

TO	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON NOVEMBER 29, 2016
FROM	KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	SOUTH CARRIAGE ROAD AND HYDE PARK ROAD INTERSECTION

<b>RECOMMENDATION</b>
-----------------------

That on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following report **BE RECEIVED** for information.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
--

For additional information, please refer to the following committee reports:

1. June 22, 2009: Environment and Transportation Committee - Appointment of Consulting Engineers; Class Environmental Assessments for Hyde Park Road, Sarnia Road, Sunningdale Road;
2. December 19, 2011: Civic Works Committee - Hyde Park Road Environmental Study Report, Notice of Completion;
3. August 21, 2012: Civic Works Committee - [Hyde Park Road Widening Phase 1, Appointment of Consulting Engineer](#);
4. September 9, 2013 – Civic Works Committee – [Hyde Park Road Widening Phase 2 North of the Canadian Pacific Railway to North of Fanshawe Park Road Detailed Design and Tendering Appointment of Consulting Engineer](#);
5. March 24, 2014: Civic Works Committee - [Contract Award: Tender No. T14-12, Growth Management Implementation Strategy \(GMIS\), Hyde Park Road](#);
6. March 3, 2015 – Civic Works Committee – [Hyde Park Road and South Carriage Road Intersection Assessment](#); and
7. March 23, 2015 – Civic Works Committee – [Contract Award: Tender No. 15-10, Hyde Park Road Widening Phase 2, CPR to Fanshawe Park Road](#).

<b>2015-19 STRATEGIC PLAN</b>
-------------------------------

The following report supports the Strategic Plan through the strategic focus area of **Strengthening Our Community** by ensuring the safe and efficient movement of traffic, goods and people.

BACKGROUND

At its November 11, 2014 meeting, Council passed the following resolution:

“That the request for the installation of traffic control measures at Hyde Park Road and South Carriage Road **BE REFERRED** to the Civic Administration for report back at a future meeting of the Civic Works Committee; it being noted that the Civic Works Committee received communications from D. Foster, Northcliff Red Light Committee, D. Szpakowski, Hyde Park Business Association and Tricar Development Corporation with respect to this matter and were also advised of a petition containing approximately 616 signatures in support of the traffic control measures, available for viewing in the City Clerk’s Office. (2014-T07) (10/17/CWC)” (File Number 29, Installation of Traffic Control Measures at Hyde Park Road and South Carriage Road, CWC Deferred Matters List)

Hyde Park Road from Oxford Street W to Fanshawe Park Road W was recently widened to two through lanes in each direction along with sidewalks, bicycle paths, improved lighting and other amenities. A traffic study in 2014 demonstrated that a traffic signal was not warranted at the South Carriage Road and Hyde Park Road intersection and additional post road widening traffic studies have been conducted. The following table summarizes the Average Annual Daily Traffic (AADT) at this intersection:

	South Carriage Road		Hyde Park Road		Pedestrians Crossing Hyde Park Road <sup>(1)</sup>
	East Leg	West Leg	North Leg	South Leg	
Spring 2006	600	750	20,100	20,700	2
Fall 2009	1,150	600	19,600	20,300	3
Spring 2014	1,700	750	21,000	21,800	2
Spring 2016	2,000	650	24,000	24,700	9
Fall 2016 <sup>(2)</sup>	2,350	680	29,700	30,750	6

Note:

1. Peak eight (8) counts
2. Traffic count may include traffic that was diverted from Wonderland Road N which was reduced to a single lane at Sarnia Road due to construction.

DISCUSSION

Traffic signals are designed to ensure a safe and orderly flow of traffic, provide safety for pedestrians and/or vehicles while crossing a busy intersection and help lessen the severity and frequency of collision between vehicles entering intersections from different directions. However, traffic signals can be detrimental to the operational efficiency of our roadway system and can increase the number of traffic collisions.

The installation of traffic control signals are recommended at intersections where the traffic volume or collision data indicates that their installation is needed to address operational and/or safety issues. The Ontario Traffic Manual (OTM) specifies the warrant process that is followed by the City of London. This process takes into consideration the volume of traffic/pedestrian using the intersection, the delay experienced by side street traffic/pedestrians and the collision history of the intersection while still acknowledging that traffic control signals can be detrimental to the operational efficiency of our roadway system.

