

K Street Bridge
Spanning Rock Creek and Potomac Parkway
Washington
District of Columbia

HAER No. DC-20

HAER
DC
WASH,
603-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U.S. Department of the Interior
Washington, DC 20013-7127

HISTORIC AMERICAN ENGINEERING RECORD
K STREET BRIDGE
HAER No. DC-20

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Location: K Street Bridge spans the Rock Creek and Potomac Parkway and Rock Creek; and connects Water Street and the elevated Whitehurst Freeway, both in Georgetown, to K Street in northwest Washington, D.C.

Date of Construction: 1939-41; altered 1947-49.

Designer and Builder: District of Columbia Highway Department, Street and Bridge Divisions; Harrington & Cortelyou, engineering consultants of Kansas City, Missouri; Louis Justement, architectural consultant; Vincent Schiavi of Wilmington, Delaware, contractor.

Present Owner: Department of Public Works, District of Columbia.

Present Use: Vehicular bridge.

Significance: K Street was the site of the second crossing between Georgetown and Washington, with a bridge built here in 1792. The present Bridge is an important link in the transportation artery that connects K Street in Washington to the Virginia and Maryland suburbs via the Whitehurst Freeway. Though its massive form creates a visual barrier in the midst of the parkway, the stone facing and arcuation represent an attempt to match the other Rock Creek spans. The same team of designers responsible for this bridge produced Massachusetts Avenue Bridge (HAER No. DC-22).

Project Information: The documentation of Rock Creek and Potomac Parkway was undertaken as a two-year pilot project to help establish standards and guidelines for recording the structures and landscape features of park roads and parkways. This project was a joint effort of 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, Safety Services Division. The project supervisor was Sara Amy Leach, HABS historian.

The Washington-based summer 1992 documentation team was headed by landscape architect Robert Harvey (Iowa State University-Department of Landscape Architecture) who served as field supervisor; the landscape architects were Deborah Warshaw (University of Virginia) and Dorota Pape-Siliwonzuk (US/ICOMOS-Poland, Board of Historical Palaces and Gardens Restoration); the architects were Evan Miller (University of Colorado-Boulder), Steven Nose (University of Maryland), and Tony Arcaro (Catholic University). The historians were Tim Davis (University of Texas) and Amy Ross (University of Virginia). Jack E. Boucher made the large-format photographs; Air Survey Corporation of Sterling, Virginia, produced the aerial photography and digital mapping from which the site-plan delineations were made.

History of the Crossing

The contract for the original bridge at K Street was let to Leonard Harbaugh, and the cornerstone of the eastern abutment was laid July 4, 1792.¹ This early bridge, 135' long x 36' wide, consisted of three stone arches. The stone was collected from the construction sites of public buildings in the new city.² The center arch had thirteen voussoirs, with each stone representing one of the original states of the Union. The keystone represented Pennsylvania, the capital of the United States at the time.³

The existing approach to the site for the proposed bridge required that a causeway be built because the K Street axis would have passed through water. The causeway was approximately 80' x 1,300', and formed a portion of what is now Water Street. The only earlier Rock Creek crossing was the bridge at M Street (1788), also the first bridge in the city of Washington.⁴

In 1795, K Street Bridge was found to be unstable, the center arch was taken down, and the bridge was left in ruin. Nothing was erected to replace it until 1869, and this second K Street crossing was made of wood.

A third bridge, built in 1907, cost \$38,000. This through-plate girder type had an additional steel plate girder in the center that divided the two lanes of traffic.⁵ This bridge was considered inadequate after the completion of the parkway increased the volume of traffic passing through the area. Plans for an improved interchange between the parkway and K Street, presented in 1938, necessitated its removal.

Design History

Construction of Rock Creek and Potomac Parkway--completed in 1936--brought about a need for new highway bridges to replace the old spans over the creek in order to provide sufficient vertical and horizontal clearance for vehicles travelling this route. Original bridges had also become obsolete given the increased volume and load of traffic crossing Rock Creek valley as a result of the expanded population northwest of the city. The Commission of Fine Arts (CFA), established in 1910 to advise the government on artistic matters, led the call for bridges erected in the Rock Creek Valley to be of an architectural character befitting their park setting. Connecticut Avenue Bridge (1897-1907), which had set a high standard for aesthetic quality, was cited as the model for parkway-bridge design.⁶

In June 1938, the CFA approved the design for a grade separation between K Street and the Rock Creek and Potomac Parkway that would carry this street over not only Rock Creek, as had the previous structure, but also over the parkway. The CFA requested that the bridge be faced with

¹ Zack Spratt, "Rock Creek's Bridges," Records of the Columbia Historical Society 53-56 (1959): 133.

