



Staff Report

Operations – Roads & Drainage

Report To: COW - Operations, Planning and Building Services
Meeting Date: March 18, 2025
Report Number: OPS.25.013
Title: Gibraltar Stop Signs
Prepared by: Jim McCannell, Manager of Roads & Drainage

A. Recommendations

THAT Council receive Staff Report OPS.25.013, entitled “Gibraltar Stop Signs”;

AND THAT Council directs staff to install painted stop bars on the 4th line;

AND THAT Council directs staff to investigate video monitoring of the intersection to assist OPP with enforcement.

B. Overview

A resident in the Gibraltar community is requesting Staff to review the safety control devices (stop signs) with the school bus company to determine if improvements are required. The concern stems from reports of drivers not stopping for the stop signs at the intersection along the 4th Line at the 6th Sideroad.

C. Background

Staff received correspondence from a resident in Gibraltar related to traffic safety during the winter of 2023. On May 9, 2023, the former Director of Operations and the Manager of Roads and Drainage met with the resident to review their concerns. Following the May 9th meeting staff have:

1. Installed oversized stop signs
2. Installed “stop ahead” signs
3. Removed brush the along the roadside near the 4th line stop signs.
4. Installed a temporary traffic counter to record traffic volumes, vehicle size and speed during the fall of 2023. See attachment #2
5. Requested additional OPP presence in the area.
6. Staff reviewed the condition of the 50km/hr signs and found they were in good condition.

In response to additional correspondence received on Sept 17, 2024, Council provided the following resolution to Staff on October 21, 2024.

THAT Council of the Town of The Blue Mountains receives for information the correspondence of Lynsi McCutcheon, Resident Re: Request for Bus Stop Signage on the 4th Sideroad and 6th Concession;

AND THAT Council of the Town of The Blue Mountains directs staff to provide a staff report in response to the September 17, 2024 correspondence of Lynsi McCutcheon and to work with pertinent municipal staff, the school bus company and the Blue Water District School Board transportation department to help address the safety concerns raised

D. Analysis

In response to the Oct 21 resolution staff did connect with First Student Inc of Owen sound and spoke with the Senior Manager. Student First Inc provides transportation services to the Blue Water District School Board in the Town. The Senior Manager did follow up with the drivers of the school bus in Gibraltar. Both drivers reported they have no concerns with the location or the sizes of the stop signs in Gibraltar. They did not report that any improvements were necessary at this time.

In addition, Staff commissioned a traffic engineer to review the intersection and the traffic control devices at the intersection. See attachment #1. It was identified that the traffic volumes in Gibraltar did not meet the warrants for a 4-way stop at this intersection however the geography of the 4th Line did support the installation of the 4-way stop.

The engineer's report recommended the installation of painted stop bars to assist in identifying the stop location along the 4th line. The painted stop bars will establish where the drivers are expected to stop to view the intersection before proceeding. The cost of painting the stop bars can be absorbed by the proposed 2025 Operating budget for line painting.

The report also suggest the Town investigate installing a video monitoring system. This would help capture evidence of driver's actions near the stop signs. Information collected would provide validation of the driver's behavior. The use of the video monitoring will record driver's actions without the influence of the OPP being on site. Staff will need to determine where there is power, a suitable mounting location and cellular service. The anticipated cost to purchase a video system and have it installed is \$3,000 to \$4,000. These costs and the monthly cellular cost could be funded from the Roads and Drainage budget.

The location of the of the stop sign on the east side of the 6th Sideroad has been relocated back further from the intersection, as identified in the engineer's report. This is to accommodate the larger turning radius need by the gravel trucks. The stop sign has been damaged many times resulting in call out by staff after hours to replace the sign. The current location provides notice to drivers while allowing enough room for trucks to turn onto the 4th line. Staff is recommending to not relocate this sign.

Recommendation:

In efforts of addressing the findings in the Engineering Report, staff recommend the following:

- The installation of painted stop bars to assist in identifying the stop location along the 4th line.
- The installation of a video monitoring system to monitor and capture driver behaviour at the intersection.

