April 28, 2022 Project 171-00927 Task 30

Mr. John Dib, M. Arch. Sent via Email to John.Dib@wmfares.com
W.M. Fares Architects
3480 Joseph Howe Drive, 5th Floor
HALIFAX NS B3L 4H7

RE: Traffic Impact Statement for Proposed Multi-Unit Residential Building Regkay Court, Sackville, NS

Dear Mr. Dib:

This is the Traffic Impact Statement (TIS) that you requested for the Proposed Multi-Unit Residential Building *W. M. Fares Architects* is preparing plans for on Regkay Court, Sackville, Nova Scotia. The proposed building on the west side of Regkay Court (Figures 1 and 2) is planned to include approximately 100 apartment units and 152 parking spaces (116 inside and 36 surface).

Description of Road and Site Accesses - The site is planned to have driveways on both Regkay Court and Sackville Drive. Regkay Court (Photos 1 and 2) is a short cul-du-sac with connections to Bambrick Road, and then Margeson Drive at existing intersections south of the site. Sackville Drive (Photos 3 and 4) which has a posted speed limit of 60 km/h is a two-lane road with gravel shoulders and open ditches on both sides.

The Regkay Court site driveway (Figure 2 and Photos 1 and 2), which is at the south edge of the site, will serve the approximately 116 inside parking places which represent 76% of the proposed total 152 parking spaces.

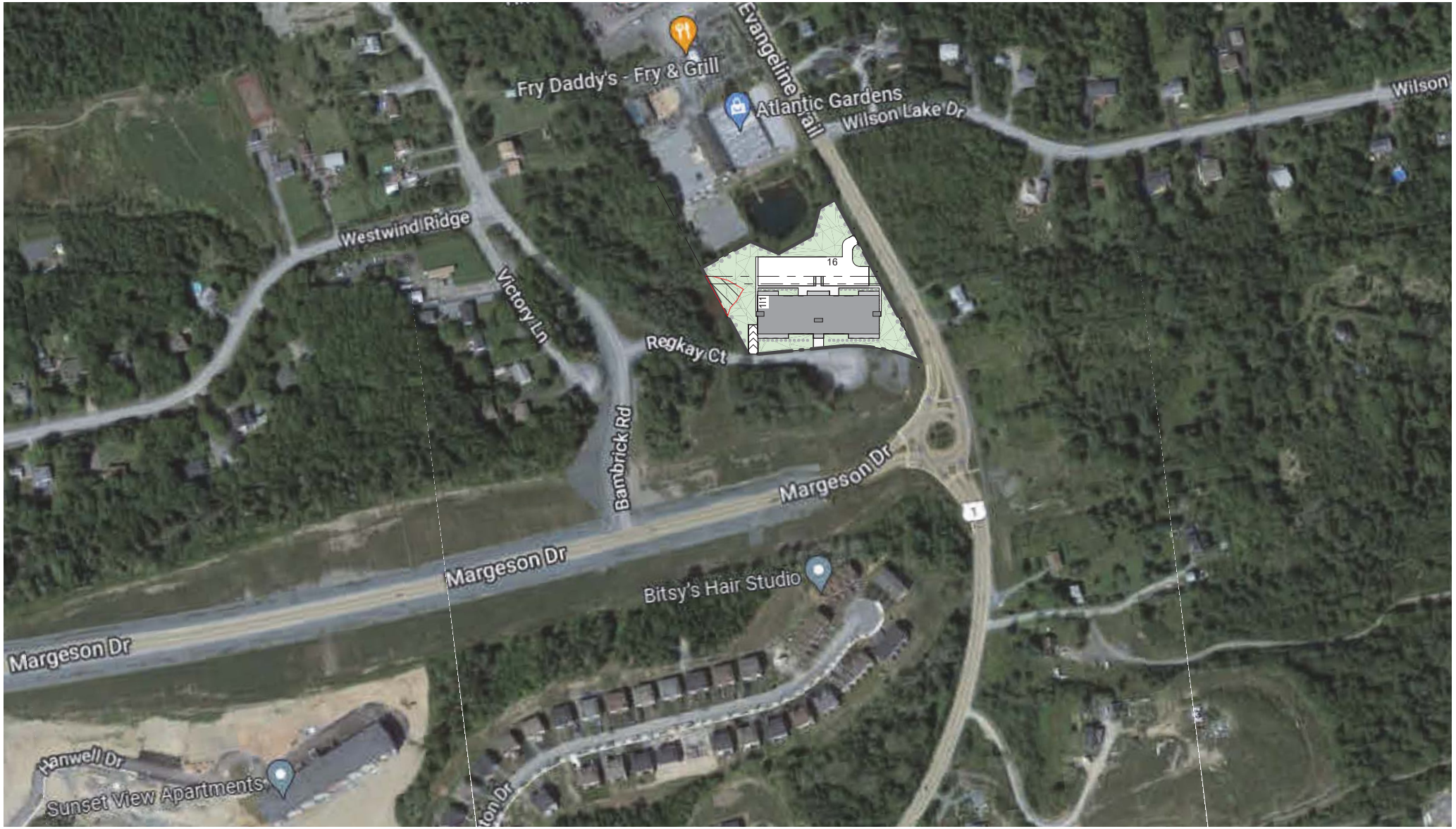
Photo 1 - Looking left towards the end of Regkay Court from proposed site driveway.

