

***Buckeye Truss Bridge  
Pocahontas County  
State Project # S338-219/15-0.33  
Federal Project # N/A  
FR#: 12-41-PH***



***STATE LEVEL OF HISTORIC DOCUMENTATION***

***March 2012***

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

STATE LEVEL HISTORIC DOCUMENTATION  
BUCKEYE TRUSS BRIDGE

Location: County Route 219/15, over Greenbrier River  
Buckeye  
Pocahontas County  
West Virginia  
  
USGS Hillsboro Quadrangle

Date of Construction: 1909

Builder: Ferris Bridge Company of Pittsburgh, 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 Buckeye Truss Bridge is significant for its example of an early bridge type and 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 March 2012 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  
March 19, 2012

The Buckeye Truss Bridge is located in Buckeye, West Virginia on Pocahontas County Route 219/15, approximately 0.33 miles from County Route 219/5, spanning the Greenbrier River.



The existing structure was built in 1909 by the Ferris Bridge Company of Pittsburgh, Pennsylvania. The structure consists of two 128'1" (centerline to centerline of bearings), simple steel pin connected through truss spans (SSTT-PRATT) supported on full height concrete abutments and a solid concrete pier. The overall length of the structure is a 263'6", from back to back of the abutment backwalls. The structure has a 12'0" wide (out to out) 2" x 4" laminated timber deck with a seal coat wearing surface. It has an 11'7" (rail to rail) roadway and horizontal clearance. The vertical clearance for the select 10'0" path of travel at the portals is 13'10" with a minimum clearance at the portal knew bracing being 13'4". There are no sidewalks or curbs on the bridge. The average daily traffic (ADT) for this crossing is 30 (2009).

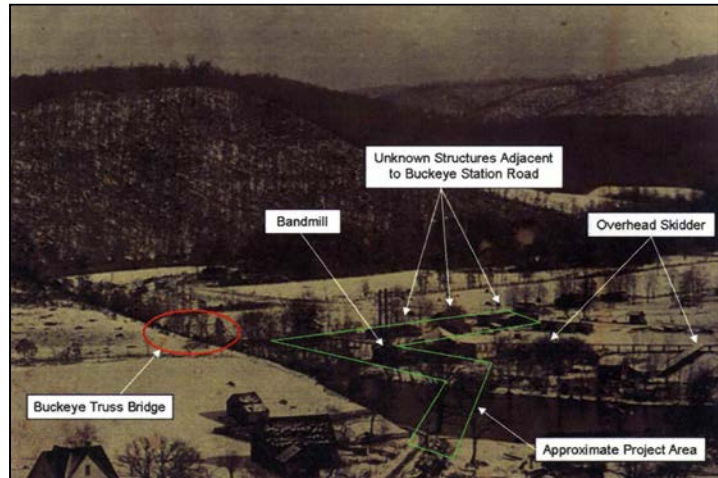
In the latest bridge inspection report lists the bridge in poor condition with a posted weight limit of 3 tons. Several repairs and/or rehabilitation were preformed from 1981 to 2007 in order to



maintain the minimum load limit of 6,000 pounds. Several fracture critical members have been replaced and the bearing seats of the abutments have been repaired. New stringers, diaphragms, and a timber deck were installed. Even after several repairs the bridge still has major deficiencies. The pier and Abutment #1 wingwall on the upstream side have heavy

spalling. There is a void between the top of the pier footing and the bottom of the stem on the upstream end. The bottom portion of several of the Span #1 upstream verticals are bent due to past flood damage. Also there is rust and pitting throughout most of the floorsystem and truss members with some minor section loss in the floorbeams and stringers. The timber deck and wearing surface are also in poor condition.

The following picture shows the current project area and was the site of intensive development in the early twentieth century. Between 1899 and 1905 the Greenbrier Division, a branch of the C&O Railroad was developed along the Greenbrier River (McNeel 1996). The eastern terminus of the redesigned easement intersects with the former railroad alignment which now functions as the Greenbrier River Trail.



