



SUBMIT TO:
 Westport Conservation Department
 Town Hall – Room 205
 110 Myrtle Avenue
 Westport, CT 06880
 Phone: 203-341-1170
 Fax: 203-341-1088

FOR OFFICE USE ONLY	
File#:	_____
Date Filed:	_____
Class:	_____
Fee: \$	_____
Date Rec'd:	_____
<input type="checkbox"/> Cash	<input type="checkbox"/> Check # _____
Final Inspection	Y / N
As-Built Required	Y / N

APPLICATION WESTPORT CONSERVATION DEPARTMENT

PROJECT LOCATION: Bayberry Lane Extension Bridge (Bridge No. 04969) over the Aspetuck River

ASSESSOR'S MAP # E18 TAX LOT # Bet. 001 & 026 ZONING DISTRICT AA

APPLICANT OR AGENT	NAME	OWNER
<u>Keith S. Wilberg, Town Engineer</u>	<u>Town of Westport</u>	<u>Town of Westport</u>
<u>Town of Westport Dept. of Public Works</u>	<u>ADDRESS</u>	<u>The Honorable Jim Marpe, First Selectman</u>
<u>110 Myrtle Ave, Rm 210, Westport, CT 06880</u>		<u>110 Myrtle Ave, Westport, CT 06880</u>
	(H) PHONE (H)	
<u>(203) 341-1128</u>	(W) PHONE (W)	<u>(203) 341-1111</u>
<u>kwilberg@westportct.gov</u>	E-MAIL	

EXISTING CONDITIONS (Describe existing property and structures): Existing two lane roadway crossing bridge over Aspetuck River. The surrounding area is a residential area, zoned for 1 acres lots.

PROJECT DESCRIPTION/PURPOSE (Describe the proposed activity): The project proposes to remove the existing two lane bridge over the Aspetuck River, and replace it with a new bridge in approximate place and kind.

I hereby depose and say that all statements contained herein and all exhibits attached hereto are true and binding to the best of my knowledge:

Keith S. Wilberg
 (Signature of Applicant)

08/11/2020
 (Date)

The act of applying to the Conservation Commission and/or Department implies consent to the proposed activity, and grants permission to the Conservation Commission/Department and its agents to inspect the property herein described for the purpose of resource inventory, impact analysis, and compliance investigation at any time beginning on the date of the application filing, and extending through the pendency of any permit issued, or in the event of permit denial, for the purpose of compliance control.

[Signature]
 (Signature of Property Owner)

8/11/2020
 (Date)

FOR DEPARTMENT USE ONLY

1. DEPARTMENT FINDINGS:

After preliminary review by department staff, the following areas, resources and levels of environmental licensure have been identified:

- Wetland(s) / Watercourse(s), section: _____
 Non-regulated Activity Permit Required FEE \$ _____
- Wetland / Watercourse Setback(s), section: _____
 Non-regulated Activity Permit Required FEE \$ _____
- Waterway Protection Line(s), section: _____
 Non-regulated Activity Permit Required FEE \$ _____
- Staff Site Inspection for Determination of Wetland Boundary
 Administrative Review Conservation Commission Review FEE \$ _____
- Sediment & Erosion Control Inspection Fee
 FEE \$ _____

CONSERVATION CERTIFICATE OF COMPLIANCE FEE \$ _____

STATE FEE \$ _____

NOTICE FEE \$ _____

TOTAL FEE DUE \$ _____

The application has been classified as requiring the following ruling:

- DECLARATORY SUMMARY PLENARY

Public Hearing of the application by the Conservation Commission: is not required.
 is scheduled for _____.

Westport/Weston Health District Approval: _____ Public Sewer: Yes / No
 Engineering Dept. review required: Yes/No Date Approved _____

Comments: _____

2. REQUEST FOR ADDITIONAL INFORMATION:

Please submit the information referenced in the attached schedule(s) by 4:00 p.m. on the _____ day of _____, 200__.

Schedule(s): A B C D E F G

Other: _____

3. RESTRICTION, CONDITIONS AND LIMITATIONS:

This review is valid for a period of six (6) months from the date of review, shown below, and is subject to the following data/plan(s)/stipulation(s): _____

Reviewed by: _____ (Date)
 _____ (Conservation Department Staff Signature)

TOWN OF WESTPORT

SCHEDULE C—WETLANDS / WATERCOURSES

APP # _____

Due by 4:00 p.m. on _____

1. Pursuant to Section 9.6.2 relating to Soil Sample Data – the applicant/agent is to submit copy of a report by a “soil scientist” duly qualified in accordance with standards set by the U.S. Civil Service Commission, showing soil sample data, soil classifications, and a surveyed delineation of wetland soils as flagged by the scientist, including flag numbers (as requested by agency).
2. Pursuant to Section 9.6.3 relating to Biological Evaluations – the applicant/agent is to submit a list and evaluation of the plant and animal life that may be found within, depend upon, or use the wetlands and watercourses (as requested by agency).
3. Describe the anticipated impacts to wetlands and watercourses that may occur as the result of that portion of your proposal that may be located in wetlands, watercourses or their setbacks.

4. Describe the mitigation that is being proposed as part of your application in order to minimize disturbance and pollution of wetlands and watercourses, maintain or improve water quality, and prevent destruction of or enhance the natural habitats and functions of the wetlands and watercourses.

5. List the alternatives to the proposed application that were considered and the reason for their abandonment.

TOWN OF WESTPORT

SCHEDULE D—WATERWAY PROTECTION LINES

APP# _____

Due by 4:00 p.m. on _____.

1. Explain/submit information showing why/how the proposed activity as located within Waterway Protection Lines will not cause flooding, drainage, erosion and/or related conditions hazardous to life and property and will not have an adverse impact upon the flood-carrying and water-storage capacity of the town's waterways, including but not limited to the impact upon flood heights, hydrological energy flow, maintenance of essential and natural patterns of water circulation, drainage and basin configuration and maintenance of fresh- and saltwater exchange through the placement of culverts, tide gates or other drainage flood-control structures. (*Sec. 148-8 of the Waterway Protection Line Ordinance*)

2. Explain/submit information showing why/how the proposed activity as located within the Waterway Protection Lines will not cause water pollution, erosion and/or environmentally related hazards to life and property and will not have an adverse impact on the preservation of the natural resources and ecosystems of the waterway, including but not limited to impact on ground or surface water, aquifers, plant and aquatic life, nutrient exchange and supply, thermal energy flow, natural pollution filtration and decomposition, habitat diversity, viability and productivity and natural rates and processes or erosion and sedimentation. (*Sec. 148-9 of the Waterway Protection Line Ordinance*)

3. Other:

February 13, 2019

ATTN: Ariel Martinez
Martinez Couch & Associates, LLC
1084 Cromwell Avenue, Suite 2-A
Rocky Hill, CT 06067

**Re: Wetland Description Report
Bayberry Lane Bridge (no. 04969) over Aspetuck River,
Westport, CT
SS&ES Job No. 2019-2-CT-WES**

Dear Mr. Martinez:

In accordance with your request, Jennifer Beno, Biologist/Wetland Scientist, with Soil Science and Environmental Services, Inc. (SSES) inspected the wetlands within the proposed Bayberry Lane Bridge over Aspetuck River project area on January 9, 2019. The purpose of the inspection was to observe the existing conditions (vegetation and wildlife) and primary functions of the wetlands within the project area. The wetlands were delineated by SSES on the same day. The Wetlands Delineation Report was provided as a separate document and is dated January 28, 2019. We reviewed resource maps available on the Town of Westport and CT Environmental Conditions Online websites for the project area.

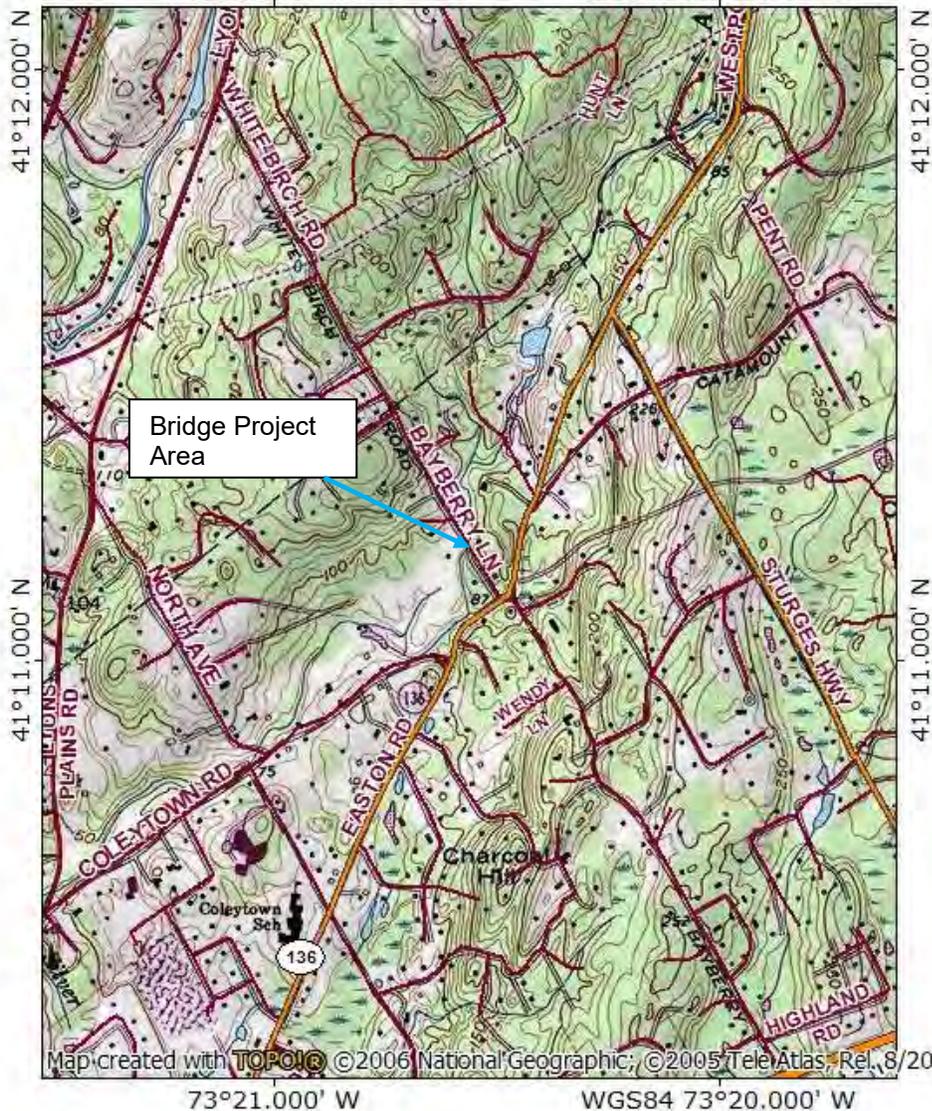
General Site Description

The project area is located within a residentially developed area in the northeastern portion of Westport (Figure 1). It is bordered by single family residential development with associated mowed lawn and paved parking areas and garages as well as wooded upland and the Newman-Poses Preserve area. The wooded upland areas are dominated by sugar maple, beech, ash, black birch, red cedar, white pine, mountain laurel, burning bush, Japanese barberry, Japanese honeysuckle, witch-hazel, multiflora rose, spicebush, Japanese honeysuckle, poison ivy, and bittersweet. Regulated wetlands were delineated to the northeast and southwest of the bridge project area.

