



STAFF REPORT ACTION REQUIRED

Improving Cyclist Safety at the Dundas Street West and Sterling Road Intersection

Date:	August 17, 2012
To:	Public Works and Infrastructure Committee
From:	Acting General Manager, Transportation Services
Wards:	Ward 18 - Davenport
Reference Number:	P:\2012\Cluster B\tra\tim\pw12019.tim

SUMMARY

On November 7, 2011, a cyclist waiting to turn right at the northwest corner of the Dundas Street West and Sterling Road intersection was struck by a right turning truck. The cyclist succumbed to her injuries and died at the scene. As a result of this tragic incident, City Council, at its meeting of November 29, 30 and December 1, 2011, adopted Member Motion MM14.22 entitled, "Improving Safety for Cyclists," and in so doing, requested the General Manager, Transportation Services to review the collision report prepared by the Toronto Police Service with respect to this incident and report to the Public Works and Infrastructure Committee on potential strategies for preventing future cyclist collisions at this location.

As a result of a detailed review of the collision history at the intersection and associated investigation into alternative intersection design treatments, Transportation Services is seeking City Council authority to install traffic control signals at the intersection of Dundas Street West and Sterling Road to replace the existing pedestrian crossover at this intersection. In conjunction with this installation, it is recommended that a "No Right Turn on Red" prohibition from southbound Sterling Road to Dundas Street West also be implemented.

These installations are short term measures to improve the safety for cyclists at this intersection. Additional long term improvements in this area are also being considered as part of the "West Toronto Railpath Study" which will examine safer cycling connections between the bike lanes on Dundas Street West and the College Street bike lanes located further to the east.

RECOMMENDATIONS

The Acting General Manager, Transportation Services recommends that:

1. City Council approve the removal of the pedestrian crossover on the east side of the intersection of Dundas Street West and Sterling Road and approve the installation of traffic control signals at this intersection, coincident with the removal of the pedestrian crossover.
2. City Council approve the implementation of a “No Right Turn on Red” regulation, bicycles excepted, from southbound Sterling Road to Dundas Street West.
3. City Council authorize and direct the appropriate City officials to take the necessary action to give effect to Recommendations 1 and 2, including the introduction of all necessary Bills.

Financial Impact

The estimated cost of replacing the pedestrian crossover with a traffic control signal at the Dundas Street West and Sterling Road intersection, and the signage required for the "No Right Turn on Red" regulation, is approximately \$170,000. Funds are available within the Transportation Services, Cycling Infrastructure and Programs 2012 Capital Budget for this work.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

ISSUE BACKGROUND

On the morning of November 7, 2011 at approximately 11:30 a.m., a cyclist waiting to complete a southbound to westbound right turn at the northwest corner of the Sterling Road and Dundas Street West intersection was struck by a right turning truck. The cyclist succumbed to her injuries and died at the scene.

DECISION HISTORY

City Council, at its meeting of November 29, 30 and December 1, 2011, adopted Member Motion MM14.22 entitled, "Improving Safety for Cyclists," and, in so doing, requested the General Manager, Transportation Services to review the collision report prepared by the Toronto Police Service with respect to the November 7, 2011 cyclist-motor vehicle collision at the intersection of Sterling Road and Dundas Street West and report to the Public Works and Infrastructure Committee on potential strategies for preventing future cyclist collisions at this location.

COMMENTS

Dundas Street West is an east-west four-lane minor arterial roadway with bicycle lanes. Sterling Road is a two lane north-south local roadway that forms a "T-intersection" at Dundas Street West with a stop sign for southbound traffic on Sterling Road approaching the intersection. A pedestrian crossover exists on Dundas Street West at the east leg of this intersection. The existing intersection configuration is included in Appendix A.

The Sterling Road intersection on Dundas Street West is located approximately 275 metres west of the traffic control signals at Lansdowne Avenue and approximately 190 metres east of the traffic control signals at Soraren Avenue, as shown on the map in Appendix B. The TTC 505 and 506 streetcars operate on this section of Dundas Street West and there are streetcar stops located on the northeast and southwest corners of the intersection. Currently, the southern terminus of the West Toronto Railpath, a multi-purpose off-street path, is located at the northwest corner of the Dundas Street West and Sterling Road intersection.

