

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting

DATE OF CONFERENCES: September 13, 2018

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Sheila Charles
Victoria Chase
Keith Cota
Jill Edelmann
Jon Hebert
Bob Juliano
Ron Kleiner
Marc Laurin
Rebecca Martin
Dan Prehemo
David Scott
Jason Tremblay

NHDHR

Laura Black
Mark Doperalski
David Trubey

FHWA

Jamie Sikora

MJ

Christine Perron

Stantec

Dave McNamara
John Stockton

VHB

Nicole Benjamin-Ma
Greg Goodrich
Mike Chervincky
Peter Walker

Town of Gilford

Scott Dunn

Consulting Party

George Heaton
(Friends of the Northern
Rail Trail)

Consulting Parties

(via telephone)
Kitty Henderson
Nathan Holth
Sen. David Watters

PROJECTS/PRESENTATIONS REVIEWED THIS MONTH:

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Newington-Dover 11238S, NHS-027-1(037)	3
Gilford 21107 (R&C #9158)	6

Danbury, 16303, X-A002(084)

Participants: Jon Hebert, Marc Laurin, David Scott, NHDOT; George Heaton, Alex Bernhard, Friends of Northern Rail Trail (Merrimack County)

Continued consultation to discuss updated designs for the US Route 4 bridge over the Northern Railroad, discuss the effects, and possible mitigation elements.

Jon Hebert briefly reviewed the project and the poor sight distance and geometrics of the roadway concerns with the existing configuration. Evaluation of the No-Build, at-grade and rehabilitation alternatives were determined to be not viable. The new bridge will be a 24 feet wide fill over structure similar to the Andover (Potter Place) bridge replacement done a few years ago.

The historic telltale along the historic former rail corridor will be re-installed. Impact to the trail will be minimal as the trail will remain in the same location, though minor re-grading will occur to address drainage issues. The drainage swales along the rail trail will be retained. Roadway drainage will be directed to where it goes now, no additional water will be directed to the trail.

George Heaton, of Friends of the Northern Rail Trail, provided a package with comments and pictures with respect to the effects and opportunity for appropriate mitigation for the project relative to the historic rail corridor and the rail trail. He commented that similar to Potter Place bridge “Northern Railroad” should be inscribed in the concrete above the opening. He suggested that the lettering should be placed a bit higher to be easier to be seen. He inquired as to the appropriate distance of the telltales. DOT will get the distance from the 1914 plans. Laura Black stated that the telltale that will not be impacted should be left where it is to reflect the distance from the original bridge location. Friends of NRR agree with the plans as long as 1) grade separation and openness remain, 2) ditches are maintained, and 3) the move of the one telltale on north side will remain at the same distance from bridge and the telltale on the S side will remain in place and not be impacted by the project and continue to reflect the original location of crossing.

George stated that Danbury residents are anxious to have the bridge replaced. David Scott stated that the Public Hearing will likely be in January 2019 with advertising in July 2020.

Jill Edelman inquired if removing the contributing bridge should be considered a No Adverse Effect to the Railroad District. Laura Black did not agree, completely removing and replacing the bridge crossing would be an Adverse Effect. Jamie stated that the Andover project was deemed an Adverse Effect.

Jill asked if stamping of the new bridge and relocation of the telltale were adequate mitigation, and should an interpretive panel be considered? George asked if parking to access the trail would be appropriate. Jill did not feel it would be mitigation. Laura stated that an interpretive panel along the trail with a focus on the little elements of the Northern Railroad, such as telltales, mile posts, signals, etc... would be good. David Trubey stated that a good example was done along the Nashua rail trail. Laura asked if the Friends of the Northern Rail Trail had an inventory of the signage along the trail, to see what topics may be missing and to be able to eventually cover the “whole” NRR story through interpretation. George will bring this up at a Board meeting to provide appropriate information for the panel and see if the Board would be interested in something else.

Ossipee 14749, X-A000(490)

Participants: Christine Perron, MJ; Rebecca Martin, NHDOT

Continued consultation to review drafts of the script, website and video mitigation elements as a result of the historic bridge impacts. This project was last discussed at the August 2016 Cultural Resource Agency Meeting, at which time mitigation was proposed for the adverse effect resulting from the replacement of the Bearcamp River Bridge and Bearcamp Relief Bridge, sister bridges that are eligible for the National Register. Proposed mitigation included an educational outreach component in the form of a short video and a webpage. This bridge replacement project will involve the use of slide-in bridge technology and will be the first project for which this construction method will be used in New Hampshire. The intent of the educational materials is to highlight the historic elements of the bridges, as well as the similarities in the history of the existing bridges and the proposed replacement bridges in the way that both have been designed using innovative technology to reduce construction costs and duration. The video and webpage were included in the MOA that was signed at the end of 2016.

