West Virginia
Historic Bridge Inventory Form

Bridge No. 55-005/00-000.04 **BARS No.** 55A010 **Federal Bridge No.** 00000000055A010 **Bridge Design No.** 9313.0

IDENTIFICATION INFORMATION

SHPO Survey No. WM-0552
Local Name MILAM ARCH
Other Local Name

Owner State Highway Agency
Status Extant - in service

LOCATIONAL AND SETTING INFORMATION

District 10 **County** Wyoming **Latitude** 37412400 **Longitude** 081290600
Location 0.04 MI E OF CR 1
Facility Carried By Structur CR 5
Features Intersected LAUREL FORK

UTM-Northing
UTM-Easting
UTM Zone
Surrounding Land Use Residential
Type of Development Rural - (undeveloped area outside communities)

STRUCTURAL INFORMATION

Main Span Type Concrete Arch - Deck
Main Span Type Code 111
Number of Spans in Main Unit 001
Number of Approach Spans 0000

Structure Length (ft) 54
Length of Maximum Span (ft) 50
Average Daily Traffic 001300 **Year** 2003
Sufficiency Rating 0419 **Skew** 48
(Note: Data current as of April 2006 database)

BRIDGE DESCRIPTIVE INFORMATION

Year Built 1925
Year Reconstructed
Truss Bridge Type
Alteration(s)

Arrangement
Connection Type
Truss Details
Date of Alterations (Year)

Architectural Treatment(s)

Bridge Plate Text
(2) plaques. "1925 WYOMING COUNTY COURT, GEO. R. STEWART, PRES., J.A. TOLER, COMR., E.W. WORRELL, COMR., DAN W. COOK, COUNTY CLERK, I.E. BASHAM, CO. ENGINEER" AND "THE CONCRETE STEEL BRIDGE CO. DESIGNER AND BUILDERS, CLARKSBURG, W.VA."

BRIDGE HISTORY

Engineer or Designer
Builder or Fabricator Concrete Steel Bridge Company
Bridge Plan Location None
Additional Details: Closed spandrel elliptical arch. Concrete deck with asphalt overlay. Concrete abutments and wingwalls. Concrete parapet with incised rectangular panels along the interior and exterior. Bridge has a 48 degree skew.

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NATIONAL REGISTER EVALUATION INFORMATION

National Register Determination Eligible **Reason Not Evaluated**

National Register Determination Date 2013

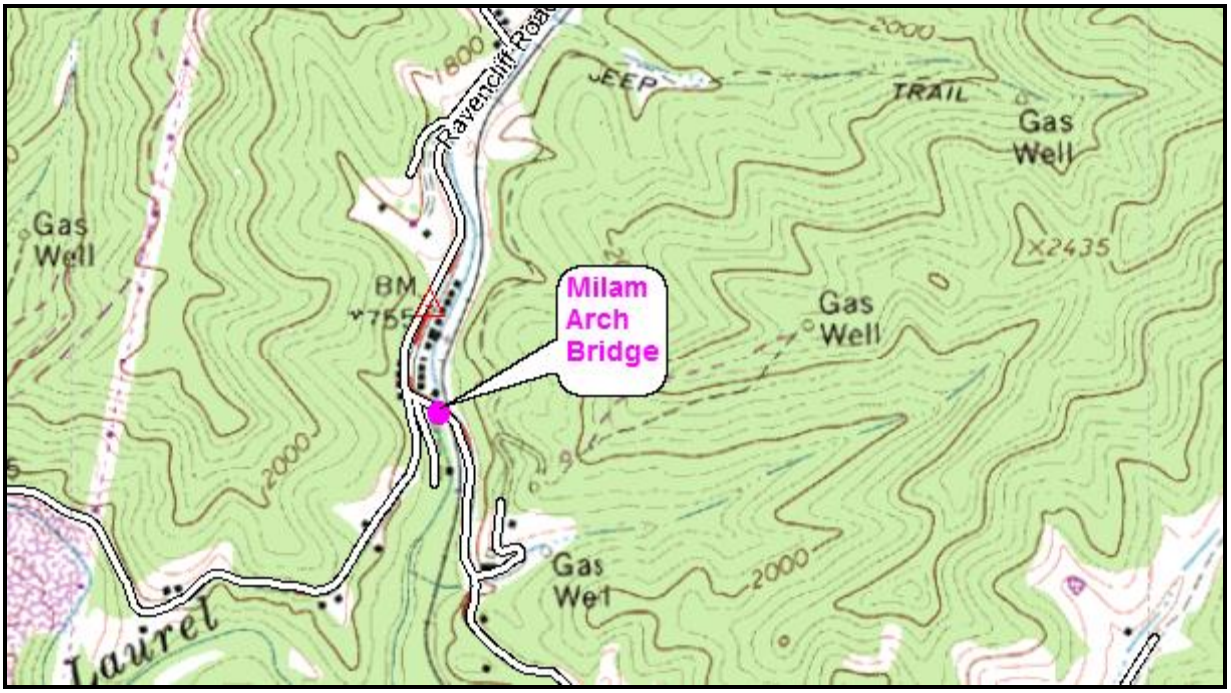
This bridge is not eligible for the National Register under Criterion A as it does not have a significant association with a historic transportation system, program, event, trend, or policy identified through contextual research and survey activities.
This bridge displays an important design innovation or construction technique that represents a variation, evolution, or transition in bridge construction.
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.
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: Milam Arch Bridge **SITE#:** WM-0552

