

***North River Mills Bridge
Hampshire County
State Project # S314-45/20-2.40 02
Federal Project # ARRA-4520(003)D
FR#: 10-1463-HM-1***



STATE LEVEL OF HISTORIC DOCUMENTATION

November 2010

***West Virginia
Department of Transportation
Division of Highways
Engineering Division
Environmental Section
(304) 558-2885***

STATE LEVEL HISTORIC DOCUMENTATION
NORTH RIVER MILLS BRIDGE

Location: West Virginia County Route 45/20, over North River
Near Northriver Mills
Hampshire County
West Virginia

USGS Hanging Rock Quadrangle

Date of Construction: 1924

Builder: Luten Bridge Company of York, Pennsylvania

Present Owner: West Virginia Department of Transportation
Division of Highways
1900 Kanawha Boulevard, Building 5, Room A-110
Charleston, WV 25305

Present Use: Vehicular Bridge

Significance: The North River Mills Bridge is significant for its bridge design/builder.

Project Information: The project has been undertaken due to the poor condition of the bridge. Any future deterioration of the bridge would result in its closure, the existing bridge warrants replacement. The documentation was undertaken in November 2010 in accordance with a Memorandum of Agreement among the West Virginia Department of Transportation and West Virginia State Historic Preservation Office. These measures are required prior to replacement of this National Register eligible structure.

Sondra L. Mullins, Structural Historian
West Virginia Division of Highways
Charleston, WV 25305
November 1, 2010

The North River Mills Bridge was constructed in 1924 by the Luten Bridge Company of York, PA. Daniel B. Luten was a prominent builder/designer of the early 1900's, and his concrete arch designs were built in a large number of concrete arches throughout West Virginia. A Luten trademark design was the incised parapet walls found on the current structure.



The existing structure consists of two simple supported reinforced concrete double ribbed deck arches (SCDA). The arches are supported at each end by a full height reinforced concrete abutment with concrete backwalls. There are no attached wingwalls but loose stone retaining walls line each roadway approach. Each span is supported at the center on a common full height reinforced concrete two column pier with a solid web wall between. Both the up and downstream ends are pointed. The span lengths each measure 53'0" springing line to springing line. The overall length of the bridge is 110'0". The structure supports a reinforced concrete deck which measures 8" thick and 15'7" wide out to out. The usable roadway width measures 13'6" curb to curb. The bridge railings are composed of solid reinforced concrete parapets. The distance between them measures 14'2 3/8". There are no sidewalks on the bridge.

The bridge is currently posted for an 8 ton weight limit and is signed as a "One Lane Bridge". The ADT is 350 according to the 2008 traffic count. The bridge is inspected every 12 months. The structure is rated as in poor condition in the latest bridge inspection report (June 9, 2010).

The North River Mills Bridge is significant for its design and workmanship and its contribution to the commercial development of Hampshire County and embodies the distinctive characteristics of an architectural period by a master in this design and construction of concrete arches in West Virginia. This bridge is considered eligible for the National Register of Historic Places under Criterion A & C.

BIBLIOGRAPHY

West Virginia Division of Highways, Bridge Files, Maintenance Division, Building 5, Capitol Complex, Charleston, West Virginia, June 9, 2010.

West Virginia Division of Highways, Historic Property Inventory Form, Engineering Division, Building 5, Capitol Complex, Charleston, West Virginia, February 2003 and June 2010.

West Virginia Division of Highways, Phase 1 Cultural Resource Management Report, Engineering Division, Building 5, Capitol Complex, Charleston, West Virginia, February 2003.

STATE LEVEL HISTORIC DOCUMENTATION
INDEX TO PHOTOGRAPHS

North River Mills Bridge

West Virginia County Route 45/20, over North River

Near Northriver Mills

Hampshire County, West Virginia

Photographer: Sondra Mullins

June 2010

NORTH RIVER MILLS -1	Upstream side of the bridge
NORTH RIVER MILLS -2	Large dead trees lodged against the upstream end of the pier
NORTH RIVER MILLS -3	General view of deck underside span #2
NORTH RIVER MILLS -4	Downstream side of the bridge
NORTH RIVER MILLS -5	Downstream side of the bridge looking upstream
NORTH RIVER MILLS -6	East side approach of the bridge
NORTH RIVER MILLS -7	Bridge plate
NORTH RIVER MILLS -8	Bridge builders plate
NORTH RIVER MILLS -9	Parapet wall with bridge builder plate in place
NORTH RIVER MILLS -10	Incised parapet wall
NORTH RIVER MILLS -11	West side approach of the bridge
NORTH RIVER MILLS -12	Missing parapet wall at abutment #2

No original bridge plans exist for this structure.



