BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: September 17, 2014
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Christine Perron
Don Lyford
Steve Liakos
Joshua Lafond
Kevin Nyhan
Jim Kirouac
Kathy Corliss
Ron Kleiner
Nancy Mayville
Jill Edelmann
Tony Weatherbee

Army Corps of Engineers
Michael Hicks

EPA
Mark Kern

NHDES
Gino Infascelli

NH Fish & Game
Carol Henderson

NH Division of Historical Resources
Laura Black
Edna Feighner

Kleinfelder
Thom Marshall

Normandeau
Jameson Paine

Louis Berger
Tim Higginson

Town of Milford
Gary Daniels
Rick Riendeau

Hoyle, Tanner
Matt Low
Josif Bicja

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:
(minutes on subsequent pages)

Finalization of August Meeting Minutes 2
Barnstead, X-A001(174), 14121E 2
Ashland, X-A001(203)), 16237 3
Keene, non-federal, 26505 4
Milford, non-federal, 29509 5
Gilford, non-federal, 29569 8

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

NOTES ON CONFERENCE:

Finalization of August Meeting Minutes

The August 20, 2014 meeting minutes were finalized.

Barnstead, X-A001(174), 14121E

Kevin Nyhan began the presentation by providing background on the project, which consists of safety improvements, including minor realignment, at the intersection of NH Route 28/Peacham Road/White Oak Road in Barnstead. At the March 19, 2014 resource agency meeting, Gino Infascelli had indicated that there is an intermittent stream to the south of the intersection. Since that time, Bureau of Environment staff visited the site and StreamStats shows a blue line originating at the outlet of a culvert south of the intersection. This area identified as an intermittent stream, with a watershed of 0.03 square miles, is wetland at the culvert outlet with minimal if any defined channel.

In addition, there is a stream channel identified near the intersection under White Oak Road. It has a watershed area of 0.1 square miles. Carol Henderson asked if the culvert at this location would be perched as it is today. K. Nyhan described the condition of pipes through the intersection and indicated that it was very unlikely, in his opinion, that aquatic organism passage exists today due to the length and angles of the pipe system, and that it would not likely exist in the proposed condition. The existing pipe is approximately 12" in diameter, and is proposed to be replaced with a 42" diameter pipe. After discussion, it was agreed that the Department would evaluate whether the proposed culvert would be perched. *(Following the meeting, Highway Design confirmed that the pipe would not be perched in the proposed condition*). All stream channels will be evaluated for compliance with the stream crossing rules prior to submitting the permit application.

Josh Lafond discussed the water quality improvements being constructed for the project, which consist of the construction of two treatment swales that will result in improved water quality treatment. Currently, there is a narrow ditch that conveys stormwater but does not provide appreciable treatment. In addition, there is sheet runoff today. Post-construction runoff flows have been designed to closely mimic pre-construction flows.

Wetland impacts are anticipated to be approximately 31,500 square feet of permanent wetland impacts with approximately 30 linear feet of stream impacts. The Department coordinated with the Barnstead Conservation Commission via letter on February 5, 2014, but no response was received. As such, the Department proposes an in-lieu fee (Aquatic Resource Mitigation Fund payment) as compensatory mitigation for wetland impacts. The payment is expected to be approximately $100,000-125,000 based on the impacts. This will be finalized with Lori Sommer prior to application submittal this winter. Mike Hicks asked what percentage of the total impacts are from stream impacts. Kevin indicated that he was unsure; however it is minimal when compared to the wetland impacts.

It is not expected that this project would need to be reviewed at a resource agency meeting again unless the impacts substantially change.

No one in attendance objected to the project as proposed.

This project was previously reviewed on the following date: 03/19/2014.

Ashland, X-A001(203)), 16237

Jameson Paine provided a project overview. The NHDOT proposes to address bridge number 107/094, which carries US Route 3 and NH Route 25 over Owl Brook, in the town of Ashland, NH. The project involves the replacement of the bridge superstructure and reconstruction of the roadway approaches. The bridge was originally constructed in 1958 and was placed on the state Red List in 2011 with a priority number of 95. The current bridge is a two-lane rolled beam bridge with cast-in-place reinforced concrete deck. The bridge is approximately 64 feet long and provides 40 roadway feet between the rails.

