CHAPTER EVENTS

TOUR OF THE STEAMSHIP LILAC

Pier 40 (North side), Hudson River, Manhattan. Saturday, August 23, 11:00 AM - 1 PM. Follow-on work session runs until you’re tired or until 7PM.

The steamship Lilac was constructed at the Pusey & Jones Shipyard in Delaware in 1932. She was put into service for the U.S. Lighthouse Service in 1933 tending to aids to navigation on the Delaware River and Bay. Later she was a lighthouse tender for the US Coast Guard when the USCG assumed operation and maintenance of navigation aids. Now, at 75 years of age, the Lilac is in the process of being restored by a not-for-profit organization, The Lilac Preservation Project. The Lilac is the only surviving steam powered Lighthouse Service/Coast Guard vessel remaining in the United States. RCSIA chapter member and President of the Lilac Preservation Project, Gerry Weinstein, will lead us on a tour of the vessel, speak to us about her restoration and guide those of us who want to stay through some hands-on restoration work. We hope you can lend a hand to get the Lilac running once again on her own steam! Work gloves, hard hats, etc. will be provided. Meet at Pier 40 (north side), on the Hudson River at Houston Street in Manhattan. Take the No. 1 train to Houston Street, head west to the River.

ANNUAL RCSIA CORN ROAST & TOUR OF ROEBLING AQUEDUCT

Lackawaxen, PA; Sunday, September 20, 2008, Tour starts at 11:30 AM, Corn Roast starts at 1 PM

We are giving long-time corn roast hosts, Gerry Weinstein and Mary Habstritt, much deserved time off! Chapter member Walter South has generously offered the use of his property in lovely Lackawaxen, PA as his land overlooks John A. Roebling’s 1847 Aqueduct, the oldest existing wire suspension bridge in the country. The aqueduct, known also as Roebling’s Bridge, was built for the Delaware and Hudson Canal Company to carry the canal over the Delaware River and runs between Lackawaxen, PA and Minisink Ford, NY. For those who get there early we will be led on a pre-corn roast tour of this National Historic and Civil Engineering Landmark by chapter member Patrick Harshbarger. Patrick, a bridge historian with Lichtenstein Consulting Engineers, will explain the history and construction of this gem. Before Patrick joined the company, Lichtenstein restored the aqueduct for the National Park Service who now owns and runs the property. Come celebrate a structural wonder built by our chapter’s namesake and have some fun with your fellow chapter members!

Please contact Lynn at 917-515-4154 about bringing food items to share. A grill will be available for cooking/heating so plan your recipes accordingly. Travel directions and meeting location provided with RSVP. Please allow 2 hours for travel time from New York City. There is no easy way to get to the event by public transportation. Please call Lynn who will try her best to pair the car-less with those driving from NYC.

CHAPTER BUSINESS

BOARD MEETING MINUTES

May 13, 2008, SUNY, 42nd Street, NYC

Meeting called to order at 7:10 PM.

In attendance: Lynn Rakos, Aron Eisenpress, Kevin Pegram, Tom Flagg, Historic Preservation Committee: Mary Habstritt; Special Projects Committee: Gianfranco Archimede; Drew Symposium Co-Chair: Allison Rachleff.

1. Tom Flagg was voted in as 5th trustee

2. Treasurer’s Report

Kevin presented RCSIA income and spending for 2006, 2007 and to-date for 2008. We currently have $15,535. Our $2500 donation to the Museum of the City of New York for their exhibit on Roebling that never materialized was returned. As MCNY listed us a sponsor on a lecture last year we will donate to them $250.

3. Secretary’s Report

We have 474 members of which 40 are comp; 50 people have not renewed in two years and will be given notice that they will be dropped.

4. Insurance: D&O (see discussion on 501 (c) 3 below)

5. Drew: To date, five speakers have been confirmed. Allison and Tom will be looking for others. The budget
is anticipated to be similar to last year’s program.

