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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE NOVEMBER 12, 2012
FROM:	EDWARD SOLDI, P.ENG. DIRECTOR, ROADS AND TRANSPORTAITON
	DUNDAS STREET & HALE STREET INTERSECTION

RECOMMENDATION

That, on the recommendation of the Director, Roads and Transportation, the following information report related to Dundas Street & Hale Street intersection **BE RECEIVED** for information.

BACKGROUND

Purpose:

This report provides Committee and Council with an overview of the transportation concerns and potential modifications related to the Dundas Street / Hale Street intersection.

Context:

On November 15, 2011, the Community and Neighbourhoods Committee heard a presentation from K. Parker, Vice Chair - the Argyle Community Association (ACA), and received communications dated October 25 and 28, 2011 from Councillor S. Orser and A. Haidar – Chair of ACA, with respect to the condition and status of 697-701 Hale Street.

On November 21, 2011, Council requested the Civic Administration to review potential improvements to the Dundas Street/Hale Street intersection, specifically the requirement for a right turn lane, and report back to the appropriate Standing Committee.

Background

The intersection is controlled by traffic signals that are hardwired into the railway crossing signals on Dundas Street. Any changes to the traffic operation of this intersection will need to be reviewed and approved by the Rail Authority (CN or CP, please list). Dundas Street at this location is a busy 4-lane arterial with traffic volume of 32,000 vehicles a day. Hale Street is a busy industrial 2-lane collector with traffic volume of 9,000 vehicles a day.

Analysis Review

A detailed technical review was undertaken by Transportation staff to review the need for an eastbound right turn lane on Dundas Street at the intersection. Two analysis methods were utilized and are summarized as follows:

1. A comparison of the amount and percentage of right turning traffic versus through traffic on the eastbound leg of the intersection was analyzed. If the amount exceeds 300 vehicles per hour or 30 % of the approach volume, then a right turn lane may be beneficial to the operation of the intersection. The eastbound right tuning traffic volume on Dundas Street at Hale Street is as follows:
 - Morning peak = 61 vehicles or 6.5%
 - Noon peak = 91 vehicles or 9 %
 - After noon peak = 184 vehicles or 15 %
 - 8hr period= 758 vehicles or 10 %

Based on the volume and percentage of right turning traffic, a right turn lane is not justified.

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2. An analysis of the traffic operation of the intersection and potential right turn lane using traffic software was completed. The analysis looked at the afternoon peak hour Level of Service (LOS) and the Volume/Capacity (V/C) ratio for the signalized intersection with and without a right turn lane using existing signal timing. The results are as follows:

- Existing – LOS “B”, V/C .69
- With right turn Lane – LOS “B”, V/C .59

As the analysis indicates the right turn lane will improve the V/C ratio from .69 to .59, however the overall level of service of the intersection is very good with and without a right turn lane. The minimal change on the volume/capacity ratio will not make any significant difference in the LOS for eastbound traffic.

Based on the above analysis, an eastbound right turn lane on Dundas Street at Hale Street will not make a significant improvement to traffic operation of the intersection and is not warranted.




In addition to the above operational requirements for a right turn lane, there are many physical constraints near the intersection. Construction of a right turn lane will impact the building at the southwest corner of the intersection, which is situated on the property line and would have to be demolished, in addition to hydro posts, signal posts and overhead flashing lights which would have to be relocated.

Summary

A traffic operation review based on traffic volume percentages and intersection LOS identified that an eastbound right turn lane at the intersection of Dundas Street & Hale Street is not warranted. The construction of an eastbound right turn lane would require property acquisition, surface utility relocation and significantly impact an existing property.

Acknowledgements

This report was prepared with the assistance of Andy Couvillon, Senior Transportation Technologist within the Transportation Planning and Design Division.

PREPARED BY:	RECOMMENDED BY:
	
MAGED ELMADHOON, M.ENG., P. ENG TRANSPORTATION PLANNING & DESIGN, ENVIRONMENTAL AND ENGINEERING SERVICES	EDWARD SOLDO, P. ENG. DIRECTOR, ROADS AND TRANSPORTATION
REVIEWED & CONCURRED BY:	
	
JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENGINEERING AND CITY ENGINEER	

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Cc: Councilor S. Orser
A. Haidar & K. Parker, Argyle Community Association-204 Tremont Rd, London, ON N5V 1C4
O. Katolyk, Manager of By-Law Enforcement