BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting
DATE OF CONFERENCES: July 13, 2023
LOCATION OF CONFERENCE: Zoom Meeting

ATTENDED BY:

NHDOT
Sheila Charles
Jill Edelmann
Jon Evans
Jennifer Reczek
Bob Juliano
Marc Laurin

NHDHR/NHDNCR
Laura Black
David Trubey

FHWA
Jamie Sikora

Hardesty & Hanover
Kim Smith
Leo Helderman

MJ
Christine Perron

NH Rail Trails Coalition
Dave Topham

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

Woodstock 27713, X-A003(597), RPR 10622

Participants:

- Hardesty & Hanover: Kimberly Smith, Leo Helderman
- McFarland Johnson: Christine Perron
- NHDOT: Jennifer Reczek, Bob Juliano, Marc, Laurin, Jon Evans
- NH Rail Trails Coalition: Dave Topham

Kim Smith provided an overview of the project, which entails rehabilitation or replacement of bridge elements due to structural condition, and replacement of the open grid deck with a closed system for increased durability. Bridge 177/148 carries NH Route 175 over the Pemigewasset River in Woodstock. The bridge is a 175' single span steel through-arch built in 1939. The bridge is eligible for listing on the National Register of Historic Places and has been on the NHDOT Red List since 2014.

This is the third Cultural Resource Agency Meeting for this project and, since the last meeting in January 2021, the effect tables were reviewed and there was concurrence that the project would result in an adverse effect to the bridge. A Public Informational Meeting was held in April 2023. The focus of today's meeting is to confirm the proposed deck and railing and mitigation approach.

The elements of the bridge that will be strengthened or replaced consist of the stringers and floor beams, deck, cable tie, hanger pin, bridge railing and curb, and concrete parapets. Impacts to most elements have been minimized and will not impact character defining features. Impacts to the deck and railing, however, will result in changes to character defining features of the bridge. The existing deck is a steel open grid with concrete fill over the floor beams. The deck is in poor condition with corrosion and section loss. The bridge is currently reduced to one lane of traffic and down posted to 3 tons due to the deck condition. The open grid does not protect the floor system or divert water away from the structure. The proposed deck will be an exodermic deck, which will minimize the weight on the structure and eliminate the need to strengthen the arch. A closed deck system will protect the floor system from water and deicing salts, will help with continued preservation of the bridge, and will also provide a safer riding surface for bicyclists.

The existing bridge railing does not meet current safety requirements and the removal of the railing and curb is required to replace the deck. The existing railing is currently painted the same color as the steel arch. The original plans called for the railing to be painted gray. The existing curb material matches the existing deck material (steel). The proposed rail is T3 steel bridge rail with a concrete curb. The standard rail is galvanized steel (gray in color). The proposed curb material will match the proposed deck material (concrete). Input is requested on the need to tint the curb and paint the railing. Future patching of the curb may not be consistent with the color of a tinted curb, and the durability of rail coating can be a concern, with scratches from vehicles like snowplows removing the coating. Renderings were shown for the following alternatives:

- Concrete deck, concrete curb, galvanized steel railing
- Concrete deck, tinted (green) curb, galvanized steel railing

The next steps in the Section 106 process were reviewed. The effect memo will be circulated for signatures. Once the memo is fully executed, the e106 filing will be made with the Advisory Council. A Memorandum of Agreement will then be prepared. The project is anticipated to advertise for construction in Spring 2024.

The following is a summary of key discussion points:

Jill Edelmann noted that effect sheets were prepared for the bridge as well as the Route 3 Cultural Landscape (ZMT-RTCL), Meadow Lark Motor Court (WDS0009), and Montaup Cabins (WDS0007). The project will not result in an effect on the other resources; the only effect is on the bridge. Specifically, the adverse effect results from impacts to the curb, railing, and deck. She commented that the design team has done a great job minimizing impacts to the bridge, and mitigation would be this minimization effort. She further commented that she was open to leaving the new rail unpainted since the galvanized steel would be gray in color and the original plans called for the rail to be painted gray.

Laura Black noted that the renderings were helpful, and she thought that the curbs should not be tinted, but if they are, a bridge white color should be avoided. The material is being changed and it should be respected what that change is. She commented that having the note about rail color from the original plans was also helpful and she agreed that it would make sense to leave them galvanized. The original thought had been to make the modern rail as unobtrusive as possible, but with the original plan note, it makes sense to not paint the rail.

L. Black commented that DHR feels strongly that minimization does not equal mitigation. Minimizing impacts is what Section 106 is all about. However, since minimization did not result in avoiding an adverse effect, mitigation is still needed. The loss of the open grid deck is a opportunity to do something creative. There's a sound and character to this deck type, and a certain sound and experience when driving over it. A suggestion for mitigation would be to record the sounds of vehicles driving over the deck and have a small exhibit at a historical society such as the Upper Pemigewasset Historical Society in Lincoln.

Jennifer Reczek noted that the existing grid deck is now covered with steel plates due to its poor condition, so the opportunity to record audio at this bridge has been lost. L. Black suggested that a recording could be obtained from another open grid bridge.

Christine Perron suggested that, since the bridge site does offer some outdoor recreation, a potential on-site interpretive panel could be considered instead of the exhibit at the historical society. The panel could potentially have a QR code for the deck recording.

J. Edelmann noted that the team would look into a panel or exhibit and a recording of an open grid deck.

Dave commented that he thought the audio recording was a novel idea. He supported getting rid of the grid deck since a closed deck is safer for bicyclists. Since painted railing could peel or scratch, his preference would be for unpainted railing.

L. Black asked if the technology of rail coating systems has been evolving. She mentioned the technology used for the Memorial Bridge, for which all steel pieces were coated prior to construction, which eliminated concerns about painting. Is this type of technology becoming more widely available? J. Reczek explained that paint has traditionally provided two different purposes, with the primary purpose of protecting the steel from rust, and the secondary purpose of aesthetics. Galvanizing uses zinc to protect the steel, resulting in a silver or gray color. The Memorial Bridge used a process call metalizing, which is a thermal sprayed-on zinc coating that provided better long-term protection. This process is typically only used for high-cost structures or in an environment that is especially corrosive. L. Black asked if there has been any research on colorizing the metalizing process. J. Rezcek said that adding a color would be a separate step in the process. C. Perron asked how powder coating differs. J. Reczek said that powder coating essentially involves baking the coating onto the steel instead of spraying it on.