Assessment of the Intersection Operations

As part of the assessment of the intersection operations at this location, staff reviewed pedestrian and cycling collision records and cyclist crossing patterns.

Collision History

The review of the Toronto Police Service collision records at this location for the period from January 1, 2000 to December 31, 2011, indicated there were two motor vehicle-pedestrian collisions and five motor vehicle-cyclist collisions. One collision resulted in the recent cyclist fatality on November 7, 2011 and all other collisions resulted in personal injury to the pedestrian or cyclist.

The two collisions involving pedestrians included:

- a pedestrian being struck in the pedestrian crossover by a vehicle turning left from Sterling Road; and
- a pedestrian crossing Sterling Road being struck by a southbound right turning vehicle from Sterling Road.

The five collisions involving cyclists included:

- a cyclist being struck by an adjacent southbound right turning truck on Sterling Road (the recent fatality);
- a cyclist travelling southbound on Sterling Road turning left into an adjacent southbound motor vehicle on Sterling Road;
- an eastbound cyclist riding the wrong way on Dundas Street West in the westbound bike lane, colliding with a southbound right-turning motor vehicle from Sterling Road;
- a westbound cyclist riding in the bicycle lane being struck by a southbound motor vehicle exiting Sterling Road; and

- an eastbound cyclist turning left from the eastbound bicycle lane on Dundas Street West into the pedestrian crossover to proceed north on Sterling Road and being struck by an eastbound motor vehicle.

Cyclist Crossing Patterns

Transportation Services staff also observed the crossing patterns of cyclists and pedestrians at the intersection. From what was observed, there are a large number of cyclists entering and exiting the West Toronto Railpath, which currently terminates at the northwest corner of Sterling Road and Dundas Street West intersection. As a result, there are significant conflicts between cyclists and motor vehicles negotiating the intersection. Motor vehicles waiting for a gap to turn left or right onto Dundas Street West typically block the path entrance. Cyclists were observed crossing Dundas Street West at several locations in the vicinity of the intersection. In addition, a significant number of cyclists chose to stay on the north side of Dundas Street West, either riding on the bridge sidewalk or wrong way in the westbound bike lane, to avoid having to cross Dundas Street West. Cyclists bound for College Street also avoid having to make the difficult left turn from Dundas Street West onto College Street by staying on the north side of the street.

Options Considered

Restriping Sterling Road:

Transportation Services staff evaluated options to restripe Sterling Road to widen the southbound traffic lane or install bike lanes in the southbound approach to Dundas Street West to provide more space for cyclists. However, the existing lane widths and pavement markings are necessary to accommodate the turning path of the large trucks that currently serve the businesses on Sterling Road. The centre line on Sterling Road can be shifted easterly to provide more width in the southbound lane, however, the rear wheels of a large truck making a southbound right from Sterling Road would still track close to the curb in order to avoid crossing the centre line on Dundas Street West and encroaching into oncoming traffic. Therefore, restriping the roadway to provide a southbound bike lane would put cyclists in a vulnerable position where the rear wheels of large trucks would track across the bike lane. For this reason, Transportation Services does not recommend restriping Sterling Road to install bike lanes.

Traffic Control Signal:

Generally, Transportation Services recommends the replacement of pedestrian crossovers with traffic control signals if vehicular operating speeds are 60 km/h or greater, the road is more than four lanes wide or if the traffic volume is 35,000 vehicles per day or greater. This location does not meet any of these criteria. Therefore, a traffic signal warrant analysis was undertaken for the intersection and, based on existing traffic volumes and vehicle delays, the traffic signal warrant criteria were not satisfied.

