

Road and Intersection Safety Review - Winona Drive at St. Clair Avenue West and Barrie Avenue

Date: March 14, 2024

To: Toronto and East York Community Council

From: Director, Traffic Management, Transportation Services

Wards: Ward 9, Davenport; Ward 12, Toronto-St. Paul's

SUMMARY

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

Toronto and East York Community Council directed Transportation Services to conduct a review of various safety and operational concerns for road users at the intersection of Winona Drive and St. Clair Avenue West, as well as Winona Drive and Barrie Avenue. This report provides an overview of the assessments and improvements proposed or undertaken by Transportation Services.

Transportation Services is recommending a westbound right turn on a red signal prohibition at Winona Drive and St. Clair Avenue West, as well as other minor improvements to refresh/enhance the signs, pavement and markings at the intersection.

Additionally, during the course of the investigation, it was noted that there is a discrepancy between the posted signs and the existing parking regulations. Recommendations 2, 3 and 4 will correct these inconsistencies.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. City Council prohibit westbound right turns on a red signal at all times at the intersection of St. Clair Avenue West and Winona Drive.

2. City Council rescind the existing parking prohibition in effect from 7:00 a.m. to 9:00 a.m., Monday to Friday, except public holidays, on the south side of St. Clair Avenue West, between Bathurst Street and Oakwood Avenue.
3. City Council amend the existing stopping prohibition in effect at all times, on the south side of St. Clair Avenue West, between a point 15 metres west of Winona Drive and Winona Drive, to be in effect between Winona Drive and a point 25.4 metres west.
4. City Council amend the existing parking machine regulation in effect from 9:00 a.m. to 9:00 p.m., Monday to Friday; 8:00 a.m. to 9:00 p.m., Saturday; from 1:00 p.m. to 9:00 p.m. Sunday, at a rate of \$2.75 per hour and for a maximum period of three hours, on the south side of St. Clair Avenue West, between a point 32.5 metres east of Westmount Avenue and a point 15 metres west of Winona Drive, to be in effect between a point 32.5 metres east of Westmount Avenue and a point 25.4 metres west of Winona Drive.

FINANCIAL IMPACT

All costs associated with the safety and operational improvements are included in the Transportation Services 2024 Operating Budget.

DECISION HISTORY

On December 13, 14 and 15, 2023, City Council adopted Item - 2023.MM13.19 (Road and Intersection Safety Review on Winona Drive at St. Clair Avenue West and Barrie Avenue), directing Transportation Services to undertake an intersection safety review at on Winona Drive at St. Clair Avenue West and Barrie Avenue. The City Council decision can be found at:

<https://secure.toronto.ca/council/agenda-item.do?item=2023.MM13.19>

COMMENTS

In response to the direction from City Council's adoption of the Item - 2023.MM13.19, arising from a fatal collision involving a pedestrian in December 2023, Transportation Services conducted an intersection safety review and studied operational and safety measures at the intersection of Winona Drive and St. Clair Avenue West.

Existing Conditions

Winona Drive is characterized by the following conditions:

- It is a two-lane, north-south roadway that is classified as a local road
- It operates with two-way traffic on a pavement width of approximately 8.6 metres, between St. Clair Avenue West and Barrie Avenue and it operates with one-way southbound traffic, north of Barrie Avenue
- The daily two-way traffic volume is approximately 2,500 vehicles, between St. Clair Avenue West and Barrie Avenue
- The speed limit is 30 km/h
- Heavy trucks are prohibited at all times
- There is no TTC service provided
- There are sidewalks located on both sides of the street

The parking regulations on Winona Drive, between St. Clair Avenue West and Barrie Avenue, are as follows:

East side

- No stopping, anytime, between Dundurn Crescent (south intersection) and St. Clair Avenue West
- No parking, anytime, between a point 15 metres south of Benson Avenue and St. Clair Avenue West

West side

- No stopping, anytime, between Barrie Avenue and St. Clair Avenue West
- Permit Parking, from 12:01 a.m. to 7:00 a.m., between Tyrrel Avenue to St. Clair Avenue West
- Maximum one-hour parking, anytime, between Benson Avenue and St. Clair Avenue West

St. Clair Avenue West is characterized by the following conditions:

- It is a four-lane, east-west, roadway, with streetcar tracks that operate on an exclusive right-of-way in the two centre lanes, and is classified as a major arterial road
- It operates two-way traffic on a pavement width of approximately 23 metres
- The daily two-way traffic volume is approximately 15,000 vehicles
- The speed limit is 40 km/h
- The TTC service is provided by the “512 St Clair Replacement Bus” and the “312 St Clair-Junction to Dundas West Station Night Service Bus”. Currently the streetcar tracks are not operational, as the TTC is undertaking electrical work, and the streetcars have been replaced with buses
- There are sidewalks located on both sides of the street

