RAINBOW BRIDGE
(Port Arthur-Orange Bridge)
Texas Historic Bridges Recording Project
Spanning Neches River at State Route 87
Port Arthur
Jefferson County
Texas

HAER No. TX-43

BLACK AND WHITE PHOTOGRAPHY

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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HISTORIC AMERICAN ENGINEERING RECORD

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Location:	Spanning Neches River at State Route 87, between Port Arthur, Jefferson County, and Bridge City, Orange County, Texas. UTM: 15/415940/3316740 USGS: West of Greens Bayou, Texas, quadrangle (1993).
Date of Construction:	1936-1938.
Designer:	George G. Wickline, preliminary design and engineering supervision; Ash, Howard, Needles, and Tammen (New York, New York, and Kansas City, Missouri), consulting engineers.
Builder:	Taylor-Fichter Steel Construction Company (New York, New York), superstructure; Union Bridge and Construction Company (Kansas City, Missouri), substructure.
Present Owner:	Texas Department of Transportation and Jefferson County.
Present Use:	Vehicular bridge.
Significance:	The Rainbow Bridge, with its vertical clearance of 176'-0", became the tallest bridge in the southern United States and one of the tallest in the world upon its completion. Its height was needed to allow for the passage of ocean-going cargo ships and tankers, for it spans the Neches River linking the busy port of Beaumont with the Gulf of Mexico. The bridge features a 680'-0" central cantilevered span, one of the longest in Texas, and an overall length of 7,752'-0". The sixty-three-span structure includes a continuous deck girder, prestressed concrete girder approach spans, deck truss spans, continuous through truss spans, and a three-span cantilever unit. The construction of the bridge required innovative engineering methods not only because of its height but also because it had to be built to withstand hurricane-force winds. Triangular steel piers with V-shaped bracing on concrete pedestals support the deck

girder spans, and were designed specifically to transfer up to 150-mile-per-hour winds to the foundations. It was built by the Public Works Administration (PWA), the Texas Highway Department, and Jefferson County for $2.75 million in 1938 — the most costly Texas program affiliated with the PWA. This joint venture marked an early example of cooperative government planning and funding for a Texas bridge. State Bridge Engineer George Wickline left his position in Austin to oversee the bridge's construction. Originally called the Port Arthur-Orange Bridge after the two largest towns it connected, the name was officially changed to Rainbow Bridge in 1957. Reportedly 30,000 people attended the dedication festivities held on September 8, 1938, which included a speech from Governor James V. Allred. In 1991, the Veterans Memorial Bridge, a four-lane cable-stayed suspension bridge, opened adjacent to the Rainbow Bridge to serve northbound traffic, thereby lessening the load on the Rainbow Bridge. In 1992, the state highway department closed the Rainbow Bridge to replace twenty-four concrete girder approach spans with prestressed concrete beams, to straighten some truss members, and to widen the deck. The structure was reopened to traffic in the fall of 1998.
Sources: "Port Arthur-Orange Bridge," National Register of Historic Places Registration Form, 1996, U.S. Department of the Interior, National Park Service, Washington, D.C.; T. Lindsay Baker, *Building the Lone Star State: An Illustrated Guide to Historic Sites* (College Station: Texas A&M University Press, 1986), pp. 178-180.

Historian: J. Philip Gruen, August 1996. Revised September 1998.

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