

## **Right Turn on Red Prohibition and School Zone Pavement Markings - Queen Street East and Carlaw Avenue**

**Date:** September 26, 2017  
**To:** Toronto and East York Community Council  
**From:** Acting Director, Transportation Services, Toronto and East York District  
**Wards:** Ward 30, Toronto-Danforth

### **SUMMARY**

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

To enhance pedestrian safety in the vicinity of Morse Street Public School, Transportation Services staff have reviewed the following:

- Prohibiting right turns on red in the southbound and eastbound directions at the intersection of Queen Street East and Carlaw Avenue during the operating hours of 8:00 a.m. to 9:00 a.m. and 3:00 p.m. to 4:00 p.m., Monday to Friday.
- Implementation of bollards at the southwest and southeast corners at the intersection of Queen Street East and Carlaw Avenue
- Implementation of school zone pavement markings in the vicinity of Morse Street Junior Public school located at 180 Carlaw Avenue.

Transportation Services recommends implementation of all the mitigating measures mentioned above. Of note, school zone pavement markings will be undertaken by Transportation Services through the City of Toronto's Vision Zero Road Safety Plan. A timeline of completion for Morse Street Jr Public School is not currently available.

### **RECOMMENDATIONS**

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The Acting Director, Transportation Services, Toronto and East York District, recommends that:

1. City Council prohibit southbound right-turn on red signal movements from 8:00 a.m. to 9:00 a.m. and 3:00 p.m. to 4:00 p.m., Monday to Friday at Queen Street East and Carlaw Avenue.

2. City Council prohibit eastbound right-turn on red signal movements from 8:00 a.m. to 9:00 a.m. and 3:00 p.m. to 4:00 p.m., Monday to Friday at Queen Street East and Carlaw.

## **FINANCIAL IMPACT**

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All costs associated with the installation of the turn prohibition are included within the Transportation Services 2017 Operating Budget.

## **DECISION HISTORY**

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Toronto and East York Community Council, at its meeting on June 13, 2017, adopted item TE25.130, requesting Transportation Services to:

1. Investigate the feasibility of prohibiting eastbound and southbound 'Right Turns on Red' at Queen Street East and Carlaw Avenue that would operate during school hours 8:00 a.m. - 9:00 a.m. and 3:00 p.m.- 4:00 p.m., Monday to Friday;
2. a. painting "School Zone" on the road to improve safety;  
b. the use of different coloured road paint in school zones on collector or arterial;  
c. installing bollards on the southeast and southwest corners of Queen Street East and Carlaw Avenue to deter truck traffic from mounting the sidewalk;

Toronto and East York Community Council requested that staff report back on this item to the October 17, 2017 Toronto and East York Community Council meeting. The Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.TE25.130>

## **COMMENTS**

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### **Existing Conditions:**

Queen Street East is a four-lane minor arterial roadway which runs east-west and operates two-way. There is one shared through-left turn lane and one shared through-right turn lane in each direction at its intersection with Carlaw Avenue. The posted speed limit is 40 km/h and the daily two-way volume is approximately 12,837 vehicles. TTC service is provided by the "501 Queen", "502 Downtowner", and "503 Kingston Rd" streetcars.

Carlaw Avenue is a four-lane minor arterial roadway which runs north-south and operates two-way. There is one shared through-left turn lane and one shared through-right turn lane in each direction at its intersection with Queen Street East. The posted speed limit is 40 km/h, south of Queen Street East, and regulatory speed limit is 50 km/h north of Queen Street East. The daily two-way volume is approximately 14,358 vehicles. TTC service is provided by the "72 Pape" bus route.

Near-side transit stops exist on Carlaw Avenue in the southbound direction, and on Queen Street East in the eastbound direction. Morse Street Junior Public School (No. 180 Carlaw Avenue) is located south of Queen Street east, on the west side of Carlaw Avenue.

Adjacent traffic control signals on Carlaw Avenue are located approximately 310 metres to the south at Eastern Avenue, and a mid-block pedestrian crossover is located approximately 230 metres to the north. Adjacent traffic control signals on Queen Street East, are located approximately 200 metres to the east, at Pape Avenue, and a pedestrian crossover is located approximately 95 metres to the west, at Morse Street.

A review of Toronto Police Service collision records for a three-year period ending December 31st, 2016 disclosed that fifty-seven collisions occurred at the intersection of Queen Street East and Carlaw Avenue. One collision involving a pedestrian and two collisions involving cyclists were reported. None of these collision were fatal and all involved minor or no significant injuries.