6. **Newsletter:** Will continue to look at distributing the newsletter electronically to those members who opt to do so. We will also seek a way to ensure that the newsletter is delivered to members in plenty of time for any events announced within.

7. **Tours and Events:** The Brooklyn Bridge 125th celebration: RCSIA is joining with the City of New York, The Brooklyn Borough President’s Office and the Metropolitan Section of ASCE in a series of events over the Memorial Day weekend. Clifford Zink will be giving two lectures, sponsored by RCSIA, on the Roebling Legacy.

   Corn Roast: A member, Walter South, has offered the use of his property in Lackawaxen, PA overlooking the Roebling Aqueduct for our Corn Roast. Patrick Harshbarger has agreed to lead a tour of the aqueduct for us on Sept. 20th. The logistics need to be worked out. The lack of public transportation to the site is a concern.

   We purchased a voice amplifier for use on our tours.

8. **Historic Preservation Committee:** Mary indicated that she wrote a letter in support of preserving/reusing the Lake Solitude Dam in High Bridge, NJ. She wrote a letter of thanks to the NYC Landmarks Preservation Commission for landmarking several industrial structures including the American Bank Note Building. Mary also testified at the NYC Council Waterfront Committee regarding the preliminary Maritime Support Services study, which among other things noted the shortage of graving docks. Mary pointed out that the city approved the filling of a still usable graving dock in Red Hook and that generally we need a better balance between recreational and economic uses of our waterfronts.

9. **Special Projects Committee**

   Gianfranco presented a report on his tally of results from the questionnaire distributed at the Annual Meeting. The yes/no questions were found to be more useful than the questions requiring people to rank ideas. Of the 20 respondents, most were interested in seeking long-term funding from external sources. The questionnaire will be published in the next newsletter to try to reach more members.

10. **Website/List Serv:** Tolga to look into website host costs. We need to consider website content and likely frequency of updates.

11. **Old Business**

   501 (c) 3 status: Mary contacted the NJ Center for Non-profits. We paid them $350 in 2006 to assist us with obtaining our 501 (c) 3 status. Recent conversations with the NJCNP lawyer indicated we have but 3 hours of her time for that fee. We will obtain what services and support we can for that money and move on to another lawyer. A new member, Allison Greenberg, has put Mary in touch with a lawyer in NJ who is willing to help us for a reduced fee ($175/hour). The board has requested a cost estimate be obtained from the lawyer to get us through the process of becoming a 501 (c) 3 organization. We will likely retain this lawyer. The lawyer will also be tasked with determining our real need for D&O insurance.

   1. Date change for Annual Meeting – The Annual Meeting will continue for the present to be held in January.

   2. New Trustees – As per the sense of the membership at the Annual Meeting, the board has determined that we will go with an informal, volunteer, non-voting position. We will ask for a representative from each state, NY and NJ. Members volunteered at the Annual Meeting and will be asked if they remain interested.

   3. Raise Annual Membership dues: As per discussions at the Annual Meeting, the board voted to raise our annual membership dues to $20.00 starting in 2009.


   5. IA artifact – request from member to ask the Allaire (NJ) Village Board to donate crane parts to the chapter; the chapter would not hold these artifacts but would have them on display at the member’s private museum. The board determined that RCSIA cannot enter into such an agreement as we have no control over the material and have no locations to store such material ourselves. We do not have the mission or ability to accept donations of artifacts.

   6. Repositories for IA material (documents) - Tom brought up that fact that last year we lost a number of members, some of whom had significant collections of IA material. Where can members donate their collections? Suggestion included the National canal Museum Archives and the Hagley Museum.

**Meeting adjourned at 9:00PM.**
SPECIAL PROJECTS COMMITTEE NEWS

Gianfranco Archimede chairs the Special Projects Committee. Allison Rachleff served on the committee with Gianfranco but recently stepped down. We heartily thank her for her service to Roebling! Allison co-chairs the RCSIA symposium so continues to help the chapter. Please consider helping with the Special Projects Committee! We need your support to get the program up and running.

