



REPORT FOR ACTION

Traffic Control Signals - Bayview Avenue and Davisville Avenue

Date: May 29, 2018

To: Public Works and Infrastructure Committee

From: General Manager, Transportation Services

Wards: Ward 22, St Paul's, Ward 26 - Don Valley West

SUMMARY

Transportation Services is requesting approval to install traffic control signals at the intersection of Bayview Avenue and Davisville Avenue to replace the existing stop sign control on Davisville Avenue. The installation of traffic control signals is technically justified and will enhance safety for vehicles and pedestrians using this intersection.

This report is submitted to Public Works and Infrastructure Committee as Bayview Avenue forms a shared boundary between the Toronto and East York Community Council and the North York Community Council.

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

RECOMMENDATIONS

The General Manager, Transportation Services recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Bayview Avenue and Davisville Avenue.

FINANCIAL IMPACT

The estimated cost of installing traffic control signals at the intersection of Bayview Avenue and Davisville Avenue is \$200,000.00. Funding is available within the 2018-2027 Capital Budget & Plan for Transportation Services, however this installation would be subject to competing priorities.

The Toronto Parking Authority has estimated that the removal of 13 pay-and-display spaces on Bayview Avenue will result in a potential revenue loss of up to \$121,933.00 annually.

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

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

Transportation Services was requested to investigate the feasibility of installing traffic control signals at the intersection of Bayview Avenue and Davisville Avenue to address safety concerns for pedestrians crossing this intersection.

Existing Conditions

Bayview Avenue and Davisville Avenue intersect to form a "T" type intersection. The eastbound approach on Davisville Avenue is stop sign controlled while the northbound and southbound approaches on Bayview Avenue are uncontrolled continuous flow. Adjacent traffic control signals on Bayview Avenue are located approximately 140 metres to the north, at Millwood Road and approximately 230 metres to the south, at Merton Street/McRae Drive. The closest traffic control measure on Davisville Avenue is an all-way stop control at Cleveland Street, about 315 metres west of Bayview Avenue.

Bayview Avenue is designated as a two-way north/south major arterial roadway with a pavement width of about 14 metres, and a regulatory speed limit of 50 km/h. It has a daily two-way traffic volume of approximately 17,000 vehicles with two lanes of traffic in each direction. TTC service on Bayview Avenue is provided by the '11 Bayview' and '28 Bayview South' bus routes. There are no designated bus stops on Bayview Avenue in proximity to Davisville Avenue. The nearest bus stops on Bayview Avenue are located at Millwood Road and at Merton Street/McRae Drive.

Davisville Avenue, between Mount Pleasant Road and Bayview Avenue, is designated as a two-way east/west collector roadway with a pavement width of about 11 metres, and a posted speed limit of 40 km/h. It has a daily two-way traffic volume of approximately 7,500 vehicles with one lane of travel in each direction.

TTC service on Davisville Avenue is provided by the '11 Bayview' and '28 Bayview South' bus routes. There is a designated bus stop on the north side of Davisville Avenue approximately 30 metres west of Bayview Avenue and on the south side of Davisville Avenue approximately 43 metres west of Bayview Avenue.

Collision Review

Collision statistics provided by Toronto Police Services for the three-year period ending December 31, 2017, disclosed that nine collisions have occurred at the intersection of Bayview Avenue and Davisville Avenue. Of these nine collisions, none involved a pedestrian and four angled collisions are considered to be potentially preventable by the installation of traffic control signals.

Traffic Control Signals

Traffic volume counts were undertaken at Bayview Avenue and Davisville Avenue in June 2017. Based on the eight-hour vehicular and pedestrian traffic counts, and the collision history, the technical justifications for the installation of traffic control signals are satisfied to the following extent:

Justification 1:	Minimum Vehicular Volume	83 percent;
Justification 2:	Delay to Cross Traffic	91 percent; and
Justification 3:	Collision Hazard	27 percent.

To meet the technical requirements for the installation of traffic control signals, one of the "Minimum Vehicle Volume" or "Delay to Cross Traffic" justifications must be 100 percent satisfied, or any two of the three justifications must be at least 80 percent satisfied. Based on the above results, the installation of traffic control signals are justified at the intersection of Bayview Avenue and Davisville Avenue.

Toronto Transit Commission (TTC)

The TTC has reviewed the impact of the proposed traffic control signals on the operation of their '11 Bayview' buses which make the east-to-north left turn and south-to-west right turn, and their '28 Bayview South' buses which make the east-to-south right turn and the north-to-west left turn at the subject intersection.

Overall, they expect the impact of the signals on the two routes to be minimal; delays to eastbound buses turning from Davisville Avenue onto Bayview Avenue are expected to decrease while delays to buses turning from Bayview Avenue onto Davisville Avenue will increase, particularly due to buses making the north-to-west left turn from the shared left/through traffic lane. To reduce the magnitude and variability of delay to their north-to-west left turning buses, the TTC requests a transit callable/extendable north-to-west left turn transit signal priority feature be implemented as part of the signal installation.

Subject to the approval of the traffic control signals by City Council, the TTC is also requesting further consultation during the design process to allow for review of the following:

- Pavement markings to ensure that there are no conflicts between their turning buses and other vehicles;

- Bus stop locations to ensure that they are optimally placed and do not affect the operation of the intersection; and
- Location of the loop antennas for the transit callable/extendable north-to-west left turn transit signal priority feature.

Conclusion

Technical requirements for the installation of traffic control signals are justified. The minimum recommended spacing between adjacent traffic control devices is 215 metres, which may be reduced in a downtown area with slower operating speeds.

Notwithstanding the 140 metre spacing with traffic control signals on Bayview Avenue at Millwood Road, Transportation Services recommends the installation of traffic control signals at the intersection of Bayview Avenue and Davisville Avenue.

The installation of traffic control signals would result in the following negative impacts:

- Loss of Parking
 - Pay and Display parking on Bayview Avenue currently operating outside the peak periods will need to be removed as a result of the statutory 30.5 metre corner parking prohibition at traffic control signals. Approximately 11 pay and display spaces will be lost on the east side of Bayview Avenue and approximately 2 pay and display spaces will be lost on the west side of Bayview Avenue north of Davisville Avenue. Toronto Parking Authority has been notified on the approximate loss of Pay and Display parking spaces on Bayview Avenue.
 - In addition to the loss of Pay and Display spaces, two maximum two-hour time limit parking spaces on the west side of Bayview Avenue, south of Davisville Avenue will also need to be removed.
- There may also be the potential for side-street traffic on Davisville Avenue to increase.

Ward 22 Councillor Josh Matlow and Ward 26 Councillor Jon Burnside have been advised of the recommendations of this staff report.

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SIGNATURE

Barbara Gray
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ATTACHMENTS

1. Drawing No. 421G-2926, dated March 2018

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