

Prohibition of stopping at all times within 15 metres on the approach to a Pedestrian Crossover (PXO)

Date:	March 29, 2010
To:	Public Works and Infrastructure Committee
From:	General Manager, Transportation Services
Wards:	All Wards
Reference Number:	PW10037te.top.doc

SUMMARY

This report seeks approval from City Council to prohibit stopping within 15 metres of a “Pedestrian Crossover” (PXO), on the approach side to the crosswalk, at all pedestrian crossover locations on major and minor arterial roads to enhance operational safety, as outlined in staff reports and approved by City Council in 2006.

City Council also is being requested to prohibit stopping within 15 metres of a PXO, on the approach side to the crosswalk at PXO locations on collector and local roads where an authorized sign is posted indicating such prohibition and delegate to the General Manager, Transportation Services, the authority to post such signs where the General Manager has determined, using the criteria outlined in this report, that the operational characteristics of the road and/or advance sight lines between motorists and pedestrians are less than satisfactory to ensure safe operation of the PXO.

RECOMMENDATIONS

The General Manager of Transportation Services recommends that City Council:

1. Increase the general no stopping prohibition at all times to within 15 metres on the approach side to a PXO at all PXOs located on a major or minor arterial roadway in the City of Toronto and at all PXO locations located on a local or collector roadway in the City of Toronto where signs are posted in accordance with Recommendation 2.

2. Authorize the General Manager of Transportation Services to post signs to prohibit stopping at all times within 15 metres on the approach side to a PXO at any PXO located on a collector or local roadway in the City of Toronto where the General Manager of Transportation Services determines through investigation that:
 - a The 85th percentile speed of traffic approaching the PXO is equal to or greater than 50 kilometres per hour; or
 - b The 85th percentile speed of traffic approaching the PXO is less than 50 kilometres per hour and the sight line stopping distance in advance of the PXO is less than 60 metres.
3. Authorize the City Solicitor, in consultation with the General Manager of Transportation Services, to prepare and submit the appropriate Bill(s) to Council to give effect thereto.

Financial Impact

The financial impact of installing signs prohibiting stopping at all times within 15 metres on the approach side to a PXO is about \$200.00 per location. This cost was included in the over all estimate of about \$9,000.00 per location to enhance PXOs on all major and minor arterial roads in the City (269 locations), identified in the staff reports contained in Clause No. 2 of Works Committee Report No. 3 (2006) and Clause No. 8 of Works Committee Report No. 6 (2006), adopted respectively by City Council at its meetings of May 23, 24 and 25, 2006 and September 25, 26 and 27, 2006.

Funding for implementing signs prohibiting stopping at all times within 15 metres on the approach side to a PXO located on a collector or local road where deemed appropriate will be available in the annual Operating Budget for Transportation Services (for signage) in 2010 and subsequent years as required.

The Deputy City Manager and Chief Financial Officer have reviewed this report and agree with the financial impact information.

DECISION HISTORY

City Council at its meetings of May 23, 24 and 25, 2006 and September 25, 26 and 27, 2006 adopted Clause No. 2 of Works Committee Report No. 3 and Clause No. 8 of Works Committee Report No. 6, respectively, containing staff reports dated April 21, 2006 entitled, "Pedestrian Crossover Review" and August 24, 2006 entitled, "Pedestrian Crossover Review (Part II) – Minor Arterial Roadways (All Wards)".

ISSUE BACKGROUND

In adopting the above-noted Clauses, City Council gave staff the authority to initiate a PXO replacement and/or enhancement program at all PXOs on major and minor arterial streets in the City. In addition to upgrading 61 PXO locations to traffic control signals, an

additional 269 locations were slated for enhancement treatment, which included installation of higher intensity overhead lighting, installation of side-mounted flashing beacons, zebra-stripe pavement markings, and extended “No Stopping” zones in advance of the pedestrian crossover. Hardware and pavement marking installation is complete at about 75% of the pedestrian crossover locations and will be fully completed this year. Amendments to the various traffic and parking by-laws/codes in effect across the City are required to address the “No Stopping” component recommended in the 2006 staff reports.

More recently, Transportation Services has received requests to expand the enhancement program to PXOs located on collector and local roads as well. This issue also is addressed in this report.

COMMENTS

Pedestrian Crossover Operation

For a PXO to operate safely and successfully, both in terms of collision record and in terms of comfort levels for pedestrians, two conditions must be present.

- Approaching drivers must be able to recognize that a PXO device is present and identify well in advance that a pedestrian is present within the crosswalk or waiting to cross; and
- A pedestrian must be able to clearly see oncoming traffic, be able to judge whether there is sufficient distance to expect the driver of an approaching vehicle to safely stop before reaching the PXO, and make this determination before stepping off the curb into the path of the oncoming vehicle.

The installation of lighting and pavement markings at and in advance of a PXO is intended to make a motorist aware that they are approaching a PXO and to be alert for pedestrians wanting to cross the road ahead. Pedestrians can indicate to motorists that they intend to cross the street by activating the overhead flashing beacons. However, in a busy urban environment both pedestrians and drivers are confronted with visual distractions and background clutter making it more important that both are able to clearly see each other.

