BOUNDARY CHANNEL BRIDGE (NEW)
George Washington Memorial Parkway, spanning Boundary Channel
Washington
District of Columbia

HAER No. DC-43

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERINC RECORD
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I. INTRODUCTION

Location:	George Washington Memorial Parkway milepost 9.84, 1.0 mile from Interstate 395; carries eastbound GWMP over Boundary Channel between Columbia Island, District of Columbia and Arlington County, Virginia.
FHwA Structure No.:	3300-019P.
Date of Construction:	1965.
Type:	Continuous concrete box beam bridge.
Designer:	Bureau of Public Roads with approval from the National Park Service. H.T. Gorschboth, District Engineer for construction. Alfred S. Benner, Resident Engineer for construction.
Contractor:	Newton Asphalt Company, Inc.
Present Owner:	National Capital Region, National Park Service.
Present Use:	Non-commercial vehicular traffic.
Significance:	Built to provide a better traffic connection between the GWMP and Memorial Avenue.
Project Information:	Documentation of the George Washington Memorial Parkway and Clara Barton Parkway was undertaken as a multi-year project by the Historic American Buildings Survey and the Historic American Engineering Record (HABS/HAER), a combined division of the National Park Service, Robert Kapsch, Chief. The project was sponsored by the Park Roads Program of the National Park Service, John Gingles, Deputy Chief, Engineering and Safety Services Division. The Project Supervisor was Sara Amy Leach, HABS Historian. Bridge reports were prepared by Elizabeth M. Nolin (1988); Michael P. Kucher (University of Delaware, 1993); and Jennifer P. Wentzien (University of Washington, 1994). HABS Report No. VA-69 prepared by Timothy Davis (University of Texas) provides an overview history of the entire parkway project. Jack E. Boucher and Jet Lowe produced the large-format photographs. The Washington-based summer 1994 documentation team was headed by landscape architect Tim Mackey (Harvard University, Graduate School of Design).

II. HISTORY

The construction of the New Boundary Channel Bridge served an important functional role for the GWMP by opening up a direct southbound lane for the GWMP and provided direct access to Memorial Bridge from Arlington Cemetery. The bridge completed the relocation of the southbound lane of the GWMP in 1965 with access from Arlington Boulevard and connections to Memorial Avenue and Boundary Channel Drive South. The bridge was part of a Parks and Parkways Project in 1964-1965 together with Project 1A26 (Little River Inlet Bridge (HAER No. DC-39). The bridge is located between Theodore Roosevelt Bridge and Memorial Bridge.

Description

The New Boundary Channel Bridge is a three span continuous concrete box bridge resting on concrete abutments and piers. The center span is 140' and end spans are 105'. The overall length is approximately 394' including the wing walls. The bridge deck consists of two-lane 28' roadway with 5' elevated sidewalks on each side. The overall width of the reinforced concrete deck is 38'. Minimum clearance is 12'-1" at mean low water.

An earth dike was laid to drain the work area. Foundations for the abutments are comprised of spread footings over steel "H" piles. "H" piles (10BP42) are estimated at from 25' to 47' long.[1] Piers are supported on concrete caissons which were driven to refusal in rock. Caissons were driven approximately 37'. Concrete Class "A" with minimum 28 day compressive strength of 3,500 psi was specified. Propane gas heaters were used in cold weather concrete pours. Supporting the bridge deck are two single stem reinforced concrete piers of 5' diameter. The continuous concrete box beam superstructure with a cast in place concrete deck is 38' wide. Exposed portions of piers, girder fascia and recessed portions of abutments were given a rubbed finish. Dimensioned masonry facing for wing walls was installed by Louis Perna and Sons. "Foliage green" paint was used for the structural steel. The surrounding landscape was seeded with Kentucky blue grass, creeping red fescue and Kentucky 31 tall fescue. Poor germination delayed the projects completion.

The work followed BPR Standard Construction Specifications for Roads and Bridges on Federal Highway Projects, FP-61, January 1961. A reference for design was the American Association of State Highway Officials (AASHO) Standard Design Specifications for Highway Bridges, 1961. The design load was a standard AASHO H20-44.

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[1]U.S. Department of Commerce, Bureau of Public Roads, "Bridge over Boundary Channel: General Plan and Elevation Boring Logs and General Notes," April 1964, Bridge Sheet 1 of 12.

III. SOURCES

U.S Department of Commerce, Bureau of Publie Roads. Plans for Proposed Project 1A27. Microfiche reductions of original construction drawings on file at the Bridge Inspection office of the Eastern Federal Lands Highway Division, Federal Highway Administration, Sterling Virginia; also available at National Capital Region Park Headquarters, National Park Serviee, Washington D.C.

U.S. Department of the Interior, Historic American Buildings Survey (HABS), No. VA-69, "George Washington Memorial Parkway," 1994. Prints and Photographs Division, Library of Congress, Washington D.C.