



Ref. No. 181-04038

March 29, 2018

Ms. Ashley Blissett, P. Eng.
Senior Development Engineer
Halifax Regional Municipality
PO Box 1749
HALIFAX NS B3J 3A5

RE: Traffic Impact Statement, Re-zoning to Allow Construction of a Motor Vehicle Dealership, Stairs Street - Livingstone Street Site, Halifax

Dear Ms. Blissett:

Further to our recent telephone conversation, this Traffic Impact Statement has been prepared to consider potential traffic impacts of re-zoning several lots on a site (Figure 1) bounded by Stairs Street, Massachusetts Avenue, Livingstone Street and Kempt Road. It is proposed that the site be zoned C-3 (Industrial) to allow construction of a Motor Vehicle Dealership (Figure 2). The proposed C-3 zoning will conform with zoning on other properties in the Kempt Road area which include many automotive sales and services businesses.

Description of Development Site - The existing site (Figure 1) includes seven properties with four zoned R-2 and one (Granite Brewery) zoned C-2 on Stairs Street. There are two properties on Livingstone Street including the Discount Car & Truck Rentals site which is zoned C-2 and a large lot zoned C-2 / C-3. Existing land uses include the Granite Brewery (3650 SF building) and Discount Car & Truck Rentals (2400 SF building), with the remainder of the site used for vehicle parking associated with these businesses or other automotive related businesses in the area.

Stairs Street, on the north side of the site, is a two-lane street approximately 7.5 meters wide with curbs on both sides and a sidewalk along the south side adjacent to the site. Driveways for the existing five lots will be closed and a new driveway to serve the proposed auto sales business will be located towards the west site boundary (Figure 2). Visibility is good on both Stairs Street approaches to the proposed new driveway as illustrated on Photos 1 and 2.



Photo 1 - Looking west on Stairs Street towards Kempt Road from the approximate location of the proposed new driveway.



Photo 2 - Looking east on Stairs Street towards Massachusetts Avenue from the approximate location of the proposed new driveway.