Photo 2 - Looking right towards Bambrick Road from proposed site driveway.

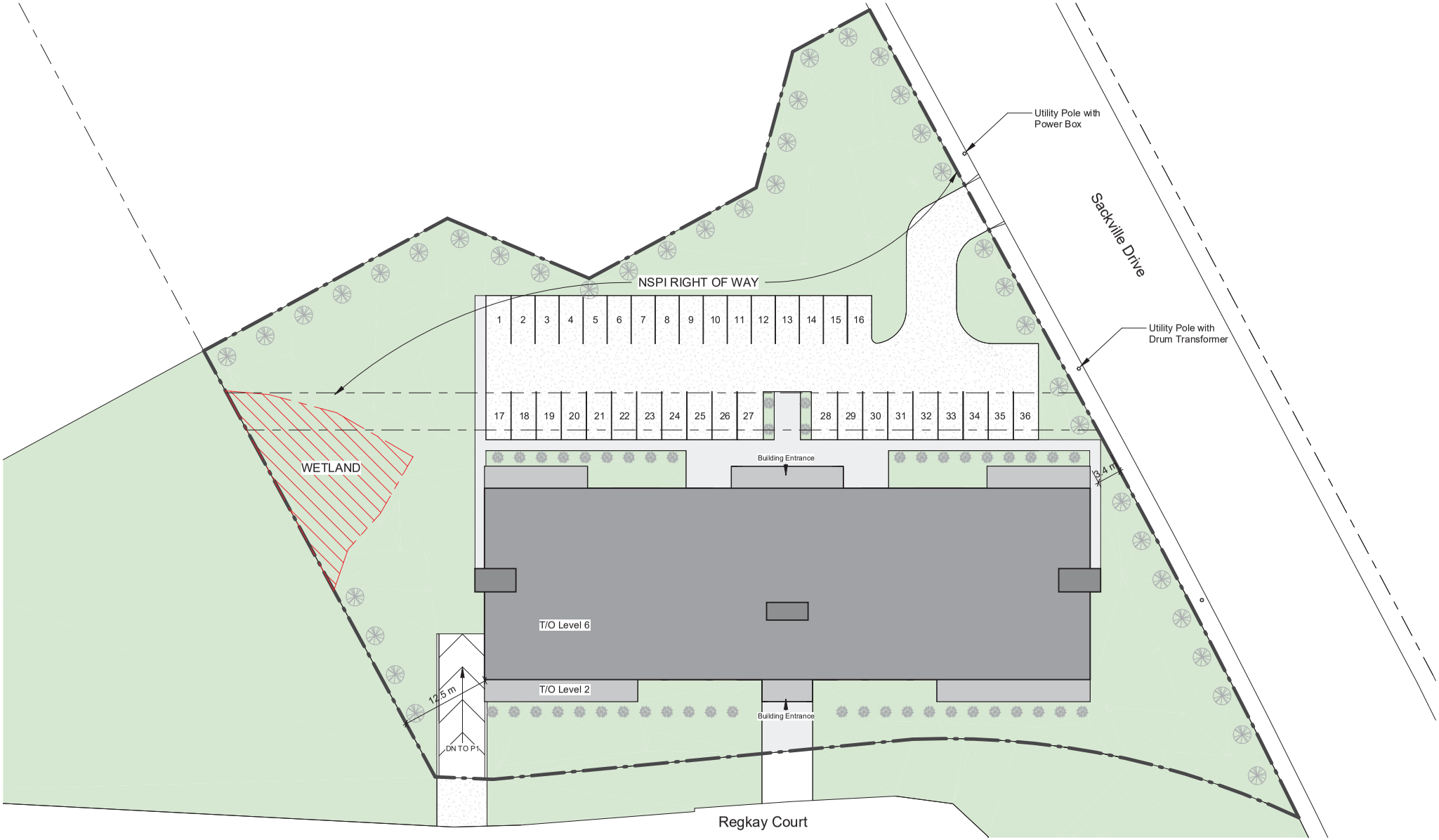
The Sackville Drive access between the Margeson Drive roundabout and Wilson Lake Road (Figure 2) will serve 36 surface spaces, 24% of the total spaces. Visibility is adequate on the Sackville Drive eastbound approach (Photo 3). Measured stopping sight distance on the westbound approach (Photo 4) is 83 meters which is adequate for the posted speed limit of 60 km/h and the uphill 3% to 4% grade. Also, since westbound vehicles have just exited a roundabout, approach speeds are expected to be less than 60 km/h.

Photo 3 - Looking west on Sackville Drive towards Wilson Lake Road from proposed driveway for ground level parking area.

Photo 4 - Looking east on Sackville Drive towards the Margeson Drive roundabout from proposed driveway for ground level parking area.



