Landmarks Preservation Commission
September 11, 1984, Designation List 171
LP-1455

UNIVERSITY HEIGHTS BRIDGE, over the Harlem River from West 207th Street, Borough of Manhattan, to West Fordham Road, Borough of the Bronx. Central swing (double) span and two adjacent approach spans originally Harlem Ship Canal Bridge, Broadway at northern end of Manhattan. Built 1893-95; William H. Burr, consulting engineer, with Alfred P. Boller and George W. Birdsall. Four spans of bridge moved to present location, new piers and additional west approach span constructed, 1905-08; Othniel F. Nichols, chief engineer.

Landmark Site: That portion of the right-of-way of West 207th Street in Manhattan upon which the bridge structures and approaches rest, beginning at Ninth Avenue and extending east to the Harlem River, and that portion of the right-of-way in the Bronx upon which these structures and approaches rest, as far east as an extension of the western curb line of Exterior Street.

Boundaries: The University Heights Bridge landmark is encompassed by a line running eastward along the northern curb line of West 207th Street, Manhattan, a line running eastward which is an extension of the northern curb line of West 207th Street to the point where it meets the western curb line of Exterior Street, the Bronx, south along a line which is an extension of the western curb line of Exterior Street, west along a line which is an extension of the southern curb line of West 207th Street, Manhattan, to its intersection with Ninth Avenue, north along a line which is an extension of the eastern curb line of Ninth Avenue, to the point of beginning.

On September 13, 1983, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the University Heights Bridge and the proposed designation of the related Landmark Site (Item No. 12). The hearing was duly advertised in accordance with the provisions of law.

DESCRIPTION AND ANALYSIS

The University Heights Bridge, a steel truss bridge consisting of a central swing (double) span and three deck truss approach spans, is, in large part, one of the oldest major bridges in New York City, and one of the city's oldest swing-type bridges, a bridge type that was employed in New York City primarily along the Harlem River between the 1870s and 1910. The swing span and two flanking spans were originally constructed in 1893-95, under the direction of consulting engineer William H. Burr, as the Harlem Ship Canal Bridge. In 1905-08, in an unusual and complex bridge flotation operation, these spans were moved to 207th Street to form the University Heights Bridge over the Harlem River. The design, construction, move, and reconstruction represent the collaboration of a highly distinguished group of American engineers. The distinctiveness of the bridge and especially its ornamental ironwork makes the University Heights Bridge one of New York City's most aesthetically designed bridges.

Harlem Ship Canal Bridge

At the northern end of Manhattan island, Broadway was originally known as the old Kingsbridge Road and functioned as the main route from New York City to Albany and Boston. The first bridge here to cross Spuyten Duyvil Creek to the Bronx was

King's Bridge (1693); later, to the east, Farmer's Bridge (1759) was built. As early as 1826 a proposal was made to dredge a navigable channel, incorporating part of Spuyten Duyvil Creek, to connect the Harlem and Hudson Rivers. This project did not come to fruition until the late nineteenth century; work was begun on the Harlem Ship Canal in 1888, and the canal was open to traffic in May 1895. In 1892 the Department of Public Works had been authorized to construct a bridge carrying Broadway over the canal.[1] Because of recently formulated federal bridge standards, the type of bridge that was to be constructed would be a revolving swing span, in order that both masted and mastless craft could clear the bridge. Construction of the four-span Harlem Ship Canal Bridge was begun in April 1893, the bridge was opened to traffic on January 1, 1895, and work was completed in March 1892.[2] The bridge was one in a series of similar steel truss swing-type bridges built alongthe Harlem River at the turn of the century to serve the rapidly expanding population of northern Manhattan and the Bronx. It was completed just prior to the Central (Macombs Dam) Bridge at 155th Street, which was finished in May 1895. These bridges are the oldest extant major bridges in New York City after the Brooklyn Bridge (1867-83, John and Washington Roebling) and Washington Bridge (1886-89, William R. Hutton, chief engineer), both of which are designated New York City Landmarks.

