



**STAFF REPORT  
ACTION REQUIRED**

**Pedestrian Traffic Control Signals and Turn Prohibition  
– Danforth Avenue, west of Broadview Avenue**

<b>Date:</b>	September 21, 2016
<b>To:</b>	Toronto and East York Community Council
<b>From:</b>	Acting Director, Transportation Services, Toronto and East York District
<b>Wards:</b>	Ward 30 - Toronto-Danforth
<b>Reference Number:</b>	Ts2016186te.top.doc

**SUMMARY**

---

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

Transportation Services is requesting approval to install pedestrian traffic control signals across Royal Drive at Danforth Avenue. Royal Drive is the on-ramp that provides access from eastbound Danforth Avenue to the northbound Don Valley Parkway, west of Broadview Avenue. Additionally, northbound left-turns will be prohibited between the hours of 11:00 a.m. to 4:00 p.m., Monday to Friday, for motorists exiting the driveway from the City Adult Learning Centre on the south side of Danforth Avenue. These measures will enhance the pedestrian environment in this section of Danforth Avenue and will have minor impacts on the flow of traffic.

**RECOMMENDATIONS**

---

Transportation Services, Toronto and East York District recommends that:

1. City Council authorize the installation of pedestrian traffic control signals across Royal Drive at Danforth Avenue.
2. City Council prohibit northbound left-turns from the driveway located on the south side of Danforth Avenue, 132 metres west of Broadview Avenue, between the hours of 11:00 a.m. to 4:00 p.m., Monday to Friday.

## **Financial Impact**

The estimated cost of installing pedestrian traffic control signals across Royal Drive at Danforth Avenue is about \$150,000.00. This installation would be subject to the availability of funding and competing priorities. All costs associated with the necessary turn prohibition signage are included within the Transportation Services 2016 Operating Budget.

## **DECISION HISTORY**

On November 10, 2015, Toronto and East York Community Council requested Transportation Services staff report on the installation of a pedestrian traffic control signal at Royal Drive and Danforth Avenue and to report on the prohibition of northbound left-turns from City Adult Learning Centre driveway on weekdays from 11:00 a.m. to 4:00 p.m. (Item TE12.98)

## **COMMENTS**

Danforth Avenue, west of Broadview Avenue, is a major arterial roadway with a regulatory speed limit of 50 km/h and a daily two-way traffic volume of about 29,000 vehicles. In the westbound direction, there are two lanes provided for through traffic and a designated bicycle lane. In the eastbound direction, there is a left-turn lane, two lanes for through traffic, a designated bicycle lane and a channelized right turn lane. The channelized right-turn lane becomes Royal Drive, which is the on-ramp that accesses the northbound Don Valley Parkway. TTC service on Danforth Avenue is provided by the '300 Bloor-Danforth' night bus.

The eastbound right-turn lane from Danforth Avenue to Royal Drive is located about 35 metres west of Broadview Avenue. During the busiest eight-hour period of a typical weekday, about 5,000 eastbound motorists use this ramp and 2,500 pedestrians cross this ramp. The road width of Royal Drive is eight metres at the pedestrian crossing and motorists have a yield control. Signage and a flashing yellow beacon have been installed for eastbound motorists on Danforth Avenue, warning drivers to be aware of pedestrians crossing Royal Drive.

The City Adult Learning Centre (No. 1 Danforth Avenue) is located on the south side of Danforth Avenue, west of Royal Drive. Vehicular access to this property is via an unsignalized two-way driveway, located about 132 metres west of Broadview Avenue. All traffic movements at this driveway are currently permitted.

Students and staff from the City Adult Learning Centre, as well Rosedale Heights School of the Arts (No. 711 Bloor Street East), travel on the south side of Danforth Avenue to and from school, throughout the day. These pedestrians report safety concerns with the crossing at Royal Drive, including near-miss pedestrian collisions, pedestrian delays, vehicle queuing and vehicle delays.

Transportation Services has investigated the feasibility of pedestrian traffic control signals across Royal Drive at Danforth Avenue.