The passing siding (removed in 1936) was formerly located on the western side of the main track, overlapping with a portion of the current project area. In addition, the Buckeye railway station was originally located to the south of Buckeye Station Road and consisted of a 10.5-x-19.5 foot passenger shelter and freight room. Whether the station was to the east or west of the track is unclear, however, the structures to the southeast of the railroad alignment and Buckeye Station Road intersection were likely associated with the railroad.

The Buckeye Truss Bridge is eligible for the National Register of Historic Places under Criterion C for its engineering significance as an early bridge type (simple span riveted steel through truss) and its design/builder.

## BIBLIOGRAPHY

McNeel, William. 1996. *The Greenbrier River Trail: Through the Eyes of History*. Pictorial Histories Publishing Company, Inc. Charleston, WV.

West Virginia Division of Highways, Bridge Files, Maintenance Division, Building 5, Capitol Complex, Charleston, West Virginia, July 2011.

West Virginia Division of Highways, Historic Property Inventory Form, Engineering Division, Building 5, Capitol Complex, Charleston, West Virginia, 2011.

West Virginia Division of Highways, Phase 1 Cultural Resource Management Report, Engineering Division, Building 5, Capitol Complex, Charleston, West Virginia, October 2011.

STATE LEVEL HISTORIC DOCUMENTATION  
INDEX TO PHOTOGRAPHS

Buckeye Truss Bridge  
County Route 219/15, over Greenbrier River  
Buckeye  
Pocahontas County, West Virginia

