

January 25, 2023

Project No. 232006

Peter Giannoulis Sr.



**Re: 5522/5540 Russell Street – Traffic Impact Statement**

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**1 Introduction**

Harbourside Transportation Consultants has completed a traffic impact statement, as per Halifax Regional Municipality (HRM) requirements, in support of the development application for a residential development at Russell Street and Gottingen Street in Halifax, Nova Scotia.

**2 Site Context**

The subject site is located on Russell Street between Isleville Street and Gottingen Street and encompasses two civic addresses: 5522 and 5540. The site context is shown in Figure 1.

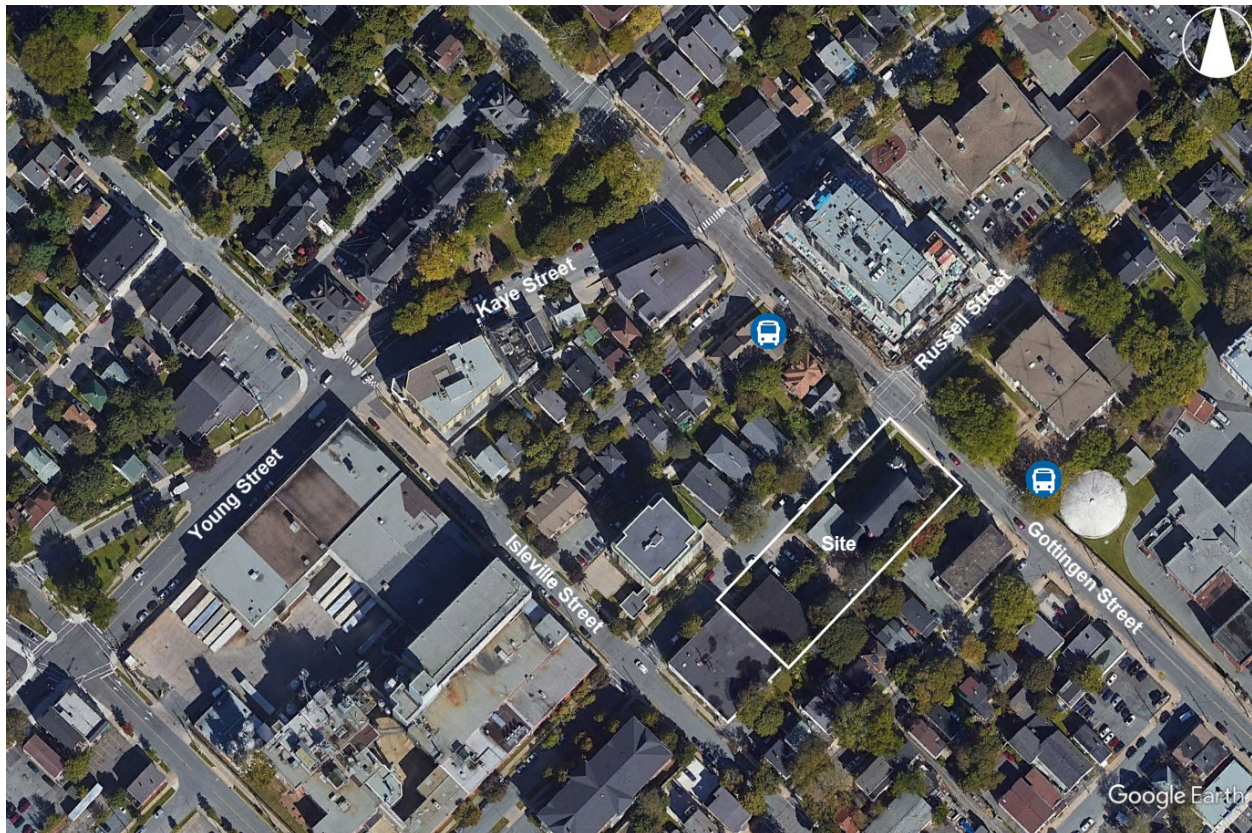


Figure 1: Site Context





### 3 Existing Site Land Use

Existing land uses on the subject site include the St Mark's Anglican Church (Civic No. 5522) and the North End Community Daycare Centre (Civic No. 5540). The site has one existing access point on Russell Street.