1. Upstream side of the bridge



2. Large dead trees lodged against the upstream end of the pier



3. General view of deck underside span #2



4. Downstream side of the bridge



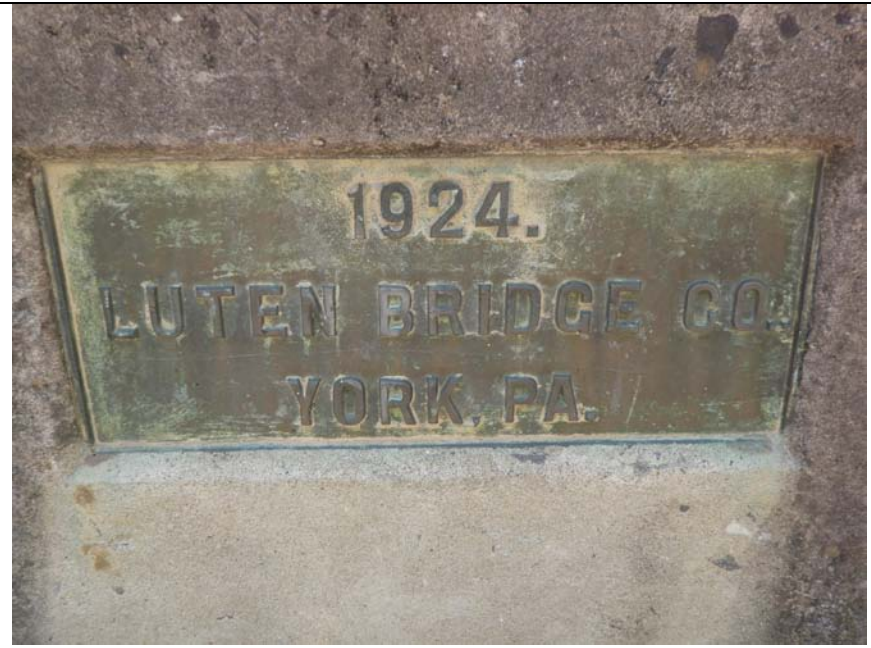
5. Downstream side of the bridge looking upstream



6. East side approach of the bridge



7. Bridge plate



8. Bridge builders plate



9. Parapet wall with bridge builder plate in place



10. Incised parapet wall



11. West side approach of the bridge



12. Missing parapet wall at abutment #2

**MEMORANDUM OF AGREEMENT
BY AND AMONG
THE FEDERAL HIGHWAY ADMINISTRATION,
THE WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER, AND THE
WEST VIRGINIA DIVISION OF HIGHWAYS**

**REGARDING IMPLEMENTATION OF THE NORTH RIVER MILLS
BRIDGE REPLACEMENT PROJECT
STATE PROJECT #S314-45/20-2.40 02
FEDERAL PROJECT #ARRA-4520(003)D
HAMPSHIRE COUNTY, WEST VIRGINIA
SEPTEMBER 2010**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the West Virginia Division of Highways (WVDOH), proposes to replace the North River Mills Bridge, which spans North River in Hampshire County, hereinafter referred to as the Project. The improvements involve the construction of a new bridge; and

WHEREAS, the FHWA has determined that the Project will have an adverse effect upon the North River Mills Bridge, a property eligible for the National Register of Historic Places (NRHP); and

WHEREAS, the FHWA has consulted with the West Virginia State Historic Preservation Officer (WVSHPO) pursuant to 36 CFR Part 800 Implementing Section 106 of the National Historic Preservation Act; (16 U.S.C., 470f); and

WHEREAS, the FHWA has determined that the Project will not effect archaeological properties; and

WHEREAS, the FHWA has consulted with the local historic groups (Hampshire County Historic Landmarks Commission, Hampshire County Historical Society and the Historic Hampshire.Org Group), regarding the effects of the undertaking on historic properties; and

WHEREAS, in accordance with 36 CFR 800.6 (a) (1), the FHWA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination providing the specified documentation, and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR 800.6 (a) (1) (iii);

NOW, THEREFORE, the FHWA, the WVSHPO, and the WVDOH, agree that the undertaking will be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on historic properties.