² Donald Beekman Myer, Bridges and the City of Washington (Washington: U.S. Commission of Fine Arts, 1974; reprint, 1983), 56. Myer quotes Viator's 1864 Washington Sketchbook.

³ Spratt, 134.

⁴ Fred A. Emery, "Washington's Historic Bridges," Records of the Columbia Historical Society 39 (1938): 53.

⁵ Spratt, 134.

⁶ Col. William H. Harts, Memo extracting from the last Annual Report of the Commissioners of the District of Columbia, 5 January 1916. RG66.

granite. An appropriation for such a structure was approved on April 4, 1938.⁷

Construction of the new overpass started as soon as the old bridge was removed in 1939, and it opened in 1941. Plans were drawn by the Street and Bridge Divisions of the District Highway Department with Washingtonian Louis Justement (1891-1968) acting as architectural consultant, and Harrington & Cortelyou, Kansas City, as engineer consultants. Contractor Vincent Schiavi won the project with a bid of \$238,270.⁸ A contemporary source quotes the total cost of the bridge and roadways as \$320,000.⁹

In 1940, the office of the National Capital Parks & Planning Commission (NCP&PC) reached an agreement with the District government on landscape work connected with four major construction projects, each intimately related to parkway improvements, that were under the jurisdiction of NCP&PC and presently being carried out by the District Commissioners. Under the new agreement, the NCP&PC and the District would spend approximately the same amount of money to complete these projects. NCP&PC proposed spending \$6,584 for landscape work in connection with the K Street Bridge. The superintendent of the NCP&PC chastised the District government for going into large projects such as the K Street span without sufficient funds to finish the work. He hoped the agreement worked out in this case would aide future policy on construction in the parks, and improve relations between the NCP&PC and D.C. commissioners.¹⁰ Thus, it became possible to landscape the area around the new bridge.

Less than a decade later, the K Street Bridge was altered to connect with the Whitehurst Freeway, and in doing so it became an important link in the elevated highway that connected K Street in Washington to the suburbs west of Georgetown.¹¹ In its 1941 report, the Department of Highways first considered a proposal for an elevated highway. The director of highways invited the J. E. Greiner Company, a Baltimore-based engineering firm, to explore the possibility of building such an artery. After examining the high traffic volume, the company recommended the elevated freeway.¹²

On December 18, 1941, the CFA gave general approval to the design for the K Street Elevated Highway and its connections with the Francis Scott Key Bridge in Georgetown. The cost was estimated at \$3.4 million.¹³ Plans were drawn in March 1942 with revisions made in 1943 and 1946, but construction was delayed by World War II. The construction drawings were corrected as built on August 5, 1947, and the structure was finished in 1949. The present K Street Bridge continues the route of the Whitehurst Freeway across the parkway and Rock Creek.

⁷ Commission of Fine Arts, Miscellaneous notes, 1938-41. RG66.

⁸ Spratt, 134.

⁹ "\$320,000 K Street Overpass Will Be Opened Thursday," Evening Star, 10 November 1940.

¹⁰ F. F. Gillen, Acting Superintendent, National Capital Parks, Memo re "Roads and Trails Program, 1941," 26 April 1940. RG328.

¹¹ Department of Highways, Washington, D.C., A Pictorial Report on Highway Bridges and Structures in the District of Columbia (Washington, D.C.: Department of Highways, 1948), 84.

¹² Commission of Fine Arts.

¹³ Commission of Fine Arts.

Design and Description

When completed in 1941, the crossing was a semi-cloverleaf with two lower-level drives--one leading north onto the parkway and one south--flanking the center arch, which spanned the parkway. Its overall length was 497'; the bridge width varied due to the laterally projecting drives. The piers of this portion were erected on a superstructure of wood piles. The east and west abutments are concrete.¹⁴

In 1947, this grade separation was altered to incorporate access to the Whitehurst Freeway, and two ramps were added to the sides of the existing structure. The north ramp leads to the freeway; the south ramp carries traffic off the freeway down onto K Street on the east bank of Rock Creek. Additional arched openings were constructed on both the north and south faces of the bridge, through which pass the north and south roadways that lead from the parkway across the creek and onto Water Street in Georgetown pass through these arches. The result was a structure that looks more like a highway segment than a bridge.

Both K Street projects were by the same designers, the team that worked on the Massachusetts Avenue Bridge (HAER No. DC-22), which has an identical random-ashlar facade. K Street and Massachusetts Avenue bridges reflect an attempt by Justement and Harrington & Cortelyou to design structures that harmonized with other Rock Creek valley crossings. However, the complex structure at K Street--with its many ramps and massive quality--is visually more of a barrier along the parkway than are the other arched spans to the north.