The purpose of today's meeting is to share the progress that has been made on the video and webpage and get feedback from DHR and FHWA before these materials are finalized. The draft script for the video and the draft webpage were shared approximately two weeks prior to the meeting. The video itself, which is approximately 6 minutes in length and does not yet have any narration, was played at the meeting while highlights of the script were provided. The video will be narrated by Bill Boynton of NHDOT, and up to three interviews with NHDOT staff will be included. The video will also include a short animation that illustrates the concept of the slide-in bridge methodology. Both the video and the webpage would highlight important features of the bridges: H-pile bents of double batter design; open-grid shoulder/steel curb/open-grid sidewalk assembly; and the combined simple and continuous beam design. The video will also highlight the importance of the design engineers, Langley and Prowse.

Laura Black indicated that she had not yet reviewed the draft script or webpage in any detail. After a brief review of the script, she did note that some of the text seemed cumbersome. She stated that she wanted to review the materials in more detail to determine if the important elements of the bridge mitigation goals are addressed.

There was discussion about the availability of photos showing the existing bridges soon after they were constructed. The project team has reviewed DOT files, contacted the Historical Society, and discussed with Jim Bowles, a DOT engineer from this area whose father worked for DOT at the time the bridges were constructed. None of this coordination/research has resulted in any historic photos that are suitable for use in the video. In lieu of photos, the intent is to incorporate views of the original engineering plans into the video as appropriate. L. Black stated that it was important to convey what the bridges were like in their heyday when they were celebrated.

Jamie Sikora asked if the video would include any images from the construction of the new bridges. C. Perron clarified that the video would be completed prior to construction. The original intent of the video was to educate the public on the slide-in bridge construction method to get people excited about the project and alleviate any concerns with the proposed road closures. The Department would be documenting construction of the bridges with the use of webcams.

L. Black agreed that the direction taken thus far with the video and webpage seemed appropriate. She would provide more detailed comments at a later date [provided 9-18-18].

Newington-Dover 11238S, NHS-027-1(037)

Participants: Nicole Benjamin-Ma, Greg Goodrich, Pete Walker, VHB; Keith Cota, Bob Landry, Bob Juliano, Marc Laurin, NHDOT ; Karen Saltus, Kitty Henderson, Nathan Holth, Consulting Parties

Update on screening of alternatives for inclusion in the supplemental draft of the EIS, and summary of input from September 5, 2018 public information meeting.

- P. Walker, K. Cota, and M. Chervincky provided a project status update, including updates/changes to the range of alternatives anticipated to be carried forward into the SEIS, and a summary of the September 5, 2018 Public Information Meeting (PIM) held in Dover.

- P. Walker provided a brief recap of the screening criteria and how they've been applied to the alternatives, including the color coding used in the presentation matrix. Since the last coordination meeting, the alternatives have been further developed and refined, and the costs refined in more detail. Based on the screening, and feedback received during the process so far, DOT is planning to carry four alternatives forward into the SEIS:
 - Alternative 1D: Rehabilitation of General Sullivan Bridge – 16' Wide Path
 - Alternative 6C: Southbound Little Bay Bridge – Widened Deck on Pier Extension (Desirable Roadway/Desirable Path Widths)
 - Alternative 7B: Southbound Little Bay Bridge – Independent Deck on Pier Extension – 16' Wide Path
 - Alternative 9B: Superstructure Replacement – Girder Alternative – 16' Wide Path (there are two sub-alternatives, differentiated only by the aesthetic use of a haunch vs. V-frame support)

This list of alternatives differs from the list provided at the July 2018 coordination meeting; Alternatives 2 and 3 were eliminated.

- While a 12' Wide Path and a 16' Wide Path were originally assumed for each alternative in response to a request from the legislature to minimize costs, the number of users of the path supported the development of the larger path width, and the cost differential between the widths in each alternative were not found to be significant. Thus, the 12' Wide Path alternatives are not being carried forward.
- Public input helped guide the development of alternatives. For example, while a suggestion to cantilever the path off the Little Bay Bridge proved structurally infeasible, alternatives utilizing the existing piers were developed instead.
- Other engineering and cost considerations included challenges associated with digging into the existing pier system of the Little Bay Bridge, and whether the new north approach ramp to the General Sullivan Bridge would need to be replaced (as in Alternative 7).
- The PIM was well-attended, with approximately 106 attendees who signed in, and likely additional attendees who chose not to sign-in.
 - There were 22 commenters who spoke in-person at the meeting, 11 written comments, and 10 e-mailed comments received so far. Generally, commenters supported the project purpose and need, and supported the incorporation of a construction detour for non-vehicular traffic that was available 24/7 (i.e., implementing a temporary detour using the northbound Little Bay Bridge).
 - Most commenters supported replacement of the bridge, and 16 comments specifically supported Alternative 9 (including 10 emails sent directly to K. Cota). Four spoken comments and one written comment supported Alternative 1, if funding could be identified.
 - Sen. Watters, who attended the PIM, agreed with the summary, and noted that if Alternative 9 became the preferred alternative, historic mitigation