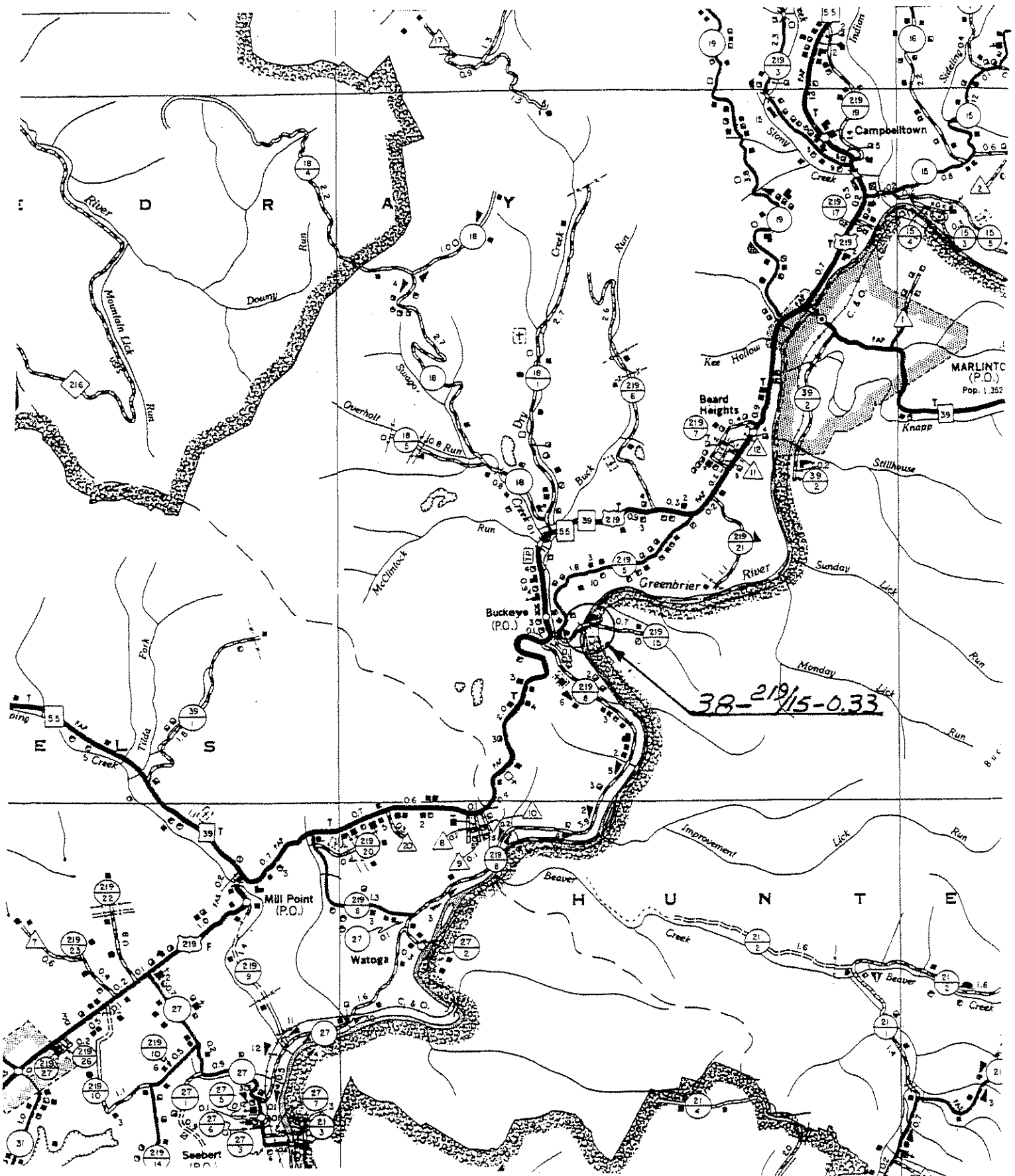
Photographer: Sondra Mullins

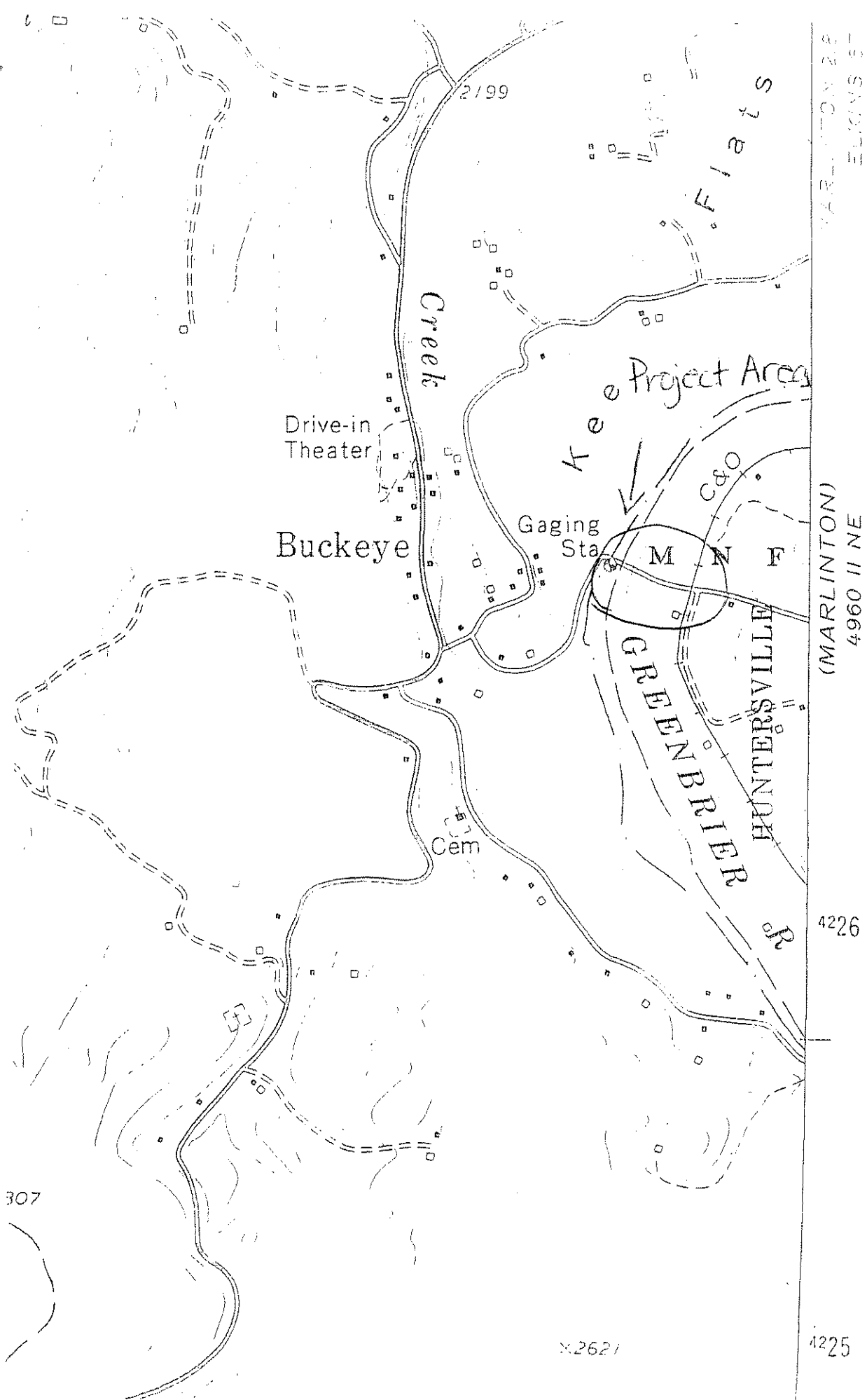
July 2011

BUCKEYE -1	Bridge plate (County Court Names-plate was stolen off of bridge)
BUCKEYE -2	End view looking east (towards Abutment No. 2)
BUCKEYE -3	Thru truss looking east
BUCKEYE -4	End view looking west (towards Abutment No. 1)
BUCKEYE -5	Vertical bracing (note repairs)
BUCKEYE -6	Sideview of the truss
BUCKEYE -7	Top chord connection
BUCKEYE -8	Underneath the bridge at Abutment No. 2
BUCKEYE -9	Sideview of the truss at Abutment No. 1
BUCKEYE -10	Milepost number on the bridge

No original bridge plans exist for this bridge.







# West Virginia Historic Bridge Inventory Form

Bridge No. 38-219/15-000.33 BARS No. 38A085 Federal Bridge No. 00000000038A085 Bridge Design No. 8358.0

## IDENTIFICATION INFORMATION

SHPO Survey No. PH-0198 Owner State Highway Agency  
Local Name BUCKEYE TRUSS Status Extant - in service  
Other Local Name

## LOCATIONAL AND SETTING INFORMATION

District 08 County Pocahontas Latitude 38111200 Longitude 080074800  
Location 0.33 MI E JCT C R 219/5 UTM-Northing  
Facility Carried By Structure C.R. 219/15 UTM-Easting  
UTM Zone  