North River Mills Bridge Replacement

Memorandum of Agreement

Page 2

STIPULATIONS

The FHWA shall ensure that the following stipulations are carried out:

North River Mills Bridge

- I. The North River Mills Bridge will be documented in its present historic setting. The documentation package will include 5"x7" black and white digital prints in accordance with the National Register of Historic Places and National Historic Landmarks Survey Photo Policy Expansion of March 2005. Also, the documentation will be sent to the Historic Hampshire.Org Group and the Hampshire County Historic Landmarks Commission to be added to the HistoricHampshire.Org Website, along with the Hampshire County Public Library in Romney, WV.
- II. A brief history of the structure will be included along with a fully completed West Virginia Historic Property Inventory form and copies of plan sheets and drawings of the bridge from WVDOH bridge files if available.
- III. The WVDOH will provide \$1,000.00 to the Hampshire County Historic Landmarks Commission for a historical interpretive marker to be designed and installed by the Historic Landmarks Commission and placed near the current bridge site.
- IV. The bridge plates for the North River Mills Bridge will be given to the Hampshire County Historic Landmarks Commission.
- V. The bridge will be documented on a future website listing historic bridges once the WV Historic Bridge Survey is complete.

VI. Duration

This MOA will expire if its stipulations are not carried out within five (5) years from the date of its execution. At such time, and prior to work continuing on the undertaking, the FHWA shall either (a) execute a MOA pursuant to 36 CFR 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. Prior to such time, FHWA may consult with other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VII. below. FHWA shall notify the signatories as to the course of action it will pursue.

VII. Post-Review Discoveries

If any unanticipated discoveries of historic properties or archaeological sites, including human burial sites and/or skeletal remains, are encountered during the implementation of this undertaking, work shall be suspended in the area of the discovery until the

WVDOH has developed and implemented an appropriate treatment plan in consultation with the WVSHPO pursuant to 800.13 (b).

VIII. Monitoring and Reporting

Each year following the execution of this MOA until it expires or is terminated, FHWA shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FHWA's efforts to carry out the terms of this MOA.

VIV. Dispute Resolution

Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FHWA shall consult with such party to resolve the objection. If FHWA determines that such objection cannot be resolved, FHWA will:

- A. Forward all documentation relevant to the dispute, including the FHWA's proposed resolution, to the ACHP. The ACHP shall provide FHWA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. FHWA will then proceed according to its final decision.
- B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the

North River Mills Bridge Replacement

Memorandum of Agreement

Page 4

signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.

- C. FHWA's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

X. Amendments

This MOA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

XI. Termination

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories. Once the MOA is terminated, and prior to work continuing on the undertaking, FHWA must either (a) execute a MOA pursuant to 36 CFR 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. FHWA shall notify the signatories as to the course of action it will pursue.

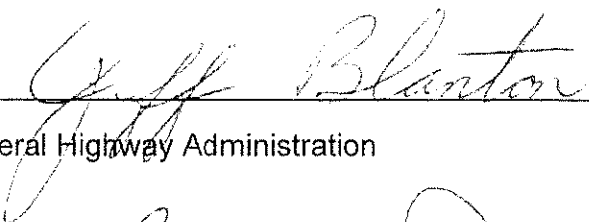
EXECUTION of the Memorandum of Agreement by the FHWA, WVSHPO, the WVDOH and the Council, and implementation of its terms evidence that the FHWA has afforded the Council an opportunity to comment on the North River Mills Bridge project and its effects on historic properties, and that the FHWA has taken into account the effects of the undertaking on the historic property.

North River Mills Bridge Replacement

Memorandum of Agreement

Signatories Page

APPROVED:

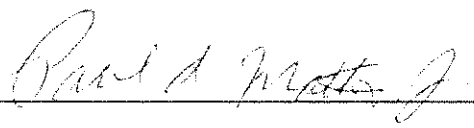

Federal Highway Administration

10/13/2010
Date


West Virginia Deputy State Historic Preservation Officer

9/28/10
Date

CONCUR:


West Virginia Division of Highways

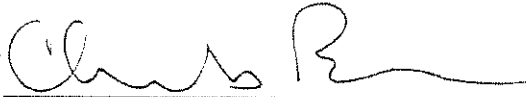
9/29/10
Date

North River Mills Bridge Replacement

Memorandum of Agreement

Signatories Page

CONSULTING PARTY:



