TORONTO TRANSIT COMMISSION
REPORT NO.

MEETING DATE: January 28, 2014

SUBJECT: IMPROVING PEDESTRIAN SAFETY AND CUSTOMER JOURNEY TIMES: TRANSIT STOPS

ACTION ITEM

RECOMMENDATIONS

It is recommended that the Board:

1. endorse the principles of:

    a. improving pedestrian safety by, wherever possible, placing transit stops at traffic signals or pedestrian crossovers (PXOs), because this provides customers with a protected street crossing when walking to or from transit stops and, in the case of streetcars, creates greater consistency for motorists regarding where they will have to stop for boarding or alighting customers; and

    b. making transit services faster, and reducing customer journey times, by eliminating closely-spaced transit stops -- including "Sunday" stops -- so that buses and streetcars can move along their routes at a better speed and avoid the stop-and-go effect of closely-spaced stops;

2. note that staff will present a follow-up report, at the February 24, 2014 Board meeting, which will describe the proposed changes to streetcar stops resulting from implementing the above two principles and staff's plan for consulting with affected Councillors prior to changing any stop locations; and

3. forward this report to the City's Planning and Growth Management, and Public Works and Infrastructure Committees, and to Metrolinx.

FUNDING

This report has no effect on the TTC's Operating or Capital Budgets.

BACKGROUND

The TTC system has over 10,000 bus and streetcar stops. Many of these stops -- especially those in the older part of the city -- have been in place for several decades and were established under very different operating conditions, land uses, and network connections. There hasn't been a comprehensive review of transit stops in Toronto in many years, but conditions have changed over this same time period.

There is a concerted and cooperative effort, between the TTC and the City of Toronto, to improve pedestrian safety on Toronto's streets, and to reduce the number of fatalities and injuries which result from pedestrian-vehicular contacts. This has been a primary focus of work being done by the City's Public Realm group as well as the Traffic Services Division of the Toronto Police Services. This matter is of particular importance on TTC streetcar routes. Most streetcar routes operate in mixed traffic and, because they are located in the centre of streets, customers must cross a lane of traffic when moving between the sidewalk and the streetcar. So, the TTC has a special interest in, and obligation regarding, improving the safety of such customer movements.

Toronto's commuting times have been ranked among the worst in North America. The TTC's Corporate Plan and Customer Charter have both publicly committed to place greater importance on customer journey times, with an emphasis on finding means by which to speed-up transit service and reduce the time required for customers to complete their journeys. Consistent with this, the TTC's work on travel-time competitiveness -- the comparative time required to complete the same trip on transit versus car -- highlights the need to improve transit travel times. Similarly, Metrolinx's work on reserved right-of-way transit -- subways and light-rail lines -- is targeted largely at delivering faster and more-reliable transit service. While there are limitations to how fast and reliable transit service can be when operating in mixed-traffic conditions, there are measures which the TTC can take to improve on these fronts. These include signal priority for transit -- which reduces the time buses and streetcars wait on red lights -- and camera enforcement of traffic bylaws -- an initiative currently under review jointly by the TTC and the City. Another forthcoming initiative includes the wider implementation of proof-of-payment (POP) fare collection in order to speed-up passenger boarding and alighting times. Yet another measure would be to reduce the number of closely-spaced transit stops in order to reduce the perception of stop-and-go travel on transit and to, generally, speed-up transit service.

Staff have been systematically reviewing the locations of all 10,000 transit stops in Toronto. This current report puts a spotlight on streetcar stops, and their relationship to both customer safety and streetcar operating speeds. The general principles that are discussed here also apply to bus routes, and bus stops will be the subject of a future report.

DISCUSSION

The best location for transit stops -- whether on a bus route or a streetcar route - is at traffic signals or pedestrian crossovers (PXO), in order to improve safety when customers are crossing to and from transit stops. Experience has shown that, the further away a stop is from a traffic signal, the more likely customers are to jaywalk across a street at an unprotected location. Conversely, the closer a stop is to a traffic signal, the more likely customers are to cross the street safely, taking advantage of the protection of the traffic signal. From a pedestrian safety perspective, it is clearly preferable to place transit stops in the immediate vicinity of one of these forms of crossing protection and to encourage customers to cross the street using that protection.

In the case of streetcars -- which, for the most part, operate in the middle of mixed-traffic roadways, without passenger platforms -- provincial law requires motorists in the curb lane to stop and give the right-of-way to people walking across that traffic lane when boarding or alighting a streetcar. Placing streetcar stops at traffic signals or pedestrian crossovers provides the benefit of

the protection offered by the signal, and the added benefit of greater consistency regarding where motorists should expect a streetcar to stop to serve customers. It is integral to the safe operation of these stops that motorists be aware that the streetcar is about to serve customers, and that the motorist is required to stop for people walking across the traffic lane. The new low-floor streetcars will have significant improvements (an illuminated “Do Not Pass” icon at the rear, and flashing LED lights along the door edges) to remind motorists to stop. Greater consistency in stop placement -- at traffic signals -- will further reduce motorists’ illegal passing of open streetcar doors.

The issue of stop spacing -- how close together stops should be -- requires striking the appropriate balance between two competing objectives: having stops close enough to each other that customers have a relatively-convenient and short walk to get to a stop, but having stops far enough apart that customers on-board the bus or streetcar are not frustrated by a slow, stop-and-go travel experience. The appropriate distance between stops will vary by circumstance depending, among other things, on the land uses and densities through which the service operates, the road network and spacing and locations of traffic signals, and the type of transit service being offered. In general, based on a considerable amount of experimentation and observation of practices in other transit systems, TTC staff have concluded that streetcar and bus stops should be located approximately 300 to 400 metres apart. This spacing achieves a good balance between reasonable walking distance to stops and an overall acceptable operating speed and less-disrupted travel for customers already on the vehicle.