A 5.8 acre parcel located in the immediate southeast quadrant of the project contains a permanent conservation easement. The parcel is controlled by the Squam Lakes Conservation Society. The project as currently proposed is not expected to impact the conservation land. The Natural Heritage Bureau review determined that there are no NHB recorded species (e.g., rare wildlife, plant, and/or natural community) present in the vicinity.

The purpose of this project is to address the red-listed bridge and provide safe, cost effective crossing over Owl Brook that would maximize longevity, minimize maintenance, and would not increase sediment loading into the river. Owl Brook Bridge was placed on the red list because the concrete deck is in poor condition with a rating of four and the substructure was rated a 5 (fair condition). Particular concerns are the heavy spalling, exposed rebar and section loss along the cantilevered portion of the deck.

The bridge would be upgraded by replacing the concrete deck and would include an expansion joint in accordance with NHDOT's current deck design guidelines. Bridge and approach rails would be upgraded to the current standards and all bridge bearings would be replaced. The use of concrete beams would result in narrower beams being installed. Upon completion of construction, the bottom of the beams would be raised by six inches. The roadway approach would be revised slightly to match in the new geometry of the proposed bridge work. Vertical granite transition curbing would also be installed on the roadway approaches to meet the new bridge curb. The scope of work also includes the installation of new W-beam guardrails and steel posts. All roadway approach work is limited to approximately 480 feet in length.

The project considered multiple options in order to address the bridge's deficiencies. Option 1 included deck replacement and painting the existing steel beams. The second option was to replace the substructure with precast concrete next beam structure. The preferred alternative is Option 2 because it would reduce cost, would be a faster replacement and would provide long term durability and reduce maintenance costs. As currently proposed, impacts appear to remain within existing right-of-way.

Wetlands impacts associated with the proposed effort are currently estimated as 890 sq. ft temporary impact; 1,400 sq. ft. permanent impact; and 150 linear feet of shoreline impact. The impacts would occur as a result of erosion repair beneath the abutments (pressure grouting) and the placement of supplemental stone added to existing rip-rap at each abutment to provide continued protection of footings (hydraulic opening to be maintained).

Carol Henderson asked if there would be a shelf for animal passage. Gino Infascelli stated that a minimum of a two foot shelf would be needed to meet the stream crossing guidelines. Thom Marshall provided that there is not much room within the existing slope footprint. Armoring of the abutments is required. The size of the stone needed to protect the abutments makes creation of a shelf difficult and would make walking on such a shelf area difficult. The design team will review options to re-grade part of the slope to create a shelf. If larger stone is required, they will review the potential to chink in small stones to level the surface.

G. Infascelli stated that the river is navigable by recreational boats and asked if stone is necessary if grout is added. T. Marshall stated that stone is required as the grout does not go deep enough to protect the abutment footings.

Mike Hicks asked if the bridge cross section would change. T. Marshall stated that the intent is to maintain the existing hydraulic opening. With the use of the concrete beams, the opening would actually be approximately six inches higher.

M. Hicks provided that the project as proposed would qualify for authorization under the Army Corps Programmatic General Permit.

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

Keene, non-federal, 26505

Tim Higginson provided a project overview. The scope of the project is to replace the existing two side by side 7ft x 10.5ft corrugated metal pipe arches that carry Beaver Brook under NH Route 12 with two side by side 8ft x 12ft precast concrete box culverts. The crossing is a Tier 3 stream crossing under the NHDES Stream Crossing Rules, and the proposed design is considered an alternative design. The project was originally designed during the Keene/Swanzey highway project but shelved at PS&E in 2008. The project is now a local public agency project for the City of Keene. Proposed work also includes slope stabilization just downstream of the crossing.

Carol Henderson asked if the proposed structure would be embedded. T. Higginson answered that the proposed structure would be embedded an additional foot to accommodate the thickness of the structure base slab. He also noted that City sewer and water pass under the structure and additional information is being obtained on the utilities.

Mike Hicks asked if there were any historic issues. T. Higginson replied that the project has just received notice to proceed. Investigation into potential resources is ongoing, and coordination with DHR has been initiated.

M. Hicks also asked if there were hydraulics issues downstream. Steve Liakos commented that there are no concerns anticipated from a velocity standpoint as this area is in the backwater of the Branch and Ashuelot Rivers during flood events, and the area becomes a large pond during high water events. In addition, he noted that Beaver Brook is flow restricted by the existing box culvert upstream under NH Route 101. This will be evaluated further as design progresses.