money would need to be considered in the evaluation. K. Cota noted that DOT would need to get to that step via evaluation. P. Walker noted that based on input so far, preference seems to be heading for Alternative 9.

- D. Trubey noted that one PIM commenter asked whether referencing or incorporating the current General Sullivan Bridge design in a new structure would be possible, which prompted a discussion regarding the benefits and drawbacks of whole or partial rehabilitation of the bridge.
 - N. Holth noted there isn't much value in replication of the bridge, and asked why Alternative 3C (Partial Rehabilitation – 16" Wide Path) did not pass the screening, as it preserves the most historically significant portion of the bridge and has lower life-cycle costs compared to Alternative 1.
 - L. Black noted that since the original project at the time of the MOA execution was full rehabilitation, and now several non-rehabilitation alternatives are under consideration, Alternative 3C is really a compromise. However, she would support Nathan's suggestion, and the alternative shouldn't be eliminated entirely based on its relative cost compared to other replacement alternatives.
 - K. Cota noted that there may be cost or other problems with Alternative 3C, but asked for confirmation that the consulting parties agreed Alternative 3C should be carried forward, if possible. K. Henderson, L. Black, and N. Holth agreed in favor of doing so. K. Henderson noted that Section 106 requires consideration of ways to avoid, minimize, or mitigate adverse effects, but minimization is often glossed over; Alternative 3C would be a way to evaluate an alternative that minimizes impacts. L. Black and K. Henderson confirmed that a minimized adverse effect, through an alternative that put effort into the historic structure, would not require as much mitigation. J. Sikora noted that Section 4(f) evaluation may require carrying a partial rehabilitation alternative forward into the SEIS. (He will confirm.)
 - L. Black further noted that a pattern established at Memorial Bridge is continuing into this project, in which rehabilitation is initially planned, but the work is postponed for so long that the structure cannot feasibly be rehabilitated. This has implications for DOT as a steward of the state's significant structures. When projects like this are discussed, it needs to be made clear that factors like postponed maintenance, lack of gas taxes, etc. have wider implications for the state's infrastructure and historic resources resulting from postponed action. K. Henderson agreed, and noted that across the country, deferred maintenance is a major challenge to saving historic bridges. It is important to think of them as something to take care of, not as things that are "old."
 - K. Cota acknowledged the comments, and noted that the initial commitment to rehabilitate the bridge was based on limited engineering information; if detailed studies were available at that time, a decision to rehabilitate may have been rejected. He also noted that in this particular case, interim maintenance was complicated by the timeline of Little Bay Bridge construction, due to its close proximity, and keeping access for vehicular

and non-vehicular traffic from both bridges was necessary to prevent hardships. As seen at the PIM, there is virtually no support for a shuttle for users of the General Sullivan Bridge; therefore, there was limited, if any, access time to the bridge during the construction period to complete maintenance.

- J. Edelman noted that Gail Pare (formerly on the Newington Historic District Commission) and Lulu Pickering (currently on the Newington Historic District Commission) attended the PIM and spoke in favor of rehabilitation. G. Pickering specifically suggested that documentation of the bridge wouldn't go far enough, and that she felt Newington had changed as a result of this ongoing project. Due to the interest expressed at the PIM, DOT intends to invite G. Pare and L. Pickering to be consulting parties.
- J. Edelman, P. Walker, and L. Black discussed the challenge in representing the nuanced concept of adverse effects in the screening, which was essentially a fatal-flaw analysis and therefore discourages this level of evaluation. DOT wanted to respect the suggestion by DHR and Sen. Watters that cultural resources be accounted for in the screening, but recognizes that the superstructure and substructure may not be of equal weight in determining the engineering significance of the GSB as a whole.
- P. Walker asked if, without trying to pre-determine the outcome of the alternatives evaluation, it would be possible to discuss potential mitigation for adverse effects. K. Cota noted he would like to better understand mitigation implications for Alternative 3C vs. non-rehabilitation alternatives. L. Black noted that since the engineering significance is carried primarily in the superstructure of the General Sullivan Bridge, that is why Alternative 3C, which preserves a major portion of the superstructure, minimizes adverse effects, while alternatives that re-use the bridge's piers only, are not considered minimizing adverse effects. She said that DHR has not begun a discussion of potential mitigation. K. Cota suggested that it would be helpful to discuss the level of mitigation required for replacement as well as partial rehabilitation.

