

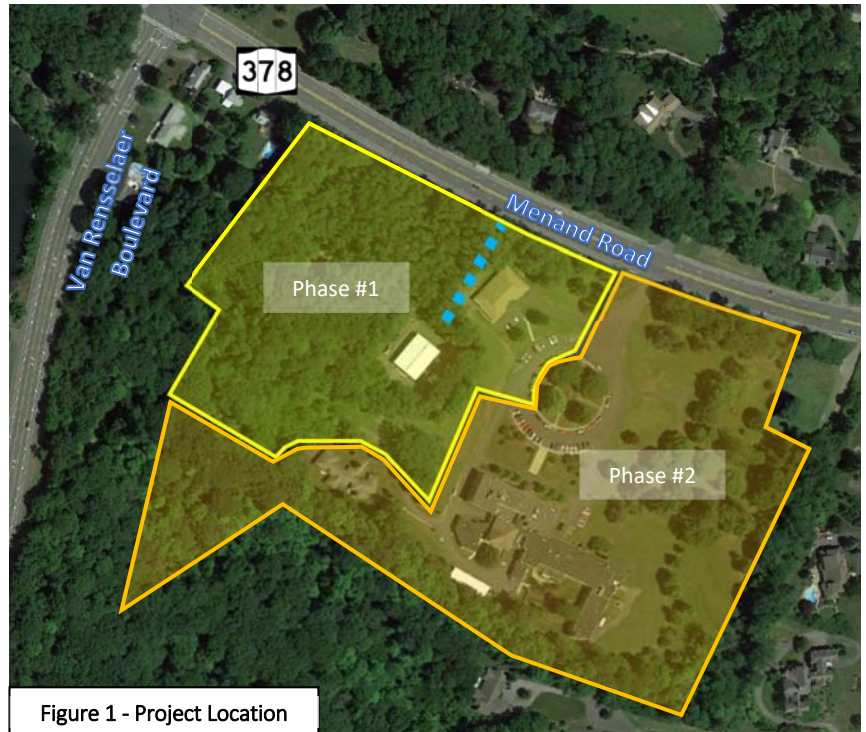
January 12, 2022

Mr. Dan Hershberg, P.E. & L.S.
Hershberg & Hershberg
18 Locust Street
Albany, New York 12203

RE: Traffic Assessment, Daughters of Charity Development, Menand Road, Village of Menands, Albany County, New York; CM Project No. 121-393

Dear Mr. Hershberg:

A *Traffic Assessment* has been completed for the proposed *Daughters of Charity Development* located on the south side of Menand Road east of Van Rensselaer Boulevard in the Village of Menands. The proposal consists of the construction of an independent/assisted living development for senior care. This evaluation is based on information provided in the “Site Plan Phase #1” and “Site Plan Phase #2” prepared by *Hershberg & Hershberg* dated November 8, 2021 included under Attachment A. This letter provides a trip generation estimate for the proposed phased development and includes a sight distance assessment for the new site access driveway. A map illustrating the project location is shown on Figure 1.



1.0 Project Description and Access

The proposed project includes the construction of various independent care/assisted living facilities for seniors that will be built-out in two phases. It is noted that the existing *St. Louise House* and *DePaul House* facilities currently located on the site serve active and senior nuns associated with the *Daughters of Charity*. It is noted that these structures will remain after completion of Phase #1; however, they will be removed in order to accommodate Phase #2 construction. The proposed land uses are summarized in Table 1 which include a breakdown of the anticipated phasing.

Table 1 – Land Use Summary

Phases	Existing Uses	Proposed Uses
Phase #1	St. Louise House DePaul House	Structure #1 = 76 Independent/Assisted Living Units Structure #2 = 28 Independent Care/Assisted Living Units Structure #2 = 36 Assisted Living/Memory Care Units
Phase #2	Remove Existing St. Louise House and DePaul House Buildings	60 Duplex and Triplex Cottage Units for Seniors

Access to Phase #1 of the development will be provided via one new driveway on Menand Road located approximately 275-feet west of the existing access to the *St. Louise House* and *DePaul House* facilities. It is

noted that the existing driveway will be eliminated after completion of Phase #2. The detailed design of the site driveway intersection on Menand Road will require approval and permitting by NYSDOT. Phase #1 of the project is expected to be completed and fully occupied in 2024 while Phase #2 will be completed in 2030.

Menand Road (NY Route 378) is a state road classified as an urban minor arterial with two 12-foot wide travel lanes in each direction, a five foot wide center median, and five foot wide shoulders in the vicinity of the site. Menand Road travels in an east-west direction from US Route 9 to NY Route 32 and the posted speed limit is 45-mph. Data published by the New York Department of Transportation (NYSDOT) in the latest version (2017) of the *Pavement Data Report* indicates that the pavement on Menand Road is in good condition. Sidewalks are not provided on Menand Road near the site and the land uses along the roadway generally consist of residential homes, vacant land, and the *Ganser-Smith Memorial Park*. Creighton Manning collected travel speed data on Menand Road near the site driveway on Wednesday, December 15, 2021. The 85th percentile operating speed on Menand Road was measured to be 51-mph in the eastbound direction and 53-mph in the westbound direction. The detailed speed data is included under Attachment B. Traffic volume data collected by NYSDOT in November 2017 indicates that Menand Road serves approximately 11,810 vehicles per day (vpd) in the project corridor.

