



STAFF REPORT ACTION REQUIRED

No Right Turn on Red Regulations

Date:	June 1, 2010
To:	Toronto and East York Community Council
From:	Director, Transportation Services, Toronto and East York District
Wards:	Trinity – Spadina, Ward 20 and Toronto Centre-Rosedale, Ward 27
Reference Number:	Ts10091te.top.doc

SUMMARY

This report is requesting approval from City Council to install “No Right Turn on Red” regulations at the following five (5) intersections in the Toronto and East York District:

- College Street and Spadina Avenue;
- College Street and St. George/Beverley Street;
- Harbord Street and Spadina Avenue;
- Harbord Street/Hoskin Avenue and St. George Street; and
- Bloor Street West and Bay Street.

Prohibiting right turns on red at the selected intersections is designed to promote pedestrian safety and is required in order to install bike boxes and a pedestrian scramble intersection. Bike boxes will be installed at the College Street and Harbord Street/Hoskin Avenue intersections and the pedestrian scramble operation will be installed at the intersection of Bloor Street West and Bay Street. The installation of bike boxes and the pedestrian scramble operation will increase pedestrian and cyclist safety and decrease potential collisions with right turning vehicles. Further, the recommended “No Right Turn on Red” regulations will have a minimal affect on traffic operations based on the volume of vehicles currently making the right turn on red manoeuvre.

The pedestrian priority phase at the Bloor Street West and Bay Street intersection was "approved by City Council at its meeting on October 22 and 23, 2007 in considering the report titled ‘Sustainable Transportation Initiatives: Short-term Proposals’ (PW9.2)".

RECOMMENDATIONS

Transportation Services, Toronto and East York District, recommends that:

1. City Council approve implementation of “No Right Turn on Red” regulations at the following locations and in the directions indicated:
 - a. eastbound and westbound from College Street onto Spadina Avenue;
 - b. eastbound and westbound from College Street onto Beverley Street and St. George Street, respectively;
 - c. northbound from Beverley Street onto College Street;
 - d. southbound from St. George Street onto College Street;
 - e. northbound from St. George Street onto Hoskin Avenue;
 - f. southbound from St. George Street onto Harbord Street;
 - g. eastbound from Harbord Street onto St. George Street;
 - h. westbound from Hoskin Avenue onto St. George Street;
 - i. northbound and southbound from Bay Street onto Bloor Street West
 - j. eastbound and westbound from Bloor Street West onto Bay Street; and
 - k. eastbound and westbound from Harbord Street onto Spadina Avenue.

2. City Council authorize and direct the appropriate City officials to take the necessary action to give effect thereto, including the introduction of all necessary bills.

Financial Impact

All costs associated with the installation of the “No Right Turn on Red” regulations are included within the Transportation Services Division’s 2010 Operating Budget estimate.

The funds to implement the bike boxes identified in this report are available within the Transportation Services Division 2010 Capital Budget in the Cycling Infrastructure Account CTP 810-05.

DECISION HISTORY

City Council, at its meeting of October 22 and 23, 2007, when considering the Sustainable Transportation Initiatives: Short-term Proposals (PW9.2), directed staff to identify three to four intersections along College Street or another street that currently has a bike lane and a high volume of bicycle use at which to pilot bike boxes.

In May 2009, City Council adopted the Walking Strategy and directed staff to install and evaluate different measures and design options to improve the pedestrian environment including the introduction of “No Right Turn on Red” regulations at 10 intersections beginning in 2010.

ISSUE BACKGROUND

“No Right Turn on Red” regulations are often introduced as a simple, low-cost measure to enhance pedestrian safety and decrease collisions involving pedestrians and right turning vehicles.

The City currently has 83 signalized intersections in which one or more approaches have a prohibition on right-turning vehicles – a small number of which the prohibition is linked to the time of day.

COMMENTS

The “No Right Turn on Red” regulations recommended by this report are required for the implementation of bike boxes and pedestrian priority traffic control signal operation.

Bike Boxes are pavement markings that designate a space for cyclists to wait in front of motorized vehicles at a red light, and to proceed first when the light turns green. When the traffic signal is red, cyclists enter the bike box through a bicycle lane, and motorists stop at a regular stop bar behind the designated area for cyclists. The purpose of bike boxes is to improve cycling conditions by reducing conflicts between cyclists and motorists turning right at intersections. Depending on the bike box design, this treatment can also be used to facilitate left-turns by cyclists.

Transportation Services has reviewed candidate locations for the installation of bike boxes along Harbord Street, Hoskin Avenue, and College Street. These corridors have bicycle lanes and some of the highest cycling volumes in the City.

The Transportation Association of Canada’s “Guidelines for the Design and Application of Bikeway Pavement Markings” (August 2007) recommend prohibiting right turns on red where bike boxes are installed. This is consistent with other jurisdictions, where bike boxes are accompanied by Right-turn on Red restrictions.