The Harlem Ship Canal Bridge was "designed and built under [the] supervision and direction"[3] of William H. Burr, consulting engineer to the Department of Public Works. Contractor for the bridge was A. McMullen & Co.[4] Burr gave credit (during his absence from New York City) for "some of the main features of the foundation plans" to Alfred P. Boller, then in association with Burr, and to George W. Birdsall, chief engineer of the Department of Public Works.[5] The bridge design was of special interest, as stated by Burr, because "the trusses of the swing-span possess a somewhat different outline than hitherto adopted in American practice, in that the center lines of the top chords exhibit reversed curves. This outline was adopted to obtain a more pleasing appearance than that usually employed."[6] Boller, known for his concern for aesthetics in bridge design, undoubtedly also had a hand in the design of the decorative features of the bridge, such as the ironwork of the railings. Boller had designed the superstructure of the Madison Avenue Bridge (1882-84, replaced in 1907-10) which had identical iron railings.[7] His aesthetic views were expressed as early as 1876 when he had written:

> Possibly to bridges more than to any other class of public works does the Ruskinian axiom (which can not be repeated too often) apply: 'Decorate the construction, but not construct decoration'... The appearance of a roadway-bridge having sidewalks is very much enhanced, and at a very small cost, by neatly-designed railings... a light lattice railing of wrought-iron, with one or more intersections, with or without rosettes, always looking well and harmonizing with the constructive character of a truss... This matter of treating bridge constructions as architectural works, in the true sense of that term, deserves the most thoughtful consideration of engineers and committees, as bridges nearly always form prominent objects of observation in cities and towns, particularly when across large watercourses."[8]

The Harlem Ship Canal Bridge was considered to be particularly attractive. Noted architectural critic Montgomery Schuyler in 1905 thought "the Central [Macombs Dam] and the bridge over the ship canal are highly creditable works, in an artistic as well as in a scientific sense,"[9] and Engineering Magazine in 1909 called it "probably the prettiest of the swing bridges" along the Harlem River.[10]

The Engineers

Three distinguished engineers were responsible for the initial design and construction of the bridge. William Hubert Burr (1851-1934) was one of the most distinguished American engineers of his day, involved in many major public works projects in New York City. American engineering historian Carl Condit credits Burr as being "one of the engineers who helped to raise the level of American building technology to the status of exact science...he played a valuable role in propagating European theory in the United States."[11] Born in Watertown, Connecticut, he received a degree in civil engineering from Rensselaer Polytechnic Institute in 1872. His career began in the construction of wrought-iron bridges for the Phillipsburg Manufacturing Company (1872-74) and in the municipal waterworks of Newark, New Jersey (1874-75). He became a professor at Rensselaer (1875-84), and left to act as assistant to the chief engineer (and was later made general manager) in superintending the design and construction of several major iron and steel bridges for the Phoenix Bridge Company (1884-91), including the Chesapeake & Ohio Railroad Bridge, Cincinnati, Ohio (1886-88), then the world's heaviest truss bridge. Burr spent a year as a professor at Harvard and then moved to New York City in 1893. He became involved in bridge and foundation construction as both consulting engineer and contractor, and at the same time started a long tenure as a professor of civil engineering at Columbia University (1893-1916). It was in his capacity as a consulting engineer that he supervised the construction of the Harlem Ship Canal Bridge (1893-95) for the Department of Public Works. Other projects in New York City with which he was associated included: North (Hudson) River Bridge proposal (1894), waterfront improvement (1894), completion of the Harlem River Speedway (1895-97), design of the City Island Bridge (1897-1900), the 145th Street Bridge (c. 1898), Holland Tunnel (1916 on), Lincoln Tunnel project, George Washington Bridge, and consulting for the Departments of Docks and Public Parks (1895-98) and New York Port Authority (1925 on). Burr's involvement outside of New York City included the Panama Canal (1899-1905), first prize in the design competition for the Memorial Bridge, Potomac River, Washington, D.C. (1900), and New York State Barge Canal (1911-14). Burr was also the author of numerous engineering books, such as The Stresses in Bridge and Roof Trusses (1881) and The Design and Construction of Metallic Bridges (1912, with Myron Falk).

