

STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

DATE: December 4, 2019

FROM:  Andrew O'Sullivan
Wetlands Program Manager

AT (OFFICE): Department of
Transportation

SUBJECT: Dredge & Fill Application
Sandwich, #99055Z

Bureau of
Environment

TO: Karl Benedict, Public Works
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT Bureau of Bridge Maintenance for the subject major impact project. This project is classified as Major per Env-Wt 303.02(p). The project is located on NH Route 25 in the Town of Sandwich, NH. The proposed work consists of rehabilitation of bridge 203/029. The existing bridge is a 10' span by 6' high concrete box with concrete invert that extends from a masonry box culvert with concrete invert lining of the same size. The masonry box is significantly deteriorated. NHDOT Bureau of Bridge Maintenance is proposing to replace the mortar rubble masonry portion of the structure with a concrete box structure to match the existing concrete box.

This project was reviewed at the Natural Resource Agency Coordination Meeting on February 21, 2018. A copy of the minutes has been included with this application package. A copy of this application and plans can be accessed on the Departments website via the following link: <http://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm>

Mitigation is not required as the proposed permanent impacts are for the protection of existing infrastructure.

The lead people to contact for this project are Steve Johnson, Administrator, Bureau of Bridge Maintenance (271-3668 or steve.johnson@dot.nh.gov) or Sarah Large, Wetlands Program Analyst, Bureau of Environment (271-3226 or sarah.large@dot.nh.gov).

A payment voucher has been processed for this application (Voucher # 588951 & 589841) in the amounts of \$1,306.20 & \$732.20 for a total of \$2,038.40.

If and when this application meets with the approval of the Bureau, please send the permit directly to Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment.

AMO:sel
Enclosures

cc:
BOE Original
Town of Sandwich (4 copies via certified mail)
David Trubey, NH Division of Historic Resources (Cultural Review Within)
Carol Henderson, NH Fish & Game (via electronic notification)
Maria Tur, US Fish & Wildlife (via electronic notification)
Mark Kern, US Environmental Protection Agency (via electronic notification)
Michael Hicks, US Army Corp of Engineers (via electronic notification)
Kevin Nyhan, BOE (via electronic notification)

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WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management

Check the status of your application: www.des.nh.gov/onestop



RSA/Rule: [RSA 482-A](#) / [Env-Wt 100-900](#)

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.: _____ Check No.: _____ Amount: _____ Initials: _____
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1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to [Guidance Document A](#) for instructions.

Standard Review (Minimum, Minor or Major Impact)
 Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required, a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if mitigation is required, please refer to the [Determine if Mitigation is Required Frequently Asked Questions](#).

Mitigation Pre-Application Meeting Date: Month: 2 Day: 21 Year: 2018
 N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: **NH 25 over Weed Brook** TOWN/CITY: **Sandwich**

TAX MAP: _____ BLOCK: _____ LOT: _____ UNIT: _____

USGS TOPO MAP WATERBODY NAME: **Weed Brook** NA STREAM WATERSHED SIZE: **2.62 sq. mi.** NA

LOCATION COORDINATES (If known): **43° 47' 22.4" 71° 22' 33.53"**
 Latitude/Longitude UTM State Plane

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The existing 10' span by 6' high bridge is a concrete box culvert that extends from a masonry box culvert. The masonry box culvert has deteriorated and is significantly modified. Proposed work includes replacing the settled downstream wingwalls, downstream masonry abutments, stone invert slabs, and H-pile superstructure. Riprap will be placed upstream and downstream along the banks and within the channel of the structure to prevent scour.

5. SHORELINE FRONTAGE:

N/A This does not have shoreline frontage. SHORELINE FRONTAGE: _____

Shoreline Frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line ([Env-Wt 101.89](#)).

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the [Land Resources Management Webpage](#).

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Individual Sewerage Disposal per RSA 485-A:2	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Subdivision Approval Per RSA 485-A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Shoreland Permit Per RSA 483-B	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the [Instructions & Required Attachments](#) document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB 19 - 1404

b. This project is within a [Designated River](#) corridor. The project is within ¼ mile of: _____; and date a copy of the application was sent to the [Local River Management Advisory Committee](#): Month: ___ Day: ___ Year: ___

N/A – This project is not within a Designated River corridor.

8. APPLICANT INFORMATION (Desired permit holder)LAST NAME, FIRST NAME, M.I.: **NH Dept. of Transportation**TRUST / COMPANY NAME: **NH Dept. of Transportation**MAILING ADDRESS: **PO Box 483**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **Steve.Johnson@dot.nh.gov**

PHONE:

ELECTRONIC COMMUNICATION: By initialing here: **SJ**, I hereby authorize NHDES to communicate all matters relative to this application electronically.**9. PROPERTY OWNER INFORMATION (If different than applicant)**LAST NAME, FIRST NAME, M.I.: **NH Dept. of Transportation**TRUST / COMPANY NAME: **NH Dept. of Transportation**MAILING ADDRESS: **PO Box 483**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **Sarah.Large@dot.nh.gov**PHONE: **271-3226**ELECTRONIC COMMUNICATION: By initialing here **SL**, I hereby authorize NHDES to communicate all matters relative to this application electronically.**10. AUTHORIZED AGENT INFORMATION**

LAST NAME, FIRST NAME, M.I.:

COMPANY NAME:

MAILING ADDRESS:

TOWN/CITY:

STATE:

ZIP CODE:

EMAIL or FAX:

PHONE:

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.

11. PROPERTY OWNER SIGNATURE:See the [Instructions & Required Attachments](#) document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the [Instructions and Required Attachment](#) document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for National Historic Preservation Act (NHPA) 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the NHDES is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not forward returned mail.



Property Owner Signature

STEVE W. JOHNSON

Print name legibly

11/15/19

Date

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name legibly	Date
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DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained prior to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will be reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

	Print name legibly	Town/City	Date
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DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact.

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

Intermittent Streams: linear footage distance of disturbance is measured along the thread of the channel.

Perennial Streams/ Rivers: the total linear footage distance is calculated by summing the lengths of disturbance to the channel and each bank.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	ATF	TEMPORARY Sq. Ft. / Lin. Ft.	ATF
Forested wetland	18	<input type="checkbox"/> ATF	2070	<input type="checkbox"/> ATF
Scrub-shrub wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Emergent wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Wet meadow		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Intermittent stream channel	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Perennial Stream / River channel	96 / 7	<input type="checkbox"/> ATF	2031 / 163	<input type="checkbox"/> ATF
Lake / Pond	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Bank - Intermittent stream	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Bank - Perennial stream / River	146 / 44	<input type="checkbox"/> ATF	735 / 81	<input type="checkbox"/> ATF
Bank - Lake / Pond	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Tidal water	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Salt marsh		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Sand dune		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Prime wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Prime wetland buffer		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Previously-developed upland in TBZ		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - Lake / Pond		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - River		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - Tidal Water		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Vernal Pool		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
TOTAL	260 / 51		4836 / 364	

15. APPLICATION FEE: See the [Instructions & Required Attachments](#) document for further instruction

Minimum Impact Fee or Fee for Non-enforcement related, publicly-funded and supervised restoration projects, regardless of impact classification (see RSA 482-A:3, 1(c)): Flat fee of \$ 400

Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) 5,096 sq. ft. X \$0.40 = \$ 2,038.40

