

Society for Industrial Archeology ROEBLING CHAPTER NEWSLETTER

August 2005

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TOURS

Roosevelt Island Infrastructure

Twenty members attended a tour on June 25th that highlighted the infrastructure that makes it possible to live and work on Roosevelt Island. Led by Judy Berdy, president of the Roosevelt Island Historical Society, the group began at the tram station with a brief presentation from the supervisor on how the tram works and what is needed to keep it in good operating condition.

Next was the stop no one wanted to leave: the steam plant which creates steam and hot water for the Goldwater and Coler hospitals, now the main institutions on what was once “Welfare Island.” The steam plant was built in 1936 and added to in 1940, with some package boilers added as late as 1948. A steam tunnel runs the length of the island and the plant could provide steam to the entire island community if it were wanted. The boilers were built for coal but now use #6 fuel oil once brought in by barge but now delivered by truck.

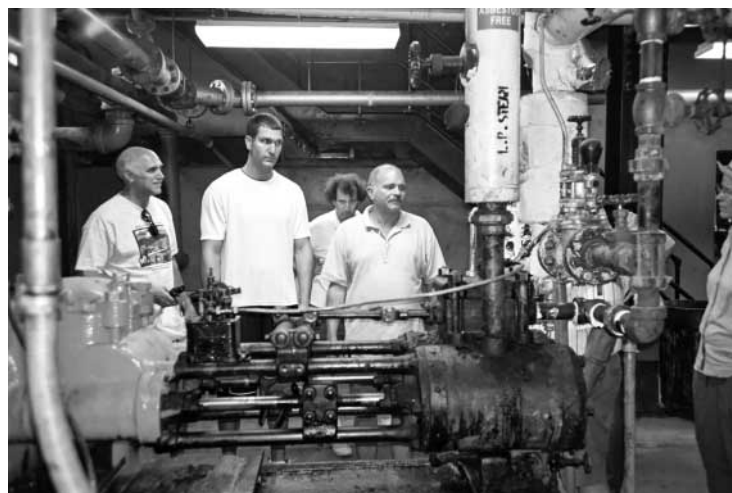


Photo by Mary Habstritt

Engineer and tourers examine a duplex pump in the lower level of the Roosevelt Island steam plant.

We spent some time out in the extreme heat of the day at the 1872 lighthouse at the island’s north end looking out at the churning waters of Hell Gate and admiring such Queens landmarks as the Sohmer piano building. Our chartered bus took us by the Octagon, built for the Municipal Lunatic Asylum in 1838 and now being incorporated into a new residential building using preservation tax credits. At the south end of the island we viewed the 1892 Strecker Laboratory, the nation’s first pathology research lab now housing a substation for the subway system, and ended the tour with the 1854 Smallpox Hospital, a fantastic ruin that once hosted the country’s first school of nursing.

Corn Roast

Sunday, September 18, 2005, 1:00 p.m.

1341 Albany Post Road, Croton-on-Hudson, NY

This annual social event will be held at the country home of Gerry Weinstein and Mary Habstritt. The house is still being renovated, so the entire event will again be held at the Engineerium. Three engines in the collection will be running on compressed air.

Contact Mary at 212-769-4946 or 917-709-5291 about bringing food items to share. We have limited cooking facilities at the Engineerium – the Weber grill, a hot plate, and microwave – so plan accordingly. Bring your swimsuits for a pre-or postprandial dip in the pool.

Photo by Mary Habstritt



Judy Berdy and RCSIA members at the Roosevelt Island lighthouse.

Detailed travel directions were printed in the August 2003 (vol. 12, no. 2) newsletter. This issue can be accessed online at <http://www.ss.mtu.edu/ia/chapters/roebbling/images/V12No2.pdf>. We will not be able to make pick-ups at the Croton-Harmon train station this year, but taxis are available and always meet the trains. Call the Engineerium at 914-271-4949 or Gerry's cell, 917-578-0602, on the day of the roast if in need of further directions.

CHAPTER BUSINESS

Call for Nominations ROEBLING AWARD

The third annual John Augustus Roebling Award for Contributions to Industrial Archeology will be awarded at the 2005 Drew Symposium on Saturday, October 29. The Award committee seeks your nominations.

The award recognizes an individual, group, or organization that has made an outstanding contribution to documenting or preserving the industrial heritage of the greater New York-New Jersey area. The honoree will receive a cash award of \$250 and a certificate.

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 archeological research, photography, written history, or other means that provides a record of such a site. Nominees are not required to be Roebling Chapter members. Individuals who are nominated must be living.