Alfred Pancoast Boller (1840-1912), Burr's associate on the Harlem Ship Canal Bridge, was also a bridge engineer of considerable reputation. Born in Philadelphia, Pennsylvania, he received a civil engineering degree from Rensselaer Polytechnic Institute in 1861, and began his career as an assistant engineer in railroad bridge construction for various companies. He became an agent for the Phoenix Iron Company (1866-70), then vice-president and engineer for the Phillipsburg Manufacturing Company (1871-73, at which time he would have known William Burr). Boller opened a consulting and contracting company in New York City in 1874, and acquired a reputation for expertise on bridge foundations, as well as for artistic accomplishment in his bridge designs. Montgomery Schuyler thought

Boller's bridges "honorably distinguished, among those of his profession, by the evident and generally successful pains taken with repsect to their appearance." His views were set forth in his Practical Treatise of the Construction of Iron Highway Bridges for the Use of Town Committees (1876). As chief engineer, Boller was involved with numerous bridge construction projects including those for the Westside & Yonkers Railroad (1880), Yonkers Rapid Transit Commission (1881), Manhattan Elevated Railroad Company (1882), Albany & Greenbush Bridge Company (1882), and Staten Island Rapid Transit Company (1885). Boller's New York & Northern (later Putnam Division, New York Central) Railroad Bridge, Eighth Avenue over the Harlem River, New York City (1880-81, demolished), was praised by Schuyler. He was also a consulting engineer to the Departments of Parks and Public Works (1880s), and designed the superstructure of the Madison Avenue Bridge (1882-84). The Thames River Bridge, New London, Connecticut (c. 1890), for which Boller was chief engineer, was the longest bridge of its type at the time. He designed the Central (Macombs Dam) Bridge, Harlem River, New York City (1893-95), the central span of which was then the world's heaviest moveable mass, and the New York Central & Hudson River Railroad Bridge, Park Avenue over the Harlem River, New York City (c. 1894-97, demolished), considered to be an especially advanced example of structural engineering. Other bridges designed by Boller included: several alternatives for the proposed Hendrik Hudson Memorial Bridge, Harlem Ship Canal, New York City (c.1905); Central Avenue Bridge, Morris Canal, Newark, New Jersey; Duluth-Superior Bridge, St. Croix River, Minnesota-Wisconsin; and State Bridge, Connecticut River, Saybrook, Connecticut. As a contractor Boller was engaged in construction for the Erie (Bergen County branch) and Pittsburgh & Lake Erie Railroads, the concrete foundation of the Statue of Liberty (1883-84), and the substructure of the Arthur Kill Bridge, Staten Island (1898, demolished). In 1898 Boller formed the engineering consulting firm of Boller & Hodge with Henry M. Hodge. The firm was responsible for the construction of thirty-two bridges and viaducts for Jay Gould's Wabash-Pittsburgh Terminal (later Pittsburgh and West Virginia) Railroad in 1901-04, which included two important cantilever bridges: Wabash Bridge, Monongahela River, Pittsburgh, and Mingo Junction Bridge, Ohio River. The firm also designed the Municipal Bridge, Mississippi River, St. Louis (1910-12), and acted as consulting engineers on the steel frameworks of the Singer Building (1907, demolished), and the Metropolitan Life Insurance Company Building (1909, 1 Madison Avenue), New York City.

George W. Birdsall (c. 1836-1911) spent most of his professional career in service to New York City and in this capacity helped design and construct the Harlem Ship Canal Bridge. He was an assistant engineer from 1872 to 1881, then became a chief engineer, and after 1902 acted as a consulting engineer. He was associated with the construction of the Bronx River water supply and new Croton Aqueduct systems.