### **Assessment:**

#### **Right Turn Prohibition:**

Staff conducted a traffic study at the intersection of Queen Street East and Carlaw Avenue on Wednesday August 23, 2017 during the hours of 8:00 a.m. to 9:00 a.m. and 3:00 p.m. to 4:00 p.m. Right-turning volumes are summarized in Table 1.

Table 1: Right Turning Vehicle Volume Counts at Intersection of Queen Street East and Carlaw Avenue

Movement	Time	Total Right Turns	Right Turns on Red	% of Right Turns Completed on Red
Southbound Right Turn (Carlaw Avenue to Queen Street East)	8:00 a.m. to 9:00 a.m.	74	14	19
	3:00 p.m. to 4:00 p.m.	40	14	35
Eastbound Right (Queen Street East to Carlaw Avenue)	8:00 a.m. to 9:00 a.m.	32	10	32
	3:00 p.m. to 4:00 p.m.	31	6	20

The traffic study revealed that 14 vehicles made a southbound right turn on a red from Carlaw Avenue to Queen Street East during the morning and afternoon peak periods. In addition, 10 vehicles made an eastbound right turn on red from Queen Street East to Carlaw during the morning hour, and 6 vehicles made this turn during the afternoon hour. The total number of vehicles observed making a right-turn on red during this

traffic study was low, and no conflicts between crossing pedestrians and vehicles occurred. However staff did note that many of the pedestrians crossing both in the morning and afternoon peak periods were children.

An 8-hour turning movement count was conducted on Monday April 22, 2013 at the intersection of Queen Street East and Carlaw Avenue. The following table shows pedestrians volumes critical to the 'Right Turns on Red' prohibitions proposed for this intersection.

Time Period	Pedestrians Crossing West Crosswalk	Pedestrians Crossing North Crosswalk
AM Peak (8:00 a.m. to 9:00 a.m.)	18	222
PM Peak (4:45 p.m. to 5:45 p.m.)	7	236
8 Hour Total (7:30 a.m. to 6:00 p.m.)	100	1858

The turning movement study revealed that the north side crosswalk is used by a large volume of pedestrians throughout the day. Conversely, the pedestrian volumes recorded on the west crosswalk were low. However, Transportation Services acknowledges that the pedestrian volumes at this intersection have increased since this turning movement count was conducted, and do not reflect current conditions. Given that the intersection of Queen Street East and Carlaw Avenue is in close proximity to Morse Public School, and used by children walking to/from school, prohibiting eastbound and southbound right-turns on a red signal movement may reduce the potential for vehicular/pedestrian conflicts at this intersection. These turn restrictions will be in operation from 8:00 a.m. to 9:00 a.m. and from 3:00 p.m. to 4:00 p.m., Monday to Friday only.

#### **Bollards:**

The Accessibility for Ontarians with Disabilities Act Design of Public Spaces Standards (Accessibility Standards for the Built Environment) indicates that a minimum clear width of 1.5 metre is required for sidewalks. Installing bollards on the curb edge of the existing sidewalk, is feasible as the sidewalk width is 3.3 metres on the south side of Queen Street East and 2.2 metres on the east side of Carlaw Avenue. Bollards should be kept to a minimum as their presence may restrict the flow of pedestrians crossing at this intersection by narrowing the available curb access. Installing bollards on the southwest and southeast corners of Queen Street and Carlaw Avenue could be installed and would enhance pedestrian safety from right-turning truck traffic. The bollards will be installed generally as shown on the attached Drawing No. 421G-2661, dated September 2017.

**School Zone Pavement Markings:**

Part of the City of Toronto's Vision Zero Road Safety Plan includes implementing enhanced safety measures within School Safety Zones. The School Safety Zones program is to be delivered by Transportation Services and aims at improving the safety of all road users travelling to and from school. School Safety Zones feature new school zone safety signs with flashing beacons, school zone pavement stencils, Watch Your Speed driver feedback signs and zebra markings at crosswalks. Staff will be extending the coverage of enhanced pavement markings up to 250 m away from the school in support of active and safe routes to school. In addition, the list of schools where School Safety Zones will be implemented will be provided to Toronto Police so that they can look to increase enforcement in these areas. Transportation Services aims to install 20 School Safety Zones annually, based on a data-driven prioritization process developed in consultation with other stakeholders, including the school boards and Toronto Public Health, which includes collision experience and student population within walking distance.

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

**CONTACT**

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**SIGNATURE**

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

**ATTACHMENTS**

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Drawing No. 421G-2661, dated September 2017  
Drawing No. 421G-2662, dated September 2017  
Drawing No. 421G-2699, dated September 2017

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