Statement of Significance (cont'd):



USGS 7.5" Topo Map: McGraws, WV Bridge UTM Location: 4171446N, 484420E

Setting: This bridge spans County Route 5 (CO 5) over Laurel Fork waterway in the vicinity of unincorporated Ravencliff, northeastern Wyoming County. Laurel Fork is a tributary of Clear Fork which, in turn, is a tributary of the Guyandotte River. The bridge is about 140 feet from the intersection of CO 1. The bridge is set within a hilly terrain with Ravencliff residential properties to the north along CO 1 and a former volunteer fire dept. property to the south. The intersection of Glen Rogers Branch RR with CO 5 is about 60 feet east of the bridge.

Description: The existing bridge is a single-span reinforced concrete deck arch structure (closed-spandrel elliptical arch) that was designed and built in 1925 by the Concrete Steel Bridge Co. of Clarksburg, WV. There are two full-height reinforced concrete wingwall abutments, each on a reinforced concrete footing. The structure has an earth fill deck and an asphalt wearing surface. The structure has solid concrete parapets/railings (with impressed rectangular motif). The deck includes curbs, but they are presently covered-over with asphalt. There are no sidewalks. At the north (upstream) railing's interior side, at the east end, is a plaque that reads "THE CONCRETE STEEL / BRIDGE CO. / DESIGNERS AND BUILDERS / CLARKSBURG, W. VA." At the south (downstream) railing's interior side, at the west end, is a plaque that reads "1925 / WYOMING COUNTY COURT / GEO. R. STEWART, PRES. / J. A. TOLER, COMR. / E. W. WORRELL, COMR. / DAN W. COOK, CO. CLERK / I. E. BASHAM., CO. ENGR." The bridge has a span length of 50 feet and an overall length (back-to-back of abutments) of 54 feet. Its overall deck width (out-to-out) is 20 feet, 6 inches and its roadway width (between parapets) is 18 feet, 10 inches.

Statement of Significance:

The Milam Arch Bridge spans CO 5 over Laurel Fork, basically at the southern end of the Ravencliff community. In earlier years the area or at least its post office was known as McGraw, so-called due to the residency of the McGraw Family since the late 1800s, the head of which was John Mcgraw, the locales first postmaster. However, long-time community members have recollections of their own or of past others that the area was always known as part of Milam or Ravencliff. The area developed due to nearby lumber, coal and gas industries and today mainly consists of homes dating from ca. 1930 to the present. (Bakic 2018).

The Town of Ravencliff was first platted in 1925, being named by local financier C. H. Mead reportedly due to the prevalence of ravens that nested in the cliffs along the road between his Ravencliff home and Glen Morrison/Sabine, where he had mining interests. Mead was also president and general manager of Ravencliff Development Company which operated successful gas wells in the area and of the Ravencliff Fuel and Supply Co. which supplied gas in Wyoming County (Bakic 2018).