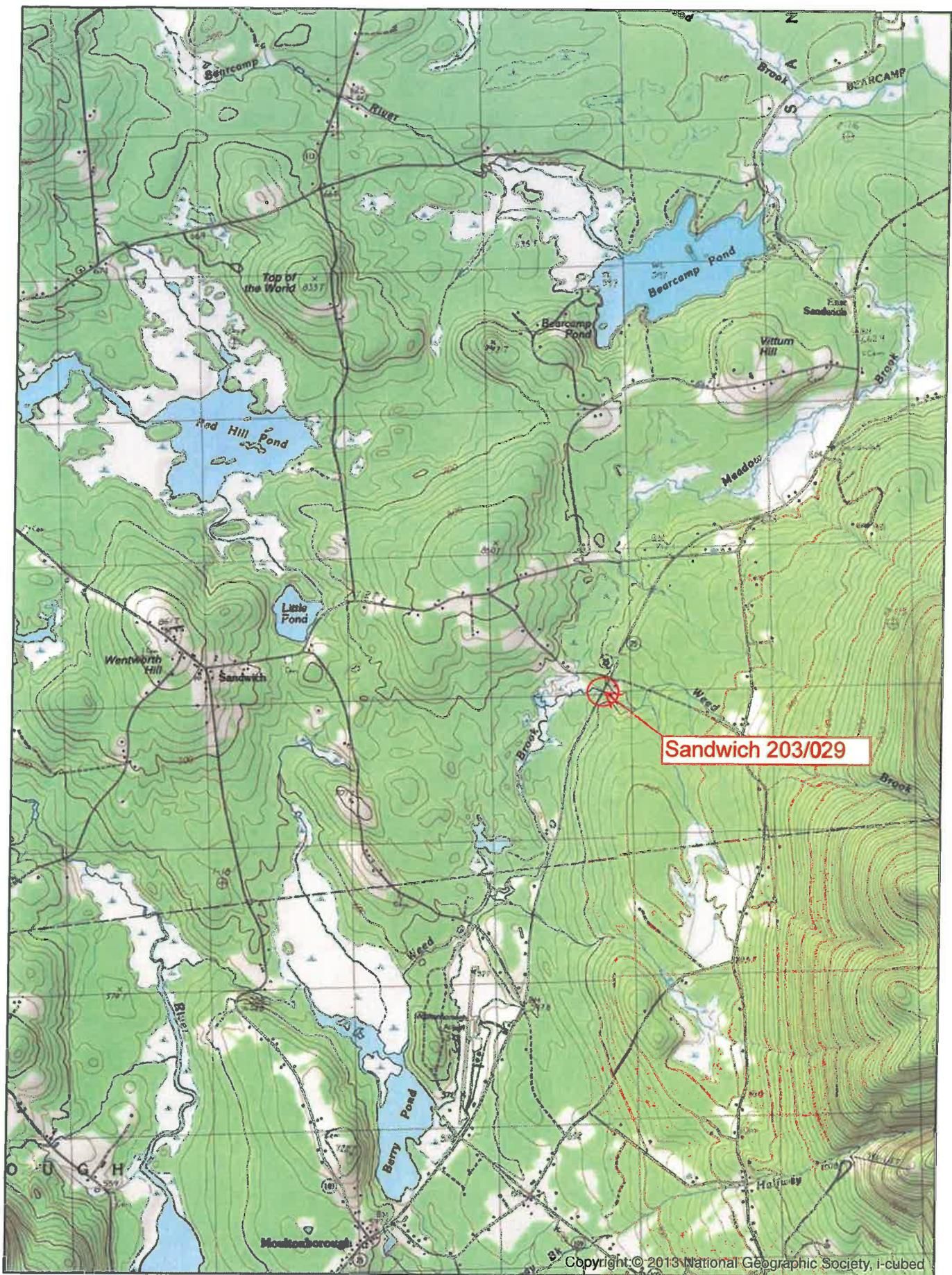
Temporary (seasonal) docking structure: _____ sq. ft. X \$2.00 = \$ _____

Permanent docking structure: _____ sq. ft. X \$4.00 = \$ _____

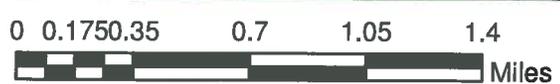
Projects proposing shoreline structures (including docks) add \$400 = \$ _____

Total = \$ 2,038.40

The Application Fee is the above calculated Total or \$400, whichever is greater = \$ 2,038.40



Sandwich 203/029





**WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS
Land Resources Management
Wetlands Bureau**



Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project’s design in assessing the impact of the proposed project to areas and environments under the department’s jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The existing bridge is a concrete box culvert that was attached to an existing masonry box culvert. The masonry box culvert has had extensive problems and has been significantly modified. It is necessary to impact jurisdictional areas to perform the necessary maintenance on the structure. The proposed work includes replacing the settled downstream wingwalls, downstream masonry abutments, stone slabs, and H-pile superstructure with concrete components. It is also necessary to place riprap along the upstream and downstream banks and channel to prevent scour. If the structure is not rehabilitated, it will eventually be load posted or closed.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

The alternatives considered are as follows:

Replace structure with a new structure in compliance with the NH Stream Crossing Guidelines: According to the NH Stream Crossing Guidelines, if a new structure were to be constructed at this location it would require a span of 26'-0". A structure of this size would cost approximately \$950,000. Spending this much money on a structure that could be adequately preserved for approximately \$120,000 would not be a practicable use of resources. Specifically with the scope of work tasked to NHDOT Bureau of Bridge Maintenance and the budget given to them this is not practicable at this time.

Replace existing masonry block culvert with a concrete culvert: This is the proposed alternative. The replacement of components within the existing footprint is the least impacting alternative. The structure can be preserved by removing the granite block portion and replacing it with a concrete culvert. The project as proposed has an estimated cost of \$150,000. This is the most cost effective solution and minimizes existing wetland impacts. This solution addresses the purpose of the project and specifically addresses the deterioration issue caused by the age of the masonry structure.

Not replacing the structure poses the risk of further deterioration and potential collapse and failure. A no build alternative was not considered substantially as it does not address the issue and does not protect the surrounding environmental resources from impacts.

3. The type and classification of the wetlands involved.

R2UB1- Riverine, lower perennial, unconsolidated bottom, cobble gravel & sand
PEM1E- Palustrine, emergent, persistent, seasonally flooded/ saturated

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

Weed Brook flows through Berry Pond approximately 2.23 miles downstream of the crossing and then into Red Hill River (which is approximately 3.63 miles downstream of the crossing).

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

Weed Brook has not been identified as a rare surface water of the state.

6. The surface area of the wetlands that will be impacted.

R2UB1 - 96 SF of permanent impacts, 2031 SF of temporary impacts
Bank - 146 SF of permanent impacts, 735 SF of temporary impacts
PEM1E- 18 SF of permanent impacts, 2070 SF of temporary impacts

7. The impact on plants, fish and wildlife including, but not limited to:

- a. Rare, special concern species;
- b. State and federally listed threatened and endangered species;
- c. Species at the extremities of their ranges;
- d. Migratory fish and wildlife;
- e. Exemplary natural communities identified by the DRED-NHB; and
- f. Vernal pools.

a) There were no rare or special concern species identified other than those listed below.

b) Through the U.S. Fish and Wildlife Service IPAC (05E1NE00-2018-SLI-1420) tool USFWS identified the threatened Northern Long-eared Bat and its habitat as a species of concern within the project vicinity. The proposed work will remove a few trees greater than 3" in diameter at breast height, but the work will be between October 1st and April 1st. NHDOT BOE has submitted consultation to USFWS regarding the NLEB and have included the consistency letter with this application submittal.

The Department has coordinated with DRED and results of the NHB review revealed no records for state or federally listed threatened or endangered species in the area.

c) There are no species known to be at the extremities of their ranges located in the project area.

d) Migratory fish and wildlife will not be affected by this project.

e) The Department has coordinated with DRED and results of the NHB review revealed no records for state or federally listed threatened or endangered species in the area.

f) There were no vernal pools identified within the project limits.

8. The impact of the proposed project on public commerce, navigation and recreation.

During construction all lanes of traffic will be maintained at all times. Weed brook is a non-navigable water which makes it non-conductive to boaters. There are no recreational areas that have been identified in this area. When construction is completed, the project as proposed will be a benefit to the public commerce.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The project will not significantly interfere with the aesthetic interests of the general public. The proposed improvements will largely go unnoticed.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

The project will not interfere with or obstruct public rights of passage or access. During construction, traffic will be maintained at all times.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The project is expected to have a positive impact on abutting properties. The rehabilitated structure will better serve the abutting properties if they need to travel on the road.

