

# New York City's Bridges: Construction and Maintenance

Science, Industry and Business Library  
The New York Public Library



Abbott, Berenice, 1898-1991 – NYPL Digital Library

2027 bridges link Manhattan to the outer boroughs, the outer boroughs to each other, and New York City to New Jersey. All of this connecting has been going on for 200 years starting with foot bridges such as Highbridge, which joins Washington Heights to the Bronx, and continuing with giants such as the Verrazano-Narrows bridge and the art modern power of the George Washington Bridge.

Documenting the construction and maintenance of these bridges has been part of the mission of The New York Public Library and the following is a snapshot of what can be found in the collections housed at the Science Industry and Business Library (SIBL).

--John Ganly, SIBL, May 2008

## Overview

Responsibility for management of the thousands of bridges is a complicated matter. The principal federal agency charged with monitoring national bridge safety is the National Highway Administration:  
<http://www.fhwa.dot.gov/bridge/>

Major local supervision rests with the New York City. Department of Transportation:  
<http://nyc.gov/html/dot/home.html>

or the Metropolitan Transportation Authority:  
<http://mta.info>

Each of the preceding agencies makes an extensive Question and Answer page relating to bridges available on its website.

National Bridge Standards  
Bridge technology - National Highway Administration;  
<http://www.fhwa.dot.gov/bridge/>

Questions and Answers on the National Bridge Inspection Standards 23 CFR 650 subpart C.  
<http://www.fhwa.dot.gov/bridge/nbis/nbisqa.htm>

Dunker, Kenneth F.; Rabbat, Basile G. "Why America's Bridges Are Crumbling." Scientific American. March 1993. vol.268. pp66-72. Article available at SIBL.

## Bridge Maintenance

Bridges and Tunnels, Annual Condition Report. 1989- . New York, N.Y. Dept. of Transportation.  
Call no. JBM 90-996

Preventive Maintenance Management System for New York City Bridges: Final Report by the Consortium of Civil Engineering Departments of the New York City Colleges and Universities. 1990.  
Call no. JBF 95-651

Sharif, Mo. "Protecting New York City's Bridge Assets." Public Roads, May/June 2005. vol 68 no. 6  
<http://www.tfhr.gov/pubrds/05may/06.htm>

Weiman, Clark. The Age of New York City Infrastructure: Water Supply, Wastewater Disposal, Bridges, Transit, Streets. New York: Cooper Union for the Advancement of Science and Art. {c1991}. Call no. JSF 92-48

## East River Bridges

Brooklyn Bridge.  
[www.nycroads.com/crossings/brooklyn](http://www.nycroads.com/crossings/brooklyn)

Farrington, E.F. Concise Description of the East River Bridge: With Full Details of Construction... 1881.  
Call no. \*XMO-216 (microfiche)  
Roebling, John Augustus. Report of John A.

Roebling to the President and Directors of the New York Bridge Company on the Proposed East River Bridge. 1870.  
Call no. VEK p.v. 1,no.2

Weigold, Marilyn E. Silent Builder: Emily Warren Roebling and the Brooklyn Bridge. 1984. Call no. JFE 85-2226

Manhattan Bridge.  
[www.nycroads.com/crossings/manhattan](http://www.nycroads.com/crossings/manhattan)

New York (N.Y.). Dept. of Bridges. Contract Drawings for Furnishing the Metalwork for the Anchorages and Constructing the Towers, Cables, Suspenders and Suspended Superstructures of the Manhattan Bridge Over the East River Between the Boroughs of Manhattan and Brooklyn. 1905.  
Call no. VEK +++

Queensboro Bridge.  
[www.nycroads.com/crossings/queensboro/](http://www.nycroads.com/crossings/queensboro/)

New York (N.Y.). Dept. of Bridges. Contract Drawings for the Construction of the Steel Superstructure of the Blackwells' Island Bridge (no.4) Over the East River Between the Boroughs of Manhattan and Queens. 1903.  
Call no. VEK +++

Kunz, F. C. Report on the Blackwell's Island Bridge (Queensboro Bridge). 1909. Call no. VEK. Pennsylvania Steel Company of New Jersey. Report...

New York (N.Y.). Borough of Queens. Bridges and Tunnel Committee. Tentative Report of Bridges & Tunnel Committee of the Borough Planning Commission of Queens.  
Call no. \*C p.v. 2020

## Harlem River Bridges

New York City's Harlem River Bridges. The Reauthorization of the Transportation Budget Act for the 21st century.  
<http://www.nyc.gov/html/dot/pdf/harlemrvbdrpt.pdf>

High Bridge (foot bridge).  
[http://www.nycgovparks.org/sub\\_your\\_park/park\\_info\\_pages/park\\_info.php?propID=X120](http://www.nycgovparks.org/sub_your_park/park_info_pages/park_info.php?propID=X120)

Triborough Bridge.  
[www.nycroads.com/crossings/triborough](http://www.nycroads.com/crossings/triborough)

Washington Bridge.  
[www.nycroads.com/crossings/washington-heights](http://www.nycroads.com/crossings/washington-heights)

Hutton, W.R. Washington Bridge over the Harlem River, at 181st Street, New York City. A description of its construction. 1889. Call no. IRH

## Hudson River Bridges

George Washington Bridge.  
<http://www.nycroads.com/crossings/george-washington/>

George Washington Bridge: across the Hudson River at New York, N.Y. (1933?).  
Call no. VEK (George)

Stearns, Edward. W. Constructing the Hudson River Bridge at Fort Lee. 1930.  
Call no. \*C p.v. 2347

## Other Spans

Arthur-Kill Bridge.  
[www.nycroads.com/crossings/arthur-kill](http://www.nycroads.com/crossings/arthur-kill)

Bayonne Bridge.  
[www.nycroads.com/crossings/bayonne](http://www.nycroads.com/crossings/bayonne)

Tappan Zee Bridge. Tappan Zee Bridge construction review. [www.TZBsite.com](http://www.TZBsite.com)

Verrazano-Narrows Bridge.  
[www.MTA.info/bandt/html/veraz.htm](http://www.MTA.info/bandt/html/veraz.htm)

## Bridges Never Built

The Liberty Bridge. The Liberty Bridge: A Petition / to the Board of Estimate and Apportionment of the City of New York from the Brooklyn Federation of Community Centers and Affiliated Organizations. 1926.  
Call no. VEB p.v. 56 no.4

Hudson River Bridges Never Built.  
<http://www.nycroads.com/crossings/hudson-river-bridge/>

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