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Appendix E.3  
New York State Historic Resource Inventory Form  
Staten Island Railway Lift Truss Bridge

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U.S. Department of  
Homeland Security

United States  
Coast Guard



Commander  
First Coast Guard District

One South Street  
Battery Building  
New York, NY 10004

Staff Symbol: dpb  
Phone: 212 668-7165  
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16591/Goethals Bridge  
May 21, 2008

Ms. Ruth L. Pierpont  
Director Field Services Bureau  
NY State Office of Parks, Recreation & Historic Preservation  
Peebles Island P.O. 189  
Waterford, NY 12188-0189

**Re: Goethals Bridge Replacement Section 106 Consultation**

Dear Ms. Pierpont:

Enclosed is an additional Historic Resource Inventory Form (Blue Form) prepared for the Staten Island Railway Lift Truss Bridge over Arthur Kill (1959 Vertical Lift Bridge) that appears to be eligible for listing on the State and National Registers, in compliance with Section 106 of the National Historic Preservation Act (ONLY NATIONAL REGISTER LISTINGS ARE SUBJECT TO NHPA) for the Goethals Bridge Replacement project. This resource was not previously included in the *Historic Resources Survey*, submitted in August 2007.

The *Historic Resources Survey (dated August 2007)*, which includes information regarding the architectural surveys that were completed in New York as well as New Jersey in order to streamline the review process, was originally submitted to the New York State Office of Parks Recreation and Historic Preservation (NYSOPRHP) and the New Jersey Historic Preservation Office (NJHPO) in August 2007 in fulfillment of Section 106 of the National Historic Preservation Act. This report has been reviewed and NYSOPRHP concurred in its November 16, 2007 letter that the architectural survey did not identify any historic properties that are eligible for inclusion in the National Register of Historic Places, other than the Goethals Bridge itself.

The Staten Island Railway Lift Truss Bridge which has both New Jersey SHPO opinion of eligibility and the recommendation for eligibility by the New York City Landmarks Preservation Commission, was not previously included as a New York resource in the *Historic Resources Effects Assessment* submittal. Following a recent consultation with Kathy Howe it appears that the resource meets eligibility criteria; therefore a survey form has been prepared for your review.

For your convenience, the following NYSOPRHP staffs have been involved with the GBR EIS since the beginning of our on-going consultation effort with your agency:

- Doug Mackey and Beth Cumming for issues and affairs on Archaeological Resources, and
- James Warren for issues and affairs on Historic Resources.

Subj: GOETHALS

16591

As noted previously, the U.S. Coast Guard authorizes the Louis Berger Group, Inc./Parsons Brinckerhoff, Inc. Joint Venture, the environmental consultant team assisting the USCG with preparation of the GBR EIS, to discuss technical matters directly with your agency during this consultation. To that effect, please feel to contact directly Deborah Van Steen at 973-407-1260 or Susan Grzybowski at 973-407-1266 for any questions or comments concerning the enclosed report. Otherwise, please call me at 212-668-7021.

Thank you for your assistance in this undertaking and the U.S. Coast Guard looks forward to your continued involvement in the EIS process and associated Section 106 Consultation Process.

Sincerely,



Gary Kassof  
Bridge Program Manager  
First Coast Guard District  
By Direction of the District Commander

Enclosures:

- Historic Resource Inventory Form (Blue Form) prepared for the Staten Island Railway Lift Truss Bridge over Arthur Kill (1959 Vertical Lift Bridge)

Copy:

- Coleen Hopson, Stefan Armington, James Blackmore (PANYNJ)
- Ken Hess, Judith Versenyi, JP Magron, Kris Beadenkopf, Susan Grzybowski, Deborah Van Steen (Berger/PB)

# HISTORIC RESOURCE INVENTORY FORM



NYS OFFICE OF PARKS, RECREATION  
& HISTORIC PRESERVATION  
P.O. BOX 189, WATERFORD, NY 12188  
(518) 237-8643

OFFICE USE ONLY

USN:

## IDENTIFICATION

Property name(if any) Staten Island Railway Lift Truss Bridge over Arthur Kill (1959 Vertical Lift Bridge)

