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October 20, 2025

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

RE: Shahani, Inc.
Proposed Food Stop and Fuel Station
416 East Haddam Moodus Road
Zoning Special Permit Application
NLJA PN 0958-0065

Dear Mr. Ventres:

Our office has conducted an engineering review of design drawings and reports for a proposed food stop store and fuel station, located at 416 East Haddam Moodus Road (Rt. 149) which is site of a former gas station. The subject property is 1.52 acres in area located in the C3 Commercial Zone. Plans include reconfiguration of existing entrance and exit drives and traffic islands, addition of rear drive through window lane and pass lane with associated retaining wall, a new septic system and a new public transient non-community water supply well. Stormwater detention facilities are also proposed to account for site runoff control

Application drawings and documents were received at our office on September 24, 2025. Our review was based on the following design documents prepared by Nemergut Consulting (Civil Engineer), Bubaris Traffic Associates (Traffic Report) and LSI (lighting consultants).

Description	Drawing No.	Date	Revision
Cover Sheet	-	3/4/25	-
Existing Conditions	1 of 7	3/4/25	-
Site Plan – Surface Improvements	2 of 7	3/4/25	-
Septic System Design Plan	3 of 7	3/4/25	-
Stormwater Management Plan & ES Control Plan	4 of 7	3/4/25	-
Details and Notes	5 of 7	3/4/25	-
Details and Notes	6 of 7	3/4/25	-
Details and Notes	7 of 7	3/4/25	-
Site Traffic Evaluation Study	-	4/4/23	-
Proposed Fueling Canopy Elevations	-	11/12/21	-
Photometrics Plan	-	11/16/21	-
Drive Through Equipment Information	-	-	-
Connecticut Department of Public Health letter	-	1/22/25	-

The following comments and recommendations are provided for the Commission's consideration. Once comments have been addressed by the design engineer, additional follow up review will be provided.

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A. Existing Conditions Plan

1. General Note #4 reference to the property line and topographic survey information is illegible and requires revision.

B. Site Plan

1. Connecticut Department of Transportation (DOT) review and approval will be required for proposed curb cut modifications and discharge of site stormwater drainage into the DOT drainage system in Rt. 149. A DOT encroachment permit will be required for any construction within the DOT right of way.

2. A total of 9 parking spaces are proposed, including 1 handicapped accessible parking space. In addition, there are 6 vehicle spaces proposed at the fuel islands. Parking space number 8 at the east edge of the site is a parallel parking space that will require backing into the space; this space is shown at 18 ft. in length however parallel parking stalls typically require a greater length.

3. Parking space number 7 on the west side of the building is a handicapped van accessible parking stall. This space will require a sidewalk ramp and detectible warning strip at the adjacent concrete sidewalk. This notation should be shown and a detail provided.

4. Prior to construction, details for the proposed retaining wall should be submitted for review and approval.

5. Prior to construction, details for the proposed 12,000 gallon underground fuel storage tanks and concrete slab should be submitted to the Fire Marshall and Building Official for approval.

6. The existing easterly entrance drive is 44 ft. in width and the island modification is proposed to reduce this width to 37 ft. The existing center entrance drive is 38 ft. in width and the island modification is proposed to reduce this width to 14 ft. and make it a one way entrance. The existing westerly entrance drive is 32 ft. in width and the width is proposed to remain the same.

7. Some of the soil test pit log information is illegible and should be clarified.

C. Drainage - General

1. The existing conditions plan shows that most of the site's pavement and building roof drainage is directed to three CL type catch basins that connect to the DOT drainage system in Rt. 149.

2. It is recommended that 1 ft. interval proposed contours, or additional spot elevations, be provided to demonstrate how proposed parking lot drainage will be directed to the proposed catch basins as well as drainage pattern for the rear drive through/pass lane (ie cross slope or crown).

