

State Level Historic Documentation Report

State Project: S307-9-6.15

Federal Project: N/A

WALNUT GROVE THRU GIRDER BRIDGE Calhoun County



Prepared by:

Tracy D. Bakic, Structural Historian

Department of Transportation
Division of Highways
Engineering Division
Environmental Section

November 8, 2019

STATE LEVEL HISTORIC DOCUMENTATION
WALNUT GROVE THRU GIRDER BRIDGE

Location:	County Route 9 over Left Fork Barnes Run Calhoun County West Virginia USGS Arnoldsburg Quadrangle
Date of Construction:	1920
Builder:	Unknown
Present Owner:	West Virginia Department of Transportation Division of Highways 1334 Smith Street Charleston, WV 25301
Present Use:	Vehicular Bridge
Significance:	Walnut Grove Thru Girder Bridge is historically significant for its engineering association as an example of the concrete through girder bridge design, an increasingly uncommon type amongst extant older bridges in WV.
Project Information:	<p>The project has been undertaken due to the deteriorating condition of the bridge and the necessity for a structure that can accommodate two lanes of traffic. Any future deterioration of the bridge will result in its closure. Therefore, this bridge warrants replacement. This documentation was undertaken in November 2019 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 due to the replacement of this National Register eligible structure.</p> <p>Tracy D. Bakic, Structural Historian West Virginia Division of Highways Charleston, WV 25305 November 8, 2019</p>

Walnut Grove Thru Girder Bridge spans Left Fork Barnes Run and is located in the unincorporated Rocksedale-Walnut Grove Church area, western-central Calhoun County, West Virginia (WV) on County Route (CR) 9, approximately 0.24 miles west of the CR 18 junction with CR 9. Left Fork Barnes Run is a tributary of the West Fork Little Kanawha River. The 2016 average daily traffic (ADT) count for the bridge is 154 vehicles per day.



The existing Walnut Grove Thru Girder Bridge was completed in 1920 by an unknown builder/designer. The bridge is a 43-foot-long by 15-foot, one-inch-wide single-span reinforced concrete through girder superstructure supported on cut stone abutments. The two concrete girders extend upward creating bridge's concrete parapet railings. The deck is 14-inch-thick reinforced concrete. There are no curbs or sidewalks on the structure. The roadway width (between concrete girder railings) is 12 feet, four-and-one-half inches. The deck has a tar and chip wearing surface.

A January 2018 WV Division of Highways bridge inspection reported that the overall structure of Walnut Grove Thru Girder Bridge is in poor condition with deficiencies that include: cracks and spalls with exposed rebar or failing repairs at both girders; cracking, efflorescence, spalls and leaks at the underside of the deck; and cracking and ongoing erosion at the stone abutments.

Historic Context

Calhoun County was established in 1856, being formed from the western portion of Gilmer County. When the State of WV was created and admitted to the Union in 1863, Calhoun County was subdivided into five townships – Sheridan, Center, Sherman, Lee and Washington. In 1872 the townships were reestablished as magisterial districts, keeping the same names as before. The location of the Calhoun County seat was much disputed for the first 13 years, with court meetings often being held in Arnoldsburg. However, Grantsville formally became the county seat in 1869.

The post-Civil War years were marked by slow but steady growth. "Timbering became an important economic activity as numerous rafts of logs were floated down the Little Kanawha to Parkersburg. Beginning in the late 1800s, Calhoun County became a major oil and gas producer,

with a resulting increase in employment and population. In the absence of railroads and all-weather roads, the river was used to ship merchandise and supplies in and out of the county” (Bonar 2013).

“At the turn of the century, an important development in river transportation was made by a Calhoun resident, Capt. Norman Williams. His narrow, shallow-draft, gasoline-powered sternwheelers made navigation possible on the upper reaches of the Little Kanawha and its tributaries. Everything from people to mail to oil field equipment traveled on these boats and their barges. Calhoun County’s recovery from the Great Depression was slow, and the county suffered from the same out-migration that affected most of the state after World War II. The number of Calhoun Countians peaked at 12,455 in 1940 and declined thereafter. The county’s economy in the late 20th century was based on livestock grazing, light manufacturing, and the oil and gas and pipeline construction industries. Reforestation has led to a resurgence of timbering and has made the county ideal for hunting and fishing” (Bonar 2013).