Send your nominations by September 1, 2005 to one of the Award committee members: Mike Raber, MSRaber@aol.com, 860-633-9026; Conrad Milster, 718-857-9524; or George Bulow, george.bulow@verizon.net, 212-580-5015.

Call for Papers DREW SYMPOSIUM

The Roebling Chapter of the Society for Industrial Archeology invites illustrated presentations for the 29th Annual Symposium on Industrial Archeology in the New York - New Jersey Area, to be held Saturday, October 29 at the Hall of Sciences, Drew University, Madison, NJ, from 10 A.M. to 5 P.M. This Symposium consists of talks on the current and historical industry and infrastructure of our region. Presentations are typically 25 minutes in length, with a few minutes for questions afterward, and illustrated with 35mm slides or

other media (we will provide digital projection on request). Our audience is a keen one and enjoys interesting accounts of the industrial heritage of our region. Come share your expertise and the wonder of discovery with our enthusiastic audience this year! Speakers (and guests) attend the symposium at no cost, and receive the lunch with the paying audience.

Contact Tom Flagg, Symposium Coordinator, at 212-780-5155 (work) or write: tflagg@sunyopt.edu

200th Birthday

John Augustus Roebling was born 200 hundred years ago as of June 12, 2006. What shall we do to celebrate? Send your suggestions to your president at RCSIAprez@aol.com or 212-769-4946.

One thing to do is participate in a symposium sponsored by the American Society of Civil Engineers History and Heritage Committee in October, 2006 (more on the tours later). Who better to speak on Roebling's influence than RCSIA members?

ASCE Call for Papers

The American Society of Civil Engineers History and Heritage Committee will celebrate the 200th birthday of John A. Roebling with a moderated history symposium to be held October 27, 2006 at Polytechnic University, Brooklyn Campus, NY, followed by a two-day Roebling coach tour on October 28 and 29 that will include the Brooklyn Bridge, the Roebling Aqueduct, and the Roebling works in Trenton, NJ. This event is co-sponsored by the New Jersey and Metropolitan Sections of ASCE.

Symposium themes are John Roebling's development as a civil engineer, his projects, his influence on other civil engineers and civil engineering, and the Roebling family legacy. Areas of interest include John A. Roebling before the Brooklyn Bridge, the Brooklyn Bridge design and construction, and the Roebling family and companies influences after the Brooklyn Bridge.

Individuals wishing to present at the symposium are invited to submit an abstract (MS-Word, WordPerfect or PDF format) related to the symposium themes. The abstract should not exceed 400 words. The following information must be given on the top of the abstract: full name, e-mail and full address of the author, title of the contribution.

Abstracts should be submitted to the symposium organizer by e-mail or post mail no later than October 15, 2005 for review: Ted Green, P.E., 76 Kingsley Rd., Kendall Park, NJ 08824-1149 or e-mail: ted.green@comcast.net

Authors will be informed of acceptance by ASCE's History and Heritage Committee by December 23, 2005. Additional information will be provided at that time for preparation of the paper. The completed paper must be delivered to the symposium organizer by April 17, 2006 for review and final acceptance. Final manuscripts must be delivered by July 17, 2006.

Authors will be responsible for all costs including symposium registration, meals, coach tour, lodging, and transportation to and from New York City.

For more information, contact: Carol Reese, Staff Contact, History and Heritage Committee, ASCE, at creese@asce.org or 703-295-6240.

OTHER EVENTS

IA at MAS

By Ann Dichter

Chester Liebs, a founding member of the Society for Industrial Archeology, was one of four participants in the Municipal Arts Society panel discussion *The Future: Cultural Landmarks, Industrial Archeology and Religious Structures*, June 1st at The Urban Center. Moderated by Frank E. Sanchis III and including Dorothy Miner and Ned Kaufman, the panel covered some of the issues facing preservation today.

Sanchis opened with a brief discussion of the shift from focusing on the preservation of fabulous architecture to preserving sites with more cultural and historical significance – the idea of “places that matter”. Liebs picked up this theme and linked it to industrial archeology. Using the biological metaphor of a vascular system, he explained how the High Line related to the city around and beneath it, as it moved material in and finished goods out of this mid-20th century industrial corridor.

Kaufman discussed a socio-cultural approach to places that matter demonstrating his points with slides from a blue-collar company town in Montana. People living in the area made distinctions among the houses according to who developed them – distinctions that were not evident from the photographs but quite real to the inhabitants. Each developer had created a very subtle but unique style that mattered to the homeowners.