Features Intersected GREENBRIER RIVER Surrounding Land Use Forested  
Type of Development Rural - (undeveloped area outside communities)

## STRUCTURAL INFORMATION

Main Span Type Steel Truss - Through/Pin Connected Structure Length (ft) 263  
Main Span Type Code 331 Length of Maximum Span (ft) 128  
Number of Spans in Main Unit 002 Average Daily Traffic 000030 Year 2003  
Number of Approach Spans 0000 Sufficiency Rating 0150 Skew 00  
(Note: Data current as of April 2006 database)

## BRIDGE DESCRIPTIVE INFORMATION

Year Built 1909 Arrangement Through  
Year Reconstructed Connection Type Pinned  
Truss Bridge Type Pratt Truss Details  
Alteration(s) Date of Alterations (Year)  
Replacement of main members 1988  
Change in railing/parapet Unknown

### Architectural Treatment(s)

### Bridge Plate Text

(1) plaque. "COUNTY COURT, W.H. HULL, W.A.G. SHARP, JAS. F. DARNELL, CLERK, C.J. MCCARTY, ATTORNEY, F.R. HILL"

## BRIDGE HISTORY

Engineer or Designer Unknown Builder or Fabricator Ferris Bridge Company  
Bridge Plan Location Unknown  
Additional Details: Minor repairs to the diagonals and the bottom chord appear to be in-kind. The north endpost has been repaired/strengthened with an I-beam. Timber deck with tar and chip.

