

NEW EAGLE LAKE ROAD BRIDGE
Acadia National Park Roads & Bridges
Spanning New Eagle Lake Road on Paradise Hill Road
Bar Harbor Vicinity
Hancock County
Maine

HAER NO. ME-18

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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

NEW EAGLE LAKE ROAD BRIDGE

HAER No. ME-18

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LOCATION:

Spanning New Eagle Lake Road on Paradise Hill Road, 1 mile north of Cadillac Mountain Entrance, Bar Harbor vicinity, Acadia National Park, Mount Desert Island, Hancock County, Maine

Quad: Bar Harbor, Maine
UTM: 19/561300/4915400

DATE OF CONSTRUCTION:

1951

DESIGN:

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

ENGINEER:

George O'Neil, Bureau of Public Roads, Resident Engineer

CONTRACTOR:

Harold MacQuinn Construction Company, Hulls Cove, Maine

STRUCTURE TYPE:

Stone-faced reinforced concrete filled spandrel arch bridge

FHWA STRUCTURE NO.:

1700-010P

OWNER:

Acadia National Park, National Park Service

SIGNIFICANCE:

This structure provides a grade separation between the Paradise Hill Road and the New Eagle Lake Road. The New Eagle Lake Road curves underneath the bridge while the bridge itself crosses the road on a 25° skew, with the result that the arch barrel is angled.

PROJECT INFORMATION:

Documentation of the New Eagle Lake Road 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
Richard Quin, HAER Historian, 1996

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 road systems. In addition, HAER No. ME-56, PARADISE HILL ROAD, contains more specific information on the road on which the structure is located.

HISTORY OF THE NEW EAGLE LAKE ROAD BRIDGE

The New Eagle Lake Road Bridge was constructed to provide a grade separation between the Paradise Hill Road [HAER No. ME-56], which connects the Park Loop Road to Hulls Cove west of Bar Harbor, and New Eagle Lake Road. The Paradise Hill Road, was the last major portion of the Acadia National Park road system to be constructed and allowed visitors to enter the park without having to pass through the congested streets of Bar Harbor. Like many other park bridges, the New Eagle Lake Road Bridge was made possible largely through the generosity of John D. Rockefeller Jr. Although he did not fund the construction of the bridge, Rockefeller had the road route surveyed in the 1930s, donated the necessary land for the right-of-way to the park, and kept up pressures on government officials to fund the road and the bridge to completion.

Before construction of the Paradise Hill Road could begin, the Town of Bar Harbor had to authorize overpasses across the New Eagle Lake Road and Route 233 (Eagle Lake Road). In a September 1939 letter to his friend, former National Park Service Director Horace M. Albright, Rockefeller expressed concerns that business interests in Bar Harbor might attempt to prevent such authorization. Businessmen, he feared, might protest having the principal park entrance relocated away from the village and pressure town officials to deny permission to construct the bridges over the Eagle Lake and New Eagle Lake Roads.¹ In order to bring the matter before the March 1940 town meeting, Rockefeller asked Leo Grossman, Assistant Highway Engineer of the Bureau of Public Roads, to have a plan for the road drawn up for consideration.² Later that year Rockefeller transferred the land constituting the major portion of the road route to the government under the stipulation that the Town of Bar Harbor would relocate the Eagle Lake Road and abandon the New Eagle Lake

¹John D. Rockefeller, Jr. to Horace Albright, 28 September 1939. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor, Box 122, Folder 72.

²Rockefeller to Leo Grossman, Assistant Highway Engineer, Bureau of Public Roads, 4 October 1939. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2 Homes (Seal Harbor), Box 122, Folder 72.

Road. Town officials accepted these conditions and the project was authorized by the National Park Service.³

Although construction of the Paradise Hill Road was completed on 11 October 1941 under Bureau of Public Roads construction administration, funding appropriations for this work did not include sufficient monies to construct the New Eagle Lake Road and Route 233 [HAER No. ME-55] bridges, as well as a third bridge which carried Paradise Hill Road over Duck Brook [HAER ME-30]. Paradise Hill Road, therefore, remained unused. Concerned over the suspension of this project, Rockefeller wrote to National Park Service Director Newton B. Drury in July 1944, urging that once World War II ended the park service complete the Acadia road system in general and the Paradise Hill Road bridges specifically. Drury replied that the Acadia park work program was in good order and that plans for the three overpasses, including the New Eagle Lake Road Bridge, were already prepared. Drury added that while specifications for the bridge could not be drawn up because it would be necessary to include wage and hour rates based on prevailing prices, he assured Rockefeller that suspended public works projects would be reinstated at the conclusion of hostilities.⁴

Rockefeller wrote Albright again in July 1947 to ask him to urge the construction of the three Paradise Hill Road bridges. He remarked that he and Mrs. Rockefeller had just driven over the completed sections of the road but were disappointed that the lack of bridges prevented them from driving over the rest, and the drive had made them "all the keener" to see the bridges completed without much more delay. Albright looked into the matter and wrote back two days later that estimates had been prepared, and that the New Eagle Lake Road Bridge was expected to cost \$76,068. However, he reported that Associate Director A. E. Demaray had written him that, because of the small appropriation for the NPS for 1948, the work at Acadia could not be pursued.⁵

Rockefeller and Albright continued to discuss the situation through the summer. Rockefeller hinted to Albright that he might

³National Park Service, "Acadia National Park Master Plan, 1940" (Richmond, VA: National Park Service, 1940), 4.