E. Strategic Priorities

1. Communication and Engagement

We will enhance communications and engagement between Town Staff, Town residents and stakeholders

3. Community

We will protect and enhance the community feel and the character of the Town, while ensuring the responsible use of resources and restoration of nature.

4. Quality of Life

We will foster a high quality of life for full-time and part-time residents of all ages and stages, while welcoming visitors.

F. Environmental Impacts

The will to use oil-based paint to ensure adhesion to the surface treated road. (Tar and chip)

G. Financial Impacts

The cost of the line painting is anticipated to be \$100 to \$200.

The video monitoring is anticipated to be \$3,000 to \$4,000 for purchase and installation with a monthly cellular cost of \$30 or \$360 annually.

H. In Consultation With

None.

I. Public Engagement

The topic of this Staff Report has not been the subject of a Public Meeting and/or a Public Information Centre as neither a Public Meeting nor a Public Information Centre are required. However, any comments regarding this report should be submitted to Jim McCannell, Manager of Roads & Drainage managerroadsdrainage@thebluemountains.ca.

J. Attached

1. Attachment 1; Intersection Signage at Gibraltar – Engineering Opinion Letter
2. Attachment 2; Traffic Data Analysis from October 2023 to November 2023.

Respectfully submitted,

Jim McCannell
Manager of Roads & Drainage

Alan Pacheco
Director of Operations

For more information, please contact:
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Report Approval Details

Document Title:	OPS.25.013 Gibraltar Stop Signs.docx
Attachments:	- Attachment 1 Intersection Signage at Gibraltar Engineering Opinion Letter.pdf - Attachment 2 Traffic Data Analysis from October 2023 to November 2023.pdf
Final Approval Date:	Feb 28, 2025

This report and all of its attachments were approved and signed as outlined below:

Jim McCannell - Feb 20, 2025 - 4:44 PM

Alan Pacheco - Feb 28, 2025 - 10:43 AM



17 January 2025

By e-mail: jmccannell@thebluemoorntains.ca

Mr. Jim McCannell
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Town of Blue Mountains
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Intersection Signage at Gibraltar - Engineering Opinion Letter

Mr. McCannell,

As requested, please see the following traffic engineering opinion letter for the intersection of 4th Line and Side Road 6, Gibraltar, within the Town of Blue Mountains.

Introduction

The Town of Blue Mountain has previously received complaints from residents at the 4th Line and Side Road 6 intersection regarding drivers not complying to the stop signs, particularly in the north-south direction. The residents claimed vehicles, in particular school buses, are not stopping at the intersection and they suspected either general non-compliance or potential visibility issues to the stop signs.

Following the complaints, the Town of Blue Mountains have already implemented mitigation measures including:

- Lowering the speed limit to 50km/h along 4th Line.
- Installing additional stop ahead signs and oversized stop signs raising them to upper range in height (bottom of the sign is 2.0m).
- Vegetation clearing to avoid interference with the drivers' sight lines.
- Ontario Provincial Police (OPP) were requested to attend the area for enforcement.

Through the above and other investigations by the Town, it was also found that:

- OPP that attended the site found no evidence of non-compliance of the stop signs.
- The Town contacted the bus company (First Student Inc.) regarding sightlines to which they reported no concerns with visibility or issues with the signs themselves.

The Town requested CIMA+ to provide this opinion letter...

Stop-Control Warrant Consideration



Given the low-volume, rural context of this intersection, the intersection was reviewed in regard to the stop-control condition. With such low volumes, a question arises if the all-way stop condition is required. According to the Ontario Traffic Manual (OTM) Book 5, all way stop control measures should be considered using criteria of traffic volume, collision history and visibility.

