

HISTORIC AMERICAN ENGINEERING RECORD

COVE CREEK SPILLWAY BRIDGE

HAER No. AR-83

LOCATION: Spanning Cove Creek Spillway at State Highway 309 (formerly Paris-Mt. Magazine Road), Corley vicinity, Logan County, Arkansas  
UTM: 15.442736.3899042, Blue Mountain, Arkansas Quad.

AHTD #: 18115

STRUCTURAL TYPE: Reinforced concrete arch faced with stone

DATE OF CONSTRUCTION: 1937

DESIGNER: H.C. Schwebke, Architect

BUILDER: Works Progress Administration (Project #165-63-1644)

OWNER: State of Arkansas

USE: Vehicular bridge

SIGNIFICANCE: Cove Creek Spillway Bridge is a significant artifact of the development of Mount Magazine as a recreation area in 1935-39 and an excellent example of the work of the Works Progress Administration in Arkansas.

HISTORIAN: Researched and written by Lola Bennett, Summer 2005

PROJECT INFORMATION: The Arkansas Historic Bridges Recording Project is part of the Historic American Engineering Record (HAER), a long-range program that documents and interprets historically significant engineering sites and structures in the United States. HAER is administered by the Heritage Documentation Programs Division of the National Park Service, United States Department of the Interior. The Arkansas State Highway and Transportation Department cosponsored and funded this project.

For related documentation, see: HAER No. AR-36, Spring Lake Bridge; HAER No. AR-83, Cove Creek Spillway Bridge; HAER No. AR-84, Cove Creek Bridge.

**Chronology**

- 1819 Botanist Thomas Nuttall describes seeing “a lofty blue ridge” from the Arkansas River
- 1828 “Geographish-Statistische und Historische Chartre von Arkansas” shows Magazine Berg
- 1836 Arkansas achieves statehood
- 1855 First settler on Mount Magazine
- 1882 Mt. Magazine recognized as potential resort
- 1889 America’s first reinforced concrete arch bridge built at San Francisco
- 1900 Skyline Inn erected on the summit of Mt. Magazine
- 1929 U.S. stock market crash; beginning of the Great Depression
- 1932 President Roosevelt promises America a “New Deal”
- 1935 Works Progress Administration created by Executive Order No. 7034
- 1936 Cove Creek Bridge and Cove Creek Tributary Bridge completed  
Work begins on Spring Creek and Cove Creek dams
- 1938 Cove Creek Spillway Bridge completed
- 1938 Mt. Magazine Project transferred to U.S. Forest Service
- 1995 Cove Creek bridges listed on the National Register of Historic Places
- 2005 Cove Creek bridges recorded by the Historic American Engineering Record

## Introduction

On October 29, 1929, the United States stock market crashed, leaving the country in an economic crisis that would last for nearly a decade. Three years later, Franklin Delano Roosevelt was elected president, based on his promise of a “New Deal” to put people back to work and help rebuild the American economy. From 1933 until 1942, the Civilian Conservation Corps (CCC), the Works Progress Administration (WPA) and other New Deal programs focused on public works projects that left a lasting impression on the American landscape.

## Description

Cove Creek Spillway Bridge is a five-span, stone-faced, reinforced concrete deck arch bridge stone masonry piers. The bridge is 119'-6" long and 24' wide overall, with a 21' wide roadway. Each arch springs from a point about 2'-6" above the spillway floor, rises 5'-0" to the crown and spans 20'-0". The masonry piers are 4'-10" thick. The spandrel walls and wing walls are coursed ashlar masonry, and dressed voussoirs outline the arch rings. There is a layer of earth fill above the arches. A 2' concrete parapet has been added along both sides of the roadway, which is paved with asphalt. Presumably, the bridge originally had stone-faced parapets, although no drawings or photographs have been found to confirm this.

## History

At 2,837', Mount Magazine is Arkansas' highest mountain and the highest point, with the exception of the Black Hills in South Dakota, between the Alleghenies and the Rockies. Although there were settler cabins prior to the Civil War and summer homes in the 1880s and 1890s, the mountain's primitive roads and lack of water kept it largely undeveloped through the end of the nineteenth century. In 1900, the Choctaw, Oklahoma & Gulf Railroad established a hotel on the summit. The Skyline Inn, and several other tourist lodgings, prospered in the 1910s and 1920s, but were ultimately doomed by the Great Depression.

In 1935, the Resettlement Administration purchased 110,000 acres on and around Mt. Magazine for a land-use demonstration area, with the goal of converting played-out agricultural land for forestry, grazing and recreation. Developed at a cost of \$1,578,000, Mt. Magazine was the largest of four land-use demonstration projects in Arkansas.<sup>1</sup> Improvements for the Mt. Magazine Land Use Area included a wildlife refuge, game preserve, two man-made lakes, beaches, lodges, cabins, fire towers and 45 miles of roads.

Work began in November 1935 with the construction of roads to Mt. Magazine from Havana, 9 miles to the south, and Paris, 20 miles to the north.<sup>2</sup> The road from Paris to Cove Lake (originally called Paris Lake) was completed in July 1936, including two stone-faced reinforced

---

<sup>1</sup> *Mt. Magazine Rural Record*, 24 October 1935, 6.

