Stop and Yield Controls - St Mark’s Road and Varsity Road (South and North Intersections)

Date: November 12, 2013
To: Etobicoke York Community Council
From: Director, Transportation Services - Etobicoke York District
Wards: Ward 13 – Parkdale-High Park
Reference Number: p:\2013\Cluster B\TRA\EtobicokeYork\eycc130132-to

SUMMARY
This staff report is about a matter that Community Council has delegated authority from City Council to make a final decision.

The purpose of this report is to recommend the installation of a stop control on St Mark’s Road at the south intersection of Varsity Road and to recommend a yield control on Varsity Road at the north intersection of St Mark’s Road.

Currently, both intersections are operating as uncontrolled intersections, despite the fact the south intersection is by-lawed for an eastbound yield control. However, our investigation has revealed that the south intersection has been operating as an uncontrolled intersection for a number of years. Therefore, the installation of these traffic controls will define the right-of-way, enhancing traffic management and safety at these locations.

RECOMMENDATIONS
Transportation Services recommends that Etobicoke York Community Council approve:

1. Replacing the yield control with a stop control for eastbound traffic on St Mark’s Road at the south intersection of Varsity Road.

2. Installing a yield control for northbound traffic on Varsity Road at the north intersection of St Mark’s Road.
### Financial Impact

<table>
<thead>
<tr>
<th>Type of Funding</th>
<th>Source of Funds</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available within current budget</td>
<td>Transportation Services Operating Budget</td>
<td>$300.00</td>
</tr>
</tbody>
</table>

### ISSUE BACKGROUND

Transportation Services received a request and met with the area Councillor to determine if traffic control measures are required at the two intersections of Varsity Road and St Mark's Road. Currently, these intersections are both operating as uncontrolled “T” type intersections. A map of the area is Attachment 1.

### COMMENTS

Varsity Road and St Mark's Road are roads in the residential community south of Dundas Street West and west of Jane Street. The north intersection is a “T” type intersection, in which St Mark's Road has a significant grade and currently operates as an uncontrolled intersection. The south intersection is also a "T" type intersection in which Varsity Road terminates at Magwood Park. Although this intersection is currently by-lawed for a yield control, our investigation reveals that this intersection has also operated as an uncontrolled intersection for a number of years. Since there are no traffic control devices at either intersection, right-of-way is determined by the basic right-of-way rule. The rule, as stated in section 135, sub-sections (2) & (3) of the Highway Traffic Act, is “every driver approaching an intersection shall yield the right-of-way to any vehicle in the intersection that has entered from an intersecting highway” and “when two vehicles enter the intersection from intersecting highways at approximately the same time, the driver on the left shall yield the right-of-way to the vehicle on the right”.

Our review of the Toronto Police Services collision records for the past three years for which we have complete data (January 1, 2010 to December 31, 2012) for both intersections of Varsity Road and St Mark's Road revealed that there has been two reported collisions, both of which involved vehicles travelling downhill on St Mark's Road, in which they lost control on icy road conditions.

To assess traffic conditions at the north intersection of St Mark’s Road and Varsity Road, observations were conducted during the morning and afternoon peaks in which all movements were recorded. Based on the traffic volumes entering the intersection, and the results of our observations, it is concluded that some form of traffic control is required to avoid potential conflicts and to more clearly define right-of-way.
Turning Movement Count Summary – St Mark's Road and Varsity Road (North Intersection)

<table>
<thead>
<tr>
<th>Time</th>
<th>Varsity Road (eastbound)</th>
<th>Varsity Road (northbound)</th>
<th>St Mark's Road (westbound)</th>
<th>Total Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 a.m. to 8:30 a.m.</td>
<td>138</td>
<td>19</td>
<td>55</td>
<td>212</td>
</tr>
<tr>
<td>8:30 a.m. to 9:30 a.m.</td>
<td>125</td>
<td>13</td>
<td>100</td>
<td>238</td>
</tr>
<tr>
<td>4:00 p.m. to 5:00 p.m.</td>
<td>55</td>
<td>6</td>
<td>59</td>
<td>120</td>
</tr>
<tr>
<td>5:00 p.m. to 6:00 p.m.</td>
<td>50</td>
<td>8</td>
<td>52</td>
<td>110</td>
</tr>
</tbody>
</table>

Considering the good sightlines from all approaches and the significant grade of both streets within the intersection, we have determined that a yield sign on Varsity Road at the north intersection of St Mark's Road is the most appropriate for traffic control. The yield control will provide right-of-way control within the intersection, without requiring vehicles to come to a complete stop in times of inclement weather, when road conditions may make it difficult for motorists to restart from a stopped position.

A morning peak hour study was conducted at the south intersection of St Mark's Road and Varsity Road.

Turning Movement Count Summary – St Mark's Road and Varsity Road (South Intersection)

<table>
<thead>
<tr>
<th>Time</th>
<th>St Mark's Road (eastbound)</th>
<th>Varsity Road (northbound)</th>
<th>Varsity Road (southbound)</th>
<th>Total Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m. to 9:00 a.m.</td>
<td>27</td>
<td>2</td>
<td>11</td>
<td>40</td>
</tr>
</tbody>
</table>

Although the traffic volumes entering the south intersection are substantially less than the north intersection, the results of our studies indicate that some form of traffic control is justified at the south intersection of St Mark's Road and Varsity Road. A review of this intersection revealed that the safe approach speed for traffic on St Mark's Road is less than the minimum guideline of 15 km/h for which a yield control is appropriate. In addition, the up-grade for eastbound traffic on the west leg of the south intersection of St. Mark's Road and Varsity Road is less than the up-grade for northbound traffic on the south leg of the north intersection of St Mark's Road and Varsity Road. Therefore, we are recommending the installation of a stop control on St Mark's Road at Varsity Road (south intersection).
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SIGNATURE

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Steven T. Kodama, P.Eng.
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ATTACHMENTS

Attachment 1: Map