



June 16, 2014

Ms. Sarah Beimers, Government Programs & Compliance
State Historic Preservation Office, Minnesota Historical Society
345 Kellogg Blvd. W., St. Paul, MN 55101

Re: S.P. 107-090-008 (Rehabilitation of the Old Cedar Avenue Bridge over Long Meadow Lake,
Bloomington, Hennepin County)
SHPO Number 2013-3206

Dear Ms. Beimers:

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the 2005 Section 106 Programmatic Agreement and the 2008 Historic Bridge Programmatic Agreement between the FHWA and the Minnesota State Historic Preservation Office.

We previously wrote to your office in September 2013 with a finding of No Adverse Effect for the proposed rehabilitation project on the conditions that 1) the City hire a historian to work with their design engineers to ensure consideration and compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties is incorporated throughout the design process and 2) that our office receive copies of the 30, 60 and 95 percent plan sheets and the special provisions for our review and approval, and your review and concurrence. Your office wrote back in October 2013 and concurred with our findings and conditions.

The City has hired the consultant team of SRF and Modjeski and Masters as the project engineers, and Hess Roise as the project historian. They have completed an in-depth inspection report, which documents the structure's current condition, and have begun to develop the rehabilitation plans (please see enclosed report and 30 percent plans for details).

Historic Fabric

- The upper chord and upper portions of the truss diagonals and vertical members are in generally good condition with almost no noticeable section loss.
- The lower portions of the truss diagonals and vertical members are in fair condition with some localized section loss.
- The lower chord members and gusset plates are in fair to critical condition, with severe section loss noted.
- The expansion and fixed bearing are in an imminent failure condition - all have broken/corroded anchor rods, partially undermined bearing masonry plates and all expansion bearing have displaced rollers and are frozen.
- The lake piers are in critical to imminent failure condition with larger unsound and spalled areas.
- The south abutment backwall is cracked, spalled and shifted and the concrete endwalls have detached from the abutment backwalls.

Non-Historic Fabric

- The north abutment was rebuilt in 1923 due to the shifting of the original abutment, and was partially rebuilt again in 1957.
- The original deck was concrete, so the existing timber deck is not historic fabric.
- The railings have been replaced several times throughout the lifespan of the bridge, based on the maintenance records. The current railing will be removed (Sheet B4).
- The timber powerline support brackets will be removed (Sheet B4).

Design

Two design items have been developed to date.

- The City proposes to replace the railing materials in kind, but to increase the height from the current height of approximately 42 inches to 54 inches (4.5 feet) to meet current MnDOT and AASHTO Bridge Standards (Sheet B4). Thin cables would be installed between the pipe rail and channels in order to meet the standard opening requirements, but to minimize the appearance

of the elements. This has been an effective railing design that has been found to meet the SOI Standards on several other historic bridge projects. However, our office is more concerned with the increase in height, and how that will look within the truss. We have requested visualizations of the proposed new railing height in order to determine if the change in height would create an adverse effect. We have already requested consideration of the application of design exceptions to lower the overall railing height, or to have the pipe rail and channel height remain the same as current, and to install the cables above the top rail to meet the required height. The design team is exploring all of these options and will have more details at the 60 percent plan stage.

- The new deck will be concrete, to match the original design. The new deck may be light-weight concrete, which will have the same look as the original, but will lessen the dead load on the structure.

Based on the 30 percent plans and the inspection report, it is the finding of this office that the **no adverse effect** finding is still appropriate. The design of repaired and replacement elements will be included in the 60 percent plans, and refined and finalized by the 95 percent plans. The project engineers and historians are following the SOI Standards, specifically Standard 6, which states that "deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence."

We look forward to working with your office, the City, FHWA, and other stakeholders in the completion of this important project. We look forward to meeting with you onsite on July 14th along with the City and their consultant team to discuss the current condition of the structure, and the proposed repair and replacement design approaches. Please respond to our finding of effects with 30 days of receipt, as per the terms of the above-referenced agreements. Do not hesitate to call or email me if you have any questions or require additional information

Sincerely,



Kristen Zschomler, Historian and RPA-Register Archaeologist
Cultural Resources Unit Supervisor

Cc: Tim Anderson, FHWA
Romeo Garcia, FHWA
Phil Forst, FHWA
Julie Long, City of Bloomington
Brandon Jutz, Fish and Wildlife Service
Melissa Jenny, U.S. Army Corps of Engineers
Larry Granger, Bloomington Historical Society
Stan Danielson, Bloomington
Dave Conkel, MnDOT State Aid Bridge
Lisa Daniels, Metro State Aid
Gary Reihl, State Aid
Tim Mitchell, MnDOT Bicycle and Pedestrian Unit Director
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