WILLIAM H. BURR

ALFRED P. BOLLER

Metal Truss Swing Bridges

The Harlem Ship Canal (University Heights) Bridge is a metal truss bridge, the most common type of bridge employed in the United States during the years between 1850 and 1925. This type of bridge is composed of a combination of metal trusses, each truss made up of pieces of iron or steel connected to form triangles which are joined together. The arrangement of the members determines the specific truss type; three truss forms were particularly popular for American bridges in the nineteenth and early twentieth centuries. The Howe truss, named after Massachusetts millwright William Howe and patented in 1840, became the predominate nineteenth-century truss form for railroad bridges, first in wood and later in iron. The Pratt truss, patented in 1844 by Boston bridge designer Thomas Pratt, later became the standard type at the end of the era of major railroad bridge construction. The Warren truss, patented in 1848 by English engineers James Warren and Theobald W. Monsani, rose in popularity in the late nineteenth century; the steel version apppeared increasingly after the 1890s, and by the 1920s the Warren truss became a dominant bridge form for two decades. The Harlem Ship Canal (University Heights) Bridge employs both Howe and Warren trusses.

The bridge is, as well, a swing-type bridge. A swing span bridge is one of the three types of moveable bridges (the others being vertical lift and bascule or drawbridge), the main span pivoting on a large central pier. Swing spans came into popularity in the United States in the mid-nineteenth century after the construction of such bridges along the Mississippi River. In New York City, this bridge type was built primarily along the Harlem River; the first swing bridges were for the railroads and included one at Second Avenue for the Suburban Rapid Transit Company (1878, demolished) and Boller's New York & Northern Railroad Bridge (1880-81). The first "high-level" iron swing bridge on the Harlem was Boller's Madison Avenue Bridge (1882-84; replaced in 1907-10).[13] The Harlem Ship Canal Bridge spans (incorporated in the University Heights Bridge) and the Central (Macombs Dam) Bridge are the oldest extant swing-type bridges in New York City. After 1910, vertical lift bridges were employed along the Harlem River.

The University Heights Bridge

At the time of the construction of the Harlem Ship Canal Bridge, the Rapid Transit Commission was planning an IRT subway line along Broadway which would eventually require a bridge to carry the trains across the canal. However, the Harlem Ship Canal Bridge had not been designed to accommodate this additional function. A proposal was made to strengthen the bridge and to add an upper deck to carry the transit line. But by 1903 Gustav Lindenthal, himself a noted bridge designer and Commissioner of the Department of Bridges, had suggested that a bridge be constructed at 207th Street to the developing University Heights area of the Bronx. This idea was adopted by the city as an opportunity to both construct a new bridge at Broadway and re-use the Harlem Ship Canal Bridge by moving it to 207th Street. Official authorization was provided by Chapter 423 of the Laws of 1903.

In one of the more intricate bridge flotation operations of its type in the United States, the four spans of the Harlem Ship Canal Bridge were lifted from their piers, floated by pontoon scow, and lowered onto a new receiving central pivot pier, rest piers, and abutments in the new location at 207th Street. This operation lasted from October 1905, to November 1907.[14] Meanwhile, a newly constructed bridge was floated into place at Broadway. The moving of the bridge was accomplished by John B. McDonald, under the direction of the Board of Rapid Transit Commissioners, with George Staples Rice as chief engineer.[15] Rice (1849-1920) had become chief engineer of the New York Rapid Transit Commission in 1904. He had previously been chief engineer of the Boston Rapid Transit Company (1887 on), was deputy chief engineer of the New Croton Aqueduct, and after 1892 was associated with the construction of the New York City subway system.