Traffic volume

According to the traffic counter installed in the area, an annual average daily traffic (AADT) count was recorded between 170 to 180 on the 4th Line north and south approach. The AADT for Side Road 6 was not recorded however, existing traffic history has shown for traffic counts to be low along the east and west approach. As per OTM Book 5, the following conditions must be met for an all stop controls conditions from a traffic volume perspective:

- The total traffic volume on all approaches along the intersection need to exceed 375 vehicles per hour during the 8-hour peak time of the day.
- The combined vehicle and pedestrian volume on the minor street need to exceed 150 combined units per day for each of the same 8-hour peak time of the day for each of the same 8 hours as the total volume of traffic.
- The combined vehicle and pedestrian volume on the minor street need to exceed 120 combined units per day for each of the same 8-hour peak time of the day for each of the same 8 hours as the total volume of traffic with an average delay to all the minor street traffic greater than 30 seconds for the entire 8-hour peak time of the day.
- The volume split does not exceed 70/30 which is defined as the minor street traffic being less than 30 percent of the total traffic approaching the intersection measured over the entire 8-hour peak time of the day. The volume of the major street will consist of vehicles only and the volume of the minor street will consist of both vehicles and pedestrians.

As per the conditions stated above and the traffic data provided, the intersection does not meet the criteria for an all-way stop control from a traffic volume perspective. With the AADT providing a count of 170 to 180 units per year along 4th Line and a lower traffic count volume alongside Side Road 6, the data does not exceed the limit of 375 vehicles per hour of the peak 8-hour time period, nor does Side Road 6 (minor street) exceed the combined 120 to 150 units per hour for the same time period as the total traffic volume. The volume split should not exceed the 70/30 split as mentioned in the data which is important as this dictates the conditions to accommodate the shifts in traffic volume and peak directions.

Collision history

The Town reviewed crash data and collision history, and the most recent incident occurred in 2016 with no collisions occurring up to the date of 2024. As per OTM Book 5, the following conditions must be met for an all stop control conditions from a collision perspective:



- The intersection itself has a previous history of high collisions frequencies with right angle or turning movements.
- The frequency data if available should be used a threshold or condition to the following if over three collisions have occurred per year in a three-year period (nine collisions in 36 months) for local/collector/rural arterials.

Visibility

Visibility is key at intersections and industry standards¹, provides guidance of providing stopping sight distance at intersections. If visibility is obstructed due to environmental constraints, and all other options are not practical, then an all-way stop controlled intersection will need to be considered. As per TAC Manual Chapter 9, the specified areas along the intersection approach legs and the corners should be free of obstructions that can potentially block the drivers view of conflicting vehicles. The geometry between both points at the minor and major road approaches create a sight triangle as shown in Figure 1. As indicated in Figure 1, trees and bushes are in the southeast corner which obstructs sight lines. As mentioned in the town's mitigation measures, bushes have been removed to avoid interference with sight lines, however the bushes and trees closer to the intersection fall under private property and the Town will need to further review bylaws etc. to see if they can be removed.

Also, 4th Line experiences a rolling profile either side of the intersection, particularly for those heading north to the intersection. Therefore, it can be determined from a visibility perspective that all-way stop control is currently warranted at this intersection.

Existing Intersection and Evidence of Noncompliance

At the intersection, the Town has installed additional stop ahead signs and oversized stop signs raising them to upper range in height (bottom of the sign is 2.0m). Due to the layout of the intersection, the stop sign along the east side of Side Road 6 is shifted to around 18 m from the intersection, assumed to accommodate the turning movements of larger vehicles, and this could be investigated to be closer as it's beyond the recommended range of 15 m as per OTM Book 5. However, no issues have been observed with the signage used. From available imagery (dated Aug 2023) there are no pavement markings on 4th Line or at the intersection (i.e. stop bars).

¹ Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads - 2017



Figure 1: 4th Line and Side Road 6 Departure Sight Triangle

OPP have attended the area for enforcement and according to their reports from their onsite activity had mentioned no vehicles running the intersection, however, have observed rolling stops from the residents at the intersection. In addition, the Town of Blue Mountains have reached out to the First Student Inc. regarding sight lines to which they reported no concerns with the visibility of the stop signs or issues with the signs themselves.

Traffic Engineering Opinion

Through above review of the 4th Line and Side Road 6 intersection, several key findings are evident.