### 4 Existing Transportation Network

Russell Street is a local street that runs east-west between Devonshire Avenue near Barrington Street and Robie Street. The segment of Russell Street between Isleville Street and Gottingen Street has one travel lane in each direction with on-street parking on both sides. The on-street parking on the south side of Russell Street is time-restricted and the on-street parking on the north side of Russell Street is by permit only and time-restricted for a short section near Isleville Street. Russell Street has a posted speed limit of 50 km/h with a school zone speed limit reduction of 30 km/h along the frontage of the site. There are sidewalks on both sides of Russell Street. The Russell Street cross section near the subject site is shown in Figure 2.



Figure 2: Russell Street



Gottingen Street is a major collector that runs north-south between Young Street and Brunswick Street/Duke Street in downtown Halifax. The segment of Gottingen Street near the site has a one travel lane in each direction with time-restricted parking on the west side of the street along the frontage of the site. Gottingen Street has a posted speed limit of 50 km/h with a school zone speed limit reduction of 30 km/h along the frontage of the site. There are sidewalks on both sides of Gottingen Street. Marked crosswalks are provided at the all-way stop control intersection of Russell Street and Gottingen Street. The Gottingen Street cross section near the site is shown in Figure 3.



Figure 3: Gottingen Street

## 5 Transit

The area is serviced by seven Halifax Transit routes: 7A/B Peninsula, 135 Flamingo Express, 136 Farnham Gate Express, 137 Clayton Park Express, 138 Parkland Express, 194 West Bedford Express, and 196 Basinview Express. There are bus stops in both directions on Gottingen Street within a 120 metre walking distance of the subject site.





## 6 Proposed Development

The proposed development plan consists of redeveloping the western portion of the site where the existing day care centre is located into a mid-rise residential building with 85 units. The existing church will remain. The residential building will include two underground parking levels with a total of 38 vehicle parking spaces. The proposed site development plan is shown in Figure 4.

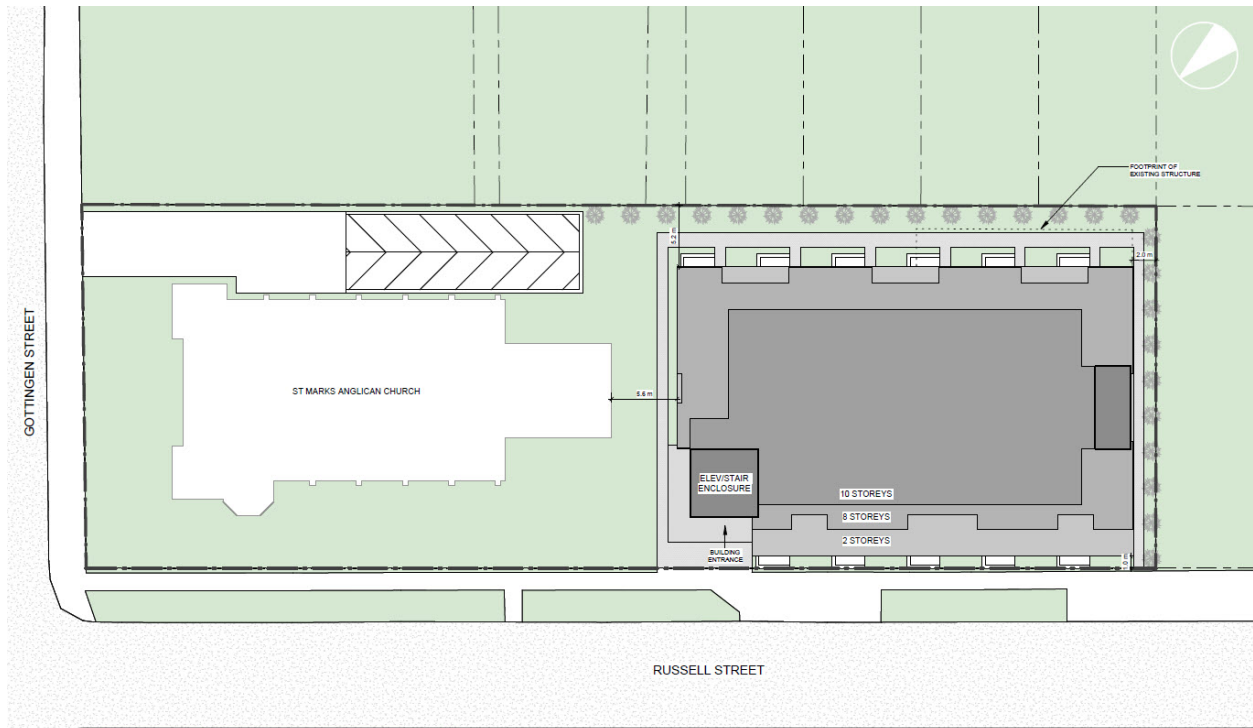


Figure 4: Site Development Plan

## 7 Site Access

Vehicle access to the underground parking levels will be provided from Gottingen Street. The access point will be located at the south end of the property next to the existing church. The development will eliminate the existing access on Russell Street.

