



**STAFF REPORT
ACTION REQUIRED**

Traffic Control Signal Study - Warden Avenue and Lupin Drive

Date:	October 21, 2009
To:	Scarborough Community Council
From:	Director, Transportation Services, Scarborough District
Wards:	Ward 40– Scarborough Agincourt
Reference Number:	P:\2009\Cluster B\TRA\Scarborough\sc09076 D09-3359622 Warden Avenue and Lupin Drive TCS

SUMMARY

This staff report is about a matter for which the Community Council does not have delegated authority from City Council to make a final decision.

The purpose of this report is to discuss the feasibility of the installation of traffic control signals at Warden Avenue and Lupin Drive.

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

RECOMMENDATIONS

Transportation Services, Scarborough District, recommends that Scarborough Community Council recommend that City Council:

1. Not approve the installation of traffic control signals at the intersection of Warden Avenue and Lupin Drive.
2. 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 \$165,000.00 should the installation be approved. The funding for these signals is not available in Transportation Services Division’s Capital Works Budget under Project No. CTP709-01 at this time.

ISSUE BACKGROUND

Further to a request from Councillor Norm Kelly, Transportation Services staff reviewed the feasibility of installing traffic control signals and/or pedestrian crossing protection at Warden Avenue and Lupin Drive.

Traffic Control Signal (TCS) and Pedestrian Cross-over (PXO) studies have been conducted at this location on several occasions dating back to the mid 1990's. The technical justification or warrants were not met on all occasions. Cross street traffic made up of motorists and/or pedestrians may be avoiding this section of Warden Avenue due to the lack of sufficient gaps in traffic, thus a warrant will have little likelihood of being met.

The traffic volumes on Warden Avenue north of Ellesmere Road are approximately 46,271 vehicles per day (vpd). This large traffic volume is usually an indication of less than adequate gaps in traffic to successfully cross the road or make a left turn safely. At the subject location, motorists and pedestrians were observed waiting for a gap in one direction of traffic, using the centre shared left turn lane on Warden Avenue as refuge, then continuing their crossing or left turn when the other direction of traffic on Warden Avenue cleared.

COMMENTS

The following characteristics describe the intersection of Warden Avenue and Lupin Drive:

- This T-type intersection is presently controlled by stop signs on Lupin Drive.
- Warden Avenue is a five-lane major arterial roadway.
- Warden Avenue has a posted speed limit of 60 kilometres per hour (km/h) and a daily traffic volume of approximately 46,271 vehicles per day (vpd), recorded just north of Ellesmere Road.
- Lupin Drive is a two-lane local roadway with an unposted speed limit of 50 km/h. that forms a "T" type intersection on the west side of Warden Avenue.
- Toronto Transit Commission bus stops for both the northbound and southbound directions along Warden Avenue are located in direct proximity to the intersection. The southbound stop is located on the northwest corner of Warden Avenue and Lupin Drive while the northbound stop is located on the east side of Warden Avenue directly opposite Lupin Drive.
- Traffic control signals are located approximately 179 metres north at Metropolitan Road, and 400 metres south at Ellesmere Road.
- Sidewalks are located on both sides of Warden Avenue and Lupin Drive.

Traffic Control Signal Warrant Study

Transportation Services staff conducted a Traffic Control Signal Warrant Study at the intersection of Warden Avenue and Lupin Drive. Using traffic volumes recorded over the peak eight hours of a typical weekday, the following results were obtained:

Traffic Control Signal Warrant	Compliance Level
	Wednesday, September 16, 2009
Minimum Vehicular Volume	22% (*27%)
Delay To Cross Traffic	59% (*70%)
Collision Hazard	33%

* Projected Warrant Compliance Level – With an eastbound left-turn prohibition in place at Sylla Avenue and Warden Avenue, the projected vehicle volumes that would use Lupin Avenue are indicated in brackets.

For traffic control signals to be numerically justified, one of the “Minimum Vehicular Volume” or “Delay to Cross Traffic” warrants must be 100% satisfied or any two of the three warrants must be at least 80% satisfied.

In addition a Pedestrian Crossover Warrant Study was conducted.

Pedestrian Crossover Warrant	Compliance Level
	Wednesday, September 16, 2009
Pedestrian Volume	12%
Pedestrian Delays	17%

As outlined in the above table, none of the categories are met. The installation of traffic control signals or a pedestrian crossover cannot be justified at the subject intersection based on the foregoing information. There are adequate sight lines for approaching vehicles but street delays and pedestrian delays occurred due to heavy vehicle volumes on Warden Avenue.

Collision History

A review of the Toronto Police Service collision records for the five-year period ending December 31, 2008 is summarised below.

Five-Year Collision Information	Number of Reported Collisions					
	2004	2005	2006	2007	2008	Total
Collisions Potentially Preventable by the Installation of Traffic Control Signals	0	0	2	2	1	5
Collisions Involving Pedestrians Crossing Warden Avenue at Lupin Drive	0	0	0	0	0	0

This collision record is not indicative of a significant safety problem at this site.

In summary, traffic control signals are not justified and should not be installed at the subject intersection. The TTC has been consulted and concurs with this finding.

CONTACT

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SIGNATURE

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ATTACHMENTS

1. Location Plan (Traffic Control Signal Study – Warden Avenue and Lupin Drive)