Miner had the most difficult presentation as her topic dealt directly with the legal issues surrounding the preservation of religious places – the First and Fourth Amendment. She said that the most effective way of preserving such places was through private funding.

To the best of our ability, this information was accurate at press time. Please check with the listed sponsor for up-to-date information.

Ironmasters Conference

Friday to Sunday, October 14-16, 2005
Sterling Forest State Park, Tuxedo, NY

The New Jersey Highlands Historical Society & Friends of Long Pond Ironworks invite you to participate in the annual Highlands Conference.

Saturday consists of a day of paper sessions related to iron. Paper proposals are still being accepted. If you are interested in making a presentation, contact Ed Lenik, Program Chair, at 100 Deerfield Rd., Wayne NJ 07470-6414 or e-mail edlenik@hotmail.com. Ed can also be reached by phone, 973-935-0770, if questions. Also on Saturday, iron-related books will be for sale in the bookroom.

Walking tours will be offered before and after the paper sessions. On Friday, iron sites in Sterling Forest State Park will be visited starting at 2:00 p.m. On Sunday, a tour of Long Pond Ironworks begins at 10:00 a.m.

The conference is free and open to the public but registration is required as space is limited. To register, call 973-208-5842 or e-mail carol@ringwoodmanor.com.

ADVOCACY

ANCW Update

On July 26, Mary Habstritt testified before the NYC Landmarks Preservation Commission on behalf of the Roebling Chapter in support of designation of the Cass Gilbert-designed former Austin, Nichols & Co. Warehouse in Williamsburg, Brooklyn.

The owners presented their case first, with several experts giving testimony that the building was a minor work of Gilbert, that he had attempted to disown the design which was so heavily influenced by Horace Havemeyer (the original owner) and his budget that it was no longer Gilbert's design. It was undistinguished, simply a concrete box with none of its original equipment. The owner claimed tenants had threatened them with using LPC to prevent the proposed renovation. Ken Fisher, former city councilmember, known in the past as a preservationist <http://www.cuny.tv/series/citywide/fisher.lasso>, waved the 2002 SIA guidebook over his head and claimed that even the SOCIETY FOR INDUSTRIAL ARCHEOLOGY did not think it was significant as they had not included it in the guidebook prepared for its 2002 conference. (To be recognized as experts but have our own publication used against us!)

Mary prefaced her prepared comments by saying how impressed she was that Mr. Fisher had obtained a copy of our guidebook, but that as an editor and the volunteer conference chair, she explained that ANCW was not included because this all-volunteer effort was able to

cover only those sites which were actually toured during the conference. Other testimony in favor of landmarking was given or sent by such experts as Francoise Bollack and Andrew Dolkart of Columbia University, the president of the Cass Gilbert Society, and a great-granddaughter of Gilbert. The Municipal Art Society, Historic Districts Council, Place in History, Metropolitan Waterfront Alliance, and other organizations also spoke in favor.

If LPC votes to designate the building as a landmark, it must still be approved by the Planning Commission and the City Council.

SITES

Waterside Generating Stations

Chapter member John Bartelstone reported by e-mail on May 11th, “The Waterside power stations are off line as steam operations have been transferred to the East River (14th St.) Plant. Did you know that they used a tunnel boring machine to dig a tunnel from 14th St to 38th St under 1st Ave? I had no idea. The new steam pipe is 3 feet in diameter...Demolition is beginning now. I spoke to a worker from Mazzocchi who was in front of the plant yesterday. They are setting up asbestos filtration vents around the building. The almost new 80MW ABB generator was sold. I guess everything else will be scrapped. The guy I spoke to was very upset about having to demolish such a great structure (perhaps he should think about a new line of work.) I can’t imagine the UN without the Waterside stacks!” Member Bob Stewart notes, “Not much of Waterside is being saved. There is a mosaic of a light bulb with ‘New York Edison Co.’ from the original main entrance that will be saved. And I know of a couple of

instruments that are being saved. Not much else.” A select group of chapter members had the chance to tour this plant in October, 2002.

