



1262 BEDFORD HIGHWAY RESIDENTIAL DEVELOPMENT

Dear Mr Bagher

ISSUED:
May 18, 2023

Fathom Studio was retained to prepare a Traffic Impact Statement for a new development at 1262 Bedford Highway (PID 00435008), located in the northeast quadrant of the intersection of Bedford Highway with Meadowbrook Drive. The property currently includes a residential building identified as a heritage home that is to be relocated closer to Bedford Highway in order to construct a new 7/8-storey residential building with approximately 26 residential units and 18 underground parking spaces accessed by one driveway off of the Bedford Highway (13 spaces), and one off of Meadowbrook Drive (5 spaces).

EXISTING CONDITIONS

The **Bedford Highway** is two-lane urban roadway with center dedicated left turn lanes and sidewalk placed directly on the back of the curb on both sides of



the roadway. Painted bike lanes are included within the cross section west of Meadowbrook Drive. The roadway includes a bus lay-by lane on the south side of Bedford Highway directly across from the development and an inset parking lane on the same side as the development ending just east of the development



Meadowbrook Drive is a two-lane roadway which expands to a three lane cross section (single northbound lane and dedicated left and right turn lanes southbound) approaching the signalized intersection at Bedford Highway. Meadowbrook slopes down toward the Bedford Highway at about 11% and includes concrete

curb and sidewalks on both sides of the roadway. This grade results in an elevation difference of about 5 meters from the front of the property at Bedford Highway to the back of the property which limits the ability to access underground parking off Meadowbrook Drive.

FUTURE CONDITIONS

The Institute of Transportation Engineers (ITE) Trip Generation Guide (version 10) was used to estimate the number of trips from the proposed development and is shown in the table below.

Land Use	Trip Code	# Units	Variable	AM Peak			PM Peak		
				Enter	Exit	TOTAL	Enter	Exit	TOTAL
Mid Rise Residential	221	26	Units	2	7	9	7	4	11

The table shows that the proposed development creates about 9 new trips (two-way) during the AM peak hour and about 11 trips during the PM peak hour. These trips will be distributed over two driveways to the development. The lower P2 parking level connects to Bedford Highway about 22 meters east of Meadowbrook Drive and includes 13 spaces resulting in about 7 two-way trips during the AM peak (1 every 10 minutes) and 8 two-way trips during the PM peak. The upper P1 parking level connects to Meadowbrook Drive about 30 meters north of Bedford highway and includes 5 parking spaces equating to about 2 trips during the AM peak and 3 trips during the PM peak.

Given the volume of traffic on Bedford Highway and Meadowbrook Drive, the addition of these low volumes will have negligible impact from an operational perspective and will not warrant any infrastructure improvements to accommodate the new traffic.

DESIGN CONSIDERATIONS

The grades on Meadowbrook Drive combined with the size of the developable lot make access to both parking levels off Meadowbrook impractical therefore the Bedford Highway driveway is necessary to access the lower parking level. This arrangements is nearly identical to the law office in the northwest quadrant of the same intersection that includes accesses to Bedford Highway and Meadowbrook Drive for about 15 parking spaces.

Sight distances from the Bedford Highway driveway are very good in both directions provided that existing vegetation is removed from the required sight lines and any new construction related to the parkade driveway do not obstruct sight lines to vehicles or pedestrians.



Bedford Highway - Facing East



Bedford Highway - Facing West



Meadowbrook - Facing South



Meadowbrook - Facing North

Sightlines along Meadowbrook are adequate as they are controlled to the south by the signalized intersection at Bedford Highway and the relatively slow speeds required when navigating the intersection. Sightlines to the north are impacted by the vertical curvature of the roadway, though meet the minimum 105 meter sight distance (left turn) requirements recommended in the Transportation of Canada's Geometric Design Guide. Any risks associated with the Meadowbrook access are aided by the presence of two southbound lanes and the minimal volume of traffic using this driveway. Further operations at this driveway are very similar to numerous other residential and commercial driveways in this section of Meadowbrook Drive.

In general, access to the site meets the intent of HRM Streets By-Law S-300, with the exception of the 30m spacing requirement for the Bedford Highway driveway from the signalized Meadowbrook intersection. As noted in the Streets By-Law, the Engineer may approve such conditions when there is no other means to access the lot. In this context, we provide the following comments:

1. Access from the lower volume Meadowbrook was pursued and parking spaces were maximized, though are limited due to the grades on Meadowbrook and the size of the development, which restricts access to multiple levels of parking through a single driveway.
2. The separation of the Bedford Highway Driveway from the Meadowbrook intersection has been maximized based on the location of the existing property lines.
3. Sight distances on Bedford Highway significantly exceed minimum requirements minimizing operational and safety risks.
4. Sidewalk is located adjacent to the curb on Bedford Highway allowing improved sightlines to pedestrians and cyclists in the vicinity of the driveway.
5. A westbound left turn is present on Bedford Highway but is limited to providing access to a small low-volume parking lot and therefore minimizing any interference to vehicles entering or exit this development at the Bedford Highway driveway.
6. The presence of traffic signals at Meadowbrook help provide gaps in traffic to facilitate left turn movements from the driveway.
7. This driveway will operate in a similar fashion and with similar or lower volumes than many other adjacent driveways along the Bedford Highway.

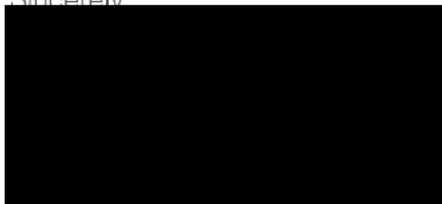
CONCLUSIONS

Based on the review of the proposed development volumes to and from the site we have no noticeable operational impacts on traffic on Bedford Highway or Meadowbrook Drive. Given the size of the site and the grades on Meadowbrook Drive, two access driveways are required to accommodate a minimum amount of underground parking for the development and maximizing the spaces off the lower volume Meadowbrook Drive was pursued. While the Bedford Highway driveway has less separation from Meadowbrook than recommended in By-Law S-300, the safety and operational risks are considered to be minimal and are relatively consistent with other nearby driveways. Other than appropriate driveway design, no other infrastructure upgrades are required to support this development.

Residents are afforded convenient transit services immediately adjacent to the development including routes 8 and 93 that travel along Bedford Highway and Route 196 that runs along both Bedford Highway and Meadowbrook Drive. Abundant active transportation opportunities also exist with sidewalks present surrounding the development, bike lanes on Bedford Highway west of Meadowbrook Drive, an extensive trail network surrounding DeWolf Park and the Bedford Waterfront, and planned local street bikeways along Shore Drive.

If you have any questions or comments regarding the content of this letter, please don't hesitate to contact the undersigned.

Sincerely,



Senior Transportation Engineer
www.fathomstudio.ca (formerly Ekistics Planning & Design and Form:Media)

40 King Street, Dartmouth, NS
B2Y 2R4

