



Committee of the Whole Report

Report Number: ENG2023-030
Meeting Date: November 7, 2023
Title: Request for Right Turn Lane on Pigeon Lake Road for Old Surrey Lane and Speed Sign Placement Review
Description: Request for Turn Lane and Speed Limit Review
Author and Title: Joseph Kelly, Senior Engineering Technician

Recommendation(s):

Report ENG2023-030 **Request for Right Turn Lane on Pigeon Lake Road for Old Surrey Lane and Speed Sign Placement Review** be received; and

That this recommendation be brought forward to Council for consideration at the next Regular Council Meeting.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

At the Council meeting of May 23, 2023, Council adopted the following resolutions:

CR2023-282

That the petition received from Don Bessey, **regarding a Right Turn Lane at the South Entrance of Victoria Place Off of Kawartha Lakes Road 17, Former Township of Verulam**, be received and referred to Staff for review and report back by the end of Q3, 2023; and

That the review includes a review of the North entrance to Victoria place Off of Kawartha Lakes Road 17, Former Township of Verulam.

CR2023-283

That the petition received from Don Bessey, **regarding the Placement of Speed Limit Signs on Kawartha Lakes Road 17 Near Victoria Place, Former Township of Verulam**, be received and referred to Staff for review and report back by the end of Q3, 2023.

This report addresses those directions. Petition submission pages are in Appendix A and B (A complete copy of the petitions with 102 signatures and 86 signatures respectively are available at the Office of the City Clerk).

Rationale:

The Transportation Association of Canada (TAC) "Geometric Design Guide for Canadian Roads" provides design standards for Tapers and Auxiliary Lanes. The flaring of one or more legs of an at-grade intersection using tapers and auxiliary lanes reduces the severity of conflicts between through and turning traffic by separating slower, right-, and left- turning vehicles from faster, through vehicles (TAC, 2017).

In general terms, a taper design (Figure 1) provides the driver with a natural transition off the through lane while an auxiliary lane (Figure 2) can be used in conjunction with a taper to serve as a storage lane, a deceleration lane, or a combination of the two for left- or right- turning vehicles. The use of auxiliary lanes provides the most separation between conflicting movements while the use of a taper alone can still facilitate the right-turn movement and reduce interference with through traffic.

Figure 1: Typical Right-Turn Taper Lane Design at T-Intersections (TAC, 2017)

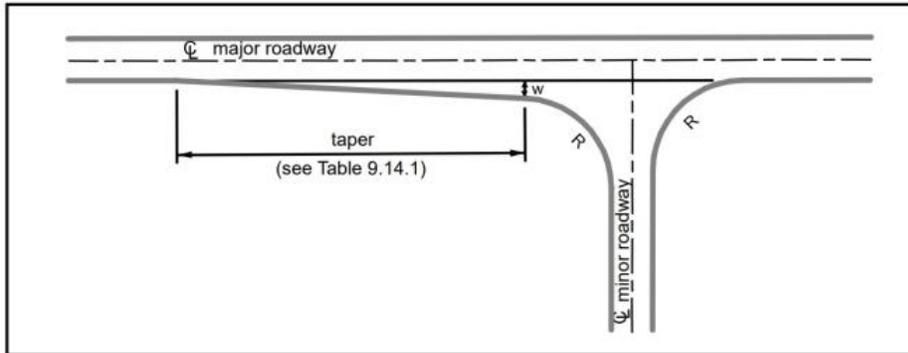
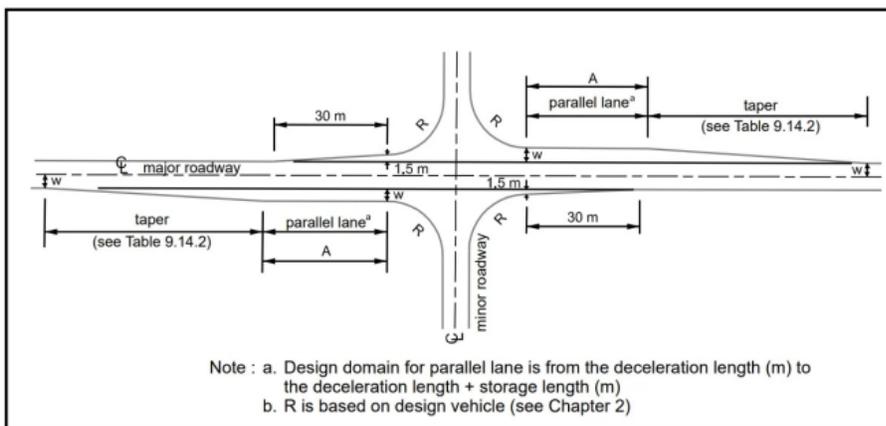


Figure 2: Right-Turn with Parallel Deceleration Lane (TAC, 2017)



Auxiliary lanes are recommended when the volume of decelerating vehicles compared with the through traffic volume causes undue hazard. Generally considered when the volume approaches the full channelization/ramp criteria of 60 right turning vehicles per hour.

A turning movement count was performed on August 25, 2023. Right-turning vehicles for peak hours were observed to be under 20 vehicles per hour. Auxiliary lanes are not warranted, however the creation of tapers to facilitate right turn vehicles should be considered when it is time for resurfacing. A very similar situation addressed through the planned resurfacing was a taper constructed on Pigeon Lake Road for vehicles turning right onto King’s Wharf Road.

This section of Pigeon Lake Road is not currently in the 5-year resurfacing plan, however it should be noted that this section would be a logical next phase for resurfacing plans on Pigeon Lake Road when conditions are met.

Speed Sign Review

The petition asks to have the 60 km/hr speed zone moved further south to cover the south entrance of Victoria Place at Old Surrey Lane. This speed zone as shown in Appendix B was created in 2021 in order to include two large curves in the 60 km/hr speed zone commencing just north of there (which in turn was created in 2018). This was justified by the collision frequency on the curves with the extent of the speed zone reflecting that.

The traffic volume and collision frequency at this intersection do not justify extending the speed zone (Zero collisions relating to the turn movement in all our available collision records). Sight distances exceed the minimum required for the existing speed limit.

It is inadvisable to provide a false sense of security for those entering Pigeon Lake Road based on a speed limit that will have a very low compliance rate due to the surrounding environment. It would promote higher risk turning movements which could make the intersection more dangerous.

North Entrance Review

In addition to the concerns listed in the petition, Council directed staff to review the north entrance to Victoria Place on Pigeon Lake Road at the north end of Old Surrey Lane. It should be noted that the previous speed reduction to 60 km/hr here was not justified by the turning movements off of Old Surrey Lane, but the non-turning related collisions on the curve. So far there has not been a single reported collision since the speed limit has changed.

Widening the paved portion of the shoulder could provide drivers with a better opportunity to safely pass vehicles turning left into Victoria Place, however the absence of collisions caused by this turning movement would suggest that this can occur at the time of resurfacing.

As a result of the justification review carried out by staff, it is determined that a taper can be constructed on Pigeon Lake Road for vehicles turning into the south entrance of Victoria Place at Old Surrey Lane when next resurfaced.

Other Alternatives Considered:

N/A

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:

N/A

Consultations:

N/A

Attachments:

Appendix A – Petition 1

Adobe Acrobat
Document

Appendix B – Petition 2

Adobe Acrobat
Document

Appendix C – Key Map

Adobe Acrobat
Document**Department Head email:** jrojas@city.kawarthalakes.on.ca**Department Head:** Juan Rojas, Director of Engineering & Corporate Assets**Department File:** Engineering