The parking regulations on St. Clair Avenue West, in the vicinity of Winona Drive, are as follows:

North side

- No standing, anytime, between Winona Drive and a point 41 metres east
- No stopping, anytime, between Winona Drive and a point 30.5 metres west
- No stopping, from 4:00 p.m. to 6:00 p.m., Monday to Friday, except public holidays

South side

- No standing, anytime, between Winona Drive and a point 39 metres east
- No stopping, anytime, between Winona Drive and a point 25.4 metres west (posted)
- No stopping, from 7:00 a.m. to 9:00 a.m., Monday to Friday, except public holidays

The adjacent land use in the vicinity of Winona Drive and St. Clair Avenue West consists of mixed use of commercial and residential condominium buildings, and single-family residential properties.

A notable land use in the area is 898-900 St. Clair Avenue West. This is a 12-storey residential condominium building with ground-floor retail. The site is an "L" shaped property bounded by a one-storey retail building and single family residential to the north, Winona Drive to the east, St. Clair Avenue West to the south and Alberta Avenue to the west. Loading/unloading and garbage pick-up activities are undertaken at the rear of this building, which is accessed by garbage trucks from Winona Drive, north of St Clair Avenue West. Long term access on Winona Drive will be maintained along with this new development.

The closest adjacent traffic controls are located approximately 300 metres to the east, at Arlington Avenue, and approximately 90 metres to the west, at Alberta Avenue in the form of traffic controls signals.

A map of the area is included in Attachment 1.

Collision Review

A review of the Toronto Police Service collision records, with specific emphasis for pedestrian, cyclist and Killed or Seriously Injured (KSI) collisions at Winona Drive and St. Clair Avenue West for the five-year period ending December 31, 2023 was undertaken and revealed a total of 20 collisions. Of these 20 collisions, one involved a cyclist, and two involved a pedestrian.

The results of the review are summarized in Table 1.

Table 1: Collision Summary (2019-2023) at the Intersection of Winona Drive and St. Clair Avenue West.

Collision Type	2019	2020	2021	2022	2023	Total
Pedestrian	0	0	0	1	1	2
Cyclist	0	0	1	0	0	1

These three collisions are described in more detail below:

- August 31, 2021 at 1:30 a.m. - A southbound motorist entered the intersection on a green. A westbound cyclist entered the intersection without the right-of-way and lost control, striking the curb. The cyclist did not sustain any injuries.
- July 9, 2022 at 9:05 p.m. - A northbound motorist stopped over the south crosswalk on Winona Drive at St. Clair Avenue West. A pedestrian walking behind the vehicle was struck when the motorist reversed. The pedestrian sustained minor injuries.
- December 7, 2023 at 12:46 p.m. - A truck was travelling westbound on St. Clair Avenue West and turned northbound on Winona Drive. The vehicle struck a pedestrian that was walking westbound in the north crosswalk. The pedestrian sustained fatal injuries.

A review of the Toronto Police Service collision records, with specific emphasis for pedestrian, cyclist and Killed or Seriously Injured (KSI) collisions at Winona Drive and Barrie Avenue for the five-year period ending December 31, 2023 was undertaken and revealed a total of one collision. There were no reported collisions involving a pedestrian or cyclist.

Road Safety Review

Traffic Operations conducted a detailed safety review at the intersection of St. Clair Avenue West and Winona Drive. This review included all aspects of the intersection's operation. The results of this review have been summarized as follows:

A. Signage

The signage within the study area were generally found to be in good condition, appropriate and clearly visible to road users.

The following signs are posted on Winona Drive at St. Clair Avenue West and Barrie Avenue to address traffic and right-of-way concerns:

- Two "No Exit" signs on the traffic signals poles on the northeast and northwest corner of Winona Drive and St. Clair Avenue West
- Two "No Through Traffic" signs on the traffic signals poles on the northeast and northwest corner of Winona Drive and St. Clair Avenue West
- Two "Do Not Enter, bicycles excepted" signs and two "One-way Southbound" signs for northbound traffic at the intersection of Winona Drive and Barrie Avenue, given that the north leg of Winona Drive is a one-way southbound street
- Two "Do Not Enter" signs and two "One-way Westbound" signs on Barrie Avenue at Winona Drive, given that Barrie Avenue is a one-way westbound street
- "Stop" sign for northbound traffic on the south leg of Winona Drive at the intersection of Winona Drive and Barrie Avenue

These signs are adequate and clearly visible. To provide additional reinforcement to motorists using this intersection, a request has been created to install a "Turning Traffic Must Yield to Pedestrians" advisory (black on yellow) sign for westbound right-turning motorists.