The project as proposed will not alter the chance of flooding on abutting properties upstream or downstream.

12. The benefit of a project to the health, safety, and well being of the general public.

The project will provide a safer, longer lasting structure and roadway. If the structure is not rehabilitated, the bridge will eventually be load posted or closed. Keeping the roadway open benefits commerce, trade, emergency access, etc., for the general public.

13. The impact of a proposed project on quantity or quality of surface and groundwater. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

The surface water currently runs off the road and over natural vegetation. Upon completion of the project, surface water will drain in the same manner. This will have no adverse effects on the quality or quantity of surface and ground water with the project limits. Best Management Practices will be used to prevent any adverse effect to water quality during construction.

The topography of the banks of the stream will not be permanently altered from the existing topographic configuration.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

Flooding: Rehabilitating the existing structure and replacing it with a concrete portion will not have any effect on the structures ability to pass the 100 year storm event. The decrease in hydraulic capacity through the structure due to the invert is negligible as half of the box's invert is already lined and the addition of the concrete invert liner will match the grade of the existing.

Erosion: Rehabilitating the existing structure and placing riprap will have no effect on erosion.

Sedimentation: Nothing will be placed that would be a barrier to sediment transport.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

Surface waters will not be reflected or redirected as a result of this project. Weed brook does not have enough surface water for wave energy to be an issue.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

The work consists of the repair of an existing bridge structure. There are no similar structures in the vicinity owned by other parties that would require repair.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The value of wetland as a habitat for living organisms will not be changed as a result of this project. A function of Weed Brook is to carry water from a higher elevation to a lower elevation. This project will not interfere with that function.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

The project is not located in or near any Natural Landmarks listed on the National Register.

19. The impact upon the value of areas named in acts of Congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

There are no areas named in an act of Congress or Presidential proclamations as national rivers national wilderness areas, or national lakeshores that will be impacted as a result of this project.

20. The degree to which a project redirects water from one watershed to another.

This project as proposed will not redirect water from one watershed to another.

Additional comments

shoreland@des.nh.gov or (603) 271-2147
NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095
www.des.nh.gov

NOTES ON CONFERENCE:**Finalization of the October 18th and November 15th Natural Resource Agency Meeting Minutes.**

Matt Urban ask the group if there were any other comments or edits for the October 18th and November 15th 2017 meeting minutes. We had received only a few comments for each. No one objected to finalizing both sets of minutes. The minutes were finalized and posted after the meeting.

Brookline, #41814 (Non-Federal)

Steve Johnson noted that the AIR form incorrectly noted in the first sentence that the project involved “bridge replacement”. The purpose of the project is to replace the deck, and place riprap to protect the structure. An overview of the project was presented including the project location. The existing structure is a concrete rigid frame constructed in 1931 that carries Pepperell Road over Rocky Pond Brook (Brookline 116/058). The drainage area is 4.3 square miles. There were NHB records noted, but it was expected that there would be no impacts.

Steve Johnson showed photos with the wetlands delineation, the upstream and downstream channel and the upstream wingwalls along with a sketch showing the proposed impacts.

Rick asked about the design and placement of the rip rap. Steve Johnson explained that the rip rap would be placed around the wingwalls and wrap around to the bank of the brook and sloped at 1½:1 as shown on the proposed impacts.

Carol Henderson asked if it was expected to use either sandbag cofferdams or a diversion pipe for this project. Steve Johnson noted that there would probably be a 36” or 48” pipe used divert the streamflow during construction. Carol noted that the pipe was not the preferred alternative to sandbag cofferdam that maintained the natural stream bottom for fish passage during construction. Steve noted that a longitudinal sandbag cofferdam was not practical at this structure. Matt Urban mentioned that the pipe would be at the streambed elevation, and which would allow for the fish to make passage through the pipe.

Steve Johnson mentioned that the project would most likely last two months and may take place during the winter depending upon ability to plow snow with one lane closed. Steve Johnson also noted that the riprap would be installed to protect the existing structure and which in the past has not required mitigation.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Sandwich, #99055Z (Non-Federal)

Steve Johnson gave an overview of the project and its location. The existing structure is a 10’ span by 6’ high concrete box constructed in 1946 which was extended from an older stone box. The structure carries NH25 over Weed Brook (Sandwich 203/029). The drainage area is 2.6 square miles and there were no NHB records.

The proposed work includes adding rip rap at each of the wingwalls and replacing the existing stone block portion of the box with a concrete frame of the same dimension. The outlet wingwalls have tipped due to undermining and the stone top has largely been replaced with H-piling with some of the remaining stones having cracks. The existing stone box section has a concrete floor which will remain. The stone box was presented at a cultural resource meeting and was determined to be not eligible for the National Register.

Steve Johnson showed photos with the wetlands delineation, the interior of the stone box, the upstream and downstream channel and the structure inlet and outlet along with a sketch showing the proposed impacts. Steve noted that the delineation shown was done at a time when Bridge Maintenance was delineating and that the NHDOT Bureau of Environment would re-delineate prior to submission of the permit.

Steve Johnson also noted that the flow of the stream had eroded the south west wingwall. It was noted the plan for the proposed impacts was incorrect, and that the rip rap in the channel should be at the downstream outlet of the culvert, no channel riprap was required at the upstream inlet.

Carol Henderson asked if there would be a diversion pipe used for this project. Steve Johnson said that a diversion pipe would be necessary to do the work required. Carol also asked what time of year it would take place and how long. Steve indicated that it would be longer than two months, and the nature of the work would require it to be done in the summer.

It was determined that mitigation would be required on this project for the downstream impacts unless it could be determined that there was rock already present where it is proposed to be placed.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Tamworth, #41813 (Non-Federal)

Steve Johnson provided overview of the project. The existing structure is a concrete tee beam bridge constructed in 1937 with a 46' span that carries NH 16 over Chocorua River Tamworth 097/165). The drainage area is 14.3 square miles and there were no NHB records.

The proposed work includes placing sandbag cofferdams along the outside wings of the bridge in order to place rip rap. The embankment is sloughing adjacent to the wingwalls.

Steve Johnson showed photos with the wetlands delineation, the upstream and downstream channel and the structure, and the wingwalls along with a sketch showing the proposed impacts.

It was stated that there is existing stone in some locations, and that the reason for the protection is because there are concerns about the stability of the project embankment. No further comments or questions were made regarding this project.