Around 1938 the McGraw PO's name was changed to Ravencliff PO; this post office closed about a couple of years ago. The Pine Grove Baptist Church and the Oak Grove Church of God of Prophecy are long-standing congregations in the community. The area included businesses, such as Scarberry's Store at the CO 1-CO 5 intersection, Lafferty's Store & Gas Station and The Green Pig (beer joint), as well as the local Odd Fellows Hall (Bakic 2018). This bridge is just north of the extant former Scarberry's Store/Apartment building.

By 1910 a lumber railroad track was built through the area, along the east bank of Laurel Fork. This narrow-gauge track was related to the W. M. Ritter Lumber Company mill in Maben. This trackage was removed at some point, possibly around or shortly after the year (1922) that Virginia & Western Railway (V&W) built its standard gauge track on the same alignment from the Virginian Railway (VGN) main line in Maben to the mine at Glen Rogers. The VGN had a lease agreement with V&W from the beginning, then V&W was merged into the VGN system in 1936. A small passenger station was built at Ravencliff around 1927 but was removed shortly after passenger service on the line ended in 1937. VGN was merged into the N&W system at the end of 1959, and then into NS Corp. in 1982. The Glen Rogers Branch has been inactive since 1996 (Bakic 2018).

The Glen Rogers Branch crosses CO 5 just north of Milam Arch Bridge; however, the at-grade road crossing has either been removed or, more likely, covered over with asphalt.

County Route 5. CO 5 and intersecting CO 1 through Ravencliff appear to have existed as more localized roads by the 1880s and likely earlier (USGS 1891). These sections of road were not part of known turnpike routes. There was likely a bridge crossing over Laurel Fork that predated the existing Milam Arch Bridge (blt 1925); however, aside from old maps showing the road extending over Laurel Fork (USGS 1912), research for this report did not find specific information regarding an earlier structure at or near the existing bridge.

It is likely that the construction of the existing Milam Arch Bridge in 1925 was part of an overall CO 5 realignment and grading project, including straightening out sections head of the route with a lot of zig-zagging, such as between Ravencliff and Milam (USGS 1927). This appears to be related to a bond project approved by the county court in May 1925 for road improvement projects in Slab Fork District (*BDT* 1925; *RR* 1925). In the 1925-26 SRC annual report future CO 5 appears to have been part of the Milam-Maben route that was being graded by county/district forces by the end of that fiscal year (WV SRC 1926:160). This grading was completed during the 1928-29 fiscal year (WV SRC 1929:187).

CO 5 and intersecting CO 1 were given their designated route numbers by 1933. At that time CO 5 was a longer route than it is today, being about 14.5 miles long from CO 1 (Ravenscliff) to Mullens. Also, by that time CO 1 was gravel or shale surfaced and CO 5 was mainly a graded earthen route, with sections near Tipple and Saulsville that were gravel or shale surfaced (WV SRC 1933).

In the 1940s SRC Project No. 5593 dealt with asphalt paving the entire CO 5 route. CO 5 from Ravenscliff to Maben was completed by 1948 and the section from Maben to Mullens was done by 1950 (WV SRC 1948:275; 1950:427). Around the mid/late 1950s the section from Maben to Mullens became part of SR 54 (WV SRC 1954, 1957). Sometime between 1970 and 1980 the section from Saulsville to Maben became part of SR 97. Since then, CO 5 has been an approximately 4.5-mile-long route from CO 1 in Ravencliff to SR 97 in Saulsville.

Milam Arch Bridge. Wyoming County commissioned installation of the existing Milam Arch Bridge, contracting with the Concrete Steel Bridge Company of Clarksburg to design and build the span.

"Based in Clarksburg, West Virginia, the Concrete Steel Bridge Company was incorporated in 1914 with Frank Duff McEnteer as president and general manager. His partner was P. M. Harrison, who had previously worked for the York Bridge Company. McEnteer, born in 1882, held a variety of jobs as a draftsman and as an engineer with various construction companies after his gradation [sic; graduation] from Harvard College in 1905. For example, in 1912, McEnteer, as the construction engineer, supervised the construction of Clarksburg's Palace Furniture Company, believed to be the first reinforced concrete building erected in West Virginia. This background obviously influenced McEnteer and his firm specialized in concrete bridges in the 50 to 100 foot range. However, the firm also built other reinforced concrete structures such as commercial buildings and industrial properties" (Carver: 2008:170-171).

