



March 22, 2022

Ref: 20604.00

Mr. Nick Laraway
c/o Brett Steenburgh, PE, PLLC
Brett L. Steenburgh PE PLLC
2832 Rosendale Road
Niskayuna, NY 12309

Re: Planning Board Comments, Carver Court Cluster Subdivision, Upper Mannix Road, Town of East Greenbush, NY

Dear Mr. Laraway,

VHB Engineering, Surveying, Landscape Architecture, and Geology, PC (VHB) completed a traffic impact evaluation dated April 20, 2021, associated with the proposed Carver Court Cluster residential subdivision development. This letter provides supplemental analyses in response to comments and questions raised at the February 9, 2022, Planning Board meeting.

Comment 1: The existing traffic on Thompson Hill Road includes a large amount of cut-through traffic and the proposed project will increase the amount of cut-through traffic.

Response: License plate surveys were conducted at the Thompson Hill Road intersections with US Route 4 and Mannix Road to identify the number of vehicles travelling through Thompson Hill Road that could be considered a cut-through trip. Data was collected on Saturday, March 5, 2022, during the midday peak period from 11:00 a.m.-1:00 p.m. and on Tuesday, March 8, 2022, during the weekday AM peak period from 7:00-9:00 a.m. and the weekday PM peak period from 4:00-6:00 p.m. The peak hour traffic on Thompson Hill Road is summarized in Table 1.

Table 1 Peak Hour Through Traffic on Thompson Hill Road

Peak Hour	Total Trips	Total Through Trips		
		Total	Police and/or Bus	Passenger Vehicle
Saturday Midday	20	8 (2 NB and 6 SB)	0	8
Weekday AM	19	9 (2 NB and 7 SB)	2	7
Weekday PM	35	13 (2 NB and 11 SB)	0	13

Table 1 shows that through traffic on Thompson Hill Road ranges from seven to 13 vehicles during the peak hours which equates to one through trip on Thompson Hill Road every 4.5 to 8.5 minutes during the peak hours. Peak hour through traffic is heavier in southbound direction and ranges from 75 to 85 percent of the through traffic during the identified peak hours.



The traffic evaluation prepared for the project dated April 20, 2021, noted 65% of the site traffic is expected to travel to and from the west on Upper Mannix Road toward US Route 4. This distribution of traffic will result in an increase of 54 vehicle trips (14 eastbound and 40 westbound) traveling to and from the west on Upper Mannix Road during the AM peak hour and 73 vehicle trips (46 eastbound and 27 westbound) traveling to and from the west during the PM peak hour. To estimate a worst-case condition, if all of the site generated traffic travels to and from the west on Upper Mannix Road there would be an increase of 83 vehicle trips (21 eastbound and 62 westbound) on Upper Mannix Road during the AM peak hour and 111 vehicle trips (70 eastbound and 41 westbound) during the PM peak hour.

The through traffic on Thompson Hill Road was compared to the ETC+10 (estimated time of completion plus 10 years) traffic volumes contained in the NYSDOT Final Design Report for the US Route 4 & Mannix Road Intersection Improvement Project PIN 1757.99 from September 2012. Based on the distribution of traffic at the US Route 4 at Upper Mannix Road intersection, 40% of the site-generated traffic is expected to travel to and from the north and 60% is expected to travel to and from the south. The weekday AM and PM peak hour through volumes on Thompson Hill Road represent one to ten percent of the weekday AM and PM peak hour traffic volumes turning to and from US Route 4 at Upper Mannix Road. Using the highest value of ten percent of the peak hour traffic, Table 2 summarizes the additional through traffic on Thompson Hill Road that may be associated with the proposed project using the trip distribution pattern included in the April 20, 2021, traffic evaluation and a worst-case condition assuming 100% of the site traffic travels to and from the west.

Table 2 Potential Site-Generated Peak Hour Through Traffic on Thompson Hill Road

Distribution Condition	AM Peak Hour			PM Peak Hour		
	Northbound	Southbound	Total	Northbound	Southbound	Total
April 20, 2021 Distribution	2	1	3	1	2	3
100% Distribution	3	1	4	2	3	5

The table shows that with ten percent of the site-generated traffic travelling to and from the north on US Route 4 using Thompson Hill Road, an increase of 3 trips may be experienced during the AM and PM peak hours which equates to one vehicle every 20 minutes. If all of the site-generated traffic travels to and from US Route 4 (no traffic travelling to Best Road), then the peak hour increase on Thompson Hill Road would be 4 vehicles during the AM peak hour and 5 vehicles during the PM peak hour which equates to one vehicle every 12 to 15 minutes.

