Traffic Control Signals -
Milner Avenue and Scunthorpe Road

Date: July 24, 2014
To: Scarborough Community Council
From: Director, Transportation Services, Scarborough District
Wards: Ward 42 – Scarborough Rouge River
Reference Number: P:\2014\Cluster B\TRA\Scarborough\sc1458
D14-6187383 Milner Ave & Scunthorpe Rd – Traffic Control Signals

SUMMARY

This report responds to a petition by area residents, requesting a study to replace the existing Pedestrian Crossover (PXO), located on the west side of the intersection, with Traffic Control Signals (TCS) at the intersection of Milner Avenue and Scunthorpe Road.

Earlier traffic studies, including vehicle speed and volume counts were conducted on Thursday, October 10, 2013, which revealed that justification for Traffic Control Signals was not met.

After more recent studies which revealed higher operating speeds, the existing PXO is no longer a suitable traffic control device and should be replaced by Traffic Control Signals, as the more suitable form of traffic control device at this time.

RECOMMENDATIONS

Transportation Services, recommends that:

1. City Council approve the installation of Traffic Control Signals at the intersection of Milner Avenue and Scunthorpe Road.

2. City Council approve the removal of the Pedestrian Crossover at Milner Avenue and Scunthorpe Road in conjunction with the installation of traffic control signals at this intersection.
Financial Impact
The financial impact associated with this report to install Traffic Control Signals and remove the PXO, would be approximately $160,000.00 for which Capital funding is available in Transportation Services Division's Capital Works Budget under Project No. CTP714-01.

ISSUE BACKGROUND
This report responds to a petition by area residents and residents of the adjacent Sts. Peter and Paul Retirement Home requesting replacement of the existing Pedestrian Crossover (PXO) with Traffic Control Signals (TCS) at the intersection of Milner Avenue and Scunthorpe Road. The petition was related to a recent pedestrian fatality.

The intersection currently is equipped with a PXO and experiences moderate pedestrian crossing volumes. During an eight hour period 139 pedestrian crossings were recorded including 28 seniors and 6 pedestrians with accessibility concerns. Of the 5,590 vehicles observed at the PXO, 16 could have safely stopped for a pedestrian but failed to do so.

The location failed to meet the justification for Traffic Control Signals (TCS) which is based on a technical warrant adopted by Council for use in the City of Toronto; the results of this study were reported to Scarborough Community Council.

At its meeting of February 24, 2014, Scarborough Community Council deferred consideration of Item SC30.16 until the report from Toronto Police on the recent pedestrian fatality is available and that a further study is conducted by staff to address the lighting concerns from the residents of Sts. Peter and Paul Senior’s Residence. The study should be conducted late spring or summer 2014, as per the following link:


This current report responds to this deferral, with some details from the Toronto Police Services report on the recent pedestrian fatality, and the results of a follow-up study focused on an updated speed and volume study from March 27, 2014.

COMMENTS
The following characteristics describe the intersection of Milner Avenue and Scunthorpe Road:

- This "T" - intersection is located in the community south of Sheppard Avenue East, west of Markham Road, and is presently controlled by a PXO located on the west side, of the intersection. Southbound Scunthorpe Road is stop controlled. This portion of Milner Avenue consists mainly of industrial buildings and has a retirement home and a police station nearby.
- The PXO is primarily used by residents of Sts. Peter and Paul Retirement Home located on the south side of this intersection.
- To enhance operation, supplemental flashing amber PXO warning beacons are scheduled to be installed in 2014 on poles at both sides of the PXO.
- Milner Avenue is a four-lane, 13.9 metre wide, east-west minor arterial road with a speed limit of 50 kilometres per hour and a daily traffic volume of approximately 6,700 vehicles per day.
- Milner Avenue has an 85th percentile operating speed of approximately 63 km/h based on a speed and volume count conducted Thursday, March 27, 2014. A previous count conducted Thursday, July 13, 2013 indicated the 85th percentile speed was approximately 59 km/h.
- Scunthorpe Road is a two-lane, north-south, 9.8 metre wide, collector road.
- Sidewalks are located on both sides of Milner Avenue and Scunthorpe Road.
- There are Traffic Control Signals located 242 metres to the east at Milner Avenue and Markham Road and 1850 metres to the west at McCowan Road.
- A westbound Toronto Transit Commission bus stop is located on the east side of the intersection, and an eastbound bus stop is located 60 metres west of the intersection.

**Traffic Control Signal Warrant Study**

Transportation Services staff conducted a Traffic Control Signal Warrant study at the intersection of Milner Avenue and Scunthorpe Road on Thursday, October 10, 2013 using traffic volumes recorded over the peak eight hours of a typical weekday. The following are the results of the study:

<table>
<thead>
<tr>
<th>Traffic Control Signal Justification</th>
<th>Compliance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Vehicular Volume</td>
<td>62%</td>
</tr>
<tr>
<td>Delay To Cross Traffic</td>
<td>74%</td>
</tr>
<tr>
<td>Collision Hazard</td>
<td>27%</td>
</tr>
</tbody>
</table>

For the traffic control signals to be numerically justified, the following results need to be obtained:

1. One of the "Minimum Vehicular Volume", "Delay to Cross Traffic" or "Collision Hazard" warrants must be 100% satisfied, or
2. The "Minimum Vehicular Volume" and "Delay to Cross Traffic" warrants must both be at least 80% satisfied.