Mark Kern asked if the amount of water the proposed structure would pass would be about the same as currently passed by the existing structure. T. Higginson answered that the opening of the structure would be increased.

Christine Perron asked about the project schedule. T. Higginson said the project is within the engineering study phase, expecting preliminary design in Spring 2015 with advertising in Fall 2015. Construction will be completed prior to the Pumpkin Festival in Fall 2016.

C. Henderson asked that the designers consider placing some stones on the floor of the culverts to make the bottom more natural. T. Higginson replied that the design will consider placement of stones for a more natural bottom.

No concerns were raised regarding the proposed Alternative Design. It was agreed that this project did not need to come back for further review.

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

Milford, non-federal, 29509

Josif Bicja provided an overview of the project through a PowerPoint presentation. He noted that the existing bridge is a High Pratt Truss built in 1910 by Canton Bridge Company of Canton Ohio. The current bridge replaced a wooden double barrel covered bridge that was lost to arson. The structure was designed by John Storrs and is eligible for listing in the National Register of Historic Places under Criterion C for its engineering significance according to a Determination of Eligibility document prepared by Richard Casella of Historic Documentation Company. Extensive repairs were completed in 1956. Minor repairs were completed in 1973. The bridge was bypassed in 1992 and had been used as a pedestrian bridge until July 11, 2014, when it was closed to all traffic due to its critical deficiency status. NHDOT inspection personnel inspected the bridge in mid-June and concluded that the bridge has no remaining safe calculated live load capacity and is considered to be unsafe for any/all loading. The Town closed the bridge shortly after it received the Critical Deficiency letter from NHDOT. The bridge is in danger of collapse and it is just a matter of time when the collapse would happen.

Jones Crossing Bridge has a span length of 150' and each truss is made up of 8 panels each measuring 18'-9" long. The bridge sits on mortared stone abutments and has an out-to-out width of 16'-8". The top chords and end diagonals are riveted box sections consisting of two channels joined back-to-back with continuous top plates and bottom tie plates. Bottom chords and truss web members are built-up members consisting of angles joined back-to-back with tie plates. Portal bracing consists of a lattice truss strut with T-sections. Sway frames struts and cross bracing are constructed with angles. The flooring consists of floor beams at each panel point. There are six lines of interior I-beam stringers and two lines of exterior channel stringers spaced at 2'-6" that support a metal pan deck filled with bituminous pavement.

The project was previously presented at the August 14th NHDOT Cultural Resources Agency Coordination Meeting and at that time it was discussed that the project would be split up in two phases. Phase A of the project was going to include the stabilization of the bridge and Phase B was going to consist of demolition, rehabilitation, or removal for adaptive reuse of the bridge. Plans and specifications for Phase A of the project were prepared by Hoyle, Tanner and included the following work:

1. Construction temporary access on the northeast quadrant of the project to complete the in-river work.
2. Installation of a temporary support bents supported on precast concrete footings in the channel bottom to support the existing bridge superstructure.
3. Jacking the bridge to release the stresses and unload it.
4. Removal of the existing bridge rail and installation of supplemental bottom chords and gusset plates.
5. Releasing the jacking pressure to engage the supplemental bottom chord.
6. Removal of the existing bridge bituminous pavement and metal pan deck.
7. Removal of temporary support bents and restoring all disturbed areas to pre-construction conditions.

Hoyle, Tanner prepared an Environmental Review Short Form and submitted it to NHDOT Bureau of Environment. The following were noted on the Short Form:

1. NH Natural Heritage Bureau database check did not reveal any records of known populations of species protected by the Endangered Species Act.
2. The US Fish and Wildlife Service (USFWS) online consultation tool did not contain any potential populations of threatened or endangered species or critical habitat.
3. The project, whether it is a stabilization or removal of the bridge, will only have temporary impacts to the wetlands, floodplain and floodway. NH Office of Energy and Planning did not object to the

proposed work and has stated that no further coordination with this office is required.