"By 1925, the firm had branch offices in Knoxville, Pittsburgh and Harrisburg (Pennsylvania), Huntington (West Virginia), and a subsidiary company in Florida. The firm diversified in the 1920s and purchased the Builders Supply Company of Clarksburg. By 1930, the company had designed and/or built more than one thousand highway and railroad bridges and numerous buildings in eleven states. Much of the firm's work was in West Virginia, and the company was in all probability the most significant builder of reinforced concrete structures in West Virginia in the early twentieth century" (Carver: 2008:170-171).

"Like many bridge companies, the Great Depression forced the company to close, and in 1931 the Concrete Steel Bridge Company was liquidated. McEnteer then worked for the West Virginia State Road Commission from 1932 until 1940. During World War II, McEnteer worked for a private firm on war contracts in the Middle East. From the end of World War II until his death in 1957, McEnteer worked as a consulting structural engineer, specializing in the design of highway bridges and industrial buildings" (Carver: 2008:170-171).

Research for this report did not find additional information regarding the contract or construction history of this bridge, nor of a prior bridge at or near this location. One resource did claim that, in 1882, there was only one bridge in Wyoming County (*Bible Society Record* 1882 :87); the source did not give the bridge location.

Evaluation

Criterion A. Other than general association with the history of the area, there is no reason to believe that this bridge has an important link with events or trends that have made a significant contribution to the broad patterns of history. This existing bridge, built in 1925, was likely built as an overall road construction project from CO 1 in Ravencliff south to Maben. The roadwork may have been prompted by increased traffic due to successful natural resource industries in the area, a familiar scenario in early 20th-century West Virginia. Although the bridge is basically within the Ravencliff area, the overall integrity of the surrounding community buildings has diminished due to removal and modification and, thus, the bridge is not within a significant historic district. Therefore, this 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 bridge 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 bridge does not meet NRHP Criterion B.

Criterion C. Milam Arch Bridge was previously evaluated for the West Virginia Statewide Historic Bridge Survey (WV Historic Bridge Survey) and was determined eligible for the NRHP under Criterion C (KCI et al. 2013 & 2015).

Per the WV Historic Bridge Survey, a total of 43 concrete arch bridges were attributed to the Concrete Steel Bridge Company. These bridges are distributed amongst 20 counties. Of these, 10 of the Concrete Steel Bridge Company arch bridges – all closed spandrel arch spans - were determined NRHP-eligible. Since the WV Historic Bridge Survey was completed, two of the eligible bridges – Cass Arch (Pocahontas Co.) and Central Station Arch (Doddridge Co.) – have been demolished and replaced. Of the presumed eight existing eligible Concrete Steel Bridge Company arch bridges, two are in Wyoming County – Milam Arch (single arch span) and Clear Fork Arch #3 (which has two arch spans).

This closed-spandrel elliptical arch bridge exhibits an excellent degree of integrity in all aspects as it has not been significantly modified over the years. WVDOH continues to agree with the WV Historic Bridge Survey finding that the Milam Arch Bridge is eligible under NRHP Criterion C. It is eligible under this criterion for its engineering significance as a notable example of a closed spandrel elliptical concrete arch bridge at county and state levels, and for its association with the Concrete Steel Bridge Company of Clarksburg, WV, a bridge designer and builder distinguishable at a state and regional level.

Criterion D. This bridge 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. The potential for information is minimal and, therefore, this bridge does not meet NRHP Criterion D.

* Correspondence was conducted with Preservation Alliance of West Virginia, Wyoming County Commission, Wyoming County Economic Development Authority, Wyoming County Historical Museum, Wyoming County Genealogical Society, National Coal Heritage Area Authority, and Friends of Milam Creek.

Continuation Sheet Date: March 20, 2018

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For Survey:
Milam Arch Bridge Replacement
State Proj #S355-5-0.04
Federal Proj N/A

Field Survey No.: APE B1

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---. *1949-1950 Annual Report, State Road Commission of West Virginia*. Charleston, WV 1950.

---. *General Highway Map, Wyoming County, West Virginia*. 1949, Revised to Jan. 1, 1954.