SPECIAL PROJECTS FUND RAISING QUESTIONNAIRE

By Gianfranco Archimede and Allison Rachleff

In our effort to establish RCSIA’s role in advocacy and support of IA projects in our area, we realize that diverse partnerships and outreach are possible through funding opportunities. Organizing and administering a Special IA Projects grant program is a great idea, but we need to raise and maintain funds in order to give and grow them for the future. There are, of course, several approaches that can be taken on fundraising, but which ones are for RCSIA?

We would like to know your opinion on some ideas that were suggested so far, as well as on those you might have that we don’t know about. We would like to work under the direction of your support during 2008 toward a fundraising strategy for special IA projects.

Intellectual and financial support for this RCSIA program is likely to be first established by its members. You decide it is something you want this organization to commit to by helping to fund and support it. It would be desirable, though, if a strategy is pursued in the short term that would essentially attract outside support for the long term. This could lead to a progressive expansion of the funding program and of RCSIA’s ability to partner with others in the area.

A slightly longer version of the following questionnaire was distributed and the data collected at the Annual Meeting in January. If you did not attend the meeting you are encouraged to provide your responses to us now. It will be very helpful if you would take a few minutes to answer these questions:

Fund Raising Questionnaire

1. Do you think RCSIA should pursue grant writing for funding? Y N Not Sure
   If yes, would you volunteer to do it or to help out with it? Y N Not Sure

2. Do you think RCSIA should pursue external fundraising from private sources, such as companies and individuals? Y N Not Sure

3. Do you think RCSIA should only pursue member-based special project fundraising? Y N Not Sure

4. Judging by your perception of member participation, do you think RCSIA would be successful in fundraising through organized annual events? Y N Not Sure

5. Do you think that it is best to pursue a fundraising strategy that will lead to an accumulation of funds over time instead of one that gets by from year to year? Y N Not Sure

6. Would you support raising annual dues with an earmarked percentage for the special events fund? This asks all members to participate in fundraising equally and provides for a more predictable annual contribution, for example. Y N Not Sure

2008 Roebling Award Call for Nominations

The sixth annual John A. Roebling Award for Contributions to Industrial Archeology will be presented at the 2008 Drew Symposium, scheduled for Sunday, October 26. The Committee seeks your nominations. Past winners were Conrad Milster, Bill McKelvey, Tom Flagg, the Friends of the High Line and the Water Works Conservancy.

The Award recognizes an individual, group or organization that has made an outstanding contribution to the documenting or preservation of the industrial heritage of the New York - New Jersey area. The honoree will receive a $250 cash award and a certificate acknowledging the nature of the honoree’s contribution.

Nominees must have displayed an extraordinary effort to save or preserve a site of industrial or engineering interest, or created unique or outstanding documentation through archaeological research, photography, written history, or other means that provide a record of such a site. Nominees are not required to be a Roebling Chapter member. Individuals who are nominated must be living.

Send your nominations by September 15, 2008 to one of the Award Committee members: Ulana Zakalak, Chair, Phone: (732) 804-7332, FAX:(732) 212-8810 or by e-mail to:uzakalak@comcast.net, Sandy Malter by email to: smalter1@earthlink.net or Clifford Zink by email to: cw.zink@verizon.net.

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Plans for a new Whitney Museum in downtown Manhattan are well along and will result in demolition of the Gansevoort Pumping Station, opened in 1908 for the FDNY's High Pressure Fire Service.

Such high-pressure central fire-station systems were needed when neither fire trucks nor standard city water service could provide enough pressure to reach increasingly taller buildings with a stream of water. Brooklyn was the first such system in the country to use centrifugal pumps driven by electric motors, but the New York City system, that is Manhattan, was close behind. These pumps were chosen for their extreme simplicity and the relatively small amount of space occupied by the pumps and their motors. Six-stage pumps were originally planned but five-stage pumps were installed. Each stage raising the pressure over 60 lbs. to about 300 psi. The system in Brooklyn could pump 40,000 gals. per minute; the Manhattan system was close behind with a rate of 15,000 gpm each, or 30,000 gpm total.