Bridge No.	38-219/15-000.33	BARS No.	38A085	Federal Bridge No.	00000000038A085	Bridge Design No.	8358.0
NATIONAL REGISTER EVALUATION INFORMATION							

National Register Determination

Reason Not Evaluated

National Register Determination Date

This bridge is as an example of the earliest period of use and evolution of its type.

This bridge was designed or constructed by a known regional or West Virginia-based engineer, architect, or firm whose work is recognized as distinguishable within the state of West Virginia.

Although this bridge has undergone alterations, it still retains the historic integrity necessary to convey its engineering significance and, therefore, is eligible for the National Register under Criterion C.





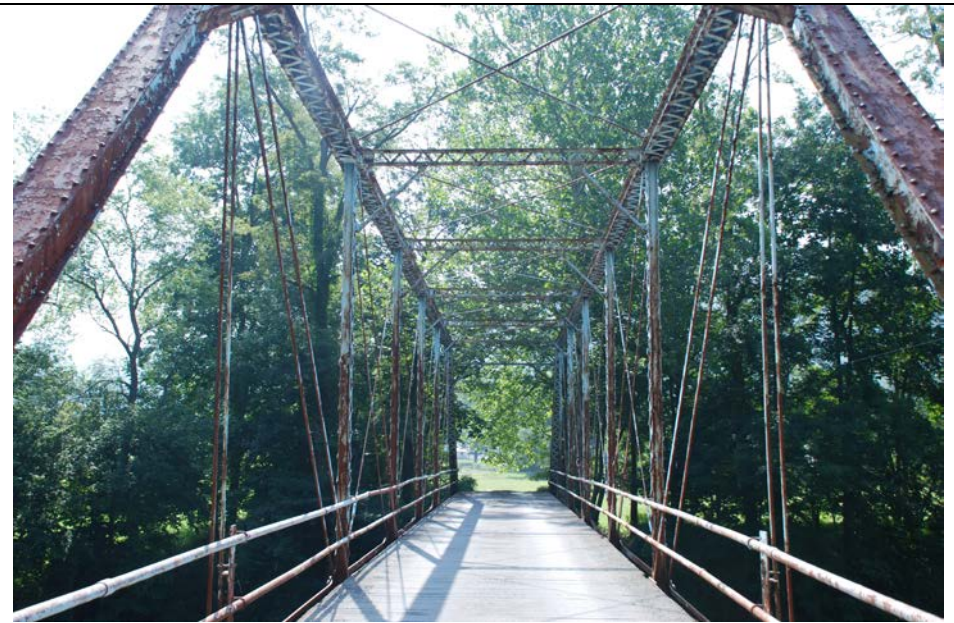
1. End view of structure looking west



2. Connections



3. Overhead bracing



4. Truss from the deck



5. Bridge Plate



6. USGS Gaging Station



7. End view of structure looking east



8. Truss



9. Center Pier and repaired lower eyebars



10. Railing on bridge



11. Underneath deck and abutment



12. Information sign near bridge on the Greenbrier River Trail



13. House on the east side of the bridge



14. Deck



15. Greenbrier River Trail



16. Looking west to the bridge from the Greenbrier River Trail



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

**REGARDING IMPLEMENTATION OF THE BUCKEYE TRUSS BRIDGE  
REPLACEMENT PROJECT  
STATE PROJECT #S338-219/15-0.33  
POCAHONTAS COUNTY, WEST VIRGINIA  
DECEMBER 2011**