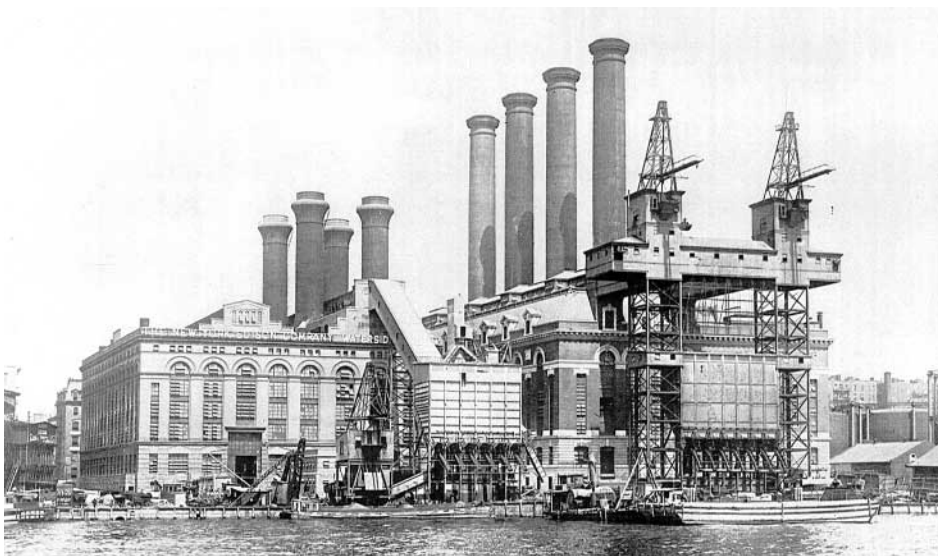
Below is an abstract from “The Waterside Generating Stations of the New York Edison Company,” by Thomas Blalock, with additional material by Robert Stewart.

The Waterside stations, located on the East Side of mid-town Manhattan, were important during the development of electric power technology in the early 20th century. Consisting of two power plants, the Waterside Generating Stations provided electric power to midtown Manhattan from 1901 to 2005.

In 1882, Thomas A. Edison’s Pearl Street Generating Station went into operation in lower Manhattan. This station generated direct current (DC), at 110 volts, in accordance with the state of electric power development of that time. By the mid-1890s, the Pearl Street Station had been replaced by several larger DC generating stations, located throughout downtown and midtown Manhattan. George Westinghouse’s experimental alternating current installations demonstrated that alternating current (AC) systems were more efficient than DC. To fulfill this need, Waterside Station No. 1 went into operation in 1901. The electric power first generated at Waterside was in the form of 6600-volt, three-phase, 25-cycle AC and went from Waterside to a number of substations that changed it into low voltage DC power by means of rotary converters to supply existing customers of the DC network.

The Edison Company constructed Waterside station along the East Side of First Avenue in Manhattan and it occupied the entire city block from 38th Street to 39th Street. Over the following century the exterior of the generator room portion of Waterside No. 1 retained its original 1901 appearance. The station extended easterly from First Avenue to the East River, where barges unloaded coal and took away ashes for disposal.

Stoker-fired boilers, operating at 175 psi, were used to maintain steam for the “base” load on the electric power system while some of the Waterside No. 1 boilers used for peaking power were hand-fired. The Waterside No. 2 boiler installation was similar to that in Waterside No. 1. The steam mains were fourteen inches in diameter, and were tied back into the Waterside No. 1 steam system. After 1906 these two boiler houses operated essentially as one steam-generating installation. The Mead-Morrison Company of New York City built the coal-handling installation,



Historic view of Waterside 1 (left) and Waterside 2 (right) from East River circa 1910.

and Rawson & Morrison steam hoisting engines drove the clamshell lifts.

The original plan for Waterside No. 1 required installation of sixteen 5,000 hp reciprocating steam engines, each engine being directly coupled to an AC generator. The Westinghouse Machine Company built the engines, while General Electric and the Stanley Electric Manufacturing Company built the direct-coupled generators. By 1910 vertical steam turbine generators began to replace the engine generators, which were all gone by 1923.

For Waterside No. 2, no reciprocating steam engines were ever contemplated. Its original installation consisted of eight vertical turbine units and two horizontal turbine units. These latter two units were very early horizontal turbine designs, each turbine driving two generators. The eight vertical units were five-stage Curtis turbines built by General Electric. During the early 20th century, turbine-generator manufacturers learned that it was not practical to design vertical turbine units for outputs greater than 20,000-kilowatts. Later installations were restricted to horizontal turbines.

The original vertical turbine units in Waterside No. 2 continued in operation until the late 1930's when they were replaced with four large hydrogen-cooled horizontal units having generating capacities as high as 65,000-kilowatts. At the west end of the turbine room, newer single-generator horizontal units had already replaced the original dual-generator horizontal units. One of these was a 22,000-kilowatt, 25-cycle unit, and the other became a 40,000-kilowatt, 60-cycle unit.

The four new turbine-generators were also 60-cycle units. These operated at a steam pressure of 1200-psi, supplied by eight new boiler units that replaced the 96 original boilers in the Waterside No. 2 boiler house. The turbines exhausted steam at a pressure of 200-psi, which then was used to drive the older low-pressure turbines still in use.

