

To: Warden and Members of County Council

From: Director of Public Works

All-way Stop and Speed Reduction - Oxford Road 33 and Oxford Road 59 Intersection

RECOMMENDATIONS

- 1. That County Council endorse the implementation of an all-way stop condition and speed reduction from 80km/hr to 60km/hr at the intersection of Oxford Road 59 and Oxford Road 33 in the Township of East Zorra-Tavistock, as outlined in Report No. PW 2023-06;**
- 2. And further, that a by-law be presented to County Council at the February 22, 2023 Council meeting to amend By-law No. 3741-98 to designate an all-way stop condition at the intersection of Oxford Road 59 and Oxford Road 33;**
- 3. And further, that a by-law be presented to County Council at the February 22, 2023 Council meeting to amend By-law No. 6019-2018 to designate 60km/hr zones on all four approaches to the intersection of Oxford Road 59 and Oxford Road 33.**

REPORT HIGHLIGHTS

- The purpose of this report is to seek County Council endorsement to amend By-law No. 3741-98 and By-law No. 6019-2018, being a by-law to designate through highways and speed limits on County roads, respectively, in order to implement an all-way stop condition and reduce speeds at the intersection of Oxford Road 59 (OR 59) and Oxford Road 33 (OR 33), in the Township of East Zorra-Tavistock.
- An intersection study at OR 59 and OR 33 has determined that warrants have been met for an all-way stop (AWS) and further recommends a speed reduction from 80km/hr to 60km/hr within 500m from the intersection on all four approaches. These measures are intended to improve intersection safety.
- Additional improvements will also be installed that include an overhead flashing light on a span wire, oversized stop signs with mounted red flashing beacons, rumble strips, and electronic speed feedback signs (SFS) on all four approaches.

Implementation Points

Intersection improvements will be implemented in Q2 2023. Installation of sign posts and an overhead flashing light will be completed in advance of activating new intersection control measures. Signage installation, pavement markings and activation of an overhead flashing light will be coordinated on the day of implementation with temporary traffic control measures in place.

On January 11, 2023, red flashing beacons were installed on the existing oversized stop signs for the east and west intersection approaches on OR 33.

Financial Impact







Implementation of the intersection improvements is estimated to cost \$75,000, with approved funding available in the 2023 Business Plan and Budget.

Communications

Report No. PW 2023-06 will be circulated to the Township of East Zorra-Tavistock, the Ontario Provincial Police and local residents for their information. The change in intersection control will also be communicated through signage that will be erected onsite in advance of implementation with advisory messaging to drivers of upcoming changes.

As a major intersection change, updates will be provided through social media, the Oxford County website, and an advisory to local media. Social media content will also be shared with Area Municipalities for their use. A general update was provided on the County website in January regarding the new flashing lights at the intersection.

Strategic Plan (2020-2022)

					
WORKS WELL TOGETHER	WELL CONNECTED	SHAPES THE FUTURE	INFORMS & ENGAGES	PERFORMS & DE5.II LIVERS	POSITIVE IMPACT
		3.iii.		5.ii	

DISCUSSION

Background

The current configuration of the OR 33 and OR 59 intersection includes stop control for east and west approaches on OR 33 with free flow conditions on OR 59. The posted speed on all four intersection approaches is 80km/hr.

An Intersection Control Feasibility (ICF) review was undertaken at this intersection in 2021. This review was originally identified as a road network strategy implementation project as part of the 2019 Oxford County Transportation Master Plan (TMP). This intersection was evaluated and assessed for enhanced intersection control and roundabout feasibility; however, the Ontario Traffic Manual (OTM) warrants (traffic volume or annual average collisions) were not met for an all-way stop or signalization/roundabout.

The County then also carried out an all-way stop warrant analysis in December 2022 based on collision occurrences, which met the OTM collision warrants for an all-way stop (AWS) at the intersection of Oxford Roads 59 and 33.

Traffic control enhancements at the intersection of OR 59 and OR 33 are as follows and are based on the findings and recommendations of the 2021 ICF Study, and subsequent all-way stop (AWS) warrant analysis completed in December 2022:

- Overhead flashing red light on a span wire, with electrical service connection;
- Implementation of an AWS with oversized stop signs;
- 60km/hr speed reduction with electronic SFS on all four approaches;
- Stop signs with mounted red amber solar flashing beacons at all four corners; and
- Transverse rumble strips at all four approaches.

Comments

County Council endorsement for AWS implementation and change in posted speed at the intersection of OR 59 and OR 33, as shown in Attachment 1, is required for staff to bring forward the necessary By-law amendments.

Implementation of an AWS by introducing stop control for north and south approaches on OR 59 is intended to mitigate problematic angle and turning movement collision occurrences. Operational analysis that was completed as part of the 2021 ICF study forecasted that the intersection would continue to operate under acceptable conditions within a 20-year horizon. During weekday peak hours, delays are not expected to exceed 15 – 25 seconds per vehicle without any queuing concerns and with adequate reserve capacity. Traffic patterns and movements will continue to be monitored over time to ensure the effectiveness of the proposed intersection enhancements and/or identify any other alternative recommended improvements (i.e. roundabout).

Implementation of an AWS is further supported by the Township of East Zorra–Tavistock (EZT) based on correspondence received by County Council on November 23, 2022 and January 11, 2023, from Township of EZT Police Services Board and Township of EZT Council, respectively.

The proposed speed reduction from 80km/hr to 60km/hr within 500m from the intersection at all four approaches is recommended based on the study data that showed excessive operating speeds on OR 59. High vehicle operating speeds are promoted by the down gradient on the south approach and the speed reduction, combined with electronic SFSs, is intended to reduce approach speeds and further mitigate collision occurrences. Lower operating speeds will also reduce required sightline distances from the intersection and private entrances and reduce noise levels generated from transverse rumble strips.

Conclusions

The intersection of OR 59 and OR 33 will continue to operate within acceptable levels of service with the implementation of an AWS. Speed reduction at intersection approaches combined with other visual enhancements are expected to improve overall traffic control at this location.

SIGNATURES

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Departmental Approval:

David Simpson, P.Eng., PMP
Director of Public Works

Approved for submission:

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ATTACHMENT

Attachment No. 1: Proposed Speed Reduction Map – OR 59/33