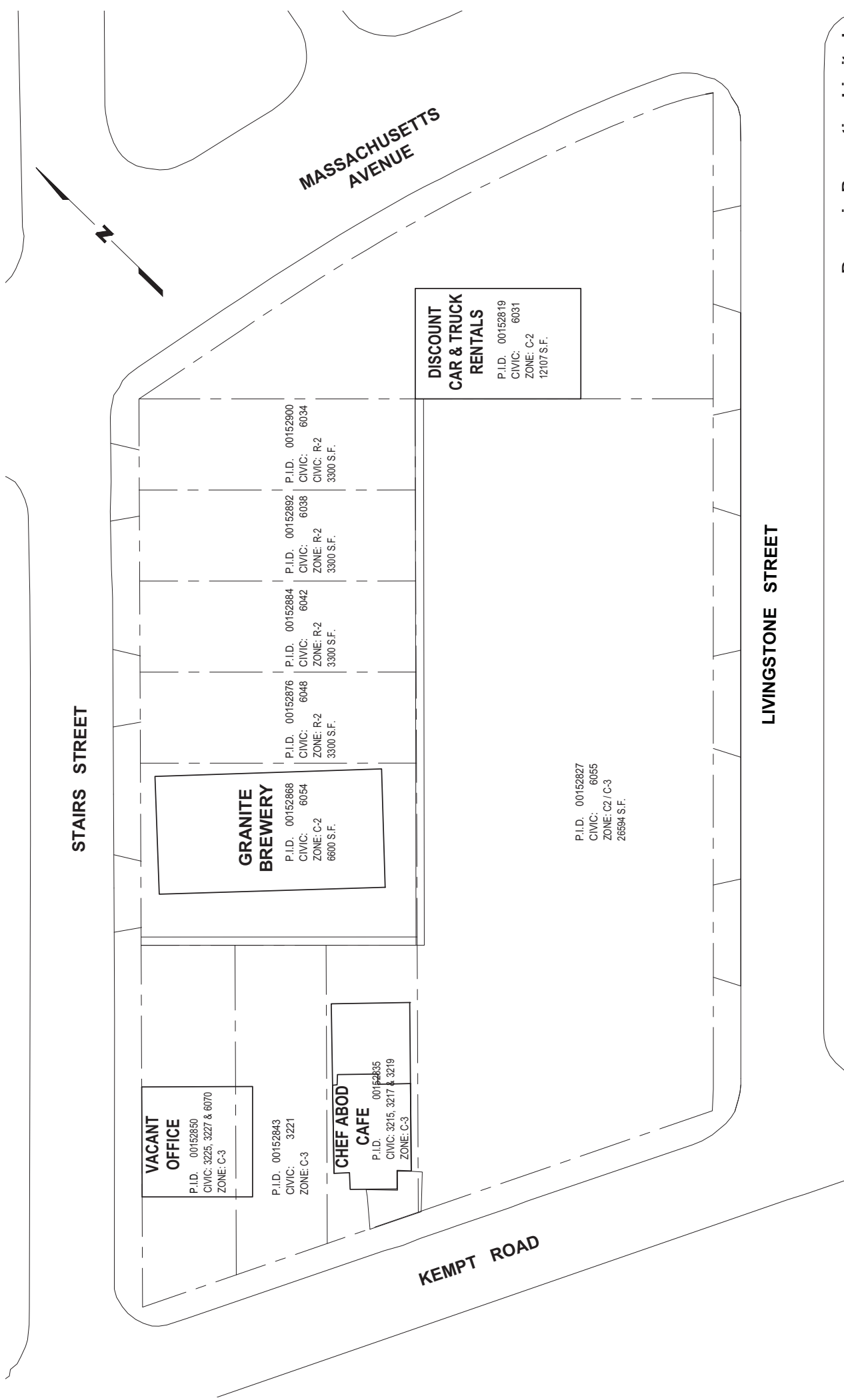


Figure 1 - Existing Site Plan

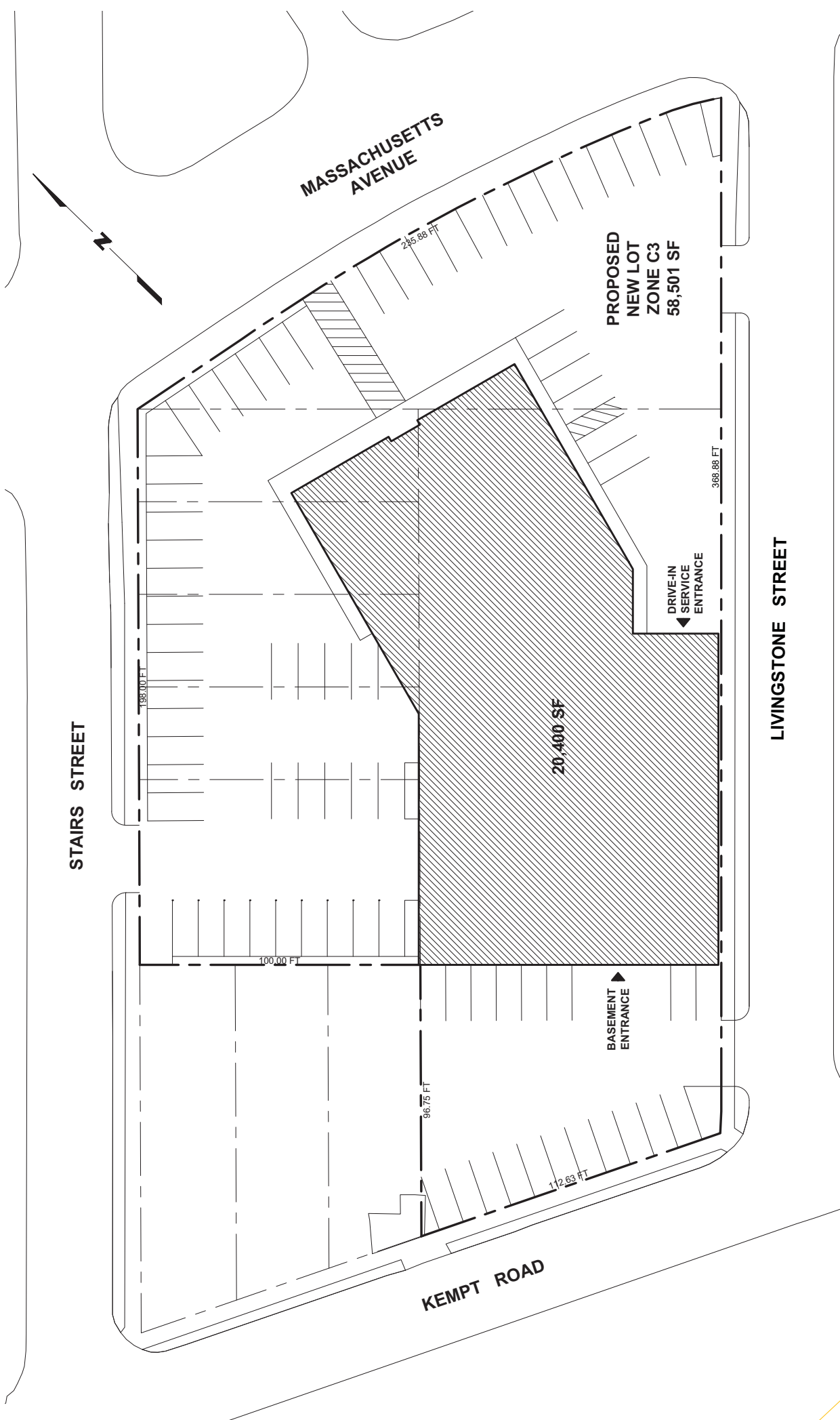


Figure 2 - Proposed Site Plan

Livingstone Street, on the south side of the site, is a two-lane street approximately 9.0 meters wide with curbs and sidewalks on both sides. Four driveways that serve the existing two lots will be closed and two new driveways to serve the proposed auto sales business will be located towards the west and east site boundaries (Figure 2). Visibility is good on both Livingstone Street approaches to both proposed new driveways as illustrated on Photos 3 to 6.



Photo 3 - Looking east on Livingstone Street towards Massachusetts Avenue from the approximate location of the proposed new driveway near the west end of the site.



Photo 4 - Looking west on Livingstone Street towards Kempt Road from the approximate location of the proposed new driveway near the west end of the site.



Photo 5 - Looking east on Livingstone Street towards Massachusetts Avenue from the approximate location of the proposed new driveway near the east end of the site.



Photo 6 - Looking west on Livingstone Street towards Kempt Road from the approximate location of the proposed new driveway near the east end of the site.

Traffic Volumes - While traffic volumes are not available for either Stairs Street or Livingstone Street, volumes are expected to be relatively low with trips generated by the existing land uses, as well as vehicles that use the streets as connectors between Kempt Road and Massachusetts Avenue. The following volumes have been obtained from HRM for Kempt Road and Massachusetts Avenue near the site:

