

DATE: January 19, 2022
TO: Dave Newman
CC: Steve Brubacher
FROM: Fujiou Lu, Niraj Sunuwar
FILE: 1300.0135.01
SUBJECT: Glassford Road Trial Closure Data Collection Comparative Review (Addended)

1.0 INTRODUCTION

Urban Systems was retained by the Town of Gibsons to collect and review traffic data pertaining to the temporary closure of Glassford Road south of Blain Lane to vehicle traffic. Mid-block tube counters were installed by Creative Transportation Solutions (CTS), as a sub-contractor to Urban Systems, at a few strategic locations around the closure location before and after the trial closure to understand the traffic impacts and travel pattern changes from the closure implementation. This memorandum summarizes the key findings from the comparative review of the pre- and post-closure data.

2.0 BACKGROUND

The Town of Gibsons initiated a trial closure of Glassford Road on August 20, 2021, by installing temporary barricades south of Blain Lane. The goal of the trial closure is to understand the implications of a proposed permanent closure to re-purpose Glassford Road as a local residential road and public space.

As part of the trial study, two rounds of data collection were conducted by CTS to collect 24-hour traffic volume data along key corridors near the closure location. Mid-block tube counters were installed at key corridors near the closure location in order to capture the travel pattern changes resulting from the closure.

The date ranges of the pre-closure and post-closure counts are as follows:

- Pre-closure: Saturday, July 31, 2021, to Friday, August 6, 2021
- Post-closure: Wednesday, August 25, 2021, to Wednesday, September 1, 2021

The counters were installed at the following five locations (see map on Figure 1):

1. Gower Point Road (north of Dogwood Road)
2. Dogwood Road (between Glassford Road & Gower Point Road)
3. Glassford Road (between Blain Lane & Blackberry Lane)
4. Blain Lane (between Glassford Road & Gower Point Road)
5. Franklin Road (east of Gower Point Road)

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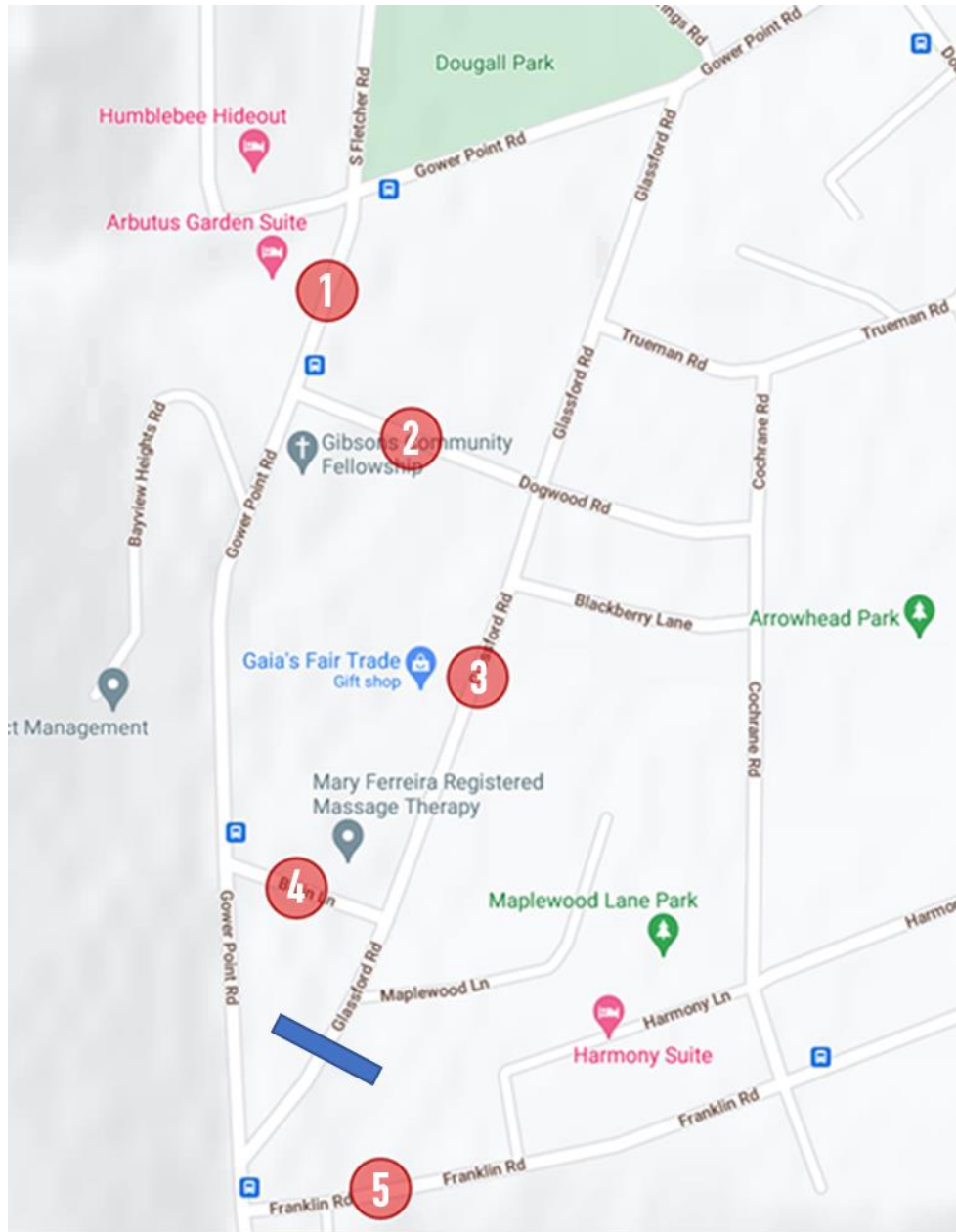


