

## TRAFFIC IMPACT BRIEF

### Proposed Residential Development

**97 Gorham Road**

**Town of Fort Erie  
Ontario**

*Submitted on behalf of BOMOFIVE Inc.*

*Prepared by: Quartek Group Inc.  
Engineers, Architects & Planners  
89-91 St. Paul Street, Suite 100  
St. Catharines, ON L7R 3M3  
905-984-8676  
[www.quartekgroup.com](http://www.quartekgroup.com)*



*November 2020  
Quartek Reference Project # 19218*

# 1.0 Introduction and Study Area

This Traffic Impact Brief (TIB) is submitted on behalf of BOMOFIVE Inc. in support of site plan approval for a proposed residential development located at 97 Gorham Road within the Town of Fort Erie. The property is located on the west side of Gorham Road, north of Farr Avenue. The nearest public road intersection with Gorham Road is Farr Avenue (±90 metres south of the proposed driveway midpoint). Highland Drive is located approximately 240 metres north of the proposed driveway.

Figure 1 shows the proposed site plan, including the layout of the proposed building, driveway access and parking stalls. The site is approximately 0.65 hectares (1.61 acres) in size. The building has 1,387m<sup>2</sup> of overall floor space.

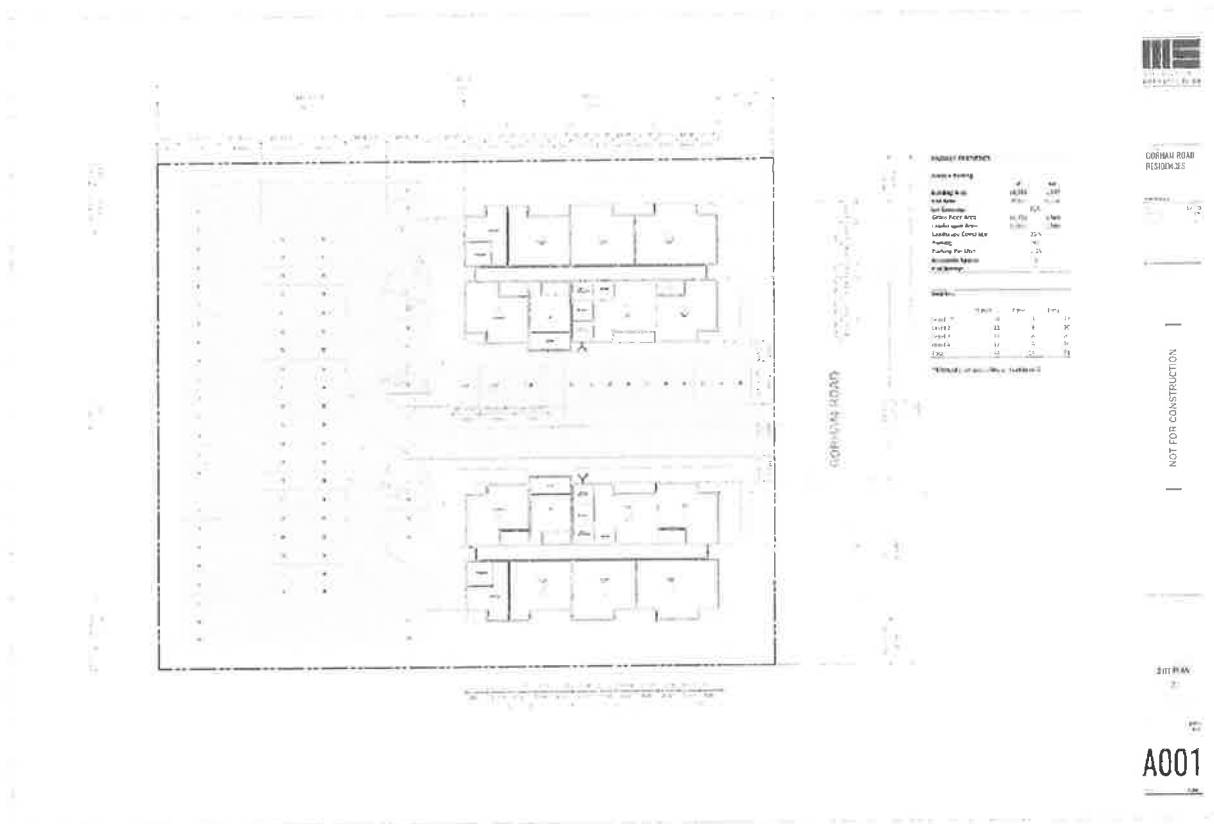


Figure 1 – Site Plan

Within Niagara Region, a detailed Traffic Impact Study is usually required when more than 100 new peak hour auto trips are generated as a result of a new development. In a pre-consultation discussion with the Town and Regional traffic sections, it was confirmed that only a TIB is required and the TIB should review and comment on the access and sight line issues associated with the development in proximity to the Gorham Road/Farr Avenue intersection.