- Kempt Road - a machine count obtained during July 2015 indicated a two-way weekday volume of 8,925 vehicles per day.
- Massachusetts Avenue - a machine count obtained during July 2017 indicated a two-way weekday volume of 24,000 vehicles per day.

Trip Generation Estimates - Table 1 includes trip generation estimates for the existing and proposed land uses on the site. Where available, published trip generation rates from *Trip Generation, 10th Edition*, have been used. Since published rates are not available for micro-brewery or car rental lots, the following rates have been used in Table 1:

- Granite Brewery - Since the size of the building and general use of the site are similar to those included for Winery (Land Use 970), published rates for that land use have been used.
- Discount Car & Truck Rental - A literature review produced trip generation rates based on gross lot area in 1000 SF (*Traffic Impact Analysis for Proposed Marina Del Rey Tower Project*, Crain & Associates, September 2006). Since review of Google aerial photos indicates that the car rental business uses the Discount Car & Truck Rental lot on Livingstone Street, as well as the four R-2 lots on Stairs Street, areas for those lots have been included to provide the gross area of 25,300 SF for the car rental lot.

It is estimated (Table 1) that the proposed Motor Vehicle Dealership will generate 72 two-way vehicle trips (45 entering and 27 exiting) during the AM peak hour and 104 two-way vehicle trips (55 entering and 49 exiting) during the PM peak hour.