The Brooklyn system covered the downtown and warehouse districts and beyond, from Erie Basin to the Navy Yard and inland to Flatbush Avenue; 1,360 acres in all. The main station was at the foot of Joralemon St. (now converted to residences) and was backed up by a reserve station at St. Edwards and Willoughby Streets (razed). They pressurized 22 miles of main and 680 hydrants.

The Manhattan system included 94 miles of cast iron high-pressure mains and over 2,000 hydrants, as well as the Gansevoort St. Pumping Station and its companion station on the East River at Oliver and South Sts. (razed). Intended to protect the dry-goods district from City Hall to 25th St. and the North River to 2nd Av, the system eventually covered 2,600 acres after extensions in 1913-14 to cover the high value areas up to 34th St.

A separate high-pressure system was installed much later in Coney Island in 1938. It is the only New York City pumping station on the National Register of Historic Places due to its Art Moderne architecture. None of the pumping stations are New York City Landmarks. (The High Pressure Service headquarters at 226 W. Broadway is in the Tribeca West Historic District.) The role of the pumping stations in protecting key industrial areas of the city with the latest in fire protection technology has gone mostly unremarked.

The pumping stations themselves were sited outside of the area of greatest fire risk. Redundancy was an important feature of the system. The Edison Co. provided electricity from its main generating stations. In Manhattan, direct connections were made to substations as back-up, but power could also be pulled from Brooklyn or from storage batteries. In Brooklyn, power could be pulled from any of the large generating stations in Brooklyn or Manhattan, including that of Brooklyn Rapid Transit. If pumping equipment failed, city fireboats could be connected to the system to pressurize it with their diesel pumps. Although fresh water was preferred since it caused less damage to goods, if the city water supply was unavailable, intakes allowed the stations to pump salt water from the North or East Rivers. When tested in 1908, the Gansevoort pumping station easily sent a stream of water over the roof of the nearby

Still extant sign on the Gansevoort St. facade.
12-story building housing Western Electric (later Bell Labs and now Westbeth, a non-profit artists’ residence).

Although the claims that the Gansevoort station was originally built as a market house and converted to fire service, Fire Department construction photos and a series of articles tracking the system’s progress in Engineering Record belie this. The building was of fire-proof construction with a concrete roof supported by steel trusses. Cheerfully painted with a bucolic mural of cows commissioned by its last major tenant, Premier Veal, it may be hard to believe that care was taken to make the Gansevoort St. station attractive with a red brick exterior accented by terra cotta and limestone trim. The interior featured walls of buff brick with slate baseboards. The pump room floor was finished with tessellated pavement.

The Fire Department shut down the high-pressure system for downtown Brooklyn and Manhattan in 1953. Fears had been growing over the aging system’s ability to withstand the maximum pressure of 300 psi, even though the system had never run at this level. (Three simultaneous five-alarm fires in 1909 were successfully extinguished with a pressure at the hydrant of 225 psi.) The hydrants and piping continued to be used at a lower pressure with each engine company in the high-pressure districts supplemented by a pumper truck capable of providing pressure up to 600 psi along with increased staffing.

The Whitney Museum plans to build on much of the block bounded by Gansevoort St., West St. and the High Line on lots now owned by the city. Designed by architect Renzo Piano, the building will include a Maintenance and Operations annex to serve the High Line park. Representatives of the Whitney have offered to assist in moving the building or salvaging portions for a museum. RCSIA is working with the Whitney, the Fire Museum, and other organizations to gain access to the building and to document and rescue any important remnants and possibly incorporating them into a permanent exhibit nearby.