2.0 Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from the project site. The Institute of Transportation Engineers (ITE) *Trip Generation*, 11th edition, provides trip generation data for various land uses based on studies of similar existing developments located across the country. The trip generation for the proposed project was estimated using the following land use codes (LUCs) and are summarized on Table 2 for the AM and PM peak hours:

Phase #1

- LUC 253 – Congregate Care Facility
- LUC 254 – Assisted Living

Phase #2

- LUC 251 – Senior Adult Housing - Single Family

Table 2 – Trip Generation Summary (New Buildings)

Land Use		Size	LUC	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Phase #1	Independent/Assisted Living Units	76 Units	253	4	3	7	7	8	15
	Independent/Assisted Living Units	28 Units	253	2	1	3	3	4	7
	Assisted Living/Memory Care Units	36 Units	254	3	3	6	3	6	9
	Total Phase #1			9	7	16	13	18	31
Phase #2	Senior Cottages	60 Units	251	8	18	26	18	12	30
Total Development (Phase #1 and Phase #2)				17	25	42	31	30	61

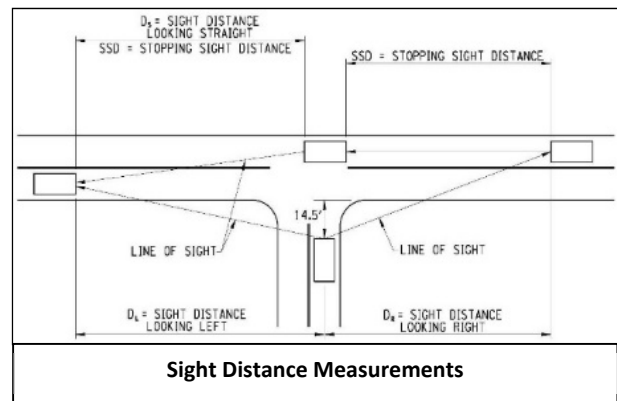
Table 2 shows that Phase #1 (2024) of the proposed development is expected to generate 16 new vehicle trips during the AM peak hour and 31 new vehicle trips during the PM peak hour. In addition, the construction of the 60 senior cottages associated with Phase #2 (2030) will generate 26 new vehicle trips during the AM peak hour and 30 new vehicle trips during the PM peak hour. This indicates that the proposed site will generate a total of 42 trips during the AM peak hour and a total of 61 trips during the

PM peak hour after full build-out of the site. It is noted that the existing *St. Louise House* and *DePaul House* facilities currently generate 15 trips during the AM peak hour and 6 trips during the PM peak hour of adjacent street traffic. This indicates that the site is already generating some traffic to the study area and that construction of Phase #2 will actually just replace some existing traffic.

The magnitude of the new vehicle trips generated by the site is less than the NYSDOT and ITE threshold of 100 site generated vehicles on any one intersection approach for needing off-site intersection analysis. This guidance was developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off-site intersections and screen out locations from requiring detailed analysis that do not reach the 100-vehicle threshold and are unlikely to require mitigation. The anticipated traffic volumes for the *Daughters of Charity* development will be below the 100-vehicle threshold indicating that detailed intersection analysis is not needed and that the site generated traffic will be accommodated by the existing roadway network.

3.0 Sight Distance

A sight distance evaluation was completed at the proposed driveway intersection with Menand Road. The sight distance was measured from the perspective of a vehicle exiting the driveway and for a vehicle traveling west along Menand Road looking straight ahead to turn left into the driveway. The available intersection sight distance on a side street should provide drivers a sufficient view of the intersecting street to allow passenger cars to enter or exit the intersection without excessively slowing vehicles traveling at or near the operating speed on the intersecting mainline.



Stopping sight distance was also measured on Menand Road at the proposed driveway location. Stopping sight distance is the length of the roadway ahead that is visible to the driver. The available stopping sight distance on a roadway should be of sufficient length to enable a vehicle traveling at or near the operating speed to stop before reaching a stationary object in its path. The diagram on the previous page illustrates these sight distance measurements.

The sight distances measured in the field were compared to the guidelines presented in *A Policy on Geometric Design of Highways and Streets, 2018* published by the American Association of State Highway Transportation Officials (AASHTO) and NYSDOT design guidance (EB 17-007) for the measured 50-mph operating speed in the eastbound direction and the measured 55-mph operating speed in the westbound direction. The results of the sight distance analysis are summarized in Table 3.