The central pivot pier on a pneumatic foundation and two rest piers had been constructed between November 1903,and September 1904, by the Foundation & Contracting Company.[16] An additional westernmost approach span was built and general approach work performed by the Snare & Triest Company in 1905.[17] Othniel Foster Nichols, chief engineer for the Department of Bridges, was responsible for the new University Heights Bridge.[18] Nichols (1845-1908) was born in Newport, Long Island, and graduated from Rensselaer Polytechic Institute in 1868. He became assistant engineer with Cooper & Hewitt in 1870, and in 1888 entered a period of public service to New York City as chief engineer of the Brooklyn Elevated Railroad Company (1888-95), assistant engineer in charge of the Williamsburg Bridge (1895-1902), and principal assistant engineer, Department of Bridges (1902-03). Nichols was appointed chief engineer in January 1904.

The bridge in its new location (originally known as the "Fordham Heights Bridge") was officially named the University Heights Bridge in May 1904, and was opened to traffic on January 8, 1908 (work was not actually completed until November 1908).[19] It was noted in 1919 that "the old spans, which have become a part of the University Heights Bridge, had to have considerable changes in order to bring them up to modern requirements, and they have done duty continuously since the formal opening of the bridge."[20]

Description

The University Heights Bridge is a five-span steel structure consisting of a 270-foot "through truss" (the traffic load is carried on the bottom chords) central swing (double) span and two western and one eastern "fixed-deck truss" (the load is carried on the top chords) approach spans. The central span(s) and two flanking spans were originally the Harlem Ship Canal Bridge, while the westernmost approach span was constructed for the new location. The swing span is composed of two pairs of Howe trusses with a central tower (which originally had four ornamental finials), while the deck spans are Warren trusses (the newer span having a somewhat different framing system). The bridge is built mostly of a riveted latticework, with the overhead lateral bracing connecting the trusses of the swing span assuming a particularly ornamental character. The central pivot pier and two rest piers are constructed of concrete faced with coursed granite ashlar. The approach spans are abutted by concrete-filled approach roadways faced with granite ashlar and having pilasters at either end.

At the northeast and southwest corners of the swing span, rising from the rest piers, are two stone shelter houses (built to house electric transformers) which originally had red tile roofs with copper finials but are now covered with asphalt shingles and metal caps. Four sidewalk shelters, flanking the outsides of the rest piers, are each constructed of six cast-iron columns supporting a hipped copper-shingled roof with modillioned copper cornice and copper ridge, finials, and hip rolls. Elliptical wrought-iron arches spring from the columns to the cornices, and the spandrels are ornamented by curvilinear wrought-ironwork. The river sides of the shelters originally contained wood sash windows. Attached to the corner columns nearest the swing span and roadway of each shelter are four security gates (the bottom panels of which were original to the Harlem Ship Canal Bridge) that consist of riveted latticework circles and bars. Both sides of the bridge have ornamental iron railings which, according to the original University Heights Bridge specifications consist of "cast-iron posts, bronze hand rail and wrought-iron panels of the same design as the railing on the three spans from the Ship Canal Bridge, which are to be erected on this site, and of which the new railing will be a continuation."[21] The posts are decorated by inset corner rope motifs and bosses. The bottom half of the wrought-iron panels have a design consisting of squares with circle cut-outs in which are placed pinwheels, while the upper portion of the panels have flowers with stylized spiral foliation.

The bridge is currently painted brown; the original paint colors were black and white, according to the specifications for the University Heights Bridge: an undercoat of red lead and two coats of white lead "tinted to the standard color of the Department of Bridges" were used for all surfaces "except to railings, fascia, lampposts, gates and other ornamental parts of structure, which shall be painted two coats of drop black and boiled linseed oil with sufficient japan to give a permanent and lustrous finish."[22]

The bridge was originally built with cast-iron lampposts. The deck of the bridge (not subject to this designation) has been rehabilitated several times between 1910 and 1980; a remnant of the trolley system which once ran across the bridge (installed in 1910 and removed in 1949) is the freestanding "portal" next

to the east end of the swing span (which held the electric wires for the trolley). Alterations in 1949 to the swing span included replacement of diagonal struts, some rail posts, and curb, sidewalk, and fascia girders. Fence guards were installed next to the railings in 1964.[23]

Conclusion

The University Heights Bridge, which remains in use over the Harlem River, is an interesting and significant piece of engineering. One of New York City's oldest major bridges and oldest extant swing-type bridges, it has a dual construction history which involved a complex and unusual bridge flotation operation. It is the product of the work of a number of the most highly distinguished turn-of-the-century engineers in New York City, and has notable decorative features.