TOPO! map printed on 01/10/19 from "Untitled.tpo"

73°21.000' W

WGS84 73°20.000' W



MN ↑ 1
13°
01/10/19

**SOIL SCIENCE and
ENVIRONMENTAL
SERVICES, INC.**

U.S.G.S. Topography Map
Bayberry Lane Bridge (No. 04969) over
Aspetuck River,
Westport, CT

Date 1/10/19

Figure No. 1

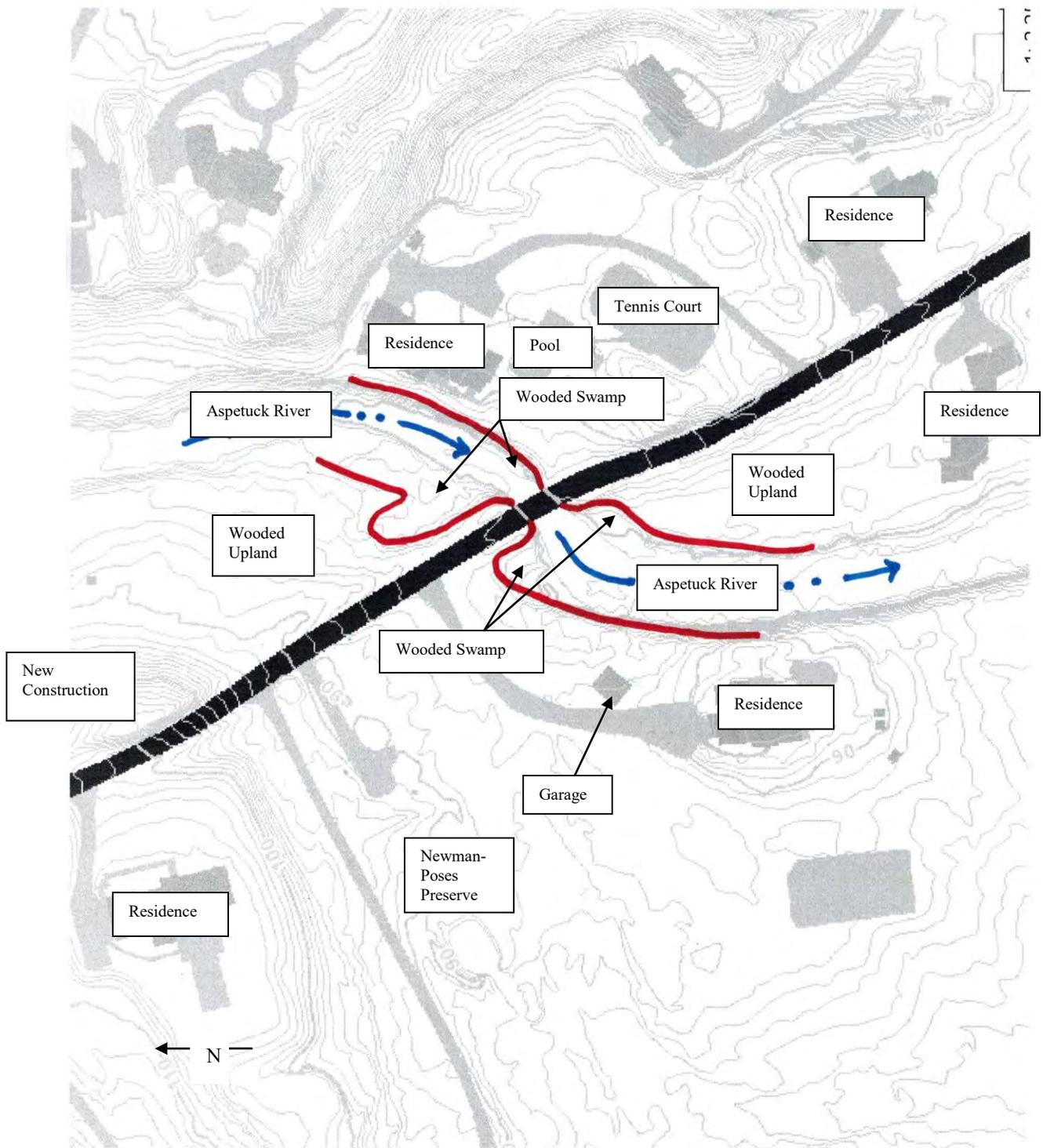


Figure 2 – Existing Conditions

Regulated Wetlands Description

On January 9, 2019, SSES delineated the CT and Federal wetland boundaries along the Aspetuck River to the northeast and southwest of the Bayberry Lane bridge project area (Figure 2). See Wetlands Delineation Report dated January 28, 2019 for additional information pertaining to the wetland delineation.

Northeast Wetland Area

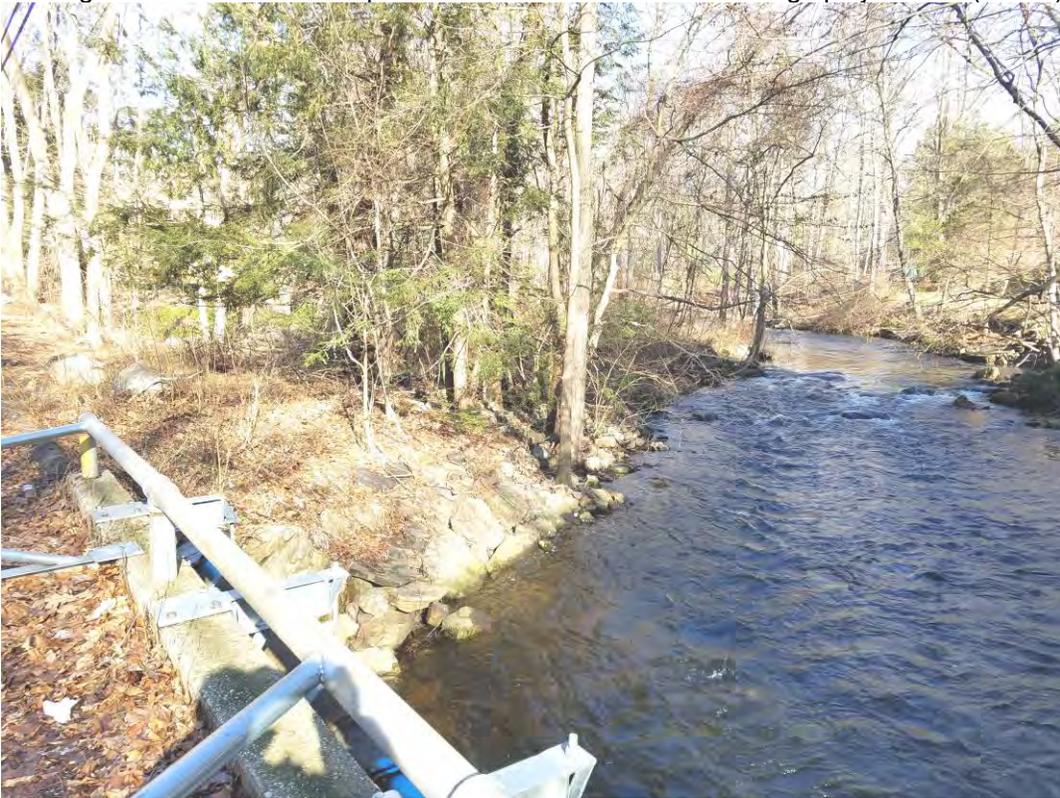
The regulated wetland area to the northeast of the bridge is dominated by a wooded swamp community. The southern bank of the Aspetuck River within this portion of the project area consists of a very narrow wetland bordered by steep fill containing rocks, earthen material, brick and concrete. A residential house is in close proximity to the Aspetuck River and wetland corridor in this area. The northern bank of the Aspetuck River within this portion of the project area consists of a wider floodplain dominated by a deciduous wooded swamp community. The wooded swamp community provides dense tree canopy cover and moderately dense to dense shrub and herbaceous understory growth. The dominant vegetation observed within the Northeast Wetland Area during the inspection includes black birch, ash, hemlock, red maple, ironwood, multiflora rose, raspberry, spicebush, burning bush, witch-hazel, Japanese knotweed, garlic mustard, meadow garlic, Japanese honeysuckle, false nettle, and skunk cabbage.

Southwest Wetland Area

A narrow regulated wetland also exists to the southwest of the bridge project area. This regulated floodplain area is dominated by a wooded swamp community. Fill, stonewalls, and a residence are in close proximity to the northern and western sides of the wetland and watercourse corridor within this portion of the project area. The wooded swamp community provides dense tree canopy cover and moderately dense to dense shrub and herbaceous understory growth. The dominant vegetation observed within the Southwest Wetland Area during the inspection includes elm, red maple, ash, sycamore, burning bush, Japanese barberry, winterberry, multiflora rose, spicebush, ironwood, meadow garlic, garlic mustard, goldenrod, sedges, grasses, skunk cabbage, false nettle, manna grass, and sensitive fern.



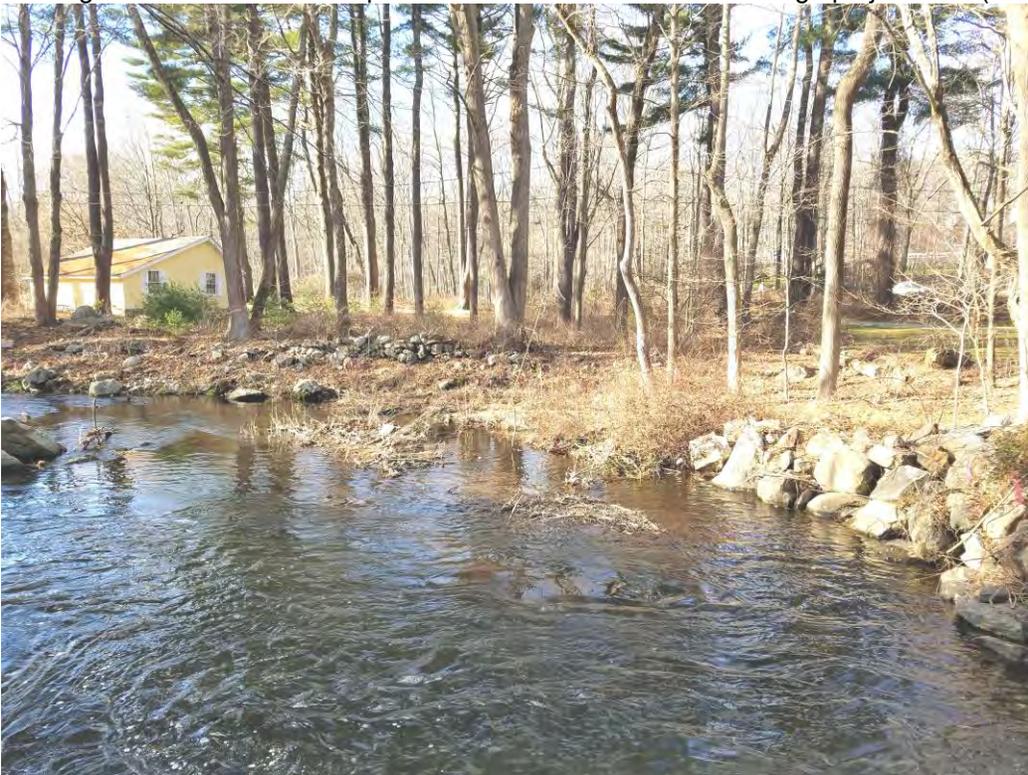
Looking at southern bank of Aspetuck River to the northeast of bridge project area (1/9/19).



Looking at northern bank of Aspetuck River to the northeast of bridge project area (1/9/19).



Looking at southern bank of Aspetuck River to the southwest of bridge project area (1/9/19).



Looking at northern bank of Aspetuck River to the southwest of bridge project area (1/9/19).

Wetland Functional Quality

A Highway Methodology form was completed for the wetlands identified along the Aspetuck River within the Bayberry Lane bridge study area (see Appendix I). Numerous functions are provided by the wooded floodplain wetlands. The principal functions provided by the wetlands within the project area include groundwater discharge, finfish/shellfish habitat, sediment retention, and wildlife habitat.

Wildlife

Wildlife observed utilizing the project area during the January 9, 2019 inspection includes deer (scat), chickadee, woodpecker, and freshwater clams within the river. These species are common in suburban areas of CT. Large machinery was being utilized for residential construction north of the bridge project area during our inspection which likely prevented us from observing other wildlife within the project area. In addition to the site inspection, SSES reviewed the December 2018 CT Department of Energy and Environmental Protection (DEEP) Natural Diversity Data Base (NDDDB) division map available on-line for the project area and immediate vicinity. According to the map, no Federal and/or State listed Endangered or Threatened species or Species of Special Concern are known to exist within or near the project area. See Appendix II for map.

Respectfully submitted,
SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.



