

WALDO-HANCOCK BRIDGE
Spanning Penobscot River at U.S. Route 1
Bucksport Vicinity
Hancock County
Maine

HAER NO. ME-65

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
1849 C Street N.W.
Washington, D.C. 20240

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Location: Spanning the Penobscot River. Carries Route 1 between Prospect, Waldo County and Verona Island near Bucksport, Hancock County, Maine.

Date of construction: 1931; opened to traffic November 16, 1931.

Designer/Fabricator: David B. Steinman, Robinson and Steinman, designer; American Bridge Company (superstructure) and Merritt-Chapman & Scott Corp. (substructure), fabricators.

Present Owner: Maine State Department of Transportation (Bridge No. 2973)

Present Use: Vehicular bridge

Significance: The Waldo-Hancock Bridge was the first long-span suspension bridge erected in Maine, as well as the first permanent bridge across the Penobscot below Bangor.

Technologically, the Waldo-Hancock Bridge represents a number of firsts. It was one of the first two bridges in the U.S. (along with the St. Johns Bridge in Portland, Oregon, completed in June, 1931) to employ Robinson and Steinman's prestressed twisted wire strand cables, which were first used on the 1929 Grand Mère Bridge over the St. Maurice River in Quebec. The prefabrication and prestressing of the cables decreased the number of field adjustments required, saving considerable time, effort, and money. As an additional experiment in efficiency, the Waldo-Hancock cables were marked prior to construction, ensuring proper setting. This method had never been used before and proved successful in this instance. These innovations, invented and pioneered by Steinman, were a significant step forward for all builders of suspension bridges.

The Waldo-Hancock was also the first bridge to make use of the Vierendeel truss in its two towers, giving it an effect that Steinman called "artistic, emphasizing horizontal and vertical lines." This attractive and effective truss design was later used in a number of important bridges, including the Triborough and Golden Gate bridges.

The Waldo-Hancock Bridge was noted at the time for its economy of design and construction. It cost far less than had been appropriated by the State Highway Commission, which enabled the construction of a second

bridge between Verona Island and Bucksport. As part of U.S. Route 1, it remains in active use today, nearly 70 years after its completion..

Specifications:

2040' long with a clear span of 800' between towers. One span of 800', two of 350' each, 20' roadway with 2 3-1/2' sidewalks, stiffening trusses 9' deep, each cable 9-5/8" in diameter consisting of 37 strands of 37 wires. Deck is 135' above water level to allow passage of large ships. Total cost: less than \$850,000.

Historian:

Katherine Larson Farnham, HAER Historian, November 1999

Sources:

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