Regkay Court LOT A1-B, SACKVILLE DRIVE, SACKVILLE NS	Context Plan **Figure 1**	Project No: 2021-22 Scale: 1" = 200'-0" Date: 2022-04-06 11:11:56 AM		WM FARES ARCHITECTS	**D0**



Regkay Court LOT A1-B, SACKVILLE DRIVE, SACKVILLE NS	Site Plan **Figure 2**	Project No: 2021-22 Scale: 1" = 40'-0" Date: 2022-04-06 11:11:58 AM		WM FARES ARCHITECTS	D1

Trip Generation -Trip generation estimates have been prepared (Table 1) for the proposed land use using published trip generation rates and equations from *Trip Generation, 11th Edition*, Institute of Transportation Engineers, 2021. It is estimated that the proposed development will generate 32 two-way vehicle trips (7 entering and 25 exiting) during the AM peak hour and 39 two-way trips (24 entering and 15 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
Mid-Rise Apartment (Land Use 221)	100 units	AM T=0.44(X) - 11.61 (23% in / 77% out) PM T=0.39(X) + 0.34 (61% in / 39% out)				7	25	24	15

NOTES:
1. Equations are for Land Use Code 221, *Trip Generation*, *11th Edition*, Institute of Transportation Engineers, 2021.
2. Units are number of residential apartments.
3. Rates are 'vehicles per hour per unit'; Trips generated are 'vehicles per hour for peak hours'.

Traffic Volumes - A turning movement count obtained at the Sackville Drive / Wilson Lake Road intersection during September 2015 indicated Sackville Drive two-way volumes of 1080 vehicles per hour (vph) (270 WB and 810 EB) during the AM peak hour and 1340 vph (890 WB and 430 EB) adjacent to the proposed Sackville Drive access. Assuming a 1.0% annual growth rate which would be reasonable for this location, projected 2022 volumes would include two-way volumes of 1160 vph (290 WB and 870 EB) during the AM peak hour and 1430 vph (950 WB and 480 EB).

Potential Impacts of Site Generated Trips - If it is assumed that vehicles will use the two parking areas in proportion to the percentage of spaces in each area compared to the total spaces, then the number of trips using each driveway will include:

- Regkay Court (76% of trips) - 24 two-way vehicle trips (5 entering and 19 exiting) during the AM peak hour and 30 two-way trips (18 entering and 12 exiting) during the PM peak.
- Sackville Drive (24% of trips) - 8 two-way vehicle trips (2 entering and 6 exiting) during the AM peak hour and 9 two-way trips (6 entering and 3 exiting) during the PM peak hour.

Since site generated trips are low, volumes using the Regkay Court driveway are not expected to have any significant impact on adjacent intersections or the regional road network.

While Sackville Drive volumes are high, the number of trips projected to use the Sackville Drive access are not expected to have and significant impact on Sackville Drive or other regional roads and intersections. If PM peak hour volumes entering the driveway are assumed to be split with 80% WB and 20% EB, then there would be about five left turning WB vehicles entering the driveway. Since the estimated number of left turning vehicles is only about 0.5% of the total WB volume on Sackville Drive, a left turn lane is not expected to be warranted.

Transit Service - Halifax Transit Route 83 provides service on Sackville Drive and Margeson Drive to Sackville Terminal and Route 183 also provides service on the same route with express buses to Halifax in the AM peak period and from Halifax in the PM peak.

Summary -

1. The proposed residential building on the west side of Regkay Court is planned to include approximately 100 apartment units and 152 parking spaces (116 inside and 36 surface).

2. The site is planned to have driveways on both Regkay Court and Sackville Drive. Regkay Court is a short cul-du-sac with connections to Bambrick Road, and then Margeson Drive at existing intersections south of the site. Sackville Drive which has a posted speed limit of 60 km/h is a two-lane road with gravel shoulders and open ditches on both sides.

3. The Regkay Court site driveway, which is at the south edge of the site, will serve the approximately 116 inside parking places which represent 76% of the proposed total 152 parking spaces. The proposed Sackville Drive access, which is between the Margeson Drive roundabout to the east and Wilson Lake Road to the west, will serve 36 ground level spaces representing 24% of the planned parking spaces.

4. Visibility is adequate on the Sackville Drive eastbound approach. Measured stopping sight distance on the westbound approach is 83 meters which is adequate for the posted speed limit of 60 km/h and the uphill 3% to 4% grade. Also, since westbound vehicles have just exited a roundabout, approach speeds are expected to be less than 60 km/h.

5. It is estimated that the proposed development will generate 32 two-way vehicle trips (7 entering and 25 exiting) during the AM peak hour and 39 two-way trips (24 entering and 15 exiting) during the PM peak hour.

6. Site generated trips using the Regkay Court driveway are not expected to have any significant impact on adjacent intersections or the regional road network.

7. While Sackville Drive volumes are high, the very small number of trips projected to use the Sackville Drive access are not expected to have and significant impact on Sackville Drive or other regional roads and intersections. Also, since the estimated number of left turning vehicles is only about 0.5% of the total WB volume on Sackville Drive, a left turn lane is not expected to be warranted.

Conclusion -

8. The low numbers of peak hour 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 ken.obrien@wsp.com or telephone 902-452-7747.

Sincerely:

Original Signed

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