Lee District & Rocksedale-Walnut Grove Church Area

Walnut Grove Thru Girder Bridge is located within central-western Lee District. “The first cabin [in Lee District] was erected by a man of the name of West, who came from Ohio to this vicinity about the year 1807. He was a squatter and did not remain long. The first actual settler was Phillip Starcher, who built his cabin where Arnoldsburg now stands in the year 1810. Soon after his settlement he was joined by Peter Cogar, Isaac Mace, William Brannan, Peter McCune and Adam O'Brien, all of whom found homes along the West Fork” (Comstock 1973:11).

Rocksedale is an unincorporated locale situated on CR 9 at the confluence of the Henry Fork and the West Fork Little Kanawha River. The area was purportedly named for the huge rock cliffs surrounding the area. By the late 1880s the Rocksedale store and post office was established, becoming the hub of this crossroad village for distribution of mail and supplies to surrounding area farmers. The Rocksedale post office operated from 1886 to 1963. Downstream



(north) along the West Fork Little Kanawha River were the villages of Hassig and then Richardson, farm communities which also had their place in early 1900s oil production history. The Rocksedale Bridge (Egypt Ridge-Rocksedale Bridge), a steel through truss, was built to span CR 11 over the West Fork Little Kanawha River in 1886. An important local boon of this bridge

was that it allowed for the driving or trucking of cattle and livestock to the City of Spencer's livestock sale. Rocksdales Bridge was demolished in early 2019 for new bridge construction.

In Rocksdales vicinity is the Walnut Grove Church. This church is at the intersection of CR 9 and CR 18, approximately 0.25 east of Walnut Grove Thru Girder Bridge. The Walnut Grove Church, initially called Barnes Run Church, was started in 1858 by Rocksdales resident William "Billy Bluehead" Starcher, the son of Lee District's early settler Philip Starcher. The initial church building meeting and school house was built to be "open to all preachers who preach the gospel." The original church building, built in 1858, was replaced by the existing Walnut Grove Church building, likely around 1915. The church drew worshippers from the Barnes Run community, up and down West Fork, up Henry's Fork, and on Egypt Ridge.

County Route 9 & Walnut Grove Thru Girder Bridge

By 1891 a postal route was established along West Fork of Little Kanawha River between Burning Spring and Arnoldsburg and included stops in Creston, Richardson, Rocksdales and Altizer. The general route of existing CR 9 – aka Altizer Road – is depicted on maps as early as 1905 (USGS 1907). By 1933 the road was designated CR 9; at that time the road was unimproved/earthen. By 1954 CR 9 was improved with a gravel/stone surface and



then was given a bituminous surface sometime b/w 1970 and 1998. WVDOH files report that the Calhoun County Court had the existing Walnut Grove Thru Girder Bridge built in 1920 (WVDOH 1993). A designer or builder for this bridge is presently unknown, nor has information related to a possible previous span at this location been found.

Reinforced Concrete Through Girder Bridge Context

The subject bridge is a reinforced concrete through girder span. "The first reinforced concrete through girder bridge was built in France about 1893, and the first of the type constructed in the United States appears in the first decade of the twentieth century. In the 1910s, several of the early state highway departments issued standardized plans for concrete girder bridges." (Parsons Brinkerhoff et al 2005: pg 3-93). In WV standard plans for concrete culverts and concrete girder bridges up to 50 feet long were in development within the first couple of years

after the WV State Road Commission was organized in 1917. The span type was commonly being built in the US within the first three decades of the 20th century.

In this bridge type, the reinforced concrete slab is supported on reinforced concrete beams that are incorporated into the slab and extend up to form solid parapet railings, creating a monolithic structure. “This system was recommended for use in spans from 20 to 60 feet, with widths of [about] 20 feet or less (12 or 16 foot widths being the most common). The integral girder/parapet arrangement gave these bridges considerable strength. It also required a massive structure with a narrow roadway (to prevent excessive dead load) and made these bridges impossible to widen. Removing a parapet would remove the support for the entire side of the bridge, causing the bridge to deform and probably collapse” (Miller et al. 1996:18). The use of the concrete through girder was gradually replaced by the deck girder bridge and then steel I-beam and pre-cast concrete spans.



In 2019 there are at least 12 bridges of the reinforced concrete through girder type still existing in WV – five in Cabell County, two in Morgan County and one in Calhoun, Hardy, Roane, Taylor and Wetzel counties. The construction dates for these spans range from 1919 to 1930. Historically, there were more reinforced concrete through girder spans built throughout WV, but most were likely replaced due to later need for wider, safer spans in those locations.