Figure 1: Trial Closure Location (Blue) and Tube Count Locations (Red)

3.0 REVIEW FINDINGS

The key findings from the comparative review of volume and speed data are summarized in this section.

3.1 VOLUMES

The daily directional volumes at each count location before and after the closure are summarized in Table 1.

Table 1: Daily Directional Volume Summary and Comparison

Location	Pre-Closure Daily Volume			Post-Closure Daily Volume			Change (% Change)		
	NB/EB*	SB/WB**	Total	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total
1. Gower Point Road (north of Dogwood Road)	659	773	1432	874	799	1673	+215 (+33%)	+26 (+3%)	+241 (+17%)
2. Dogwood Road (between Glassford Road & Gower Point Road)	51	42	93	81	102	183	+30 (+59%)	+60 (+143%)	+90 (+97%)
3. Glassford Road (between Blain Lane & Blackberry Lane)	309	275	584	103	96	199	-206 (-67%)	-179 (-65%)	-385 (-66%)
4. Blain Lane (between Glassford Road & Gower Point Road)	5	3	8	34	32	66	+29 (+580%)	+29 (+967%)	+58 (+725%)
5. Franklin Road (east of Gower Point Road)	239	343	582	223	301	524	-16 (-7%)	-42 (-12%)	-58 (-10%)

*NB/EB denotes northbound or eastbound direction (whichever is relevant for each location)

*SB/WB denotes southbound or westbound direction (whichever is relevant for each location)

Note: summary represents weekday data only (excluding holidays)

A summary of key observations is as follows:

- Daily volumes along Glassford Road dropped by approximately two-thirds following the trial closure, corresponding to a reduction of about 390 vehicles per day.
- Significant increase in northbound volumes (about 250 vehicles per day) is observed on Gower Point Road north of Dogwood Road, with a minor increase in southbound traffic (about 60 vehicles per day).
- Daily volumes along Dogwood Road have roughly doubled following the closure. Specifically, there is a notable increase in westbound traffic (about 60 vehicles per day) and moderate increase in eastbound traffic (about 30 vehicles per day). The increase in westbound traffic likely corresponds to southbound drivers originally on Glassford Road using Dogwood Road to divert onto Gower Point Road.
- Daily volumes along Blain Lane also increase notably in both directions (about 30 vehicles per day in each direction), indicating usage by drivers diverting to and from Gower Point Road. Note that traffic along this segment may potentially reduce as drivers become more familiar with the road closure and choose alternate routes earlier upstream.
- Franklin Road observed a minor decrease in daily traffic following the trial closure. While the reduction is minimal and may not be directly associated with the closure, this still indicates that Franklin Road and the local roads to the east are not well utilized as an alternate route to Glassford Road for through traffic.

Based on the findings, it is evident that majority of the regional traffic along Glassford Road has shifted onto Gower Point Road following the trial closure, especially for northbound traffic. Some southbound drivers along Glassford Road are observed to use Dogwood Road and Blain Lane to connect on to Gower Point Road. In contrast, a slight reduction to volumes on Franklin Road shows minimal usage of the local roads east of Glassford Road by regional traffic travelling through the area. It is worth to note that the post-closure data was collected one week following the closure implementation and represents the initial shifts in travel patterns as drivers adapt to the changes. As such, the travel patterns are expected to further stabilize as drivers become more familiar with their preferred routes.

3.2 SPEED

The mean vehicle speeds and 85th percentile vehicle speeds at each count location before and after the closure are summarized in Table 2.