In Waterside No. 1, a total of four 35,000-kilowatt, 25-cycle horizontal turbine-generator units were installed by the mid-1930s, two of these had already replaced the last of the steam engine units in the 1920s. The three 1911 vintage 20,000-kilowatt vertical turbine units were still in operation. Another major renovation took place during the late 1940's. This involved removing the boilers in Waterside No. 1. The space was then utilized for the installation of two new boilers and two new 60-cycle horizontal turbine-generator units. These units were each rated at 50,000-kilowatts and, like the 1930's units installed in Waterside No. 2, were high-pressure turbines. Also, as with those Waterside

No. 2 units, these generators were cooled by hydrogen gas rather than air.

When it closed down in 2005, Waterside had three operating turbine-generators with a total capacity of 180,000-kilowatts (180 megawatts). It functioned as a "co-generation" plant since it also supplied a significant amount of steam to midtown Manhattan. In the renovated Waterside No. 1 boiler house structure, the two boilers and two Westinghouse hydrogen-cooled turbine-generators that were installed during the late 1940's were still in operation. Each of the boilers was capable of supplying up to 1,000,000 lbs. of steam per hour at 1600-psi and 950 degrees Fahrenheit. The turbines exhausted steam at 200-psi that was sold to steam customers in midtown Manhattan.

In Waterside No. 2, there was only one operating generator unit. This was an 80,000-kilowatt, air-cooled turbine-generator built by the ASEA - Brown Boveri Company and installed in 1991. Steam for this unit was supplied by two of the boilers that were installed during the late 1930s. Each of these supplied 650,000 lbs. of steam per hour at 1250-psi. The turbine unit also exhausted steam at 200-psi into the Manhattan steam system.

PUBLICATIONS

- **Howard Halle, in "Goodbye, Gowanus,"** *BKLYN* magazine, Summer 2005, p. 30, profiles Lenny "The Chicken Man" Thomas, who recently retired from his job as operator of the Union, Third, and Carroll street movable bridges over the Gowanus Canal [SIA annual conference tour site, 2002]. Lenny is working on a sequel to the cookbook that made him famous.
- **Diana Stuart, "The Manhole Cover Lady,"** has a new book out. *Decorative Architectural Ironwork* serves as a historical record of the amazing cast and wrought ironwork to be found in New York City. 700 color photographs depict cast and wrought iron fences, gates, newel posts, balustrades, railings, brackets, lamps, and more stunning artifacts of the city streetscape. The book is \$39.95 and can be ordered from the publisher at www.schifferbooks.com if not available from your bookstore.
- Syracuse University Press is celebrating the publication of ***The Encyclopedia of New York State*** which it calls the most comprehensive work on the Empire State to be published since the Civil War. In nearly 2,000 pages and more than 4,000 signed entries, this single volume captures the impressive complexity of New York State as a historic crossroads of people and ideas. It is packed with fascinating details in fields ranging from sociology and the arts to geography and history.

Several RCSIA members contributed to this hefty volume, including Paul Bartczak, Norman Brouwer, and Tom Flagg. Topics of special interest to RCSIA members include the Erie Canal, iron and steel industry, power and lighting, railroad marine operations, salt industry, and Syracuse China Company. Also, entries on specific towns and counties discuss major area industries. Suggestions for further reading are appended to each entry and cross-referencing is extensive.

As part of the launch, Syracuse has provided copies of the Encyclopedia free to all public libraries in the state so New Yorkers can consult it at their local branch. More information on the content is available at

<http://www.syracuseuniversitypress.syr.edu/encyclopedia> and it can be purchased there for \$95 for those who need to have it on the nightstand or who live in New Jersey.

Roebling Chapter SIA Officers

President	Mary Habstritt
Vice President	Lynn Rakos
Treasurer	Charles Scott
Secretary	Aron Eisenpress

The Roebling Chapter official telephone number is the residence number of the President: (212) 769-4946. Please leave a brief message on the answering machine.

Membership is \$10.00 per year, payable to RCSIA, c/o Aron Eisenpress, 235 West End Avenue, Apt. 14-C, New York, NY 10023.

A downloadable chapter membership form and general information about the SIA are available at www.siahq.org.

Design: Joe Macasek, MacGraphics

UPCOMING EVENTS

Sept. 18	Corn Roast
Sept. 29-Oct. 2	SIA national Fall Tour, Detroit MI
Oct. 14-16	Ironmasters conference, Tuxedo NY
Oct. 29	Annual Drew Symposium, Madison NJ

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