There are warranted exceptions to this 300-400 metre spacing standard. Transit facilities which are specifically designed to achieve higher operating speeds -- such as light-rail lines operating in reserved rights-of-way -- should, ideally, have stops spaced no closer than 500 metres. There are no light-rail facilities in Toronto yet, but light-rail is planned for parts of Eglinton Avenue, Sheppard Avenue East, and Finch Avenue West. At the other extreme, local bus routes which operate within residential neighbourhoods are not expected to operate at high overall speeds but, instead, have greater emphasis on good local walk access. In this situation, stops can be located as close to each other as 200 metres.

Over time, many TTC routes have had stops installed which are closer than the above standards prescribe. Therefore, as part of the current system-wide review of transit stops, TTC staff will be identifying stops which are closer to adjacent stops than is appropriate and will be removing those stops.

TTC staff were part of the work team, established by the City’s Transportation Services, to identify means to reduce congestion and improve traffic flows in the downtown area. The issue of very closely-spaced streetcar stops was identified as a problem that contributes to congestion on downtown roadways: when a streetcar is serving a transit stop, all traffic travelling in the same direction must stop, even at a green light. Removal of closely-spaced stops would provide City staff with greater flexibility in their efforts to improve traffic flow on downtown streets.

Also relevant in this discussion are Sunday stops -- stops which were established many years ago (as early as the 1920’s) in order to reduce the walking distance to nearby churches. Of the over 600 streetcar stops that were reviewed by TTC staff, 39 are Sunday stops. They are typically not located at traffic signals, are very lightly used, and are usually less than 100 metres away from a

regular streetcar stop. In support of the objectives of eliminating stops that are not at traffic signals and which are very close to other stops, these Sunday Stops will be removed.

In order to provide a real-life illustration of what implementing the above-described principles and objectives would result in, the attached Exhibit 1 shows the existing and proposed locations of streetcar stops on Queen Street, between Church Street and Spadina Avenue -- an area whose close stop-spacing is the source of customer complaints. Under these new standards, the stops at Victoria Street, York Street, McCaul Avenue, and the westbound stop at Simcoe Street would all be removed. This would eliminate stops which are less than 200 metres away from adjacent stops, while keeping the maximum distance between stops at approximately 400 metres. In this example, there is a necessary exception: a new westbound stop would be installed at the signalized Queen Street/Patrick Street intersection, which is just in advance of the McCaul Street turn-back loop. This new westbound-only stop would provide an alternative to the often-overcrowded Queen Street/University Avenue stop for passengers alighting streetcars which are turning back at McCaul Street.

TTC staff will present to the Board, at the February 24, 2014 meeting, a follow-up report to document the implications for streetcar routes of the updated stop-location standards described in the current report. That report will also present staff's plan for consulting with affected Councillors prior to changing the location of stops.

A further report, summarising changes to bus stop locations, will require more time to prepare because of the much-larger number of bus stops in the TTC system. That report will be submitted upon completion of the bus-stop review.

JUSTIFICATION

The Board should endorse the principles of locating transit stops at traffic signals and removing closely-spaced transit stops in order to improve the safety of customers when crossing to or from transit stops and to improve the operating speed, on-board travel experience, and travel time competitiveness of TTC services.

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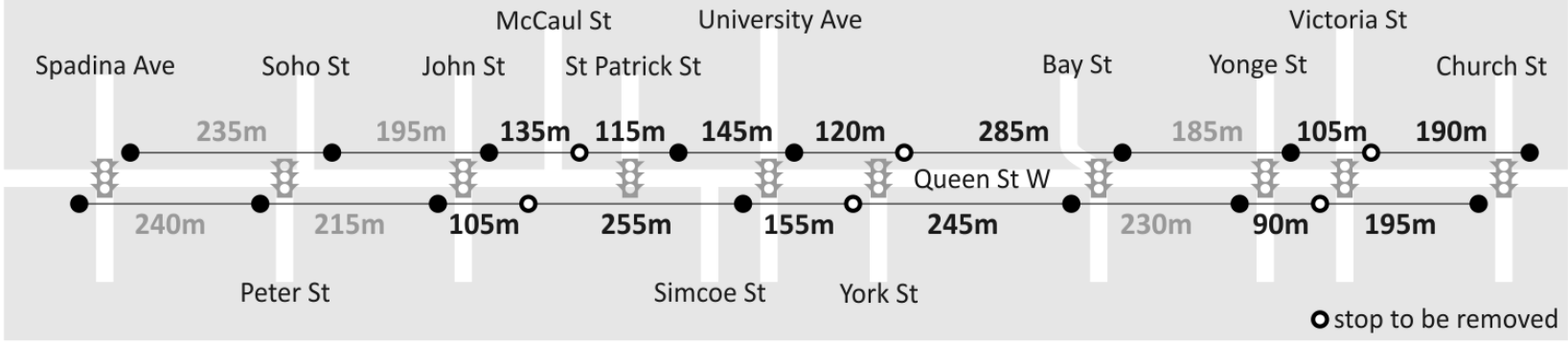
11-31-42/80
Attachment: Exhibit 1 – Proposed Changes to Stop Locations on Queen Street, Spadina Avenue to Church Street

Proposed Changes to Stop Locations on Queen St, Spadina Ave to Church St

Existing



Proposed Changes: 3 fewer stops in each direction