The K Street Bridge's rigid-concrete frame is faced with multi-colored gneiss laid in a random ashlar pattern. The arch rings are finished with monochrome voussoir stones. Buttresses, which have a triangular footprint, flank both the main arch that spans the parkway, and the two-tiered arches--one over the creek and the other above it, spanning the ramps to Water Street. The three arches are each 68' across. The total length of the present K Street Bridge is 499', the width is 101'-6".

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¹⁴ District of Columbia-Department of Public Works, Annual Bridge Inspection Report: K Street Bridge, 2 March 1990.

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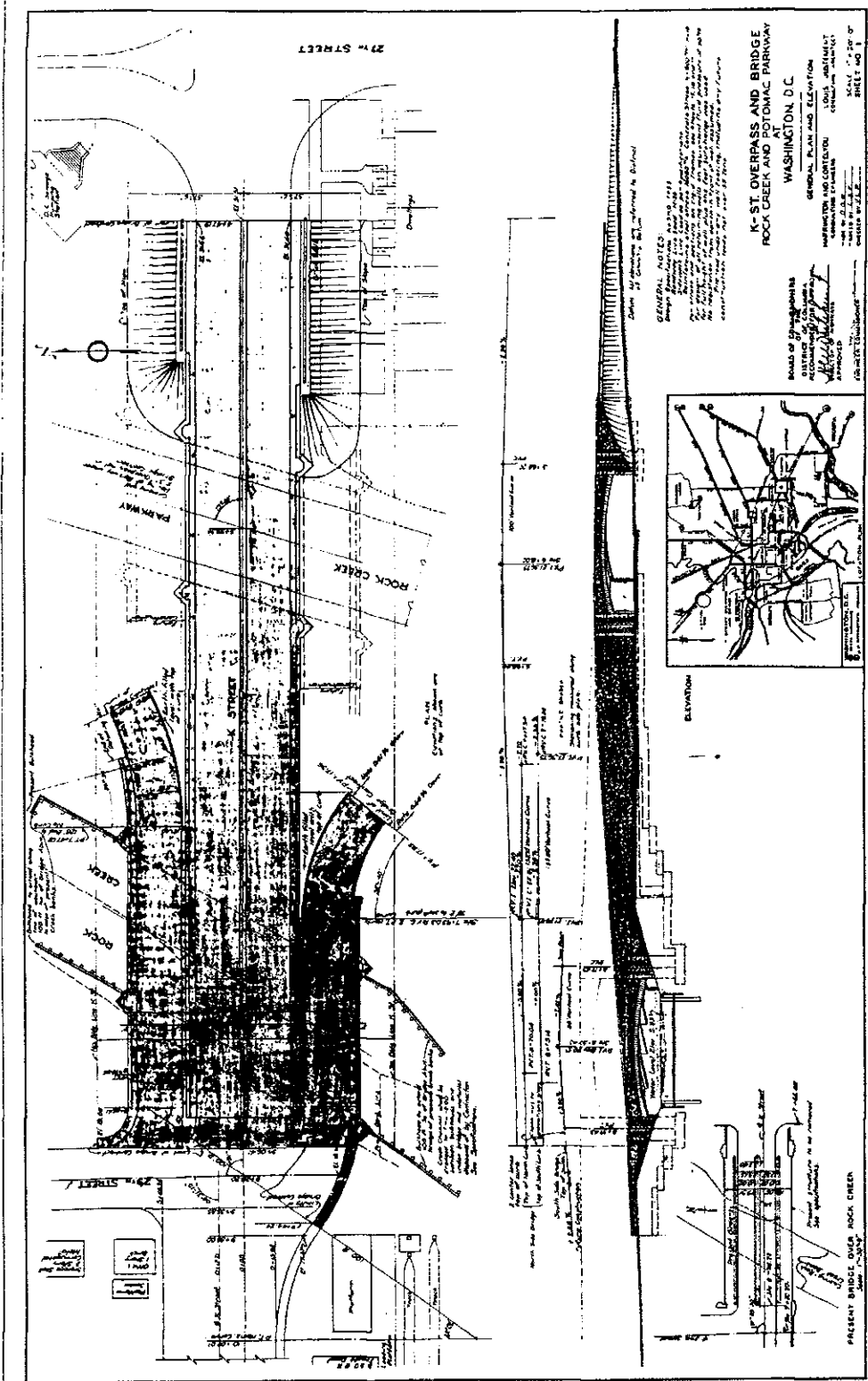
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