A sight distance review was completed at the proposed underground parking access location to confirm that the sight lines meet the minimum stopping and turning sight distance requirements of the Transportation Association of Canada's (TAC) Geometric Design Guide for Canadian Roads<sup>1</sup>. The minimum stopping and turning sight distance requirements for a two-lane roadway with a design speed of 50 km/h are:

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<sup>1</sup> Geometric Design Guide for Canadian Roads, Transportation Association of Canada, June 2017.



- ▶ Minimum stopping sight distance = 65 metres;
- ▶ Minimum turning sight distance – left-turn from stop = 105 metres; and
- ▶ Minimum turning sight distance – right-turn from stop = 95 metres.

The sight line north of the access (looking to the left) is shown in Figure 5. The sight line extends past the crosswalk at Kaye Street indicating that there is over 140 metres of sight distance available. The sight distance may be intermittently obstructed by utility poles. The minimum stopping and turning sight distance requirements are met north of the access.



Figure 5: Sight Line North of Access (Looking to the Left)

The sight line south of the access (looking to the right) is shown in Figure 6. The sight line extends past the intersection with Bilby Street indicating that there is over 120 metres of sight distance available. The sight distance may be intermittently obstructed by utility poles. The minimum stopping and turning sight distance requirements are met south of access.





Figure 6: Sight Line South of Access (Looking to the Right)

## 8 Site Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual<sup>2</sup> was used to estimate the vehicle trip generation for the proposed site land uses. Land use code 221 Multifamily Housing (Mid-Rise), Dense Multi-Use Urban was used for the proposed residential building and land use code 565 Day Care Centre, General Urban/Suburban was used to account for trips to the site associated with existing land uses that will be removed by the proposed development. Table 1 summarizes the trip generation rates for the land use code.

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<sup>2</sup> Trip Generation Manual, 11<sup>th</sup> edition, Institute of Transportation Engineers, September 2021.



Table 1: Trip Generation Rates

Land Use	AM Peak Hour			PM Peak Hour		
	Rate	Entering	Exiting	Rate	Entering	Exiting
221 Multifamily Housing (Mid-Rise)	$T = 0.25(X) + 5.35$	14%	86%	$T = 0.29(X) - 6.26$	74%	26%
565 Day Care Centre	11.00	53%	47%	11.12	47%	53%

Note: Rates are in vehicles per hour (vph)/dwelling unit for residential uses and vph/1000 ft<sup>2</sup> of GFA for institutional and commercial uses.

The weekday morning (AM) and afternoon (PM) peak hour trip generation estimates for the site are summarized in Table 2. On a typical weekday, the site is estimated to generate 27 vehicle trips in the morning peak hour (4 trips entering and 23 trips exiting) and 18 vehicle trips in the afternoon peak hour (14 trips entering and 4 trips exiting).

When accounting for the removal of existing trips to site associated with the day care facility, the proposal development will result in a net reduction of 32 vehicle trips in the morning peak hour (27 trips entering and 5 trips exiting) and a net reduction of 42 vehicle trips in the afternoon peak hour (14 trips entering and 28 trips exiting).

Table 2: Trip Generation Estimates

Land Use	Units	AM Peak Hour			PM Peak Hour		
		Total	Entering	Exiting	Total	Entering	Exiting
221 Multifamily Housing (Mid-Rise)	85	27	4	23	18	14	4
565 Day Care Centre	5.38	-59	-31	-28	-60	-28	-32
Net Trips Generated (vph)		-32	-27	-5	-42	-14	-28

Note: Units are in dwelling unit for residential uses and 1000 ft<sup>2</sup> of GFA for institutional and commercial uses.

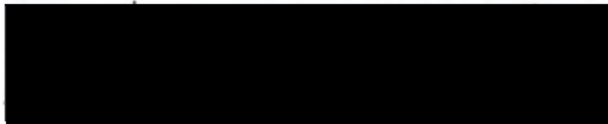


## 9 Impacts

The proposed development is expected to result in a reduction in trips to the site compared to existing site land uses. It is anticipated that the new vehicle trips associated with the development can be accommodated on Gottingen Street 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,



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