

BLACKWOODS BRIDGES

Acadia National Park Roads & Bridges

Spanning Park Loop Road at Route 3, near Blackwoods

Otter Creek Vicinity

Hancock County

Maine

HAER NO. ME-15

HAER
ME
5-OTCRE.V,
1-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

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

HISTORIC AMERICAN ENGINEERING RECORD

BLACKWOODS BRIDGE

HAER No. ME-15

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LOCATION: Spanning Park Loop Road on Maine Route 3, 1.9 miles from Route 14, Seal Harbor vicinity, Acadia National Park, Mount Desert Island, Hancock County, Maine
Quad: Seal Harbor, ME
UTM: 19/562010/4906250

DATE OF CONSTRUCTION: 1940

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

ENGINEER: Leo Grossman, Associate Highway Engineer, Public Roads Administration, Structural Engineer

Philip Mabel, Junior Highway Engineer, Public Roads Administration, Resident Structural Engineer

CONTRACTOR: W.H. Hinman, Inc., North Anson, Maine

STRUCTURE TYPE: Stone faced reinforced concrete segmental arch bridge

FHWA STRUCTURE NO.: 1700- 003P

OWNER: Acadia National Park, National Park Service

SIGNIFICANCE: Blackwoods Bridge provides a separated grade crossing which allows the Park Loop Road to traverse underneath Maine Route 3.

PROJECT INFORMATION: Documentation of the Blackwoods 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

HISTORY

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 THE BLACKWOODS BRIDGE

The extension of the Park Loop Road through the Blackwoods area necessitated the construction of an underpass under the Bar Harbor-Seal Harbor road, now Maine Route 3. While Mount Desert Island, on which Acadia National park is located, has an extensive road system, the Park Loop Road was designed as a self-contained closed-loop system separated from local roads by parallel routes or grade separation structures. This was desired in order to separate park visitor travel from commercial and residential traffic on the island. The Blackwoods Bridge was designed to avoid a grade crossing at the public highway.

The bridge was constructed as part of Day Mountain Road Project 9A1 of the Park Loop Road, which also included grading, subgrade reinforcement, installation of drainage structures, and bituminous gravel surfacing of a road connecting the Stanley Brook section and the Otter Cliffs section of the Park Loop Road.¹ The work was carried out under the supervision of the Public Roads Administration, the Depression-era successor to the Bureau of Public Roads. The Bureau of Public Roads became responsible for major road construction and reconstruction projects in the national parks under a 1926 agreement with the National Park Service.

Surveys for the project were begun by the Bureau of Public Roads in March 1937 and conducted until August 1939. Several alternate routes were investigated, and the final location was decided upon by Harold J. Spelman, District Engineer of the Public Roads Administration, Thomas, C. Vint, Chief of the Branch of Plans and Design for the National Park Service, and John D. Rockefeller Jr., who funded much of the construction of the Park Loop Road.²

Bids were opened in the Public Road's Administration's Albany, New York district office on 24 August 1939. Work began on the project on 18 September of the same year, and was completed by

¹Leo Grossman, Associate Highway Engineer, Federal Works Agency, Public Roads Administration, District No. 9, "Final Construction Report, 1939-1941, Acadia National Park, Day Mountain Road, Hancock County, Maine, Project No. 9A1, Account No. 5663" (Albany, New York: Federal Works Agency, Public Roads Administration), 1.

²Ibid., 11.

May 1941. The Public Roads Administration assigned Associate Highway Engineer Leo Grossman, who was resident engineer for most of the road work at Acadia National Park, as supervising engineer. Assistant Highway Engineer Philip Mabel was resident engineer for the bridge construction. Final cost of the structure was \$22,622.93.³

The Blackwoods Bridge is a reinforced concrete rigid frame structure faced in ashlar cut granite. The filled spandrel arch bridge is 93' long and spans the Park Loop Road on a 5° grade rising from southwest to northeast. It carries two lanes of traffic on a 30' wide deck. The bridge has a vertical clearance of 12', and the entire structure is skewed 17°. The single segmental arch has a clear span of 34' 1" and is defined by cut arch ring stones or voussoirs.

A 1991 bridge safety inspection prepared by the Federal Highway Administration reported the bridge as "structurally sound." The report did however recommend repointing the joints in the bridge's stone masonry, and removing efflorescence and spall on the underside of the deck.⁴

³Ibid., 11.

⁴U.S. Department of Transportation, Federal Highway Administration, "Bridge Safety Inspection Report, Maine Route 3 Over Park Loop Road, Acadia National Park, Str. No. 1700-003P" (Sterling, VA: Federal Highway Administration, Eastern District Federal Division, 26 June 1990), 2-4

BIBLIOGRAPHY

Grossman, Leo, Associate Highway Engineer, Federal Works Agency, Public Roads Administration, District No. 9. "Final Construction Report, 1939-1941, Acadia National Park, Day Mountain Road, Hancock County, Maine, Project No. 9A1, Account No. 5663." Albany, New York: Federal Works Agency, Public Roads Administration.

U.S. Department of Transportation, Federal Highway Administration. "Bridge Safety Inspection Report, Maine Route 3 Over Park Loop Road, Acadia National Park, Str. No. 1700-003P." Sterling, VA: Federal Highway Administration, Eastern District Federal Division, 26 June 1990.

HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

HAER
ME
S-OTCREV
1-

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Maine Route 3, spanning Park Loop Road near Blackwoods
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JET LOWE, PHOTOGRAPHER, MAY 1995

- ME-15-1 BLACKWOODS BRIDGE VIEW FROM ROADWAY FACING NE BY 45
 DEGREES
- ME-15-2 ELEVATION FACING NORTH BY 340 DEGREES



HAER No ME.15.1



HABER N. S. ME. 15. 2