In Toronto the current stopping prohibition in advance of all PXOs is 9 metres. A vehicle located against the curb at a point between 9 metres and 15 metres from a PXO can potentially reduce advance sight lines to less than 30 metres, between a driver approaching the crosswalk and a pedestrian standing at the curb waiting to cross the road. As a means of comparison, a vehicle travelling on a level grade at a speed of 50 kilometres per hour requires an unobstructed sight line stopping distance of about 60 metres for the driver to react and safely bring the vehicle to a complete stop.

Extending the general stopping prohibition from within 9 metres of a PXO to within 15 metres on the approach side to a PXO will provide an unobstructed advance sight line of about 60 metres and enhance safety. The 9-metre stopping prohibition at all times will be maintained beyond the PXO.

By-law Requirements

Each traffic bylaw of the former area municipalities is still in effect and contains a general provision that stopping is prohibited at all times within 9 metres of a PXO. Since this is a general regulation that applies at all PXOs, it is neither necessary to delineate within the “No Stopping” schedule of the traffic by-law a stopping prohibition for every PXO location nor to technically post signs to give effect to this regulation, albeit most locations are signed.

Major and Minor Arterial Roads:

There are two options that would provide Transportation Services’ staff with the legal mechanism to extend the length of the stopping prohibition from within 9 metres to within 15 metres on the approach to all PXOs located on major and minor arterial roads in the City.

1. Implement 269 site-specific by-law amendments indicating that stopping is prohibited at all times on a specific street for specified distances to/from an intersecting street or mid-block location where a PXO is present; or
2. Amend the text of each traffic by-law of the former area municipalities to indicate that stopping is prohibited:
 - Within fifteen (15) metres of a PXO on the approach to a PXO and within nine (9) metres beyond the PXO, where the street is classified in the City’s Road Classification System as a major or minor arterial road.

Option 1 jumbles numerous entries within the “No Stopping” schedule of each traffic by-law. Any future installation of a PXO on a minor or major arterial road would require staff to report on the site-specific stopping prohibition required in conjunction with the installation of the PXO. This method is not recommended given the potential for errors, overlapping parking regulations in the by-laws, and obligation on staff resources to report on every PXO location across the City.

Option 2 neither requires making site-specific by-law amendments for every existing PXO location on a major or minor arterial road nor future amendments if a new PXO is installed on a minor arterial road in order to extend the “No Stopping” regulation to within 15 metres on the approach side to the crosswalk (new PXOs will no longer be installed on major arterial roads).

Collector and Local Roads

Since City Council adopted the recommendations of the staff reports in 2006 and the subsequent enhancement of nearly 200 PXOs on the arterial road network to date, Transportation Services has been asked to extend the same enhancement measures to PXOs on collector and local roads.

Transportation Services is currently investigating the operational/technical issues and financial implications associated with expanding the Pedestrian Crossover Enhancement Program to collector and local roads. This matter will be the subject of an independent report to the Public Works and Infrastructure Committee at a later date.

In the interim and as a proactive step to enhance pedestrian safety, Transportation Services recommends reviewing PXO locations on collector and local roads on an individual basis to determine if they would benefit from extending the stopping prohibition from within 9 metres to within 15 metres on the approach to the PXO.

To facilitate this and simplify implementation of the appropriate signs, it is recommended that:

- The text of the various traffic by-laws be amended to indicate that where authorized signs to that effect are displayed, no person shall stop a vehicle at anytime within fifteen (15) metres of a PXO on the approach side to the PXO on a street classified in the City's Road Classification System as a collector or local road. The general stopping prohibition within nine (9) metres beyond the PXO on a street classified as a collector or local road will remain unchanged.
- The General Manager of Transportation Services be authorized to post signs prohibiting stopping at anytime within fifteen (15) metres of a PXO on the approach side to the PXO on a street classified as a collector or local road where the General Manager of Transportation Services determines through investigation that:
 - The 85th percentile speed of traffic approaching the PXO is equal to or greater than 50 kilometres per hour; or
 - The 85th percentile speed of traffic approaching the PXO is less than 50 kilometres per hour and the sight line stopping distance in advance of the PXO is less than 60 metres.

CONCLUSION

As a final step in the process to enhance advance visibility between pedestrians and motorists at PXOs on major and minor arterial roads, it is necessary that City Council approve the extension of the stopping prohibition from within 9 metres to within 15

metres of a PXO on the approach side to the crosswalk at all PXOs located on major and minor arterial roads.

Sight line and operational safety concerns are also present at certain PXO locations on collector and local roads. It is recommended that City Council prohibit stopping within 15 metres of a PXO, on the approach side to the crosswalk, on collector and local roads where authorized signs are posted. Exact locations will be determined by the General Manager of Transportation Services where it has been found through investigation and evaluation of the criteria outlined above that the operational characteristics of the road and/or advance sight lines between motorists and pedestrians are not satisfactory to ensure safe operation of the PXO and can be improved by extending the stopping prohibition.

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