<sup>2</sup> *Mt. Magazine Rural Record*, 28 November 1935, 1.

concrete arch bridges across Cove Creek and Cove Creek Tributary.<sup>3</sup> A nearly identical bridge was built near Spring Lake, south of Belleville, at about the same time.<sup>4</sup> A crew of fifty WPA workers began construction of the summit road in April 1936.<sup>5</sup>

With the roads well underway, construction began on a masonry dam at Spring Creek and an earth dam at Cove Creek. The dams were finished in July 1937 and the lakes, respectively covering 82 acres and 175 acres, began to fill. Meanwhile, work was progressing on swimming, boating and lodging facilities surrounding the lakes.

By the end of 1937, the road from Paris to Havana had been finished, except for the section near Cove Lake. The Cove Creek Spillway Bridge was completed in March 1938, shortly after a local reporter observed: "*Workmen are busy this week laying the concrete and stone floor in the spillway and putting the finishing touches on the bridge over the spillway.*"<sup>6</sup>

On April 28, 1938, a crowd of 5,000 people witnessed the dedication of the Mt. Magazine Project.<sup>7</sup> During the summer of 1938, development progressed on the summit of Mt. Magazine, with the construction of a lodge, cabins, picnic and camping facilities, an amphitheater and hiking trails. On August 30, 1938, President Roosevelt officially transferred the project to the U.S. Forest Service.

## **Builder**

The Mt. Magazine project was financed by the U.S. Resettlement Administration (USRA) and employed over 2,500 WPA workers and USRA clients from Logan, Yell and surrounding counties.<sup>8</sup> Project Manager V.D. Hill of Paris, Arkansas, supervised the work. Architect H.C. Schwabke designed the buildings and structures in the "Rustic style," making use of native red cedar and brownstone.

## **Design**

In 1889, Ernest Ransom (1844-1917) designed America's first reinforced concrete arch bridge, the Alvord Lake Bridge, at San Francisco.<sup>9</sup> By reinforcing concrete, which is strong in compression, with steel mesh or rods, builders could improve a structure's tensile strength and use the materials more efficiently.

---

<sup>3</sup> "Mt. Magazine Road Project Progressing," *Booneville Democrat*, 16 July 1936.

<sup>4</sup> See HAER No. AR-36, Spring Lake Bridge.

<sup>5</sup> "Crew Starts Work on Mount Magazine Road," *Booneville Democrat*, 2 April 1936, 1.

<sup>6</sup> "Improvements at Cove Lake to State Soon," *Paris Express*, 10 February 1938.

<sup>7</sup> "Mount Magazine Dedication Held," *Booneville Democrat*, 4 May 1938, 1.

<sup>8</sup> *Mt. Magazine Rural Record*, 7 May 1936, 4.

<sup>9</sup> See HAER No. CA-33, Alvord Lake Bridge.

In the 1930s, reinforced concrete was the material of choice for bridges. This was particularly true during the New Deal era, when hand-built public works projects integrated modern technology with native materials to create permanent structures that were both functional and beautiful.

Cove Creek Spillway Bridge is the largest bridge within the Mt. Magazine Project area. Cove Creek Tributary Bridge (HAER No. AR-75), Cove Creek Bridge (HAER No. AR-83) and the Spring Lake Bridge (HAER No. AR-36) are nearly identical, two-span, stone-faced, reinforced concrete arch bridges.

**Appendix A: Field Photograph**



Perspective view. Field photograph taken by Lola Bennett.

**Sources**

Arkansas Highway and Transportation Department. *Bridge Records: Bridge Nos. 18115, 18116 and 18376.*

Arkansas State Highway Commission and Bureau of Public Roads. "General Highway and Transportation Map: Logan County," 1936 and 1947.

*Booneville Democrat* (Booneville, Arkansas), 1936-38.

Cutler, Phoebe. *The Public Landscape of the New Deal.* New Haven: Yale University Press, 1985.

Green, Garvin. *Mount Magazine: A History.* Paris, Arkansas: Paris Express-Progress, 1980.

Hopkins, Harry L. *Activities of the Works Progress Administration.* Washington, DC: Government Printing Office, 1936.

Johnson, Earle. "Mount Magazine Invites America," *Arkansas Democrat*, 24 April 1938, 3.

*Mt. Magazine Rural Record* (Havana, Arkansas), 1935-38.

*Paris Express* (Paris, Arkansas), 1936-38.

Sharp, Floyd. *Traveling Recovery Road.* Little Rock: Emergency Relief Administration, 1936.

Story, Ken. National Register of Historic Places Registration Form: "Cove Creek Bridge," Logan County, Arkansas, 1995.

Story, Ken. National Register of Historic Places Registration Form: "Cove Creek Tributary Bridge," Logan County, Arkansas, 1995.

Story, Kenneth. National Register of Historic Places Registration Form: "Cove Creek Spillway Dam/Bridge," Logan County, Arkansas, 1993.

United States, Federal Works Agency. *WPA.* Greenwood Publishing Group, 1976.

United States, Federal Emergency Relief Administration. *Final Statistical Report.* Washington, DC: U.S. Government Printing Office, 1942.

"Wonders of Mt. Magazine are Now Accessible," *Paris Express* (Paris, Arkansas), 28 April 1938.

Works Progress Administration. *WPA Records Index.*