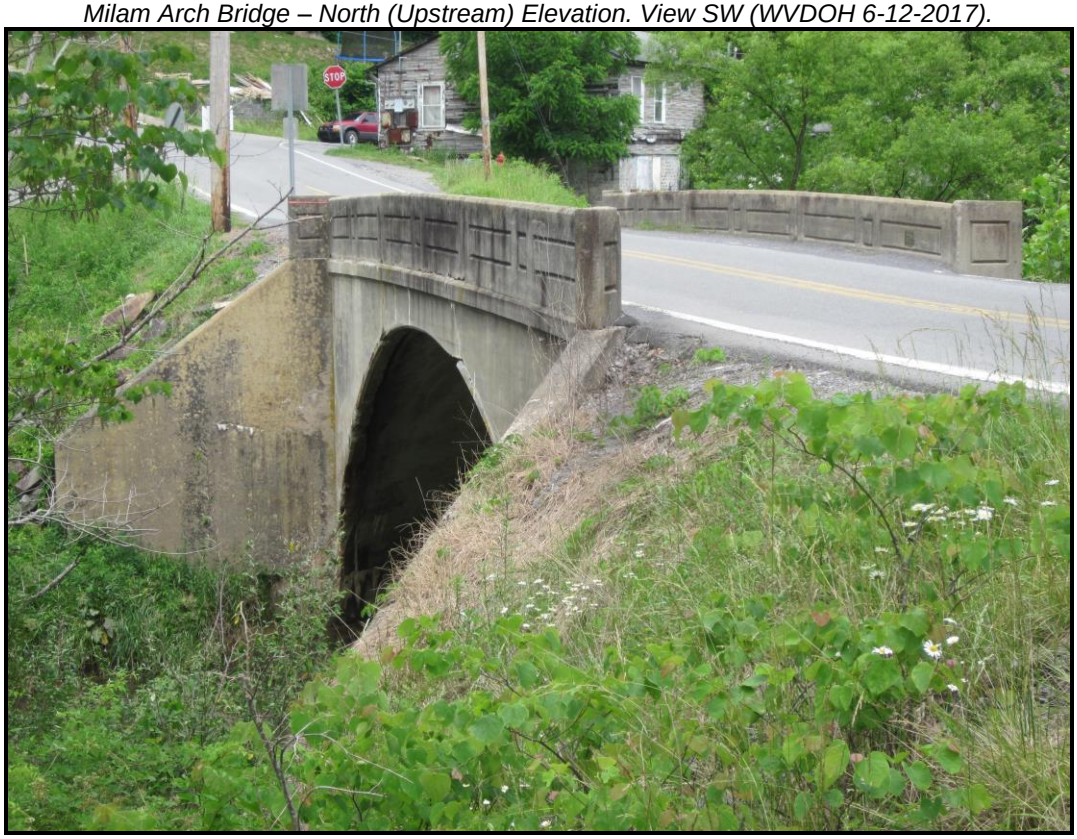
---. *General Highway Map, Wyoming County, West Virginia*. 1949, Revised to Jan. 1957.

---. *Map of Wyoming County, Primary and Secondary Highways*. 1933.

Milam Arch Bridge, built 1925. South (Downstream) Elevation. View NNE (WVDOH 6-12-2017)

Milam Arch Bridge – South (Downstream) Elevation. View NE (WVDOH 6-12-2017).

Milam Arch Bridge – North (Upstream) Elevation. View SW (WVDOH 6-12-2017).



Milam Arch Bridge – South (Downstream) Elevation & East Approach. View NW (WVDOH 6-12-2017).

Milam Arch Bridge – West Approach, taken from County Rt 1.View SE (WVDOH 6-12-2017).

Milam Arch Bridge – North (Upstream) Elevation & East Approach. View Southwest (WVDOH 6-12-2017).

Milam Arch Bridge – East Approach. View NW (WVDOH 6-12-2017).

Milam Arch Bridge – North Parapet Railing. View NW (WVDOH 6-12-2017).

Milam Arch Bridge – Plaque on East end of North Railing. View NNE (WVDOH 6-12-2017).

Milam Arch Bridge – South Parapet Railing. View SW (WVDOH 6-12-2017).

Milam Arch Bridge – Plaque at West End of South Railing. View SW (WVDOH 6-12-2017).

Milam Arch Bridge – South (Downstream) Elevation – Abutment Detail. View NE (WVDOH 6-12-2017).