The Traffic Control Signal Justification was not met.
Collision History
A review of the available Toronto Police Service collision records for the six-year period ending December 31, 2013 revealed the following history:

<table>
<thead>
<tr>
<th>Six-Year Collision Information Milner Avenue at Scunthorpe Road</th>
<th>Number of Reported Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>Collisions Potentially Preventable by the Installation of Traffic Control Signals</td>
<td>0</td>
</tr>
<tr>
<td>Collisions Involving Pedestrians crossing Milner Avenue</td>
<td>0</td>
</tr>
</tbody>
</table>

- A review of the Toronto Police Service collision records for the six-year period of complete data from January 1, 2008 to December 31, 2013 indicates there has been one pedestrian collision at the intersection of Milner Avenue and Scunthorpe Road. The fatal pedestrian collision occurred on Thursday, September 5, 2013 at 6:05 p.m. during daylight conditions and involved an 88-year old man, on a mobility scooter, attempting to cross Milner Avenue from the north side to the south side, within the PXO on the west side of the intersection. A 62-year-old driver travelling westbound in a GMC truck in the passing lane struck the pedestrian. The PXO crossing lights were activated and the pedestrian was a resident of Saints Peter and Paul Retirement Home on the south side of the intersection.

- Please note that in the above Collision History Table the subject fatal pedestrian collision is “double counted” since it is listed in both collision type categories. The collision is listed firstly as traffic control signal preventable and also secondly is listed as a collision involving pedestrians crossing Milner Avenue.

- Toronto Police Service records for the current 2014 part year period of available data, from January 1 to February 28, 2014, indicates there have been no reported collisions at the subject intersection.

Environmental Standards for PXO Suitability

We conducted a detailed review of this location and compared the standards at this PXO with the recommended design standards, or “environmental standards”, for PXO’s as developed by the Province of Ontario in consultation with Ontario municipalities. These criteria describe a roadway environment suitable for this type of control, and exposure factors, which would make a PXO unsuitable or potentially unsafe.
The following table outlines our review of these criteria and whether they are satisfied at this location.

<table>
<thead>
<tr>
<th>Standards or Criteria to be Met For Physical Suitability of a PXO</th>
<th>Met/Not Met</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle operating speed less than 60 km/h.</td>
<td>Not Met</td>
<td>Speed limit is 50 km/h new 85&lt;sup&gt;th&lt;/sup&gt; percentile speeds are: Eastbound – 64 km/h on March 27, 2014 Westbound – 62 km/h on March 27, 2014 (Speeds in 2013 were less than 60 km/h)</td>
</tr>
<tr>
<td>Not more than four lanes wide on a two-way street, or more than three lanes wide on a one-way street.</td>
<td>Met</td>
<td>4 lanes (13.9 metres at PXO)</td>
</tr>
<tr>
<td>Traffic volume less than 35,000 vehicles per day (total both directions).</td>
<td>Met</td>
<td>6,719 Vehicles per day (Thursday, March 27, 2014)</td>
</tr>
<tr>
<td>No driveways or entrances nearby.</td>
<td>Met</td>
<td>The driveway to 221 Milner Avenue is located on the south side, 15 metres west of the PXO. The traffic volume at this driveway is minimal and does not interfere with the safe operation of this PXO.</td>
</tr>
<tr>
<td>No significant volume of turning movements which interfere with PXO.</td>
<td>Met</td>
<td>Southbound right turning movement at this intersection is 389 vehicles in the eight hour peak study period.</td>
</tr>
<tr>
<td>No visibility problems exist for either pedestrians or motorists.</td>
<td>Met</td>
<td>Visibility is fair at this location (vertical curve to east and horizontal curve to west).</td>
</tr>
<tr>
<td>No loading zones (including TTC) in the immediate vicinity.</td>
<td>Not Met</td>
<td>WB TTC bus stop is located on the east side of the intersection. EB TTC bus stop is located 60 metres west of the PXO.</td>
</tr>
<tr>
<td>Not less than 215 metres to another PXO or traffic control device.</td>
<td>Met</td>
<td>242 metres east to Traffic Signal at Markham Road and Milner Avenue.</td>
</tr>
</tbody>
</table>

We reviewed the Environmental Standards for PXO Suitability for aspects which were not satisfied at this intersection and have determined that due to the new higher 85<sup>th</sup> percentile operating speeds, the PXO is no longer operating in a safe and efficient
manner; this is no longer a suitable location for a PXO. Since the PXO is no longer a suitable traffic control device, the PXO should be replaced by Traffic Control Signals which would be the more suitable form of traffic control device.

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SIGNATURE

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KS:cr

ATTACHMENTS

1. Location Plan - Traffic Control Signals - Milner Avenue and Scunthorpe Road