Jennifer L. Beno
Biologist/Wetland Scientist

Appendix I: Highway Methodology Data Forms and Supporting Documents

Table: WETLAND FUNCTION-VALUE EVALUATION FORM

Floodplain Wetland, Bayberry Lane bridge (04969) over Aspetuck River project area,

Wetland I.D. Westport, CT

Total area of wetland _____ Human made? No Is wetland part of a wildlife corridor? Yes Or a "habitat island"? No

Lat. +41.76381°N Long. +/-73.39940°W

Adjacent land use: wooded upland; road; residences Distance to nearest roadway or development +/- 0' (road fill)

Prepared by JLB Date 1/28/19

Dominant wetland systems present PFOIE Contiguous undeveloped buffer zone present No

Wetland Impact:

Type: fill Area +/- sqft
Waterway Impact: +/- sqft

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid to Low

Evaluation based on:

Office Y Field Y

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (*see included lists*)

Corps manual wetland delineation

Completed? Y X N _____

Occurrence Rationale Principal

Function/Value	Y	N	(Reference #)*	Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	X		1, 2, 7, 11, 12, 13, 15	X	Groundwater is Class GA/ Surface water is Class A; seepage observed in the wetland.
Floodflow Alteration	X		5, 9, 10, 13, 18		Wetland is a narrow floodplain associated with Aspetuck River; signs (stone walls, Rocks, bricks, fill) of previous filling up to the wetland boundary.
Fish and Shellfish Habitat	X		1, 2, 3, 4, 6, 7, 8, 10, 14, 15, 17	X	Watercourse likely supports finfish. None observed. Reported trout stream.
Sediment/Toxicant Retention	X		4, 6, 8, 9, 10, 16	X	Sediment possibly contributed to this wetland from the adjacent road. Wetland is narrow at project location.
Nutrient Removal	X		3, 4, 7, 8, 9, 10		Floodplain wetland is narrow.
Production Export	X		4, 5, 6, 10		Perennial watercourse; narrow wetland with moderately dense vegetation growth.
Sediment/Shoreline Stabilization	X		3, 6, 7, 8, 9, 14		No significant erosion observed along banks; bordering wetland is narrow; evidence of sand deposits on wetland surface.
Wildlife Habitat	X		2, 6, 7, 8, 11, 15, 17	X	Residential development near project area; nests observed in trees and shrubs; see included vegetation and wildlife list.
Recreation		X	none		Private property; no public access.
Educational Scientific Value		X	none		Private property; no public access.
Uniqueness/Heritage		X	5, 14, 18, 27		Wetland provides several wetland functions; part of a large wetland/watercourse corridor; no public access.
Visual Quality/Aesthetics		X	none		Watercourse is contrasting; otherwise appears similar to adjacent upland areas.
ES Endangered Species Habitat					None observed. See attached map.
Other					

* REFER TO BACK UP LIST OF CONSIDERATIONS (ATTACHED)

Dominant Wetland Vegetation Inventory (January 9, 2019)

Project Area - Bayberry Lane Bridge (No. 04969) over Aspetuck River, Westport, CT

Scientific Name	Common Name	Indicator Status
Trees		
<i>Acer rubrum</i>	red maple	FAC
<i>Betula lenta</i>	black birch	FACU
<i>Fraxinus pennsylvanica</i>	ash	FACW
<i>Platanus occidentalis</i>	sycamore	FACW
<i>Tsuga canadensis</i>	hemlock	FACU
<i>Ulmus rubra</i>	elm	FAC
Saplings/Shrubs		
<i>Berberis thunbergii</i>	Japanese barberry	FACU
<i>Carpinus caroliniana</i>	ironwood	FAC
<i>Euonymus atropurpureus</i>	burning bush	FACU
<i>Hamamelis virginiana</i>	witch-hazel	FACU
<i>Ilex verticillata</i>	winterberry	FACW
<i>Lindera benzoin</i>	spicebush	FACW
<i>Rosa multiflora</i>	multiflora rose	FACU
<i>Rubus idaeus</i>	raspberry	FACU
Herbaceous		
<i>Alliaria petiolata</i>	garlic mustard	FACU
<i>Allium canadense</i>	meadow garlic	FAC
<i>Boehmeria cylindrical</i>	false nettle	OBL
<i>Carex sp.</i>	sedges	-----
<i>Glyceria striata</i>	mannan grass	OBL
<i>Lonicera japonica</i>	Japanese honeysuckle	FACU
<i>Onoclea sensibilis</i>	sensitive fern	FACW
<i>Polygonum cuspidatum</i>	Japanese knotweed	FACU
<i>Solidago sp.</i>	goldenrod	-----
<i>Symplocarpus foetidus</i>	skunk cabbage	OBL
Vines		
<i>Celastrus orbiculatus</i>	bittersweet	UPL

Indicator Status : Taken from the "National List of Plant Species that Occur in Wetlands:1988 National Summary," Fish and Wildlife Service, U.S. Department of the Interior

- OBL:** obligate wetland; occur almost always under natural conditions in wetlands
- FACW:** facultative wetland; usually occur in wetlands , but occasionally found in non-wetlands
- FAC:** equally likely to occur in wetlands or non-wetlands
- UPL:** occur almost always under natural conditions in non-wetlands
- +** : more frequently found in specified condition
- : less frequently found in specified condition

Inspection was conducted during non-growing season conditions. This species list is not all inclusive.

Bayberry Lane Bridge over Aspetuck River, Westport, CT

**Dominant Wildlife Inventory (January 9, 2019)
Bayberry Lane Bridge (No. 04969) over Aspetuck River, Westport, CT**

<i>Odocoileus virginianus</i>	white-tailed deer
<i>Parus atricapillus</i>	black-capped chickadee
<i>Picoides pubescens</i>	downy woodpecker
Freshwater clams	

Species were observed utilizing the study area during the inspection.



Appendix A

Wetland evaluation supporting documentation and reproducible forms.

Below is an example list of considerations that was used for a New Hampshire highway project. Considerations are flexible, based on best professional judgement and interdisciplinary team consensus. This example provides a comprehensive base, however, and may only need slight modifications for use in other projects.



GROUNDWATER RECHARGE/DISCHARGE— This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

CONSIDERATIONS/QUALIFIERS

1. Public or private wells occur downstream of the wetland.
2. Potential exists for public or private wells downstream of the wetland.
3. Wetland is underlain by stratified drift.
4. Gravel or sandy soils present in/or adjacent to the wetland.
5. Fragipan does not occur in the wetland.
6. Fragipan, impervious soils, or bedrock, does occur in the wetland.
7. Wetland is associated with a perennial or intermittent watercourse.
8. Signs of groundwater recharge are present or piezometer data demonstrates recharge.
9. Wetland is associated with a watercourse, but lacks a defined outlet or contains a constricted outlet.
10. Wetland contains only an outlet.
11. Groundwater quality of stratified drift aquifer within or downstream of wetland meets drinking water standards.
12. Quality of water associated with the wetland is high.
13. Signs of groundwater discharge are present (e.g. springs).
14. Water temperature suggests it is a discharge site.
15. Wetland shows signs of variable water levels.
16. Gravel or sandy soils present in or adjacent to wetland.
17. Piezometer data demonstrates discharge.
18. Other



FLOODFLOW ALTERATION (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.

CONSIDERATIONS/QUALIFIERS

1. Area of this wetland is large relative to its watershed.
2. Wetland occurs in the upper portions of its watershed.
3. Effective flood storage is small or non-existent upslope of or above the wetland.
4. Wetland watershed contains a high degree of impervious surfaces.
5. Wetland contains hydric soils which are able to absorb and detain water.
6. Wetland exists in a relatively flat area that has flood storage potential.
7. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level.
8. During flood events, this wetland can retain higher volumes of water than under normal or average rainfall conditions.
9. Wetland receives and retains overland or sheet flow runoff from surrounding uplands.
10. In the event of a large storm, this wetland may receive and detain excessive flood water from a nearby watercourse.
11. Valuable properties, structures or resources are located in or near the floodplain downstream from the wetland.
12. The watershed has a history of economic loss due to flooding.
13. This wetland is associated with one or more watercourses.
14. This wetland watercourse is sinuous or diffuse.
15. This wetland outlet is constricted.
16. Channel flow velocity is affected by this wetland.
17. Land uses downstream are protected by this wetland.
18. This wetland contains a high density of vegetation.
19. Other

FISH AND SHELLFISH HABITAT — This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

CONSIDERATIONS/QUALIFIERS

1. Forest land dominant in the watershed above this wetland.
 2. Abundance of cover objects present.
- STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE**
3. Size of this wetland is able to support large fish/shellfish populations.
 4. Wetland is part of a larger, contiguous watercourse.
 5. Wetland has sufficient size and depth in open water areas so as not to freeze solid and retains some open water during winter.
 6. Stream width (bank to bank) is more than 50 feet.
 7. Quality of the watercourse associated with this wetland is able to support healthy fish/shellfish populations.
 8. Streamside vegetation provides shade for the watercourse.
 9. Spawning areas are present (submerged vegetation or gravel beds).
 10. Food is available to fish/shellfish populations within this wetland.
 11. Barrier(s) to anadromous fish (such as dams, including beaver dams, water falls, road crossing, etc.) are absent from the stream reach associated with this wetland.
 12. Evidence of fish is present.
 13. Wetland is stocked with fish.
 14. The watercourse is persistent.
 15. Man-made streams are absent.
 16. Water velocities are not too excessive for fish usage.
 17. Defined stream channel is present.
 18. Other



SEDIMENT/TOXICANT/PATHOGEN RETENTION — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands, or upstream erod-



ing wetland areas.

CONSIDERATIONS/QUALIFIERS

1. Potential sources of excess sediment are in the watershed above the wetland.
 2. Potential or known sources of toxicants are in the watershed above the wetland.
 3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
 4. Mineral, fine grained, or organic soils are present.
 5. Long duration water retention time is present in this wetland.
 6. Public or private water sources occur downstream.
 7. The wetland edge is broad and intermittently aerobic.
 8. The wetland is known to have existed for more than 50 years.
 9. Drainage ditches have not been constructed in the wetland.
- STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.**
10. Wetland is associated with an intermittent or perennial stream, or a lake.
 11. Channelized flows have visible velocity decreases in the wetland.
 12. Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
 13. No indicators of erosive forces are present. No high water velocities are present.
 14. Diffuse water flows are present in the wetland.
 15. Wetland has a high degree of water and vegetation interspersion.
 16. Dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation is present by dense vegetation.
 17. Other



NUTRIENT REMOVAL/RETENTION/TRANSFORMATION --- This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands, and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers or estuaries.

CONSIDERATIONS/QUALIFIERS

1. Wetland is large relative to the size of its watershed.
 2. Deep water or open water habitat exists.
 3. Overall potential for sediment trapping exists in the wetland.
 4. Potential sources of excess nutrients present in the watershed above the wetland.
 5. Wetland saturated for most of the season. Pounded water is present in the wetland.
 6. Deep organic/sediment deposits are present.
 7. Slowly drained mineral, fine grained, or organic soils, are present.
 8. Dense vegetation is present.
 9. Emergent vegetation and/or dense woody stems are dominant.
 10. Aquatic diversity/abundance sufficient to utilize nutrients.
 11. Opportunity for nutrient attenuation exists.
 12. Vegetation diversity/abundance sufficient to utilize nutrients.
- STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.**
13. Waterflow through this wetland is diffuse.
 14. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation.
 15. Water moves slowly through this wetland.
 16. Other



PRODUCTION EXPORT (Nutrient) — This function evaluates the effectiveness of the wetland to produce food or usable products for man or other living organisms.

CONSIDERATIONS/QUALIFIERS

1. Wildlife food sources grow within this wetland.
2. Detritus development is present within this wetland
3. Economically or commercially used products found in this wetland.

4. Evidence of wildlife use found within this wetland.
5. Higher trophic level consumers are utilizing this wetland.
6. Fish or shellfish develop or occur in this wetland.
7. High vegetation density is present.
8. Wetland exhibits high degree of plant community structure/species diversity.
9. High aquatic diversity/abundance is present.
10. Nutrients exported in wetland watercourses (permanent outlet present).
11. "Flushing" of relatively large amounts of organic plant material occurs from this wetland.
12. Wetland contains flowering plants which are used by nectar-gathering insects.
13. Indications of export are present.
14. High production levels occurring however, no visible signs of export (assumes export is attenuated).
15. Other

SEDIMENT/ShORELINE STABILIZATION — This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.



CONSIDERATIONS/QUALIFIERS

1. Indications of erosion, siltation present.
2. Topographical gradient is present in wetland.
3. Potential sediment sources are present up-slope.
4. No distinct shoreline or bank is evident between the waterbody and the wetland or upland.
5. A distinct step between the open waterbody or stream and the adjacent land exists (i.e. sharp bank) with dense roots throughout.
6. Wide wetland (>10') bordering watercourse, lake, or pond.
7. High flow velocities in the wetland.
8. Potential sediment sources present upstream.
9. The watershed is of sufficient size to produce channelized flow.
10. Open water fetch is present.
11. Boating activity is present.
12. Dense vegetation is bordering watercourse, lake, or pond.
13. High percentage of energy absorbing emergents and/or shrubs bordering watercourse, lake or pond.
14. Vegetation comprised of large trees and shrubs which withstand major flood events or erosive incidents and stabilize the shoreline on a large scale (feet).
15. Vegetation comprised of dense resilient herbaceous layer which stabilizes sediments and the shoreline on a small scale (inches) during minor flood events or potentially erosive events.
16. Other

WILDLIFE HABITAT — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.²



CONSIDERATIONS/QUALIFIERS

1. Wetland is not degraded by human activity.
2. Water quality of the watercourse, pond, or lake associated with this wetland meets or exceeds Class A or B standards.
3. Wetland is not fragmented by development.
4. Upland surrounding this wetland is undeveloped.
5. More than 40% of this wetland edge is bordered by upland wildlife habitat (e.g. brushland, wood land, active farmland, or idle land) at least 500 feet in width.
6. Wetland contiguous with other wetland systems connected by watercourse or lake.
7. Wildlife overland access to other wetlands is present.
8. Wildlife food sources are within this wetland or are nearby.