Table 2: Mean and 85th Percentile Speeds Summary and Comparison

Location	Pre-Closure Mean Speed (85th Percentile Speed) [km/h]		Post-Closure Mean Speed (85th Percentile Speed) [km/h]		Change [km/h]	
	NB/EB*	SB/WB**	NB/EB	SB/WB	NB/EB	SB/WB
1. Gower Point Road (north of Dogwood Road)	32 (38)	35 (41)	33 (40)	35 (41)	+1 (+2)	0 (0)
2. Dogwood Road (between Glassford Road & Gower Point Road)	25 (30)	25 (32)	25 (30)	27 (34)	0 (0)	+2 (+2)
3. Glassford Road (between Blain Lane & Blackberry Lane)	41 (49)	43 (52)	35 (43)	38 (47)	-6 (-6)	-5 (-5)
4. Blain Lane (between Glassford Road & Gower Point Road)	20 (23)	20 (22)	21 (25)	21 (25)	+1 (+2)	+1 (+3)
5. Franklin Road (east of Gower Point Road)	32 (40)	34 (41)	33 (40)	34 (41)	+1 (0)	0 (0)

*NB/EB denotes northbound or eastbound direction (whichever is relevant for each location)

**SB/WB denotes southbound or westbound direction (whichever is relevant for each location)

Note: summary represents weekday data only (excluding holidays)

A summary of key observations is provided as follows:

- Glassford Road observed a reduction of 5 km/h to 6 km/h in mean and 85th percentile speeds after the closure. Note that Glassford Road also exhibited significantly higher travel speeds prior to the closure compared to all the other count locations.
- Dogwood Road experienced slight increase in westbound speed (+2 km/h), while eastbound speeds remain comparable to pre-closure conditions.
- Blain Lane also observed a slight increase in travel speeds, more notably for the 85th percentile speeds (+2 to +3 km/h).
- Gower Point Road showed slight increase in mean and 85th percentile speed in the northbound direction while southbound speeds remain comparable to pre-closure conditions.

4.0 ADDITIONAL DATA COLLECTION (POST BLAIN LANE CLOSURE)

Following the findings of the comparative review and discussions with the Town, it was decided that an additional barricade would be installed on Blain Lane to address the notable spike in daily volumes along that connection after the Glassford Road closure. The additional trial closure of Blain Lane was implemented on November 29, 2021 and aimed to further reduce the amount of cut-through traffic using Glassford Road and limit this corridor to local traffic only.

As such, a third round of data collection was conducted on from Thursday, December 9, 2021, to Wednesday, December 15, 2021. The tube counters were installed at the same locations as the previous counts, with the exception of Blain Lane (which is now closed). Note that during the count period, there were notable snowfall in the region which may have impacted the traffic patterns in the area. The

Table 3: Comparison of August 2021 and December 2021 Daily Directional Volumes

Location	August 2021 (Post-Closure) Daily Volume			December 2021 (Post-Closure) Daily Volume			Change (% Change)		
	NB/ EB*	SB/ WB**	Total	NB/ EB	SB/ WB	Total	NB/EB	SB/WB	Total
1. Gower Point Road (north of Dogwood Road)	874	799	1673	627	660	1287	-247 (-28%)	-139 (-17%)	-386 (-23%)
2. Dogwood Road (between Glassford Road & Gower Point Road)	81	102	183	115	98	213	+34 (+42%)	-4 (-4%)	+30 (+16%)
3. Glassford Road (between Blain Lane & Blackberry Lane)	103	96	199	116	89	205	+13 (+13%)	-7 (-7%)	+6 (+3%)
4. Blain Lane (between Glassford Road & Gower Point Road)	34	32	66	-	-	-	-34 (-100%)	-32 (-100%)	-66 (-100%)
5. Franklin Road (east of Gower Point Road)	223	301	524	254	189	443	+31 (+14%)	-112 (-37%)	-81 (-15%)

*NB/EB denotes northbound or eastbound direction (whichever is relevant for each location)

**SB/WB denotes southbound or westbound direction (whichever is relevant for each location)

Note: summary represents weekday data only

A summary of key observations is as follows:

- Volumes along Glassford Road remained relatively consistent with post-closure counts in August (with minor daily and seasonal variations), indicating that traffic largely consists of local residents.
- Daily volumes along Gower Point Road reduced by approximately one quarter as compared to August counts, which may be attributed to a number of factors given the more regional nature of this corridor, include seasonal fluctuations in demand, weather impacts from snowfall, and/or rerouting of traffic onto Gibsons Way.
- Eastbound daily volumes on Dogwood Road observed a notable increase when compared to August volumes. This increase is comparable to the magnitude of traffic on Blain Lane prior, which may suggest largely consists of rerouted traffic from Blain Lane.
- Westbound daily volumes along Franklin Road reduced by approximately one-third compared to August count, while eastbound daily volumes increased slightly. This may be attributed to seasonal fluctuations in travel patterns between Lower Gibsons and the Elphinstone communities.

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5.0 SUMMARY

This addended memo summarized the key findings from the comparative review of pre- and post-closure volume and speed data near Glassford Road, as well as the changes in volumes following the additional closure on Blain Lane. The complete set of original data is enclosed with this submission. If there are any questions, please do not hesitate to contact the undersigned.

Sincerely,

URBAN SYSTEMS LTD.



Fujiou Lu
Transportation EIT



Niraj, Sunuwar, P.Eng., PTOE
Transportation Engineer

cc: Steve Brubacher

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Enclosure: Raw Tube Count Data

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