay to cross traffic (pedestrians and vehicles)	43%
Collision hazard	0%

To meet the technical 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 2, the installation of traffic control signals is not justified.

In regards to the environmental checklist, staff noted the following environmental factors:

- the long spacing between pedestrian crossing protection on The West Mall;
- the presence of transit stops in both directions on The West Mall that attract pedestrians to cross the street; and
- the four lane cross-section on The West Mall, as well as the speed and volume of traffic using this street.

In considering the above environmental factors, Transportation Services recommends the installation of traffic control signals at The West Mall and Waulron Street as it will provide enhanced safety for all road users.

The installation of traffic control signals at this location will require modifications to the private driveway located on the east side of The West Mall immediately south of the subject intersection. During discussions with the property management for this property they did not have any objections to the proposed modifications.

The TTC has been consulted and concurs with these findings.

### **Other Considerations**

- There is potential for increase in delays to transit service on The West Mall
- The installation of traffic control signals at this location will require modifications to the private driveway located on the east side of The West Mall immediately south of the subject intersection. During discussions with the property management for this property they did not have any objections to the proposed modifications

Staff recommend the installation of traffic control signals based on the technical and environmental criteria including the long spacing between existing pedestrian crossing protections and the presence of transit stops in the area.

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

## **CONTACT**

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## **SIGNATURE**

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

## **ATTACHMENTS**

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Attachment 1: Environmental Safety Audit - PXO - The West Mall and Waulron Street  
Attachment 2: Map - Traffic Control Signals - The West Mall and Waulron Street

Attachment 1: Environmental Safety Audit - PXO - The West Mall and Waulron Street

<b>Standard</b>	<b>Comments</b>	<b>Standard Met/Not Met</b>
Vehicle operating speed less than 60 km/h	The operating speed or 85th percentile speed on The West Mall is over 60 km/h.	Not Met
Not more than four lanes wide on a two-way street or more than three lanes wide on a one-way street	The West Mall operates with two lanes in each direction.	Met
Traffic volume not more than 35,000 vehicles per day	The West Mall carries approximately 14,000 vehicles per day.	Met
No significant volume of turning movements	The volume of traffic turning to/from The West Mall is moderate (significant volume of heavy vehicles)	Not Met
No visibility problems exist for either pedestrians or motorists	No vertical or horizontal curves.	Met
No loading zones (including TTC) in the immediate area	TTC stops are located on The West Mall north of Waulron Street.	Met
No driveways or entrances nearby	A driveway is located on the east side just south of the intersection.	Not Met
Spacing is not less than 200 metres to another pedestrian crossover or traffic control signal (TCS)	West Mall Crescent (TCS) - 900 metres north The Queensway (TCS) - 700 metres south	Met

Attachment 2: Map - Traffic Control Signals - The West Mall and Waulron Street

