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October 16, 2023

Att: Chris Markides, MCIP, LPP
Zwicker Zareski Architecture & Planning
1 Canal Street
Dartmouth, NS B2Y 2W1

RE: An Access Review at Civic #173/175 St. Margaret's Bay Road

1.0 INTRODUCTION

1.1 – Overview

At the request of *Zwicker Zareski Architecture & Planning (ZZAP)*, the GRIFFIN transportation group inc. (GRIFFIN) has carried out a qualitative traffic operational assessment in support of the planning application being submitted to Halifax Regional Municipality (HRM) for a redevelopment of civic #173/175 St. Margaret's Bay Road, in the community of Halifax, Halifax Regional Municipality (HRM). The subject lands are located about 140 m west of the Armdale roundabout and situated between St. Margaret's Bay Road and Finch Lane. There is an existing driveway that already connects to St. Margaret's Bay Road in the southwest corner of the property.

It is understood that the proponent has plans to redevelop this property and add 6 new residential units as well as adjust the alignment of some of the individual driveways. The existing vehicle access to St. Margaret's Bay Road will remain and this driveway is proposed to serve up to three residential units – an increase of 1 additional unit using this connection. The remaining units on the property will be accessed via Finch Lane. The proposed site plan layout and access to St. Margaret's Bay Road is provided in *Figure 1*.

1.2 – Objective

ZZAP has held discussions with representatives of HRM throughout the planning application process. Through these discussions, HRM has indicated that a traffic operational assessment of the existing driveway is required; however, given the very small change in residential units proposed for this property a Stage 1 impact statement letter was not necessary. As such, GRIFFIN has been engaged to review the driver visibility, suitability, and future operating conditions of the pre-existing driveway connecting to St. Margaret's Bay Road under the proposed future conditions.

Figure 1: Proposed Site Layout



Source: ZZAP

GRIFFIN has carried out their qualitative review following HRM traffic impact study guidelines as well as consideration of the recently adopted Integrated Mobility Plan (IMP) policy for a new development in an urban area. In addition, GRIFFIN has applied the latest guiding principles published by the Institute of Transportation Engineers (ITE), and Transportation Association of Canada (TAC).

2.0 DRIVER VISIBILITY

A driver visibility review was completed for the existing driveway that connects to St. Margaret's Bay Road. These types of reviews are typically carried out prior to any geometric design work to ensure new accesses and driveways are situated in a suitable location that provides sufficient visibility for approaching drivers to identify a hazard and bring their vehicle to a stop.

GRIFFIN has concluded that this pre-existing driveway is situated in a suitable location along St. Margaret's Bay Road since it is located on the outside of a horizontal curve. Thus, it offers good sight lines in both directions along the street corridor. Due to these site-specific conditions, GRIFFIN focused their review on the available stopping sight distance (SSD) to ensure approaching drivers are provided with sufficient visibility to identify a hazard in the road and bring their vehicle

to a stop. This review was completed using TAC SSD design guidelines contained in the latest Geometric Design Guide for Canadian Roads. The details of our review are contained in *Table 1*.

Table 1: Summary of Stopping Sight Distances – Existing Driveway (50 km/h)

Measurement Location	Travel Direction	Available SSD	TAC Required SSD		Does Available Exceed Required?
			Base ^A	Slope Adjusted	
1. Existing Driveway civic #173/175	Eastbound (toward roundabout)	80 m	65 m	70 m (-6%) ^B	YES
	Westbound (leaving roundabout)	85 m	65 m	59 m (+6%) ^B	YES

A – 2017 TAC Chapter 2, Table 2.5.2

B – An estimate of the actual slope along St. Margaret’s Bay Road on the approaches to the existing driveway.

As identified in *Table 1*, GRIFFIN concluded the available driver visibility along St. Margaret’s Bay Road – toward the existing driveway – exceeds minimum TAC requirements for a 50 km/h operating speed.

3.0 FUTURE TRAFFIC VOLUMES

Given the proposed site layout, the existing driveway connecting to St. Margaret’s Bay Road will only serve three townhome units. If we assume the residents of each townhome unit exhibit similar vehicle trip-making behaviour as a detached single-family dwelling – a very conservative and worst-case assumption – then the ITE’s empirical data would suggest that we can expect about one new vehicle trip per hour, per unit. Therefore, during the peak travel times of a typical weekday we would expect the existing driveway to accommodate a demand of only three vehicle trips per hour, or less.

If we examine the situation even further, and account for the existing vehicle trips that already utilize this driveway, then the net change in vehicle demand is very small. We can also conclude that a change in one or two vehicle trips per hour along the St. Margaret’s Bay Road corridor would have a negligible and immeasurable impact on traffic flow operations. The daily fluctuation in volumes moving along St. Margaret’s Bay Road would greatly exceed the one or two new vehicle trips using the civic #173/175 driveway. In conclusion, the existing capacity along St. Margaret’s Bay Road is sufficient to accommodate the future year traffic volume expected to utilize the civic #173/175 driveway.

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4.0 CLOSING

GRIFFIN has determined that the existing driveway serving the civic #173/175 property is situated in a suitable location along the outside of a horizontal curve on St. Margaret's Bay Road. This location maximizes the available driver visibility for approaching drivers. Our review of the available SSD suggests that the existing conditions provide sufficient sight lines for drivers and that current conditions exceed TAC's minimum guidelines for a 50 km/h operating speed.

Since the existing driveway will serve only three townhome units in the future, the number of vehicles expected to utilize this driveway will be very low. Therefore, no traffic flow or operational concerns are expected at this driveway under future conditions. The existing lane configuration can remain and will adequately accommodate future year volumes.

I would be happy to provide you with additional information or clarification regarding these matters and can be reached anytime by phone at [REDACTED] or by email at [REDACTED].

Sincerely,

[REDACTED]

James J. Copeland, P.Eng., RSP1
Managing Principal – Traffic & Road Safety Engineer
GRIFFIN transportation group inc.