Sources:

Kosciuszko Bridge Going Down
By Mary Habstritt

The Kosciuszko Bridge which carries the Brooklyn-Queens Expressway over Newtown Creek is slated for demolition. The NY State Historic Preservation Office had declared it, “a significant and unusual variation of the Warren truss type” and pushed for rehabilitation as an alternative. NY Dept. of Transportation cited the steep approaches and huge traffic capacity which make for hazardous travel and SHPO finally gave in to these safety concerns. DOT announced the pending demolition in March.

The steel-truss bridge was built in 1939 as the Meeker Avenue Bridge. In 1940, it was re-named for Thaddeus Kosciuszko, the Polish general who fought with the American colonists during the Revolutionary War.
According to federal regulations regarding bridges over navigable waterways, the fixed span had to be 125 ft. over the water. A low-level movable bridge would have been an option but bridge historian Patrick Harshbarger [SIA] says the high-level fixed span was probably chosen by highway engineers not out of concern for navigation, but to eliminate bridge-opening delays for vehicles on one of the nation’s early expressways, linking the Triborough Bridge to Brooklyn. Once a high-level span was chosen, cost considerations would have included balancing the expense of long approaches against the steepness of the grade. Steep grades slow traffic and can cause sight-distance safety issues for drivers. The sight distances were probably adequate by 1939 standards but not today’s.

Is it unusual? Harshbarger says no. Although NY’s historic bridge survey refers to its "unusual combination" of bridge elements, there are sound engineering reasons for each of them. All were well-known since the late 19th century and none were unusual singly or in combination for longer bridges. The Kosciuszko has a polygonal top chord, to achieve greatest depth at midspan where it is needed to carry loads (also saving steel). The main span over the stream is a through-truss which helps achieve the necessary vertical clearance. The side spans can be deck trusses because vertical clearance is not an issue. This bridge is a very logical, economical, choice, representing steel-truss bridge-building practice throughout much of the 20th century.

Is it historically significant? Under the criteria used for the National Register, it could be considered of local significance as a prominent and long-span truss bridge and, even more obviously, as a central feature of the BQE and its associated and demonstrated impact on land-use and residential/commercial development in the region. It was one of the first links in the BQE brought to completion.

**Brooklyn Bridge 125th Anniversary Celebration**

On Memorial Day weekend RCSIA joined with the American Society of Civil Engineers (ASCE), Metropolitan Section to celebrate the 125th Anniversary of the opening of the Brooklyn Bridge. The events were organized by the Brooklyn Borough President’s Office and New York City Mayor’s Office. Chapter member Clifford Zink, author of *Spanning the Industrial Age: The John A. Roebling’s Sons Company, Trenton, New Jersey, 1849–1974*, represented RCSIA in a lecture series that was part of the weekend events. His talk, “The Roebling Legacy” was very well received; first on Saturday afternoon at the Surrogate’s Court in Manhattan and again on Sunday at the Brooklyn Historical Society. On Friday, Saturday and Sunday RCSIA and ASCE volunteers staffed tables set up at each tower. The goal was to speak to people about the history and construction of the bridge. ACSE created a brochure to hand out highlighting the bridge’s history and construction while RCSIA supplied a
detailed page on the bridge taken from the Historic American Engineering Record. Many thanks to Bob Bodenstein, Mary Lee Baranger, Ann Schoenfeld, Lenny and Ruth Lowell, Patrick and David Harshbarger and Lynn Rakos who helped staff the tables and to Clifford Zink for his presentations to the public.

