

HISTORIC AMERICAN ENGINEERING RECORD

LEE CREEK BRIDGE

(Natural Dam Bridge)

HAER NO. AR-24

LOCATION: Spanning Lee's Creek on State Highway 59 approximately 0.2 miles south of Natural Dam road, in the town of Natural Dam, Crawford County, Arkansas.

UTM: 15/3945350/373830
QUAD: Natural Dam

DATE OF CONSTRUCTION: 1934

STYLE: Two-span, Pennsylvania through steel truss bridge.

ENGINEER: The Lee Creek Bridge was designed by the Arkansas Highway and Transportation Department (AHTD) bridge engineering division under the general supervision of N.B. Garver, Chief Bridge Engineer.

BUILDER: The construction contract was awarded to M.E. Gillioz Company, Monett, Missouri.

PRESENT CONDITION AND USE: This bridge is in excellent condition and is currently in vehicular use.

SIGNIFICANCE: The Lee Creek Bridge is one of four historic Pennsylvania through steel truss bridges remaining in Arkansas. This bridge was built as part of a two bridge improvement project over Lee's Creek approximately one mile north of the small community of Natural Dam and was completed in 1934. It is an excellent example of its type and clearly demonstrates the advancements made by the AHTD in steel truss bridge design and technology by the 1930s.

HISTORIAN: Michael Swanda
Survey Coordinator
Arkansas Historic Preservation Program

DATE: August 26, 1988.

STRUCTURAL SYSTEMS

Pennsylvania steel trusses are used in the two identical main spans. These spans have built-up members made from channels, angles, continuous plates, batten plates, and single lacing bars riveted together. I-beams are used for all verticals and some diagonals. Six steel stringer approach spans, with concrete decking, connect to the south main span. The piers are reinforced concrete.

DIMENSIONS

The Lee Creek Bridge is 587 feet long. It contains two main spans, each 140 feet in length, with a vertical clearance height of 14 feet and clear roadway of 22 feet. Each steel stringer approach span is 50 feet long.

SIGNIFICANT EXTERIOR FEATURES

Commemorative plaques on either side of the bridge state "Lee Creek; M.E. Gillioz; Contractor; Arkansas; State Highway Commission; Jas. R. Rhyne, Director, N.B. Garver, Bridge Engineer; 1934; Bridge No. ____".

M.E. GILLIOZ

Crawford County Court and AHTD records show that the contractor for the Lee Creek Bridge was responsible for the removal of the existing bridge at this location. This earlier bridge, type unknown, was let by the county on July 15, 1907, to the Illinois Steel Bridge Company for \$4,600 "for the construction of a Steel Bridge."

Mr. M.E. Gillioz was born in Rolla, Missouri, in 1877. He learned the construction business as a young man working for the Santa Fe Railroad Company and by 1907 had started his own contracting company that moved to Monett, Missouri by 1914. His company was not only concerned with the construction of both concrete and steel truss bridges, but they also built churches, commercial buildings, roads, and dams. His business brought him huge success and he quickly expanded into the local Monett economy with business operations that included the Gillioz Clothing Store, the Gillioz Motor Company, the Gillioz Implement Company, the Gillioz Paint and Body Shop, and the Gillioz Bank and Trust Company. Some of Gillioz's construction projects in the state include the Lake Fort Smith Dam near Mountainburg, Arkansas, and the Current River Bridge at Van Buren, Arkansas.

SOURCES OF INFORMATION

Bridge Division Files, Arkansas Highway and Transportation Department, Little Rock.

Crawford County Court Records, Crawford County Courthouse, Van Buren, Arkansas.

Historic Bridge File, Arkansas Historic Preservation Program, Little Rock.

McClurkan, Burney B. Arkansas' Historic Bridge Inventory, Evaluation Procedures 1987 and Preservation Plan. Manuscript of file, Environmental Division, Arkansas Highway and Transportation Department, Little Rock.

M.E. Gillioz Research Files, Barrey-Lawrence Regional Library, Monett, Missouri.

ADDITIONAL INFORMATION

Shop drawings for the Natural Dam Bridge are filed at the AHTD; Drawing No. 3659, 3660, 3661, 3662, 3663, 3664, 3665, 3671, 3672, 3673, and Standard Drawing No. 2163, 2386, and 2435. AHTD Bridge No. 1811, AHPP Resource No. CW0158.