



Council Report

Report Number: ENG2022-027
Meeting Date: August 23, 2022
Title: Request for Left Turn Lane on Pigeon Lake Road at Lakeview Estates
Description: Request for Left Turn Lane
Author and Title: Joseph Kelly, Senior Engineering Technician

Recommendation(s):

Report ENG2022-027 **Request for Left Turn Lane on Pigeon Lake Road at Lakeview Estates** be received.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

At the Council meeting of January 28, 2020, Council adopted the following resolution:

CW2020-018

That the Memo from Councillor Ron Ashmore, regarding a left turning lane into Lakeview Estates, be received; and

That Staff investigate the feasibility of creating left turning lane on Pigeon Lake Road into Lakeview Estates and report back to Council by the end of Q3, 2020.

This report addresses that direction. The memorandum can be seen in Appendix A.

Rationale:

The MTO Geometric Design Standards for Ontario Highways specifies that when the number of left turning vehicles at an intersection is such that it creates a hazard and reduces capacity, consideration should be given to the provisions of a separate left turn lane design. In the MTO document, the two warrants to perform in considering left turning lanes are volume warrants and accident warrants.

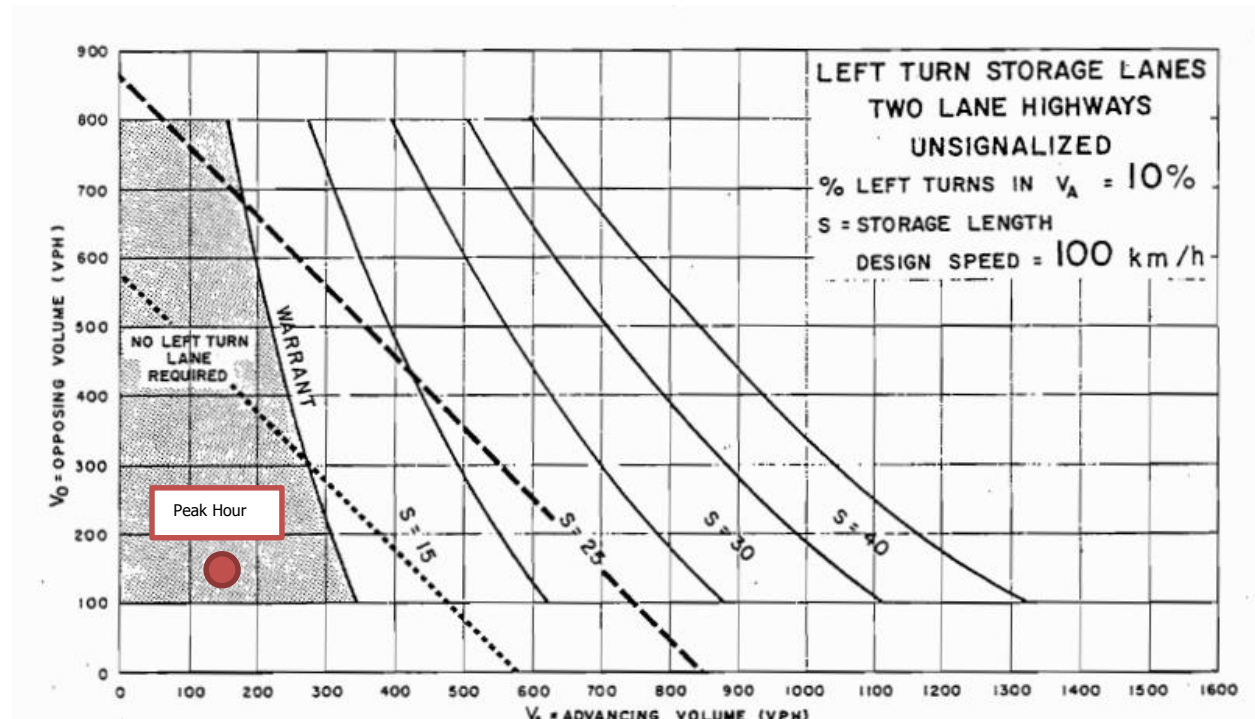
Volume Warrant

When opposing traffic volumes are such that left turning vehicles must wait for a gap to make their turn, they interfere with the through traffic. The magnitude of this interference depends on (1) the opposing volume, (2) the advancing volume and (3) the percentage of left turning vehicles (Ministry of Transportation Ontario, 1994).

The MTO created graphs accounting for the above factors along with design speed. It is in using best practices to use these graphs to determine if a left turn lane is warranted for the unsignalized intersection.

Based on a recent traffic count, it was revealed that the peak hour percentage of left turning vehicles southbound on Pigeon Lake Road into Lakeview estates (King's Wharf Road) is 7.1%. Using the peak hour advancing volume of 140 vehicles and the peak hour opposing volume of 151 vehicles it is was determined that the volume warrant is not met (Figure 1).

Figure 1: MTO Left Turn Warrant Showing Peak Hour Results



Accident Warrant

A left turn storage lane may also be considered at locations where four or more left turn related accidents occur per year or where six or more occur within a two-year period. With one reported left turning related collision in the last 36 months, the accident warrant is not met.

As a result of the justification review carried out by staff, it is determined that a left turn lane on Pigeon Lake Road for Lakeview Estates is not warranted.

Other Alternatives Considered:

Council has the option to reject the recommendation and direct staff to design and construct an unwarranted left turning lane. This would require approximately \$50000 implemented through the Capital Program-Urban/Arterial Resurfacing. This alternative option is not recommended.

Alignment to Strategic Priorities

Providing life safety and protection, is a priority objective of the City under the Council Adopted Strategic Plan Goal of An Exceptional Quality of Life.

Financial/Operation Impacts:

The recommendation has no financial impacts.

The alternative option would require approximately \$50000 from the Capital Program-Urban/Arterial Resurfacing.

Consultations:

N/A

Attachments:

Appendix A – Memorandum



Adobe Acrobat
Document

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Department Head: Juan Rojas, Director of Engineering & Corporate Assets

Department File: Engineering