Address or Street Location Arthur Kill between Staten Island, Richmond County, NY and City of Elizabeth, Union County, NJ

County Richmond County Town/City \_\_\_\_\_ Village/Hamlet: \_\_\_\_\_

Owner \_\_\_\_\_ Address \_\_\_\_\_

Original use railroad bridge Current use railroad bridge

Architect/Builder, if known Staten Island Rapid Transit Railway Co Date of construction, if known 1959

Architect/Builder, if known Parsons, Brinckerhoff, Hall & Macdonald, consulting engineers

Architect/Builder, if known Charles F. Vachris, Inc.(contractor for the substructure)

Architect/Builder, if known American Bridge Division of the United States Steel Corporation(contractor for the superstructure)

## DESCRIPTION

Materials -- please check those materials that are visible

Exterior Walls:	<input type="checkbox"/> wood clapboard	<input type="checkbox"/> wood shingle	<input type="checkbox"/> vertical boards	<input type="checkbox"/> plywood	
	<input type="checkbox"/> stone	<input type="checkbox"/> brick	<input type="checkbox"/> poured concrete	<input type="checkbox"/> concrete block	
	<input type="checkbox"/> vinyl siding	<input type="checkbox"/> aluminum siding	<input type="checkbox"/> cement-asbestos	<input checked="" type="checkbox"/> other: _____	
Roof:	<input type="checkbox"/> asphalt, shingle	<input type="checkbox"/> asphalt, roll	<input type="checkbox"/> wood shingle	<input type="checkbox"/> metal	<input type="checkbox"/> slate
Foundation:	<input type="checkbox"/> stone	<input type="checkbox"/> brick	<input type="checkbox"/> poured concrete	<input type="checkbox"/> concrete block	

Other materials and their location: \_\_\_\_\_

Alterations, if known: \_\_\_\_\_ Date: \_\_\_\_\_

Condition:  excellent  good  fair  deteriorated

## Photos

Provide several clear, original photographs of the property proposed for nomination. Submitted views should represent the property as a whole. For buildings or structures, this includes exterior and interior views, general setting, outbuildings and landscape features. Color prints are acceptable for initial submissions.

Please staple one photograph providing a complete view of the structure or property to the front of this sheet. Additional views should be submitted in a separate envelope or stapled to a continuation sheet.

## Maps

Attach a printed or drawn locational map indicating the location of the property in relationship to streets, intersections or other widely recognized features so that the property can be accurately positioned. Show a north arrow. Include a scale or estimate distances where possible.

Prepared by: Deborah Van Steen address The Louis Berger Group, Inc. 412 Mt Kemble Ave, PO Box 1946, Morristown, NJ 07962

Telephone: 973 407 1260 email dvansteen@louisberger.com Date May 2, 2008

PLEASE PROVIDE THE FOLLOWING INFORMATION

IF YOU ARE PREPARING A NATIONAL REGISTER NOMINATION, PLEASE REFER TO THE ATTACHED INSTRUCTIONS

**Narrative Description of Property:** Briefly describe the property and its setting. Include a verbal description of the location (e.g., north side of NY 17, west of Jones Road); a general description of the building, structure or feature including such items as architectural style (if known), number of stories, type and shape of roof (flat, gabled, mansard, shed or other), materials and landscape features. Identify and describe any associated buildings, structures or features on the property, such as garages, silos, privies, pools, gravesites. Identify any known exterior and interior alterations such as additions, replacement windows, aluminum or vinyl siding or changes in plan. Include dates of construction and alteration, if known. Attach additional sheets as needed.

The Staten Island Railway Lift Truss Bridge (1959 Vertical Lift Bridge) carries a single track of the Staten Island Railroad over the Arthur Kill from Elizabeth, Union County New Jersey to Staten Island, Richmond County, New York. This main vertical lift truss is 558 feet long with two 215-foot towers and has 13 plate girder approach spans (Engineering News-Record 1959). The bridge consists of a Pratt truss, described by William Middleton as follows:

Each end of the lift span was supported by 40 wire ropes, each 2¼ inch in diameter, which passed across four 15-foot diameter cast steel sheaves at the top of each tower in counterweights that were made up of steel boxes filled with concrete. Each sheave weighed 23 tons and was carried on two roller bearings. An auxiliary counterweight system compensated for the unbalanced weight of the cablers as the counterweights moved up or down (quoted in Richman 2005: 145).

