Street Traffic Studies, Ltd.

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September 19, 2022

Ms. Kelly Duty
Town Planner
Town of Thurmont
615 East Main Street
Thurmont, MD 21788

RE: Simmers Property
STS No.: 6834

Dear Ms. Duty:

This is in response to Town concerns that the evening peak hour would be influenced by the NVR shift change and that it would not fall within the typical 4:00 to 6:00 PM evening peak hour time period.

To address this concern, turning movement counts were conducted at all of the study intersections on Thursday, September 8, 2022 between the hours of 1:00 to 6:00 PM and also included the intersection of Graceham Road and Seiss Road. Based on the 2022 counts, it was determined that the evening peak hour at the East Main Street/North Church Street-Water Street and East Main Street/Apple Church Road fell within the typical evening peak hour period of 4:00 to 6:00 PM and was not impacted by the NVR shift change. All of the remaining intersections were influenced by the shift change as the peak hour volumes were recorded between 2:45 to 3:45 PM.

A comparison was made between the counts conducted on Wednesday, May 19, 2021 and those conducted on Thursday, September 8, 2022 to determine whether or not COVID had any impact on the counts used in the traffic study. The comparison revealed that when the same peak hour volumes were compared, the 2021 and 2022 counts were similar and fell within what would normally be considered daily variation in traffic. The only exception to this was at the East Main Street/Apple Church Road intersection where the 2022 volumes were higher than what was recorded in 2021.

Based on the above, it was determined that the traffic impact study would be amended to include the higher volumes at the East Main Street intersections and include the Graceham Road/Seiss Road intersection; however the remaining intersections would not be adjusted.

To address the different evening peak hour at the remaining intersections, it was determined that an addendum to the traffic study would be prepared which would analyze the 2:45 to 3:45 time period.

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The existing 2:45 to 3:45 PM peak hour volumes are shown in Exhibit 3. These volumes were adjusted by the same 1.5% growth rate used in the traffic study and the 2024 Adjusted Volumes are shown in Exhibit 4. For simplicity, the same trips generated by the planned developments were used in the addendum even though the trip generation rates were based on the 4:00 to 6:00 PM time period. They Background Volumes are then shown in Exhibit 7.

Since the trip rates used in the original traffic study were based on the ITE trip rates used for an evening peak hour between the hours of 4:00 to 6:00 PM and the trip generation in the 2:45 to 3:45 time period would be different, the diurnal data provided by the ITE was used to generate trips for the proposed uses during the 2:45 to 3:45 PM peak hour. The results of this analysis are shown in Table 1.

TABLE 1
TRIP GENERATION

LAND USE	**DAILY**	**2:45 TO 3:45 PM**	
		IN	**OUT**
Multi-family (220)			
Trips/DU	T = 6.41(X) + 75.31	0.3%	0.3%
Trips/172 DU's	1,178	18	12
Assisted Living (254)			
Trips/Bed	T = 2.6(X)	9.4%	7.9%
Trips/54 Beds	140	7	6
Day Care Center (565)			
Trips/Student	T = 3.56(X) + 47.23	5.5%	5.5%
Trips/188 Students	717	20	20
Internal Capture (50%)		10	10
Off Site Trips		10	10
Total Site Trips		35	28

The site generated trips were assigned to the road network using the same trip distributions used in the traffic study. The site generated trips are shown in Exhibit 11 and the Total Traffic Volumes are shown in Exhibit 12.

Capacity analyses were performed at the intersections for both the Background and Total Traffic Volumes to determine the impact the proposed development would have on the study intersections. The results of this analysis, are shown in Table 2.

TABLE 2
CAPACITY ANALYSES RESULTS
(2:45 to 3:45 PM PEAK HOUR)

INTERSECTION	BACKGROUND VOLUMES	TOTAL VOLUMES
Apple Church Rd @ Carroll St		
NB	B(14.3)	C(18.2)
SB	B(10.9)	B(12.7)
EB	B(12.1)	C(18.2)
WB	B(12.2)	B(13.5)
Apple Church Rd @ Roddy Rd		
NB	A(8.5)	A(8.6)
SB	B(10.8)	B(10.9)
EB	A(8.7)	A(8.8)
WB	A(9.4)	A(9.5)
Emmitsburg Rd @ Eyler Rd		
NB Left Turn	A(0.0)	A(0.0)
SB Left Turn	A(7.5)	A(7.6)
EB	A(0.0)	A(0.0)
WB	B(11.4)	B(11.8)
Emmitsburg Rd @ Church St		
SB Left Turn	A(9.7)	A(9.7)
WB	E(43.3)	E(43.3)
Church st @ Woodside Ave		
SB Left Turn	A(9.1)	A(9.1)
WB	C(22.5)	C(22.5)

X(00.0) - Level of Service (Control Delay)

A review of the capacity analyses results shown above reveal that the only movement which experiences unacceptable delay are the westbound movements on Emmitsburg Road at Church Street and the proposed development does not increase the delay at this intersection. In fact the only intersection where the proposed uses increases the projected delay by more than a second, is at the Apple Church Road/Carroll Street intersection and the projected delays at this intersection are still very good. All of the remaining intersections are projected to continue to operate at acceptable levels of service with the full development of the proposed use.

Please review the above along with the enclosed attachments and let me know if you have any questions or comments.

Sincerely,

Mike Nalepa
Senior Traffic Engineer

Enclosures