



Ref. No. 171-00927 Task 20-002

February 19, 2021

Ms. Sarah Rodgers, P. Eng.
Program Engineer - Planning and Development
Halifax Regional Municipality
PO Box 1749
HALIFAX NS B3J 3A5

RE: Traffic Impact Statement, Proposed Multi-Unit Residential and Commercial Development, 8 Walker Avenue, Lower Sackville, Nova Scotia

Dear Ms. Rodgers:

W. M. Fares Group is preparing plans to develop the southeast corner of the Old Sackville Road and Walker Avenue intersection. The proposed development (Figure 1) will include approximately 129 apartment units, 10,000 square feet of commercial space, and approximately 214 parking spaces (117 underground and 97 surface).

The site at 8 Walker Avenue is now occupied by a 3,400 SF automotive repair shop and two light industrial type businesses with a total of approximately 8,500 SF of building space. The existing site is served by three driveways, two on Walker Avenue and one on Old Sackville Road. The Walker Avenue driveway just south of Old Sackville Road (Photo 1) will be closed and the other two will be retained as site accesses. This is the Traffic Impact Statement (TIS) required to accompany the development application.

Description of Site Accesses - Three driveways are planned for the site (Figure 1), with one on Walker Avenue east of the Sackville Transit Terminal and two on Old Sackville Road.

1. Walker Avenue Driveway (Photos 2 and 3), which is an existing site driveway location on Walker Avenue between Wheatons' driveway and Sackville Transit Terminal, will provide full traffic movements to serve the surface parking area. Traffic using this driveway will be able to access Old Sackville Road opposite the Downsview Drive intersection, as well as at the eastern end of Walker Avenue.

Walker Avenue is a two lane collector street with a 50 km/h speed limit. It has curb and gutter on both sides with a sidewalk on the south side opposite the site. Visibility is good on both approaches to the driveway as illustrated in Photos 2 and 3.



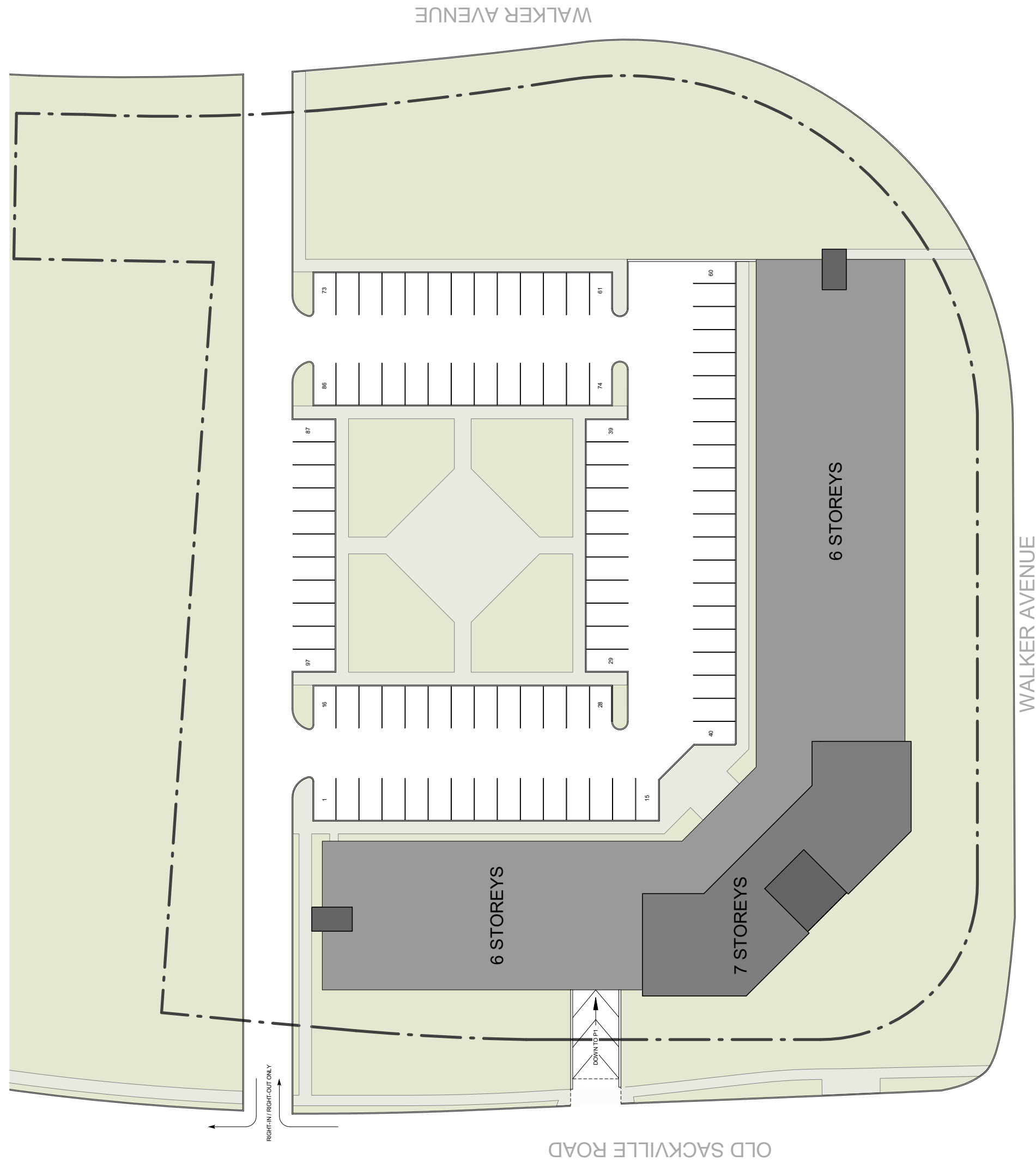
Photo 1 - Looking across Walker Avenue from the Sackville Transit Terminal parking lot towards an existing site driveway for business on the site.