The bridge is 31 feet above mean water level and has a clearance of 135 feet above mean water level when raised. Each of the towers is supported by four columns with bracing on all sides and space inside for the counterweights. An operator's house is located in one of the towers. Both towers have flashing aerial beacons (Engineering News-Record 1959).

The vertical lift bridge was constructed by the Staten Island Rapid Transit Railway Company in 1959 and replaced the earlier swing bridge. The first bridge at this location was built by the Baltimore and Ohio Railroad (B&O). Erastus Wiman, Canadian-born financier and real estate developer, established the Staten Island Rapid Transit Railroad in response to the development potential he saw on Staten Island. Wiman also oversaw construction of the St. Georg ferry terminal in 1886. However, he believed that a direct connection between the island and New Jersey was necessary. He extended his Staten Island railroad to Howland Hook and set about gaining approval and backing for a bridge over the Arthur Kill. The B&O gained the necessary federal approval, passed by the Senate in 1886. The structure built was an 800-foot swing bridge, 32 feet above low water, with a 500-foot swing span and a central pier. Sources give the construction date of this first bridge as 1890, but according to Reier, the opening ceremony was January 1, 1890. The 1890 swing bridge was the first direct connection with the surrounding communities.

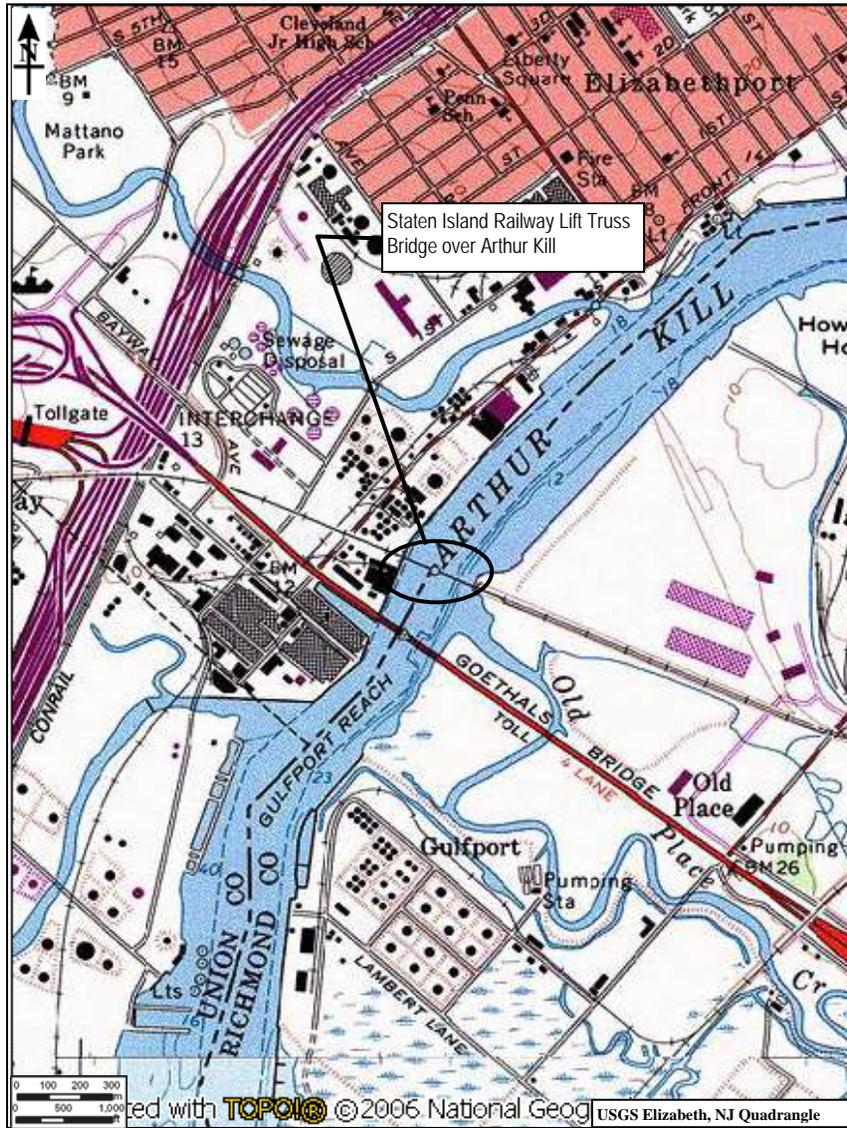
By the 1950s, large ocean going vessels and many smaller ships passed through the kill. The increased traffic through the strait resulted in numerous bridge openings each day. The low height of the bridge and the bridge's pier were an obstruction to traffic on the kill. There was also constant fear that the bridge might become disabled and cripple the industries that depended on the Arthur Kill for their transportation needs. A new bridge, higher above the mean water line was planned and the 1890 swing bridge was replaced by the 1959 vertical lift bridge. The federal government paid for more than 80 percent of the cost and the bridge was constructed 150 feet east of its original location. According to an article at the time of construction, design was a project of The Staten Island Rapid Transit Railway Company, Parsons, Brickerhoff, Hall & Macdonald served as consulting engineers for the bridge. The superstructure of the bridge was fabricated by the American Bridge Company, a division of the United States Steel Corporation, at its Ambridge, Pennsylvania, factory and assembled on Staten Island. After assembly, the 2,000-ton bridge was then floated into position (Richman 2005: 145; Hedefine and Kuesel 1959: 38). The new bridge was better able to accommodate the marine traffic in the Arthur Kill than the previous structure.