Eligibility

Walnut Grove Thru Girder Bridge was determined eligible for listing in the National Register of Historic Places (NRHP) for its engineering significance as an example of the concrete through girder bridge design, an increasingly uncommon type amongst extant older bridges in WV.

Walnut Grove Thru Girder Bridge will eventually be removed as a result of the planned construction of a new bridge upstream.

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- . *Bridge Inspection Report, BARS 07A025 [Walnut Grove Thru Girder], County Route 9 over Left Fork Barnes Run, Calhoun County*. January 29, 2018.

STATE LEVEL HISTORIC DOCUMENTATION
INDEX TO PHOTOGRAPHS

Walnut Grove Thru Girder Bridge
County Route 9 over Left Fork Barnes Run
Calhoun County, West Virginia

Photographer(s): Tracy D. Bakic

April 4, 2019

WLNT GROVE - 1	East Approach. View Northwest
WLNT GROVE - 2	East Approach. View West
WLNT GROVE - 3	West Approach. View East
WLNT GROVE - 4	South (Downstream) Elevation. View Northeast
WLNT GROVE - 5	South (Downstream) Elevation. View Northwest
WLNT GROVE - 6	North (Upstream) Elevation. View Southeast
WLNT GROVE - 7	North (Upstream) Elevation. View Southwest
WLNT GROVE - 8	Underside of Bridge. View East/Northeast
WLNT GROVE - 9	West Abutment. View Northwest
WLNT GROVE - 10	East Abutment. View Southeast.

No original bridge plans exist for this bridge.