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FOOTNOTES

1. Laws of New York Chapter 232.

2. N.H. Bettigole, Bridge Rehabilitation Project Report: University Heights Bridge Over the Harlem River (New York: N.H. Bettigole 1982), p. 17.

3. "William Hubert Burr," Engineering Record, Building Record and Sanitary Engineer, 49 (January 9, 1904), 59.

4. New York City, Department of Public Works, Annual Report (New York: Martin B. Brown, 1895), p.73.

5. William H. Burr, The Harlem Ship-Canal Bridge (London: Institution of Civil Engineers, 1897), p.16.

6. Burr, pp.12-13.

7. New York City, Department of Public Parks, Minutes and Documents, 1880-1884.

8. Alfred P. Boller, Practical Treatise on the Construction of Iron Highway Bridges (New York: John Wiley & Sons, 1876), pp.83-87.

9. Montgomery Schuyler, "New York Bridges," Architectural Record, 18 (October 1905), 254.

10. T. Kennard Thomson, "The Bridges of New York City," The Engineering Magazine, 37 (September-October 1909), 915.

11. Carl W. Condit, American Building Art: The Nineteenth Century (New York: Oxford University Press, 1960), p.311.

12. Montgomery Schuyler, "Monumental Engineering," Architectural Record, 11 (October 1901), 617.

13. Sharon Reier, The Bridges of New York (New York: Quadrant Press, Inc., 1977), p.78.

14. Horace J. Howe, "Notes on the Replacing of the Superstructure of the Harlem Ship Canal Bridge," Transactions, Paper No. 1143 (New York: American Society of Civil Engineers, 1919).

15. Ibid.

16. New York City, Department of Bridges, Report of the Commissioner of Bridges (New York: Martin B. Brown Co., 1905), p.169.

17. New York City, Department of Bridges, Annual Report (New York: M.B. Brown Printing and Binding Co., 1912), p.95.

18. New York City, Department of Transportation, Drawings of University Heights Bridge.

19. New York City, Department of Transportation, "University Heights Bridge." Four page typed history, n.d.

20. Howe, p.25. Quote by Martin Gay.

21. New York City, Department of Bridges, Specifications for the Construction of The University Heights Bridge and Approaches (New York: Martin B. Brown Press, 1905), pp.51-52.

22. Ibid, p.56.

23. Bettigole, pp.20-23.

FINDINGS AND DESIGNATION

On the basis of a careful consideration of the history, the architecture, and other features of this structure, the Landmarks Preservation Commission finds that the University Heights Bridge has a special character, special historical and aesthetic interest and value as part of the development, heritage and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the University Heights Bridge is a significant work of engineering; that the spans of the original Harlem Ship Canal Bridge, later incorporated into the University Heights Bridge, constitute one of the oldest bridges in New York City and, in particular, one of New York City's oldest extant swing-type bridges, a bridge type that was employed in New York City primarily along the Harlem River between the 1870s and 1910; that the moving of the Harlem Ship Canal Bridge to 207th Street was an unusual and complex bridge flotation operation which allowed the re-use of a notable structure; that the design, construction, move, and reconstruction of this bridge represent the collaboration of a highly distinguished group of American engineers; and that its distinctiveness continues to make the University Heights Bridge one of New York City's most aesthetically designed bridges, with its handsome truss outline and notable ornamental ironwork, steel latticework, and stone and cast-iron and copper shelters.