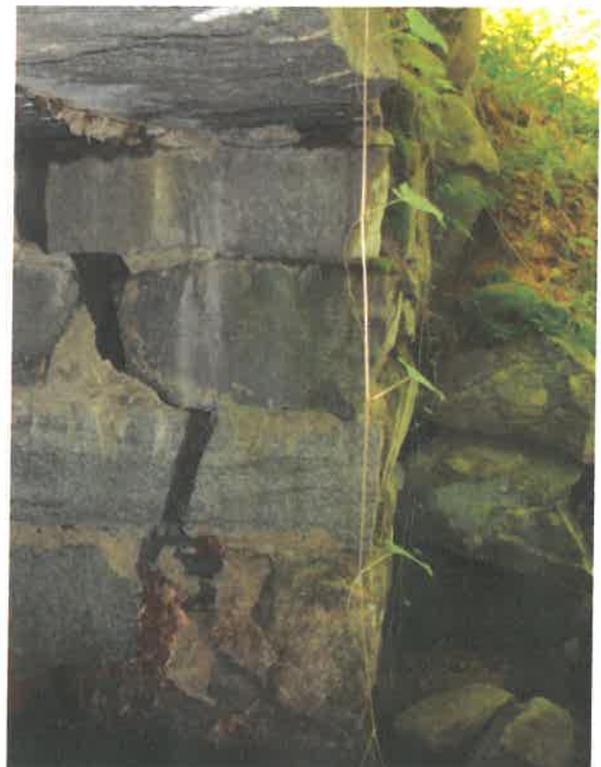
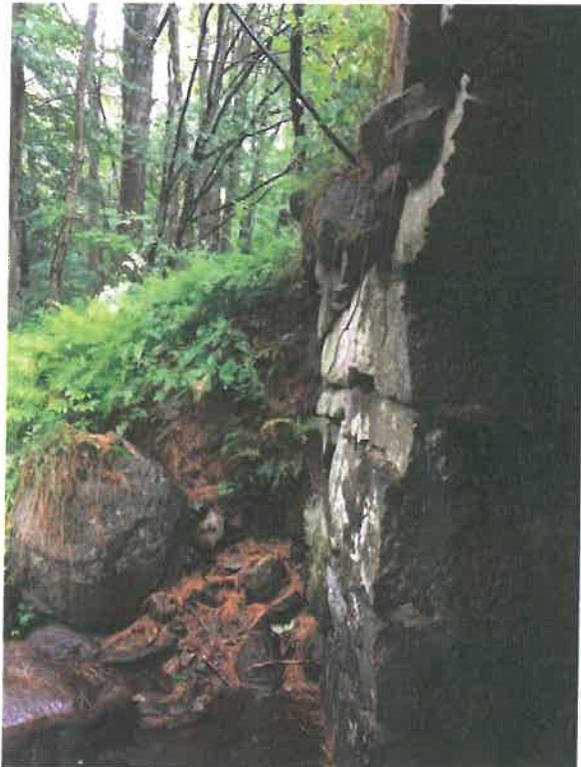
This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Alton, #41352 (Non-Federal)

Leah Savage provided an overview of the 41352 project, which proposes to replace a hybrid culvert located in Alton on NH Route 11 located east of the Gilford-Alton town line. In this area NH Route 11 is quite narrow. The culvert is comprised of three elements, at the outlet an extension of poured concrete blocks is visible and there is a corrugated metal pipe at the inlet of the structure. Between these two elements is a failing stone box culvert, 3 foot wide by 4 foot high. The original stone box culvert was constructed in 1918 and the extensions represent evidence of maintenance work/repairs. A second stone box culvert, 7'high x 3.5'wide in fairly close proximity is located

Mitigation Narrative

At the February 21, 2018 Natural Resource Agency Meeting mitigation was discussed. "It was determined that mitigation would be required on this project for the downstream impacts unless it could be determined that there was rock already present where it is proposed to be placed" to protect the existing infrastructure. Bridge Maintenance Assistant Administrator Tim Boodey provided the following photos showing previously existing riprap along the banks and channel of the structure. Therefore NHDOT is not proposing mitigation per Env-Wt 302.03(c)2c and the permanent bank and channel impacts are for the protection of existing infrastructure.

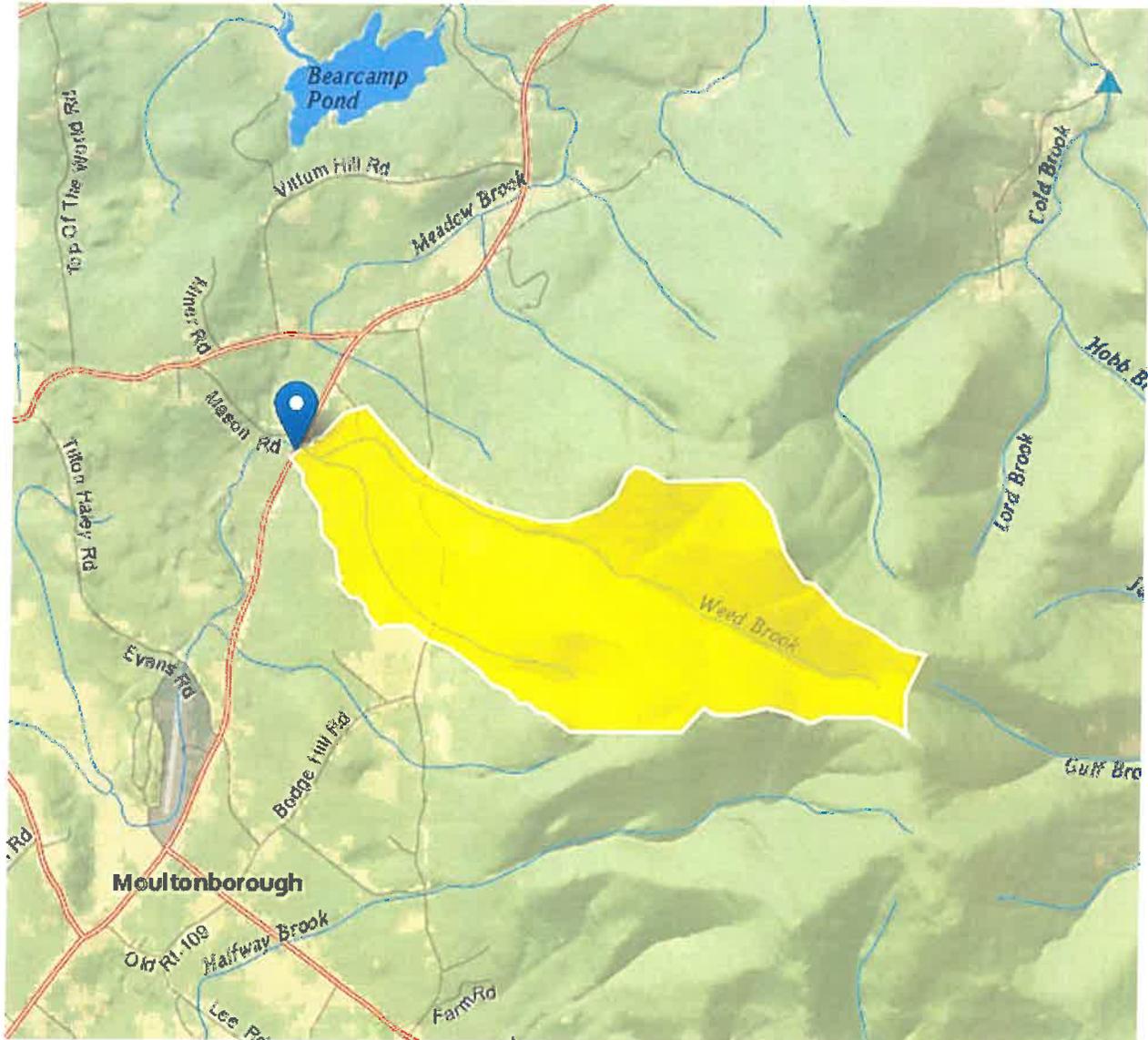


Hydraulic Data

Drainage Area –2.62 square miles

Flow – Q 100 = 826 cfs

The proposed structure will pass the 100 year flood.



Watershed Boundaries Map

**NH Department of Transportation
Bureau of Bridge Maintenance
Project, # 99055Z
Env-Wt 904.09 Alternative Design
TECHNICAL REPORT**

Env-Wt 904.09(a) - If the applicant believes that installing the structure specified in the applicable rule is not practicable, the applicant may propose an alternative design in accordance with this section.

Please explain why the structure specified in the applicable rule is not practicable (Env-Wt 101.69 defines practicable as available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes.)

Weed Brook has a drainage area of 2.62 square miles which qualifies this stream as a Tier 3 crossing. The required span based on NH Stream Crossing Guidelines, using the crossings drainage area from stream stats and using the Hydraulic Curve Calculation, for a new crossing is 26'-0". A structure of this size would cost approximately \$950,000 and would have much larger impacts than the proposed alternative. Spending this much money on a structure that could be adequately preserved for approximately \$120,000 with much smaller impacts would not be a practicable use of resources with the scope and purpose NHDOT Bureau of Bridge Maintenance was assigned in to practical.

The proposed alternative meets the specific design criteria for Tier 2 and Tier 3 crossings to the maximum extent practicable, as specified below.

Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings – New Tier 2 stream crossings, replacement Tier 2 crossings that do not meet the requirements of Env-Wt 904.07, and new and replacement Tier 3 crossings shall be designed and constructed:

(a) In accordance with the NH Stream Crossing Guidelines.

The proposed improvements have been developed in accordance with the NH Stream Crossing Guidelines. The Department has considered other design alternatives based on general considerations that take the geomorphic conditions of the stream into account as it relates to the structure. The Department has collected data in the field and in the office to aid in the design of the proposed crossing. Using information that was available the Department has proposed an alternative design that meets the intent of the stream crossing guidelines to maximum extent practicable.

(b) With bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing.

The proposed project will not change the existing waterway opening and structure alignment, and therefore, it will not change the depths or velocities at the crossing. The proposed alternative, although not an upgrade, does not diminish the existing conditions at the crossing and prevents further degradation and potential failure.

(c) To provide a vegetated bank on both sides of the watercourse to allow for wildlife passage.

The banks on both sides of Weed Brook are currently vegetated. Although there are temporary impacts in those areas the vegetation and existing conditions are not expected to change permanently. Banks currently do not exist through the crossing and will not after the work is performed.

(d) To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the functioning of the natural floodplain.

The proposed project will not significantly change the existing waterway opening and structure alignment, and therefore the current alignment and gradient of the stream channel will not change as a result of this project.

(e) To accommodate the 100-year frequency flood, to ensure that (1) there is no increase in flood stages on abutting properties; and (2) flow and sediment transport characteristics will not be affected in a manner which could adversely affect channel stability.

The project as proposed will not alter the chance of flooding on abutting properties. Through HydroCAD analysis it was determined that the existing crossing passes the Q100 storm volume determined by StreamStats and the rehabilitation and modifications of the crossing will not change the structures ability to pass the Q100.

(f) To simulate a natural stream channel.

The entire structure has a concrete invert. This streambed condition will not change.

(g) So as not to alter sediment transport competence.

The proposed project will not impact the crossing's ability to transport sediment.

Env-Wt 904.09(c)(3) – The alternative design must meet the general design criteria specified in Env-Wt 904.01:

Env-Wt 904.01

(a) Not be a barrier to sediment transport;

There will be no barriers to sediment transport as a result of the structure modification. The crossing is competently transporting sediment and the proposed rehabilitation will not alter the crossing's ability to continue to perform this function. The crossing will maintain the existing opening.

(b) Prevent the restriction of high flows and maintain existing low flows;

The proposed crossing will maintain existing waterway opening. High flows and low flows will not change as a result of this project.

(c) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;

Aquatic life indigenous to the water body will not be obstructed or otherwise disrupted as a result of this project. The existing crossing has a concrete invert throughout the entire length of the structure and will still after the rehabilitation. The stream will also maintain its ability to successfully maintain adequate fish passage. The crossing is at grade.

(d) Not cause an increase in the frequency of flooding or overtopping of banks;

The existing crossing has no history of flooding or overtopping the banks of the stream. The proposed project will not increase the frequency of flooding or overtopping of banks. The project will maintain the existing waterway opening. The crossing is will pass the 100yr flood events.

(e) Preserve watercourse connectivity where it currently exists;

Watercourse connectivity will remain unchanged as a result of this project. The project as proposed does not relocate the streams natural alignment. The project will maintain the watercourse's current connectivity running through the existing structure as it is today.

(f) Restore watercourse connectivity where: (1) Connectivity previously was disrupted as a result of human activity(ies); and (2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

Watercourse connectivity will be unchanged as a result of this project.

(g) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and

The intent of the proposed project will not cause erosion aggradation or scouring upstream or downstream of the crossing. Appropriate BMP's will be in place to ensure that the construction site is stable at all times.

(h) Not cause water quality degradation.

The proposed project will not cause water quality degradation. The project will utilize appropriate BMP's throughout construction to ensure that the construction site is stable at all times.

*****Note: An alternative design for Tier 1 stream crossings must meet the general design criteria (Env-Wt 904.01) only to the *maximum extent practicable*.**

The crossing of NH 25 over Wood Brook is a 10' span by 6' rise concrete box. The last ~25' of the structure consists of a concrete floor with cut stone walls and ceiling. The ceiling is beginning to fail and the cut stone walls are being pulled down stream.

The proposed work is to replace the ~25' of hybrid box at the outlet and ~~can~~ with a concrete box that matches the rest of the structure. Erosion protection to protect the structure and replace existing protection will be installed.

The existing structure does not have a history of flooding and currently can carry the 100 year flood event. The drainage area (2.62 sq. mi) and other pertinent watershed data was obtained using USGS Streamstats. The box structure was modeled using field survey data and existing bridge plans. There is fundamentally very little changing at the crossing due to the proposed work, hydraulic capacity wise, as the 10'x6' covered box is being extended in place of cut stone in the same location.

The proposed work will not increase the chance of flooding in this area and will carry the 100-year storm event.

Timothy Bradley

Timothy Bradley, P.E.



NEW HAMPSHIRE NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

To: Arin Mills, NH Department of Transportation
John O. Morton Building
7 Hazen Drive
Concord, NH 03302-0483

From: NH Natural Heritage Bureau

Date: 5/14/2019 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau of request submitted 5/7/2019

NHB File ID: NHB19-1404

Applicant: Arin Mills

Location: Sandwich
Bridge #203/029 over Weed Brook on NH Route 25

Project Description: The proposed work includes replacing the settled downstream wingwalls, downstream masonry abutments, stone slab, and H-pile superstructure and replace with concrete. Riprap will be placed at the upstream and downstream ends of the structure to prevent scour.

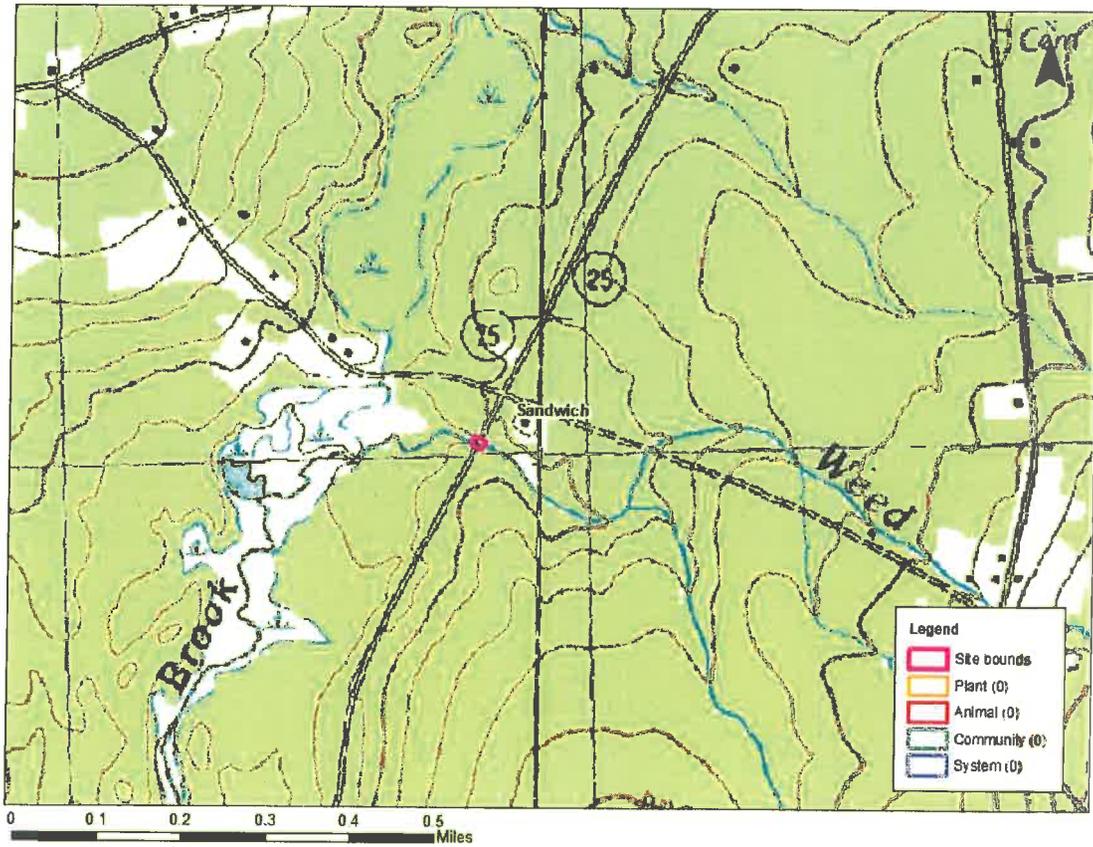
The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 5/7/2019, and cannot be used for any other project.