Table 3 – Sight Distance Summary (feet)

Intersections		Intersection Sight Distance ¹				Stopping Sight Distance ²	
		Right-Turn from Driveway (D _L)	Left-Turn from Driveway		Left-Turn from Menand Road (D _S)	SSD _{EB}	SSD _{WB}
			Looking Left (D _L)	Looking Right (D _R)			
Menand Road/ Site Driveway	Available	690	690	>900	660	690	890
	Recommended ³	480	590	650	445 ⁴	450 ⁴	400 ⁵

¹ Intersection sight distance is measured at 14.5 feet back from the travel way at an object height of 3.5 feet and an eye height of 3.5 feet for a vehicle.
² Stopping sight distance measured for a 2 foot object located in the path of eastbound and westbound vehicles on Menand Road at an eye height of 3.5 feet.
³ = Sight distance measurements are compared to recommended distances for a 50-mph operating speed on Menand Road in the eastbound direction and a 55-mph operating speed on Menand Road in the westbound direction.
⁴ = AASHTO recommended stopping sight distance guidelines reflect approximate -7% grade on Menand Road in the eastbound direction.
⁵ = AASHTO recommended stopping sight distance guidelines reflect approximate +8% grade on Menand Road in the westbound direction.

The available intersection and stopping sight distances at the proposed access roadways meet applicable AASHTO guidelines for the measured operating speed. No improvements are recommended.

4.0 Conclusions

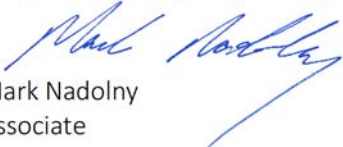
The proposed project includes the construction of various independent care/assisted living facilities for seniors that will be built-out in two phases. It is noted that the existing *St. Louise House* and *DePaul House* facilities currently located on the site serve active and senior nuns associated with the *Daughters of Charity*. It is noted that these structures will remain after completion of Phase #1; however, they will be removed in order to accommodate Phase #2 construction. Access to Phase #1 of the development will be provided via one new driveway located approximately 275-feet west of the existing access to the *St. Louise House* and *DePaul House* facilities. It is noted that the existing driveway will be eliminated after completion of Phase #2. Phase #1 of the project is expected to be completed and fully occupied in 2024 while Phase #2 will be completed in 2030. The following is noted regarding the proposed project:

- Phase #1 of the proposed development is expected to generate 16 new vehicle trips during the AM peak hour and 31 new vehicle trips during the PM peak hour. In addition, Phase #2 will generate 26 new vehicle trips during the AM peak hour and 30 new vehicle trips during the PM peak hour. This indicates that the proposed site will generate a total of 42 trips during the AM peak hour and a total of 61 trips during the PM peak hour after full build-out of the site. This magnitude of traffic does not warrant detailed evaluation of off-site intersections based on NYSDOT and ITE guidelines and the site will be adequately served by the existing roadway network.
- It is noted that the existing *St. Louise House* and *DePaul House* facilities currently generate 15 trips during the AM peak hour and 6 trips during the PM peak hour. This indicates that the site is already generating some traffic to the study area and that construction of Phase #2 will actually just replace some existing traffic.
- Adequate intersection and stopping sight distances are provided at the site roadway intersection for the applicable operating speed.
- The detailed design of the site driveway intersection on Menand Road will require approval and permitting by NYSDOT.

Mr. Dan Hershberg, P.E. & L.S.
January 12, 2022
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Please feel free to call our office if you have any questions or comments regarding the above evaluation.

Respectfully submitted,
Creighton Manning Engineering, LLP


Mark Nadolny
Associate

Attachments

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Attachment A
Site Plan

Daughters of Charity Development
Village of Menands, New York

Attachment B
Speed Data

Daughters of Charity Development
Village of Menands, New York

Project: 121-393; Daughters of Charity
 Observation by: MPF
 Date: 12/15/2021
 Location: At proposed site driveway on Menand Road

Menand Road (MPH)	
Eastbound	Westbound
43	51
46	42
47	51
45	42
46	42
46	45
45	43
48	50
53	49
43	49
43	47
49	53
47	48
45	46
39	44
44	52
45	59
44	46
50	41
44	48
49	42
52	49
46	34
46	42
47	46
44	35
51	62
53	57
50	53
45	50
37	49
51	47
45	45
46	45
50	50
50	46
42	49
45	53
60	48
46	54
44	43
48	53
48	54
50	51
50	47
45	55
44	63
46	55
45	51
54	47

Menand Road (MPH)	
Eastbound	Westbound
45	49
43	57
49	50
50	47
46	40
46	51
49	45
52	45
50	41
49	43
46	43
47	45
42	38
55	45
45	44
50	34
49	48
41	47
46	41
51	47
53	37
65	44
48	48
44	51
46	49
48	50
45	53
44	54
54	46
62	60
50	46
49	53
46	46
46	48
44	43
39	40
59	44
46	49
48	50
47	51
46	52
55	47
45	49
44	44
42	46
43	43
41	49
48	49
49	58
47	51

Menand Road (MPH)	
Eastbound	Westbound
Average:	Average:
47	48
85th Percentile:	85th Percentile:
51	53
Combined:	
Average:	48
85th Percentile:	52