

Report

Report No. OCS 2022-10	To: Council	Prepared By: Shawn Binns
Meeting Date: March 23, 2022	Subject: Line 15 North Traffic Calming	Motion # _____
Roll #:		R.M.S. File #:

Recommendation(s):	Requires Action <input checked="" type="checkbox"/>	For Information Only <input type="checkbox"/>
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It is recommended that:

1. Report No. OCS 2022-10 be received;
2. That Council consider Option 2a – Directional closure of Line 15N from Hwy 12 to Bass Lake Sideroad subject to additional community consultation;
3. That staff report back to Council for further direction/decision following the consultation program.

Background:

As identified in the *2019 Oro-Medonte Road Network Plan – Road Systems & Operations Report*, travel speeds and traffic volumes along Line 15 North between Bass Lake Sideroad to Highway 12 are becoming an increasing concern. This section of road is intended to serve a local function, providing direct access to several homes and side streets as well as the Bass Lake beach area. The beach area experiences relatively high recreational demand during the summer months which generates pedestrian traffic and on-street parking pressures through the immediate area further compounding traffic safety concerns. Despite the intended function of the road, daily traffic volumes are more reflective of a high use collector road (2019 daily volumes were in the order of 4300 vehicles per day). The traffic volumes are expected to increase with the continued development of the West Orillia area as a number of direct access points to Line 15 North will be provided between Bass Lake Sideroad and Old Barrie Road. Furthermore, as volumes on Highway 12 increase, motorists divert to Line 15 North to avoid Highway congestion.

Given the intended local function of Line 15 North between Bass Lake Sideroad and Highway 12, a traffic calming pilot project was introduced to address the travel speed and traffic volume concerns, with the ultimate goal of returning Line 15 North to its intended use as a local road. The pilot program, consisting of temporary speed cushions, narrowed travel lanes (through pavement markings) and supplemental pavement markings (dragon

teeth) through the beach area along with the use of dynamic radar signs and targeted traffic enforcement did not deliver the results that had been hoped for (namely reduced traffic volumes and travel speeds). In light of this, more restrictive measures have been reviewed in order to properly address the existing concerns with the objective of reducing traffic volumes and traffic safety risks.

Analysis:

Tatham Engineering was engaged in late 2021 to conduct a review of options and considerations to reduce traffic volumes, travel speeds and improve traffic safety on Line 15N.

The review identified and outlined considerations for three potential options with varying orientations. A summary is provided below:

Option 1- Full Closure

A full closure involves wholly preventing vehicles from continuing along a road in both directions through implementation of a physical barrier. Full closures can be implemented at intersections or mid-block (provided a convenient location can be identified). The intent of a full closure is to eliminate through traffic entirely, returning a road to a local function. The primary advantage of a full closure is that it is 100% effective in reducing traffic volumes through complete elimination of through traffic. The disadvantages include restricted access to local residents along Line 15 North, impacts to emergency vehicle response times (unless the closures are designed so as to allow emergency vehicle access – i.e. gates, collapsible bollards, etc.), and disruption of snow clearing, bussing and garbage routes.

A full closure would also require land acquisition to facilitate appropriate turn arounds and would require cooperation for land from Ontario Parks (Bass Lake Provincial Park) for full closure at Bass Lake Side Road, the North, or South Park Gate, or private property north of Rutledge Road approximately 50m south of Highway 12. Approval from the Ministry of Transportation would also be required for closure at Highway 12.

Option 2 – Directional Closure

A directional closure involves limiting traffic flow to a single direction (i.e. one-way travel) through the implementation of a barrier extended to the centreline of the road at the road segment limits.

Applied to Line 15 North, directional closures could be implemented at either the intersection of Line 15 North at Bass Lake Sideroad (**Option 2a**) or at Highway 12 (**Option 2b**) (although MTO approval would be required for any changes to the intersection with Highway 12). By implementing access restrictions at one of the noted intersections, access to the road is prohibited at that location, effectively prohibiting through traffic in one direction for the entire length of road. While a directional closure could be

implemented mid-block (i.e. in the vicinity of the beach), the circumvention of such would be more likely as motorists would resist backtracking along Line 15 North.

