

CLA Engineers, Inc.

Civil • Structural • Survey

317 MAIN STREET • NORWICH, CT 06360 • (860) 886-1966 • (860) 886-9165 FAX

April 7, 2025

Town of Montville – Inland Wetlands Commission
C/O Stacy Radford, Zoning & Wetland Officer
310 Norwich-New London Turnpike
Uncasville, CT 06382

RE: Town of Montville
Bridge Street Bridge Deck Replacement
CLA-7767D
Project Narrative

To the Commission:

CLA Engineers, Inc. has prepared the attached application and plans for the replacement of a bridge deck on Bridge Street on behalf of the Town of Montville Public Works Department. The existing bridge deck is located approximately 165' east of the Bridge Street and Maple Avenue intersection. The bridge conveys Bridge Street over the former Central Vermont/New England Central Railroad tracks. The railroad tracks no longer exist below the bridge; over time the area has developed into inland wetlands. A wetland functions and values letter prepared by Robert Russo from this office is attached separately.

The existing bridge deck is constructed of asphalt and steel plating over timber and steel beams. The asphalt and plating have been repaired in the past and are beyond their useful life. The asphalt surface and plating have continued to deteriorate, and potholes are present over the bridge. Public Works Staff monitor and repair the bridge surface as needed. The existing abutments are constructed of stone masonry and are in good condition.

The proposed project involves the removal of the existing deteriorated bridge deck and beams, and the installation of new precast concrete bridge deck panels and pavement surface. Generally, the project scope includes the following:

1. Temporary bracing and debris netting will be installed below the existing bridge deck. Temporary scaffolding and/or planking will be needed below the bridge deck to complete this work.
2. The asphalt surfacing will be saw cut & removed.
3. The existing bridge beams will be removed.
4. The existing stone masonry abutments will be repointed to about 5' below the level of the bridge deck. New concrete seats will be poured for the new bridge deck.

5. New precast concrete deck panels will be installed on the abutments.
6. The temporary bracing and scaffolding will be removed.
7. The road will be repaved, and new bridge rails and fencing installed.
8. All disturbed areas will be restored to match the existing conditions, including the wetlands below the new bridge deck.

The project will require the temporary disturbance of approximately 1,000 square feet of inland wetlands below and around the existing bridge crossing. The disturbance is required for the installation of temporary scaffolding and planking under the bridge. These measures are necessary to install the temporary bracing between the existing abutments, to install debris netting, and for personnel to access the underside of the bridge. Temporary hay bales or sand bags will be used to direct any water flow through the bridge. All of the temporary measures will be removed after construction is complete and the areas restored to conditions that are equal or better than what currently exists. Restoration work will be done under the supervision of the Soil Scientist.

Construction is planned for the summer of 2025, so work can be performed during the dry time of year.

Erosion and sedimentation controls have been proposed in accordance with the 2024 CTDEEP Erosion and Sedimentation Control Manual. Erosion and sedimentation control measures and a narrative are included on the project plans.

The bridge is located within the 100-year flood plain (Zone AE) as depicted in the attached FEMA Firmette. The flood plain elevation is approximately 166.5 and is within the channel below the bridge deck. The elevation of the low chord of the existing and proposed bridge deck is approximately 176.2. The deck replacement will have no impact on the flood plain.

Alternatives were considered during the development of this project.

1. The complete replacement of the bridge: This would require the complete removal of the bridge deck and abutments. This alternative was not selected for several reasons:
 - a. The existing abutments are in good condition and do not need to be replaced.
 - b. The cost for a full replacement was estimated at approximately 2.5 times the cost for the bridge deck replacement.
 - c. The replacement would disturb approximately 500 additional square feet of inland wetlands.
 - d. The full replacement could potentially destabilize the existing 2:1 slopes adjacent to the bridge.
 - e. The detour duration may be impractical.
2. Deck resurfacing and structural rehabilitation: This includes the removal of the asphalt surface and steel plating and the rehabilitation of the steel and timber beams. The temporary disturbance to the inland wetlands would be the same as the proposed project

because scaffolding and staging would be required for the structural rehabilitation. This alternative was not selected because it was estimated that the longevity of the repair work may only extend the life of the deck and structure for another 10-15 years. The projected lifespan of the precast concrete deck would be at least 50-years.

Feel free to call me at our office or email me at khaubert@claengineers.com with any questions or if you require additional information.

Very truly yours,
CLA Engineers, Inc.



