

KEBO BROOK BRIDGE

HAER NO. ME-20

Acadia National Park Roads & Bridges
Spanning Kebo Brook on Park Loop Road
Bar Harbor Vicinity
Hancock County
Maine

HAER
ME
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
P.O. Box 37127
Washington, D.C. 20013-7127

HISTORIC AMERICAN ENGINEERING RECORD

KEBO BROOK BRIDGE

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LOCATION: Spanning Kebo Brook on Park Loop Road, 2.1 miles to Maine Route 3, Bar Harbor vicinity, Acadia National Park, Mount Desert Island, Hancock County, Maine
Quad: Bar Harbor, Maine
UTM: 19/561960/4913330

DATE OF CONSTRUCTION: 1938

DESIGN: Bureau of Public Roads, U.S. Department of Agriculture

ENGINEER: Leo Grossman, Associate Highway Engineer, Bureau of Public Roads

CONTRACTOR: B. W. Candage & Son, Seal Harbor, Maine

STRUCTURE TYPE: Stone-faced reinforced concrete filled spandrel arch bridge

FHWA STRUCTURE NO.: 1700-018P

OWNER: Acadia National Park, National Park Service

SIGNIFICANCE: This single arch structure spanning Kebo Brook is typical of the stone-faced bridges employed on the motor roads in the park. The design was chosen to help bridges harmonize with the island's rugged landscape.

PROJECT INFORMATION: Documentation of Kebo Brook Bridge is part of the Acadia National Park Roads and Bridges Recording Project, conducted in 1994-95 by the Historic American Engineering Record

Neil Maher, Historian, 1995

This is one in a series of reports prepared for the Acadia National Park Roads and Bridges Recording Project. HAER No. ME-11, ACADIA NATIONAL PARK ROADS AND BRIDGES, contains an overview history of the park motor road systems.

HISTORY OF KEBO BROOK BRIDGE

The Kebo Brook Bridge was constructed to carry the Kebo Mountain Road segment of the Park Loop Road over Kebo Brook, the watercourse which drains The Gorge between Cadillac and Dorr Mountains. This road section was designed to serve as an approach road to the Jordan Pond/Eagle Lake Motor Road and from there to Cadillac Mountain Road from the town of Bar Harbor, effectively bypassing Maine Route 233, the Eagle Lake Road. The Kebo Brook Road was the first section of the Park Loop Road to be undertaken by a new partnership involving John D. Rockefeller Jr. and his consultants at Olmsted Brothers, the National Park Service, and the Department of Agriculture's Bureau of Public Roads.¹

Prior to August 1936 all the property traversed by the Kebo Brook Road, including the land upon which the Kebo Brook Bridge would be built, was owned personally by Acadia National Park Superintendent George B. Dorr, John D. Rockefeller Jr., and the town of Bar Harbor. The possibility of building a motor road through this area had already been studied by Rockefeller who employed the Walter Kidde construction company of New York City to make detailed surveys. In 1935, the Bureau of Public Roads conducted additional surveys which were necessary before the project could be advertised and the contract awarded. As a result of the BPR investigation, the proposed bridge location across Kebo Brook was changed and approved by Rockefeller, Superintendent Dorr, Frederick Law Olmsted Jr., and National Park Service Chief Landscape Architect Thomas C. Vint.² BPR Associate Highway Engineer Leo Grossman was in overall charge of the project.

On 17 August 1937 the contractor, B. W. Candage & Son of Seal Harbor, Maine, began hauling equipment and material to the bridge-site and excavating the eastern wing wall and barrel

¹H. Eliot Foulds, *Compliance Documentation for the Historic Motor Roads, Acadia National Park, Federal Highways Project #PRA-ACAD-4A10* (Brookline, MA: National Park Service, Olmsted Center for Landscape Preservation, 1993), 42.

²Leo Grossman, Associate Highway Engineer, United States Department of Agriculture, Bureau of Public Roads, "Final Construction Report, 1937-1938, Acadia National Park, Kebo Brook Bridge Project, Hancock County, Maine, Project No. 6A2, Account No. 2956" (Albany, NY: Federal Works Agency, Public Roads Administration, 1939), 4.

foundations. The Candages had earlier been involved in the construction of numerous bridges on the Rockefeller carriage road system on the island. On 10 November, workers began constructing the barrel falsework, after which the dimensioned masonry was placed without cementing. The contractor ceased operations for the winter beginning on 8 December.³

When work recommenced the following spring it was noticed that the amount of settlement of the barrel framework was negligible, only about an eighth of an inch. Work continued on the bridge throughout the summer, with stone being obtained from a park owned quarry approximately 500' off the Bubble Pond Road about three miles from the Kebo Bridge project. The bridge was completed on 2 September 1938.⁴

A 1990 inspection of the Kebo Brook Bridge by the Federal Highway Administration determined the bridge "structurally sound" but in need of rehabilitation work. The bridge safety inspection report recommended an expenditure of \$300 in order to repair erosion on one of the abutments and to remove moderate efflorescence from under the arch.⁵

DESCRIPTION

Spanning Kebo Brook on the Park Loop Road approximately a mile east of its junction with the Paradise Hill Road, the Kebo Brook Bridge is a large reinforced concrete structure faced in grey granite. The bridge is 136' long and 23' wide. The single semi-circular arch has a clear span of 34'6" and a maximum vertical clearance of 17' and is defined by cut stone arch ring stones or voussoirs. Stone-faced parapet walls extend 1' 9" above the deck.⁶ On the bridge itself, shoulders were constructed 5' wide to provide for the future construction of a sidewalk. The bridge is located on a 300' radius curve connecting grades of +0.91 percent and +7.00 percent.⁷ A small parking area at the east end of the bridge provides access to the Kebo Brook Trail, a connector to The Gorge and Dorr Mountain North Ridge trails.

³Ibid., 7.

⁴Ibid., 8.

⁵U.S. Department of Transportation, Federal Highway Administration, "Bridge Safety Inspection Report, Park Loop Road Over Kebo Brook, Acadia National Park, Str. No. 1700-018P, Inspected: June 26, 1990" (Sterling, Virginia: Federal Highway Administration, Eastern District Federal Division, June 26, 1990), 2.

⁶Ibid., 3.

⁷Grossman, 6.

BIBLIOGRAPHY

Foulds, H. Eliot. *Compliance Documentation for the Historic Motor Roads, Acadia National Park, Federal Highways Project #PRA-ACAD-4A10*. Brookline, MA: National Park Service, Olmsted Center for Landscape Preservation, 1993.

Grossman, Leo, Associate Highway Engineer, United States Department of Agriculture, Bureau of Public Roads. "Final Construction Report, 1937-1938, Acadia National Park, Kebo Brook Bridge Project, Hancock County, Maine, Project No. 6A2, Account No. 2956". Albany, NY: Federal Works Agency, Public Roads Administration, 1939.

-----to John D. Rockefeller Jr., 14 February 1939. Rockefeller Archives Center, Offices of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 122 Folder 73.

U.S. Department of Transportation, Federal Highway Administration. "Bridge Safety Inspection Report, Park Loop Road Over Kebo Brook, Acadia National Park, Str. No. 1700-018P, Inspected: June 26, 1990". Sterling, Virginia: Federal Highway Administration, Eastern District Federal Division, 1990.