Photo 2 - Looking east on Walker Avenue towards Wheatons' driveway.



Photo 3 - Looking west on Walker Avenue towards the Transit Terminal.



WALKER AVENUE

8 WALKER AVENUE, HALIFAX NS

SITE DEVELOPMENT PLAN

Figure 1

Project No:

1" = 50'-0"

1" = 50'-0"

Scale:

Date: _____

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2. Old Sackville Road Driveway 1 (Photos 4 and 5) is an existing full movement site driveway approximately 60 meters east of Walker Avenue intersection. This driveway will provide full traffic movements for vehicles using the underground parking spaces. Old Sackville Road is a two lane collector street with a 50 km/h speed limit. It has curb and gutter on both sides, and a sidewalk on the south side adjacent to the proposed development. Visibility is good on both approaches to the driveway are illustrated in Photos 4 and 5.



Photo 4 - Looking west towards Walker Avenue from the proposed parking garage driveway.



Photo 5 - Looking east towards the proposed right-in / right-out site driveway.

3. Old Sackville Road Driveway 2 (Photos 6 and 7) is on Old Sackville Road near the east site boundary approximately 48 meters east of the proposed full movement parking garage driveway. While visibility is good to the west (Photo 6), visibility to the east is reduced by a crest vertical curve (Photo 7). Consequently, the driveway will be restricted by design to right-in / right-out traffic movements from the ground level parking lot.



Photo 6 - Looking west on Old Sackville Road towards the proposed parking garage driveway and Walker Avenue from right-in / right-out driveway.



Photo 7 - Looking east on Old Sackville Road towards RCMP detachment driveway from right-in / right-out driveway.

Traffic Volumes - Traffic count data were obtained by HRM Traffic Management at the Old Sackville Road / Walker Avenue / Downsview Drive intersection during August 2018. Counted volumes, adjusted for season and increased with a 1% per year growth factor, indicate the following estimated 2021 two-way peak hour vehicles per hour (vph) traffic volumes:

- Old Sackville Road adjacent to site driveways - 215 vph AM and 410 vph PM
- Walker Avenue at Old Sackville Road - 290 vph AM and 280 vph PM.

While volume data are not available on Walker Avenue at the proposed site driveway near Wheatons, volumes are expected to be significantly lower than the Walker Avenue volumes indicated above.

Transit Service - The site has excellent transit service with Sackville Transit Terminal across Walker Avenue which provides access to many Metro Transit Routes.

Trip Generation - Trip generation estimates have been prepared (Table 1) for proposed and existing land uses using published trip generation rates and equations from *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017, except as noted. Trips for the existing 3400 SF auto repair shop and 8500 SF of light industrial land uses have been considered as credits against trips estimated to be generated by the proposed residential and commercial land uses.

It is estimated that the proposed development will generate 52 two-way vehicle trips (20 entering and 32 exiting) during the AM peak hour and 70 two-way trips (38 entering and 32 exiting) during the PM peak hour. However, after consideration of a credit for trips made by existing site land uses, it is estimated that the proposed development will generate approximately 39 additional two-way vehicle trips (10 entering and 29 exiting) during the AM peak hour and 56 additional two-way vehicle trips (34 entering and 22 exiting) during the PM peak hour.

