STAFF REPORT
ACTION REQUIRED

Traffic Control Signal Study – Finch Avenue East and Tiffield Road/Scottfield Drive

Date: December 8, 2010
To: Scarborough Community Council
From: Director, Transportation Services, Scarborough District
Wards: Ward 41 – Scarborough-Rouge River
Reference Number: P:\2011\Cluster B\TRA\Scarborough\sc1109

SUMMARY

The purpose of this report is to review the feasibility installing Traffic Control Signals at the intersection of Finch Avenue East and Tiffield Road/Scottfield Drive.

Traffic studies reveal that Traffic Control Signals are not warranted at this time.

RECOMMENDATIONS

Transportation Services recommends that:

1. City Council not approve the installation of Traffic Control Signals at the intersection of Finch Avenue East and Tiffield Road/Scottfield Drive.

2. City Council not pass or amend the appropriate by-law(s) accordingly.

FINANCIAL IMPACT

There is no financial impact associated with this report. However, the financial cost of installing these new traffic control signals would be approximately $175,000.00 should the installation be approved. The funding for these signals is not available in the Transportation Services Division’s Capital Works Budget under Project No. CTP711-01.

The City of Toronto has secured $93,820.00 from Tiffield Development Corporation and Greenvilla Homes as funding towards the cost of traffic control signals at this location subject to traffic signal controls being warranted.
ISSUE BACKGROUND
Further to a request from Councillor Chin Lee, Transportation Services staff conducted traffic studies to determine whether traffic control signals should be install at the subject intersection.

Traffic Control Signal (TCS) and Pedestrian Crossover (PXO) studies have been conducted at this location on several occasions and the technical justification or warrants have not been met.

COMMENTS
The following characteristics describe the intersection of Finch Avenue East and Tiffield Road/Scottfield Drive:

- Finch Avenue East is a four-lane major arterial road. Tiffield Road is a collector road and Scottfield Drive is a local road.
- This intersection is in the East Highland Creek Neighbourhood.
- Finch Avenue East has a posted speed limit of 60 kilometres per hour (km/h) and a daily traffic volume of approximately 26,000 vehicles per day (vpd).
- This intersection is presently controlled by a northbound stop sign on Scottfield Drive and a southbound stop sign on Tiffield Road.
- Toronto Transit Commission bus stops for both the eastbound and westbound directions along Finch Avenue East are located in direct proximity to the intersection.
- Traffic Control Signals are located approximately 380 metres west at Middlefield Road and 815 metres east at Markham Road.
- Sidewalks are located on both sides of Finch Ave East and Scottfield Drive, and Tiffield Road has a sidewalk on one side only.

Traffic Control Signal Warrant Study and Historical Records
Transportation Services staff conducted a Traffic Control Signal Warrant Study at the intersection of Finch Avenue East and Tiffield Road/Scottfield Drive. Using traffic volumes recorded over the peak eight hours of a typical weekday, the following warrant compliance results were obtained.

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</thead>
<tbody>
<tr>
<td>Minimum Vehicular Volume</td>
<td>57%</td>
<td>61%</td>
<td>71%</td>
<td>79%</td>
</tr>
<tr>
<td>Delay To Cross Traffic</td>
<td>67%</td>
<td>71%</td>
<td>56%</td>
<td>67%</td>
</tr>
<tr>
<td>Collision Hazard</td>
<td>13%</td>
<td>20%</td>
<td>53%</td>
<td>53%</td>
</tr>
</tbody>
</table>

For traffic control signals to be numerically justified, one of the “Minimum Vehicular Volume” or “Delay to Cross Traffic” warrants must be 100 percent satisfied, or any two of
the three warrants must be at least 80 percent satisfied. Our review of the Collision Hazard is based on the previous three-year (2007 - 2009) collision history.

As outlined in the above tables, neither the traffic volume nor the collision history satisfies the requirements to install traffic control signals.

**Pedestrian Crossover Warrant Study and Historical Records**
In addition a Pedestrian Crossover Warrant Study was also conducted, and the following warrant compliance results were obtained.

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<tr>
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</thead>
<tbody>
<tr>
<td>Warrant 1: Pedestrian Volume</td>
<td>53%</td>
<td>80%</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>Warrant 2: Pedestrian Delay</td>
<td>37%</td>
<td>65%</td>
<td>35%</td>
<td>45%</td>
</tr>
</tbody>
</table>

To support the installation of a pedestrian crossover, both warrants must be satisfied to the extent of 100 percent. In order for the pedestrian delay warrant to be met, a minimum of 200 pedestrians must be observed crossing the roadway, of which 130 must be delayed for periods greater than 10 seconds when crossing Finch Avenue East. Given these observations, a pedestrian crossover cannot be supported at this time.

**Collision History**

A review of the Toronto Police Service collision records for the three-year period from January 1, 2007 to December 31, 2009 is summarised below.

<table>
<thead>
<tr>
<th>Three-Year Collision Information</th>
<th>Number of Reported Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Collisions Potentially Preventable by the installation of Traffic Control Signals</td>
<td>3</td>
</tr>
<tr>
<td>Collisions Involving Pedestrians Crossing Finch Avenue East</td>
<td>0</td>
</tr>
</tbody>
</table>

This collision record is indicative of a potential safety issue at this intersection, but not one that is significant to trigger the warrant for traffic control signals.
In summary, traffic control signals are not justified and should not be installed at the subject intersection.

**CONTACT**
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**SIGNATURE**

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Peter J. Noehammer, P.Eng.
Director, Transportation Services, Scarborough District

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**ATTACHMENTS**

1. Location Plan (Traffic Control Signal Study – Finch Avenue East and Tiffield Road/Scottfield Drive)