⁴Rockefeller to Newton B. Drury, Director, National Park Service, 13 July 1944; Drury to Rockefeller, 17 July 1944. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 123, Folder 75.

⁵Rockefeller to Albright, 14 July 1947; Albright to Rockefeller, 16 July 1947, in Joseph W. Ernst, editor, *Worthwhile Places: Correspondence of John D. Rockefeller, Jr. and Horace M. Albright* (New York: Fordham University Press for Rockefeller Archives Center, 1991), 240-41.

be willing to "make a contribution" to the park to see the bridge project proceed, but Albright suggested the government might be able to move ahead with the project if Congress could be convinced to appropriate the funds. Rockefeller was encouraged in August when Director Drury made a visit to the park and affirmed his interest in having at least one of the bridges built as soon as possible. Unfortunately, Thomas C. Vint, the Chief of the Branch of Plans and Design who was accompanying Drury on the trip, pointed out that the estimates for the cost of the bridges had risen dramatically--perhaps as much as 100 percent. Albright wrote Rockefeller again that month, stating that Drury did not see how any funds could be appropriated to the project as of yet. Rockefeller wrote back asking whether or not it might help the project go ahead if he were to offer to match federal expenditures, but Albright urged him to wait, as Drury was working on getting funds released.⁶

In September, Director Drury wrote Rockefeller that if the National Park Service received its requested appropriation, construction of the three bridges would begin as soon as the funds were released on 1 July 1948.⁷ The park service estimated that the construction of the Route 233 Bridge and the New Eagle Lake Road Bridge would cost approximately \$152,000. The funds were subsequently released and the contract for the two bridges was awarded to Harold MacQuinn of Hulls Cove, who employed more than fifty men on the project. George O'Neil of the Bureau of Public Roads was resident engineer.⁸

Drury notified Rockefeller in January 1951 that the New Eagle Lake Road Bridge was finally under construction. He informed Rockefeller that although cold weather had resulted in a suspension of work during the winter months, both overpasses were 49 percent completed. Drury added that he thought prior difficulties in obtaining the structural steel needed to reinforce the bridges had been overcome and anticipated no further problems.⁹

⁶Rockefeller to Albright, 20 August 1947, in Ernst, 246-49.

⁷Drury to Rockefeller, 9 September 1947. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 123, Folder 77.

⁸"Acadia's Stone Bridges Link Past and Future," *Bar Harbor [ME] Times*, 23 April 1987.

⁹Drury to Rockefeller, 26 January 1951. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 123, Folder 77.

A 1990 inspection of the New Eagle Lake Road Bridge by the Federal Highway Administration determined the bridge "structurally sound" but in need of rehabilitation. The bridge safety inspection report recommended an expenditure of \$8,300 for rehabilitation work, including the repointing of stone masonry, repairing erosion at the abutment of the west wing wall, and repaving the western approach. Both abutments had settled slightly, causing moderate transverse cracks at mid-span on the roadway running across the bridge. Minor cracking with efflorescence at the stone fascia joint was also noted, as were minor cracks over the expansion joints.¹⁰

DESCRIPTION

Spanning New Eagle Lake Road on Paradise Hill Road, 1 mile north of the Cadillac Mountain Entrance to Acadia National Park, the New Eagle Lake Road Bridge is a large stone-faced reinforced concrete structure. The bridge is 129' long and spans the New Eagle Lake Road on a single semicircular arch with a clear span of 30'10" and a vertical height of 18'. The structure carries the two-lane Park Loop Road on a 22' 4"-wide roadbed. The New Eagle Lake Road curves underneath the bridge while the bridge itself crosses the road on a 25° skew, with the result that the arch barrel is angled. The reinforced concrete filled spandrel arch structure is faced in grey granite, and the arch is defined by cut ring stones or voussoirs. Stone-faced parapet walls extend 1' 11" above the deck.¹¹

Stone used in the masonry facing, on the parapets, and the wing walls, is ashlar cut native pink granite. The arch rises less than 3' from the spring line. Slender arch radiating voussoirs define the curve of the arch. The intrados of the arch barrel is also faced in granite.

¹⁰U.S. Department of Transportation, Federal Highway Administration. "Bridge Safety Inspection Report, Paradise Hill Road Over NPS Route 100, Acadia National Park, Str. No. 1700-010P, Inspected: June 26, 1990." (Sterling, VA: Federal Highway Administration, Eastern District Federal Division, 1990), 2.

¹¹Ibid., 3.

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Acadia National Park Roads and Bridges

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JET LOWE, PHOTOGRAPHER, SEPTEMBER 1994

ME-18-1	SE ELEVATION FACING NW
ME-18-2	FACING N, OBLIQUE VIEW
ME-18-3	ROADWAY VIEW FACING SOUTH



MAEC N. ME. 18.1

HAER No. A 61



HAER No. ME. 18.2

Lowe A 163
HAER



HAER N. ME 18.3