Information published by the Capital District Transportation Committee (CDTC) notes that local roads can accommodate 625 vehicles per hour per direction while maintaining acceptable operations. Residents of Thompson Hill Road may notice an increase in traffic with construction of the proposed project; however, the roadway is currently serving 19 to 35 vehicles during the weekday peak hours. Thompson Hill Road has sufficient capacity to accommodate the maximum potential addition of three to five peak hour trips associated with the proposed project. The proposed project will not have a significant impact on traffic operations and therefore no traffic-related mitigation is recommended.



Comment 2: What traffic calming measures can be implemented to reduce the amount of cut-through traffic on Thompson Hill Road?

Response: Based on a review of Thompson Hill Road and the surrounding area, the following measures are offered for consideration by the Town to reduce the potential for through traffic on Thompson Hill Road:

- **Alter the flow of traffic on Thompson Hill Road to one-way southbound along the entire length of the roadway.** This would eliminate traffic travelling northbound from Upper Mannix Road onto Thompson Hill Road to access US Route 4 northbound. The travel pattern change would require residents to arrive at their homes from the north via US Route 4 and depart their homes via Upper Mannix Road. The access change would also impact travel patterns for guests, deliveries, school busses, etc. on Thompson Hill Road.
- **Alter the flow of traffic on Thompson Hill Road to one-way southbound at the south end of the roadway.** This would eliminate traffic traveling northbound from Upper Mannix Road onto Thompson Hill Road to access US Route 4 northbound. Altering to one-way southbound flow on Thompson Hill Road only at the south end of the roadway would minimize the impacts to residents on Thompson Hill Road but would still restrict access for residents accessing their homes from Upper Mannix Road and diverting them to US Route 4. Similar impacts will result for guests, deliveries, school busses, etc. traveling to Thompson Hill Road from Upper Mannix Road.
- **Dead-end Thompson Hill Road at the north end of the roadway eliminating the connection between Thompson Hill Road and US Route 4.** Due to the length of Thompson Hill Road a secondary emergency access would likely need to be maintained and a cul-de-sac may be needed for a vehicle turnaround. This change would force all traffic accessing Thompson Hill Road to utilize Upper Mannix Road.
- **Dead-end Thompson Hill Road at the south end of the roadway eliminating the connection between Thompson Hill Road and Upper Mannix Road.** Due to the length of Thompson Hill Road a secondary emergency access would likely need to be maintained and a cul-de-sac may be needed for a vehicle turnaround. This change would force all traffic accessing Thompson Hill Road to utilize US Route 4.
- **Install speed humps on Thomson Hill Road.** Installation of speed humps would reduce the attractiveness of Thompson Hill Road to cut through traffic. The speed humps would impact all travelers on Thompson Hill Road and snow removal during inclement weather. To minimize impacts during winter months, removeable speed humps could be considered and removed during the winter.
- **Restrict right-turn movements from westbound Upper Mannix Road onto Thompson Hill Road with installation of a "No Right Turn" sign and/or a raised island to physically restrict the right-turn movement.** This restriction would apply to westbound traffic on Upper Mannix Road turning right onto Thompson Hill Road to access a residence or to use Thompson Hill Road to reach US Route 4 northbound. VHB has concerns with the placement of a turn restriction sign on Upper Mannix Road at Thompson Hill Road due to the proximity of this intersection to the roundabout at US Route 4 and potential for driver confusion; therefore, we defer the decision for the placement of this sign to Town technical staff and NYSDOT.

As noted, the proposed project will not have significant impact on traffic operations; therefore, no traffic-related mitigation is recommended. The above identified traffic calming measures are included for Town consideration.

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If you have any questions on the above evaluation, please call.

Sincerely,

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C.

A handwritten signature in blue ink that reads "Wendy C. Holsberger" with a long horizontal flourish extending to the right.

Wendy C. Holsberger, PE, PTOE
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A handwritten signature in blue ink that reads "Alanna M. Moran" with a long horizontal flourish extending to the right.

Alanna M. Moran, PE
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