1. East Approach. View Northwest



2. East Approach. View West



3. West Approach. View East



4. South (Downstream) Elevation. View Northeast



5. South (Downstream) Elevation. View Northwest



6. North (Upstream) Elevation. View Southeast



7. North (Upstream) Elevation. View Southwest



8. Underside of Bridge. View East/Northeast



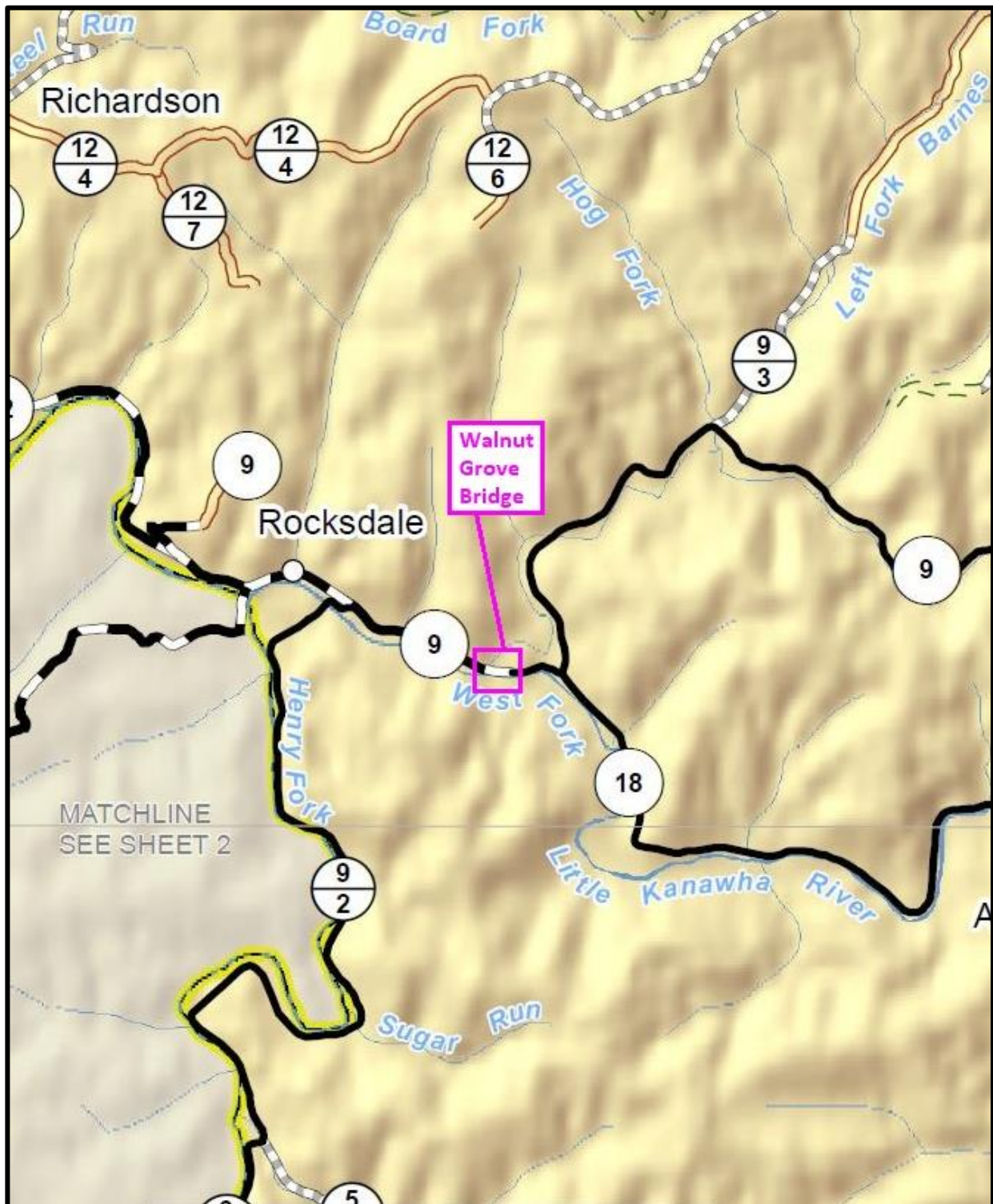
9. West Abutment. View Northwest



10. East Abutment. View Southeast

LOCATION MAP

WALNUT GROVE BRIDGE REPLACEMENT CALHOUN COUNTY



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TOPO MAP

WALNUT GROVE BRIDGE REPLACEMENT

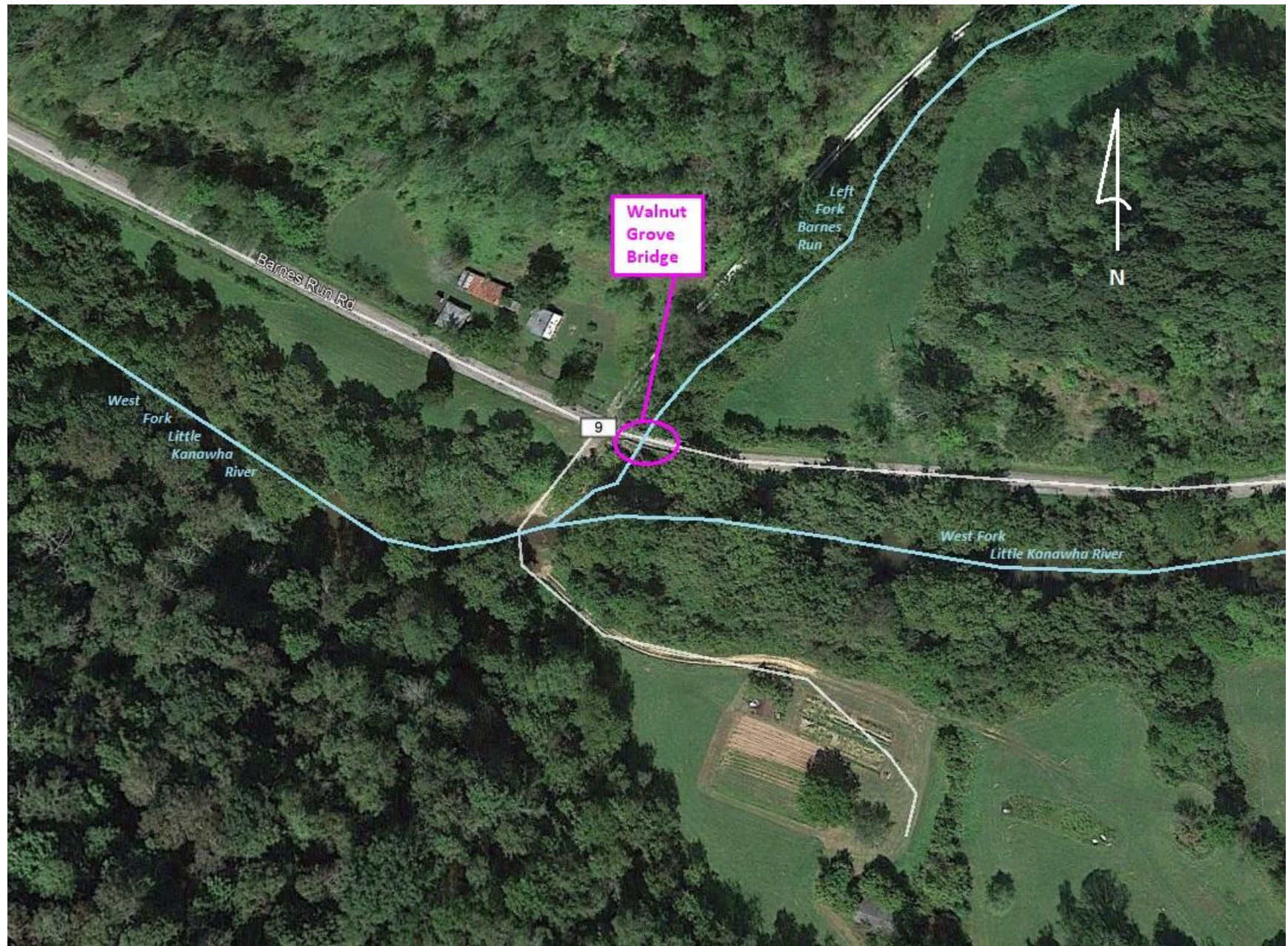
State Project S307-9-6.15

CALHOUN COUNTY



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT AREA
WALNUT GROVE BRIDGE REPLACEMENT
CALHOUN COUNTY



West Virginia Historic Bridge Inventory Form

Bridge No. 07-009/00-006.15 BARS No. 07A025 Federal Bridge No. 00000000007A025 Bridge Design No. 6097.0

IDENTIFICATION INFORMATION

SHPO Survey No. CH-0013 Owner State Highway Agency
Local Name WALNUT GROVE SLAB Status Extant - in service
Other Local Name

LOCATIONAL AND SETTING INFORMATION

District 03 County Calhoun Latitude 38502400 Longitude 081122400
Location 0.23 MI W CR 18 UTM-Northing
Facility Carried By Structure COUNTY ROUTE 9 UTM-Easting
UTM Zone
Features Intersected LEFT FORK BARNES RUN Surrounding Land Use Residential
Type of Development Rural - (undeveloped area outside communities)

STRUCTURAL INFORMATION

Main Span Type Concrete Stringer/Multi-beam or Girder Structure Length (ft) 43
Main Span Type Code 102 Length of Maximum Span (ft) 38
Number of Spans in Main Unit 001 Average Daily Traffic 000150 Year 2004
Number of Approach Spans 0000 Sufficiency Rating 0512 Skew 00