## 2.0 Existing Conditions

Gorham Road south of Dominion Road is a local road under the jurisdiction of the Town of Fort Erie. It has a posted speed limit of 50 km/hr and has one (1) lane in each direction. At the intersection with the Farr Avenue, there are channelized right turn lanes for both directions.

Farr Avenue is a local road under the jurisdiction of the Town of Fort Erie. East of Gorham Road, Farr Avenue has a posted speed of 40km/hr and has one (1) lane in each direction. West of Gorham Road, Farr Avenue has a posted speed of 60km/hr and has one (1) lane in each direction. There is a channelized right turn lane for southbound vehicles. There is no channelized right turn lane onto Gorham Road for northbound vehicles.

There are existing residential driveways on Gorham Road north of the proposed development.

## 3.0 Estimated Development Traffic Activity

The property will front onto Gorham Road and is to be serviced by a single in/out driveway connecting to Gorham Road. The site plan access driveway meets applicable municipal standards and the parking lot has been designed to meet municipal parking requirements. The proposed development will include a total of 72 units within two (2) four-storey buildings; 44 of which are one-bedroom units and 28 of which are two-bedroom units.

For residential mid-rise apartment units, the number of dwelling units was used as the variable for estimating the trips. (ITE Trip Generation 7<sup>th</sup> Edition, Land Use code 223).

Based on this edition, the equation rates are as follows:

$$T = 0.46(X) - 14.10 \text{ (AM Peak Hour)}$$

$$T = 0.53(X) - 11.27 \text{ (PM Peak Hour)}$$

The variable X is the number of units.

$$\text{AM Peak Hour would be } 19 = (0.46*72) - 14.10$$

$$\text{PM Peak Hour would be } 27 = (0.53*72) - 11.27$$

For 72 dwelling units, the total trips would be 19 for the AM peak hour and 27 for the PM peak hour.

## 4.0 Sight Distances

Recommended guidelines for sight distances were determined using the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads, Chapter 9 - Intersections. Based on the existing 50km/h posted speed, a 95m sight distance is recommended for the right turn outbound (heading south) of the parking lot and a 115m sight distance is recommended for the left turn inbound (northbound vehicles). There is adequate

sight distance for the right turn, however the left turn sight distance is lacking due to the slope of the road from the intersection of Gorham Road and Farr Avenue. 89m is the available sight distance (measured from the centreline of Farr Avenue to the centre of the proposed access). If the roadway speed was reduced to 40km/h, the required sight distance would be 93.5m; still greater than what is available. Drawing 19218-TR shows the available and proposed sight line distances.

It is recommended that a 'modified' ENTRANCE Wc-8L warning sign (replace truck symbol with a car symbol) be installed either within the northeast quadrant of the intersection or just south of the intersection, in order to provide advance warning of the proposed access to drivers so that they are prepared to react to the associated entrance/exit. A 'HIDDEN DRIVEWAY' tab sign (modified Wc-8t) can be attached underneath the modified Wc-8L sign to convey in words the meaning of the car entrance symbol.

#### 4.0 Conclusions and Recommendations

Based on the review of the existing roadway conditions on Gorham Road and the proposed development access location, the following conclusions have been reached:

1. The proposed development is expected to generate approximately 19 AM peak trips and 27 PM peak trips on a typical weekday.
2. The traffic generated will be within existing localized operational capacity of the intersection and does not warrant a detailed transportation impact analysis.
3. There is adequate sight distance for vehicles to turn right (heading southbound) from the access.
4. There is inadequate sight distance for vehicles to turn left (heading northbound) from the access. To address this concern, it is recommended to install 'modified' ENTRANCE signs/HIDDEN DRIVEWAY tabs within the northeast quadrant of the Gorham Road/Farr Avenue intersection or just south of the intersection,

Prepared by:



