

Boldman Bridge  
(KY 1384 Suspension Bridge)  
Spanning Levisa Fork  
Pikeville Vic., Kentucky  
Pike County

HAER No. KY-4

HAER  
KY  
98-PIKVI.V,  
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
National Park Service  
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Atlanta, Georgia 30303

HISTORIC AMERICAN ENGINEERING RECORD

BOLDMAN BRIDGE  
(KY 1384 SUSPENSION BRIDGE)

HAER  
KY  
98-PIKVI.V  
1-

Date: ca. 1935

Location: Spanning the Levisa Fork of the Big Sandy River, north of  
Pikeville, Kentucky

Built by: Unknown

Owner: Kentucky Transportation Cabinet

Significance: The Boldman Bridge is a rare surviving example of a  
swinging suspension bridge, which is a distinctive cultural  
feature of Eastern Kentucky. The east tower is original,  
constructed of I-beams and channels with massive concrete  
anchors.

Historian: Gregory D. Rawlings

Transmitted by: Monica E. Hawley, Historian, 1984

The Boldman Bridge in Pike County crosses the Levisa Fork of the Big Sandy River north of Pikeville, near the Floyd County line. This simple "swinging" suspension bridge has been judged eligible to the National Register of Historic Places (9/30/82). The builder and date of construction are unknown but estimates based on similar examples indicate that it was built circa 1935.

On a suspension bridge with towers, the tower is the only member that acts in compression to perform the dead and live load bridge work. The towers support the main cable (a tension member) which passes over the tower and is anchored on each end of the bridge. The deck is supported by tension hangers suspended from the main cables. On large suspension bridges, a stiffening truss is usually placed on or below the deck to evenly distribute moving loads along the length of the bridge. A stiffening truss also serves to stabilize the bridge in high winds.

Suspension bridges are relatively simple structures that use few materials for members and thus allow low transportation and erection costs. In mountainous eastern Kentucky, the lower erection costs and ease of transportation of construction materials led to the distinctive "swinging" bridge for small vehicle and pedestrian crossings. These bridges will support only light loads that "swing" in passage because no stiffening truss is used for the deck. These bridges were once numerous but are rapidly disappearing from our cultural heritage.

The Boldman Bridge is 419 feet in length and 9 feet wide. Bridge traffic is restricted to cars and pick-up trucks, and is restricted to one vehicle at a time. The towers on the Boldman Bridge are constructed of I-beams and channels. The west tower was reconstructed of newer materials with the relocation of US 23. Anchorage of the cables is to the hillside on the west and to massive concrete anchors on the east. The single cables on each side of the deck are parallel twisted wire strands. The deck is connected to the cables via hangers and U-bolts with metal blocks. Hangers are single round rods that are loop welded at the cable end and pass through the floor beams and are bolted to threaded ends. Floor beams are I-beams and the stringers are wood beams. The deck is wood planks.

The "Survey of Truss, Suspension, and Arch Bridges in Kentucky" completed in January, 1982, located seven suspension bridges in the state. Three of five "swinging" suspension bridges are on the National Register of Historic Places. The Boldman Bridge is a good representative example of the swinging bridge, a type that was once numerous but has nearly disappeared. These bridges are a distinctive cultural feature of Eastern Kentucky.