Accordingly, pursuant to the provisions of Chapter 21 (formerly Chapter 63) of the Charter of the City of New York and Chapter 8-A of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark the University Heights Bridge over the Harlem River, Boroughs of Manhattan and the Bronx, and designates the following as its Landmark Site: that portion of the right-of-way of West 207th Street in Manhattan upon which the bridge structures and approaches rest, beginning at Ninth Avenue and extending east to the Harlem River, and that portion of the right-of-way in the Bronx upon which these structures and approaches rest, as far east as an extension of the western curb line of Exterior Street.

Boundaries:

The University Heights Bridge Landmark is encompassed by a line running eastward along the northern curb line of West 207th Street, Manhattan, a line running eastward which is an extension of the northern curb line of West 207th Street to the point where it meets the western curb line of Exterior Street, the Bronx, south along a line which is an extension of the western curb line of Exterior Street, west along a line which is an extension of the southern curb line of West 207th Street, Manhattan, to its intersection with Ninth Avenue, north along a line which is an extension of the eastern curb line of Ninth Avenue, to the point of beginning.

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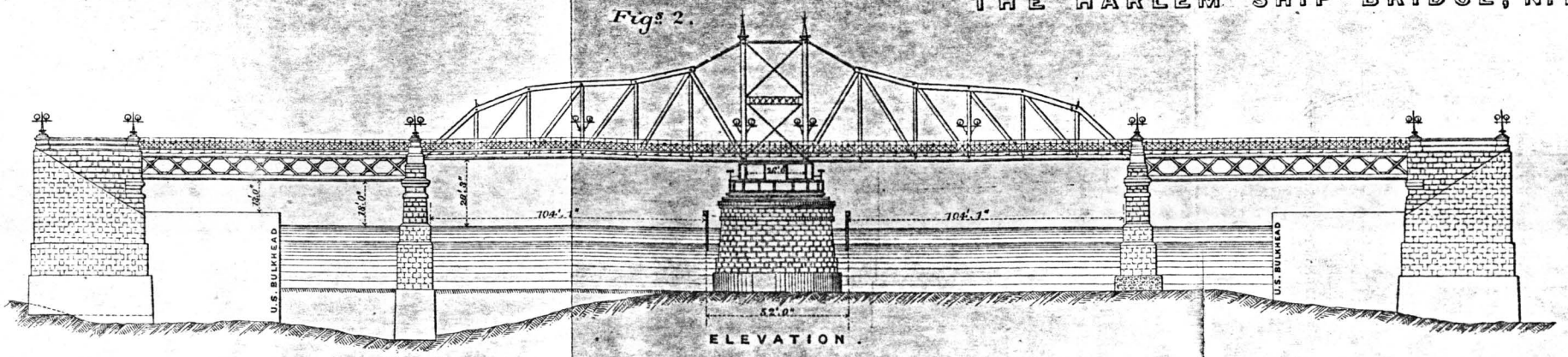
THE HARLEM SHIP-BRIDGE, N.Y.

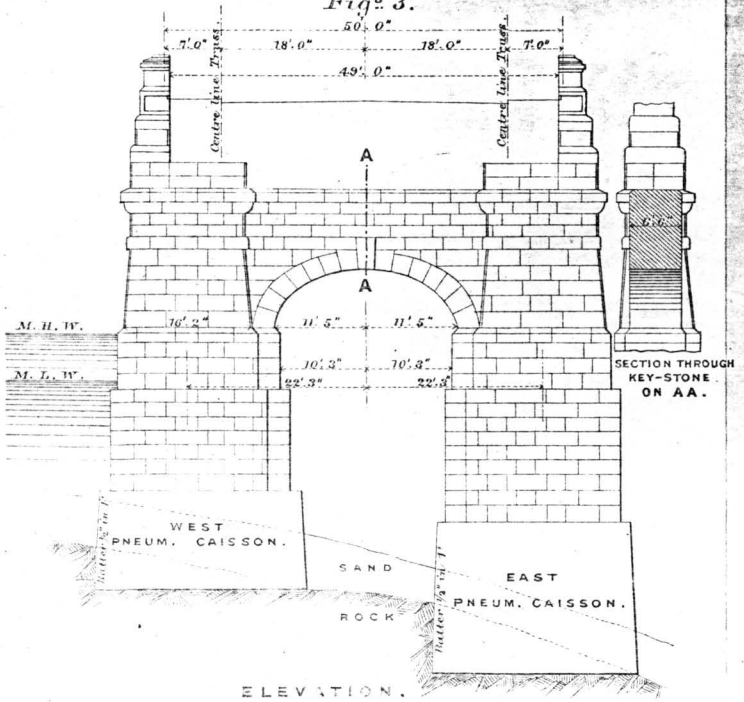
Figs 2.