The Staten Island Railroad runs between St. George, Staten Island and Cranford Junction, New Jersey. During the twentieth century the railroad was quickly losing revenues to vehicular traffic and reduced its services. By 1971, the Staten Island Rapid Transit Operating Authority, a subsidiary of the Metropolitan Transportation Authority (the Board of Transportation's successor) assumed passenger operations to prevent abandonment of the line. The B&O retain trackage rights for freight traffic on portions of the line. In 1985, the B&O (part of the Chessie System) turned the line over to the Delaware Otsego system, a designated operator of short-line railroads. The railroad's customers included Procter & Gamble (Port Ivory, Staten Island), the Howland Hook Marine Terminal, Laminated Paper Company (at Bayway, New Jersey), and the Federal Plastics Corporation (Cranford, New Jersey). According to the New Jersey Historic Preservation Office (NJHPO), in 1990-1991 the Staten Island Railway Corporation (SIRY), a subsidiary of the Delaware and Ostego

Railroad, sought the approval of the Interstate Commerce Commission to abandon the railroad. In 1994, the New Jersey Department of Transportation acquired the New Jersey section of the Staten Island Railroad and the New York City Economic Development Corporation acquired the Staten Island Section.

**Narrative Description of Significance:** Briefly describe those characteristics by which this property may be considered historically significant. Significance may include, but is not limited to, a structure being an intact representative of an architectural or engineering type or style (e.g., Gothic Revival style cottage, Pratt through-truss bridge); association with historic events or broad patterns of local, state or national history (e.g., a cotton mill from a period of growth in local industry, a seaside cottage representing a locale's history as a resort community, a structure associated with activities of the "underground railroad."); or by association with persons or organizations significant at a local, state or national level. Simply put, why is this property important to you and the community. Attach additional sheets as needed.

The Staten Island Railroad Lift Truss Bridge, which opened in 1890, is significant under Criterion A and C in the areas of engineering and social history. The bridge, which holds the distinction of being the longest span in the world, is a well-preserved example of a proprietary bridge type, exceptional for its length. The bridge, which has a main span length of 558 feet, is the longest by about seven feet, according to Richmond. The al-Firdan Bridge over the Suez Canal in Egypt (1963) and the Cape Cod Canal Railroad Bridge in Massachusetts (1933-1935) are close in length (Richmond 2005:144). Bridges at this crossing have historically provided a physical connection between Staten Island and the neighboring communities. The bridge continues to maintain a vital link between Staten Island and New Jersey. The bridge also has an opinion of eligibility for listing on the State and National Registers from the NJHPO.