9. Wetland exhibits a high degree of interspersions of vegetation classes and/or open water.
10. Two or more islands or inclusions of upland within the wetland are present.
11. Dominant wetland class includes deep or shallow marsh or wooded swamp.
12. More than three acres of shallow permanent open water (less than 6.6 feet deep), including streams in or adjacent to wetland are present.
13. Density of the wetland vegetation is high.
14. Wetland exhibits a high degree of plant species diversity.
15. Wetland exhibits a high degree of diversity in plant community structure (e.g. tree/shrub/vine /grasses/mosses/etc.)
16. Plant/animal indicator species present.
17. Animal signs observed (tracks, scats, nesting areas, etc.)
18. Seasonal uses vary for wildlife, and wetland appears to support varied population diversity/abundance during different seasons.
19. Wetland contains or has potential to contain a high population of insects.
20. Wetland contains or has potential to contain large amphibian populations.
21. Wetland has a high avian utilization or its potential.
22. Indications of less disturbance-tolerant species present.
23. Signs of wildlife habitat enhancement present (birdhouses, nesting boxes, food sources, etc.).
24. Other



RECREATION (Consumptive and Non-Consumptive) — This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting and other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland. Non-consumptive opportunities do not consume or diminish these resources of the wetland.

CONSIDERATIONS/QUALIFIERS

1. Wetland is part of a recreation area, park, forest, or refuge.
2. Fishing is available within or from the wetland.
3. Hunting is permitted in the wetland.
4. Hiking occurs or has potential to occur within the wetland.
5. Wetland is a valuable wildlife habitat.
6. The watercourse, pond, or lake, associated with the wetland is unpolluted.
7. High visual/aesthetic quality of this potential recreation site.
8. Access to water is available at this potential recreation site for boating, canoeing, or fishing.
9. The watercourse associated with this wetland is wide and deep enough to accommodate canoeing and/or non-powered boating.
10. Off-road public parking available at the potential recreation site.
11. Accessibility and travel ease is present at this site.
12. The wetland is within a short drive or safe walk from highly populated public and private areas.
13. Other



EDUCATIONAL/SCIENTIFIC VALUE — This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened, rare, or endangered species.
2. Little or no disturbance is occurring in this wetland.
3. Potential educational site contains a diversity of wetland classes which are accessible or potentially accessible.
4. Potential educational site is undisturbed and natural.
5. Wetland is considered to be a valuable wildlife habitat.

6. Wetland is located within a nature preserve or wildlife management area.
7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.).
8. Off-road parking at potential educational site suitable for school bus access in or near wetland.
9. Potential educational site is within safe walking distance or a short drive to schools.
10. Potential educational site within safe walking distance to other plant communities.
11. Direct access to perennial stream at potential educational site available.
12. Direct access to pond or lake at potential educational site available.
13. No known safety hazards within the potential educational site.
14. Public access to the potential educational site is controlled.
15. Handicap accessibility is available.
16. Site is currently used for educational or scientific purposes.
17. Other

UNIQUENESS/HERITAGE — This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.



CONSIDERATIONS/QUALIFIERS

1. Upland surrounding wetland primarily urban.
2. Upland surrounding wetland developing rapidly.
3. More than 3 acres of shallow permanent open water occur in wetlands (less than 6.6 feet deep) including streams.
4. Three or more wetland classes present.
5. Deep and/or shallow marsh, or wooded swamp dominate.
6. High degree of interspersion of vegetation and/or open water occurring in this wetland.
7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland.
8. Potential educational site is within a short drive or a safe walk from schools.
9. Off-road parking at potential educational site is suitable for school buses.
10. No known safety hazards exist within this potential educational site.
11. Direct access to perennial stream or lake at potential educational site.
12. Two or more wetland classes visible from primary viewing locations.
13. Low-growing wetlands (marshes, scrub-shrub, bogs, open water) visible from primary viewing locations.
14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations.
15. Large area of wetland is dominated by flowering plants, or plants which turn vibrant colors in different seasons.
16. General appearance of the wetland visible from primary viewing locations is unpolluted and/or undisturbed.
17. Overall view of the wetland is available from the surrounding upland.
18. Quality of the water associated with the wetland is high.
19. Opportunities for wildlife observations are available.
20. Historical buildings occur within the wetland.
21. Presence of pond or pond site and remains of a dam occur within the wetland.
22. Wetland within 50 yards of the nearest perennial watercourse.
23. Visible stone or earthen foundations, berms, dams, standing structures or associated features occur within the wetland.
24. Wetland contains critical habitat for a state or federally listed threatened or endangered species.
25. Wetland is known to be a study site for scientific research.
26. Wetland is a natural landmark or recognized by the state natural heritage inventory authority as an exemplary natural community.
27. Wetland has local significance because it serves several functional values.

28. Wetland has local significance because it has biological, geological, or other features which are locally rare or unique.
29. Wetland is known to contain an important archaeological site.
30. Wetland is hydrologically connected to a state or federally designated scenic river.
31. Wetland is located in an area experiencing a high wetland loss rate.
32. Other



VISUAL QUALITY/AESTHETICS — This value considers the visual and aesthetic quality or usefulness of the wetland.

CONSIDERATIONS/QUALIFIERS

1. Multiple wetland classes visible from primary viewing locations.
2. Emergent marsh and/or open water visible from primary viewing locations.
3. Diversity of vegetation species visible from primary viewing locations.
4. Wetland dominated by flowering plants, or plants which turn vibrant colors in different seasons.
5. Land use surrounding the wetland is undeveloped as seen from primary viewing locations.
6. Visible surrounding land use form contrasts with wetland.
7. Wetland views absent of trash, debris, and signs of disturbance.
8. Wetland is considered to be a valuable wildlife habitat.
9. Wetland is easily accessed.
10. Low noise level at primary viewing locations.
11. Unpleasant odors absent at primary viewing locations.
12. Relatively unobstructed sight line exists through wetland.
13. Other

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ENDANGERED SPECIES HABITAT — This value considers the suitability of the wetland to support threatened or endangered species.

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened or endangered species.
2. Wetland contains critical habitat for a state or federally listed threatened or endangered species.
3. Other

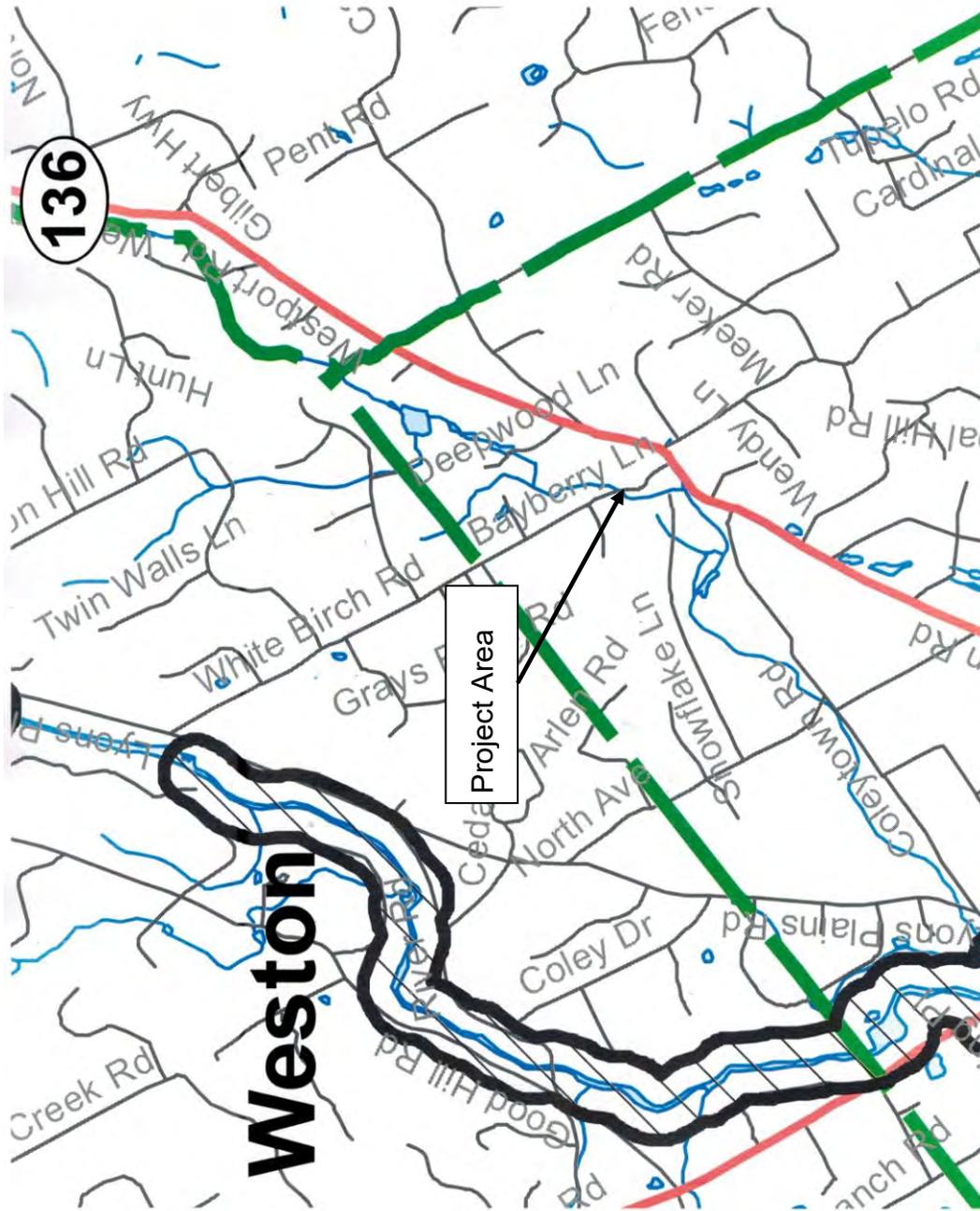
- 1 Although the above example refers to freshwater wetlands, it can also be adapted for marine ecosystems. Below is an example of an adaptation for the fish and shellfish function provided by the National Marine Fisheries Service.

FISH AND SHELLFISH HABITAT ---- This function considers the effectiveness of wetlands, embayments, tidal flats, vegetated shallows, and other environments in supporting marine resources such as fish, shellfish, marine mammals, and sea turtles.

CONSIDERATIONS/QUALIFIERS (Marine)

1. Special aquatic sites (tidal marsh, mud flats, eelgrass beds) are present.
 2. Suitable spawning habitat is present at the site or in the area.
 3. Commercially or recreationally important species are present or suitable habitat exists.
 4. The wetland/waterway supports prey for higher trophic level marine organisms.
 5. The waterway provides migratory habitat for anadromous fish.
 6. Other
-
- 2 In March 1995 a rapid wildlife habitat assessment method was completed by a University of Massachusetts research team, with funding and oversight provided by the New England Transportation Consortium. The method is called WEThings (wetland habitat indicators for non- game species). It produces a list of potential wetland- dependent mammals, reptiles, and amphibian species that may be present in the wetland. The output is based on observable habitat characteristics documented on the field data form. This method may be used to generate the wildlife species list recommended as backup information to the wetland evaluation form, and to augment the considerations. Use of this method should first be coordinated with the Corps project manager. A computer program is also available to expedite this process.

Appendix II: Natural Diversity Data Base



Portion of State of CT DEEP Natural Diversity Data Base Map, Westport, CT
Dated December 2018
Map indicates no known populations of Endangered, Threatened or Special Concern
Species or significant natural communities in the study area.