3. The design engineer should evaluate if an additional CL type catch basin should be provided along the proposed westerly 128 L.F. of 12" CPP to intercept parking lot runoff before reaching the westerly entrance/exit and flow towards Rt. 149.

4. The label for the DOT drainage catch basin in Rt. 149 is illegible.

5. An elevation for the fuel island concrete pad should be provided.

6. It is noted on the drawing that runoff from the fuel island canopy be conveyed to the underground fuel storage tanks stone bedding(?) The fuel tanks are 8 ft. in diameter plus depth of cover over the tanks will be required. If this notation is for proposed infiltration of fuel island canopy runoff into the soil, information on soil type, groundwater and bedrock conditions at this depth should be provided.

7. The plan shows silt fence siltation control downhill of the southerly swale and detention basin construction area. The plan also calls for providing anti-tracking pads at all points where construction equipment exits the site. Other internal erosion and sediment control measures will be required in the driveway/parking reconfiguration areas to control siltation of Rt. 149. It is recommended that additional details be provided for construction erosion controls at catch basin inlets.

D. Drainage - Detention Basin and Forebay

1. Drainage calculations for the basis of design of the stormwater detention system should be provided in terms of predevelopment and post development runoff rate control.

2. Given the slopes of the proposed drainage swales leading to the forebay, it is recommended that the swales be provided with erosion control turf reinforcement mat to assist with establishing vegetation and avoid soil erosion. The proposed 126 elevation contour label on the easterly swale requires correction.

3. The forebay inlet and outlet have 2:1 slopes. It is recommended that these steep slopes be provided with rip-rap stone protection to avoid erosion of the soil. A detail should be provided.

4. A detail should be provided for the forebay and detention basin soil planting layer.

5. The Health District should verify that the 69 ft. separation distance between the proposed water supply well and the stormwater forebay is acceptable.

6. Detention basin outlet structure detail - the proposed 2 ft. elevation difference between the detention basin outlet structure top of frame and base will require a custom unit and top slab. The bottom of detention basin elevation shown in the detail requires correction.

E. Traffic Report

1. The traffic report notes that the drive through lane provides stacking room for 13 vehicles. Our review of the layout plan shows approximately enough stacking room for 9+/- vehicles if 20 ft. is provided for each vehicle, or 7+/- vehicles if 25 ft. is provided for each vehicle. It is recommended that a site demonstration plan be provided to show vehicle stacking capacity.

2. The traffic report notes adequate sight distance along Rt. 149 for the easterly and westerly exit driveways. The traffic report was prepared in 2023 and additional vegetation may have developed in the sight line area since that time. It is recommended that sight distance looking to the east and west be reevaluated to determine if any brush or trees may require clearing on the subject property or withing the DOT right of way for adequate sight distance.

3. The traffic report refers to the south/west leg of Rt. 149 as Green Village Street. This name should be verified.

F. Details

1. The site plan notes a wood fence enclosure for the dumpster pad however the detail sheet shows a chain link fence. This should be clarified. If a chain link fence is to be provided, the detail should include screening slats in the fence and gate.

G. Lighting

1. Additional discussion and detail should be provided for site pole lights, canopy lighting and building mounted lighting to demonstrate how lamp shielding or lamp recess will be provided to prevent off-site light glare. Site pole lights are 12 ft. in height and the canopy bottom is 16 ft. in height. It is recommended that an evaluation of lamp elevation be made in comparison to elevations of adjacent residential and commercial properties in order to avoid creating a glare problem.

2. Note that the fuel island canopy is proposed with perimeter internal green tube lighting.

3. Note that the drive through menu board appears to be internally lit.

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4. Note that the site sign is proposed to be externally lit.

Should you have any questions or require additional information, please feel free to call.

Sincerely,

NATHAN L. JACOBSON & ASSOCIATES, INC.

Brian C. Curtis, P.E.

cc: Roger D. Nemergut, P.E.
James G. Bubaris, P.E.

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