To identify specific locations along these bike lanes for bike boxes, staff reviewed traffic volumes, bicycle volumes, cycling collision history, bikeway network context, and intersection configurations. Based on this analysis, four intersections were identified as ideal locations for bike boxes. Field observations of motor vehicle right turns were then collected, specifically noting the number of motor vehicle right turns during a red light.

The Toronto Transit Commission (TTC) provides surface transit services along Harbord Street, Hoskin Avenue, College Street, and Spadina Avenue. The bike box locations described in this report have been identified in consultation with TTC staff, and are supported by the Ward Councillor.

1.0 College Street / Spadina Avenue

Eastbound and westbound bike boxes are proposed in the curb lanes along College Street. The presence of the TTC islands will help define the bike box. Because the curb lanes accommodate shared through and right turn traffic movements, field observations during the AM and PM peak hours indicate a relatively small number of motor vehicles turning right on red.

College St. & Spadina Ave. Right Turn Count Summary

AM Peak Hour	RTOR	Total Right Turns	%	PM Peak Hour	RTOR	Total Right Turns	%
EB	9	107	8.4	EB	19	103	18.4
WB	18	99	18.1	WB	13	128	10.1

2.0 College Street / St. George Street / Beverley Street

Along St. George Street and Beverley Street, bike boxes are proposed to extend across the north bound and southbound curb lanes and left turn lanes. Along College Street, bike boxes are proposed across the eastbound and westbound curb lanes. Field observations undertaken during the AM and PM peak hours indicate a relatively modest number of motor vehicles turning right on red on all four approaches.

College St. & St. George St. Right Turn Count Summary

AM Peak Hour	RTOR	Total Right Turns	%	PM Peak Hour	RTOR	Total Right Turns	%
NB	3	45	6.6	NB	7	95	7.3
SB	3	71	4.2	SB	5	32	15.6
EB	10	26	38.4	EB	6	59	10.1
WB	7	81	8.6	WB	2	113	1.7

3.0 Harbord Street / Spadina Avenue

Eastbound and westbound bike boxes are proposed along Harbord Street. In order to introduce bike boxes at this location, bicycle lanes will be extended up to Spadina Avenue. This would be accomplished by introducing eastbound and westbound exclusive left turn lanes. Bike boxes would extend across the curb and left turn lanes. Field observations during the AM and PM peak hours indicate a relatively small number of motor vehicles turning right on red.

**Harbord St. & Spadina Ave.
Right Turn Count Summary**

AM Peak Hour	RTOR	Total Right Turns	%	PM Peak Hour	RTOR	Total Right Turns	%
EB	9	75	12	EB	11	48	22.9
WB	7	86	8.1	WB	6	87	6.8

4.0 Harbord Street / Hoskin Avenue / St. George Street

Bike boxes are proposed on all approaches to the intersection. They would extend across the curb lanes and the left turn lanes. Field observations during the AM and PM peak hours indicate a small number of motor vehicles turning right on red.

**Harbord St. & St. George St.
Right Turn Count Summary**

AM Peak Hour	RTOR	Total Right Turns	%	PM Peak Hour	RTOR	Total Right Turns	%
NB	7	30	23.3	NB	1	28	3.5
SB	2	14	14.2	SB	6	45	13.3
EB	4	84	4.7	EB	12	51	23.5
WB	21	68	30.8	WB	13	98	13.2

In addition to the NRTOR regulation at the four intersections, Transportation Services reviewed the feasibility of installing a pedestrian priority phase (scramble) at St. George Street and Harbord Street/Hoskin Avenue. A pedestrian priority phase is a walk signal for pedestrians in all directions at the same time while drivers are stopped in all directions. The primary advantage is that pedestrians can cross the intersection without any conflicting motor vehicle movements.

The existing pedestrian crossing volumes at this intersection warrant the installation of the pedestrian scramble phase, however, due to the skewed layout of the intersection, diagonal pedestrian crossings are not advised. Diagonal crossings at this intersection would be too long and would create long pedestrian wait times between walk phases and create undesirable congestion for all vehicles.

Instead of diagonal crossings, pedestrians would be able to cross any of the four legs of the intersection during the pedestrian priority phase. In order to accommodate this safely all right-turns-on-red should be prohibited at this intersection.

5.0 Bloor Street West and Bay Street

Transportation Services was directed by Council in October 2007 to install a pedestrian priority phase (scramble) at the Bay Street and Bloor Street West intersection. The installation has been delayed as a result of the Bloor Street transformation project construction. At the earliest, implementation is now scheduled for Fall 2010.

A pedestrian priority phase is a walk signal for pedestrians in all directions at the same time while drivers are stopped in all directions. The primary advantage is that pedestrians can cross the intersection without any conflicting motor vehicle movements. In order to accommodate this safely all right-turns-on-red should be prohibited at this intersection.

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SIGNATURE

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