Quantuck Canal Bridge
(Beach Lane Bridge)
Beach Lane, spanning Quantuck Canal
Westhampton Beach
Suffolk County
New York

HAER NO. NY -182

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Martin Stupich, photographer, August 27, 1987

NY-182-1 GENERAL VIEW, EAST SIDE FROM NORTH BANK
NY-182-2 GENERAL VIEW, FROM DECK TO NORTH
NY-182-3 DETAIL, EAST SIDE, VIEW FROM DECK, FEATURING CONTROL TOWER



Dimensions:

Precast, reinforced concrete piles, 35 feet long and 15 Inches square, support the pier foundations. Bascule span piers are pile bents with steel cross beams. Approach span pile bent plers carry interior concrete girders and false arch fascia girders supporting concrete deck slab. Approach spans have concrete balustrades. Each bascule leaf has two main girders, three floor beams, and five I beam stringers.

Bridge length is 164 feet. Bascule span is 64 feet 6 inches center-to-center of main trunnions. On both sides of the bascule span are two approach spans, each individual span 20 feet long. Bridge has an out-to-out width of 38 feet, a clear roadway of 30 feet, and a deck area of 6,200 square feet. Each leaf has a deck surface 26 feet long and bridge has a horizontal clearance between bascule pier fenders of 50 feet 4 inches. A 5 foot 6 inch wide pedestrian sidewalk is on one side of the bridge and a narrower 1 foot 6 inch walkway on the other side. A tower is located at each corner of the double leaf bascule span, two towers for machinery and two for operating control equipment. Operators towers are 10 feet 8 inches by 14 feet 4 inches. Machinery room towers have an external dimension of 15 feet 9 inches by 14 feet 4 inches. Towers are reinforced concrete with a facade of stone blocks three inches thick and 2 feet, 4 inches high. All steel reinforcing rods are of the "deformed" type.

Each bascule leaf is 32 feet 3 inches from the center line of the trunnion to the end of the leaf. Riveted steel plates form the maln bascule girders, two per leaf. Bascule girders range in height from 2 feet 4 inches to 6 feet. Each leaf has three 33 inch high riveted plate floor beams spaced 13 feet 6 inches center-to-center and a single trunnion counterweight girder. Main trunnion shaft is 9 inches in diameter. Trunnion plers are each 4 feet 6 inches wide. Segmental trunnion shaft gear rack has a radius of 6 feet 3 inches. Counterweights are not of identical weight. Northern counterweight uses 1243.91 cublc feet of concrete to produce a 205,708 pound counterweight. South counterweight welghts 215,314 pounds and uses 1302.64 cubic feet of concrete. Five 15 inch rolled steel I beams are used as floor stringers. Both spans have diagonal lower lateral bracing. Bascule leaves open to a 75 degree angle.

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Significant Ex-
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    terior Features: Approach spans have false arch fascia girders and concrete
                balustrades. Tower "A," the operator's tower, has a glass.
                    enclosed control room with an aluminum roof. The most
                    aesthetically and historically significant feature of the
                    bridge is the bas-relief frieze below control room windows.
                    Frieze depicts an early Euro-American settler with a horse
                    and plow, a seaman harpooning a whale, coast watchers
                    signaling a schooner, and an American Indian hunting. All
                    four scenes are highly stylized, Art Deco images from Long
                    Island history.
    Major Alterations and Additions:

Originally bridge had a creosoted plank sub-surface with a surface of asphalt plank blocks, 8 inches wide and 1-1/2 inches thick.

Additional
Information:
This bridge replaced a center pier swing bridge originally at this site. Bascule span operated by two Westinghouse Electric and Manufacturing Coḿpany three phase, 60 cycle, 220 volt alternating current lift motors, each with five horsepower and 863 rpm at full load. Each bascule leaf has one motor mounted solenoid brake and one floor mounted emergency solenoid brake as well as a two horsepower lock gear motor.

Project
Information:
The documentation of the Quantuck Canal Bridge was prepared by the Historic American Engineering Record (HAER), National Park Service, during the summer of 1987 for the New York State Historic Bridges Recording Project. This project was sponsored by the New York State Department of Transportation and under the supervision of Eric DeLony, Chief \& Principal Architect, HAER. This report was written by Andrew Cole and Charles Scott. When citing this report, please credit the Historic American Engineering Record and the authors.

## BIBLIOGRAPHY

Drawings, "Proposed Plan and Elevation for Beach Lane Bridge," Suffolk County Superintendent of Highways, March 7, 1935.

Gibb, James G. Cultural Resource Management Survey. PIN 0754.23, Quantuck Canal Bridge. Albany, N.Y.: New York State Museum, 1986.

New York State Department of Transportation, Bridge Inventory Files, 3300630, Region 10, Hauppauge, New York.

Strauss Trunnion Bascule Bridge over Quogue Ganal, February 15, 1935, Drawings File 1667.

