

December 15, 2020

Mr. Takashi Tada
Land Use Director/Town Planner
Town of Groton Planning Board
173 Main Street
Groton, MA 01450

RE: Nitsch Project #13346.15
Village at Shepley Hill
Traffic Review Comments
Groton, MA

Dear Mr. Tada:

Nitsch Engineering has received the Transportation Impact Assessment (TIA) report for the proposed residential development to be known as The Village at Shepley Hill, located off Longley Road and Sand Hill Road in Groton, Massachusetts, dated September 2020 prepared by Vanasse & Associates Inc. (VAI). This letter summarizes our review of the report.

Based on Nitsch Engineering's review of the TIA report, we have determined that the traffic study and method of analysis comply with industry practices and current transportation engineering standards in addressing the following key elements:

- Existing Conditions;
- Traffic Data Collection;
- Seasonal and COVID-19 Pandemic Adjustment;
- Crash Analysis;
- 7-Year Build Horizon;
- Annual Background Growth Rate;
- Site-Generated Trips;
- Trip Distribution and Assignment;
- HCM Capacity Analysis with delay, Level of Service (LOS), v/c ratios, and queues; and
- Sight Distance Evaluation.

However, based on Nitsch Engineering's review of the report, we offer the following comments for consideration:

1. Even though the number of provided parking spaces will be in accordance with the Town's Zoning Bylaw, please also include the minimum number of parking spaces required for the development per ITE Parking Generation, 5th Edition, and compare with the proposed number of parking spaces.
2. The COVID-19 adjustment methodology indicates that the volumes "were adjusted upward by 28% based on a comparison of August 2019 and August 2020 traffic volume data obtained from MassDOT Continuous Count Station No. 4090." Per MassDOT's Engineering Directive E-20-005 issued in May 2020, historical intersection data should be used to develop 2020 Existing Condition volumes. There is no mention in the report of correspondence with the Town of Groton to obtain this information. If the Town was contacted and no historical data exists within the last 5 years, please note that in the report. If there is historical intersection data, please recalculate the 2020 Existing, 2027 No-Build, and 2027 Build volumes.
3. The Traffic Volumes section states, "These time periods [for AM and PM traffic counts] were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network." However, for trip generation, the peak hour of adjacent street traffic was used for the morning and evening peak hours, rather than the peak hour of the generator. Using the peak hour of the generator would result in higher numbers of trips and a more conservative analysis. Please explain why the peak hour of adjacent street traffic was used for the morning and evening peak hours, or please update the trip generation using the peak hour of the generator.

4. In the traffic volume comparison (Table 6), why were 33 units of conventional multifamily residential used instead of 28 to match the proposed development? Please consider revising to 28. Also, the first paragraph on page 15 erroneously states 35 units. Please correct this number.
5. Please consider discussing mode share for site-generated trips, even if only to state that all trips were assumed to be vehicular.
6. Was there a reason that the Traffic Operations Analysis used HCM 2010 methodology instead of HCM 6?
7. The owner should consider establishing a Transportation Demand Management plan to include, for example, providing shuttle service for residents and providing LRTA Road Runner program information, per applicable Metropolitan Area Planning Council (MAPC) guidelines.
8. Please provide a diagram showing a turning analysis using an emergency vehicle for interior circulation and for the development access points on Longley Road and Sand Hill Road.
9. Please correct the Project Title at the bottom of the Intersection Crash Rate Worksheets in the Appendix.

We recommend that the Applicant review these comments and make appropriate revisions or additions prior to Town of Groton Planning Board approval of the traffic study.

We are available to discuss this review in person with the Applicant. If the Planning Board has any questions, please call.

Very truly yours,

Nitsch Engineering, Inc.


Adina Alpert, PE, ENV SP, PTOE
Senior Project Engineer

Approved By:


Bryan Zimorka, PE, ENV SP
Project Manager