MAP OF PROJECT BOUNDARIES FOR: NHB19-1404

NHB19-1404





United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

In Reply Refer To:

November 14, 2019

Consultation Code: 05E1NE00-2020-SLI-0450

Event Code: 05E1NE00-2020-E-01272

Project Name: Sandwich Br. 203/029

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2020-SLI-0450

Event Code: 05E1NE00-2020-E-01272

Project Name: Sandwich Br. 203/029

Project Type: TRANSPORTATION

Project Description: The existing 10' span by 6' high bridge is a concrete box culvert that extends from a masonry box culvert. The masonry box culvert has deteriorated and is significantly modified. Proposed work includes replacing the settled downstream wingwalls, downstream masonry abutments, stone invert slabs, and H-pile superstructure. Riprap will be placed upstream and downstream along the banks and within the channel of the structure to prevent scour. Some tree clearing is required to access the structure.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/43.78957139882668N71.37600973394302W>



Counties: Carroll, NH

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
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<http://www.fws.gov/newengland>

IPaC Record Locator: 163-19090422

November 14, 2019

Subject: Consistency letter for the 'Sandwich Br. 203/029' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Sarah Large:

The U.S. Fish and Wildlife Service (Service) received on November 14, 2019 your effects determination for the 'Sandwich Br. 203/029' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause “take”^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action’s effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

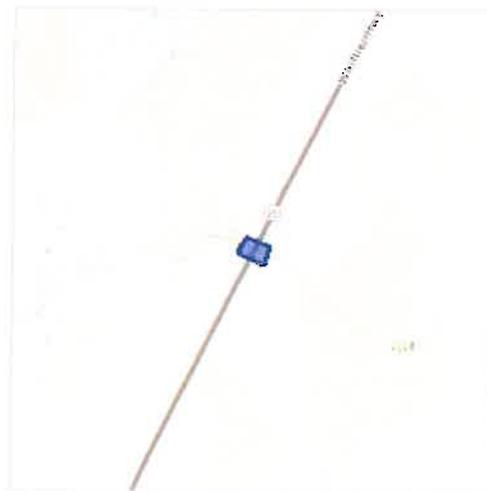
Sandwich Br. 203/029

2. Description

The following description was provided for the project 'Sandwich Br. 203/029':

The existing 10' span by 6' high bridge is a concrete box culvert that extends from a masonry box culvert. The masonry box culvert has deteriorated and is significantly modified. Proposed work includes replacing the settled downstream wingwalls, downstream masonry abutments, stone invert slabs, and H-pile superstructure. Riprap will be placed upstream and downstream along the banks and within the channel of the structure to prevent scour. Some tree clearing is required to access the structure.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/43.78957139882668N71.37600973394302W>

**Determination Key Result**

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully **Take** northern long-eared bats?

No

3. Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

Yes

7. Will the action only remove hazardous trees for the protection of human life or property?

No

8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

.001

2. If known, estimated acres of forest conversion from April 1 to October 31

.001

3. If known, estimated acres of forest conversion from June 1 to July 31

0.001

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

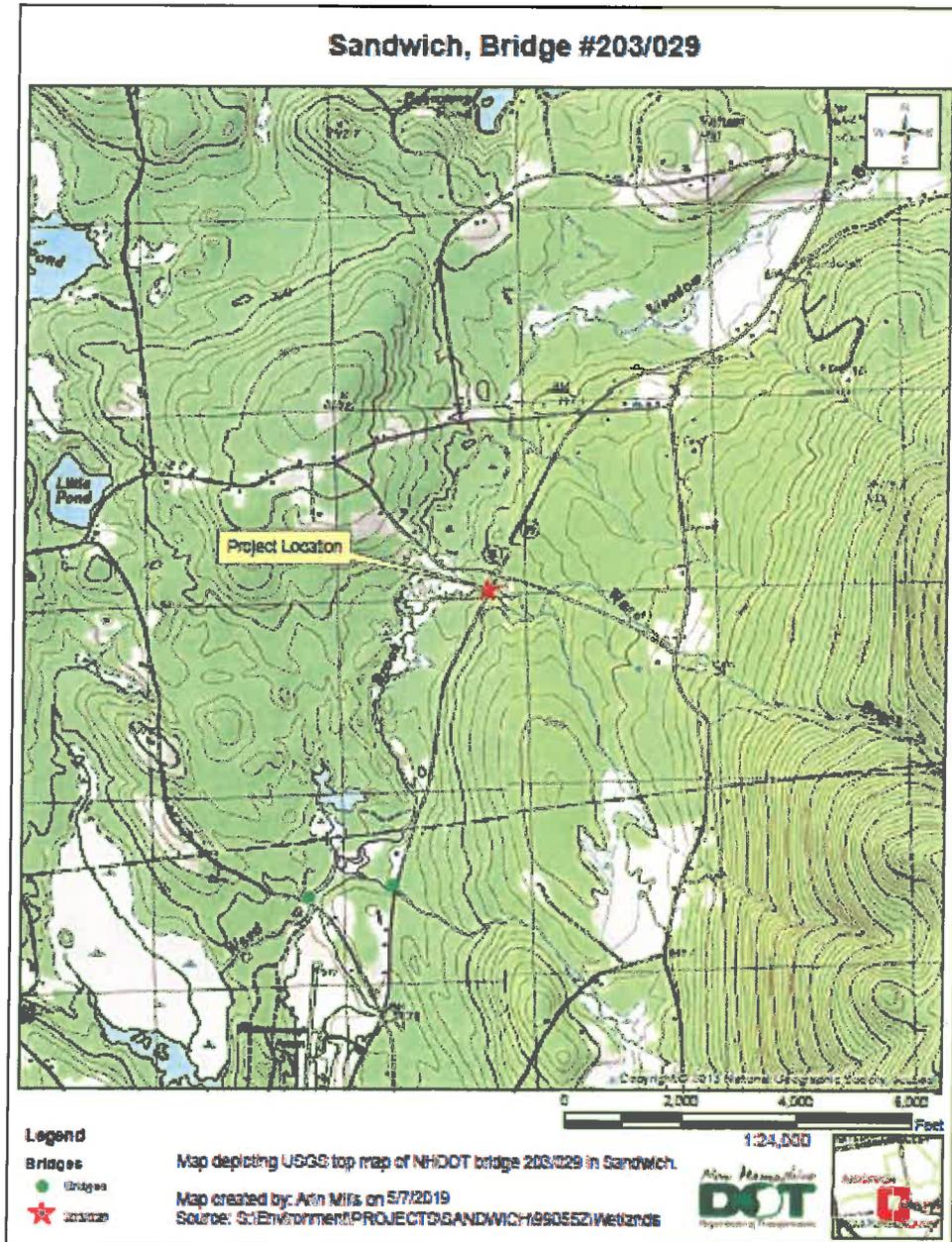
If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?
0

Wetland Application – NHDOT Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the proposed project for potential impacts to historic properties.

