FULLER ENGINEERING & LAND SURVEYING, LLC

525 John Street – Second Floor – Bridgeport, CT 06604

Phone: (203) 333-9465 Fax: (203) 336-1769

18 April 2025

Mrs. Meredith Badalucca
Assistant Planner
Town of Montville

RE: Response to Comments
Madison Place, Luxury Townhouse Development
145 Route 32 & 18 Powerhouse Road
Montville, Connecticut

The following are our responses to comments from the Town Staff and CLA Engineers, Inc. Our responses are designated in ***bold and italics***. Engineers, Inc.

Technical Review by CLA Engineers, Inc. dated 4/17/2025

Engineering Report

2. The existing condition Drainage Area 'A' travel time: The sheet flow component appears to be longer than 100' and the slopes appears to less than 8.8%, potentially in the range of 2.5-3". This should be reviewed and recalculated.

   Response: Please see page 54 in the Engineering Report. The first 100 feet has been calculated utilizing the Sheet Flow criteria. The remainder of the flow path has been calculated using concentrated flow per standard practice. The entire segment slope has been calculated based on the aggregate slope between the beginning high point and the ending point of concern.

   New Comment

   - In our opinion the sheet flow length for this watershed travel path is longer than the 100' used in the calculations. Please see attached SK1 an excerpt of the DA-EX watershed map from the Engineering Report. In our opinion the sheet flow component would extend to the top of slope at approximately contour 105, adding another +- 60 to the sheet flow component. Limiting this length to 150' would not be unreasonable in accordance with the DOT Drainage Manual Section 6.C.4 (attached).
   - Aggregate slope should not be used for the entire travel path time of concentration calculation. The actual slope of the land for each segment of the travel path should be used. In this case, sheet flow is the largest component of the time of concentration, and the actual land slope is approximately 2% vs the 8.8% used in the calculations. Using the actual land slope may substantially change the calculations.

Response: We have re-analyzed the DA-EX flow path based on the actual sheet flow and shallow concentrated flow paths. The lengths and time of concentration is reflected in the revised report and DA-EX map in the engineering report.

3. The existing and post development travel times are identical in the calculations but are depicted differently in the mapping. Actual ground slopes should be used in the calculations.

   Response: While there is minor grading in some areas, the aggregate slopes from each endpoint do not change from the pre existing to post existing development conditions.

   We respectfully request that any minor modifications to the drainage report be conditioned to the satisfaction of the Town engineer.

   New Comments

   - Please see the comment above regarding using the actual land slope for each segment when calculating travel times.
   - Please see attached SK1 and SK2, excerpts from DA-EX and DA-PR indicating two different flow path length for the travel flow path. These differences are not reflected in the calculations (See highlighted summaries attached).
   - As shown on SK1 and SK2 there appears to be a substantial difference in ground slope for each of the sheet flow components. As previously noted, in this case the sheet flow is the largest component in the time of concentration calculation, and land slope will have impact to those calculations.

   The concern with the times of concentration calculations is that the existing conditions peak stormwater flow rates may be lower than calculated in the Report and the post development may be higher than calculated in the Report; therefore, additional subsurface storage may be needed.

   Response: The following revisions have been made to the Drainage Plan and Report:

   - ***The DA-EX flow path length has been re-calculated to reflect the actual slope conditions.***
   - ***The resultant flow path calculations have been incorporated in the revised Drainage Report.***
   - ***The resultant Drainage Report calculations indicate the need to increase the storage capacities of Galleries P1 and P2.***
   - ***The roof areas of units 8 through 11 have been removed from Drainage Area 5s and are now included in Drainage Area 4S. The grassed area behind these units remain in Drainage Area 5S and will bypass directly to the level spreader.***
   - ***The Sheet C-3.1 has been revised to increase both subsurface systems to accommodate the increased storage required.***