B. Pavement markings

The pavement markings within the study area were generally in good condition. Partial wear and tear of the east and west crosswalks was identified. Accordingly, a request has been submitted to refresh the worn pavement markings at St. Clair Avenue West and Winona Drive. Otherwise, markings at this intersection, when required, will be refreshed as part of Transportation Services' annual painting program.

C. Pavement quality

Some sections of the pavement at this intersection were cracked and may require patching. Accordingly, a request was submitted to have the quality of the pavement at this intersection assessed. There is no other planned road work at this intersection.

D. Sight lines

All sightlines at the intersection were reviewed and there were no impediments identified for road users.

E. Sidewalks

Sidewalks on St. Clair Avenue West and Winona Drive, within the study area, were found to be in good condition. All corners of the intersection are equipped with tactile walking surface indicators.

F. Street lighting

Street lighting is the responsibility of Toronto Hydro. However, Transportation Services' review did note that there are streetlights provided around the intersection of St. Clair Avenue West and Winona Drive.

G. Parking Regulations

A review of the existing parking regulations revealed that they both effectively allow for safe and efficient traffic operations and serve the community and businesses within the study area. These regulations can be categorized as follows:

- No standing anytime near TTC stops to ensure passenger boarding and dismounting is done without any impediments
- No parking and no stopping anytime within 30.5 metres of the traffic control signals
- Parking and stopping prohibitions during the a.m. and p.m. peak hours to ensure a smooth flow of traffic

In light of the above, no changes are recommended to the existing parking regulations. However, during the course of the investigation, discrepancies were noted between the posted signs and the existing parking regulation by-laws on the south side of St. Clair Avenue West. The approval of Recommendations 2, 3 and 4 will correct these inconsistencies.

H. Signal Hardware and Design

The vehicle and pedestrian signal displays at the intersection were found to be in good condition and clearly visible to intersection users.

The intersection is equipped with Audible Pedestrian Signals (APS). An audible pedestrian signal would assist visually-impaired pedestrians to cross the intersection safely. Pedestrian crosswalks are provided on the north, south, east and west sides of the intersection.

I. Signal Timings

The signals at the intersection of Winona Drive and St. Clair Avenue West operate with a semi-actuated mode of control. With this type of operation, the signal remains green on the main street (St. Clair Avenue West) until there is an actuation by either a pedestrian or vehicle on the side street (Winona Drive). The side street will always serve the pedestrian walk phase, regardless of whether a pedestrian or vehicle call has been received. Additionally, east-west left turn/U turn green arrow phases are also provided, actuated by vehicle demand in the left turn lanes.

Based on the pedestrian crossing distances, the signal timings provide sufficient time for pedestrians to cross at a comfortable walking speed. No pedestrians were observed having difficulty completing their crossings.

The intersection is also equipped with a leading pedestrian interval feature (LPI) for the north-south pedestrian crossings on the east and west legs of Winona Drive at St. Clair Avenue West. An LPI operates by displaying the "Walk" phase for pedestrians before the green phase for motorists, giving pedestrians a head-start overturning traffic. This type of phasing is beneficial to pedestrians, as motorists are more likely to yield the right-of-way to pedestrians that are already crossing the street, as opposed to pedestrians that are about to begin their crossing.

The system logs confirmed that the signal was operating as per the signal timing plan, at the date and time of the fatal collision on December 7, 2023.

J. Geometric Safety Improvements

At the time that this report was prepared, there are no capital works planned for the next five years. No other opportunities for interim improvements were disclosed at the existing lane widths and curve radii meet the appropriate standards.

K. Turn Prohibitions

Currently there are no turn restrictions at this intersection. A site investigation was conducted by Transportation Services to review the intersection. During the course of our investigation, it was determined that potential conflicts with pedestrians can occur for westbound motorists turning right on a red signal. Though the fatal incident on December 7, 2023 did not occur during an east-west red signal, prohibiting right turns on red signals at all times at the intersection of Winona Drive and St. Clair Avenue West will reduce the number of potential conflicts and improve the safety for all road users.

Conclusion

Based on staff findings the traffic control signals at the intersection of St. Clair Avenue West and Winona Drive provide a safe and controlled crossing for all road users. However, Transportation Services recommends prohibiting right turns on red signals at all times for westbound motorists at the intersection of Winona Drive and St. Clair Avenue West to reduce the number of potential conflicts and improve the safety for all road users.

Ward Councillors have been advised of the recommendations of this staff report.

CONTACT

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SIGNATURE

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ATTACHMENTS

Attachment 1: Map - Road and Intersection Safety Review on Winona Drive at St. Clair Avenue West and Barrie Avenue

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