A review of Toronto Police collision records for a five-year period ending December 31, 2015 disclosed a total of seven reported collisions at Royal Drive and Danforth Avenue. Of these seven collisions, none involved a pedestrian.

Field observations were undertaken at Royal Drive and Danforth Avenue during the morning and afternoon peak periods on March 23, 2016 and April 20, 2016. The pedestrian crossing on Royal Drive generally operated safely and efficiently during these periods. No conflicts between motorists and pedestrians were observed. Groups of pedestrians crossing Royal Drive resulted in minimal queuing and delays for eastbound motorists on Danforth Avenue.

Capacity analysis was used to model the existing conditions at Royal Drive and Danforth Avenue, as well as the potential operation with pedestrian traffic control signals. Using the existing vehicle and pedestrian volumes data, the analysis determined that there would be increases to the queue lengths and delays experienced by eastbound motorists as a result of this signalization. However, the intersection will still operate with acceptable queue lengths and delays for motorists under the signalized condition. The results of the capacity analysis have been summarized in the table below.

<b>Time Period</b>	<b>Scenario</b>	<b>Volume/ Capacity Ratio</b>	<b>Vehicle Delay (seconds)</b>	<b>95<sup>th</sup> Percentile Queue Length (metres)</b>
Morning Peak (7:45 a.m. to 8:45 a.m.)	Existing	0.65	12.2	68.9
	Signalized	0.76	15.8	90.3
Afternoon Peak (2:45 p.m. to 3:45 p.m.)	Existing	0.71	14.0	59.1
	Signalized	0.84	20.4	121.4
Evening Peak (5:00 p.m. to 6:00 p.m.)	Existing	0.66	12.7	24.7
	Signalized	0.78	16.9	82.1

Based on the forgoing study findings, the installation of pedestrian traffic control signals across Royal Drive at Danforth Avenue is recommended by Transportation Services. The TTC have been consulted on this proposal and have no objections to this installation.

In the current operation, drivers using the on-ramp at Royal Drive are provided advance warning and are accustomed to be alert for crossing pedestrians. With the conversion of this crossing to a signalized operation, there may be concerns with pedestrians choosing not to comply with the "Don't Walk" display, given the relatively short crossing distance. Until motorists and pedestrians become familiar with the operation, these potential concerns may need to be referred to the Toronto Police Service to undertake enforcement. In order to mitigate potential delays to crossing pedestrians, the signal cycle lengths will be kept to a minimum and these signals will operate uncoordinated.

Additionally, northbound left-turning vehicles exiting the driveway from the City Adult Learning Centre were identified as a safety concern for eastbound motorists and bicyclists on this section of Danforth Avenue. As noted, this driveway is located on the south side of Danforth Avenue, 132 metres west of Broadview Avenue. The left-turn movement requires vehicles to travel across a bicycle lane and three vehicle lanes. The high volumes of eastbound traffic makes this movement difficult and sightlines to oncoming westbound vehicles are limited.

In view of the forgoing, Transportation Services do not have any objections to the prohibition of northbound left-turn movements from the subject driveway between the hours of 11:00 a.m. to 4:00 p.m., Monday to Friday, to enhance safety. The principal of the City Adult Learning Centre has indicated their concurrence with this proposal. However, it is noted that this prohibition will inconvenience motorists exiting the City Adult Learning Centre, as they will be required to take a more circuitous route.

Councillor Paula Fletcher has been advised of the recommendations of this staff report.

## **CONTACT**

Ann S. Khan, P.Eng.  
Manager, Traffic Operations  
Toronto and East York District  
Transportation Services  
Telephone: (416) 397-5021  
Fax: (416) 392-1920  
E-mail: [akhan5@toronto.ca](mailto:akhan5@toronto.ca)

## **SIGNATURE**

Dave Twaddle, C.E.T.  
Acting Director, Transportation Services  
Toronto and East York District

## **LIST OF ATTACHMENTS**

1. Drawing No. 421G-2266, dated September 2016

P:\2016\Cluster B\Tra\Toronto and East York\Top\ts2016186te.top.doc - mb