Natural Diversity Data Base Areas

WESTPORT, CT

June 2020

-  State and Federal Listed Species
-  Critical Habitat
-  Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Critical Habitats. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDDB) from a variety of data sources. Exact locations of species have been buffered to produce the generalized locations.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a hatched area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

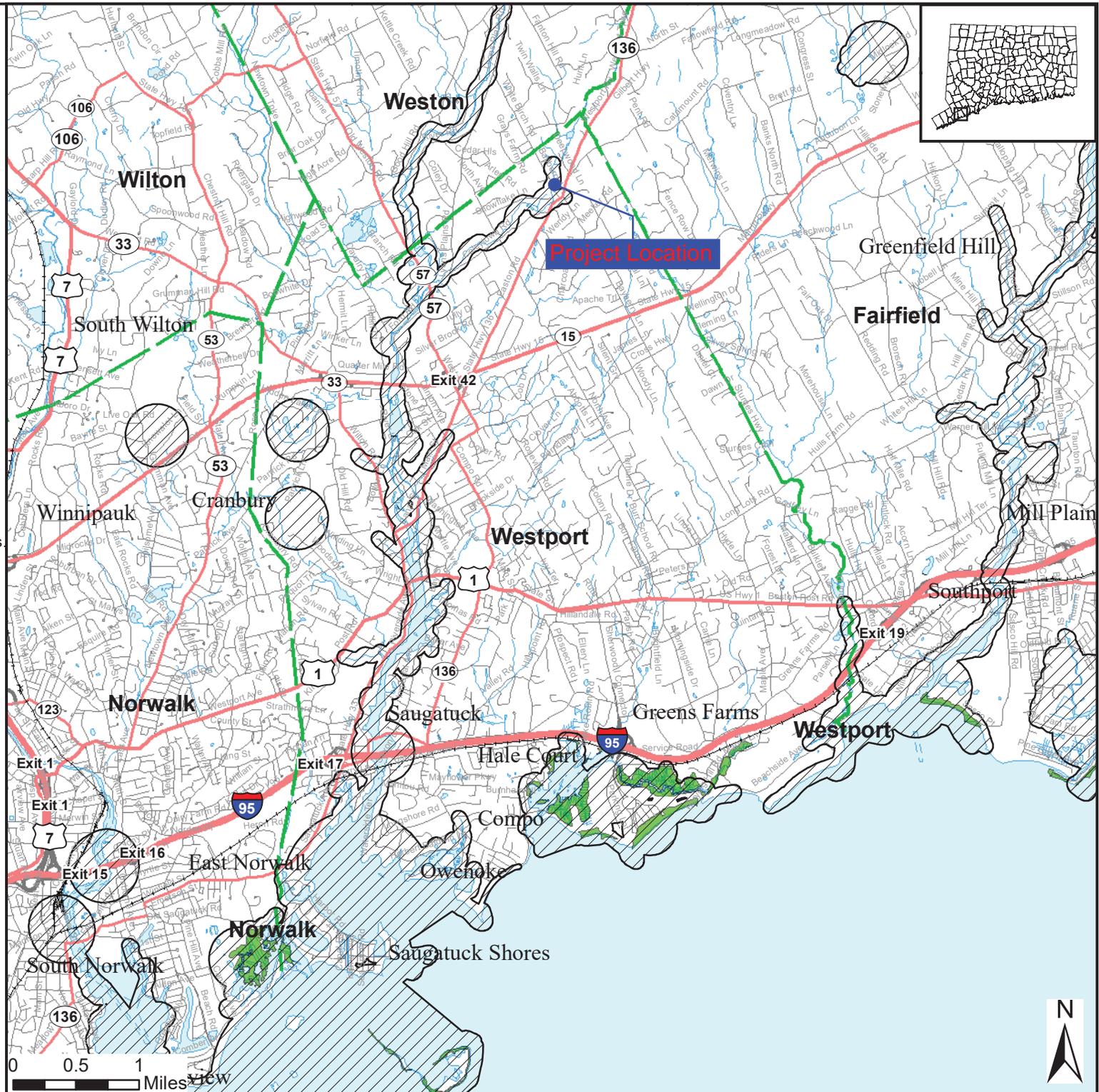
www.ct.gov/deep/nddbrequest

Use the CTECO Interactive Map Viewers at <http://cteco.uconn.edu> to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St, Hartford, CT 06106
email: deep.nddbrequest@ct.gov
Phone: (860) 424-3011



Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



Replacement of Bridge No. 04969
Bayberry Lane Ext. over Aspetuck River, Westport, CT
State Project No. 158-216
Town of Westport Conservation Application
August 2020

The ConnDEEP review of the Natural Diversity Data Base information (June 2020 edition) and the relevant conservation strategies documentation to be provided by the CTDOT Bridge Liaison Engineer.

TO: Alexander Finch, Office of Environmental Planning, DOT

FROM: Bruce Williams, DEEP - Fisheries Division

DATE: March 1, 2018

SUBJECT: Preliminary Fisheries Review – Replacement of Bayberry Lane #2 Bridge over the Aspetuck River

Type of Permit:

- 1. **DOT Culvert/Bridge Projects**
- 2. **Diversion**
- 3. **PGP/Inland Wetland**
- 4. **Water Quality Certification**

Project#: 158-TBD

Bridge#: 04969

Applicant: Connecticut Department of Transportation

State P.E. Project #:

Town: Westport

Waters: Aspetuck River

Sub Regional Basin #: 7202

Project Scope: The superstructure of the existing single span bridge structurally deficient and the abutments have been undermined by scour. The proposed scope of the project is to replace the entire bridge with a clear-span superstructure founded on new abutments. The project also includes approximately 100 feet of roadway reconstruction, new guiderail systems, and scour protection. Enclosed are my preliminary comments.

Fisheries Resources: The Fisheries Division has targeted the Aspetuck River for diadromous (migratory) fish restoration. All dams downstream of the project site are now passable to migratory fish. Alewives, Blueback Herring, American Eel, Sea Lamprey, and sea-run Brown Trout now have free passage upstream through the project area up to the first impassable dam approximately 400 feet upstream of Bayberry Lane. These fish use the river not only as a migratory corridor, but also as spawning and juvenile habitat.

The Fisheries Division annually stocks a combined total of approximately 455 adult Brown Trout and Brook Trout in the Aspetuck River between Lyons Plain Road and the Aspetuck Reservoir. The Bayberry Lane Bridge is one of ten designated stocking locations in this area. In addition to stocked trout, the Fisheries Division has also documented the presence of wild Brown Trout and wild Brook Trout in this section river. Other documented fish species include Blacknose Dace, Common Shiner, Creek Chub, Cutlips Minnow, Green Sunfish, Largemouth

Bass, Longnose Dace, Redbreast Sunfish, Rock Bass, Tessellated Darter, and White Sucker.

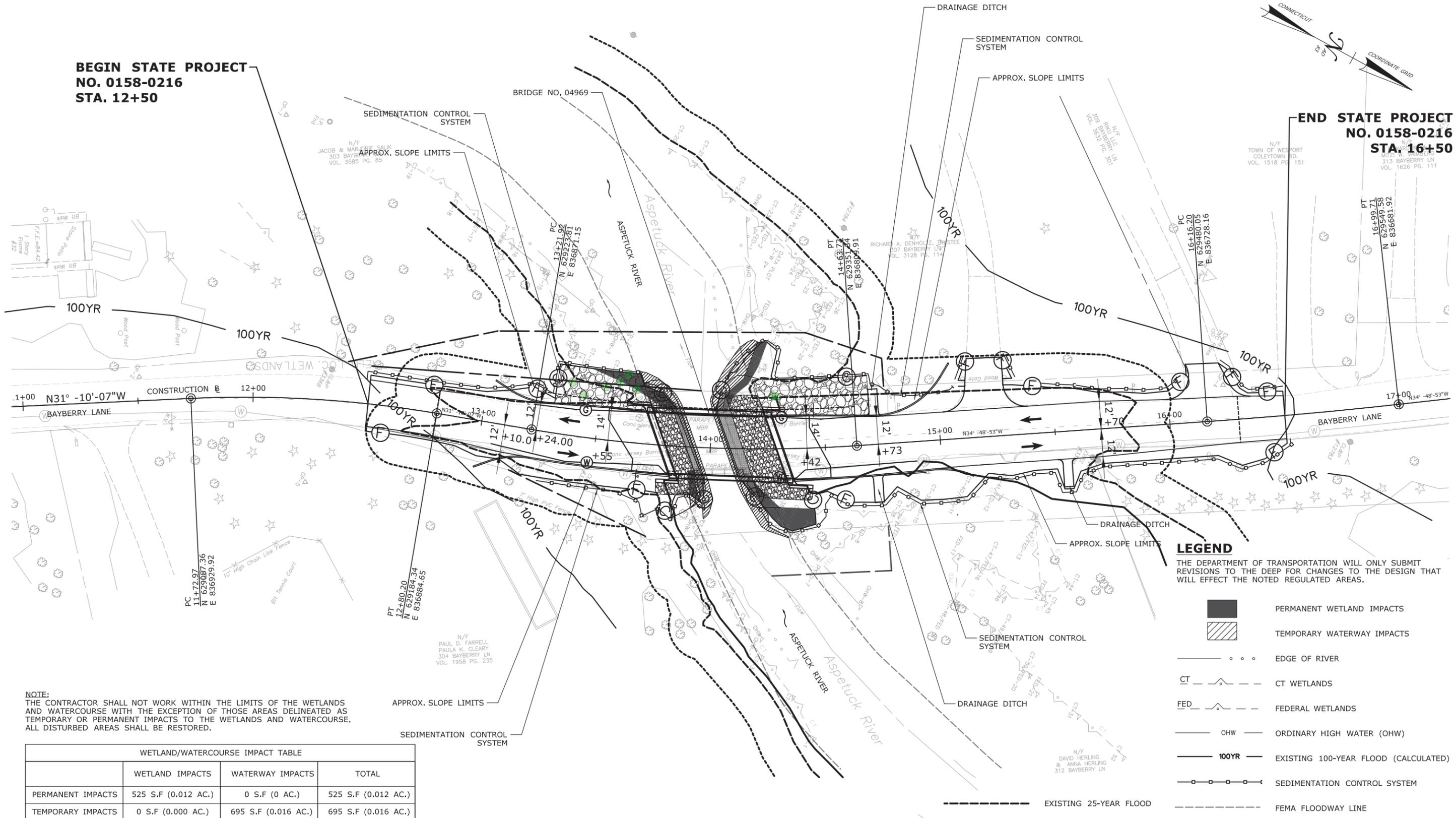
Comments/Recommendations:

1. Existing onsite conditions provide for unrestricted fish passage and a streambed of natural materials. The final design of this project must maintain such conditions.
2. To protect downstream fish habitat, it is critical that proper erosion and sedimentation controls be installed and maintained throughout the duration of this project. Care should be exercised so as not to increase turbidity levels and all disturbed area will need to be stabilized and restored with native vegetation after completion of the project.
3. Due to the presence of diadromous fish, any “unconfined” instream work should be restricted to the period July 1 through September 30.
4. If riprap is required for scour protection, all efforts should be made to minimize the amount of area covered by riprap and all riprap should be covered with natural streambed material or rounded stone.

CC. S. Gephard

**BEGIN STATE PROJECT
NO. 0158-0216
STA. 12+50**

**END STATE PROJECT
NO. 0158-0216
STA. 16+50**



LEGEND
THE DEPARTMENT OF TRANSPORTATION WILL ONLY SUBMIT REVISIONS TO THE DEEP FOR CHANGES TO THE DESIGN THAT WILL EFFECT THE NOTED REGULATED AREAS.

- PERMANENT WETLAND IMPACTS
- TEMPORARY WATERWAY IMPACTS
- EDGE OF RIVER
- CT WETLANDS
- FEDERAL WETLANDS
- OHW ORDINARY HIGH WATER (OHW)
- 100YR EXISTING 100-YEAR FLOOD (CALCULATED)
- SEDIMENTATION CONTROL SYSTEM
- FEMA FLOODWAY LINE
- EXISTING 25-YEAR FLOOD
- WATERWAY PROTECTION LINE
- PROPOSED 25-YEAR FLOOD

