

October 31, 2020

Reference No. 202084

Cesar Saleh
WM Fares Architects
3480 Joseph Howe Drive, Suite 500
Halifax, NS B3L 4H7

Re: Beaver Bank Road, Sackville, NS – Traffic Impact Statement

Mr. Saleh,

Harbourside Transportation Consultants has completed a traffic impact statement, as per Halifax Regional Municipality (HRM) requirements, to support the development application for a residential development on Beaver Bank Road in Sackville, Nova Scotia.

Site Context: The development site is located on the east side of Beaver Road south of the intersection with Windgate Drive in Sackville, Nova Scotia. The site context is illustrated in Figure 1.



Figure 1: Site Context



Beaver Bank Road is a north-south arterial roadway which connects Beaver Bank and other areas to the north to Nova Scotia Trunk 1 (Sackville Drive) and Highway 101. Beaver Bank Road has a two-lane cross section with sidewalk on the east side of the roadway. Beaver Bank Road has posted speed limit of 50 km/h. The Beaver Bank Road cross section is shown in Figure 2.

Beaver Bank Road is serviced by Halifax Transit Route 86 Beaver Bank and Route 186 Beaver Bank Express. The routes provide service to the Sackville Terminal, Scotia Square and Downtown Halifax. Bus stops are located on Beaver Bank Road near the intersection with Millwood Drive and Stokil Drive approximately 250 metres south of the development site.



Figure 2: Beaver Bank Road

Proposed Development: The proposed development plan includes two (2) 46-unit mid-rise residential buildings for a total of 92 units. Building 'A' will include 68 parking spaces (36 underground parking, 32 surface parking) and Building 'B' will include 70 parking spaces (36 underground parking, 34 surface parking). Access to the proposed development will include a new driveway on Beaver Bank Road. The site development plan is shown in Figure 5.



Figure 3: Site Development Plan

Sight Distance: The sight distance at the proposed access was reviewed to ensure the required sight distance is available. The HRM *Municipal Design Guidelines* (2013) specifies that the minimum stopping sight distance and minimum turning sight distance should meet the requirements of the Transportation Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads*.

The minimum stopping sight distance requirements for a two-lane roadway with a design speed of 50 km/h is 65 metres. Approximate measurements for stopping sight distance on Beaver Bank Road indicate that the stopping sight distance requirement is met in both directions.

The minimum turning sight distance requirements for a two-lane roadway with a design speed of 50 km/h are: 105 metres for a left-turn from stop and 95 metres for a right-turn from stop. There is over 200 metres of sight distance looking to the right of the proposed access location (Figure 4) and over 150 metres of



sight distance looking to the left of the proposed access location. Approximate measurements for turning sight distance at the approximate access location indicate that the turning sight distance requirements will be met at the access point.



Figure 4: Turning Sight Distance - Looking to the Right from Access



Figure 5: Turning Sight Distance - Looking to the Left from Access

Trip Generation: The vehicle trip generation estimates for the development were quantified using trip generation rates from the 10th edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. The weekday morning (AM) and afternoon (PM) peak hour trip generation estimates for the proposed development are summarized in Table 1. On a typical weekday, the proposed development is expected to generate 33 vehicle trips in the morning peak hour (9 trips entering, 24 trips exiting) and 40 vehicle trips in the afternoon peak hour (24 trips entering, 16 trips exiting).

Table 1: Trip Generation Estimates

Land Use	Units	Trip Generation Rates ¹						Trips Generated ²					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		Rate	In	Out	Rate	In	Out	Total	In	Out	Total	In	Out
221 - Multifamily Housing (Mid-Rise)	92	0.36	26%	74%	0.44	61%	39%	33	9	24	40	24	16
Total Trips Generated								33	9	24	40	24	16

1. Trip generation rates are in 'vehicles per hour per unit.'
2. Trips generated are in 'vehicles per hour.'



Impact to Surrounding Roadways: The site generated vehicle traffic will travel along Beaver Bank Road. The peak-direction of traffic on Beaver Bank Road is southbound during the morning peak hour (travelling towards Highway 101) and northbound during the afternoon peak hour.

The trip generation estimates indicate that the proposed development will generate less than 25 vehicle trips in the peak direction of traffic on Beaver Bank Road during the peak hours. It is anticipated that the new vehicle trips associated with the proposed development can be accommodated with a negligible impact on traffic operations. It should be noted that this consists of a high-level qualitative assessment, therefore no analytical capacity calculations have been completed to support the assessment.

If you have any questions or additional discussion, please feel free to contact the undersigned.

Regards,

Original Signed

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