(Note: Data current as of April 2006 database)

BRIDGE DESCRIPTIVE INFORMATION

Year Built 1920 Arrangement
Year Reconstructed Connection Type
Truss Bridge Type Truss Details
Alteration(s) Date of Alterations (Year)

Architectural Treatment(s) Bridge Plate Text
N/A

BRIDGE HISTORY

Engineer or Designer Builder or Fabricator County Court
Bridge Plan Location Unknown
Additional Details: Concrete parapet with concrete cap. Concrete slab deck. Stone abutments. Bridge has a through girder design with the parapet serving as the girder, which is an uncommon type in West Virginia.

Bridge No.	07-009/00-006.15	BARS No.	07A025	Federal Bridge No.	00000000007A025	Bridge Design No.	6097.0
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NATIONAL REGISTER EVALUATION INFORMATION

National Register Determination	Eligible	Reason Not Evaluated
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National Register Determination Date	2013
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This bridge is not eligible for the National Register under Criterion A as it does not have a significant association with an important historic transportation system, program, event, trend, or policy identified through contextual research and survey activities.

This bridge is an example of an uncommon type or displays an unusual design element that represents the individuality or variation of features particular to this bridge type.

This bridge retains the historic integrity necessary to convey its engineering significance and, therefore, is eligible for the National Register under Criterion C.



West Virginia Historic Bridge Inventory Form
Form Prepared By Mead & Hunt and KCI
Form Preparation Date 2013

WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013



USGS 7.5" Topo Arnoldsburg, W.V.