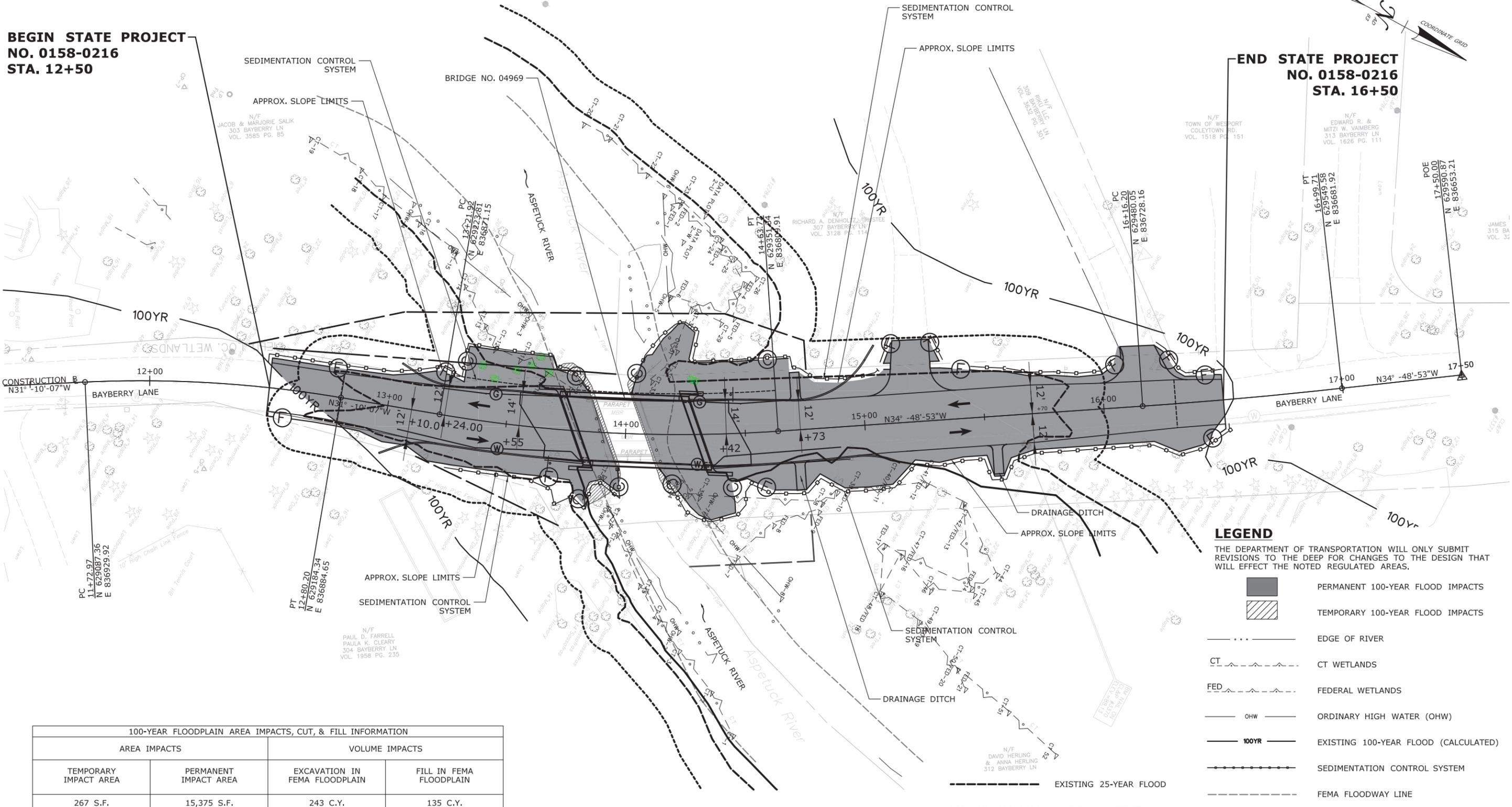
NOTE:
THE CONTRACTOR SHALL NOT WORK WITHIN THE LIMITS OF THE WETLANDS AND WATERCOURSE WITH THE EXCEPTION OF THOSE AREAS DELINEATED AS TEMPORARY OR PERMANENT IMPACTS TO THE WETLANDS AND WATERCOURSE. ALL DISTURBED AREAS SHALL BE RESTORED.

WETLAND/WATERCOURSE IMPACT TABLE			
	WETLAND IMPACTS	WATERWAY IMPACTS	TOTAL
PERMANENT IMPACTS	525 S.F (0.012 AC.)	0 S.F (0 AC.)	525 S.F (0.012 AC.)
TEMPORARY IMPACTS	0 S.F (0.000 AC.)	695 S.F (0.016 AC.)	695 S.F (0.016 AC.)
TOTAL IMPACTS	525 S.F (0.012 AC.)	695 S.F (0.016 AC.)	1,220 S.F (0.028 AC.)

		DESIGNER/DRAFTER: M. GREER CHECKED BY: S. GWARA SCALE IN FEET SCALE 1"=20'	TOWN OF WESTPORT	SIGNATURE/ BLOCK: AI ENGINEERS, INC. 919 MIDDLE STREET MIDDLETOWN, CT 06457 PHONE: (860) 635-7740 FAX: (860) 635-7312	PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 04969 BAYBERRY LANE #2 OVER ASPETUCK RIVER	TOWN: WESTPORT	PROJECT NO. 0158-0216 DRAWING NO. PMT-03 SHEET NO.	
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 8/11/2020	FILENAME: ...VHW_MSH_0158_0216_PMT-03.dgn	ENVIRONMENTAL PERMIT PLANS PLAN DATE: AUGUST 12, 2020		DRAWING TITLE: WETLAND/WATERCOURSE IMPACT PLAN

**BEGIN STATE PROJECT
NO. 0158-0216
STA. 12+50**

**END STATE PROJECT
NO. 0158-0216
STA. 16+50**



- LEGEND**
THE DEPARTMENT OF TRANSPORTATION WILL ONLY SUBMIT REVISIONS TO THE DEEP FOR CHANGES TO THE DESIGN THAT WILL EFFECT THE NOTED REGULATED AREAS.
- PERMANENT 100-YEAR FLOOD IMPACTS
 - TEMPORARY 100-YEAR FLOOD IMPACTS
 - EDGE OF RIVER
 - CT WETLANDS
 - FEDERAL WETLANDS
 - ORDINARY HIGH WATER (OHW)
 - EXISTING 100-YEAR FLOOD (CALCULATED)
 - SEDIMENTATION CONTROL SYSTEM
 - FEMA FLOODWAY LINE
 - EXISTING 25-YEAR FLOOD
 - WATERWAY PROTECTION LINE
 - PROPOSED 25-YEAR FLOOD

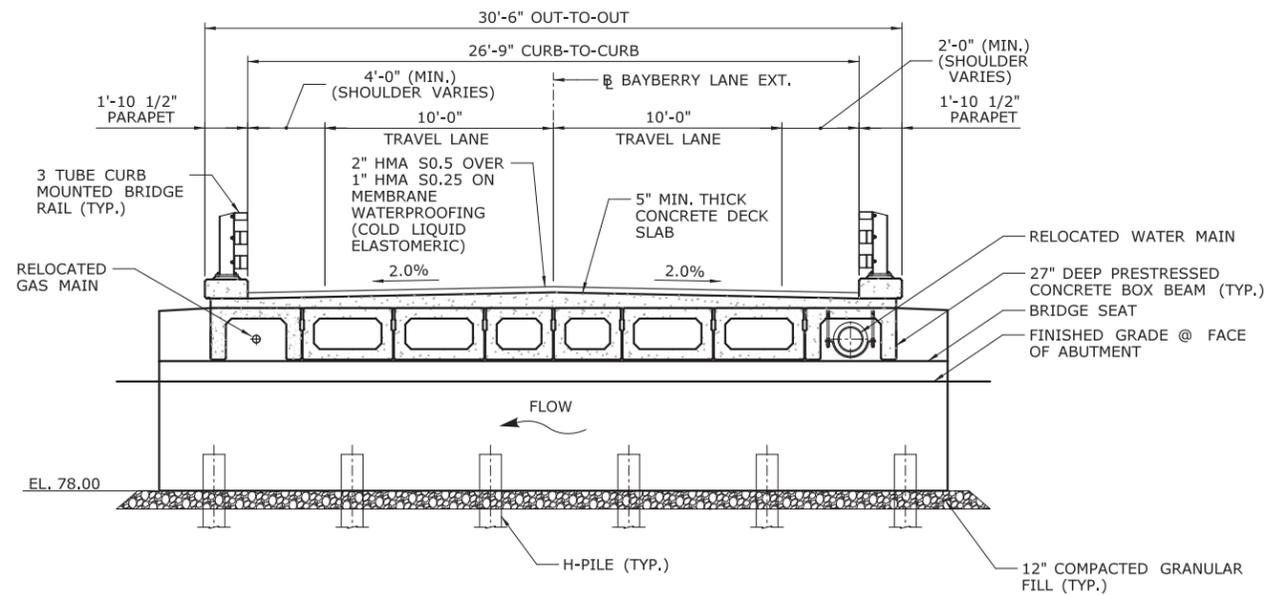
100-YEAR FLOODPLAIN AREA IMPACTS, CUT, & FILL INFORMATION			
AREA IMPACTS		VOLUME IMPACTS	
TEMPORARY IMPACT AREA	PERMANENT IMPACT AREA	EXCAVATION IN FEMA FLOODPLAIN	FILL IN FEMA FLOODPLAIN
267 S.F.	15,375 S.F.	243 C.Y.	135 C.Y.

		DESIGNER/DRAFTER: M. GREER CHECKED BY: S. GWARA SCALE IN FEET SCALE 1"=20'	TOWN OF WESTPORT FILENAME: ...VHW_MSH_0158_0216_PMT-04.dgn	SIGNATURE/BLOCK: AI ENGINEERS, INC. 919 MIDDLE STREET MIDDLETOWN, CT 06457 PHONE: (860) 635-7740 FAX: (860) 635-7312	PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 04969 BAYBERRY LANE #2 OVER ASPETUCK RIVER	TOWN: WESTPORT DRAWING TITLE: 100-YEAR FLOOD IMPACT PLAN PLAN DATE: AUGUST 12, 2020	PROJECT NO. 0158-0216 DRAWING NO. PMT-04 SHEET NO.
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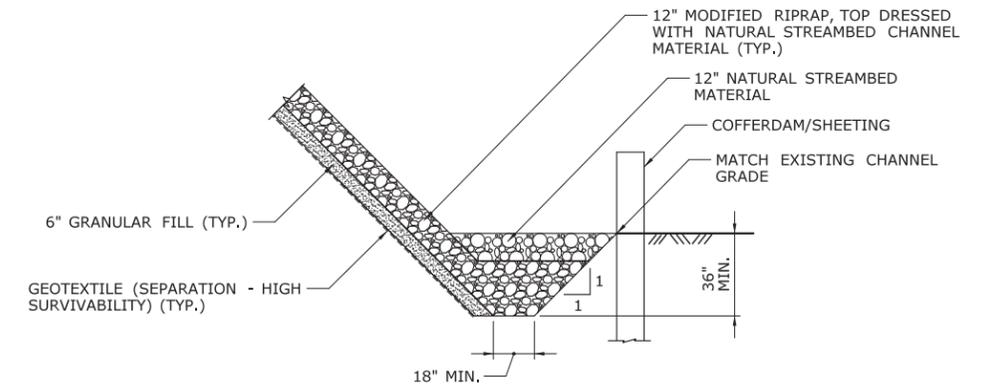
REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Plotted Date: 8/11/2020

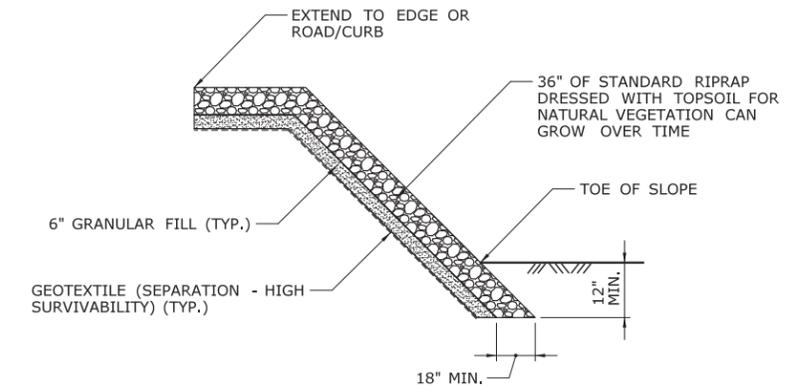
THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.