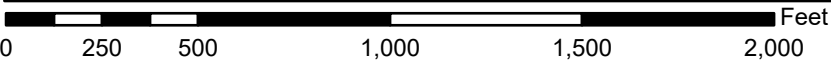
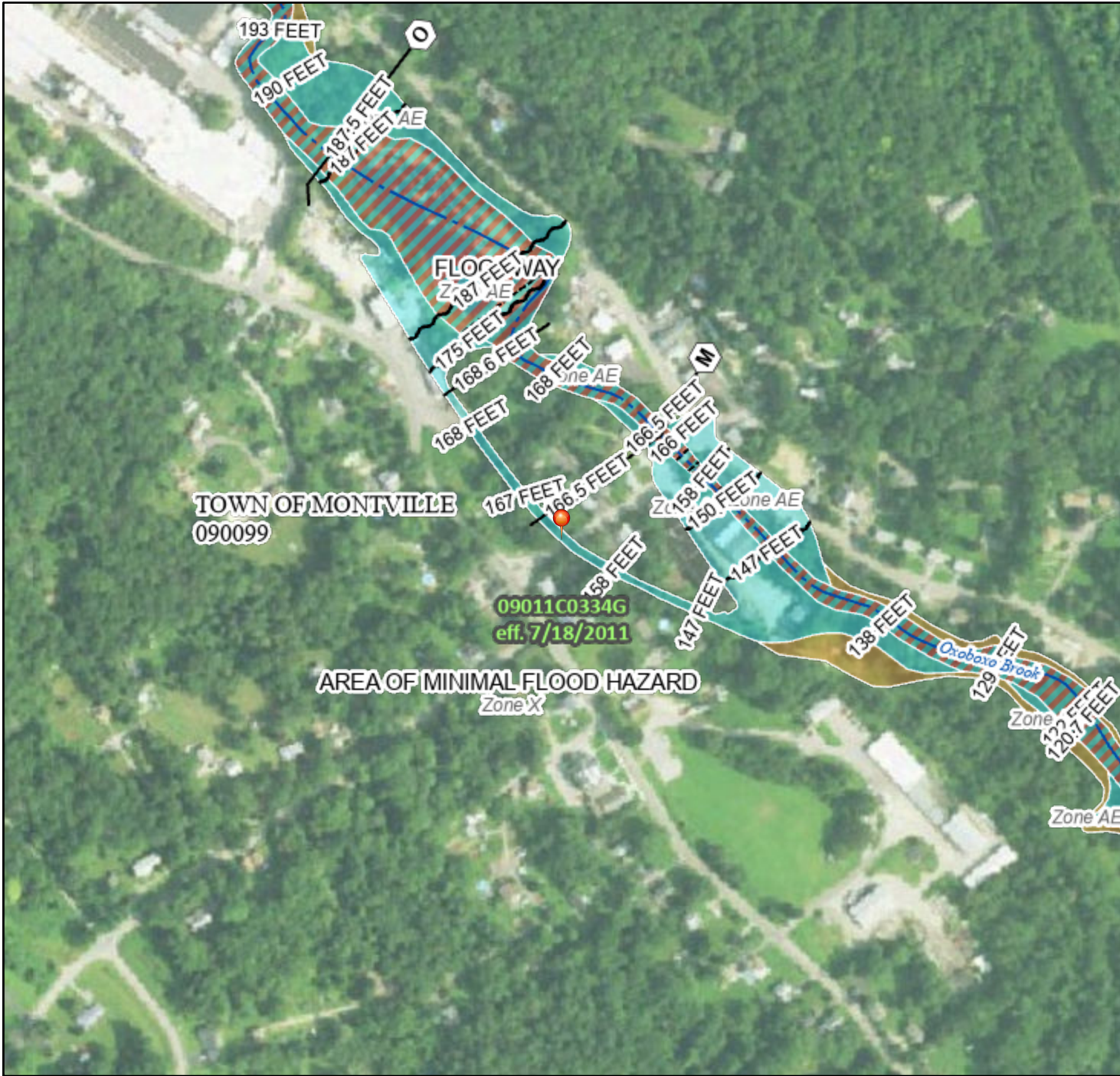
Kyle Haubert, P.E.

Attachments

National Flood Hazard Layer FIRMMette



72°8'11"W 41°27'7"N



1:6,000

72°7'34"W 41°26'40"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
OTHER FEATURES		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
OTHER FEATURES		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/7/2025 at 1:27 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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