Jacobson

October 14, 2026

Mr. James Ventres, Land Use Administrator
Town Office Building
1 Plains Road, P.O. Box 385
Moodus, Connecticut 06469

RE: Four Corners Village Project
Commerce Drive-Route 82-Town Steet
Inland Wetland Permit Application
NLJA PN 0957-0067

Dear Mr. Ventres:

Our office has conducted an engineering review of design drawings and reports for a proposed mixed use development at the intersection of Route 82 and Town Street. The subject property is 7.78 acres in area located in the IG Industrial General Zone. Plans include on-site septic systems and a new water supply well. Stormwater detention facilities are also proposed to provide for site runoff treatment and control.

Application drawings and documents were initially received at our office on August 17, 2026, with a revised drawing set received on September 15, 2026. Our review of the overall site layout is based on the following design documents prepared by Nemergut Consulting.

Description	Drawing No.	Date	Revision
Cover Sheet	-	08/14/26	09/15/26
Existing Conditions	1 of 8	04/18/24	01/29/25
Overall Site Plan	2 of 8	08/14/26	09/15/26
Stormwater Management Plan & ES Control Plan	3 of 8	08/14/26	09/15/26
Stormwater Management Plan & ES Control Plan	4 of 8	08/14/26	09/15/26
Sightline Demonstration Plan	5 of 8	08/14/26	-
Details and Notes	6 of 8	08/14/26	09/15/26
Details and Notes	7 of 8	08/14/26	09/15/26
Soil Test Results and Septic System Details	8 of 8	08/14/26	-
Existing Drainage Area Map	-	08/14/26	-
Proposed Drainage Area Map	-	08/14/26	-
Wetland Application	-	08/12/26	-
Environmental Report	-	09/03/26	-
Existing HydroCAD Report	-	08/14/26	-
Proposed HydroCAD Report	-	08/14/26	-

We have the following comments:

General Site Comments:

Nathan L. Jacobson & Associates, Inc.
Nathan L. Jacobson & Associates, P.C. (NY)
86 Main Street P.O. Box 337 Chester, Connecticut 06412-0337
Tel 860.526.9591 Fax 860.526.5416
Consulting Civil and Environmental Engineers Since 1972

1. A detention basin exists at the north end of Lot 1 and receives the runoff from Commerce Drive. It is our understanding that the detention basin currently has no easement in favor of the Town of East Haddam for repairs and maintenance. Additionally, the submitted existing conditions plan provides no survey information for the limits of the basin or the inlet pipe or outlet structures. We would recommend that an as-built survey of the basin be provided along with an easement granted to the Town for repair and maintenance of the basin.

2. The Wetlands and Watercourses Commission application form indicates that the project proposes to disturb 2,400 square feet of wetlands. Measurements taken from the Overall Site Plan indicate that 5,800 square feet of wetlands are proposed to be disturbed. This exceeds the 1/10 Acre non-tidal wetland threshold for the US Army Corp of Engineers.

3. While sedimentation controls have been generally shown around the perimeter of the proposed work area, additional rows of sedimentation controls should be shown at intermediate locations through the site so as not to overload the perimeter controls. Sedimentation controls should also be proposed at the existing and proposed drainage structures.

4. Referral should be made to the CTDOT for the proposed access to Town Street (CT Route 82).

5. A Lighting Plan in accordance with Section 26.4 on the East Haddam Zoning Regulations should be submitted.

6. The proposed parking layout should indicate the location of the accessible parking spaces and corresponding pavement markings with signage.

7. While planting schedules have been proposed for the wetland buffer area and stormwater basins, a detailed site landscaping plan should be submitted with specific attention to Section 14.D. of the East Haddam Zoning Regulations.

8. The Site Plan should identify the soil classifications, as per the USDA National Resources Conservation Service.

9. In areas where the proposed contours pass through the paved parking areas with curbed peninsulas and edges, the contours do not reflect the influence of the curbing. The proposed grading should be revised to account for the proposed curb height. In addition, the cape cod curb detail does not provide a curb height or width.

10. While standard details have been provided for Precast Concrete Curb Stops, ADA Sidewalk Ramps & Bollards, locations for these items are not shown on the Site Plan.

11. Proposed spot elevations should be provided in the parking areas to demonstrate that proper drainage slopes are being maintained to the drainage structures.

12. Access manholes should be proposed for septic system structures shown under paved areas.

13. The Route 82 site access drive shows curbing on either side of the driveway. The standard detail for the "Driveway Section at Culverts" does not show curbing.

Stormwater Comments:

1. The Site Plan identifies the proposed stormwater basin at the northwest corner of the site as a bioretention basin while the detail sheet for the outlet control structure refers to it as a Biofiltration / Detention Basin. If the intent is to design a bio-retention system, the bottom of the basin should include an engineered soil media at a depth of 24" – 48" and the system should completely drain in 48 hours or less of the design storm. It appears that the basin as designed is a wet detention basin with a permanent pool volume and peak flow attenuation. Please clarify.

2. The proposed detention basin along the north edge does not provide a pre-treatment BMP. While the plan does propose a vegetated swale that enters the detention basin from the east side, it does not provide a sediment forebay or the proper dimensional requirements to contain the flow to insure adequate residence time for treatment.

3. The HydroCAD model assumes a five inches/hour infiltration at for both stormwater basins. Without actual testing at the proposed location, the Connecticut Stormwater Quality Manual provides default infiltration rates of 0.52 inches/hour for B Soils with Silt Loam soil conditions. Additionally, the bottom of the infiltration system/basin should maintain a separation distance of 3 feet to seasonal high ground water and bedrock.

4. A cross sectional detail should be provided for the proposed bio-retention basin at the northwest corner of the site. The detail should include an embankment cross section. Additionally, an anti-seep collar should be shown for the outlet basin outlet pipe as it passes through the embankment.

5. The Connecticut Stormwater Quality Manual recommends side slopes of 3H:1V or flatter with a minimum embankment top width of 8 feet. The proposed basin shows 2H:1V slopes with a top width of 5 feet.

6. Maintenance access drives should be provided for the proposed stormwater basins.

7. The invert elevations, sizes and configurations shown on the Site Plan for the bio-retention basin outlet structure do not correspond with either the standard outlet structure detail or the HydroCAD model. These discrepancies should be reviewed and reconciled.

8. We would recommend that a track rack be placed over the orifices on the vertical face of the outlet structure at the proposed bio-retention basin.

9. Calculations should be provided for the sizing of the rip rap at the proposed stormwater outfalls.

10. Water quality volume calculations should be provided.

11. The HydroCAD model for the proposed 12" diameter culvert crossing at the Route 82 site access drive uses an inlet invert of 252.50 while the Site Plan shows and inlet invert of 252.00. Additionally, the East Haddam Driveway regulations require driveway culverts to be a minimum diameter of 15 inches.

12. The East Haddam Regulations require pre & post development flows for the 2, 10, 25 & 100 year storm events. The submitted HydroCAD model does not provide a 2-year event scenario.

13. The drainage report should include a copy of the NOAA Atlas 14 recurrence intervals. Additionally, the Connecticut Stormwater Quality Manual recommends the use of Type III 24-hour rainfall distributions. The submitted HydroCAD models use Type II distributions.

Sincerely,

NATHAN L. JACOBSON & ASSOCIATES, INC.

Joseph M. Dillon, P.E.

cc: Brian C. Curtis, P.E.
Davison Environmental
Nemergut Consulting
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