The advantages of directional closure include the reduction of through traffic in one direction by 100% and reduced travel speeds (Transportation Association of Canada - TAC) research indicates reduction in 85th percentile speed by up to 11 km/h). Emergency vehicles are able to circumvent the one-way restriction as necessary during emergency operations. As the emphasis is to restrict access to the road from one location rather than egress, residents along Line 15 North are still able to access Highway 12 and Bass Lake Sideroad, which offers better service than a full closure.

The disadvantages are that directional closures only reduce traffic in one direction (i.e. one direction would continue to experience high volumes), restricts access for local residents to one location and can impact waste collection, snow removal and bus routes. In addition, motorists may deliberately disobey the one-way restriction, particularly during off peak hours.

Option 2a. Directional Closure at Bass Lake Sideroad

Option 2a would be to close northbound access to Line 15 North at Bass Lake Sideroad. The closure point would be located at the intersection of Line 15 North with Bass Lake Sideroad, with the northbound receiving lanes on the north leg of the intersection closed through the placement of a barrier configured so as to create a channel or throat to further discourage circumvention of the closure. In addition to the barrier, no-entry/wrong-way signage would be required to alert motorists to the directional closure.

Option 2b. Directional Closure at Highway 12

Under Option 2b, southbound access to Line 15 North would be closed at Highway 12 (approximately 50 metres south of Highway 12 so as not to restrict access to the existing commercial property on the southeast corner of the Highway 12/Line 15 North intersection). The directional closure would be enforced through the placement of a barrier in the southbound lane. In addition to the barrier, no-entry/wrong-way signage would be required to alert southbound drivers to the closure.

This closure would require MTO approval which may be difficult to attain as there would be concern of impacts to the highway system (particularly during the early stages of implementation).

Under both Option 2 orientations additional warning signage would be required along Bass Lake Sideroad to indicate turning movement prohibitions.

Option 3 – Traffic Calming Measures

As previously highlighted recently implemented traffic calming measures including speed cushions, line painting and targeted traffic enforcement have not yielded considerable benefit. Additional traffic calming considerations were reviewed but do present a number of limitations such as seasonality (removed for snow removal), damage to devices and

roadways, limited effectiveness to location of installation and high cost considerations (lifecycle and operating). Moreover, the measures would likely have limited impact on traffic volumes. The main benefit is they would continue to permit two-way traffic while potentially providing minor improvements to traffic volumes and speed (during installed period).

Additional traffic calming measures such as the use of chicanes could be applied with a directional closure and would assist with speed reduction and improve safety and access for pedestrians and public use of the existing beach area.

Recommended option and direction

Option 2a, a directional closure at Bass Lake Sideroad, is recommended as it can be implemented at the intersection (rather than mid-block, as is required in Option 2b), would not have potential implications to Highway 12 traffic and would not require MTO approval. Directional closure at Bass Lake Sideroad, if properly obeyed by motorists, would result in improved operations at the intersection of Highway 12 with Line 15 North. While southbound volumes would not be reduced on Line 15 North, northbound through traffic would theoretically be reduced to zero. The implementation of this option would also reflect a continued staged approach to traffic calming in the area by introducing an added level of traffic flow restriction to be assessed prior to consideration of a full closure.

It is further recommended that additional traffic calming through the use of temporary chicanes be implemented at the north and south limits Line 15 North Bass Lake beach area to enhance safety and recreational access.

Stakeholder considerations

As previously referenced considering a directional closure will limit residents on this segment to one point of access which may be seen as an inconvenience to some. In addition, residents around the area and motorists who currently use this segment as a by-pass to Hwy 12 may also be inconvenienced with alternate travel routes. While this is understood, there are no other feasible options to address the traffic volume and safety issues which continue to be compounded with the growth of West Orillia.