4. There are no Section 6(f) properties to be impacted based on coordination with Department of Resources and Economic Development (DRED).
5. The Souhegan River is severely impaired for primary contact recreation due to elevated bacteria (E. coli) levels within the project area. The work as proposed will not affect this impairment, either positively or negatively.
6. The unavoidable temporary impacts to the riverbed and its banks have been allowed via Emergency Authorization from NHDES dated August 21, 2014. An After-the-Fact wetland permit application will be submitted to NHDES at a later date. Coordination with the Souhegan River Local Advisory Committee will occur at that time. Due to the location of the project within the protected shoreland of the Souhegan River, the Town will apply for a Shoreland Permit by Notification from NHDES at the time of the filing of the wetland application.

Bids for Phase A of the project were opened on August 26, 2014 and were as follows:

- A Bidder (T-Buck Construction) - $298,268.00
- B Bidder (RM Piper, Inc.) - $298,860.00
- C Bidder (Neil H. Daniels) - $386,550.00

The A bidder was 64% higher than the Engineer's Estimate of Probable Construction costs and the Town decided to not move forward with Phase A of the project. The Town would rather remove the bridge now to save costs than go through the process that has been previously discussed.

Matt Low added to the discussion and clarified that whether the project is completed in two phases or on a single phase the majority of the work that was recently bid is going to be essentially the same. In order for the contractor to remove the bridge they would need to build temporary access in order to access the river bottom to temporarily shore the bridge so the deck can be removed. A temporary chord may also be required to stabilize the trusses during the removal operations. If the bridge is removed in a single phase, the contractor would need to build the access and shoring only once and there will be savings. The removal cost will most likely be greater than $300,000 based on the recent bids that were received.

Gary Daniels stated that the Milford Board of Selectmen would like to see the bridge disassembled and disposed of as scrap metal. The Town's share of funding for the Phase A project would require 56% of the Town's budget that is set aside to improve the existing infrastructure. The Town is currently faced with a situation in which the school buses are not able to use certain roads and have to take long detours. The Town would rather use their funds to fix their in-service bridges.

Nancy Mayville added that the condition of this bridge is a huge safety concern due to its critical deficiency status. The bridge is in danger of collapse and Federal Highway Administration (FHWA) is also concerned in addition to NHDOT. She asked to look at other alternatives and the most cost effective solution to address the current situation while being respectful to the process. The goal would be to remove the bridge this fall before the winter.

Edna Feighner asked about the 1992 bypass project, specifically if a Memorandum of Agreement (MOA) was executed, if the project went through Section 106 consultation at that time, and what the effect determination was. She expressed concerns that the process is moving too fast and DHR needs to see the MOA to understand how to move forward. Jill Edelmann stated that she did not find anything in the Bureau of Environment (BOE) files about the bypass project. It is likely that a no adverse effect finding was made at that time since the bridge was not removed. N. Mayville said that she would look at the old municipal records but she anticipates that most likely there would be no records if none were found in the BOE files. Rick Riendeau stated that the Town has no records of such documents.

Laura Black stated that most likely the 1950s work has not been documented because the National Historic

Preservation act was not enacted until 1966.

E. Feighner stated that the quadrant that is proposed to access the in-river work has Native American sensitivity. A survey would be required prior to carrying out ground disturbing activities. J. Bicja asked why this was the case as through our initial consultation with DHR it was decided that an archeologist would be required for monitoring only when removing the fill materials from this quadrant. At that time it was also discussed that a geotextile should be installed over the existing ground prior to placing any fill. The limits of ground disturbance would essentially be the same whether the bridge would be stabilized or removed. E. Feighner stated that now the project is different than what was previously discussed and a survey would be required since the bridge is being proposed to be removed.

Mike Hicks asked if there would be Section 404 impacts. J. Bicja stated that there would be fill in the river but all impacts are temporary only and were reported to NHDES prior to getting the Emergency Authorization from Frank Richardson. Gino Infascelli stated that an Emergency Authorization Permit is to be issued within 5 days of an event and was not sure how this project qualified for such a permit. J. Bicja stated that the bridge is in danger of collapse. G. Infascelli asked when the permit is set to expire and J. Bicja stated that it will expire at the end of November and most likely an extension would be required. G. Infascelli was doubtful if an extension would be granted by NHDES and said that a full standard dredge and fill application may be required, but that the team should continue to coordinate with Frank Richardson at NHDES. He and Carol Henderson noted that coordination with the Souhegan River Local Advisory Committee would also be necessary since the river is a Designated River.