---

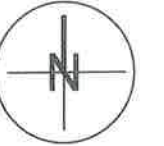
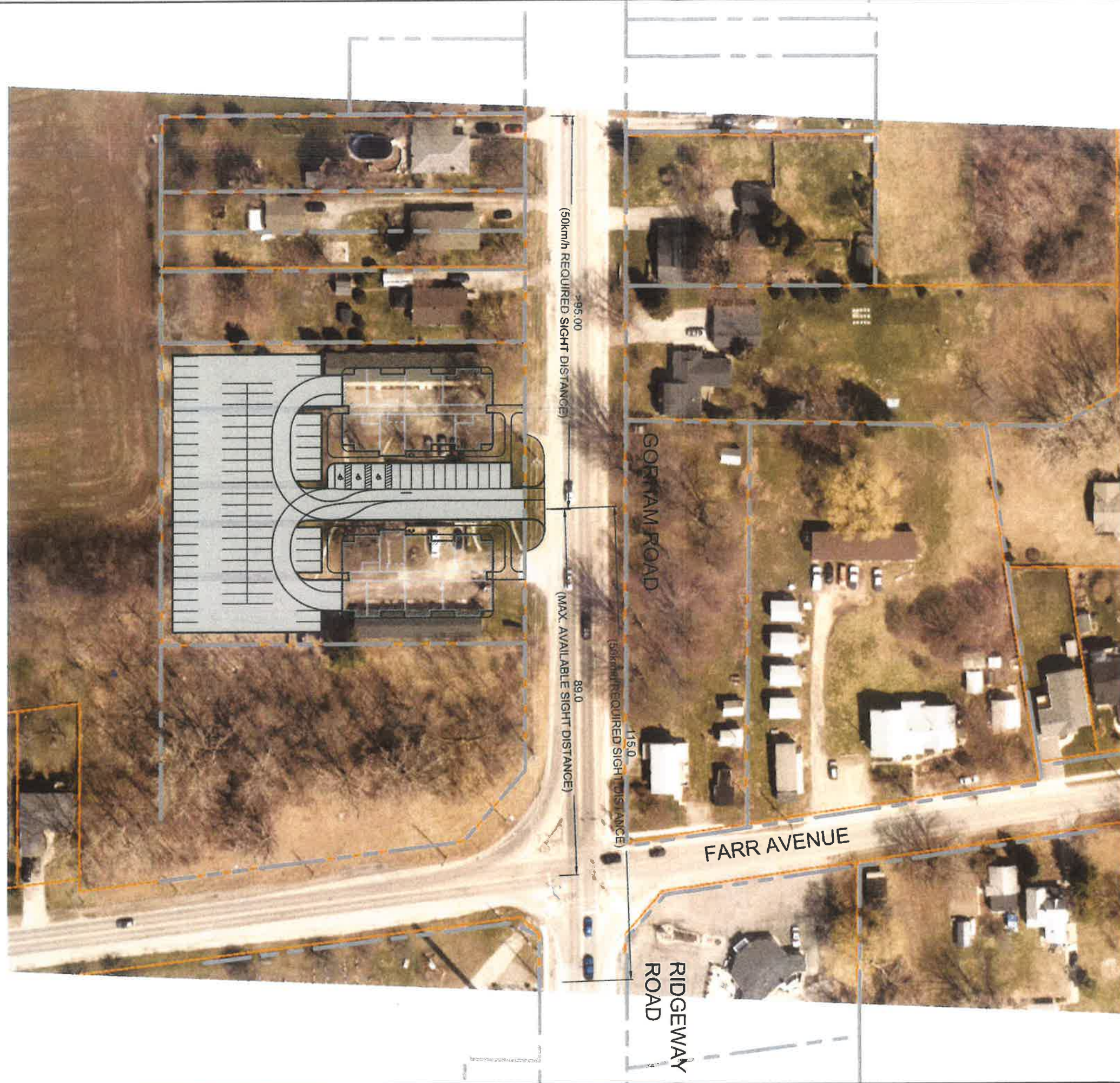
Eric Flora, P.Eng., CET  
Senior Civil Engineer



---

Nick Sully, EIT  
Civil Engineer-in-Training





A TRAFFIC IMPACT BRIEF 26 NOV 2020 NS			
issue	issued for	date	init.

seal

Do not scale drawings. Report any discrepancies to Quartek Group Inc. before proceeding.

Drawings must be sealed by the Architect and / or Engineer prior to the use for any building permit applications and / or government approval. Seals must be signed by the Architect and / or Engineer before drawings are used for any construction.

All construction to be in accordance with the current Ontario Building Code and all applicable Ontario regulations.

All drawings and related documents remain the property of Quartek Group Inc., all drawings are protected under copyright and under contract.



T • 905 984 8676  
 89 - 91 St Paul Street, Suite 100,  
 St. Catharines, ON, L2R 3M3  
 www.quartekgroup.com

project title

97 GORHAM ROAD

RIDGEWAY, ON

drawing title

TRAFFIC SIGHT DISTANCES

drawn by designed by

NS EF/NS

scale date

1:1000 19/8/2020

job number issue

19218 A

drawing number

19218-TR