Proposed Project: This review aligns with a wetland permit for proposed repairs to a 'Red Listed' bridge (203/029) which carries NH 25 over Weed Brook in Sandwich. The following repairs have been proposed: installation of riprap to prevent scour, the granite block portions of walls and roof of the culvert will be removed and replaced with concrete, masonry wall work will be done on the abutments to address cracks.



Above Ground Review

Known/approximate age of structure: 1946 Concrete box bridge (203/029). Emmit review indicated an individual inventory form for the 1946 Weed Brook Culvert/Bridge (203/029) on Route 25/Whittier Road over Weed Brook, was compiled by Richard Casella in 2014 (SWH0012) and the culvert was determined not to be eligible for listing on the National Register (8/4/2014).

DETERMINATION OF ELIGIBILITY

Not eligible for either NR or SR

Integrity: Partial Level:

Criteria: A: No B: No C: No
 D: Unknown E:

STATEMENT OF SIGNIFICANCE:

Weed Brook Culvert carries Weed Brook under NH 25 in the southeast corner of Sandwich, NH. It is a 10-foot box culvert approximately 105 feet long, with a stone box section 25 feet long built circa 1900 and concrete box section 85 feet long built 1948. The assessment of this resource was based on the report, "Stone Highway Culverts in New Hampshire 1750-1930" which establishes a historic context for stone box highway culverts in the state. The culvert is not associated with broad patterns of historical events nor does it possess exceptional characteristics of design, workmanship, or length that distinguishes it from better extant examples. The Weed Brook Culvert is not eligible for listing in the National Register of Historic Places.

No Potential to Cause Effect/No Concerns

Below Ground Review

Recorded Archaeological site: Yes No

Nearest Recorded Archaeological Site Name & Number: 27-CA-0042 (no name designated)

Pre-Contact Post-Contact

Distance from Project Area:
 1.885 miles (3.033 km) northeast of project area

Nearest Recorded Archaeological Site Name & Number: 27-CA-0151 Northrop Bennet Potter

Pre-Contact Post-Contact

Distance from Project Area:
 2.069 miles (3.330 km) southwest of project area

No Potential to Cause Effect/No Concerns

No archaeological concerns. The proposed repairs include installation of riprap to prevent scour, removal of granite block portions of walls and culvert roof and replacement with concrete, and masonry repair work on the abutments to address cracks. These actions are being undertaken in disturbed zones with no associated archaeological sensitivity concerns.

Conclusion:

The former project file (S:\Environment\PROJECTS\SANDWICH\99055Z\2019_Bridge_Repair) was reviewed and it is apparent the new project plans still comply with the former proposed activities and findings. Reviews affirmed there were no historic or archeological resources present in the project area and no further survey work was needed. A No Historic Properties Affected Memo was compiled and signed 2/2/16. As such, **there are no concerns for cultural resources.**

Reviewed by:

Styia Charles

7/2/2019

NHDOT Cultural Resources Staff

Date:



**US Army Corps
of Engineers**
New England District

**U.S. Army Corps of Engineers
New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)**

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to “work” include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5 regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org , specifically the book Natural Community Systems of New Hampshire .		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	372 sq. ft.	
2.7 What is the size of the proposed impervious surface area?	372 sq. ft.	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	17%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)		X
3.2 Would work occur in any area identified as either “Highest Ranked Habitat in N.H.” or “Highest Ranked Habitat in Ecological Region”? (These areas are colored magenta and green, respectively, on NH Fish and Game’s map, “2010 Highest Ranked Wildlife Habitat by Ecological Condition.”) Map information can be found at: <ul style="list-style-type: none"> • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html. 	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	X	

4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		
5. Historic/Archaeological Resources		
If a minor or major impact project, has a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) been sent to the NH Division of Historical Resources as required on Page 5 of the PGP? **	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.



Looking Downstream Through the Structure



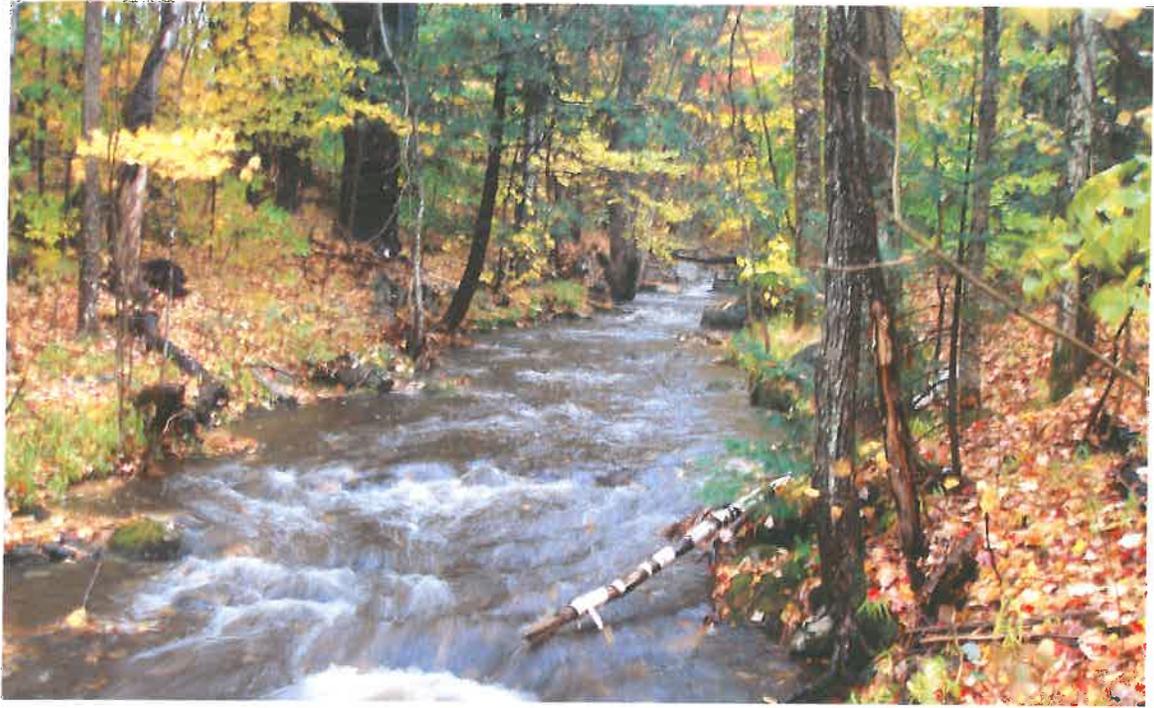
Downstream Outlet



Downstream Channel



Upstream Inlet



Upstream Channel

CONSTRUCTION SEQUENCE

~~CONSTRUCTION SEQUENCE~~

1. Outside of wetlands jurisdiction sheet piles will be driven to retain soil from the roadway and remove fill above the existing culvert.
2. A clean water bypass pipe will be installed to maintain flows during construction *through structure?*
3. The granite block portion of walls and roof of the existing culvert will be removed. The existing concrete invert in the granite section will be maintained and new concrete walls, deck, and wingwalls will be constructed.
4. Temporary staging will be erected in the invert of the section of the culvert being rebuilt to support the forms for the new deck (roof).
5. *DS, within or (US)?*
remove barrier
redirection
slow
as
enter
box ↓
50 feet of the left side of the channel will be dredge to remove deposited material and to realign the streamflow with the entrance of the box. Riprap will be placed at the inlet along both banks and outlet along both banks and channel. ↓ #6

Note: The Project will utilize BMP's from the Best Management Practices manual during all phases of construction.

Env-Wt 404 Criteria for Shoreline Protection

The rehabilitation of the bridge that carries Rte. 25 over Weed Brook proposes the placement of stone fill within areas under the jurisdiction of the NH Wetlands Bureau and the US Army Corps of Engineers. The stone fill will be located in the channel and along the bank of the proposed structure as shown on the plans.

Pursuant to PART Wt 404 Criteria for Shoreline Stabilization, the following addresses each codified section of the Administrative Rules:

Wt 404.01 Least Intrusive Method

The riverbank stabilization treatment proposed is the least intrusive construction method necessary to minimize the disruption to the existing shorelines. The stone treatment can be reasonably constructed utilizing general highway construction methods.

