All-Way Stop Control Study – Lawrence Avenue East and Rouge Hills Drive

Date: August 14, 2012
To: Scarborough Community Council
From: Director, Transportation Services, Scarborough District
Wards: Ward 44 – Scarborough-East
Reference Number: P:\2012\Cluster B\TRA\Scarborough\sc1272
                     D12-4723290, Lawrence Ave at Rouge Hills  AWSC

SUMMARY

This staff report is about a matter for which the Community Council has delegated authority from City Council to make a final decision.

The purpose of this report is to advise on the feasibility of installing an all-way stop control at this intersection. The installation of an all-way stop control is justified under engineering judgement.

RECOMMENDATIONS

Transportation Services recommends that Scarborough Community Council:

1. Enact the compulsory stop regulations, as identified in the Appendix 1 of this report.

2. Pass or amend the appropriate by-law(s) accordingly.

Financial Impact
The financial cost of installing the subject recommended all-way stop control is approximately $1,000.00. Funding for the all-way stop control has been requested from the Transportation Services 2012 Operating Budget, within Cost Centre TP0397.
ISSUE BACKGROUND
Further to a public request, Transportation Services staff have reviewed the feasibility of installing an all-way stop control at the intersection of Lawrence Avenue East and Rouge Hills Drive. Currently, this right-angle intersection requires westbound vehicles exiting from the Waterfront Trail to stop at Lawrence Avenue East and Rouge Hills Drive; however, there is some motorist confusion concerning the right-of-way from approaching motorists. Specifically, the partially unsigned configuration does not provide a clear alternating right-of-way, and is subject to the default "yield to the right rule" in the Highway Traffic Act.

COMMENTS
The following characteristics describe the subject intersection of Lawrence Avenue East and Rouge Hills Drive:

- This right-angle intersection is presently only controlled by a stop sign on the westbound driveway approach.
- The land uses in the vicinity of this intersection are single family residential and natural parkland.
- Lawrence Avenue East is a two-lane local road with a posted speed limit of 50 kilometres per hour and a traffic volume of less than 3,000 vehicles per day.
- Rouge Hills Drive is a two-lane local road with a posted speed limit of 40 km/h and a traffic volume of approximately 1,000 vehicles per day.
- The Waterfront Trail provides access to the Rouge Park and the Rouge Beach Park.
- The prevailing through traffic movement involves eastbound left-turns and southbound right-turns.

A traffic study conducted at the intersection of Lawrence Avenue East and Rouge Hills Drive during the morning and afternoon peak hours of a typical weekday (Wednesday, April 25, 2012) produced the following results:

<table>
<thead>
<tr>
<th>All-Way Stop Control Warrant (Four-Hour Study Period Average)</th>
<th>A Total Approach Vehicle Volume</th>
<th>B Vehicle/Pedestrian Volume Crossing Major Road</th>
<th>C Unit Volume Split* Major/Minor Roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence Avenue East at Rouge Hills Drive</td>
<td>66</td>
<td>8</td>
<td>88 / 12</td>
</tr>
<tr>
<td>Warrant Requirements For Study Period Average For Local Roads</td>
<td>≥ 250</td>
<td>≥ 100</td>
<td>≥ 30/70 or ≤ 70/30</td>
</tr>
</tbody>
</table>

* “Unit Volume Split”: Major Road Volume – Vehichles only.
   Minor Road Volume – Vehicles plus pedestrians crossing the major road.

For an All-Way Stop Control to be numerically justified, the traffic volume requirements for the “Study Period Average” must be completely satisfied in Categories A and C, or Categories B and C.
As outlined in the previous table, the traffic volumes do not meet the technical requirements to install an all-way stop control at the subject intersection; however, the lack of clarity from road users as to who has the right-of-way justifies the installation of an all-way stop control under engineering judgement, considering that the prevailing through traffic pattern involves eastbound left turns and southbound right-turns and neither of these are controlled.

Conclusions:

Based on staff observations, in order to resolve the conflict with right-of-way issues, an all-way stop control is recommended at this intersection.

A review of the collision records revealed that there were no collisions of the type susceptible to correction by the installation of an all-way stop control at this intersection during the five-year period ending December 31, 2011.

The adoption of the proposed traffic by-law amendments will allow for proper enforcement of the respective traffic signs under the Highway Traffic Act, clearly define the right-of-way, and enhance drive and pedestrian safety.

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SIGNATURE

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

DBS/JAB:ca

ATTACHMENTS

1. Appendix 1 – By-law Amendment (Enact)
2. Location Plan (All-Way Stop Control Study – Lawrence Ave East & Rouge Hills Drive)
Appendix 1

“Compulsory Stops”
Regulation to be Enacted

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Stop Street</th>
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</thead>
<tbody>
<tr>
<td>Lawrence Avenue East and Rouge Hills Drive</td>
<td>Lawrence Avenue East</td>
</tr>
<tr>
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