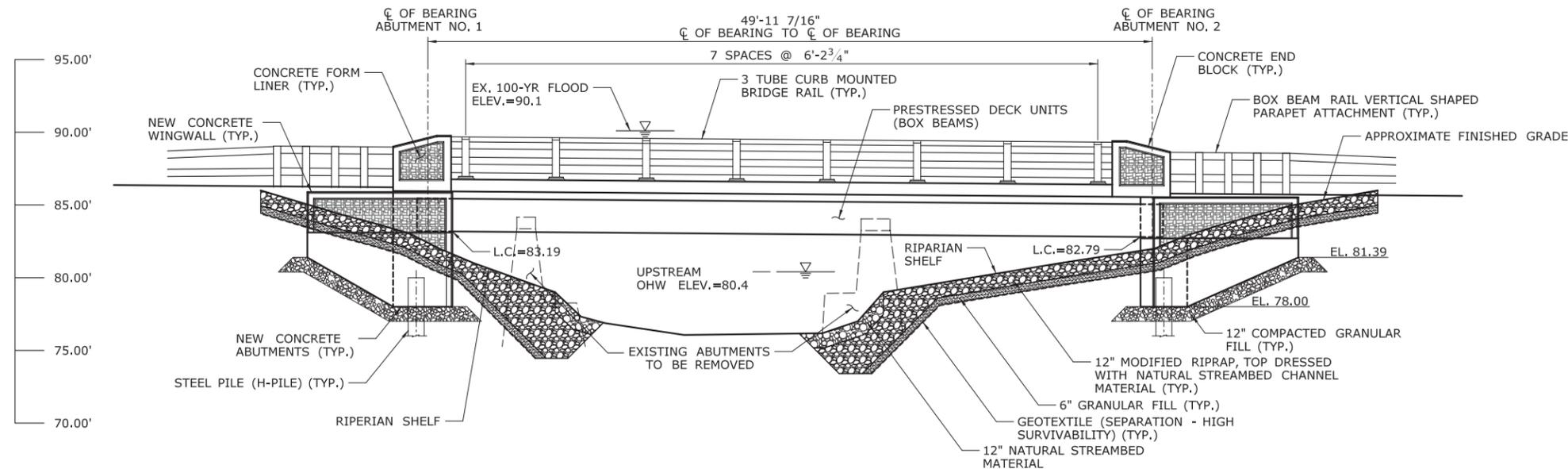
TYPICAL BRIDGE SECTION
SCALE: 1/4" = 1'-0"



MODIFIED RIPRAP KEY-IN DETAIL
NOT TO SCALE



STANDARD RIPRAP OVERTOPPING PROTECTION DETAIL
NOT TO SCALE



UPSTREAM ELEVATION VIEW (DOWNSTREAM SIMILAR)
SCALE: 1" = 5'

OPENNESS RATIO (OR):

OR = OPEN AREA / LENGTH
OR = 199.00 SF / 30.0 FT = 6.63
6.63 FT > 0.82 FT (RECOMMENDED MINIMUM)

BANKFULL WIDTH (BFW):

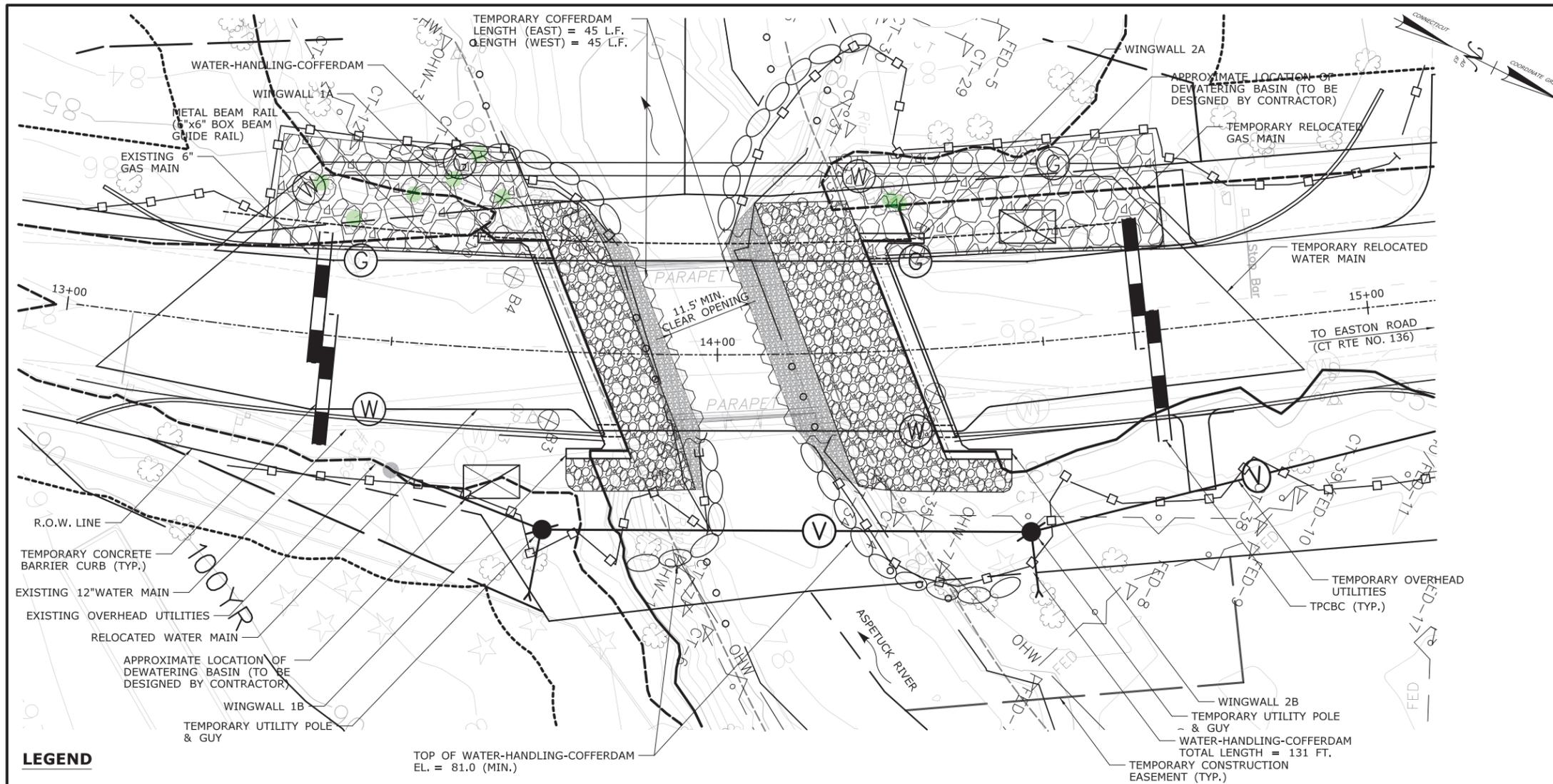
BFW = 37.0 FT
1.2 FT X 37.0 = 44.4 FT
45.0 FT > 44.4 FT (PROPOSED BRIDGE MINIMUM)

HYDRAULIC DATA SUMMARY	
DRAINAGE AREA (SQUARE MILES)	21.1
DESIGN FREQUENCY (YEAR)	100
DESIGN DISCHARGE (CFS)	3,000
AVERAGE DAILY FLOW ELEVATION (FEET)	78.5 ESTIMATED
DESIGN WATER SURFACE ELEVATION - U.S. (FT)	87.7
DESIGN WATER SURFACE ELEVATION - D.S. (FT)	83.7
MAXIMUM SCOUR DEPTH (FT)	68.7
FREQUENCY (YEAR)	50
DISCHARGE (CFS)	2,540
WORST CASE SCOUR SUBSTRUCTURE UNIT	NORTH ABUTMENT

ENVIRONMENTAL PERMIT PLANS

PLAN DATE: AUGUST 12, 2020

REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 8/11/2020	DESIGNER/DRAFTER: M. GREER	CHECKED BY: S. GWARA	SCALE AS NOTED	TOWN OF WESTPORT	Signature/Block:	PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 04969 BAYBERRY LANE #2 OVER ASPETUCK RIVER	TOWN: WESTPORT	PROJECT NO. 0158-0216
THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.					TOWN OF WESTPORT			AI Engineers AI ENGINEERS, INC. 919 MIDDLE STREET MIDDLETOWN, CT 06457 PHONE: (860) 635-7740 FAX: (860) 635-7312	DRAWING TITLE: ELEVATION AND SECTION PLAN	DRAWING NO. PMT-05	SHEET NO.	
File name: ...VHW_MSH_0158_0216_PMT-05.dgn												



SUGGESTED CONSTRUCTION SEQUENCE:

1. MOBILIZE AND INSTALL CONSTRUCTION SIGNS.
2. INSTALL SEDIMENTATION AND EROSION CONTROL MEASURES.
3. PERFORM NECESSARY CLEARING AND GRUBBING.
4. PLACE TPCBC AND IMPLEMENT DETOUR.
5. TEMPORARILY SUPPORT AND RELOCATE UTILITIES.
6. INSTALL DEBRIS SHIELD (MIN. ELEV.=83.5) UNDER THE BRIDGE AND REMOVE THE EXISTING SUPERSTRUCTURE.
7. INSTALL TEMPORARY COFFERDAM AND DEWATER.
8. REMOVE BOTH EXISTING ABUTMENTS.
9. INSTALL TEST PILES AS SHOWN ON THE PLANS.
10. INSTALL H-PILE FOUNDATION.
11. CONSTRUCT PROPOSED ABUTMENTS AND WINGWALLS.
12. CONSTRUCT EMBANKMENT GRADING AND INSTALL MODIFIED RIPRAP TOP DRESSED WITH NATURAL STREAMBED MATERIAL.
13. REMOVE TEMPORARY COFFERDAM.
14. INSTALL PRESTRESSED CONCRETE DECK UNITS AND CONSTRUCT DECK SLAB & BRIDGE PARAPET.
15. CONSTRUCT BACKWALL WITH APPROACH SLABS SEATS.
16. CONSTRUCT APPROACH SLABS.
17. INSTALL HMA ON MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC) ON DECK SLAB.
18. INSTALL BRIDGE RAIL.
19. RECONSTRUCT ROADWAY, TACK COAT, PAVE, INSTALL GUIDE RAIL, END DETOUR AND OPEN THE BRIDGE TO TRAFFIC.
20. FINALIZE GRADING AND TOP SOIL/TURF ESTABLISHMENT.
21. THE SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED AFTER IMPACTED AREAS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

TEMPORARY HYDRAULICS DATA SUMMARY	
AVERAGE DAILY FLOW (CFS)	35
AVERAGE SPRING FLOW (CFS)	75
2-YEAR FREQUENCY DISCHARGE (CFS)	840
TEMPORARY DESIGN DISCHARGE (CFS)	225
TEMPORARY DESIGN FREQUENCY (YEARS)	1
TEMPORARY WATER SURFACE ELEVATION - UPSTREAM (FT)	80.0
TEMPORARY WATER SURFACE ELEVATION - DOWNSTREAM (FT)	79.0

WATER HANDLING NOTES:

1. ANY UNCONFINED IN-STREAM WORK SHOULD BE RESTRICTED TO THE PERIOD JULY 1ST THROUGH SEPTEMBER 30TH.
2. THE CONTRACTOR SHALL MAINTAIN FLOW BETWEEN THE TEMPORARY WATER-HANDLING-COFFERDAMS AS SHOWN DURING CONSTRUCTION OF THE NEW STRUCTURE.
3. EQUIPMENT SHALL NOT BE PERMITTED IN THE STREAMBED WITHOUT APPROVAL FROM THE ENGINEER.
4. A DEWATERING BASIN SHALL BE ESTABLISHED OUTSIDE OF THE WETLAND LIMITS. THE LOCATION OF THE DEWATERING BASIN IS APPROXIMATE. THE EXACT POSITION MAY VARY BASED ON THE PUMPING DESIGN SUBMISSION AND APPROVED BY THE ENGINEER. THIS WORK SHALL BE PAID FOR UNDER THE ITEM "HANDLING WATER".
5. TEMPORARY WATER HANDLING COFFERDAMS SHALL BE DESIGNED BY THE CONTRACTOR TO SAFELY CONVEY WATER THROUGH THE CONSTRUCTION AREA AND BE ABLE TO SUPPORT THE CONSTRUCTION ACTIVITY AND SHALL CONFORM TO PERMITS. THIS WORK WILL BE PAID FOR UNDER THE ITEM "WATER HANDLING".
6. TEMPORARY COFFERDAMS SHALL BE DESIGNED BY THE CONTRACTOR TO SUPPORT THE CONSTRUCTION ACTIVITY AND EXCAVATION TO REMOVE THE EXISTING ABUTMENTS AND WINGWALLS AND SHALL CONFORM TO PERMITS. THIS WORK WILL BE PAID FOR UNDER THE ITEM "COFFERDAM AND DEWATERING".

NATIVE STREAMBED MATERIAL NOTES:

1. NATIVE STREAMBED MATERIAL EXCAVATED DURING THE BRIDGE REPLACEMENT SHALL BE STOCKPILED AND THEN REPLACED WITHIN THE BRIDGE TO THE DEPTH SHOWN ON THE PLANS, AS DIRECTED BY THE ENGINEER, AND IN ACCORDANCE WITH THE PERMIT DOCUMENTS.
2. THE STOCKPILE SHALL BE LOCATED OUTSIDE THE WETLAND LIMITS AND WITHIN THE R.O.W./CONSTRUCTION EASEMENTS AND PROTECTED WITH SEDIMENTATION CONTROL SYSTEM.