Wt 404.02 Diversion of Water

Proposed roadway drainage will allow storm water run-off to be diverted so that it will flow over vegetated areas, insofar as possible, prior to entering Sucker Brook. This will minimize erosion of the shoreline.

Wt 404.03 Vegetative Stabilization

Natural vegetation will be left undisturbed to the maximum extent possible. The only locations being disturbed are the impacted areas on the plan for construction. All newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help stabilize the project area.

Wt 404.04 Rip-Rap

- (a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structural integrity of the bridge during all flow conditions.
- (b) (1-5) The minimum and maximum stone size, the gradation, cross sections of the stone fill, proposed location, and other details have been provided on the attached plans. Bedding for the stone fill will consist of natural ground excavated to the proposed underside of the stone fill.
- (b) (6) Enclosed are plan sheets to sufficiently indicate the relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.
- (b) (7) Stone fill is recommended for the limits shown on the attached plans to protect the banks from erosion during flood flows, from scour during all flows, and slopes greater than 2:1 have difficulty supporting vegetation.
- (c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.
- (d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.
- (e) The enclosed plan has been stamped by a professional engineer.

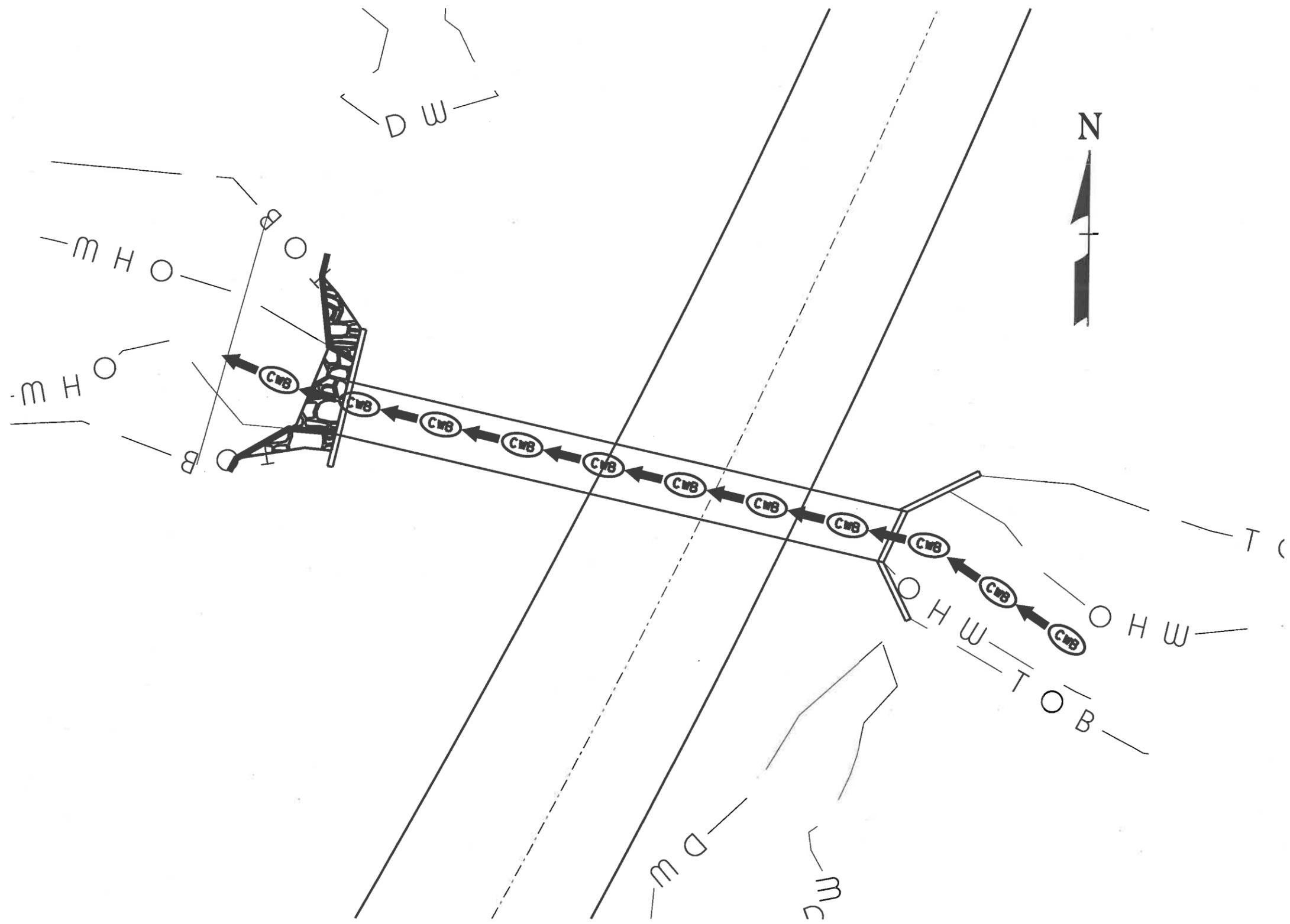
WETLAND IMPACT SUMMARY														
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA IMPACTS						LINEAR STREAM IMPACTS FOR MITIGATION					
			PERMANENT						PERMANENT					
			N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)		TEMPORARY		BANK LEFT	BANK RIGHT	CHANNEL			
			SF	LF	SF	LF	SF	LF	LF	LF	LF			
1	R2UB1	A			96	7	316	17						
2	BANK	B	55	10			192	13						
2	BANK	C	47	17			91	9	17					
3	PEM1E	D					1845	98						
1	R2UB1	E					1715	146						
2	BANK	F					362	34						
2	BANK	G	44	17			90	25						
3	PEM1E	H			18	4	225	22						
TOTAL			146	44	114	11	4836	364	17	10	7			

PERMANENT IMPACTS: 260 SF
 TEMPORARY IMPACTS: 4836 SF
 TOTAL IMPACTS: 5096 SF

SUBTOTALS		PERMANENT				TEMPORARY		WETLAND CLASSIFICATION CODES
		N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)				
CLASS	DESCRIPTION	SF	LF	SF	LF	SF	LF	
R2UB1	RIVERINE			96	7	2031	163	R2UB1 RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE GRAVEL AND SAND
BANK	BANK	146	44	0	0	735	81	PEM1E PAULUSTRINE, EMERGENT, PERSISTEND, SEASONALLY FLOODED/SATURATED
PEM1E	NON PERENNIAL STREAM			18	4	2070	120	
		0	0	0	0	0	0	BANK

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	SANDWICH	BRIDGE NO.	203/029	STATE PROJECT	99055Z				
LOCATION NH 25 OVER WEED BROOK									
WETLAND IMPACTS									
REVISIONS AFTER PROPOSAL		DESIGNED	DBL	4/30/19	CHECKED				
		DRAWN	DBL	4/30/19	CHECKED				
		QUANTITIES			CHECKED				
ISSUE DATE		FISCAL YEAR	2019	CREW	8	SHEET NO.	2	TOTAL SHEETS	3
REV. DATE									

SHEET SCALE



EROSION CONTROL PLANS

SCALE: 1" = 20'-0"

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	SANDWICH	BRIDGE NO.	203/029	STATE PROJECT	99055Z				
LOCATION NH 25 OVER WEED BROOK									
WETLAND IMPACTS									
REVISIONS AFTER PROPOSAL		DESIGNED	BY	DATE	CHECKED	BY	DATE	BRIDGE SHEET	
		DRAWN	DBL	4/30/19	CHECKED			3 OF 3	
		QUANTITIES	DBL	4/30/19	CHECKED			FILE NUMBER	
		ISSUE DATE						TOTAL SHEETS	
		REV. DATE						3	
SHEET SCALE		FISCAL YEAR	2019	CREW	8	SHEET NO.	3		