Bridge UTM Location: 4299086N, 482026E

Setting: This bridge is located in the unincorporated Walnut Grove Church-Rocksdale area in western-central Calhoun County. The bridge spans County Rt 9 (CO 9; Altizer Rd) over the Left Fork Barnes Run, a tributary of the nearby West Fork Little Kanawha River. The bridge is about 0.24 miles west of the CO 18 intersection with CO 9. The setting is hilly and rural/agricultural. The existing surrounding development dates from the ca. 1920s to present. The closest built up property is to the northwest and includes a ca. 1970 building (currently used as a cabin) with associated outbuildings to the west. The existing Walnut Grove Church, built ca. 1915, is located about 0.25 miles to the east at the corner of the CO 9-CO 18 intersection.

Description: The existing Walnut Grove Thru Girder Bridge, built in 1920, is a 43-foot-long by 15-foot, one-inch-wide single-span reinforced concrete through girder superstructure supported on cut stone abutments. The two concrete girders extend upward creating bridge's concrete parapet railings. The deck is 14-inch-thick reinforced concrete. There are no curbs or sidewalks on the structure. The roadway width (between concrete girder railings) is 12 feet, four-and-one-half inches. The deck has a tar and chip wearing surface. In 1993 approach standard flexbeam guardrail was bolted to the inside faces of the concrete girders and continued along the approach shoulders for a short distance; approach guardrail at the east end of the bridge was replaced in 2006.

WEST VIRGINIA HISTORIC PROPERTY FORM

CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013

Statement of Significance:

The Walnut Grove Thru Girder Bridge is in the unincorporated Walnut Grove Church-Rocksedale area in western-central Calhoun County. The county was established in 1856, being formed from the western portion of Gilmer County (VA 1856:90). When the State of WV was created and admitted to the Union in 1863, Calhoun County was subdivided into five townships – Sheridan, Center, Sherman, Lee and Washington. In 1872 the townships were reestablished as magisterial districts, keeping the same names as before. The subject property has always been in Lee District (Rand McNally 1924; White 1873). The location of the Calhoun County seat was much disputed for the first 13 years, with court meetings often being held in Arnoldsburg. However, Grantsville formally became the county seat in 1869 (Lewis 1998:216; WVCulture.org).

The post-Civil War years were marked by slow but steady growth. “Timbering became an important economic activity as numerous rafts of logs were floated down the Little Kanawha to Parkersburg. Beginning in the late 1800s, Calhoun County became a major oil and gas producer, with a resulting increase in employment and population. In the absence of railroads and all-weather roads, the river was used to ship merchandise and supplies in and out of the county” (Bonar 5/2013).

“At the turn of the century, an important development in river transportation was made by a Calhoun resident, Capt. Norman Williams. His narrow, shallow-draft, gasoline-powered sternwheelers made navigation possible on the upper reaches of the Little Kanawha and its tributaries. Everything from people to mail to oil field equipment traveled on these boats and their barges. Calhoun County’s recovery from the Great Depression was slow, and the county suffered from the same out-migration that affected most of the state after World War II. The number of Calhoun Countians peaked at 12,455 in 1940 and declined thereafter. The county’s economy in the late 20th century was based on livestock grazing, light manufacturing, and the oil and gas and pipeline construction industries. Reforestation has led to a resurgence of timbering and has made the county ideal for hunting and fishing” (Bonar 2013).

Lee District & Rocksedale-Walnut Grove Church Area

“The first cabin [in Lee District] was erected by a man of the name of West, who came from Ohio to this vicinity about the year 1807. He was a squatter and did not remain long. The first actual settler was Phillip Starcher, who built his cabin where Arnoldsburg now stands in the year 1810. Soon after his settlement he was joined by Peter Cogar, Isaac Mace, William Brannan, Peter McCune and Adam O'Brien, all of whom found homes along the West Fork” (Comstock 1973:11).

Rocksedale is an unincorporated locale situated on CO 9 at the confluence of the Henry Fork and the West Fork Little Kanawha River. The area was purportedly named for the huge rock cliffs surrounding the area. By the late 1880s the Rocksedale store and post office was established, becoming the hub of this crossroad village for distribution of mail and supplies to surrounding area farmers. The Rocksedale post office operated from 1886 to 1963. Downstream (north) along the West Fork Little Kanawha River were the villages of Hassig and then Richardson, farm communities which also had their place in early 1900s oil production history. The Rocksedale Bridge (Egypt Ridge-Rocksedale Bridge), a steel through truss, was built to span CO 11 over the West Fork Little Kanawha River in 1886. An important local boon of this bridge was to allow for the driving or trucking of cattle and livestock to the City of Spencer livestock sale. The bridge was demolished in early 2019 for new bridge construction (Hennen 1911:28; HurHerald.com; PostalHistory.com).