Staff have reviewed options and the recommended direction with the Township's Traffic Safety Task Force and the Line 15 North Bass Lake Ratepayers Association group who were generally supportive of the proposed direction. However, prior to rendering a decision it is recommended that further consultation occur with residents along this segment of Line 15N, as well as emergency and public service providers (Waste collection, School Bussing). In addition, information on the proposed direction and an opportunity for the general public to provide comment will be made available through the Township's communication channels.

Following the consultation program an updated report and final recommended direction for 2022 implementation will be provided for Council's consideration.

Financial / Legal Implications / Risk Management:

The proposed recommended direction will provide tangible improvements for traffic safety.

A project budget of \$30,000 has been identified for Line 15 North Traffic Calming in the revised 2022 Roads Capital Program endorsed by Council on January 12, 2022.

The recommended direction allows for a continued phased approach which will be monitored to review effectiveness and for potential implications on other roadways with adjustments considered accordingly.

Policies/Legislation:

Ontario Highway Traffic Act

Corporate Strategic Goals:

Prepare for Our Future
Foster Safe and Inclusive Community Living & Business Growth
Modernize Township Services

Consultations

Tatham Engineering
Traffic Safety Task Force
Manager, Operations
Manager, Infrastructure and Capital Projects

Attachments:

Appendix 1 – Site Location - Line 15 North Hwy 12 to Bass Lake Side Road
Appendix 2 – Option 2 - Directional Closures
Appendix 3 – Example of chicanes

Conclusion:

Recognizing that the traffic calming pilot project on Line 15 North has not delivered the desired results (i.e. reduced traffic volumes and travel speeds), more restrictive measures have been reviewed to address ongoing traffic concerns in the area. The review completed by Tatham Engineering has identified potential options with respect to full closure, directional closure of Line 15 North and additional traffic calming.

It is recommended that consideration be given to implementation of a directional closure of Line 15 North at Bass Lake Road as well as additional traffic calming along the Bass Lake Beach Area subject to consultation with emergency and public service providers and additional community consultation and a final recommended decision by Council.

Respectfully submitted:

Shawn Binns, PBDM, MBA
Director, Operations and Community Services

Approvals:

Date:

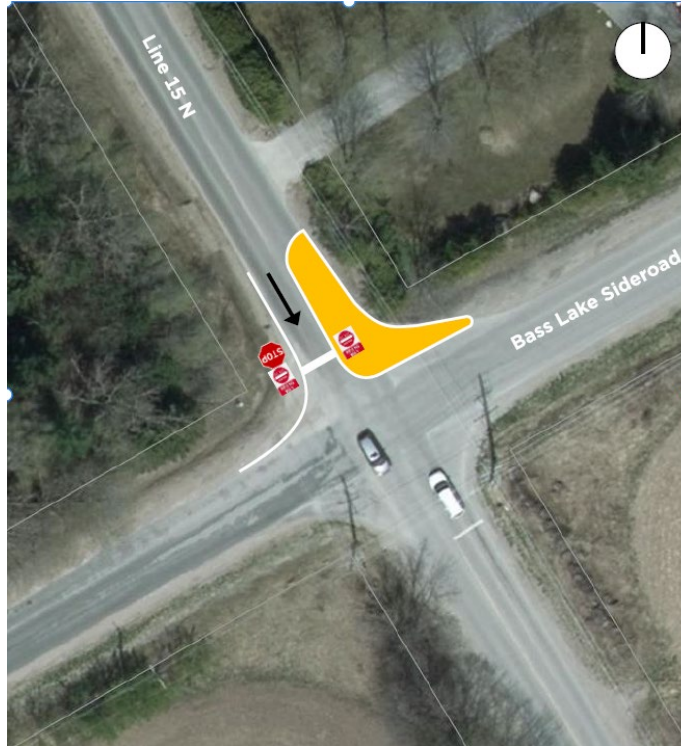
Andria Leigh, Deputy CAO, Director,
Development Services