PS 290 Manhattan New School, 311 East 82nd Street



Staten Island Railway Lift Truss Bridge over Arthur Kill View Southwest (Source HAER, Jet Lowe 1991)



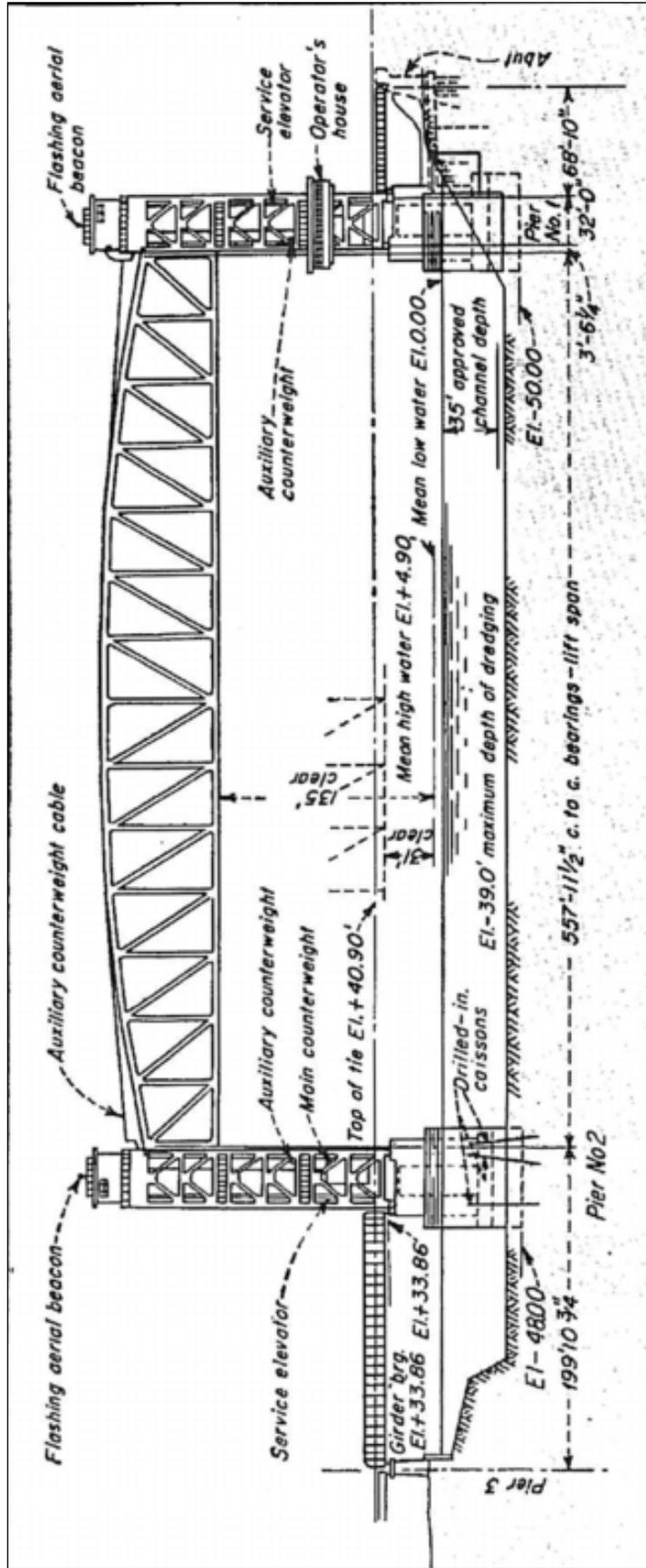
Staten Island Railway Lift Truss Bridge over Arthur Kill View East



Staten Island Railroad Approach and Vertical Lift Bridge over Arthur Kill View East



Staten Island Railroad Approach and Vertical Lift Bridge over Arthur Kill View East (Source AKRF, 1994)



General Design Features; Source Engineering News-Record June 11, 1959