In Rocksedale vicinity is the Walnut Grove Church. This church is at the intersection of CO 9 and CO 18, approximately 0.25 east of the subject resource. The Barnes Run Church, later named Walnut Grove Church, was started in 1858 by Rocksedale resident William “Billy Bluehead” Starcher. The first official sermon in West Fork area was in 1820 at the Altizer residence of Phillip Starcher, William’s father. The sermon was given by Methodist minister Lorenzo Dow. The Walnut Grove Church was started in January 1858 and a meeting and school house was built to be “open to all preachers who preach the gospel.” The church was to be completed on or before April 1, 1858. This original church was replaced by the extant church building, likely around 1915. The church drew worshippers from the Barnes Run community, up and down West Fork, up Henry’s Fork, and on Egypt Ridge (HurHerald.com).

WEST VIRGINIA HISTORIC PROPERTY FORM

CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013

CO 9 (Altizer Road) & Walnut Grove Thru Girder Bridge. A postal route was established along West Fork between Burning Spring and Arnoldsburg and included stops in Creston, Richardson, Rocksdales and Altizer by 1891 (US Post Office Dept 1891). The general route of existing CO 9 is depicted on maps as early as 1905 (USGS 1907). By 1933, the road was designated CO 9; at that time the road was unimproved/earthen (WV SRC 1933). By 1954 CO 9 was improved with a gravel/stone surface and then was given a bituminous surface sometime b/w 1970 and 1998 (WV Dept. Hwys 1970; WVDOT 1998; WV SRC 1940, 1954, 1957). WVDOT files report that the Calhoun County Court had the existing Walnut Grove Thru Girder Bridge built in 1920 (WVDOT 1993). Research for this form did not find more construction information, including designer/builder, related to this bridge or a possible previous span at this location; research include WVDOT files, Newspaperarchive.com, LOC's Chronicling America website, Google/Google books searches.

Concrete Through Girder Bridge Type. The subject Walnut Grove Bridge is a concrete through girder span. "The first reinforced concrete through girder bridge was built in France about 1893, and the first of the type constructed in the United States appears in the first decade of the twentieth century. In the 1910s, several of the early state highway departments issued standardized plans for concrete girder bridges." (Parsons Brinkerhoff et al 2005: pg 3-93). The span type was commonly being built within the first three decades of the 20th century (Parsons Brinkerhoff et al 2005: pg 3-93; Smith et al. 1996:18). In WV standard plans for concrete culverts and concrete girder bridges up to 50 feet long were in development within the first couple of years after the State Road Commission was organized in 1917 (WV SRC 1919:16).

In this type, the reinforced concrete slab is supported on reinforced concrete beams that are incorporated into the slab and extend up to form solid parapet railings, creating a monolithic structure (Parsons Brinkerhoff et al 2005:pg 3-93; Smith et al 1996:18). "This system was recommended for use in spans from 20 to 60 feet, with widths of [about] 20 feet or less (12 or 16 foot widths being the most common). The integral girder/parapet arrangement gave these bridges considerable strength. It also required a massive structure with a narrow roadway (to prevent excessive dead load) and made these bridges impossible to widen. Removing a parapet would remove the support for the entire side of the bridge, causing the bridge to deform and probably collapse" (Miller et al. 1996:18). The use of the concrete through girder was gradually replaced by the deck girder bridge and then steel I-beam and pre-cast concrete spans (Parsons Brinkerhoff et al. 2005:pg 3-93).

Previous NHPR Eligibility

Walnut Grove Thru Girder Bridge (SHPO No. CH-0013) was evaluated as part of the *West Virginia Statewide Historic Bridge Survey: Final Survey Report* (WV Historic Bridge Survey [KCI et al 2015]) and determined to be eligible for the NRHP under Criterion C (structural significance). In the survey, the bridge was called "Walnut Grove Slab." Further, the WV Historic Bridge Survey determined the bridge not eligible for the NRHP under Criterion A "as it does not have a significant association with an important historic transportation system, program, event, trend, or policy identified through contextual research and survey activities".

Evaluation

Criterion A. County Rt 9, including Walnut Grove Thru Girder Bridge, represents local road development that is common throughout the state. Other than general association with the history of the area, there is no reason to believe that this road or bridge have an important link with events or trends, transportation-related or other, that have made a significant contribution to the broad patterns of history. Thus, Walnut Grove Thru Girder Bridge does not meet NRHP Criterion A for association with events at a national, regional or local level.