After trips generated by the existing land uses are considered, it is estimated that the proposed Motor Vehicle Dealership will generate 52 additional two-way vehicle trips (33 entering and 19 exiting) during the AM peak hour and 52 additional two-way vehicle trips (29 entering and 23 exiting) during the PM peak hour.

Table 1 - Trip Generation Estimates for Existing Land Use and Proposed New Auto Dealership									
Land Use ¹	Units ²	Trip Generation Rates ³				Trips Generated ³			
		AM Peak		PM Peak		AM Peak		PM Peak	
		In	Out	In	Out	In	Out	In	Out
Trip Generation Estimate for the Proposed New Auto Dealership ⁴									
Auto Sales (New) (Land Use 840)	20.4 KGFA	2.22	1.31	2.72	2.41	45	27	55	49
Trip Generation Estimate for the Existing Businesses on the Site ⁵									
Discount Car Rental ⁶	25.3 K Lot A	0.28	0.22	0.50	0.50	7	6	13	13
Granite Brewery ⁷ (Land Use 970)	3.65 KGFA	1.45	0.62	3.65	3.66	5	2	13	13
Estimated Trip Generation for the Existing Businesses ⁵						12	8	26	26
Estimated Change in Trips Generated by the Redeveloped Site									
Change in Vehicle Trip Estimates for the Redeveloped Site ⁸						33	19	29	23
NOTES: 1. Rates are for indicated Land Use Codes, <i>Trip Generation, 10th Edition</i> , Institute of Transportation Engineers, 2017. 2. KGFA is 'Gross Floor Area x 1000 square feet' for buildings; K Lot A is 'Gross Lot Area x 1000 square feet' for Car Rental business. 3. Rates are 'vehicles per hour per unit'; trips generated are 'vehicles per hour for peak hours'. 4. These are the trip generation estimates for the proposed New Auto Dealership. 5. These are the trip generation estimates for the existing Granite Brewery and Discount Car & Truck Rental. 6. Since <i>Trip Generation</i> does not include trip rates for a car rental lot, rates used are 0.5 trips per 1,000 SF lot size for AM peak hour and 1.0 trips per 1,000 SF lot size for PM peak hour. 7. Since <i>Trip Generation</i> does not include trip rates for a micro-brewery, rates for a winery have been used, 8. These are the estimated changes in AM and PM peak hour vehicle trips as a result of re-developing the site to allow construction of a new auto dealership.									

Summary -

1. It is proposed that the seven existing properties on the Stairs - Livingstone site be zoned C-3 (Industrial) to allow construction of a Motor Vehicle Dealership (Figure 2). The proposed C-3 zoning will conform with zoning on other properties in the Kempt Road area which include many automotive sales and services businesses.
2. Driveways for the existing five lots on Stairs Street will be closed and a new driveway to serve the proposed auto sales business will be located towards the west site boundary. Four driveways that serve the existing two lots on Livingstone Street will be closed and two new driveways to serve the proposed auto sales business will be located towards the west and east site boundaries. Visibility is good on street approaches to the three proposed new driveways.
3. It is estimated that the proposed Motor Vehicle Dealership will generate 72 two-way vehicle trips (45 entering and 27 exiting) during the AM peak hour and 104 two-way vehicle trips (55 entering and 49 exiting) during the PM peak hour.

4. After trips generated by the existing Granite Brewery on Stairs Street and Discount Car & Truck Rentals on Livingstone Street are considered, it is estimated that the proposed Motor Vehicle Dealership will generate 52 additional two-way vehicle trips (33 entering and 19 exiting) during the AM peak hour and 52 additional two-way vehicle trips (29 entering and 23 exiting) during the PM peak hour.

Conclusion -

5. Since site generated trips will be distributed to three driveways with accesses to two intersections on Kempt Road and two intersections on Massachusetts Avenue, site generated trips are not expected to have any significant impact on adjacent intersections, streets, or the regional road network.

If you have any questions, please contact me by Email to ken.obrien@wsp.com or telephone 902-452-7747.

Sincerely,

Original Signed

Ken O'Brien, P. Eng.
Senior Traffic Engineer
WSP Canada Inc.