ENVIRONMENTAL PERMIT PLANS

PLAN DATE: AUGUST 12, 2020

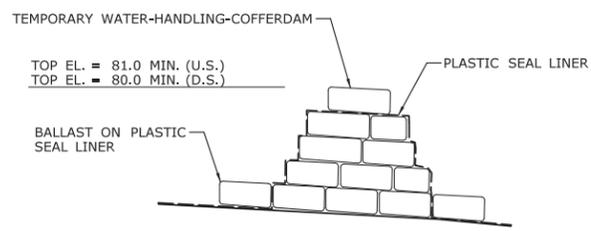
LEGEND

- EDGE OF RIVER
- SEDIMENTATION CONTROL SYSTEM
- OHW --- ORDINARY HIGH WATER (OHW)
- CT --- FEDERAL WETLANDS
- FED --- FEDERAL WETLANDS
- 100YR --- EXISTING 100-YEAR FLOOD CALCULATED
- WATER-HANDLING-COFFERDAM
- TEMPORARY COFFERDAM

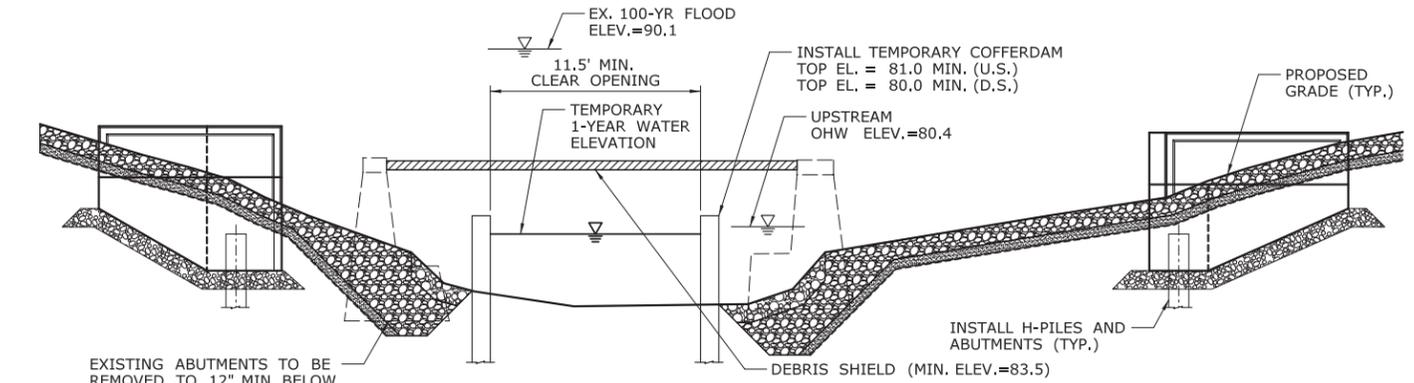
WATER HANDLING PLAN
SCALE: 1" = 10'

- EXISTING 25-YEAR FLOOD
- WATERWAY PROTECTION LINE
- PROPOSED 25-YEAR FLOOD

TEMPORARY RELOCATED WATER MAIN -
THE TOWN'S CONTRACTOR IN COORDINATION WITH THE AQUARIUM WATER COMPANY (AWC) WILL INSTALL THE TEMPORARY BYPASS WATER LINE WITH THE EXCEPTION OF INSERTION VALVES AND TAPPING SLEEVES AND VALVES, WHICH WILL BE PERFORMED BY AN AWC'S SPECIALTY CONTRACTOR.

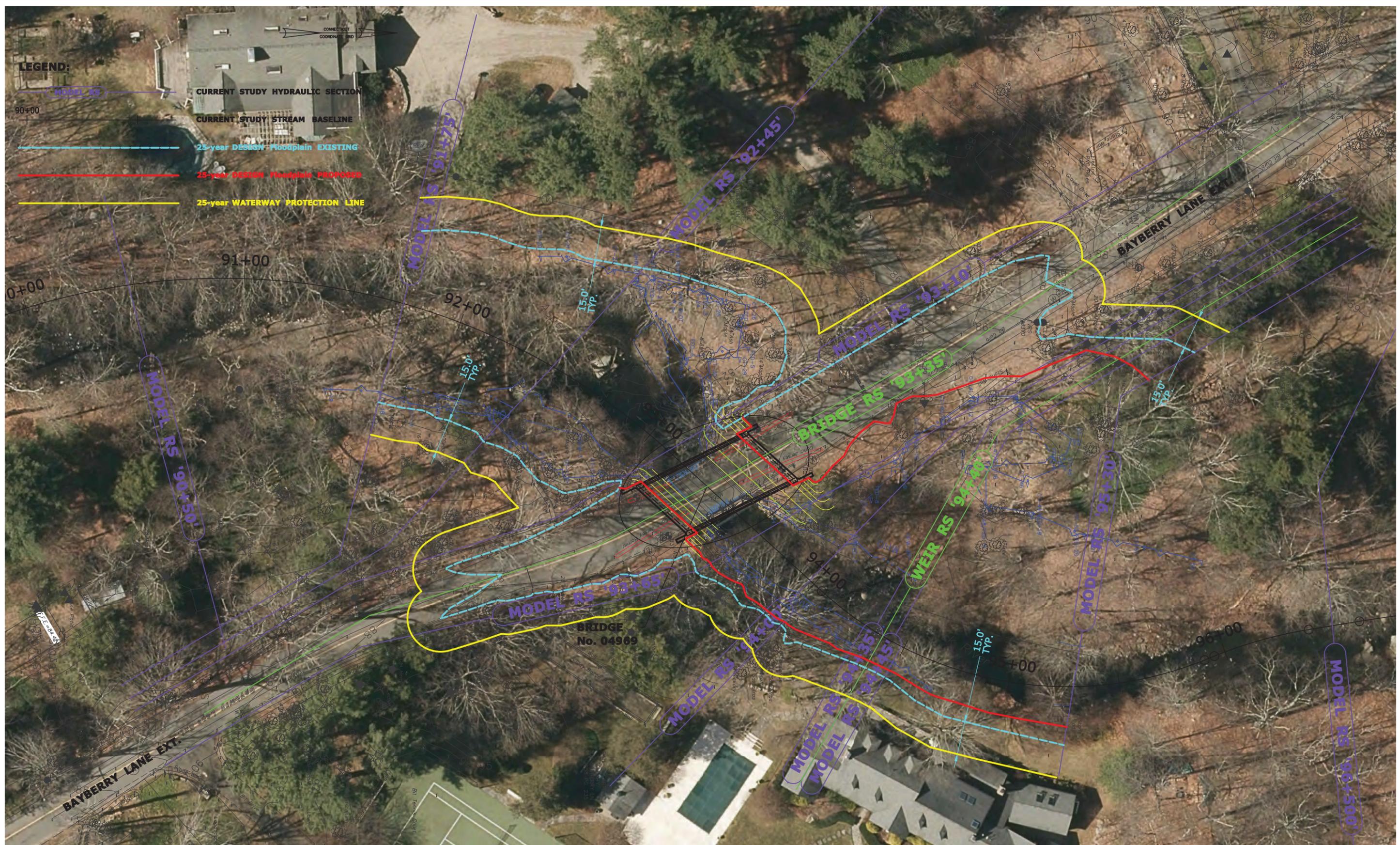


TEMPORARY WATER-HANDLING-COFFERDAM
N.T.S.



UPSTREAM ELEVATION VIEW
SCALE: 1" = 5'

	DESIGNER/DRAFTER: M. GREER		TOWN OF WESTPORT	SIGNATURE/ BLOCK:		PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 04969 BAYBERRY LANE #2 OVER ASPETUCK RIVER	TOWN: WESTPORT	PROJECT NO. 0158-0216
	CHECKED BY: A. GOKHALE				AI ENGINEERS, INC. 919 MIDDLE STREET MIDDLETOWN, CT 06457 PHONE: (860) 635-7740 FAX: (860) 635-7312		DRAWING TITLE: WATER HANDLING PLAN	DRAWING NO. PMT-06
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 8/11/2020	SCALE AS NOTED	Filename: ...VHW_MSH_0158_0216_PMT-06.dgn		SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/9/2020

DESIGNER/DRAFTER:
TJB

CHECKED BY:
T.J.B.

SCALE IN FEET
0 20 40
SCALE 1"=20'



SIGNATURE/BLOCK:
EcoDesign, LLC
for AI Engineers, Inc.

APPROVED BY: _____ DATE: _____

PROJECT TITLE:
**BAYBERRY LANE EXT.
OVER ASPETUCK RIVER
BRIDGE No. 04969**

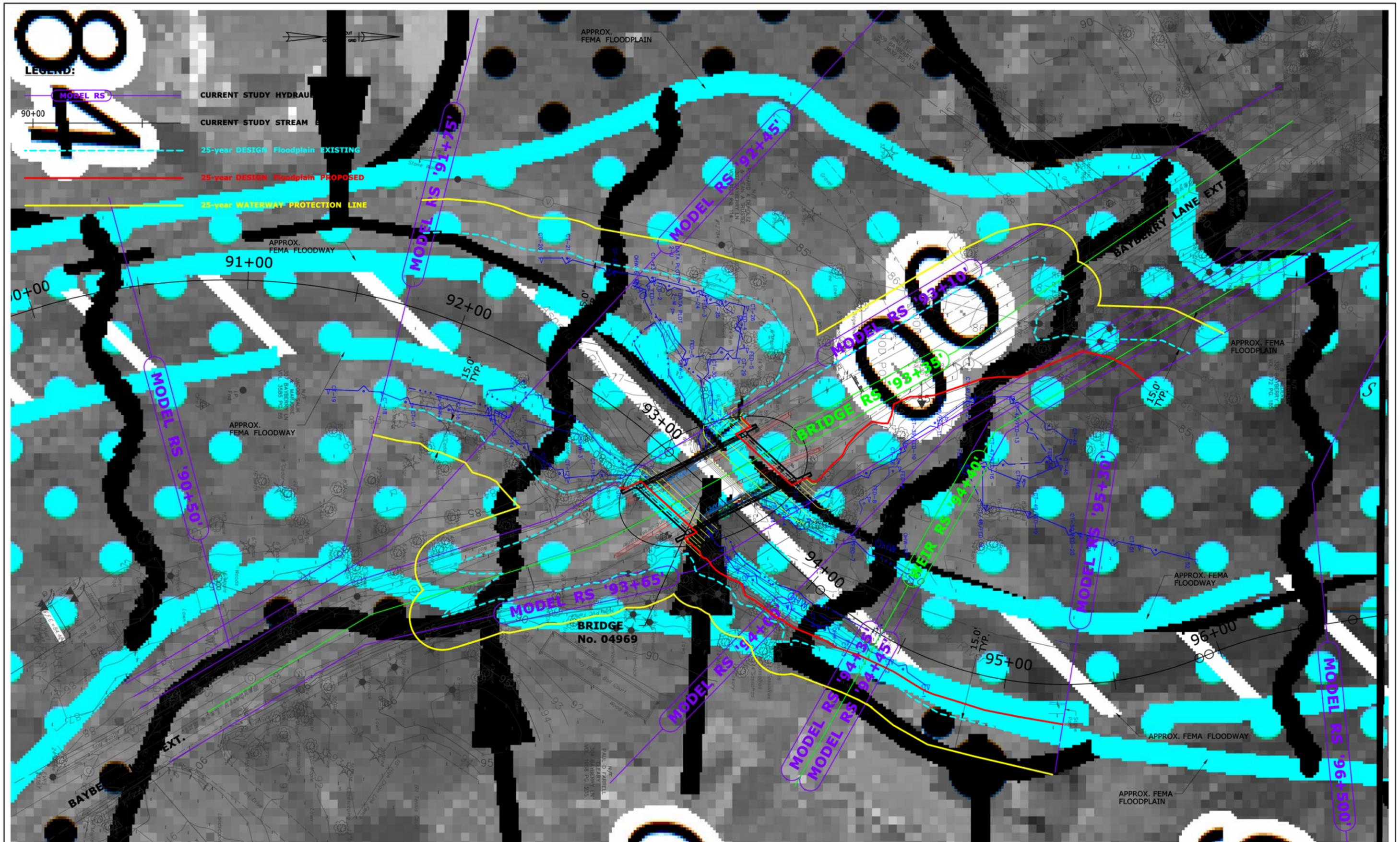
TOWN:
WESTPORT

DRAWING TITLE:
**WATERWAY PROTECTION LINE
25-year DESIGN FLOW**

PROJECT NO.
18-006

DRAWING NO.
WPL-25y

SHEET NO.
Fig. 25y



REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:
TJB
CHECKED BY:
T.J.B.
SCALE IN FEET
0 20 40
SCALE 1"=20'



Signature/Block:
EcoDesign, LLC
for AI Engineers, Inc.
APPROVED BY: DATE:

PROJECT TITLE:
BAYBERRY LANE EXT. OVER ASPETCHUCK RIVER BRIDGE No. 04969

TOWN:
WESTPORT

PROJECT NO.: **18-006**
DRAWING NO.: **WPL-25y**
DRAWING TITLE: **WATERWAY PROTECTION LINE 25-year DESIGN FLOW (FEMA)**
SHEET NO.: **Fig. 25y**