Volunteer and RCSIA member Mary Lee Baranger sent the following reminiscence on the event: I worked all day Friday on the Brooklyn Bridge at the Manhattan tower. As a teacher I often took my students over the bridge to teach them about its history and construction. I would have been happy to answer many questions for the crowds but they generally flowed around our table, taking in the views and not stopping. We tried to engage people by giving out the newspaper listing the weekend’s celebration events, and more interestingly, a commemorative Deed to the Bridge produced by the Brooklyn Borough President’s Office. Many people were disappointed that we were not actually leading tours. A junior high school teacher was grateful that I, as an historian who was used to talking to young people, could engage the kids and get them to share their extensive knowledge of the bridge which they have been studying. They enjoyed hearing about the role of Emily Roebling, and her riding first over the completed structure, carrying a rooster, like a French victory symbol. Quite a few people admired the T-Shirt all volunteers were given and wanted to buy one. A woman from New Mexico explained to me that it would mean so much to her 80-year old father, a former NY-er and WWII Navaho code-talker, to have such a shirt. I arranged to meet with her cousin later in the week to give it to her for her dad. Another highlight was watching two boys, 10-years old maybe, leaning intently over the table to talk to a young ASCE engineer, who was trying to interest them in the profession. One wanted to be a soccer player, but I think he was swayed!

BOOKS

Congratulations to chapter member Kevin Olsen! His book, A Great Conveniency: A Maritime History of the Passaic River, Hackensack River and Newark Bay was recently published by American History Imprints. Kevin’s book examines the history of these New Jersey waterways from early European exploration, through their industrial rise and decline to present day contaminant remediation and re-use of once largely abandoned waterfronts. The book provides context for the development of many northern New Jersey communities and their impact on the history of the United States. Kevin also provides an overview of the rivercraft that were once ubiquitous on these waterways and an examination of the cargo shipped. Kevin will be selling and signing his new book at the RCSIA symposium at Drew. The book can also be ordered through the publisher at 1-888-521-1789.

OTHER IA NEWS

SUMMER AT WATERLOO, NJ

Waterloo was first settled in the 1750s to support the operations of the Andover Iron Company. The location of their furnace and iron mines became the town of Andover and the location of their finery forge seven miles away on the Musconetcong River became the village Waterloo. In the 1830s, after the completion of the Morris Canal, Waterloo became a major transportation center with a tramway to the mines and docks for shipping ore to furnaces in Phillipsburg and then on to rolling mills in Trenton. The village prospered into the 1870s when later generation built fine homes. Today, most of Waterloo is still intact with world class examples of canal engineering along side grand victorian architecture, all in an outstanding natural setting. For years it was a major tourist attraction with an emphasis on art and culture and lack of appreciation for the industrial history that is at the core of the Waterloo story. The foundation that for many years operated the Village is now out of business leaving open a new opportunity the explore and reinterpret this fascinating place. Come and join us.

Again this year, the Canal Society of New Jersey is working in cooperation with the New Jersey Department of Environmental Protection and the Division of Parks & Forestry to keep Waterloo Village open two Saturdays a month from July through October. On these Waterloo Heritage Day the canal museum will be open and there will be tours and boat rides. The Village will be open from 11 a.m. to 5 p.m. and Admission is Free. There will also be a selection of special events. This year’s schedule is:

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PRESERVATION PROJECTS MOVE FORWARD IN WHARTON AND LEDGEOOUD, NJ

Preservation work on the outstanding turbine chamber and tailrace of Plane 2 East in Ledgewood Canal Park is about to get underway. This project will rebuild the collapsing stone archway at the junction of the tailrace tunnel and the turbine chamber. It will repoint some of the open masonry joints in the turbine chamber, will secure the top of the turbine chamber for public safety purposes and will provide drainage control at the site. This project is costing approximately $200,000 and is being funded by the Morris County
Historic Preservation Trust Fund, with a matching component from Roxbury Township.

The Borough of Wharton is continuing with its plans to enhance Lock 2 East within Hugh Force Park, hopefully restoring it to be an operable lock. The Canal Society is partnering with the Borough in seeking more funding for this project. A recent grant application has been submitted by the Society to support an additional engineering study of the lock site to further explore the feasibility of restoring the buried lock to an operating condition. If successful in attracting a grant, the Society will pass through the grant to the Borough to support the lock project.

**UPCOMING EVENTS**

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<td>September 15</td>
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<td>September 20</td>
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