Table 1 - Trip Generation Estimates for Proposed Development									
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
Estimated Trips Generated by Proposed Land Uses									
Mid-Rise Apartment (Land Use 223)	129 units	AM Peak Hour $\ln(T) = 0.98 \ln(x) - 0.98$ PM Peak Hour $\ln(T) = 0.96 \ln(x) - 0.63$				11	33	35	22
Small Office Building (Land Use 712)	5.0 KGFA	1.59	0.33	0.78	1.67	8	2	4	8
Specialty Retail (Land Use 826) ⁴	5.0 KGLA	0.76	0.60	1.19	1.52	4	3	6	8
Trip Generation Estimates for the Proposed Development						23	38	45	38
15% Reduction - Non-vehicle Trips ⁵						3	6	7	6
Adjusted Vehicle Trip Estimates for Proposed Development						20	32	38	32
Estimated Trips Generated by Existing Land Uses									
General Light Industrial (Land Use 110)	8.5 KGFA	0.62	0.08	0.08	0.55	5	1	1	5
Auto Parts & Service (Land Use 943)	3.4 KGFA	1.43	0.53	0.90	1.36	5	2	3	5
Trip Generation Estimates for Existing Land Uses						10	3	4	10
Comparison of Trip Generation Estimates - Proposed Development to Existing Land Uses ⁶									
Increase in Trip Estimates for Proposed Development ⁷						10	29	34	22
NOTES: 1. Equations and rates are for indicated Land Use Codes, <i>Trip Generation, 10th Edition</i> , Institute of Transportation Engineers, 2017, except as noted. 2. Units are 'Number of Residential Units'; KGFA is 'Gross Floor Area x 1000 square feet'; KGLA is 'Gross Leasable Area x 1000 square feet' 3. Rates are 'vehicles per hour per unit'; trips generated are 'vehicles per hour for peak hours'. 4. Since <i>10th Edition</i> does not have Specialty Retail, rates for Land Use 826 from the <i>9th Edition</i> have been used. Since there is no published rate for the AM peak hour for this Land Use, and since AM peak hour trips to Specialty Retail are generally low, AM trip rates have been assumed to be 50% of the PM rate with reversal of the directional split. 5. While the Halifax Integrated Mobility plan has a target for 14% non-auto trips within the Outer Suburban Region, a 15% reduction for non-auto trips is considered appropriate for this site since it is adjacent to a transit terminal and is within easy walking distance of Downsview Plaza. 6. These are the trip generation estimates for the existing land uses at 8 Walker Avenue.. 7. 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 the proposed residential development.									

Summary -

- The proposed development at 8 Walker Avenue will include approximately 129 apartment units and 10,000 square feet of commercial space, with approximately 214 parking spaces (117 underground and 97 surface).
- The site at 8 Walker Avenue is now occupied by a 3,400 SF automotive repair shop and two light industrial type businesses with a total of approximately 8,500 SF of building space.
- The existing site is served by three driveways, two on Walker Avenue and one on Old Sackville Road. The Walker Avenue driveway between Old Sackville Road and the Transit Terminal will be closed and the other existing Walker Avenue and Old Sackville Drive driveways will be retained as site accesses.
- The site will be served by the following three driveways:
 - Walker Avenue** - The existing full movement site driveway on Walker Avenue between Wheatons' driveway and Sackville Transit Terminal will provide full traffic movements to serve the surface parking area. Visibility is good on both approaches to the driveway.

- **Old Sackville Road 1**- The existing full movement site driveway approximately 60 meters east of Walker Avenue intersection will provide full traffic movements for vehicles using the underground parking spaces. Visibility is good on both approaches to the driveway.
 - **Old Sackville Road 2** - A new right-in / right-out driveway on Old Sackville Road is proposed near the east site boundary. While visibility is good to the west, visibility to the east is reduced by a crest vertical curve . Consequently, the driveway will be restricted by design to right-in / right-out traffic movements for the ground level parking lot.
5. Walker Avenue is a two lane collector street with a 50 km/h speed limit. It has curb and gutter on both sides with a sidewalk on the south side opposite the site. Estimated 2021 two-way peak hourly volumes on Walker Avenue between the Transit Terminal and Old Sackville Road adjacent to the site are 290 vph AM and 280 vph PM. While volume data are not available on Walker Avenue at the proposed site driveway near Wheatons, volumes are expected to be significantly lower than the above Walker Avenue volumes.
6. Old Sackville Road is a two lane collector street with a 50 km/h speed limit. It has curb and gutter on both sides, and a sidewalk on the south side adjacent to the proposed development. Estimated 2021 two-way peak hourly volumes on Old Sackville Road east of Walker Avenue and adjacent to the site driveways are 215 vph AM and 410 vph PM.
7. The site has excellent transit service with Sackville Transit Terminal across Walker Avenue providing access to many Halifax Transit routes.
8. It is estimated that the proposed development will generate 52 two-way vehicle trips (20 entering and 32 exiting) during the AM peak hour and 70 two-way trips (38 entering and 32 exiting) during the PM peak hour. However, after consideration of a credit for trips made by existing site land uses, it is estimated that the proposed development will generate approximately 39 additional two-way vehicle trips (10 entering and 29 exiting) during the AM peak hour and 56 additional two-way vehicle trips (34 entering and 22 exiting) during the PM peak hour.

Conclusion -

9. Since peak hourly volumes are moderate on both Walker Avenue and Old Sackville Road, and additional site generated trips are low and are distributed to three site driveways, additional vehicle trips generated by the site are not expected to have any significant impact to the performance of adjacent streets, intersections, or the regional street network.

If you have any questions, please contact me by Email to [REDACTED]

Sincerely,

Original Signed

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

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