- While not warranted from traffic volume or collisions, the all-way stop control is currently still recommended from the visibility perspective.
- The intersection is currently signed with elevated stop signs and stop ahead signs, however there is no pavement marking at the intersection (i.e. stop bars).
- While the Town has received complaints of non-compliance at the stop signs, with resident-assumed issues with sign visibility, there is no evidence or corroboration of these issues from the OPP or First Student Inc..



The complaints from the residents should not be ignored; however, from the above observations, our opinion is that the problem may stem from the residents' perception of the non-compliance. There are no observable issues with the stop signs and due to the lack of pavement markings (i.e. stop bars), and with the east stop sign located slightly further than typically located, it is speculated that drivers may only be stopping in the vicinity of the stop signs. For the east arm, where visibility is constrained, drivers maybe more generous with their consideration of this vicinity, as encroaching forward would better the sight lines. This could be perceived as non-compliance by the resident. What would also exacerbate this action, is that the volumes are very low and so drivers are likely to feel more comfortable in expanding what they deem as the 'vicinity' of the stop sign.

As there are no observable issues with the stop signs, it is considered that any further additional signs and/or even larger stop signs will not solve the immediate issue.

It is recommended the Town consider implementing pavement markings (the stop bars on each arm at a minimum) and re-evaluate the location of the eastern arm stop sign. Further, the Town could consider the use of video monitoring at the intersection, to validate the concerns and/or the effectiveness of the pavement marking, if implemented. The argument to OPP not observing any non-compliance, is that drivers will alter their behaviour at the sight of the OPP. Video monitoring could therefore provide further validation through a record of uninfluenced driver behaviour at the intersection.

This opinion letter has provided an overview of the issue along with opinions based on the available data and information. To quantify and/or further validate the findings will require additional detailed site investigation and review.

Sincerely,

Prepared by:

David Hiett, Senior Project Manager

Supported by:

Gian Cruz, Eng. Trainee

DAVID HIETT, M.Eng., P.Eng., RSP₁
Senior Project Manager / Traffic Engineering / Mobility



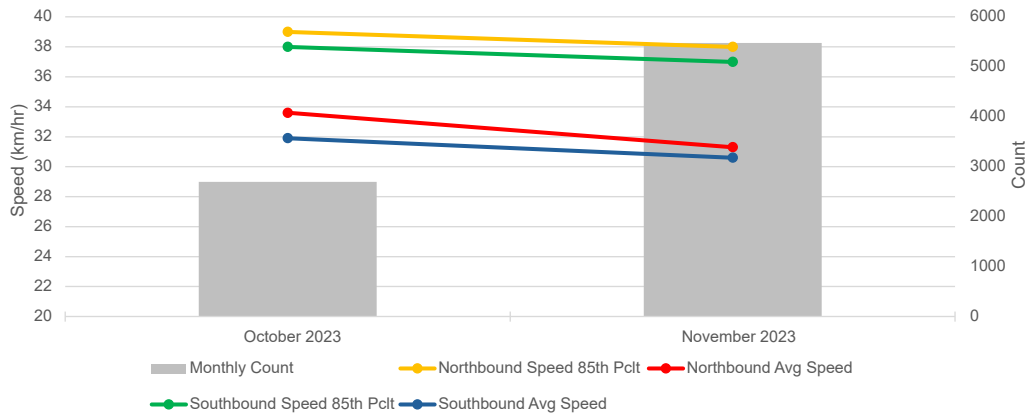


Traffic Count - Gibraltar Intersection

October 25, 2023 - November 24, 2023

		Gibraltar Intersection	
		Northbound	Southbound
Count	Avg Count per Day	171	185
	Small Vehicle	149	20
	Medium Vehicle	3550	4014
	Large Vehicle	227	213
	Total Count	3926	4247
Speed*	Avg Speed	31.2	30.3
	85th Percentile	40	39

Gibraltar- 85th Percentile and Average Speed and Total Count per Month



Gibraltar- 85th Percentile and Average Speed and Total Count per Day