Although the Dundas Street West and Sterling Road intersection does not meet the traffic signal warrants, signalization of this intersection will likely be required in the future when the West Toronto Railpath is extended and pedestrian/cyclist volumes are expected to increase as a result. Extending the West Toronto Railpath was approved as a project of the Bikeway Trails Implementation Plan, adopted by City Council at its meeting on June 6 and 7, 2012. One of the options that will be considered for extending the West Toronto Railpath is a crossing to the east side of Sterling Road and the extension of the Railpath along a new bicycle bridge on the north side of the Dundas Street West bridge over the GO Barrie rail corridor. Based on the Dundas-Sterling investigation, staff have concluded that this extension option, if feasible, would significantly improve the cycling connections between the West Toronto Railpath, Dundas Street West, Sterling Road and College Street by eliminating the existing difficult left-turn across streetcar tracks.

Through the design and construction of the new hydro and rail corridor bikeway trails over the past two years, Transportation Services has developed a new policy to provide signalized crossings wherever the trails cross major roads where no traffic control signal exists, even if the current trail activity does not satisfy the signal warrant criteria. Consistent with this new approach, the extension of the West Toronto Railpath from its southern terminus and across to the east side of Sterling Road would require the signalization of that intersection, to provide a safe and convenient crossing for cyclists of both Sterling Road and Dundas Street West.

Public Consultation

A community meeting was held on July 30, 2012 to present and receive feedback on a strategy for improving cyclist safety at the intersection of the Sterling Road, Dundas Street West and the West Toronto Railpath. Approximately 40 people attended the meeting and there was widespread support for the installation of traffic control signals as a short term improvement. In addition, potential long term improvements, to be considered as part of the West Toronto Railpath Study, were also discussed. There was general support for extending the Railpath east along the north side of Dundas Street West, as described above, to provide a safer connection to the College Street bike lanes. This alignment will be evaluated as part of the Environmental Assessment study to extend the West Toronto Railpath.

Conclusions

Although neither the technical requirements for a traffic control signal nor the criteria for converting a pedestrian crossover to a traffic control signal are met, providing safe and convenient trail-roadway crossings is essential to the successful operation of the trail system. Observations of the cyclist crossing patterns and review of the collision patterns indicate that additional right-of-way control, as provided by traffic signals, would improve safety for pedestrians and cyclists by mitigating conflicts between motor vehicle, pedestrian and bicycle traffic. In addition, pedestrians, cyclists and drivers would benefit from the additional guidance provided by more prominently marked crossings on all legs of the Sterling Road and Dundas Street West intersection. Furthermore, implementing a

“No Right Turn on Red” regulation from southbound Sterling Road to Dundas Street West would prevent motor vehicles from blocking the entrance to the West Toronto Railpath and mitigate potential conflicts between motor vehicles, cyclists and pedestrians. The “No Right Turn on Red” regulation would also reduce the likelihood of a right turning motor vehicle coming into conflict with a cyclist who might be waiting adjacent to the curb. In addition, bicycles should be exempt from this prohibition in order to allow right-turning cyclists to clear this intersection prior to the right turns by motor vehicles.

Therefore, Transportation Services is recommending the installation of a traffic control signal and implementation of a “No Right Turn on Red” regulation for southbound traffic at the intersection of Sterling Road and Dundas Street West, to replace the existing pedestrian crossover.

The Councillor for Ward 18 – Davenport has been consulted in the development of the recommended traffic control signals and “No Right Turn on Red” regulation at this location.

CONTACT

David Dunn, P.Eng.
Transportation Engineer,
Cycling Infrastructure and Programs
Transportation Services Division
Tel: 416-392-8985
Email: ddunn1@toronto.ca

Daniel Egan
Manager,
Cycling Infrastructure and Programs
Transportation Services Division
Tel: 416-392-9065
Email: degan@toronto.ca