Appendix #1 – Site location Line 15 North – Hwy 12 to Bass Lake Side Road

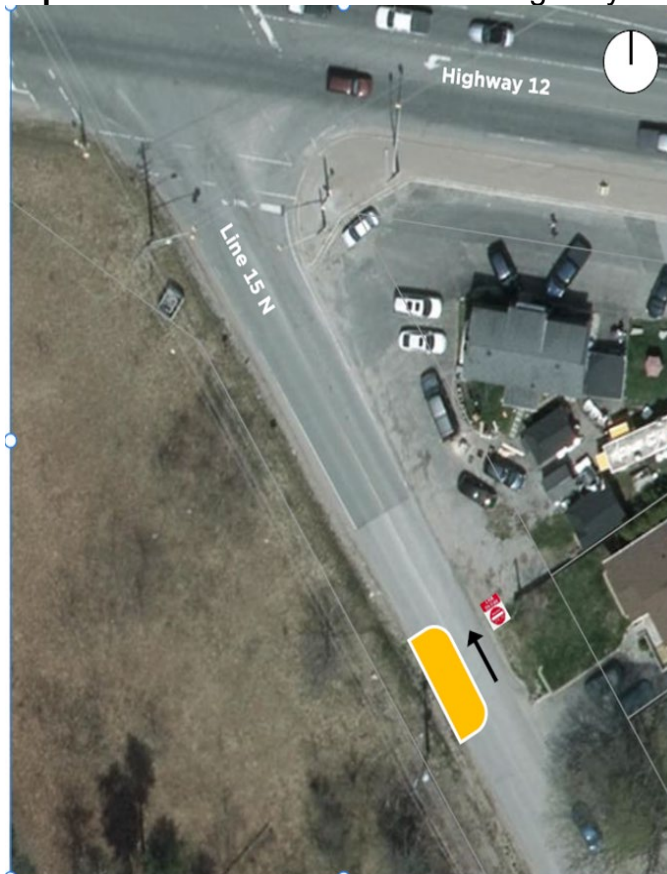


Appendix #2 – Directional Closure Options

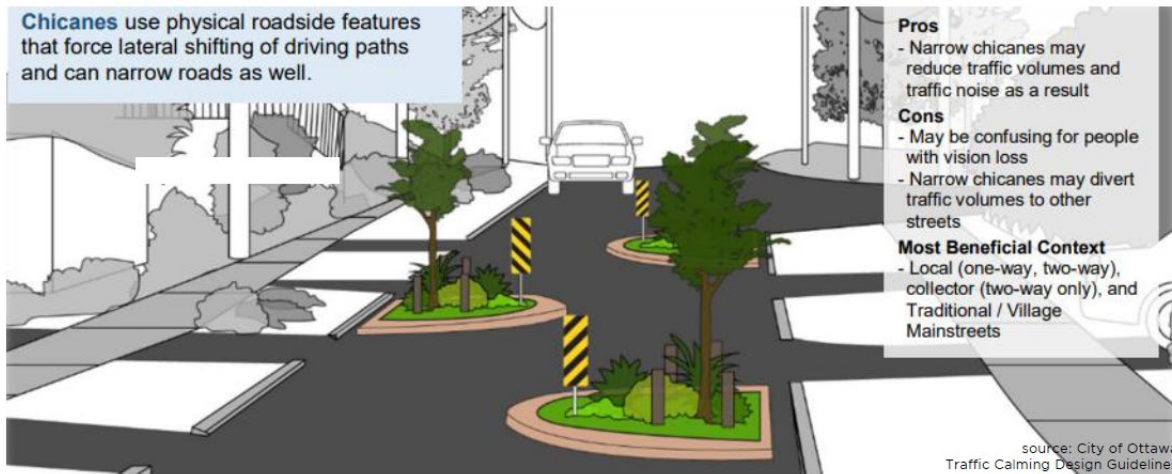
Option 2a. Directional Closure on Line 15 North at Bass Lake Sideroad



Option 2b. Directional Closure at Highway 12



Appendix 3 – Example of chicanes



Temporary chicane installation