



## STAFF REPORT ACTION REQUIRED

### Traffic Control Signals – Bathurst Street and Nassau Street

<b>Date:</b>	September 23, 2009
<b>To:</b>	Toronto and East York Community Council
<b>From:</b>	Director, Transportation Services Toronto and East York District
<b>Wards:</b>	Trinity-Spadina, Wards 19 and 20
<b>Reference Number:</b>	Ts09171te.top.doc

#### SUMMARY

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Transportation Services is requesting authority from City Council to install traffic control signals at the intersection of Bathurst Street and Nassau Street.

The installation of traffic control signals at this location will replace an existing pedestrian crossover (PXO) and enhance safety for pedestrians and motorists. Installation of the signals requires prohibiting the eastbound to northbound left-turn and the eastbound straight through movements from a private parking lot on the west side of Bathurst Street, opposite Nassau Street. Operators of the parking lot are aware of this and have no objection.

#### RECOMMENDATIONS

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**Transportation Services recommends that City Council:**

1. Approve the removal of a pedestrian crossover (PXO) from the north side at the intersection of Bathurst Street and Nassau Street and, coincident with the removal of the PXO, approve installation of traffic control signals at this intersection.
2. Contingent upon installation of the traffic control signals in Recommendation 1, prohibit eastbound to northbound left-turn and eastbound straight through movements at all times by vehicles leaving the parking lot on the west side of Bathurst Street, opposite Nassau Street.

## Financial Impact

Type of funding	Source of funds	Amount
Available within current budget	Transportation Services 2009 Operating Budget	\$156,000.00

## ISSUE BACKGROUND

Transportation Services was requested by Councillor Adam Vaughan to investigate and report on the installation of traffic control signals at the intersection of Bathurst Street and Nassau Street to enhance crossing safety for pedestrians. Bathurst Street is the boundary street separating Trinity-Spadina Wards 19 and 20. Both Deputy Mayor Joe Pantalone and Councillor Adam Vaughan have been consulted on this proposal.

## COMMENTS

### Current conditions

Bathurst Street is a four-lane, major arterial roadway with a daily two-way traffic volume of approximately 22,000 vehicles and a speed limit of 50 km/h. There are streetcars on Bathurst Street that operate in the median lanes on a shared right-of-way with general traffic. Transit service is provided by the “511-Bathurst” streetcar and there are near-side transit stops at Nassau Street.

Nassau Street intersects the east side of Bathurst Street, about 215 metres north of Dundas Street West and 235 metres south of College Street. Nassau Street is a collector roadway with a daily two-way traffic volume of about 5,000 vehicles and a speed limit of 40 km/h. Vehicles on Nassau Street are controlled by a “Stop” sign at Bathurst Street. There is a pedestrian crossover (PXO), located on the north leg of the intersection. A private driveway to/from a parking lot is located on the west side of Bathurst Street, opposite Nassau Street. There are 19 spaces provided in this parking lot, which also has access to College Place (public lane) at the westerly side of the property. Toronto Western Hospital is located on the southeast corner of this intersection.

### Investigation

Transportation Services initially undertook a study to review the operating characteristics at the PXO. During the busiest eight-hour period of a typical weekday, 1102 pedestrians were recorded crossing Bathurst Street within the crosswalk. Additionally, 17 pedestrians were recorded crossing Bathurst Street outside the crosswalk. During 86 percent of the crossings, the overhead flashing lights were used. Eighteen motorists over the eight-hours did not yield to pedestrians within the crosswalk.

Based on the vehicular and pedestrian traffic count data obtained at the intersection of Bathurst Street and Nassau Street, the technical warrants for the installation of traffic control signals are satisfied to the following extent:

- Warrant 1: Minimum Vehicular Volume 56 percent
- Warrant 2: Delay to Cross Traffic 100 percent
- Warrant 3: Collision Hazard 20 percent

To meet the technical requirements for the installation of traffic control signals, one of the “Minimum Vehicular Volume” or “Delay to Cross Traffic” warrants must be 100 percent satisfied, or any two of the three warrants must be at least 80 percent satisfied.

The “Collision Hazard” warrant is based on the number of collisions potentially preventable by the installation of traffic control signals. Collision statistics provided by the Toronto Police Service for the three-year period ending May 31, 2009 disclosed that 13 collisions had occurred at the intersection of Bathurst Street and Nassau Street. Of the 13 collisions, two involved pedestrians, and three were considered potentially preventable by the installation of traffic control signals.

Based on the above results, the installation of traffic controls signals is warranted and recommended at this intersection. However, it is necessary to include the driveway of the private parking lot, opposite Nassau Street, in the traffic control signal operation.

## **Consultation**

Staff consulted with the Toronto Transit Commission (TTC) regarding the installation of traffic control signals at this intersection. The TTC has no objections provided that appropriate transit priority extension is included in the signal operation.

A public meeting was held in January 2008 and attended by Transportation Services staff and a representative of Toronto Western Hospital. All attendees at the meeting were in favour of the proposed traffic control signals.

A meeting was held in April 2009 with representatives of the parking lot operator to discuss the potential impacts on the private parking lot. To enable full directional movements by vehicles exiting the parking lot onto Bathurst Street, the traffic signal plant requires eliminating several parking spaces in the lot. This is necessary to provide proper lane widths that will accommodate two-way traffic and the installation of vehicle detector loops in the pavement of the driveway that will trigger a green signal display to motorists exiting the parking lot. The parking lot operators expressed concern about the loss of parking spaces.

Given the frequency of westbound approaching traffic and volume of pedestrians crossing Bathurst Street, staff anticipates that the east/west green signal display will be displayed quite frequently, but during quieter periods of the day motorists leaving the parking lot and wishing to travel straight eastbound or turn north onto Bathurst Street from the parking lot will have no means to call their green signal indication without detector loops. The only way to avoid this and to maintain the current number of parking spaces in the lot, is to prohibit eastbound left-turn and straight through movements exiting the parking lot. Consequently, motorists would only be permitted to turn right

when a green signal is displayed, or when turning right on the red signal display. The parking lot operators have indicated their acceptance with this proposed operation.

## **Summary**

To provide enhanced protection for motorists and pedestrians crossing Bathurst Street, the installation of traffic control signals and the removal of the PXO at this intersection is recommended. As with other signalized intersections on Bathurst Street, a transit priority feature will be installed at this intersection, which will assist “511-Bathurst” streetcars in clearing this intersection more efficiently.

Signalization will enhance intersection safety and minimize conflicts between pedestrians and motor vehicles, but some less desirable consequences may result, as follows:

- Increased congestion and delay to traffic on Bathurst Street is possible;
- Traffic volume could increase on Nassau Street;
- As with any installation of traffic control signals, parking must be prohibited at all times within 30.5 metres of the intersection. This will result in a loss of about 3 parking spaces on the west side of Bathurst Street, south of Nassau Street;
- Pedestrians will experience increased wait times before being able to cross Bathurst Street;
- Movements for motorists exiting the parking lot due to the eastbound left turn and straight through prohibitions are restricted.

## **CONTACT**

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## **SIGNATURE**

Peter Noehammer, P.Eng.  
Director, Transportation Services

## **LIST OF ATTACHMENTS**

- (1) Drawing No. 421F-9771, dated September 2009

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