The following is a summary of the Fall 2016 traffic signal analysis:

Justification	Compliance
Minimum Volume Warrant:	53 % <sup>(1)</sup>
Delay Warrant:	54 % <sup>(1)</sup>
Combination Warrant:	not met <sup>(1)</sup>
Collision Experience:	7 % <sup>(2)</sup>

- Notes:
- 1. The Minimum Volume Warrant or the Delay Warrant must exceed 100 % or both must exceed 80 %.
  - 2. There have been three reported collisions in the last three years. One collision was of a type susceptible to prevention by a traffic signal. The collision warrant requires an average of five preventable collisions per year for three years.

An analysis of the pedestrian volume was also conducted which identified 6 pedestrians crossing Hyde Park Road during the peak eight (8) hours. The OTM warrant for an intersection pedestrian signal requires a minimum of 200 pedestrians crossing.

A review of current and proposed development was undertaken. This includes the new elementary school, 97 single family dwelling units and 190 multi-family units. These developments will add traffic during the peak hours; however, additional growth of 60 % during the off-peak hours is required to achieve the traffic signal warrant.

Traffic operating conditions were evaluated using intersection analysis software. This analysis confirmed field observations that the widening of Hyde Park Road has reduced the delays experienced by traffic leaving South Carriage Road; however, drivers will still experience delays during peak times. The installation of a traffic signal would help mitigate the peak hour delays; however, it would introduce delays to the traffic on Hyde Park Road. Drivers who are concerned with the turning onto Hyde Park Road at South Carriage Road have other alternative routes.

**Other Intersection Studies**

Each year the city undertakes numerous intersection traffic studies to monitor traffic growth at un-signalized intersections similar to the South Carriage Road and Hyde Park Road intersection. Appendix A summarizes the status of some of these intersections. Some of the intersections that are currently being monitored may reach the warrant for a traffic signal before the South Carriage Road and Hyde Park Road intersection. It should be noted that none of these intersections meet the collision warrant for a traffic signal.

<b>CONCLUSION</b>
-------------------

The intersection of South Carriage Road and Hyde Park Road is nearing the warrant for a traffic signal. The new developments currently underway are expected to add traffic during the peak hours; however, additional traffic growth is needed during the off-peak times before a traffic signal warrant is satisfied.

Installing a traffic signal at this intersection will reduce the delays experienced by drivers exiting the South Carriage Road during the peak hours; however, it will increase delays to the traffic on Hyde Park Road. It should be noted that installing a traffic signal at this intersection now will move it ahead other intersections that are being monitored but a traffic signal is not yet warranted.

Traffic counts will be completed as this area develops and a report will be brought forward to the Civic Work Committee when a traffic signal is recommended.

**Acknowledgements:**

This report was prepared with the assistance of Tim Koostra, Transportation Technologist with the Transportation Planning & Design Division and Suresh Jogie, Traffic Signal & Street Light Technologist with the Roadway Lighting & Traffic Control Division.

<b>PREPARED BY:</b>	<b>RECOMMENDED BY:</b>
<b>SHANE MAGUIRE, P. ENG. DIVISION MANAGER ROADWAY LIGHTING &amp; TRAFFIC CONTROL</b>	<b>EDWARD SOLDO, P.ENG. DIRECTOR, ROADS AND TRANSPORTATION</b>
<b>REVIEWED &amp; CONCURRED BY:</b>	
<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>	

**Appendix A**

**Summary of Traffic Signal Warrants**

Southdale Road W at Boler Road	100 % <sup>(1)</sup> & 88 % <sup>(2)</sup> Currently an all-way stop, a traffic signal design is currently underway.
Riverside Drive at Beaverbrook Avenue	57 % <sup>(1)</sup> & 92 % <sup>(2)</sup> Continue to monitor.
Base Line Road E at High Street	90% <sup>(1)</sup> & 62% <sup>(2)</sup> Currently an all-way stop.
Gainsborough Road at Coronation Drive (west leg)	66% <sup>(1)</sup> & 86% <sup>(2)</sup> Continue to monitor.
Blackwater Road at Adelaide Street N	77% <sup>(1)</sup> & 82% <sup>(2)</sup> Continue to monitor.
Fanshawe College Driveway at Fanshawe College Boulevard	73 % <sup>(1)</sup> & 81 % <sup>(2)</sup> Continue to monitor.
Sunningdale Road E at South Wenige Drive E (east leg)	74 % <sup>(1)</sup> & 77 % <sup>(2)</sup> Continue to monitor.

Note:       (1)     Minimum Volume Warrant  
              (2)     Delay Warrant