**WHEREAS**, the West Virginia Division of Highways (WVDOH) proposes to replace Buckeye Truss Bridge, which spans the Greenbrier River in Pocahontas County, hereinafter referred to as the Project. The improvements involve the construction of a new bridge the downstream and the removal of the existing bridge; and

**WHEREAS**, the WVDOH has determined that the Project will have an adverse effect upon the Buckeye Truss Bridge, a property eligible for the National Register of Historic Places (NRHP); and

**WHEREAS**, the WVDOH has consulted with the West Virginia State Historic Preservation Officer (WVSHPO) pursuant to West Virginia Code Chapter 29, Article 1 and its implementing regulations (82 CSR 2), as well as 36 CFR Part 800.5 Implementing Section 106 of the National Historic Preservation Act; (16 U.S.C., 470f); and

**WHEREAS**, the WVDOH has determined that the Project will not affect archaeological properties;

**NOW, THEREFORE**, 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.

**STIPULATIONS**

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

**Buckeye Truss Bridge**

- I. Buckeye Truss 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 Pocahontas County Free Libraries in Marlinton, West Virginia.
- II. A brief history of the structure will be included along with fully completed West

Virginia Historic Property Inventory forms and copies of plan sheets and drawings of the bridge from WVDOH bridge files if they are available.

- III. A brochure of the Buckeye Truss Bridge will be developed and distributed to the Pocahontas County Free Libraries and Pocahontas County Schools as appropriate for content and grade level. A digital copy will be provided to the libraries and schools for future distribution. The WVSHPO will be given the opportunity to review the brochure as developed for this stipulation.
- IV. The bridge will be documented on a future website listing historic bridges once the WV Historic Bridge Survey is complete.
- V. The bridge plates for the Buckeye Truss Bridge will be given to an interested party.

**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 WVDOH shall execute a MOA pursuant to 82 CSR 2.5.4.d. Prior to such time, WVDOH may consult with other signatories to reconsider the terms of the MOA and amend it in accordance. WVDOH 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 36 CFR 800.13 (b).

**VIII. Monitoring and Reporting**

Each year following the execution of this MOA until it expires or is terminated, WVDOH 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 WVDOH's efforts to carry out the terms of this MOA.

**IX. Amendments**

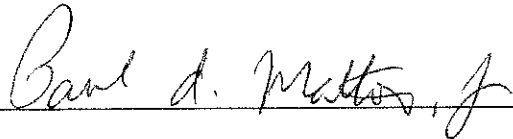
This MOA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the SHPO.

**X. Termination**

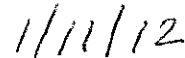
If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation IX, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment 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, WVDOH must execute a MOA pursuant to 82 CSR 2.5.4.d.

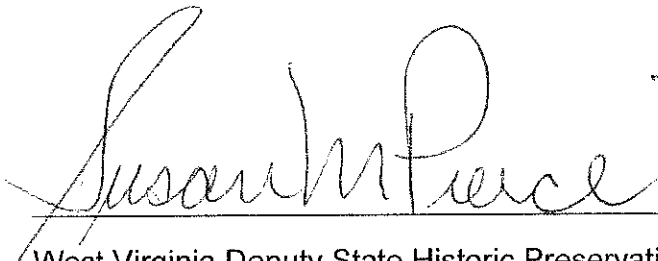
**EXECUTION** of the Memorandum of Agreement by the WWSHPO and the WVDOH, and implementation of its terms evidence that the WVDOH has afforded the SHPO an opportunity to comment on the Buckeye Truss Bridge Replacement project and its effects on historic properties, and that the WVDOH has taken into account the effects of the undertaking on the historic property.



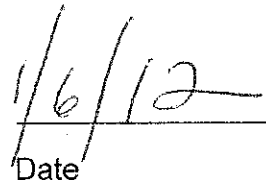
West Virginia Division of Highways



Date



West Virginia Deputy State Historic Preservation Officer



Date