

Intersection Safety Review - Broadview Avenue and Torrens Avenue

Date: March 23, 2023

To: Toronto and East York Community Council

From: Director, Traffic Management, Transportation Services

Wards: Ward 14, Toronto-Danforth

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Broadview Avenue, 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 Broadview Avenue and Torrens Avenue, including the possibility of upgrading the existing pedestrian crossover to traffic control signals. This report provides an overview of the assessments and improvements proposed or undertaken by Transportation Services.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. City Council receive this report for information.

FINANCIAL IMPACT

All costs associated with the safety and operational improvements are included in the Transportation Services 2023 Capital Budget.

DECISION HISTORY

On September 9, 2021, Toronto and East York Community Council adopted Item TE27.98 (Broadview Avenue and Torrens Avenue: Creating a Safer Intersection), directing Transportation Services to undertake a road safety review of intersection of Broadview Avenue and Torrens Avenue, including the possibility of upgrading the existing pedestrian crossover to traffic control signals. The Community Council decision can be found at:

<https://secure.toronto.ca/council/agenda-item.do?item=2021.TE27.98>

COMMENTS

In response to the direction from Toronto and East York Community Council's adoption of the item TE27.98, Transportation Services conducted a road safety review and studied operational and safety measures at the intersection of Broadview Avenue and Torrens Avenue.

Existing Conditions

Broadview Avenue is characterized by the following conditions:

- It is a four-lane, north-south, roadway that is classified as a minor arterial
- It operates two-way traffic on a pavement width of approximately 13 metres
- The daily two-way traffic volume is approximately 20,000 vehicles
- The speed limit is 40 km/h
- Heavy trucks are prohibited from 7:00 p.m. of one day to 7:00 a.m. of the next following day
- The TTC service is provided by 8 Broadview and 100 Flemington Park bus routes
- There are sidewalks provided on both sides of the street

The parking regulations on Broadview Avenue in the vicinity of Torrens Avenue are as follows:

East side

- No parking, from 7:00 a.m. to 9:00 a.m., Monday to Friday, except public holidays
- No stopping, from 4:00 p.m. to 6:00 p.m., Monday to Friday, except public holidays
- Maximum three-hour statutory parking at all other times

West side

- No parking, from 4:00 p.m. to 6:00 p.m., Monday to Friday, except public holidays
- No stopping, from 7:00 a.m. to 9:00 a.m., Monday to Friday, except public holidays
- Maximum three-hour statutory parking at all other times

Torrens Avenue is characterized by the following conditions:

- It is a two-lane, east-west, roadway that is classified as a local road
- It operates two-way traffic on a pavement width of approximately 8.4 metres
- The daily two-way traffic volume is approximately 670 vehicles
- The speed limit is 30 km/h
- Heavy trucks are prohibited
- There is no TTC service provided
- There are sidewalks provided on both sides of the street

The parking regulations on Torrens Avenue in the vicinity of Broadview Avenue are as follows:

North side

- No parking anytime, from Pape Avenue to Broadview Avenue, during the months of May, July, September and November
- Permit parking, from 11:00 p.m. to 5:00 a.m., during the months of January, February, March, April, June, August, October and December
- Maximum three-hour statutory parking on all other times

South side

- No parking anytime, from Pape Avenue to Broadview Avenue, during the months of January, February, March, April, June, August, October and December
- Permit parking, from 11:00 p.m. to 5:00 a.m., during the months of May, July, September and November
- Maximum three-hour statutory parking on all other times

The area, around Broadview Avenue and Torrens Avenue, is generally comprised of low-rise and single-family residential properties.

The closest adjacent traffic controls are located approximately 205 metres to the south at Cosburn 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 this intersection for the three-year period ending January 1, 2023 revealed three collisions, one of which involved a pedestrian (on their bike).

On July 2, 2021, a southbound vehicle rear ended another vehicle that was stopped at the pedestrian crossover. The second vehicle hit a pedestrian (on their bike). The first driver was charged with careless driving. The police report did not indicate any injuries.

Road Safety Review

Traffic Operations' Staff conducted a detailed safety review at the intersection of Broadview Avenue and Torrens Avenue. This review included all aspects of the road's operation. The results are summarized below.

A. Signage

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

B. Pavement markings

The pavement markings, within the study area were in good condition. These markings, when required, will be refreshed as part of Transportation Services' annual painting program.

C. Sight lines

All sightlines along Broadview Avenue and at its intersection with Torrens Avenue were reviewed and there were no impediments identified for road users.