Hampshire County Historic Landmarks Commission
Charles Baker, Director


9-7-10

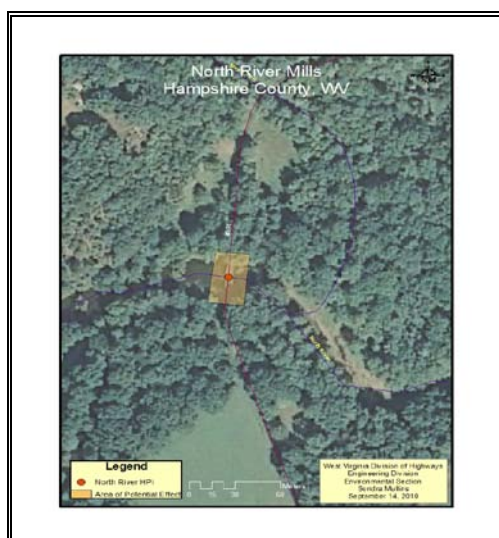
Date

Internal Rating: _____



WEST VIRGINIA HISTORIC PROPERTY INVENTORY FORM

Street Address Spans North River on County Route 45/20, 0.55 miles east of County Route 4/6	Common/Historic Name/Both <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> North River Mills Bridge	Field Survey # HPI #1	Site # (SHPO Only)
Town or Community North River Mills	County Hampshire	Negative No.	NR Listed Date
Architect/Builder Luten Bridge Company of York, PA	Date of Construction 1924	Style (SHPO Only)	
Exterior Siding / Materials Two simply supported reinforced concrete double ribbed deck arches (SCDA)	Roofing Material Deck material: Reinforced Concrete Deck	Foundation Abutments: #1 Reinforced Concrete Pedestals #2 10BP42 Piling Pier: Concrete	
Property Use or Function Transportation	UTM Zone 17 NAD 1983 Easting 714048E Northing 4358187N		
	Quadrangle Name Hanging Rock		
Survey Organization & Date WVDOH September 23, 2010	Part of What Survey / FR# State County Route S314-45/20-2.40 02 Federal Route ARRA-4520(003)D		



Name: North River Mills

Survey #: HPI #1

Survey / FR#: State County Route S314-45/20-2.40 02 Federal Project # ARRA-4520(003)D

Present Owners WVDOH	Owners Mailing Address Capitol Complex Building 5 Charleston, WV 25305			
Describe Setting <div style="float: right; text-align: right;"> Unknown -- <1 Acres <input type="checkbox"/> Archaeological Artifacts Present </div> <p>The bridge is located in a rural area of Hampshire County on County Route 45/20 and crosses over North River.</p>				
<table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Description of Buildings or Site (Original and Present)</td> <td style="width: 10%; text-align: center;">Stories</td> <td style="width: 20%; text-align: center;">Front Bays</td> </tr> </table> <p>The North River Mills Bridge was constructed in 1924 by the Luten Bridge Company of York, PA. The structure consists of two simple supported reinforced concrete double ribbed deck arches (SCDA). The arches are supported at each end by a full height reinforced concrete abutment with concrete backwalls. There are no attached wingwalls but loose stone retaining walls line each roadway approach. Each span is supported at the center on a common full height reinforced concrete two column pier with a solid web wall between. Both the up and downstream ends are pointed. The span lengths each measure 53'0" springing line to springing line. The overall length of the bridge is 110'0". The structure supports a reinforced concrete deck which measures 8" thick and 15'7" wide out to out. The usable roadway width measures 13'6" curb to curb. The bridge railings are composed of solid reinforced concrete parapets. The distance between them measures 14'2 3/8". There are no sidewalks on the bridge.</p> <p>The bridge is currently posted for an 8 ton weight limit and is signed as a "One Lane Bridge". The ADT is 350 according to the 2008 traffic count. The bridge is inspected every 12 months. The structure is rated as in poor condition in the latest bridge inspection report (June 9, 2010).</p>		Description of Buildings or Site (Original and Present)	Stories	Front Bays
Description of Buildings or Site (Original and Present)	Stories	Front Bays		
Alterations <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe				
Additions <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe				
Describe All Outbuildings N/A				
Statement of Significance: The North River Mills Bridge is significant for its design and workmanship and its contribution to the commercial development of Hampshire County and embodies the distinctive characteristics of an architectural period by a master in this design and construction of concrete arches in West Virginia. This bridge is considered eligible for the National Register of Historic Places under Criterion A & C.				
Bibliographical References WVDOH Bridge Inspection Report, June 9, 2010.				
<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Form Prepared By:</td> <td style="width: 40%;">Date: September 23, 2010</td> </tr> </table> <p>Name/Organization: Sondra Mullins Address: WV Division of Highways Capitol Complex Building 5, Rm. 431 Charleston, WV 25305</p> <p>Phone #: 304-558-9487</p>		Form Prepared By:	Date: September 23, 2010	
Form Prepared By:	Date: September 23, 2010			

WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

Name North River Mills

Survey Number: HPI #1

Project / FR#: State County Route S314-45/20-2.40 02 Federal Project # ARRA-4520(003)D