Criterion B. Per research and public involvement to this point*, this span is not known to have been associated with the significant productive period of some notable person's life, nor to have been associated for any length of time with such a person, nor to be the best representation of such a person's historic contribution. Therefore, this span does not meet NRHP Criterion B.

WEST VIRGINIA HISTORIC PROPERTY FORM

CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013

Criterion C. The extant Walnut Grove Thru Girder Bridge is a single-span concrete through girder bridge that was built in 1920 by an unknown builder/designer. Although the bridge is not known to represent the work of a master or possess, it exemplifies the concrete through girder bridge type which, although at one time a well-used design throughout the US, has increasingly less representation throughout WV.

Per the *WV Historic Bridge Survey* fieldwork, the survey found at least 13 bridges of this type still existing in WV – five in Cabell Co., two in Morgan and in Wetzel, and one in Calhoun, Hardy, Roane and Taylor counties. The construction dates for these spans range from 1919 to 1930. Per review of current WVDOH files, one of the 13 bridges – Buffalo Run Bridge in Wetzel Co. (SHPO WZ-0052) - was replaced. Therefore, currently there are at least 12 concrete through girder spans remaining in the state. Eleven of the 12 bridges were determined NRHP-eligible (Criterion C only) in the WV Historic Bridge Survey, inclusive of the Walnut Grove Thru Girder, the only of its type in Calhoun County. Historically, there were more concrete through girders throughout WV – including in other counties (WV SRC 1919:119-121) - but they were likely later removed due to need for wider, safer spans.

Walnut Grove Thru Girder Bridge retains a good level of integrity in that it exhibits the structural components of its type – girder parapets and deck. Thus, this bridge meets NRHP Criterion C at a state level of significance as an example of the concrete through girder bridge design, an uncommon type amongst extant older bridges in West Virginia.

Criterion D. This span is not likely to have important information that will contribute to our understanding of human history or prehistory. Construction appears to have utilized commonly known techniques, tools and materials for the period built. The potential for information is minimal and, therefore, this span does not meet NRHP Criterion D.

Summary: This bridge is NRHP-eligible at a state level under Criterion C for structural significance as an example of the concrete through girder bridge design, an uncommon type amongst extant older bridges in West Virginia. The bridge's period of significance is 1920, the year the span was constructed. Due to inconsistent periods of construction and/or lack of integrity of this resource and the surrounding built environment, this structure is not a contributor to a historic district.

* Correspondence was conducted with Preservation Alliance of West Virginia and the Calhoun County Historical & Genealogical Society.

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WEST VIRGINIA HISTORIC PROPERTY FORM

CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013

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Parsons Brinkerhoff & Engineering and Industrial Heritage. *A Context For Common Historic Bridge Types*. NCHRP Project 25-25, Task 15. October 2005.

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Continuation Sheet Date: July 1, 2019

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For Survey:

Walnut Grove Thru Girder Bridge Replacement
State Proj # S307-9-6.15

Field Survey No.: APE B1

WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013



East Approach. View West (WVDOH 4-4-2019)



East Approach. View NW (WVDOH 4-4-2019)

WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013



East Approach. View West (WVDOH 4-4-2019)



West Approach. View East (WVDOH 4-4-2019)

WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013



South (Downstream) Elevation. View NE (WVDOH 4-4-2019)



South (Downstream) Elevation. View NE (WVDOH 4-4-2019)

WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

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South (Downstream) Elevation. View NW (WVDOH 4-4-2019)



North (Upstream) Elevation. View South (WVDOH 4-4-2019)

WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013



North (Upstream) Elevation. View SE (WVDOH 4-4-2019)



North (Upstream) Elevation. View SW (WVDOH 4-4-2019)

**WEST VIRGINIA HISTORIC PROPERTY FORM
CONTINUATION SHEET**

NAME: Walnut Grove Thru Girder Bridge

SITE#: CH-0013



Underside of Bridge. View ENE, taken from East Abutment (WVDOH 4-4-2019)



West Abutment. View ESE (WVDOH 4-4-2019)

**WEST VIRGINIA HISTORIC PROPERTY FORM
CONTINUATION SHEET**

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West Abutment. View NW (WVDOH 4-4-2019)



East Abutment. View SE (WVDOH 4-4-2019)