D. Sidewalks

Sidewalks on Broadview Avenue, within the study area of the intersection, were found to be in good condition. All corners of the intersection are equipped with tactile walking surface indicators (TWSI).

E. Street lighting

Street lighting is the responsibility of Toronto Hydro. However, Transportation Services' review did note that there are street lights provided around the intersection of Broadview Avenue and Torrens Avenue.

F. Parking Regulations

A review of the existing parking regulations revealed that they 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:

- Corner parking prohibition to provide unobstructed sightlines at intersections
- Stopping prohibition within the vicinity of the pedestrian crossover
- No standing anytime near TTC stops to ensure passenger boarding and dismounting is done without any impediments
- Parking and stopping prohibition during peak hours to ensure a smooth flow of traffic

In light of the above, no changes are recommended to the existing parking regulations.

G. Community Safety Zone

A Community Safety Zone is created by designating the frontage of an eligible school within the City as such. The study area cannot be designated a Community Safety Zone as there is no school fronting on Broadview Avenue around the intersection.

H. School Crossing Guards

School crossing guards help children to safely cross the street during their walks to and from school and remind drivers of the presence of pedestrians at key intersections. There is a crossing guard at this location.

I. Traffic Control Devices

The existing pedestrian crossover on Broadview Avenue at Torrens Avenue was found to be appropriately functional and in accordance with the City's standards.

Traffic Control Signals Warrant Studies

To determine the need for traffic control signals at the intersection of Broadview Avenue and Torrens Avenue, 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, vehicle operating speeds, adjacent land uses, pedestrian desire lines and demographics, presence of a transit stop, sight lines, and distance between existing crossing opportunities.

Using traffic volumes recorded during the peak eight hours on Thursday, March 31, 2022, the following results were obtained:

Table 1: Warrant Compliance - Broadview Avenue and Torrens Avenue

Justification	Compliance Level
Minimum Vehicular Volume	9%
Delay To Cross Traffic	53%
Collision Hazard	13%

For traffic control signals to be numerically justified, one of the “Minimum Vehicular Volume” or “Delay to Cross Traffic” or “Collision Hazard” warrants must be 100% satisfied, or both the “Minimum Vehicular Volume” and “Delay to Cross Traffic” warrants must be at least 80% satisfied.

The warrant Collision Hazard is based on three years collision history review ending January 1, 2023.

As outlined in the above table, the traffic volumes do not satisfy the requirements to install traffic control signals.

Staff also completed the environmental checklist which is a contextual assessment, including consideration of road width, posted speed limit, operating speeds, adjacent land use, pedestrian desire lines and demographics, presence of a transit stop, sight lines, and distance between existing signalized crossing opportunities.

Pedestrian Observance Study

Traffic studies were also undertaken to review the operating characteristics of the pedestrian crossover. The studies recorded the number and type of pedestrians crossing Broadview Avenue within the crosswalk during the busiest morning and afternoon period of a typical weekday. These studies were conducted on November 22, 2022. 27 and 28 pedestrians were observed crossing Broadview Avenue during the morning (8:00 a.m. to 9:00 a.m.) and afternoon (3:30 p.m. to 4:30 p.m.) peak periods, respectively. Of the total 55 pedestrians 73 percent were youths and adults, 25 percent were assisted children and 2 percent were senior citizens. 91 percent of the pedestrians used the pedestrian crossover properly and 84 percent of the vehicles completely came to a stop and waited for the pedestrians to completely cross.

Based on the observations above, staff did not identify any operational or safety concerns with the pedestrian crossover at the intersection of Broadview Avenue and Torrens Avenue.

Conclusion

Based on staff findings, the pedestrian crossover at the intersection of Broadview Avenue and Torrens Avenue provide a safe and controlled crossing for all road users. Our review indicates that the installation of the traffic control signals is not warranted based on the numerical technical analysis and the environmental criteria at this intersection. Accordingly, the installation of traffic control signals to replace the existing pedestrian crossover is not supported.

Additionally, the installation of traffic control signals at this intersection would result in the following negative impacts:

- Loss of Parking spaces: The installation of traffic control signals would result in the loss of about three on-street parking spaces on Torrens Avenue
- The potential for increase in delays to transit service on Broadview Avenue
- The potential for increased delays to pedestrians, who will be required to wait for a "Walk" signal, rather than crossing upon pushing the PXO button; and
- The potential of traffic infiltration that may increase traffic volumes on Torrens Avenue as it becomes easier for motorists to enter Broadview Avenue

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

CONTACT

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SIGNATURE



for

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ATTACHMENTS

Attachment 1: Area Map - Pedestrian Crossover, Broadview Avenue and Torrens Avenue

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