ELEVATION.

GROUND PLAN.

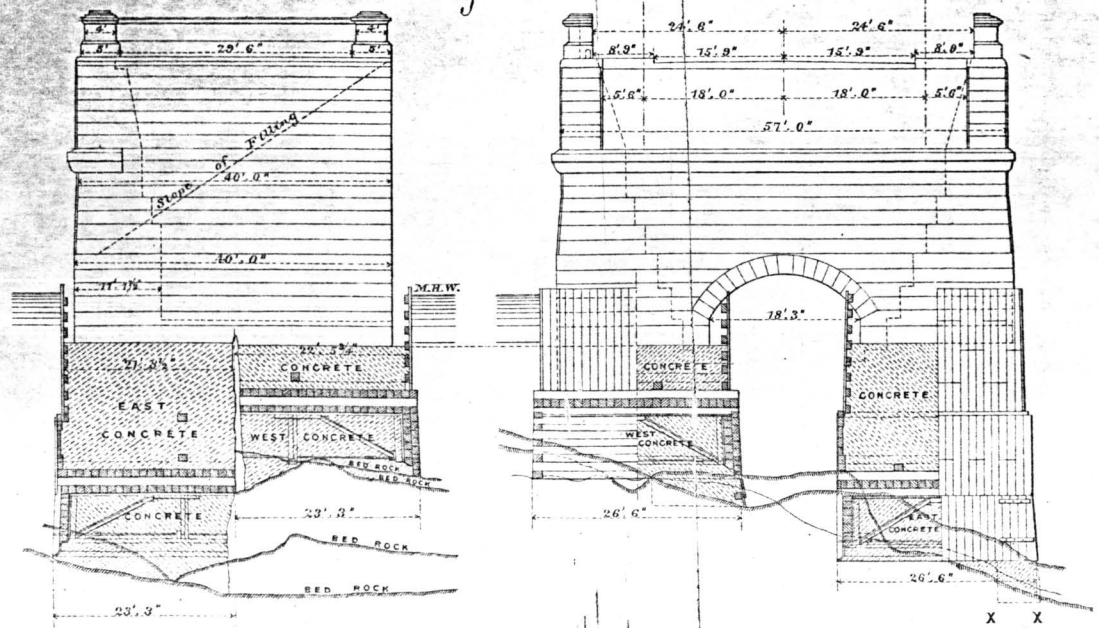
Figs 3.



ELEVATION.
PIER Nº I.

SECTION THROUGH KEY-STONE ON AA.

Figs 4.



SIDE ELEVATION.

FRONT ELEVATION.

NORTH ABUTMENT.

W. H. BLRR

University Heights Bridge, over the Harlem River, Manhattan and the Bronx
William H. Burr, consulting engineer, with Alfred P. Boller and George W. Birdsall
Built: 1893-95

Photo credit: Jeremy Woodoff, Landmarks Preservation Commission

University Heights Bridge, over the Harlem River, Manhattan and the Bronx
William H. Burr, consulting engineer, with Alfred P. Boller and George W. Birdsall
Built: 1893-95

Photo credit: Jeremy Woodoff, Landmarks Preservation Commission

University Heights Bridge, over the Harlem River, Manhattan and the Bronx; detail.
William H. Burr, consulting engineer, with Alfred P. Boller and George W. Birdsall
Built: 1893-95

Photo credit: Jeremy Woodoff, Landmarks Preservation Commission