SIGNATURE

John Mende, P. Eng.
Acting General Manager, Transportation Services

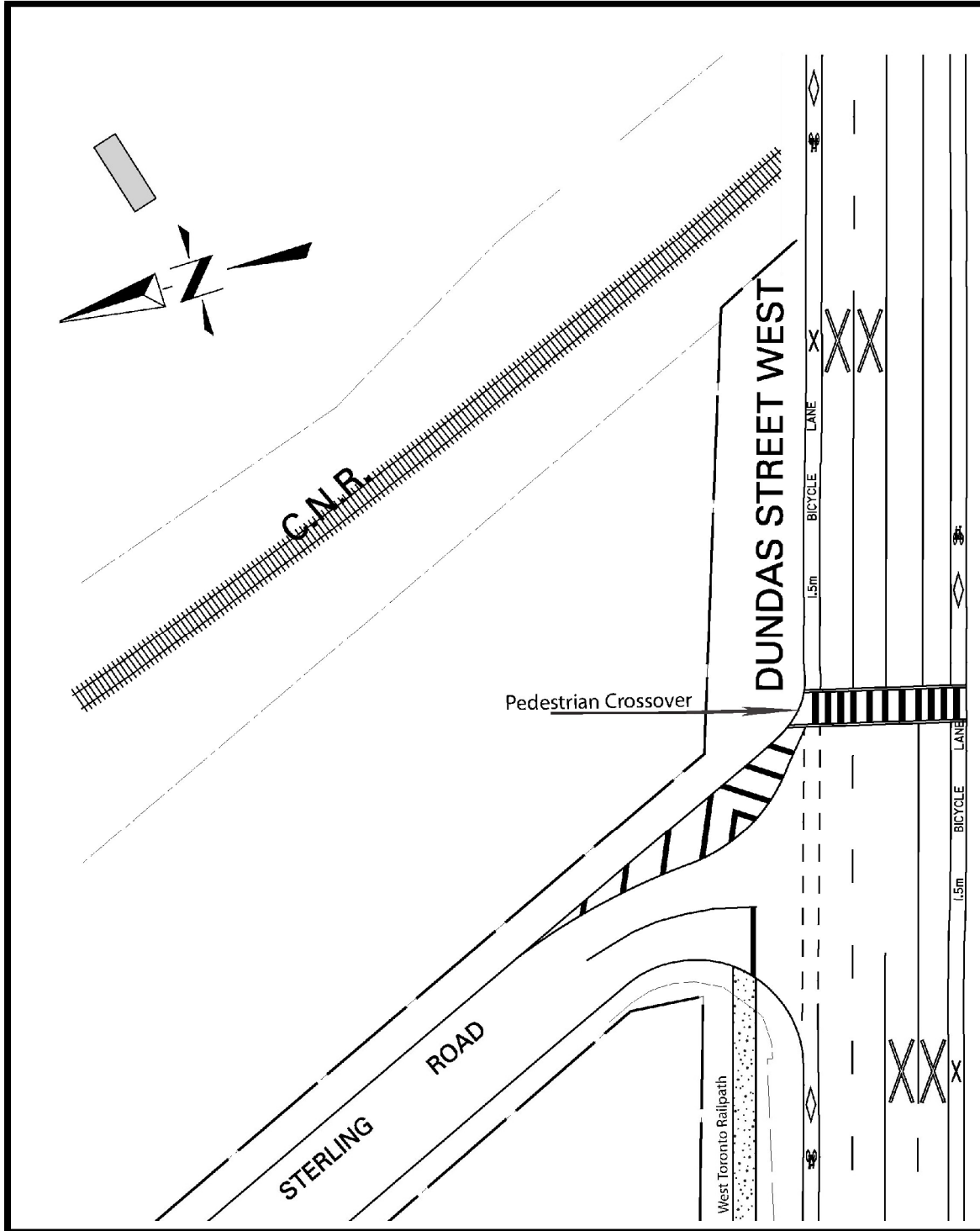
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ATTACHMENTS

APPENDIX A: Dundas Street West/Sterling Road – Existing Intersection Configuration

APPENDIX B: Dundas Street West and Sterling Road – Proposed Traffic Control Signal, dated August, 2012

APPENDIX A
Dundas Street West/Sterling Road - Existing Intersection Configuration



APPENDIX B

Dundas Street West and Sterling Road – Proposed Traffic Control