E. Feighner asked when the DOE was completed. J. Bicja stated that it was done in 2004/2005 and a copy was obtained from DHR records.

L. Black stated that in order to be respectful of the process one must follow through on its intent, not just the "paperwork". You can't truly follow Section 106, which requires the analysis and preferably use of alternatives that avoid and minimize adverse effects before settling for one that doesn't, if you state from the start that your end goal is an alternative that adversely affects a historic resource the greatest. The Section 106 process cannot be avoided. Another NH community is also dealing with a similar situation in regard to bridge deterioration and imminent potential collapse, and unexpected costs, but they are approaching the situation from the standpoint of "avoid and minimize adverse effects" first with an intent to hopefully rehabilitate, rather than jumping to demolition. The two communities are dealing with the same challenges, and the other community is not just "following the Section 106 process" but following it in good faith to hopefully end up with a project that retains a historic resource for the community.

E. Feighner asked if federal funding was used in the 1992 bypass project. N. Mayville said that most likely federal funding was used at that time. E. Feighner stated that Section 106 process would need to be re-initiated if federal funds were used for the bypass project, and if federal funds had not been used then coordination with DHR would still be required under RSA 227C. If there had been federal funding in 1992, then FHWA would likely continue to be the lead federal agency. If there had been no federal funding, then the Army Corps would now be the lead federal agency.

R. Riendeau said that he has found some correspondence in which the selectmen asked NHDOT in 1992 if the bridge could be used for pedestrian traffic.

J. Edelmann stated that the 1992 project plans would need to be located and that federal involvement would need to be determined. M. Hicks would be kept informed in the event that the Army Corps is the lead federal agency.

L. Black asked if public involvement has been initiated. R. Riendeau stated that to date the Town Conservation Commission has been notified and is aware of the project. No letters have been sent out to local interest groups such as Historical Societies, Recreational Trail Groups, etc. L. Black suggested that public involvement should start immediately.

J. Edelmann asked if Hoyle, Tanner needs to start looking at the alternatives analysis. L. Black stated that the alternatives analysis would be required in order to fully follow the Section 106 process. It was decided to evaluate the following alternatives:

1) Rehabilitation and Reuse in Existing Location
2) Relocation for Rehabilitation and Reuse in Different Location
3) Removal and Recycling of the Existing Bridge

M. Hicks stated that a fourth alternative that would construct permanent piers in the river should also be included. C. Henderson noted that Fish & Game would prefer that no new piers in the river be installed in the river.

Christine Perron said that it did not appear that attendance at a future Natural Resource Agency Coordination Meeting would be necessary and recommended that coordination continue through the Cultural Resources Meeting.

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

Gilford, non-federal, 29569

Tony Weatherbee provided an overview of the project. The scope of the project is to rehabilitate the bridge that carries US Route 3 over Jewett Brook (Bridge 164/050). Proposed work consists of placing a concrete invert in the existing 10-foot wide metal pipe and building a fish weir. Two temporary access roads will have to be constructed to provide access to the inlet and outlet.

Gino Infascelli said that the roads would be considered temporary impact if no grubbing occurred and gravel was placed on fabric to be removed following completion of the project.

Carol Henderson asked what the slope of the culvert was and noted that trout are in this stream. T. Weatherbee replied that it is 3.86% and it is 232' long. The proposed design includes a fish weir to fix the existing perch. There was some discussion of whether the existing culvert is passable to fish given its slope and length. G. Infascelli suggested the Vermont stream crossing guidelines could be used as a resource for determining fish usage and Christine Perron suggested the Coffman predictive model could also be useful. Although it is generally agreed that improvements to passage should be made whenever possible, C. Henderson agreed to discuss this site with John Magee to ensure that the proposed fish weir is worthwhile.

Mike Hicks asked if it would make sense to create permanent access roads to facilitate future maintenance. T. Weatherbee said that this pipe would not require much future maintenance but the issue of the access roads could be discussed with the landowners. It was noted that one end of the pipe would be accessed via an existing trail. G. Infascelli commented that he would not object to permanent wetland impacts if needed to create a wider trail, assuming the landowner would want a wider trail.

C. Perron asked when the permit application would be submitted and T. Weatherbee said it would be a few weeks. C. Perron asked about mitigation and G. Infascelli said no mitigation would be required.

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