Gilford 21107 (R&C #9158)

Participants: Dave McNamara, Stantec; Scott Dunn, Town of Gilford

Initial review of the needs and goals the Old Lake Shore Road bridge project, impacts to the structure which has been determined eligible for listing on the National Register, and consideration of possible mitigation.

The project involves addressing red listed Bridge No. 106/099, which conveys Gunstock River under Old Lake Shore Road. The existing bridge was built in 1927 and consists of a continuous two-span reinforced concrete deck slab supported on unreinforced concrete gravity abutments and a lightly reinforced concrete pier. Each clear span is 15 feet, and the total bridge length is 33 feet. The abutments and pier are founded on spread footings approximately two feet below the streambed. The slab is 23 feet wide and carries a bituminous roadway with a width of approximately 21 feet between two 1-foot wide curbs. Sidewalks are not present on the bridge or

on the roadway approaches. The original wood bridge rail has since been replaced with steel-post w-beam guardrail fastened to each edge of the slab. This bridge rail does not meet current standards. Aside from the bridge rail replacement and some concrete reconstruction work on the southeast wing wall, there does not appear to have been any alterations or modifications to the original structure.

Due to the poor condition of the deck and superstructure, the bridge was added to the Municipal Red List in September 2010. The concrete slab exhibits large areas of spalled concrete with exposed and corroded reinforcement, particularly along the fascia edges. Significant areas of spalled concrete, exposed and corroded reinforcement and efflorescence are present throughout the underside of the slab. The abutments and pier show wear and abrasion, cracks and delaminations throughout their length, and the pier has large spalls on both upstream and downstream ends. The pier base and pier footing are exposed in some areas, leaving only 18" of embedment. This bridge has been identified by the New Hampshire Department of Transportation (NHDOT) as Scour Critical.

Several alternatives were contemplated early in the process. A No-Build option was eliminated from consideration because it would not address the structural condition deficiencies or safety concerns with the bridge rail or scour. Due to the widespread nature of the deterioration, a Superstructure Rehabilitation was also eliminated. This alternative would not address the scour vulnerability and would require a wider superstructure slab to accommodate new bridge rail. A Superstructure Replacement alternative would allow the center pier to be removed, but also requires a wider superstructure slab and would not address scour. Preliminary analyses indicate the existing abutments do not meet current stability criteria, so this alternative was also eliminated.

The existing Old Lake Shore Road bridge (determined eligible for the National Register in 2018) is one of nine remaining multi-span concrete slab bridges constructed in the late 1920s, and one of only four that has not been rebuilt. It appears to be one of only four or five pre-1935 multi-span concrete bridges that retain its original deck/slab. The design does not appear to represent any particular technical innovation, and in the mid-1920s concrete slabs were the most popular bridge type in New Hampshire. The bridge designer was Harold E. Langley. He became known for his expertise with long-span, arched, and steel bridges and later served as the State Bridge Engineer from 1942 to 1961.

David Trubey of the New Hampshire Division of Historical Resources (NHDHR) asked about the proposed project footprint as it relates to potential archaeological impacts. The new bridge will be approximately 10 feet longer and 3-4' wider than existing. It was noted the potential archaeological impacts were reviewed as part of the RPR process and noted as no potential impacts. No further investigation is necessary.

Laura Black (NHDHR) suggested that the discarded bridge rehabilitation option be documented in the Engineering Study to demonstrate why it is not considered a practical alternative. Stantec will strengthen the explanation of this evaluation in the Final Engineering Study.

Stantec will prepare an Effect Memo containing an explanation and justification of why the resource cannot be retained and describing the proposed action. The proposed action will result in a determination of an Adverse Effect on Historic or Archaeological Properties or Resources.

A Memorandum of Agreement will be prepared detailing proposed mitigation for the proposed bridge replacement. Jill Edelmann of the New Hampshire Department of Transportation (NHDOT) will provide samples of recent mitigation measures for similar projects for Stantec and the Town of Gilford to consider.

Submitted by: Sheila Charles and Jill Edelmann, Cultural Resources

New Hampshire Department of Transportation Cultural Resources Agency Coordination Meeting

Date September 13, 2018

Please initial next to your name. Guests: Please use reverse side to sign in.

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Please fill in all of the requested information.

September 13, 2018

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